NOTICE TO THE PUBLIC
WILLIAMSON COUNTY COMMISSIONER'S COURT
APRIL 4TH, 2017
9:30 A.M.

The Commissioner's Court of Williamson County, Texas will meet in regular session in the Commissioner's Courtroom, 710 Main Street, in Georgetown, Texas to consider the following items:

1. Review and approval of minutes.

2. Consider noting in minutes any off right-of-way work on any County road done by Road & Bridge Division.

3. Hear County Auditor concerning invoices, bills, Quick Check Report, wire transfers and electronic payments submitted for payment and take appropriate action including, but not limited to approval for payment provided said items are found by the County Auditor to be legal obligations of the county.

4. Citizen comments. Except when public hearings are scheduled for later in the meeting, this will be the only opportunity for citizen input. The Court invites comments on any matter affecting the county, whether on the Agenda or not. Speakers should limit their comments to three minutes. Note that the members of the Court may not comment at the meeting about matters that are not on the agenda.

CONSENT AGENDA
The Consent Agenda includes non-controversial and routine items that the Court may act on with one single vote. The Judge or a Commissioner may pull any item from the consent agenda in order that the court discuss and act upon it individually as part of the Regular Agenda.
(Items 5 – 16)

5. Discuss, consider and take appropriate action on a line item transfer for the District Attorney.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0440-001101	DA/PT Salaries	$10,073.70
To	0100-0440-001107	DA/Temp-Seasonal	$10,073.70

6. Discuss, consider and take appropriate action on a line item transfer for the District Attorney.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0440-001105	DA/LE Salaries	$21,774.45
To	0100-0440-001110	DA/Overtime	$21,774.45

7. Discuss, consider and take appropriate action to approve a line item transfer for the Tax Assessor/Collector.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0499-004208	Internet Cloud Solutions	$3300.00
To	0100-0499-004100	Professional Services	$3300.00

8. Discuss, consider and take appropriate action on authorizing the disposal of various county assets through auction including (1) White Metal records rack, (1) Cash Box, (3) Mice, (10) Note card holders, various speakers, (7) Chairs, (4) Computers, (4) Monitors, (1) Panasonic white board, (1) Metal cabinet, (1) Printer, (1) 2007 Orange Wanco Traffic sign, (2) 1999 Gray Trial Kings, trailer, (1) 2010 Ford Crown Vic (see attached lists) pursuant to Tx. Local Gov't code 263.152.

9. Discuss, consider and take appropriate action on authorizing the disposal of (3) Cannon Scanners through inter-departmental transfer (see attached list) pursuant to Tx. Local Gov't code 263.152.

10. Discuss, consider and take appropriate action on approving compensation changes, position titles changes, position grade changes and any corresponding line item transfers.

11. Discuss, consider and take any appropriate action regarding approval and receipt of Standard Agreement with Ranch at Cypress Creek MUD #1 regarding off-duty contracting of County Sheriff Deputies

12. Discuss, consider and take appropriate action on approval of the final plat for the Parkside at Mayfield Ranch Sec 12 subdivision - Pct 3.

13. Discuss, consider and take appropriate action on approving a license agreement with Williamson County MUD #30 (Crescent Bluff subdivision) - Pct 3.

14. Discuss, consider and take appropriate action on approval of the revised preliminary plat for the Ridge at Cross Creek subdivision - Pct 3.

15. Discuss, consider and take appropriate action on approving a license agreement with San Gabriel Hidden Creek Estates, LLC - Pct 3.

16. Discuss, consider, and take appropriate action on approval of the final plat for the Melchor Estates subdivision - Pct 2.

REGULAR AGENDA

17. Discuss, consider, and take appropriate action on a Resolution declaring the week of April 9th-15th, 2017, as "Public Safety Telecommunicator Week" for Williamson County.

18. Hear report on Texas 85th Legislature House Bill 2321 regarding changes to the ?Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Retirement Program (LIRAP) and the Associated Local Initiative Program (LIP).

19. Receive and discuss the 2016 Comprehensive Annual Financial Report (CAFR) and Popular Annual Financial Report (PAFR). Only if necessary, take any appropriate action regarding same.

20. Discuss, consider and take appropriate action on the Department of Infrastructure projects and issues update.

21. Discuss, consider and take appropriate action on approving 2006 Road Bond Transfer Request per Mike Weaver, Road Bond Manager. To move $280,000 from I35 Frontage Road (P162) to Corridor A1/FM1660 (P458) of $70,000, Corridor C/SH29 Bypass (P459) of $70,000, Corridor E1/FM3349 (P460) of $70,000 and Corridor F/US183 (P461) of $70,000.

22. Discuss, consider and take appropriate action on approving 2013 Road Bond Transfer Request per Mike Weaver, Road Bond Manager. To move $70,000 from SH29@Cedar Hollow (P291) to Corridor H/Sam Bass (P462). Also move $3,983,960 from Non Departmental (P290) to Corrdior A1/FM1160 (P458) $909,765, Corridor C/SH29 Bypass (P459) $595,735, Corridor E1/FM3349 (P460) $997,360, Corridor F/US1853 (P461) $989,320 and Corridor H/Sam Bass (P462) $491,780.

23. Discuss, consider and take appropriate action on an Agreement between Williamson County and Oncor Electric Delivery Company, LLC for installation of electrical infrastructure in relation to the Sheriff's Office Training Facility Project.

24. Discuss, consider and take appropriate action on a Real Estate Contract with Douglas and Rebecca Schernik for right of way needed on CR 101. (Parcel 12)

25. Discuss, consider and take appropriate action on accepting the resignation of John Miri and the appointment of a replacement to the Central Texas Regional Mobility Authority (CTRMA) Board of Directors for a two-year term beginning February 1, 2017 and ending on January 31, 2019.

26. Discuss, consider and take appropriate action on preparing and filing all necessary documentation in order to request the delegation of authority from the Texas Commission on Environmental Quality to administer and regulate, as an Authorized Agent, the use of On-Site Sewage Facility Systems in Williamson County, Texas, and the responsibility for the implementation and enforcement of applicable rules relating to On-Site Sewage Facilities in Williamson County, Texas.

27. Discuss, consider and take appropriate action on approving the Stryker EMS Protect Service Agreement with Stryker Corporation.

28. Discuss, consider, and take appropriate action on providing the Texas Department of Public Safety helicopter access to WCSO call data.

29. Discuss, consider and take appropriate action to authorize the Purchasing Agent to advertise and receive proposals for the Cedar Park Tax Office Renovations under RFP 1703-149.

30. Discuss, consider and take appropriate action on awarding the contract, RFP 1701-136, for the renovations to the Justice Center, to the best proposer S&G Contracting.

31. Discuss, consider and take appropriate action on authorizing Supplemental Agreement No. 7 with BLGY, North Campus Project, for additional plan revisions for inclusion of encasement pipe and realignment of waste water lines in the amount of $6,808.06 under 15RFQ102.

32. Discuss, consider and take appropriate action on authorizing the service agreement with Intertech Flooring, for carpet installations at the Juvenile Justice Center in the amount of $84,661.39, under TXMAS contract No. TXMAS-13-72020.

33. Discuss, consider and take appropriate action on authorizing Purchasing Agent to advertise and receive sealed bids for the Sale of Real Property located between RM 2243, Ronald W. Reagan Boulevard, Ridgmar Road, and E. Windermere Street, in Leander, Texas under IFB 1703-151, pursuant to Tex. Loc. Gov't Code § 272.001 *et seq.*

34. Discuss, consider and take appropriate action on an order declaring an emergency and a grave necessity due to unforeseeable circumstances and approve budget amendment to acknowledge additional revenues for Information Technology Systems.

Fiscal Impact

From/To	Acct No.	Description	Amount
	0100.0000.333220	Payments From Other Entities	$40,105.60

35. Discuss, consider and take appropriate action on an order declaring an emergency and a grave necessity due to unforeseeable circumstances and approve budget amendment to acknowledge additional expenditures for Information Technology Systems.

Fiscal Impact

From/To	Acct No.	Description	Amount
	0100.0503.004208	Internet Cloud Solutions	$40,105.60

EXECUTIVE SESSION

"The Commissioners Court for Williamson County reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by Texas Government Code Sections 551.071 (Consultations with Attorney), 551.072 (Deliberations regarding Real Property), 551.073 (Deliberations regarding Gifts and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations regarding Security Devices) and 551.087 (Deliberations regarding Economic Development Negotiations)."

36. Discussion regarding economic development negotiations pursuant to Texas Government Code, Section 551.087:
a) Business prospect(s) that may locate or expand within Williamson County.
b) Discuss Pearson Road District.
c) Discuss North Woods Road District.
d) Project Columbus Balbo
e) Mega Site

37. Discuss real estate matters (EXECUTIVE SESSION as per VTCA Govt. Code sec. 551.072 Deliberation Regarding Real Estate Property if deliberation in an open meeting would have a detrimental effect on the position of the governmental body in negotiations with third person.)
A. Real Estate Owned by Third Parties
1. Preliminary discussions relating to proposed or potential purchase or lease of property owned by third parties
a) Discuss the acquisition of real property for right-of-way for Mays St. Extension
b) Discuss the acquisition of real property for SW 183 and SH 29 Loop.
c) Discuss the acquisition of real property for CR 176 at RM 2243
d) Discuss the acquisition of real property with endangered species for mitigation purposes.
e) Discuss the acquisition of real property: CR 101
f) Discuss the acquisition of real property: CR 111

g) Discuss the acquisition of real property for CR 278 at Bagdad Rd.
h) Discuss the acquisition of real property for proposed CR 110 project. (All sections)
i) Discuss the acquisition of real property for County Facilities.
j) Discuss the acquisition of real property on CR 305.
k) Discuss the acquisition of Easement interests for the Brushy Creek Trail Project.
l) Discuss acquisition of property located at NEC of Toll 130 and Gattis School Rd.
m) Discuss the acquisition of a drainage easement for CR 108.
n) Discuss easement acquisitions from San Gabriel River Ranch Subdivision.
o) Discuss the acquisition of real property for CR 258.
p) Discuss the acquisition of real property for Lakeline Blvd.
q) Discuss the acquisition of real property for US 183.
r) Discuss the acquisition of real property for Hairy Man Rd.
s) Discuss the acquisition of real property for SW Bypass.
t) Discuss the acquisition of real property for Crossroad Acres.

B. Property or Real Estate owned by Williamson County
1). Preliminary discussions relating to proposed or potential sale or lease of property owned by the County
a) Discuss County owned real estate containing underground water rights and interests.
b) Discuss possible sale of 183 A excess right of way
c) Discuss proposed sale of real estate of Blue Springs Blvd
d) Discuss transfer of right of way for Westinghouse Rd. to the City of Georgetown.
e) Discuss wastewater easements in Berry Springs Park
f) Discuss Development Agreement with Ashby Capital Investments, LLC
g) Discuss sale of County property on Ronald Reagan Blvd.
h) Discuss abandonment of County property on CR 123.

C. Consider intervention in lawsuit regarding de-listing of Bone Cave harvestman.

38. Discuss pending or contemplated litigation, settlement matters and other confidential attorney-client legal matters (EXECUTIVE SESSION as per VTCA Govt. Code sec. 551.071 consultation with attorney.), including the following:

a) Litigation or claims or potential litigation or claims against the County or by the County
b) Status Update-Pending Cases or Claims;
c) Civil Action No.1:13- CV- 505, Robert Lloyd v. Lisa Birkman, et al, In The United States District Court for the Western District of Texas, Austin Division
d) Employee/personnel related matters
e) Other confidential attorney-client matters, including contracts and certain matters related to county defense issues in which the duty of the attorney to the governmental body within the attorney/client relationship clearly conflicts with Chapter 551 of the Texas Government Code.
f) Cause No. 15-0064-C277, Gordon v. Dollahite et al, In The District Court of Williamson County, Texas, 277th District
g) County Road 241 utility and Right-of-Way Issues and matters;
h) Civil Action No. 1:15-cv-431; *Herman Crisp v. Williamson County, et al*; In the USDC-WD-Austin Division
i) Carolyn Barnes, et al v. Texas Attorney General, et al; Cause # D-1-GN-15-000877, in the 419th Judicial District Court of Travis County
j) Appeal of IRS Proposed Worker Classification Changes and Proposed Tax Adjustments 2011 -2013; and Payment of Disputed Employment Taxes Pending Appeal
k) Potential claims and litigation against Volkswagen and Audi related to Volkswagen and Audi emission control systems on diesel engine vehicles in the period 2009 – 2015
l) Discuss proposed acquisition of property for SW 183 and SH 29 Loop
m) Claims of Texas Association for Children and Families
n) Civil Action; American Stewards of Liberty, *et al.* v. Sally Jewell, *et al.*, In the Western District Court, Western District of Texas, Austin Division
o) Legislative changes to firearms laws and possession of firearms on county property
p) LCRA's proposed Leander to Round Rock 138k-V Transmission Line Project including but not limited to filing as an intervenor.

q) Notice of claim and demand of Morgan Lee Roach.
r) Labor and employment law review of Employee Policy Manual provisions and amendments.
s) Berry Springs Park and Preserve pipeline
t) Discuss subrogation claims related to medical claims incurred during the County's contract with Allegiance Benefit Plan Management (TPA).
u) Discuss requirements related to health benefit plan.
v) Case No. 1:16-cv-00505-LY, Saturn v. Barnett et al, In The United States District Court For The Western District of Texas-Austin Division
w) Civil Action No. 1:16-cv-1023 LY, Brian Carrier v. Lt. McKnight, et al, In The United States District Court For The Western District Of Texas, Austin Division
x) Cause No. 1JC-16-1540; *Roy Earl Briggs v. Lt. Doug Wheless,* In The Justice Court Precinct 1, Williamson County, Texas
y) Civil Action No. 1:16-cv-01185-SS-ML, *Jose Refugio Fernandez-Madrid v. Keefe Commissary and the Williamson County Sheriff,* In the United States District Court for the Western District of Texas – Austin Division
z) Law relating requests for the closure, abandonment or vacation of roadway(s) in the Woodland Park Subdivision.
aa) Civil Action No. Case 1:17-cv-00068; Dennis Farmer & Linda Schlueter v. Williamson County and Deputy Damon Grant; In The United States District Court for the Western District of Texas, Austin Division

39. Deliberate the appointment, employment, evaluation, reassignment, duties, discipline and/or dismissal of Williamson County officers, directors, employees and/or positions, including but not limited to conducting deliberation and discussion pertaining to annual reviews of department heads and appointed officials (Executive Session as per Tex. Gov. Code Section 551.074 – Personnel Matters).

40. Discuss the deployment or specific occasions for implementation of security personnel or devices in relation to the Williamson County Justice Center (Executive Session as per Texas Gov't. Code § 551.076).

REGULAR AGENDA (continued)

41. Discuss and take appropriate action concerning economic development.

42. Discuss and take appropriate action concerning real estate.

43. Discuss and take appropriate action on pending or contemplated litigation, settlement matters and other confidential attorney-client legal matters, including the following:

a) Litigation or claims or potential litigation or claims against the County or by the County
b) Status Update-Pending Cases or Claims;
c) Civil Action No.1:13- CV- 505, Robert Lloyd v. Lisa Birkman, et al, In The United States District Court for the Western District of Texas, Austin Division
d) Employee/personnel related matters
e) Other confidential attorney-client matters, including contracts and certain matters related to county defense issues in which the duty of the attorney to the governmental body within the attorney/client relationship clearly conflicts with Chapter 551 of the Texas Government Code.
f) Cause No. 15-0064-C277, Gordon v. Dollahite et al, In The District Court of Williamson County, Texas, 277th District
g) County Road 241 utility and Right-of-Way Issues and matters;
h) Civil Action No. 1:15-cv-431; *Herman Crisp v. Williamson County, et al*; In the USDC-WD-Austin Division
i) Carolyn Barnes, et al v. Texas Attorney General, et al; Cause # D-1-GN-15-000877, in the 419th

Judicial District Court of Travis County
j) Discuss, consider and take appropriate action regarding possible appeal of IRS Proposed Worker Classification Changes and Proposed Tax Adjustments 2011 -2013; and approval of payment of disputed employment taxes pending appeal
k) Potential claims and litigation against Volkswagen and Audi related to Volkswagen and Audi emission control systems on diesel engine vehicles in the period 2009 – 2015
l) Discuss proposed acquisition of property for SW 183 and SH 29 Loop
m) Claims of Texas Association for Children and Families
n) Civil Action; American Stewards of Liberty, *et al.* v. Sally Jewell, *et al.*, In the Western District Court, Western District of Texas, Austin Division
o) Action regarding legislative changes to firearms laws, to include but not be limited to the adoption and implementation of regulations and policies relating to the possession of firearms on and within Williamson County property and facilities.
p) LCRA's proposed Leander to Round Rock 138k-V Transmission Line Project including but not limited to filing as an intervenor.
q) Notice of claim and demand of Morgan Lee Roach.
r) Berry Springs Park and Preserve pipeline
s) Discuss, consider, and take appropriate action regarding the handling, including but not limited to, the negotiating and approval of settlement offers, of subrogation claims related to medical claims incurred during the County's contract with Allegiance Benefit Plan Management (TPA).
t) Discuss requirements related to health benefit plan.
u) Case No. 1:16-cv-00505-LY, Saturn v. Barnett et al, In The United States District Court For The Western District of Texas-Austin Division
v) Civil Action No. 1:16-cv-1023 LY, Brian Carrier v. Lt. McKnight, et al, In The United States District Court For The Western District Of Texas, Austin Division
w) Cause No. 1JC-16-1540; *Roy Earl Briggs v. Lt. Doug Wheless,* In The Justice Court Precinct 1, Williamson County, Texas
x) Civil Action No. 1:16-cv-01185-SS-ML, *Jose Refugio Fernandez-Madrid v. Keefe Commissary and the Williamson County Sheriff,* In the United States District Court for the Western District of Texas – Austin Division
y) Law relating requests for the closure, abandonment or vacation of roadway(s) in the Woodland Park Subdivision.
z) Civil Action No. Case 1:17-cv-00068; Dennis Farmer & Linda Schlueter v. Williamson County and Deputy Damon Grant; In The United States District Court for the Western District of Texas, Austin Division

44. Discuss, consider and take appropriate action regarding the appointment, employment, evaluation, reassignment, duties, discipline and/or dismissal of Williamson County officers, directors or employees, including but not limited to any necessary action pertaining to conducting annual reviews of department heads and appointed officials.

45. Comments from Commissioners.

46. 1:00 Recess - Workshop to Discuss Unallocated

_____
Dan A. Gattis, County Judge

This notice of meeting was posted in the locked box located on the south side of the Williamson County Courthouse, a place readily accessible to the general public at all times, on the _____ day of _____, 2017 at _____ and remained posted for at least 72 continuous hours preceding the scheduled time of said meeting.

Commissioners Court - Regular Session **5.**

Meeting Date: 04/04/2017

Line Item Transfer

Submitted By: Ashlie Koenig, Budget Office

Department: Budget Office

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on a line item transfer for the District Attorney.

Background

This transfer will move funding from a part time line item to a temporary/seasonal line to allow additional discovery requests to be processed as approved in Commissioners Court on 3/7/17.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0440-001101	DA/PT Salaries	$10,073.70
To	0100-0440-001107	DA/Temp-Seasonal	$10,073.70

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/29/2017 01:41 PM
Form Started By: Ashlie Koenig		Started On: 03/29/2017 11:10 AM
Final Approval Date: 03/29/2017		

Commissioners Court - Regular Session **6.**

Meeting Date: 04/04/2017

Line Item Transfer

Submitted By: Ashlie Koenig, Budget Office

Department: Budget Office

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on a line item transfer for the District Attorney.

Background

This transfer will move funding from law enforcement unallocated into an overtime line item to facilitate processing of a backlog of files/cases as approved in Commissioners Court on 3/7/17.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0440-001105	DA/LE Salaries	$21,774.45
To	0100-0440-001110	DA/Overtime	$21,774.45

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/29/2017 01:41 PM
Form Started By: Ashlie Koenig		Started On: 03/29/2017 11:13 AM
Final Approval Date: 03/29/2017		

Commissioners Court - Regular Session **7.**

Meeting Date: 04/04/2017

Line item transfer for the Tax Assessor Collector.

Submitted For: Larry Gaddes **Submitted By:** Judy Kocian, County Tax Assessor Collector

Department: County Tax Assessor Collector

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action to approve a line item transfer for the Tax Assessor/Collector.

Background

Professional services are being utilized for assistance in updating the Tax Assessor/Collector's office strategic plan. Our current strategic plan is over six years old. We feel that a professional who has developed, prepared and guided many companies through the strategic planning process can assist our office in establishing an updated strategic plan which will enhance our mission statement and accomplish the goals of the Tax Assessor/Collector's office.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0499-004208	Internet Cloud Solutions	$3300.00
To	0100-0499-004100	Professional Services	$3300.00

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/24/2017 09:41 AM
Budget Office	Ashlie Koenig	03/24/2017 10:16 AM
Form Started By: Judy Kocian		Started On: 03/24/2017 08:32 AM
Final Approval Date: 03/24/2017		

Commissioners Court - Regular Session **8.**

Meeting Date: 04/04/2017

Asset Auction 4-4-2017

Submitted By: Jayme Jasso, Purchasing

Department: Purchasing

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on authorizing the disposal of various county assets through auction including (1) White Metal records rack, (1) Cash Box, (3) Mice, (10) Note card holders, various speakers, (7) Chairs, (4) Computers, (4) Monitors, (1) Panasonic white board, (1) Metal cabinet, (1) Printer, (1) 2007 Orange Wanco Traffic sign, (2) 1999 Gray Trial Kings, trailer, (1) 2010 Ford Crown Vic (see attached lists) pursuant to Tx. Local Gov't code 263.152.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Vehicle auction

Asset Auction

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 10:21 AM
Form Started By: Jayme Jasso		Started On: 03/30/2017 08:58 AM
Final Approval Date: 03/30/2017		

Williamson County
Vehicle Status Change Form

RECEIVED
MAR 22 2017

To be completed by **department** releasing vehicle:

1) Identify Vehicle:

5F12S161561004202	210	2621
Vehicle Identification Number	Department	Door Number

9062376	2007	WANCO	WTLMB-SLL	ORANGE
License Plate Number	Year	Make	Model	Color

2) Reason for Status Change:

☒ Accident

Received: 1. Williamson County Fleet Incident/Crash/Vandalism Report
2. The Official Accident Report – N/A due to storm damage, no other entity involved
3. A Vehicle Insurance / Litigation Form

☐ High Mileage: List actual mileage _____

☐ Not mechanically sound _____

☒ Other: Explain: Blew over during a wind storm. Not cost effective to repair damages.

3) Elected Official/Department Head/Authorized Staff

Print Name Terron Everitson Signature [signature] Date 10/11/16

To be completed by **Fleet Services Manager:**

1) Method of Status Change: This vehicle is to be considered for: (Select one)

- ☒ SALE at the earliest auction
- ○ SALVAGE for parts
- ○ TRADE-IN for new assets of same general type for the county
- ○ SALE to a government entity / civil or charitable organization in the county at fair market value
- ○ TRANSFER between county departments
- ○ Other

Print Name R Robbins Signature [signature] Date 10/11/16

To be completed by **Human Resources Analyst:**

All applicable accident paperwork has been received and there is no litigation pending on this unit. It has been cleared for retirement.

HR Release Authorization: [signature]

To be completed by **Budget Office** (only for transfers):

Transfer has been reviewed and approved:

Signature: _____

All forms must be routed to the County Auditor's Office once the final authorization and approval have been received.

Williamson County
Vehicle Status Change Form

To be completed by **department** releasing vehicle:

1) Identify Vehicle:

1TKS04026XM027359	210	UF9904
Vehicle Identification Number	Department	Door Number

9064144	1999	TRAIL KING	TK54BDU	GRAY
License Plate Number	Year	Make	Model	Color

2) Reason for Status Change:

☐ Accident

Received: 1. Williamson County Fleet Incident/Crash/Vandalism Report
2. The Official Accident Report
3. A Vehicle Insurance / Litigation Form

MAR 22 2017

☐ High Mileage: List actual mileage 143592

☐ Not mechanically sound

☒ Other: Explain: Has reached operational life expectancy

3) Elected Official/Department Head/Authorized Staff

Print Name Terron Evertson Signature Terron Evertson Date 10/11/16

To be completed by **Fleet Services Manager:**

1) Method of Status Change: This vehicle is to be considered for: (Select one)

- (X) SALE at the earliest auction
- ( ) SALVAGE for parts
- ( ) TRADE-IN for new assets of same general type for the county
- ( ) SALE to a government entity / civil or charitable organization in the county at fair market value
- ( ) TRANSFER between county departments
- ( ) Other

Print Name [illegible] Signature [illegible] Date 10/11/16

To be completed by **Human Resources Analyst:**

All applicable accident paperwork has been received and there is no litigation pending on this unit. It has been cleared for retirement.

HR Release Authorization: [illegible]

To be completed by **Budget Office** (only for transfers):

Transfer has been reviewed and approved:

Signature:

All forms must be routed to the County Auditor's Office once the final authorization and approval have been received.

Williamson County
Vehicle Status Change Form

MAR 22 2017

To be completed by **department** releasing vehicle:

1) Identify Vehicle:

1TKS04024XM027358	210	UF9923
Vehicle Identification Number	Department	Door Number

9064145	1999	TRAIL KING	TK54BDU	GRAY
License Plate Number	Year	Make	Model	Color

2) Reason for Status Change:

☐ Accident

Received: 1. Williamson County Fleet Incident/Crash/Vandalism Report
2. The Official Accident Report
3. A Vehicle Insurance / Litigation Form

☐ High Mileage: List actual mileage 101489

☐ Not mechanically sound

☒ Other: Explain: Has reached operational life expectancy

3) Elected Official/Department Head/Authorized Staff

Print Name Terron Evertson Signature [signature] Date 10/11/16

To be completed by **Fleet Services Manager:**

1) Method of Status Change: This vehicle is to be considered for: (Select one)

- (•) SALE at the earliest auction
- ( ) SALVAGE for parts
- ( ) TRADE-IN for new assets of same general type for the county
- ( ) SALE to a government entity / civil or charitable organization in the county at fair market value
- ( ) TRANSFER between county departments
- ( ) Other

Print Name R Romero Signature [signature] Date 10/11/16

To be completed by **Human Resources Analyst:**

All applicable accident paperwork has been received and there is no litigation pending on this unit. It has been cleared for retirement.

HR Release Authorization: [signature]

To be completed by **Budget Office** (only for transfers):

Transfer has been reviewed and approved:

Signature:

All forms must be routed to the County Auditor's Office once the final authorization and approval have been received.

Williamson County
Vehicle Status Change Form

To be completed by **department** releasing vehicle:

1) Identify Vehicle:

2FABP7BV7AX124328	560	SA1010
Vehicle Identification Number	Department	Door Number

1104082	2010	FORD	CROWN VIC	BLK/WHT
License Plate Number	Year	Make	Model	Color

2) Reason for Status Change:

☐ Accident

Received: 1. Williamson County Fleet Incident/Crash/Vandalism Report MAR 22 2017

2. The Official Accident Report

3. A Vehicle Insurance / Litigation Form

☒ High Mileage: List actual mileage 135,875

☐ Not mechanically sound

☐ Other: Explain

3) Elected Official/Department Head/Authorized Staff

Print Name L.C. 'Tony' Marshall Signature [signature] Date 10-19-16

To be completed by **Fleet Services Manager:**

1) Method of Status Change: This vehicle is to be considered for: (Select one)

- X SALE at the earliest auction
- ○ SALVAGE for parts
- ○ TRADE-IN for new assets of same general type for the county
- ○ SALE to a government entity / civil or charitable organization in the county at fair market value
- ○ TRANSFER between county departments
- ○ Other

Print Name R Rodgers Signature [signature] Date 10/20/16

To be completed by **Human Resources Analyst:**

All applicable accident paperwork has been received and there is no litigation pending on this unit. It has been cleared for retirement.

HR Release Authorization: [signature]

To be completed by **Budget Office** (only for transfers):

Transfer has been reviewed and approved:

Signature:

All forms must be routed to the County Auditor's Office once the final authorization and approval have been received.

FrmAudASCF01 revision 07/2014

Williamson County
Asset Status Change Form

Print Form

The following asset(s) is(are) considered for: (select one)

- ○ TRANSFER bet ween county departments
- ◉ SALE at the earliest auction *
- ○ TRADE-IN for new assets of similar type for the county
- ○ DONATION to a non-county entity
- ○ DESTRUCTION due to Public Health / Safety
- ○ SALE to a government entity / civil or charitable organization in the county at fair market value

Asset List:

Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non-Working)
1	White Metal Records Rack	N/A		Working
				Non-Working

Parties involved:

FROM (Transferor Department): Williamson County Clerk

MAR 17 2017

Transferor - Elected Official/Department Head/ Authorized Staff:

Nancy E. Rister
Print Name

Nancy E. Rister
Signature

March 16, 2017
Date

Contact Person:

Sean L. Johnson
Print Name

+1 (512) 943-1549
Phone Number

TO (Transferee Department/Auction/Trade-in/Donee): AUCTION

Transferee - Elected Official/Department Head/ Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-in, no signature is necessary.)

Print Name

Signature

Date

Contact Person:

Print Name

Phone Number

* If the above asset(s) is (are) listed for sale at auction and no bids are made, the Purchasing Director may dispose of or donate this (these) asset(s). A list of the (these) asset(s) to be donated or disposed of will be sent to the Auditor's Office with a date of donation or disposal.

Forward to County Auditor's Office

This Change Status was approved as agenda item # _____ in Commissioner's Court on _____

If for Sale, the asset(s) was(were) delivered to warehouse on _____ by _____

FrmAudASCF01 revision 07/2014

Williamson County
Asset Status Change Form

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- ○ DESTRUCTION due to Public Health / Safety
- ○ SALE to a government entity / civil or charitable organization in the county at fair market value

Asset List:

Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non-Working)
1	Cash box	N/A	N/A	Non-Working
1	Various items: 3 mouse, 10 note holders, speakers	N/A	N/A	Non-Working
23	Task chairs; one black and one maroon fabric	N/A	N/A	Working
1	Guest chair: maroon fabric	N/A	N/A	Working
				Working

Parties involved:

FROM (Transferor Department): Tax Assessor/Collector

MAR 17 2017

Transferor - Elected Official/Department Head/ Authorized Staff:

Larry Gaddes
Print Name

Signature

March 16, 2017
Date

Contact Person:

Judy Kocian
Print Name

+1 (512) 943-1954
Phone Number

TO (Transferee Department/Auction/Trade-in/Donee): Auction

Transferee - Elected Official/Department Head/ Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-in, no signature is necessary.)

Tony Hill
Print Name

Signature

Date

Contact Person:

Print Name

Phone Number

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Forward to County Auditor's Office

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FrmAudASCF01 revision 07/2014

Williamson County
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- ○ DESTRUCTION due to Public Health / Safety
- ○ SALE to a government entity / civil or charitable organization in the county at fair market value

Asset List:

Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non-Working)
1	Computer, DELL OptiPlex 740	289MDC1	UK	Working
1	Monitor, DELL	CN-0C730C-71623-9CM-4085	UK	Working
1	Monitor, DELL	CN-OCC299-64180-6C1-OEUL	UK	Working
1	Monitor, DELL	CN-0CC299-64180-66C1-OEZL	UK	Working
1	Monitor, DELL	CN-OCC352-64180-696-1TDC	UK	Working

Parties involved:

FROM (Transferor Department): Animal Services

Transferor - Elected Official/Department Head/ Authorized Staff:

Cheryl Schneider
Print Name

Cheryl Schneider
Signature

Date

Contact Person:

Linda Gunter
Print Name

943-3567
Phone Number

TO (Transferee Department/Auction/Trade-In/Donee): Auction

Transferee - Elected Official/Department Head/ Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-in, no signature is necessary.)

Print Name

Signature

Date

Contact Person:

Print Name

Phone Number

RECEIVED
MAR 21 2017
AUDITOR'S OFFICE
WILLIAMSON COUNTY, TEXAS

* If the above asset(s) is (are) listed for sale at auction and no bids are made, the Purchasing Director may dispose of or donate this (these) asset(s). A list of the (these) asset(s) to be donated or disposed of will be sent to the Auditor's Office with a date of donation or disposal.

Forward to County Auditor's Office

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FrmAudASCF01 revision 07/2014

Print Form

Williamson County
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- ○ DESTRUCTION due to Public Health / Safety
- ○ ..E to a government entity /.civil or charitable organization in ..ne county at fair market value

Asset List:

Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Asset: (Working, Non-Working)
1	Panasonic KX-B530	n/a	n/a	working

Parties involved:

FROM (Transferor Department): 368th District Court

Transferor - Elected Official/Department Head/ Authorized Staff:

Jennifer Tredemeyer
Print Name

Tredemeyer 3/21/17
Signature Date

Contact Person:

Jennifer Tredemeyer
Print Name

(512) 943-1368
Phone Number

TO (Transferee Department/Auction/Trade-In/Donee): Auction

Transferee - Elected Official/Department Head/ Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-In, no signature is necessary.)

Print Name

Signature Date

Contact Person:

Print Name

Phone Number

RECEIVED
MAR 22 2017
AUDITOR'S OFFICE
WILLIAMSON COUNTY, TEXAS

* If the above asset(s) is (are) listed for sale at auction and no bids are made, the Purchasing Director may dispose of or donate this (the asset(s). A list of the (these) asset(s) to be donated or disposed of will be sent to the Auditor's Office with a date of donation or disposal

Forward to County Auditor's Office

This Change Status was approved as agenda item # _____ In Commissioner's Court on _____

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FrmAudASCF01 revision 07/2014

Williamson County
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Asset List:

Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non-Working)
1	PANASONIC CF-30 TOUGHBOOK	211057-9HKYA77793		Working

Parties involved:

FROM (Transferor Department): SHERIFF

Transferor - Elected Official/Department Head/ Authorized Staff:

Chief Tim Ryle
Print Name

T Ryle
Signature

Date

Contact Person:

Starla Hall
Print Name

512-943-5270
Phone Number

TO (Transferee Department/Auction/Trade-in/Donee): AUCTION

Transferee - Elected Official/Department Head/ Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-in, no signature is necessary.)

Print Name

Signature

Date

Contact Person:

RECEIVED
MAR 22 2017
AUDITOR'S OFFICE
WILLIAMSON COUNTY, TEXAS

Print Name

Phone Number

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FrmAudASCF01 revIsion 07/2014

Williamson County
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- ○ DESTRUCTION due to Public Health / Safety
- SALE to a government entity / civil or charitable organization in the county at fair market value

Asset List:

Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non-Working)
1	Old four-drawer green metal cabinet key missing	Tx HEA 12219		Working

Parties involved:

FROM (Transferor Department): Commissioner Terry Cook - Jester Annex Suite 110 (Printer Room)

Transferor - Elected Official/Department Head/ Authorized Staff:

Terry Cook
Print Name

Terry Cook
Signature

March 17, 2017
Date

Contact Person:

Doris Sanchez
Print Name

+1 (512) 244-8610
Phone Number

TO (Transferee Department/Auction/Trade-in/Donee): AUCTION

Transferee - Elected Official/Department Head/ Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-in, no signature is necessary.)

Print Name

Signature

Date

Contact Person:

Print Name

Phone Number

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RECEIVED
MAR 22 2017
AUDITOR'S OFFICE
WILLIAMSON COUNTY, TEXAS

Forward to County Auditor's Office

This Change Status was approved as agenda item # _____ in Commissioner's Court on _____

If for Sale, the asset(s) was(were) delivered to warehouse on _____ by _____

FrmAudASCF01 revision 07/2014

Williamson County
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- ○ DESTRUCTION due to Public Health / Safety
- ○ SALE to a government entity / civil or charitable organization in the county at fair market value

Asset List:

Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non-Working)
1	Dell Optiplex 740	F9T5QD1		Working
1	Dell Optiplex 740	G44MTJ1		Working
1	HP Laserjet 2430n	CNGJC98687		

Parties involved:

FROM (Transferor Department): ITS

Transferor - Elected Official/Department Head/ Authorized Staff:

Tammy McCulley
Print Name

Tammy McCulley
Signature

3-22-17
Date

Contact Person:

Tony Hill
Print Name

943-3314
Phone Number

TO (Transferee Department/Auction/Trade-In/Donee): Auction

Transferee - Elected Official/Department Head/ Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-In, no signature is necessary.)

Print Name

Signature

Date

Contact Person:

Tony Hill
Print Name

943-3314
Phone Number

RECEIVED
MAR 23 2017
AUDITOR'S OFFICE
WILLIAMSON COUNTY, TEXAS

* If the above asset(s) is (are) listed for sale at auction and no bids are made, the Purchasing Director may dispose of or donate this (these) asset(s). A list of the (these) asset(s) to be donated or disposed of will be sent to the Auditor's Office with a date of donation or disposal.

Forward to County Auditor's Office

This Change Status was approved as agenda Item # _____ in Commissioner's Court on _____

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FrmAudASCF01 revision 07/2014

Williamson County
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- ○ SALE to a government entity / civil or charitable organization in the county at fair market value

Asset List:

Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non-Working)
1	Dell Poweredge 2950	CZYMWC1		Working
1	Dell Poweredge 2970	CL44JM1		Working
1	Dell Poweredge R710	DQSWJM1		Working
	Asst. rails			

Parties involved:

FROM (Transferor Department): Technology Services

Transferor - Elected Official/Department Head/ Authorized Staff:

Tammy McCulley
Print Name

Tammy McCulley 3/23/17
Signature Date

Contact Person:

Rory Tierney
Print Name

943.1455
Phone Number

TO (Transferee Department/Auction/Trade-in/Donee): Auction

Transferee - Elected Official/Department Head/ Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-in, no signature is necessary.)

Print Name

Signature Date

Contact Person:

Print Name

Phone Number

RECEIVED
MAR 24 2017
AUDITOR'S OFFICE
WILLIAMSON COUNTY, TEXAS

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Forward to County Auditor's Office

This Change Status was approved as agenda item # _____ In Commissioner's Court on _____

If for Sale, the asset(s) was(were) delivered to warehouse on _____ by _____

Commissioners Court - Regular Session **9.**

Meeting Date: 04/04/2017

Asset Transfer 4-4-2017

Submitted By: Jayme Jasso, Purchasing

Department: Purchasing

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on authorizing the disposal of (3) Cannon Scanners through inter-departmental transfer (see attached list) pursuant to Tx. Local Gov't code 263.152.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Asset Transfer

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 09:40 AM
Form Started By: Jayme Jasso		Started On: 03/30/2017 09:20 AM
Final Approval Date: 03/30/2017		

FrmAudASCF01 revision 07/2014

Williamson County
Asset Status Change Form

Print Form

The following asset(s) is(are) considered for: (select one)

- (•) TRANSFER bet ween county departments
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- ( ) DESTRUCTION due to Public Health / Safety
- ( ) SALE to a government entity / civil or charitable organization in the county at fair market value

Asset List:

Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non-Working)
3	Cannon Scanner	DW309590		Working
		FB314589		Working
		DW310740		Working

Parties involved:

FROM (Transferor Department): Auction

Transferor - Elected Official/Department Head/ Authorized Staff:

Tony Hill
Print Name

Signature

3/10/2017
Date

Contact Person:

Tony Hill
Print Name

943-3314
Phone Number

TO (Transferee Department/Auction/Trade-in/Donee): DA

Transferee - Elected Official/Department Head/ Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-in, no signature is necessary.)

Print Name

Signature

Date

Contact Person:

Print Name

Phone Number

RECEIVED
MAR 13 2017
AUDITOR'S OFFICE
WILLIAMSON COUNTY, TEXAS

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Forward to County Auditor's Office

This Change Status was approved as agenda item # _____ in Commissioner's Court on _____

If for Sale, the asset(s) was(were) delivered to warehouse on _____ by _____

Commissioners Court - Regular Session **10.**

Meeting Date: 04/04/2017

Compensation Items

Submitted For: Tara Raymore **Submitted By:** Kristy Sutton, Human Resources

Department: Human Resources

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on approving compensation changes, position titles changes, position grade changes and any corresponding line item transfers.

Background

See attached documentation for details.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Comp Item

Form Review

Inbox	Reviewed By	Date
Human Resources (Originator)	Tara Raymore	03/30/2017 11:04 AM
County Judge Exec Asst.	Wendy Coco	03/30/2017 12:16 PM
Form Started By: Kristy Sutton		Started On: 03/29/2017 02:39 PM
Final Approval Date: 03/30/2017		

Department	PCN	EE ID	Budget Amount	*Requested Amount	Change Amount	% Change	Reason for Change	Available Funds	Earliest Oracle Effective Date
Road and Bridge/DOI	1512	01037	$66,551.16	$67,881.06	$1,329.90	2.00%	Merit	Unallocated	3/24/2017
Road and Bridge	1520	Vacant	$33,500.00	N/A	N/A	N/A	Title, Grade change: Operator II (B.19) to Operator I (B.17)	N/A	3/31/2017
District Attorney	1790	Vacant	$80,665.16	$108,942.62	$28,277.46	35.06%	Salary increase vacant position	PCN 0071, 0086 & Unallocated	3/31/2017
District Attorney	0071	Vacant	$108,942.62	$97,786.63	-$11,155.99	-10.24%	Salary decrease vacant position	To PCN 1790	3/31/2017
District Attorney	0086	Vacant	$91,499.98	$80,665.16	-$10,834.82	-11.84%	Salary decrease vacant position	To PCN 1790	3/31/2017
Justice of the Peace 1	0978	Vacant	$31,836.46	$32,473.19	$636.73	2.00%	Salary increase vacant position	Unallocated	3/31/2017

*Amount may vary slightly due to Oracle rounding

Commissioners Court - Regular Session **11.**

Meeting Date: 04/04/2017

Standard Agreement for County Sheriff

Submitted For: Robert Chody **Submitted By:** Starla Hall, Sheriff

Department: Sheriff

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take any appropriate action regarding approval and receipt of Standard Agreement with Ranch at Cypress Creek MUD #1 regarding off-duty contracting of County Sheriff Deputies

Background

This agreement gives permission for Ranch at Cypress Creek MUD #1 to contract County Deputies in a private capacity and the County to invoice Cypress Creek MUD for deputies' vehicle usage. We are updating our agreements since Sheriff Chody took office on January 1st.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Ranch at Cypress Creek MUD #1

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 07:59 AM
Form Started By: Starla Hall		Started On: 03/29/2017 01:43 PM
Final Approval Date: 03/30/2017		

STATE OF TEXAS	§	**STANDARD AGREEMENT WITH**
	§	**LOCAL GOVERNMENTAL ENTITY**
	§	**REGARDING OFF-DUTY**
	§	**CONTRACTING OF COUNTY**
COUNTY OF WILLIAMSON	§	**SHERIFF DEPUTIES**

This interlocal agreement (hereinafter, the "AGREEMENT") is entered into by and between the local governmental entity set forth on the signature page below (hereinafter, "LGE") in the State of Texas, and Williamson County, Texas (hereinafter, "COUNTY") a political subdivision of the State of Texas, and the Williamson County SHERIFF's Office set forth on the signature page below (hereinafter, "SHERIFF'S OFFICE").

For and in consideration of the permission given by COUNTY for the LGE to contract in a private capacity DEPUTIES of the SHERIFF'S OFFICE (hereinafter "DEPUTIES"), while DEPUTIES are not on duty with and for the COUNTY, it is hereby agreed as follows:

1. It is mutually agreed that while the DEPUTIES are working for the LGE, the DEPUTIES' primary responsibility is the enforcement of Federal and State laws and COUNTY Ordinances or Regulations to protect life and property and to keep the peace. The DEPUTIES cannot enforce "district policies" or "house rules" of the District. The DEPUTIES shall enforce District Rules and Regulations adopted pursuant to Section 54.205(4) of the Texas Water Code and published in accordance with Sections 54.206 through 54.208 of the Texas Water Code provided that a violation of such District Rules and Regulations also constitutes a crime under the Texas Penal Code. DEPUTIES are at all times subject to the rules and policies of the SHERIFF'S OFFICE. ***LGE expressly acknowledges and agrees that such DEPUTIES are at all times independent contractors of LGE when contracted by the LGE.***

2. It is understood by the LGE that the COUNTY shall retain the right to withdraw at any time its permission for the DEPUTIES to work in a private capacity. If the permission of the COUNTY is withdrawn, the LGE agrees to terminate its contractor relationships with DEPUTIES. The LGE, as part of this AGREEMENT, binds itself to release and hold harmless the COUNTY from any liability or claim for damages in the event such permission is withdrawn by the COUNTY.

3. Prior to the beginning of DEPUTIES employment with the LGE, the LGE shall obtain a comprehensive general liability insurance policy from a company authorized to do business in the State of Texas with minimum amounts of Ten Thousand Dollars ($10,000) per occurrence for property damage, One Hundred Thousand Dollars ($100,000) per person, and Three Hundred Thousand Dollars

($300,000) per occurrence for personal injury. COUNTY SHALL BE NAMED AS AN ADDITIONAL INSURED UNDER THIS COVERAGE.

4. The term of this AGREEMENT shall begin on the _____ _____, 201___ and shall terminate on September 30, 2017, and will have two additional one (1) year automatic renewals. The AGREEMENT will automatically renew on October 1, 2017, and October 1, 2018. It must be revisited with proper approvals from the applicable governing bodies and elected official(s) for FY2020.

5. State law requires that law enforcement personnel conducting "off-duty" work must be both "full time" and "entitled" to fringe benefits. Tex. Occup. Code Sec. 1702.322(A) & (B)(i). Thus, part-time deputies and "reserve" officers may not conduct "off-duty" work.

6. The COUNTY agrees that each of the DEPUTIES will be properly insured with automobile liability insurance while operating the patrol vehicle in accordance with Section 612.005(b) of the Texas Government Code, and any other applicable laws.

7. COUNTY agrees to invoice LGE for the reimbursement amounts for DEPUTIES' vehicle usage at the rate of $8.00 per hour per vehicle (to cover LGE's fair share of costs for fuel, maintenance, and yearly premiums on automobile insurance). The LGE acknowledges that the above described reimbursement rate will not totally cover the entire costs incurred by COUNTY for the fully equipped patrol vehicle that is being utilized by such DEPUTIES in the LGE's Area; provided, however, COUNTY deems such unrecovered costs for the fully equipped patrol vehicle to be of a public benefit to the citizens of Williamson County.

8. LGE agrees to log and maintain all times that vehicles are allotted to off-duty work, whether actually used or parked, for each vehicle used by DEPUTIES on a monthly basis. LGE shall provide such vehicle time records to COUNTY and SHERIFF'S OFFICE no later than the end of each quarter (end of month for each of the following: March, June, September, and December). COUNTY will invoice based on the total usage and rate, as set forth in Paragraph 7, and LGE will pay such invoice pursuant Chapter 2251 of the Texas Government Code ("Texas Prompt Payment Act"). Reporting must be submitted to:

SHERIFF'S OFFICE: At the address set forth on the signature page below.

COUNTY: Williamson County Auditor's Office
Attn: Finance Director
710 Main Street, Suite 301
Georgetown, Texas 78626

9. LGE agrees that it shall pay deputies directly and file 1099 forms with the Internal Revenue Service.

10. Each party to this AGREEMENT, in the performance of this AGREEMENT, shall act in an individual capacity and not as agents, employees, partners, joint ventures or associates of one another.

11. Nothing in this AGREEMENT shall be deemed to waive, modify or amend any legal defense available at law or in equity to COUNTY, its past or present officers, employees, or agents, nor to create any legal rights or claim on behalf of any third party. COUNTY does not waive, modify, or alter to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.

LGE:

Name of LGE: _____

Signature: RANCH AT CYPRESS CREEK MUD NO. 1

Printed Name: Chris Schneider

Title: Vice President

Date: 03/22/2017 , 20

WILLIAMSON COUNTY SHERIFF'S OFFICE:

Williamson County Sheriff

Printed Name of Official: Robert Chody

Signature of Official: _____

Date: 3-27-17 , 2017

Address of Office: 508 S. Rock St.
Georgetown, TX 78626

COUNTERPART SIGNATURE PAGE TO STANDARD AGREEMENT WITH LOCAL GOVERNMENTAL ENTITY REGARDING OFF-DUTY SERVICES OF COUNTY DEPTUIES

TO BE EXECUTED BY COUNTY COMMISSIONERS COURT FOR CONFIRMATION OF BUDGETARY AUTHORIZATION RELATED TO USE OF VEHICLES FOR OFF-DUTY WORK[1]

WILLIAMSON COUNTY COMMISSIONERS COURT:

By: _____

Dan A. Gattis,
Williamson County Judge &
Presiding Officer, Williamson County Commissioners Court
710 Main Street, Suite 105
Georgetown, Texas 78626

[1] Including, but not limited to fuel, insurance, and maintenance of county-owned assets.

Commissioners Court - Regular Session **12.**

Meeting Date: 04/04/2017

Discuss consider and take appropriate action on approval of the final plat for the Parkside at Mayfield Ranch Sec 12 subdivision - Pct 3

Submitted For: Terron Evertson **Submitted By:** Patrick Hughes, Unified Road System

Department: Unified Road System

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on approval of the final plat for the Parkside at Mayfield Ranch Sec 12 subdivision - Pct 3.

Background

This is the next section of the Parkside at Mayfield Ranch development. Section 12 consists of 58 single-family lots and 3,137 feet of new public roadway.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Final Plat - Parkside at Mayfield Ranch Sec 12

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/24/2017 08:01 AM
Form Started By: Patrick Hughes		Started On: 03/23/2017 04:39 PM
Final Approval Date: 03/24/2017		

PLAT OF

PARKSIDE AT MAYFIELD RANCH SECTION 12

SCALE: 1"=100'

0 100' 200' 300' 400'

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	CHORD BRNG.	CHORD
C1	223.20	1196.20	10°41'27"	S26°09'14"E	222.87
C2	23.56	15.00	90°00'00"	S01°34'26"E	21.21
C3	128.88	320.00	23°04'31"	N54°55'44"E	128.01
C4	55.92	320.00	10°00'45"	N48°23'51"E	55.85
C5	60.10	320.00	10°45'37"	N58°47'02"E	60.01
C6	12.86	320.00	2°18'09"	N65°18'55"E	12.86
C7	37.95	25.00	86°58'41"	N70°02'40"W	34.41
C8	82.51	1266.20	3°44'01"	N28°25'20"W	82.50
C9	39.29	25.00	90°02'49"	N14°44'04"E	35.37
C10	38.72	25.00	88°44'33"	N75°52'15"W	34.97
C11	112.72	395.43	16°19'55"	N51°35'31"E	112.33
C12	59.25	395.43	8°35'06"	N47°43'07"E	59.20
C13	53.46	395.43	7°44'48"	N55°53'05"E	53.42
C14	98.46	345.43	16°19'55"	N51°35'31"E	98.13
C15	23.56	15.00	90°00'00"	N01°34'26"W	21.21
C16	23.56	15.00	90°00'00"	N88°25'34"E	21.21
C17	431.80	300.00	82°28'06"	N02°11'31"E	395.48
C18	29.46	300.00	5°37'33"	N40°36'48"E	29.45
C19	58.44	300.00	11°09'41"	N32°13'10"E	58.35
C20	58.44	300.00	11°09'41"	N21°03'29"E	58.35
C21	58.44	300.00	11°09'41"	N09°53'48"E	58.35
C22	58.44	300.00	11°09'41"	N01°15'54"W	58.35
C23	58.44	300.00	11°09'41"	N12°25'35"W	58.35
C24	58.44	300.00	11°09'41"	N23°35'17"W	58.35
C25	51.70	300.00	9°52'25"	N34°06'20"W	51.63
C26	353.65	250.00	81°03'03"	N02°54'03"E	324.89
C27	63.11	250.00	14°27'47"	N36°11'41"E	62.94
C28	99.93	250.00	22°54'06"	N17°30'45"E	99.26
C29	99.93	250.00	22°54'06"	N05°23'21"W	99.26
C30	90.69	250.00	20°47'05"	N27°13'57"W	90.19
C31	43.17	25.00	98°56'57"	N87°05'57"W	38.01
C32	28.24	25.00	64°43'35"	N06°40'45"W	26.76
C33	6.85	25.00	15°42'10"	N31°11'27"W	6.83
C34	21.39	25.00	49°01'24"	N01°10'20"E	20.74
C35	194.98	50.00	223°25'41"	N86°01'48"W	92.90
C36	70.67	50.00	80°59'14"	N14°48'35"W	64.94
C37	21.39	50.00	24°30'50"	N67°33'37"W	21.23
C38	73.82	50.00	84°35'44"	N57°53'06"E	67.30
C39	29.09	50.00	33°19'52"	N01°04'43"W	28.68
C40	26.69	25.00	61°10'13"	N12°50'28"E	25.44
C41	95.61	335.43	16°19'55"	N51°35'31"E	95.29
C42	23.56	15.00	90°00'00"	N88°25'34"E	21.21
C43	23.56	15.00	90°00'00"	N01°34'26"W	21.21

LINE TABLE		
LINE	BEARING	LENGTH
L1	S58°30'02"W	72.07'
L2	S46°34'26"E	50.00'
L3	S43°25'34"W	51.87'
L4	N59°45'29"E	57.39'
L5	N34°51'32"W	40.44'
L6	N34°51'32"W	61.28'
L7	N43°25'34"E	12.82'
L8	N32°14'33"E	15.16'
L9	N46°34'26"W	55.08'
L10	N05°23'21"W	52.10'
L11	N17°30'45"E	52.10'
L12	N43°20'36"E	42.35'
L13	N43°20'36"E	30.39'
L14	N41°07'29"E	64.40'
L15	N43°25'34"E	85.33'
L16	N46°42'47"E	50.93'
L17	N35°14'07"E	20.49'
L18	N43°25'34"E	60.00'
L19	N43°25'34"E	60.00'
L20	N43°25'34"E	50.61'
L21	N63°29'03"E	10.00'
L22	N40°09'16"E	60.10'
L23	N43°25'34"E	60.00'
L24	N43°25'34"E	60.00'
L25	N51°21'48"E	24.02'
L26	N38°11'36"E	36.36'
L27	N43°25'34"E	60.00'
L28	N43°25'34"E	60.00'
L29	N48°10'28"E	45.69'
L30	N28°46'33"E	14.95'

LINE TABLE		
LINE	BEARING	LENGTH
L31	N43°25'34"E	60.00'
L32	N43°25'34"E	60.00'
L33	N43°25'34"E	39.04'
L34	N53°25'34"E	21.28'
L35	N37°16'04"E	50.52'
L36	N43°25'34"E	60.00'
L37	N43°25'34"E	60.00'
L38	N52°47'19"E	30.69'
L39	N43°53'59"E	29.72'
L40	N44°55'39"E	42.99'
L41	N41°41'50"E	34.05'
L42	N25°13'37"E	16.36'
L43	N46°34'26"W	120.00'
L44	N46°34'26"W	114.76'
L45	N33°14'16"E	28.27'
L46	N34°51'32"W	101.72'
L47	N41°41'50"E	7.53'
L48	N53°25'34"E	9.93'

NEW PUBLIC STREETS:

NAME	LENGTH	DESIGN SPEED (MPH)
FORT HOOD LANE	145'	30
FORT RICHARDSON DRIVE	145'	30
FONTAINEBLEAU STREET	551	25
CROSS TIMBERS DRIVE	1786	30
PARKSIDE PARKWAY	510	30
TOTAL	3137	

ELMER McLESTER, KAREN WUNSCH, ET AL 1.00 ACRE DOC. No. 2010060789 OPRWC

CONSERVATION EASEMENT 1.343 ACRES DOCUMENT No. 2005003748 OPRWC

JAMES B. ALLEN SURVEY, ABS. 36

JOHN T. CHURCH SURVEY ABS. 140

PARKSIDE AT MAYFIELD REMAINDER OF 140.93 ACRES DOCUMENT No. 2007002999 OPRWC

PARKSIDE AT MAYFIELD RANCH LTD.

PARKSIDE AT MAYFIELD RANCH SECTION 14 DOC. No. 2015018874 OPRWC

PARKSIDE AT MAYFIELD RANCH SECTION 11 DOC. No. 2015018807 OPRWC

APPROXIMATE SURVEY LINE JOHN T. CHURCH SURVEY ABS. 140 JAMES S. PATTERSON SURVEY ABS. 504

LOT 70-A, BLOCK U PARKSIDE AT MAYFIELD RANCH SECTION 10 CABINET EE, SLIDES 252-255 PLAT RECORDS OF WILLIAMSON COUNTY

C. BORHO 100 ACRES VOLUME 780, PAGE 62 DRWC

COLTER BORHO & JENA BORHO 2.00 ACRES DOC. No. 2011034766 OPRWC

RIGHT OF WAY DEDICATED BY THIS PLAT

COUNTY ROAD 176

PARKSIDE PARKWAY

FORT HOOD LANE

FORT RICHARDSON DRIVE

CROSS TIMBERS DRIVE

FONTAINEBLEAU STREET

GALVESTON ISLAND LANE

50' WATER LINE EASEMENT TO BRUSHY CREEK MUD BY DOC. No. 2005003749 OPRWC

EASEMENT TO BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT No. 1 VOL. 430, PAGE 664, DRWC

BLOCK U

BLOCK DD

BLOCK CC

BLOCK BB

SECTION 11

POINT OF BEGINNING

APPROXIMATELY N41°55'44"E 1707.97' TO NE CORNER OF JAMES S. PATTERSON SURVEY ABS. 504

PART OF LOT 140 SEE DETAIL A

NOTE:
LOT 140 IS A LIFT STATION EASEMENT, DRAINAGE EASEMENT, PUBLIC UTILITY EASEMENT, AND ACCESS EASEMENT.

LIMITS OF FLOOD ZONE A AS SHOWN ON FLOOD INSURANCE RATE MAP FOR WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS MAP NUMBER 48491C0460E, EFFECTIVE DATE SEPTEMBER 26, 2008

SITE DATA:
TOTAL AREA: 16.83 ACRES
58 SINGLE FAMILY LOTS
2 LANDSCAPE AND OPEN SPACE LOTS
1 LIFT STATION LOT

PROPERTY OWNER:
PARKSIDE AT MAYFIELD RANCH, LTD

DETAIL A
SCALE: 1" = 50'

NOTES:

1. THE MINIMUM LOWEST FINISHED FLOOR ELEVATION SHALL BE ONE FOOT HIGHER THAN THE HIGHEST SPOT ELEVATION THAT IS LOCATED WITHIN FIVE OF THE PERIMETER OF THE BUILDING, OR ONE FOOT ABOVE THE BASE FLOOD ELEVATION (BFE), WHICHEVER IS HIGHER..
2. NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTION IS MADE TO AN APPROVED PUBLIC SEWER SYSTEM.
3. NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL WATER SATISFACTORY FOR HUMAN CONSUMPTION IS AVAILABLE FROM A SOURCE IN ADEQUATE AND SUFFICIENT SUPPLY.
4. NO STRUCTURE OR LAND IN THIS PLAT SHALL HEREAFTER BE LOCATED OR ALTERED WITHOUT FIRST OBTAINING A DEVELOPMENT PERMIT FROM THE WILLIAMSON COUNTY FLOOD PLAIN ADMINISTRATOR.
5. WATER SERVICE WILL BE PROVIDED BY THE CITY OF GEORGETOWN. SEWER SERVICE WILL BE PROVIDED BY THE PARKSIDE AT MAYFIELD RANCH M.U.D..
6. LOT 170, BLOCK U; AND LOT 12, BLOCK DD, ARE FOR LANDSCAPE AND OPEN SPACE PURPOSES AND WILL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION OR MUD. NO SINGLE FAMILY DWELLINGS ARE PERMITTED ON THESE LOTS. LOT 140, BLOCK U, IS FOR LIFT STATION, PUBLIC UTILITY EASEMENT, DRAINAGE EASEMENT AND ACCESS EASEMENT PURPOSES. NO SINGLE FAMILY DWELLINGS ARE PERMITTED ON THIS LOT.
7. ALL SIDEWALKS ARE TO BE MAINTAINED BY EACH OF THE ADJACENT PROPERTY OWNERS.
8. DRIVEWAY ACCESS TO COUNTY ROAD 176 IS PROHIBITED.
9. ALL PUBLIC ROADWAYS AND EASEMENTS AS SHOWN O THIS PLAT ARE FREE OF LIENS.

LEGEND:

- o = SET IRON ROD WITH "RJ SURVEYING" CAP
- ● = FOUND IRON ROD
- ▸ = NAIL FOUND
- FP = FENCE POST
- PO = POST OAK
- BL = BUILDING SETBACK LINE
- PUE = PUBLIC UTILITY EASEMENT
- DE = DRAINAGE EASEMENT
- FE = FENCE EASEMENT
- OPRWC = OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
- DRWC = DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
- (U) = BLOCK NAME

DATE: NOV. 12, 2015 SCALE: 1" = 100'

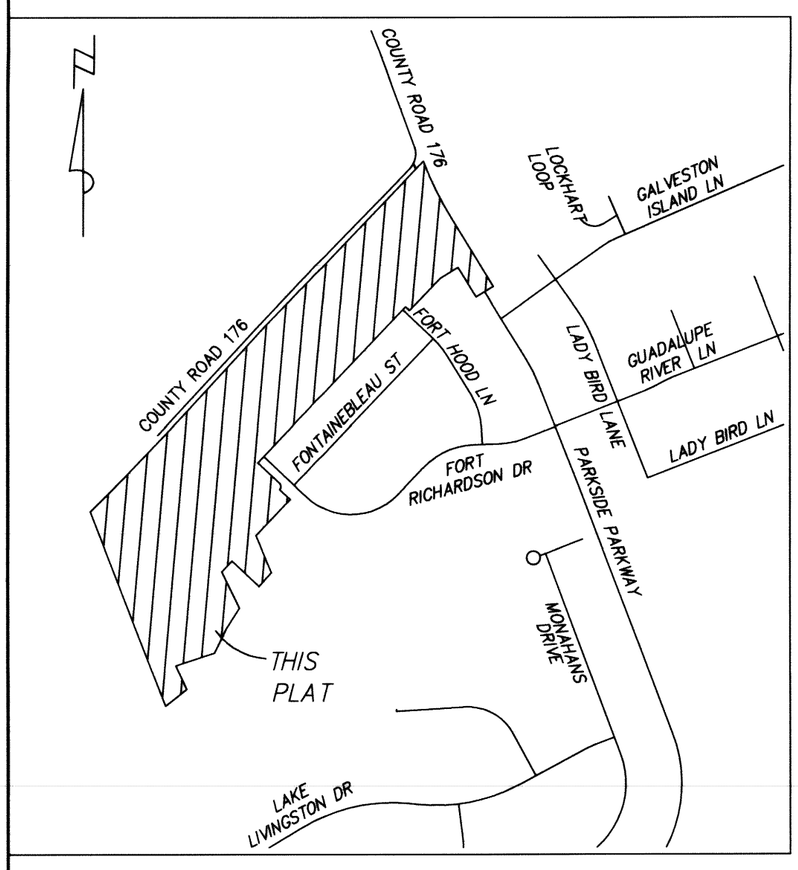
RANDALL JONES & ASSOCIATES ENGINEERING, INC.
2900 JAZZ STREET, ROUND ROCK, TEXAS, 78664
(512) 836-4793 FAX: (512) 836-4817 F-9784

RJ SURVEYING & ASSOCIATES, INC.
2900 JAZZ STREET, ROUND ROCK, TEXAS, 78664
(512) 836-4793 FAX: (512) 836-4817 F-10015400

S:\LAND2301-2350\2314\dwg\2314-plat.dwg 3/22/2017 12:24:18 PM CDT

PLAT OF

PARKSIDE AT MAYFIELD RANCH SECTION 12



LOCATION MAP
SCALE: 1" = 500'

THAT PART OF THE JOHN T. CHURCH SURVEY, ABSTRACT No. 140, AND THE JAMES S. PATTERSON SURVEY, ABSTRACT No. 504, IN WILLIAMSON COUNTY, TEXAS, BEING A PART OF THAT 140.93 ACRE TRACT OF LAND CONVEYED TO PARKSIDE AT MAYFIELD RANCH, LTD., BY DEED RECORDED IN DOCUMENT No. 2007002999 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN at a 1/2" iron rod set in the West Line of said 140.93 Acre Tract and the East Line of that 100 Acre Tract conveyed to Curtis Borho by deed recorded in Volume 780, Page 62 of the Deed Records of Williamson County, Texas, at the most westerly Northwest Corner of Lot 70–A, Block U, Parkside at Mayfield Ranch Section 10, according to the plat thereof recorded in Cabinet EE, Slides 252–255 of the Plat Records of Williamson County, Texas;

THENCE N.21°05'17"W. along the West Line of said 140.93 Acre Tract and the East Line of said 100 Acre Tract a distance of 727.66 feet to a 1/2" iron rod found in the Southeasterly Line of County Road 176;

THENCE along said Southeasterly Line and along the Northwesterly Line of said 140.93 Acre Tract the following six courses:

1. N.44°57'41"E. a distance of 12.43 feet to a fence post;
2. N.44°56'27"E. a distance of 147.52 feet to a post oak;
3. N.43°34'22"E. a distance of 302.39 feet to a nail found;
4. N.42°29'12"E. a distance of 428.43 feet to a nail found;
5. N.44°03'04"E. a distance of 255.79 feet to a nail found;
6. N.43°33'00"E. a distance of 542.41 feet to a 1/2" iron rod set at a point on a non–tangent curve to the left;

THENCE across said 140.93 Acre Tract the following 12 courses:

1. Southeasterly along the arc of said curve, a distance of 223.20 feet, said curve having a radius of 1196.20 feet, a central angle of 10°41'27" and a chord bearing S.26°09'14"E., 222.87 feet to a 1/2" iron rod set;
2. S.31°29'58"E. a distance of 279.55 feet to a 1/2" iron rod set;
3. S.58°30'02"W. a distance of 70.00 feet to a 1/2" iron rod set;
4. N.31°29'58"W. a distance of 121.43 feet to a 1/2" iron rod set;
5. S.58°30'02"W. a distance of 72.07 feet to a 1/2" iron rod set;
6. S.43°25'34"W. a distance of 156.57 feet to a 1/2" iron rod set;
7. N.46°34'26"W. a distance of 19.27 feet to a 1/2" iron rod set;
8. S.43°25'34"W. a distance of 749.84 feet to a 1/2" iron rod set;
9. S.46°34'26"E. a distance of 105.00 feet to a 1/2" iron rod set at a point of curvature of a curve to the right;
10. Southerly, along the arc of said curve to the right a distance of 23.56 feet to a 1/2" iron rod set, said curve having a radius of 15.00 feet, a central angle of 90°00'00", and a chord bearing S.01°34'26"E., 21.21 feet to a 1/2" iron rod set;
11. S.46°34'26"E. a distance of 50.00 feet to a 1/2" iron rod set;
12. S.43°25'34"W. (at 108.28 feet pass a corner in the Northwesterly Line of said Lot 70–A) in all a distance of 174.05 feet to a 1/2" iron rod set;

THENCE along the Northwesterly Line of said Lot 70–A the following ten courses:

1. S.22°34'03"E. a distance of 140.00 feet to a 1/2" iron rod set;
2. S.41°48'02"W. a distance of 65.10 feet to a 1/2" iron rod set;
3. N.46°34'26"W. a distance of 129.74 feet to a 1/2" iron rod set;
4. S.43°25'34"W. a distance of 51.87 feet to a 1/2" iron rod set;
5. S.25°53'03"E. a distance of 141.35 feet to a 1/2" iron rod set;
6. S.31°53'36"W. a distance of 85.86 feet to a 1/2" iron rod set;
7. S.26°17'00"W. a distance of 93.62 feet to a 1/2" iron rod set;
8. S.71°39'52"W. a distance of 142.83 feet to a 1/2" iron rod set;
9. S.24°39'30"E. a distance of 90.25 feet to a 1/2" iron rod set;
10. S.51°40'23"W. a distance of 94.46 feet to the said Point of Beginning.

Containing 16.83 acres, more or less

Bearings are Texas State Plane Central Zone NAD 83

DEDICATION

STATE OF TEXAS
COUNTY OF

KNOW ALL MEN BY THESE PRESENTS THAT PARKSIDE AT MAYFIELD RANCH, LTD., ACTING BY AND THROUGH BJM MAYFIELD RANCH GP, A TEXAS CORPORATION, GENERAL PARTNER, BY BLAKE, J. MAGEE, PRESIDENT, THE OWNER OF THAT CERTAIN 140.93 ACRE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT No. 2007002999 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DOES HEREBY SUBDIVIDE 16.83 ACRES OUT OF SAID TRACT AND DOES HEREBY JOIN, APPROVE AND CONSENT TO ALL DEDICATIONS AND PLAT NOTE REQUIREMENTS SHOWN HEREON. I DO HEREBY APPROVE THE RECORDATION OF THIS SUBDIVISION PLAT AND DEDICATE TO THE PUBLIC USE FOREVER ANY EASEMENTS AND ROADS THAT ARE SHOWN HEREON. THIS SUBDIVISION IS TO BE KNOWN AS "PARKSIDE AT MAYFIELD RANCH SECTION 12." AND FURTHER ACKNOWLEDGE THAT IT IS THE RESPONSIBILITY OF THE OWNER, NOT THE COUNTY, TO ASSURE COMPLIANCE WITH THE PROVISIONS OF ALL APPLICABLE STATE, FEDERAL AND LOCAL LAWS AND REGULATIONS RELATING TO THE ENVIRONMENT, INCLUDING (BUT NOT LIMITED TO) THE ENDANGERED SPECIES ACT, STATE AQUIFER REGULATIONS AND MUNICIPAL WATERSHED ORDINANCES.

THIS 18th DAY OF October 2016

PARKSIDE AT MAYFIELD RANCH, LTD.

BY: BJM MAYFIELD RANCH GP, A TEXAS CORPORATION, GENERAL PARTNER,

BY: _____

BLAKE, J. MAGEE, PRESIDENT
1011 NORTH LAMAR BLVD.
AUSTIN, TEXAS 78703

ACKNOWLEDGMENT

THE STATE OF TEXAS
COUNTY OF

BEFORE ME ON THIS DAY PERSONALLY APPEARED BLAKE J. MAGEE, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE 18 DAY OF October, A. D., 2016.

NOTARY PUBLIC SIGNATURE

AMY LITTLE
Notary Public, State of Texas
Notary ID# 13073628-6
My Commission Expires
JULY 19, 2020

SEAL

STATE OF TEXAS
COUNTY OF WILLIAMSON

KNOW ALL MEN BY THESE PRESENTS THAT TEXAS CAPITAL BANK, N.A., THE LIEN HOLDER OF THAT CERTAIN TRACT OF LAND RECORDED IN DOCUMENT NO. 2007002999 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DOES HEREBY CONSENT TO THE SUBDIVISION OF 16.81 ACRES OF LAND SITUATED IN WILLIAMSON COUNTY, TEXAS, AND DOES HEREBY JOIN, APPROVE AND CONSENT TO THE DEDICATION TO THE PUBLIC USE FOREVER THE STREETS, EASEMENTS AND ALL OTHER LANDS INTENDED FOR PUBLIC DEDICATION AS SHOWN HEREON.

TEXAS CAPITAL BANK, N.A.

BY: _____

114 WEST SEVENTH STREET, SUITE 300
AUSTIN, TEXAS 78701

STATE OF TEXAS
COUNTY OF

BEFORE ME, A NOTARY PUBLIC, ON THIS DAY PERSONALLY APPEARED Douglas A Cotner, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE 18 DAY OF October, A. D., 2016.

NOTARY PUBLIC SIGNATURE

ATANACIO C SERNA
Notary Public, State of Texas
Comm. Expires 02-09-2019
Notary ID 1119780-3

SEAL

STATE OF TEXAS
COUNTY OF WILLIAMSON

ROAD MANE AND ADDRESS ASSIGNMENTS VERIFIED THIS THE 26th DAY OF October, 2016 A.D.

WILLIAMSON COUNTY ADDRESSING COORDINATOR — DATE 10/26/16

SURVEYOR'S CERTIFICATION

I, J. KENNETH WEIGAND, DO HEREBY CERTIFY THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ON THE GROUND SURVEY OF THE LAND SHOWN HEREON AND THAT THE CORNER MONUMENTS SHOWN HEREON WERE PROPERLY PLACED UNDER MY SUPERVISION. THIS PLAT COMPLIES WITH THE REQUIREMENTS OF WILLIAMSON COUNTY. ALL EASEMENTS OF RECORD OF WHICH I HAVE KNOWLEDGE ARE SHOWN OR NOTED ON THE PLAT. THE FIELD NOTES HEREON MATHEMATICALLY CLOSE.

J. Kenneth Weigand 10/18/2016

J. KENNETH WEIGAND — DATE
R.P.L.S. NO. 5741
STATE OF TEXAS

STATE OF TEXAS
REGISTERED
JOHN KENNETH WEIGAND
5741
PROFESSIONAL
LAND SURVEYOR

ENGINEER'S CERTIFICATION

THE 100–YEAR FLOOD PLAIN IS CONTAINED WITHIN THE DRAINAGE EASEMENTS AS SHOWN HEREON. NO LOT WITHIN THIS SUBDIVISION IS ENCROACHED BY ANY SPECIAL FLOOD HAZARD AREAS INUNDATED BY THE 100–YEAR FLOODS AS IDENTIFIED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY BOUNDARY MAP (FLOOD INSURANCE RATE MAP) COMMUNITY PANEL NUMBER 48491C0460 E, EFFECTIVE DATE SEPTEMBER 26, 2008, FOR WILLIAMSON COUNTY, TEXAS.

A PORTION OF THIS TRACT IS WITHIN THE 100 YEAR FLOOD PLAIN AS SHOWN ON FLOOD INSURANCE RATE COMMUNITY PANEL NUMBER 48491C0460 E, EFFECTIVE DATE SEPTEMBER 26, 2008, FOR WILLIAMSON COUNTY, TEXAS.

I, R. BRENT JONES, DO HEREBY CERTIFY THAT THE INFORMATION CONTAINED ON THIS PLAT COMPLIES WITH THE SUBDIVISION ORDINANCES AND THE STORMWATER DRAINAGE POLICY ADOPTED BY WILLIAMSON COUNTY, TEXAS.

THIS TRACT IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.

R.B. 10/18/16

R. BRENT JONES — DATE
LICENSED PROFESSIONAL ENGINEER NO. 92671

STATE OF TEXAS
R. BRENT JONES
92671
LICENSED
PROFESSIONAL ENGINEER

IN APPROVING THIS PLAT BY THE COMMISSIONERS' COURT OF WILLIAMSON COUNTY, TEXAS, IT IS UNDERSTOOD THAT THE BUILDING OF ALL STREETS, ROADS, AND OTHER PUBLIC THOROUGHFARES AND ANY BRIDGES OR CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IS THE RESPONSIBILITY OF THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY THE COMMISSIONERS' COURT OF WILLIAMSON COUNTY, TEXAS. SAID COMMISSIONERS' COURT ASSUMES NO OBLIGATION TO BUILD ANY OF THE STREETS, ROADS, OR OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT OR OF CONSTRUCTING ANY OF THE BRIDGES OR DRAINAGE IMPROVEMENTS IN CONNECTION THEREWITH. THE COUNTY WILL ASSUME NO RESPONSIBILITY FOR DRAINAGE WAYS OR EASEMENTS IN THE SUBDIVISION, OTHER THAN THOSE DRAINING OR PROTECTING THE ROAD SYSTEM AND STREETS.

THE COUNTY ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF REPRESENTATIONS BY OTHER PARTIES IN THIS PLAT. FLOOD PLAIN DATA, IN PARTICULAR, MAY CHANGE DEPENDING ON SUBSEQUENT DEVELOPMENT. IT IS FURTHER UNDERSTOOD THAT THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT MUST INSTALL AT THEIR OWN EXPENSE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE THAT MAY BE REQUIRED BEFORE THE STREETS IN THE SUBDIVISION HAVE FINALLY BEEN ACCEPTED FOR MAINTENANCE BY THE COUNTY.

STATE OF TEXAS
KNOW ALL MEN BY THESE PRESENTS THAT
COUNTY OF WILLIAMSON

I, DAN A. GATTIS, COUNTY JUDGE OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CERTIFY THAT THIS MAP OR PLAT, WITH FIELD NOTES HEREON, THAT A SUBDIVISION HAVING BEEN FULLY PRESENTED TO THE COMMISSIONERS' COURT OF WILLIAMSON COUNTY, TEXAS, AND BY THE SAID COURT DULY CONSIDERED, WERE ON THIS DAY APPROVED AND PLAT IS AUTHORIZED TO BE REGISTERED AND RECORDED IN THE PROPER RECORDS OF THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

_____ _____
DAN A. GATTIS COUNTY JUDGE — DATE
WILLIAMSON COUNTY, TEXAS

STATE OF TEXAS
COUNTY OF WILLIAMSON

KNOW ALL MEN BY THESE PRESENTS;

I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE DAY OF _____, 20___, A.D., AT _____ O'CLOCK, ___.M., AND DULY RECORDED THIS THE _____ DAY OF _____, 20___, A.D., AT _____ O'CLOCK, ___.M., IN THE PLAT RECORDS OF SAID COUNTY IN DOCUMENT NUMBER

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

NANCY RISTER, CLERK COUNTY COURT
OF WILLIAMSON COUNTY, TEXAS

BY: _____ DEPUTY

DATE: NOV. 12, 2015

RANDALL JONES & ASSOCIATES ENGINEERING, INC.
2900 JAZZ STREET, ROUND ROCK, TEXAS, 78664
(512) 836–4793 FAX: (512) 836–4817 F–9784

RJ SURVEYING & ASSOCIATES, INC.
2900 JAZZ STREET, ROUND ROCK, TEXAS, 78664
(512) 836–4793 FAX: (512) 836–4817 F–10015400

S:\LAND2301-2350\2314\dwg\2314-plat.dwg 10/18/2016 8:51:29 AM CDT

Commissioners Court - Regular Session **13.**

Meeting Date: 04/04/2017

Discuss consider and take appropriate action on approving a license agreement with MUD 30 Crescent Bluff subdivision - Pct 3

Submitted For: Terron Evertson **Submitted By:** Patrick Hughes, Unified Road System

Department: Unified Road System

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on approving a license agreement with Williamson County MUD #30 (Crescent Bluff subdivision) - Pct 3.

Background

This licence agreement is for the Crescent Bluff development located along the south side of SH 29, 3.0 miles west of D B Wood.
This agreement has been reviewed and approved by Sheets & Crossfield.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

License Agreement - Wilco MUD #30

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/27/2017 10:17 AM
Form Started By: Patrick Hughes		Started On: 03/27/2017 08:40 AM
Final Approval Date: 03/27/2017		

WILLIAMSON COUNTY
LICENSE AGREEMENT

WILLIAMSON COUNTY MUNICIPAL UTILITY DIDSTICT NO. 30

WILLIAMSON COUNTY, a political subdivision of the State of Texas (the "*County*"), **CRESCENT BLUFF PROPERTY OWNERS ASSOCIATION, INC.**, a Texas non-profit corporation (the "*Association*" or "*Licensee*"), and **WILLIAMSON COUNTY MUNICIPAL UTILITY DISTRICT NO. 30**, a political subdivision of the State of Texas (the "*District*"), enter into this **LICENSE AGREEMENT** (this "*Agreement*") upon the terms and conditions set forth below.

I.
PURPOSE AND GRANT OF LICENSE AGREEMENT

Licensee has requested permission from County to install, repair, maintain and operate improvements from time to time, including, but not limited to, landscaping, lighting, fencing, signage and irrigation (collectively referred to herein as the "*Licensee's Improvements*"), in portions of the County's right-of-way. The County grants to Licensee permission to install, repair, maintain and operate Licensee's Improvements from time to time in the areas of the County's right-of-way described in the attached **Exhibit "A"** (the "*Licensed Property*"). This Agreement shall not apply to, or affect, the County's, the Licensee's or the District's rights and obligations regarding water, wastewater or drainage facilities located or to be located in the Licensed Property.

The County makes this grant solely to the extent of its right, title, and interest in the Licensed Property, without any express or implied warranties.

Licensee agrees that all installation, repair, maintenance and operation permitted by this Agreement will be done in compliance with the terms and conditions of this Agreement and all applicable County, State, and/or Federal police, traffic, building, health, and safety ordinances, laws, and regulations existing at the time said installation, repair, maintenance and operation is performed.

II.
ANNUAL FEE

The County, its governing body, and its respective successors and assigns agree that no annual fee will be assessed for the license and permission herein granted to Licensee. Licensee agrees that the County's permission and grant of a license hereunder and Licensee's ability to construct and obligation to thereafter maintain Licensee's Improvements on the Licensed Property serve as consideration to support this Agreement.

III.
COUNTY'S RIGHTS TO LICENSED PROPERTY

This Agreement is expressly subject and subordinate to the present and future rights of the County, its successors, assigns, lessees, grantees and licensees, to construct, install, establish, maintain, use, operate, and renew any public utilities facilities, franchised public utilities, roadways, or streets on, beneath, or above the surface of the Licensed Property.

Nothing in this Agreement will be construed to limit, in any way, the power of the County

to widen, alter, or improve the Licensed Property pursuant to official action by the governing body of the County or its successors. The County does, however, agree to give Licensee at least thirty (30) days' written notice of such action and will cooperate with Licensee to effect the relocation and/or removal of Licensee's Improvements, at Licensee's sole cost, in the event of such widening, altering, or improvement of the Licensed Property, and further, to cooperate with Licensee wherever possible, to effect such widening, altering, or improving of the Licensed Property so that Licensee's Improvements and operations on the Licensed Property will not be materially affected thereby.

Notwithstanding any provision in this Agreement to the contrary, the County retains the right to enter upon the Licensed Property at any time without notice to Licensee, assuming no obligation to Licensee, and remove, without liability to County, any of the Licensee's Improvements whenever such removal is deemed necessary by the County for protecting persons or property or the public health or safety.

IV.
INSURANCE

Licensee will, at its sole expense, obtain and maintain during the term of this Agreement a commercial general liability insurance policy, written by a company acceptable to the County and licensed to do business in Texas, with a combined single limit of not less than Five Hundred Thousand and No/100 Dollars ($500,000.00), which coverage may be provided in the form of a rider and/or endorsement to a previously existing insurance policy. Such insurance coverage must specifically name the County as an additional insured and cover all perils arising from the activities of Licensee, its officers, directors, employees, agents, or contractors in implementing this Agreement or exercising Licensee's rights hereunder. Licensee will be responsible for any deductibles stated in the policy. A true copy of each instrument effecting such coverage must be delivered to the County on or before the Effective Date defined on the initial signature page hereto.

So long as Licensee is using the Licensed Property, Licensee will not cause such insurance to be canceled nor permit such insurance to lapse. All insurance certificates must include a clause to the effect that the policy will not be canceled, reduced, restricted, or otherwise limited until thirty (30) days after the County has received written notice as evidenced by a return receipt of registered or certified mail.

V.
INDEMNIFICATION

INDEMNIFICATION - EMPLOYEE PERSONAL INJURY CLAIMS. TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE WILL INDEMNIFY, DEFEND (WITH COUNSEL OF COUNTY'S CHOOSING), AND HOLD HARMLESS THE COUNTY, AND THE COUNTY'S EMPLOYEES, AGENTS, REPRESENTATIVES, PARTNERS, OFFICERS, AND DIRECTORS (COLLECTIVELY, THE "*INDEMNITEES*") AND WILL ASSUME ENTIRE RESPONSIBILITY AND LIABILITY (OTHER THAN AS A RESULT OF THE COUNTY'S NEGLIGENT OR WILLFUL MISCONDUCT) FOR ANY CLAIM OR ACTION BASED ON OR ARISING OUT OF THE PERSONAL INJURY, OR DEATH, OF ANY EMPLOYEE OF LICENSEE, OR OF ANY SUBCONTRACTOR, OR OF ANY OTHER ENTITY FOR WHOSE ACTS LICENSEE MAY BE LIABLE, WHICH OCCURRED OR WAS ALLEGED TO HAVE OCCURRED ON THE LICENSED PROPERTY OR IN CONNECTION WITH LICENSEE'S IMPROVEMENTS. TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE HEREBY INDEMNIFIES THE INDEMNITEES EVEN TO THE EXTENT THAT SUCH PERSONAL INJURY WAS CAUSED OR ALLEGED TO HAVE BEEN CAUSED BY THE COMPARATIVE OR CONCURRENT NEGLIGENCE OR THE STRICT LIABILITY OF ANY INDEMNITEE. THIS INDEMNIFICATION WILL NOT BE LIMITED TO DAMAGES, COMPENSATION, OR BENEFITS PAYABLE UNDER

INSURANCE POLICIES, WORKERS COMPENSATION ACTS, DISABILITY BENEFITS ACTS, OR OTHER EMPLOYEES BENEFIT ACTS.

INDEMNIFICATION - OTHER THAN EMPLOYEE PERSONAL INJURY CLAIMS. TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE WILL INDEMNIFY, DEFEND (WITH COUNSEL OF COUNTY'S CHOOSING), AND HOLD HARMLESS THE INDEMNITEES FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR ALLEGED TO BE RESULTING FROM THE PERFORMANCE OF THIS AGREEMENT OR THE WORK DESCRIBED HEREIN BY LICENSEE, TO THE EXTENT CAUSED BY THE NEGLIGENCE, ACTS, ERRORS, OR OMISSIONS OF LICENSEE OR ITS SUBCONTRACTORS, ANYONE EMPLOYED BY THEM, OR ANYONE FOR WHOSE ACTS THEY MAY BE LIABLE, REGARDLESS OF WHETHER OR NOT SUCH CLAIM, DAMAGE, LOSS OR EXPENSE IS CAUSED IN PART BY AN INDEMNITEE HEREUNDER.

VI.
CONDITIONS

A. Licensee's Responsibilities. Licensee will be responsible for any damage to and/or for the relocation of Licensee's Improvements on the Licensed Property. Further, Licensee will reimburse the County for all costs of replacing or repairing any property of the County or of others which is damaged or destroyed as a result of activities authorized under this Agreement by, or on behalf of, Licensee.

B. Maintenance. Licensee will maintain the Licensed Property and Licensee's Improvements. Removal of dead or dying plants will also be handled by Licensee at its expense, as required by the County. Such removal of dead or dying plants must be completed within thirty (30) days following receipt of a written request by the County to do so. If Licensee abandons or fails to maintain Licensee's Improvements within the Licensed Property, and the County receives no substantive response within thirty (30) days following written notification to Licensee, then the County may remove and/or replace all of Licensee's Improvements.

C. Removal or Modification. Licensee agrees that removal or modification of any of Licensee's Improvements now existing or to be later installed or replaced on the Licensed Property will be at Licensee's sole expense. Said removal, replacement or modification will be at Licensee's sole discretion, except where otherwise provided by this Agreement.

D. Default. In the event that Licensee fails to maintain Licensee's Improvements within the Licensed Property or otherwise comply with the terms or conditions as set forth herein, then the County will give Licensee written notice thereof, by registered or certified mail, return receipt requested, to the addresses set forth below. Licensee will have thirty (30) days from the date of receipt of such notice to take action to remedy the failure complained of and, if Licensee does not remedy the same to the County's complete satisfaction within the 30-day period, the County may, in addition to other remedies available herein or by law to County, (1) perform the work, (2) contract for the completion of the work, or (3) terminate this Agreement. Licensee agrees to pay, within thirty (30) days of written demand by the County, all costs and expenses incurred by the County in completing the work or contracting for the work to be completed.

VII.
COMMENCEMENT: TERMINATION BY ABANDONMENT

This Agreement will begin on the Effective Date set forth above the signature of the parties herein below, and continue thereafter for so long as the Licensed Property is used for the

purposes set forth herein or until this Agreement is terminated according to the terms hereof. If Licensee abandons the use of all or any part of the Licensed Property for such purposes set forth in this Agreement, then this Agreement, as to such portion or portions abandoned, will expire and terminate following thirty (30) days' written notice by the County to Licensee. If such abandonment has not been remedied by Licensee within such period, the County will thereafter have the same complete title to the Licensed Property so abandoned as though this Agreement had never been made and will have the right to enter on the Licensed Property so abandoned and terminate the rights of Licensee, its successors and assigns hereunder, with respect to the abandoned Licensed Property.

VIII.
TERMINATION

A. Termination by Licensee. This Agreement may be terminated by Licensee as to all or any portion of the Licensed Property by delivering written notice of termination to the County not later than thirty (30) days before the effective date of termination. If Licensee so terminates, then Licensee will, within the 30-day notice period, remove from the portion of the Licensed Property as to which this Agreement is being terminated, installations of Licensee's Improvements. Any of Licensee's Improvements within the portion of the Licensed Property as to which this Agreement is being terminated that are not removed within said period will become the property of the County. Licensee hereby agrees and acknowledges that Licensee will be liable to the County for any damages caused to the Licensed Property by the removal of Licensee's Improvements.

B. Termination by County. This Agreement may be revoked and terminated in whole or in part at any time by resolution of the Williamson County Commissioners Court if such revocation and termination is reasonably required by the public interest (as hereinafter set forth), after providing thirty (30) days' written notice to the Licensee.

Subject to prior written notification by the County to Licensee, this Agreement is revocable by the County and deemed to be required by the public interest if:

1. the Licensee's Improvements, or a portion of them, interfere with the County's right-of-way and such interference cannot be remedied by Licensee within 30 days after receipt of notice from the County;

2. use of the Licensed Property becomes necessary for a public purpose with which the Licensee's Improvements would be incompatible and such incompatibly is not remedied by Licensee within 30 days after receipt of notice from the County;

3. the Licensee's Improvements, or a portion of them, constitute a danger to the public which the County deems, in its sole discretion and the alteration or maintenance of Licensee's Improvements necessary to alleviate such danger is not effected by Licensee within 30 days after receipt of notice from the County;

4. despite thirty (30) days' written notice to Licensee, maintenance or alteration necessary to alleviate a danger to the public has not been made; or

5. Licensee fails to comply with the material terms and conditions of this Agreement including, but not limited to, any insurance requirements specified herein and such failure is not remedied by Licensee within 30 days after receipt of notice from the County.

IX.
DISTRICT AS LICENSEE

Notwithstanding any contrary provision herein, in the event that (i) Licensee ceases to exist or Licensee assigns any of its rights and obligations under this Agreement to the District after giving 30 days prior written notice to the County, the District will automatically assume the (i) all of the rights and obligations of the "Licensee" pursuant to this Agreement if the Licensee ceases to exist or (ii) the assigned rights and obligations if and to the extent the Licensee assigns such rights and obligations to the District.

X.
MISCELLANEOUS PROVISIONS

A. Venue and Governing Law. Each party to this Agreement hereby agrees and acknowledges that venue and jurisdiction of any suit, right, or cause of action arising out of or in connection with this Agreement will lie exclusively in Williamson County, Texas. Furthermore, this Agreement will be governed by and construed in accordance with the laws of the State of Texas, excluding, however, its choice of law rules.

B. Severability. If any provision of this Agreement are held invalid or unenforceable by any court of competent jurisdiction, such holding will not invalidate or render unenforceable any other provision hereof, but rather this entire Agreement will be construed as if not containing the particular invalid or unenforceable provision or provisions, and the rights and obligation of the parties will be construed and enforced in accordance therewith. The parties acknowledge that if any provision of this Agreement is determined to be invalid or unenforceable, it is the desire and intention of each that such provision be reformed and construed in such a manner that it will, to the maximum extent practicable, give effect to the intent of this Agreement and be deemed to be validated and enforceable.

C. Covenant Running With the Licensed Property; Waiver of Default. This Agreement and all of the covenants herein will run with the Licensed Property; therefore, the conditions set forth herein will inure to and bind each party's successors and assigns. Any party may waive any default of another at any time, without affecting or impairing any right arising from any subsequent or other default.

D. Assignment. Licensee will not assign, sublet, or transfer its interest in this Agreement without the written consent of the County, which consent will not be unreasonably withheld, delayed or conditioned; provided, however, the County shall not deny, condition or delay any assignment, in whole or in part, of this Agreement by the Licensee to the District. In the event that the County agrees to Licensee's assignment of its interest in this Agreement and subject to the assignee's compliance with the insurance requirements set forth herein, Licensee will furnish to the County a copy of any such assignment or transfer of any of Licensee's rights in this Agreement, including the name, date, address, and contact person.

E. Notices. All notices, demands, and requests for delivery of documents or information hereunder must be in writing and will be deemed to have been properly delivered and received as of the time of delivery if personally delivered, as of the time deposited in the mail system if sent by United States certified mail, return receipt requested, and postage prepaid, or as of the time of delivery to Federal Express (or comparable express delivery system) if sent by such method with all costs prepaid. All notices, demands, and requests hereunder will be addressed as follows or to such other addresses which a party may so designate by sending notice as aforesaid:

To the Association at:

Crescent Bluff Property Owners Association, Inc.
6002 Camp Bullis Rd.
San Antonio, TX 78257

Attn: Dr. G. P. Singh
6002 Camp Bullis Rd.
San Antonio, TX 78257

To the County at:

Williamson County Judge
Dan A. Gattis (or successor)
710 Main Street, Ste. 101
Georgetown, Texas 78626

with a copy to:

Williamson County Engineer
J. Terron Evertson (or successor)
3151 S. E. Inner Loop, Suite B
Georgetown, Texas 78626

Additionally, the County and the Association agree to copy the District and _____ (the "*Developer*") on all notices, demands, and requests hereunder at the following addresses or to such other addresses that the District or the Developer, as applicable, may designate by sending notice as aforesaid:

To the District at:

Williamson County Municipal Utility District No. 30
C/O Ronald J. Freeman, Attorney
102 N. Railroad Ave.
Pflugerville, TX 78660

To the Developer at:

ZAMIN. L.P.
6002 Camp Bullis Rd.
San Antonio, TX 78257
Attn: Dr. G. P. Singh

With Copy to:

Athena domain, Inc.
17503 LaConterra Parkway
Suite 104-451
San Antonio, TX 78257
Attn: Rajeev Puri

will be construed as conferring upon any other person any rights, remedies or any other type or types of benefits.

G. Compliance with Laws. Each party to this Agreement will comply with all federal, state, and local laws, statutes, ordinances, rules, and regulations and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Agreement

H. Gender, Number and Headings. Words of any gender used in this Agreement will be held and construed to include any other gender, and words in the singular number will be held to include the plural, unless the context otherwise requires. The headings and section numbers are for convenience only and will not be considered in interpreting or construing this Agreement.

I. Construction. Each party to this Agreement acknowledges that it and its counsel have reviewed this Agreement and that the normal rules of construction are not applicable and there will be no presumption that any ambiguities will be resolved against the drafting party in the interpretation of this Agreement.

J. No Waiver of Immunities. Nothing in this Agreement will be deemed to waive, modify, or amend any legal defense available at law or in equity to the County or the District, or their respective past or present officers, employees, or agents, nor to create any legal rights or claim on behalf of any third party. Neither the County nor the District waives, modifies, or alters to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.

K. Entire Agreement. This Agreement represents the entire and integrated Agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either oral or written. This Agreement may be amended only by written instrument signed by each party to this Agreement. NO OFFICIAL, EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE COUNTY HAS ANY AUTHORITY, EITHER EXPRESS OR IMPLIED, TO AMEND THIS AGREEMENT, EXCEPT PURSUANT TO SUCH EXPRESS AUTHORITY AS MAY BE GRANTED BY THE COUNTY COMMISSIONERS COURT.

L. Counterparts. This Agreement may be executed in multiple counterparts, each of which will be deemed an original and all of which together will constitute a single instrument.

THE REMAINDER OF THIS PAGE IS BLANK

TERMS AND CONDITIONS ACCEPTED, this the _____ day of _____, 2014 (the "*Effective Date*").

COUNTY:

WILLIAMSON COUNTY, a political subdivision of the State of Texas

By:_____
Dan A. Gattis,
Williamson County Judge

THE STATE OF TEXAS §
§
COUNTY OF WILLIAMSON §

This instrument was acknowledged before me on this the _____ day of _____, 2017 by Dan A. Gattis, as County Judge of WILLIAMSON COUNTY, a political subdivision of the state of Texas, on behalf of said political subdivision.

_____
NOTARY PUBLIC, State of Texas

ASSOCIATION:

CRESCENT BLUFF PROPERTY OWNERS ASSOCIATION, INC., a Texas non-profit corporation

By: _____
Name: RAJEEV PURI
Title: SECRETARY

THE STATE OF TEXAS §
§
COUNTY OF Bexar §

This instrument was acknowledged before me on this the 1st day of March, 2017, by Rajeev Puri, Secretary of Crescent Bluff Property Owners Association, Inc., a Texas non-profit corporation, on behalf of said non-profit corporation.

JONI L. WARREN
Notary Public, State of Texas
Comm. Expires 02-24-2021
Notary ID 126815981

_____
NOTARY PUBLIC, State of Texas

MUD:

WILLIAMSON COUNTY MUNICIPAL UTILTY DISTRICT NO. 30 a political subdivision of the State of Texas

By: _____
Rob Glenn, President
Board of Directors

THE STATE OF TEXAS §
§
COUNTY OF Bexar §

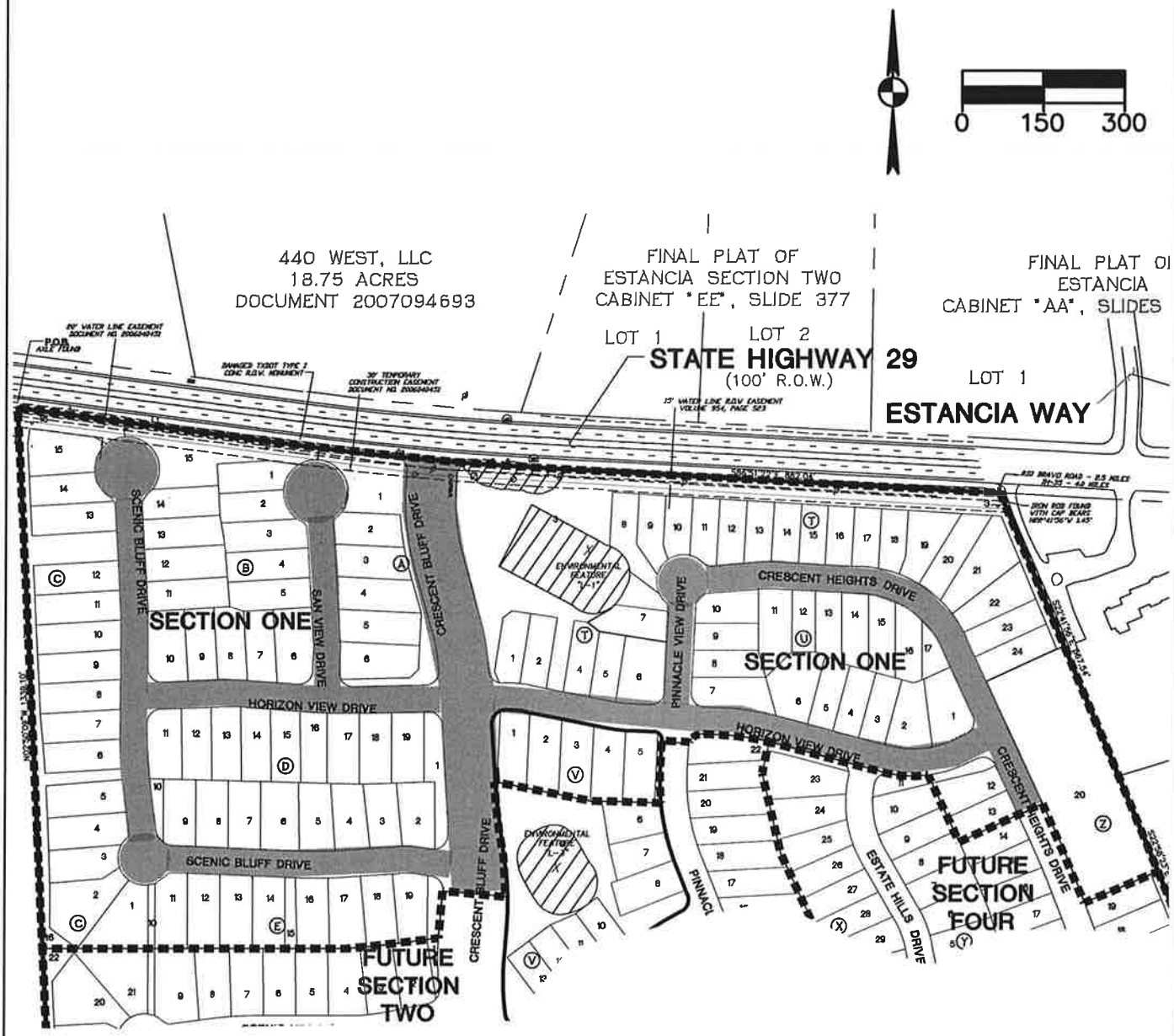
This instrument was acknowledged before me on this the 28th day of February, 2017 by Rob Glenn, President of Williamson County Municipal Utility District No. 30, a political subdivision of the state of Texas, on behalf of said political subdivision.

DEBRA G. CASTILLO
Notary Public, State of Texas
My Commission Expires
December 17, 2017

_____
NOTARY PUBLIC, State of Texas

EXHIBIT "A"
LICENSED PROPERTY

The portions of all public rights-of-way between the edge of pavement or back of curb to the outer boundary of said rights-of-way within and adjacent to the portion of the Crescent Bluff Subdivision located within the boundaries of Williamson County Municipal Utility District No. 30 as more particularly depicted on **Exhibit "A"**.



Stantec

221 West Sixth Street, Suite 600
Austin, TX 78701
TBPE # F-6324 TBPLS # 10194230
www.stantec.com

CRESCENT BLUFF SECTION 1
WILLIAMSON COUNTY, TEXAS

ZAMIN, LP

EXHIBIT 'A'

DATE:	SCALE:	DRAWN BY:	FILE:	PROJECT No.

Commissioners Court - Regular Session **14.**

Meeting Date: 04/04/2017

Discuss consider and take appropriate action on approval of the revised preliminary plat for the Ridge at Cross Creek subdivision - Pct 3

Submitted For: Terron Evertson **Submitted By:** Patrick Hughes, Unified Road System

Department: Unified Road System

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on approval of the revised preliminary plat for the Ridge at Cross Creek subdivision - Pct 3.

Background

This preliminary plat was originally approved on February 10, 2015. Modifications are being proposed to Lots 26 through 30 (proposed lots located in the FEMA floodplain) and one road located in the floodplain (Lazy Creek Drive) has been eliminated. The appropriate review fee has been paid.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Revised Prelim Plat - Ridge at Cross Creek

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/27/2017 10:17 AM
Form Started By: Patrick Hughes		Started On: 03/27/2017 09:12 AM
Final Approval Date: 03/27/2017		

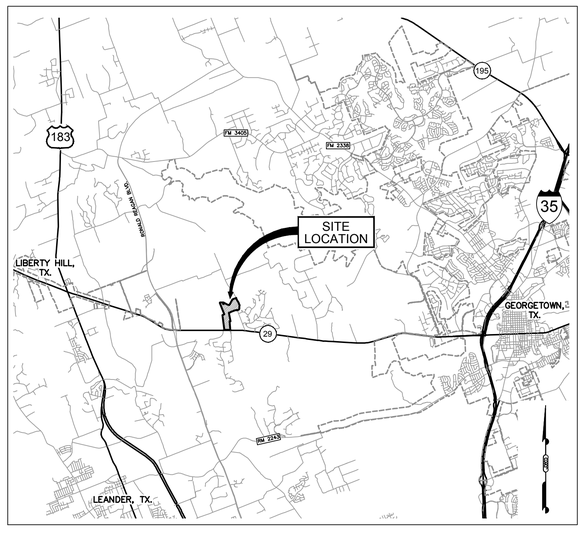
THE RIDGE at CROSS CREEK

REVISED PRELIMINARY PLAT

FOR

CLEAR ROCK DEVELOPMENT

MARCH 2017



LOCATION MAP

scale: 1"=10,000'

OWNER:
RAS Level 2 Holding, LP
P.O. Box 519
Liberty Hill, Texas 78642
Phone: (512) 299-6617

DEVELOPER:
Clear Rock Development
P.O. Box 519
Liberty Hill, Texas 78642
Phone: (512) 299-6617
Email: luke@clearrockllc.com

ENGINEER:
Jay Engineering Co., Inc.
P.O Box 1220
Leander, Texas 78646-1220
Phone: (512) 259-3882
Fax: (512) 259-8016
Email: skiger@jaeco.net

SURVEYOR:
Philip L. McLaughlin, RPLS
G & R Surveying, LLC
1805 Ouida Drive
Austin, Texas 78728
Phone: (512) 267-7430
Fax: (512) 836-8385
Email: pmclaughlin@grsurveying.com

Clear Rock LLC

INDEX TO DRAWINGS

SHEET NO.	DRAWING TITLE & CONTENTS
1.	COVER SHEET & LOCATION MAP
2.	PRELIMINARY LAYOUT (Overall)
3.	PRELIMINARY LAYOUT (100' scale)
4.	PRELIMINARY LAYOUT (100' scale)
5.	OVERALL DRAINAGE PLAN
6.	OVERALL STREET PLAN
7.	WATER DISTRIBUTION PLAN

PREPARED BY:
JAY ENGINEERING COMPANY, INC

STATE OF TEXAS
SAMUEL D. KIGER
89353
LICENSED PROFESSIONAL ENGINEER
7-16-17

NO.	DATE	REVISION	APPV.

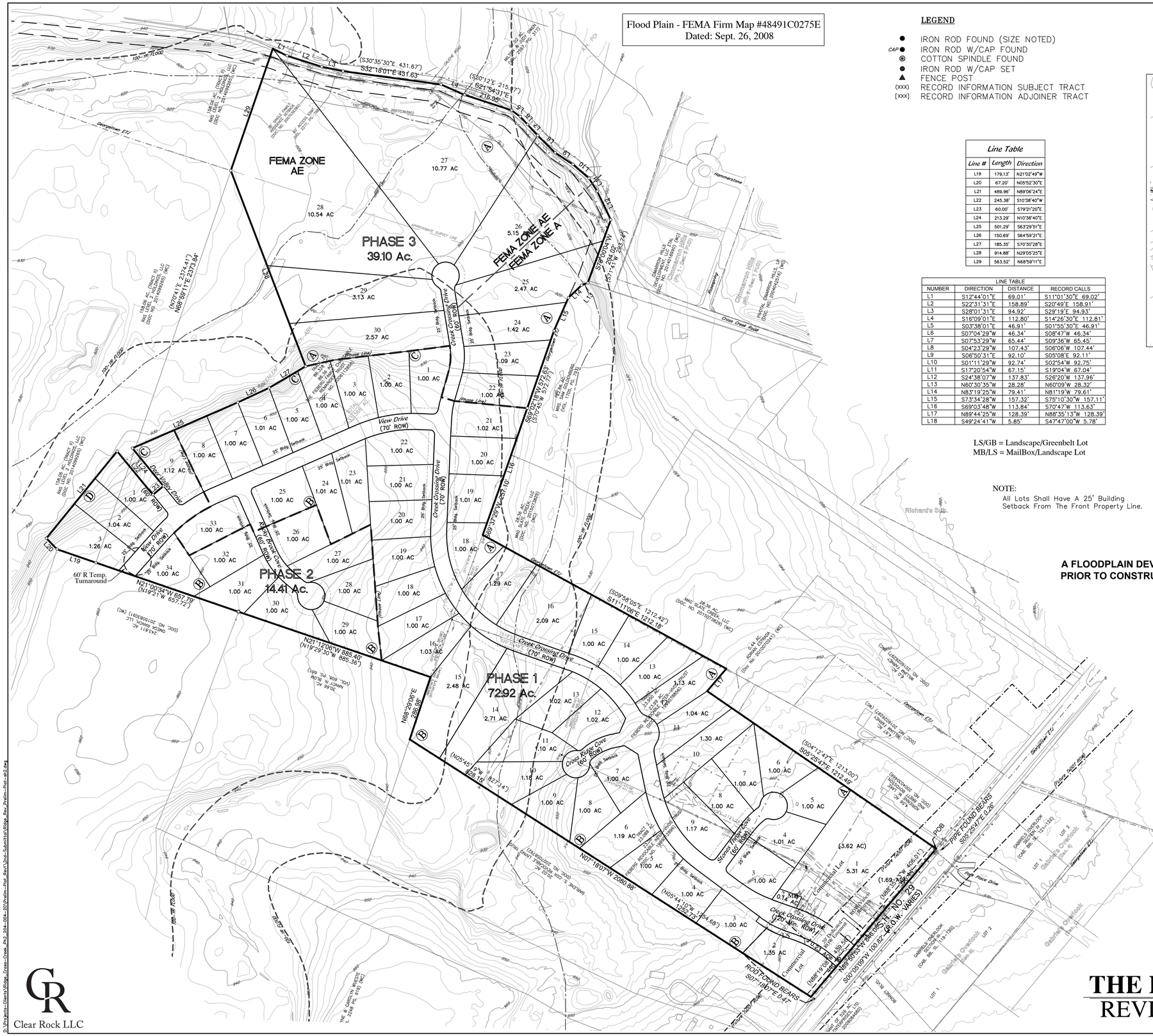
JAECO JOB NO.: 204-004-20

Jay Engineering Company, Inc.
P.O. Box 1220
Leander, Texas 78646-1220
Tel. (512) 259-3882 Fax. (512) 259-8016

THE RIDGE at CROSS CREEK - REVISED PRELIMINARY PLAT - JOB No. 204-004-20

D:\Projects-Clients\Ridge Cross-Creek_Ph2_204-004-20\Prelim-Plat_Rev1\2nd-Submittal\Ridge_Rev_Prelim-Plat_sh1.dwg

Flood Plain - FEMA Firm Map #48491C0275E
Dated: Sept. 26, 2008



LEGEND

- ● IRON ROD FOUND (SIZE NOTED)
- CAP● IRON ROD W/CAP FOUND
- ⊛ COTTON SPINDLE FOUND
- ● IRON ROD W/CAP SET
- ▲ FENCE POST
- (xxx) RECORD INFORMATION SUBJECT TRACT
- [xxx] RECORD INFORMATION ADJOINER TRACT

Line Table

Line #	Length	Direction
L19	179.13'	N21°02'49"W
L20	67.20'	N05°52'30"E
L21	489.96'	N89°06'24"E
L22	245.38'	S10°38'40"W
L23	60.00'	S79°21'20"E
L24	213.29'	N10°38'40"E
L25	501.29'	S63°29'51"E
L26	150.69'	S64°59'21"E
L27	185.35'	S70°30'28"E
L28	914.88'	N29°05'25"E
L29	563.52'	N68°59'11"E

LINE TABLE

NUMBER	DIRECTION	DISTANCE	RECORD CALLS
L1	S12°44'01"E	69.01'	S11°01'30"E 69.02'
L2	S22°31'31"E	158.89'	S20°49'E 158.91'
L3	S28°01'31"E	94.92'	S29°19'E 94.93'
L4	S16°09'01"E	112.80'	S14°26'30"E 112.81'
L5	S03°38'01"E	46.91'	S01°55'30"E 46.91'
L6	S07°04'29"W	46.34'	S08°47'W 46.34'
L7	S07°53'29"W	65.44'	S09°36'W 65.45'
L8	S04°23'29"W	107.43'	S06°06'W 107.44'
L9	S06°50'31"E	92.10'	S05°08'E 92.11'
L10	S01°11'29"W	92.74'	S02°54'W 92.75'
L11	S17°20'54"W	67.15'	S19°04'W 67.04'
L12	S24°38'07"W	137.83'	S26°20'W 137.96'
L13	N60°30'35"W	28.28'	N60°09'W 28.32'
L14	N83°19'25"W	79.41'	N81°19'W 79.61'
L15	S73°34'28"W	157.32'	S75°10'30"W 157.11'
L16	S69°03'48"W	113.84'	S70°47'W 113.63'
L17	N89°44'25"W	128.39'	N88°35'13"W 128.39'
L18	S49°24'41"W	5.85'	S47°47'00"W 5.78'

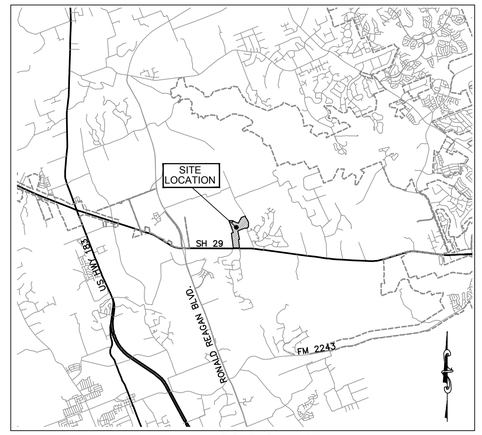
LS/GB = Landscape/Greenbelt Lot
MB/LS = MailBox/Landscape Lot

NOTE:
All Lots Shall Have A 25' Building Setback From The Front Property Line.

A FLOODPLAIN DEVELOPMENT PERMIT WILL BE RQUIRED PRIOR TO CONSTRUCTION PLAN APPROVAL.

SUBMITTAL DATE: MARCH 03, 2017

RESIDENTIAL. LOTS	72
COMMERCIAL LOTS	2
LANDSCAPE/MAILBOX LOTS	2
No OF BLOCKS	4
RESIDENTIAL ACREAGE	107.43 Ac.
COMMERCIAL ACREAGE	6.67 Ac.
LANDSCAPE/MAILBOX ACREAGE	0.37 Ac.
ROW ACREAGE	11.95 Ac.
DETENTION	0
TOTAL ACREAGE	126.43 Ac.
TOTAL STREETS	7,110 L.F.



LOCATION MAP
scale: 1" = 10,000'

SCALE: 1" = 200'
0 200 400 600
2 FOOT CONTOURS

Date: 03-23-17

THE RIDGE at CROSS CREEK
REVISED PRELIMINARY PLAT
WILLIAMSON COUNTY, TEXAS

OWNER:
RAS Level 2 Holdings, LP
P.O. Box 519
Liberty Hill, Texas 78642
Phone: (512) 299-6617

DEVELOPER:
Clear Rock, LLC
P.O. Box 519
Liberty Hill, Texas 78642
Phone: (512) 299-6617
Email: luke@clearrockllc.com

ENGINEER:
Jay Engineering Co., Inc.
P.O Box 1220
Leander, Texas 78646-1220
Phone: (512) 259-3882
Fax: (512) 259-8016
Email: skiger@jaeco.net

SURVEYOR:
Philip L. McLaughlin, RPLS
G & R Surveying, LLC
1805 Ouida Drive
Austin, Texas 78728
Phone: (512) 267-7430
Fax: (512) 836-8385
Email: pmclaughlin@grsurveying.com

Clear Rock LLC

STATE OF TEXAS
SAMUEL D. KIGER
89353
PROFESSIONAL ENGINEER
3-16-17

no.	date	Revisions	appv.

Jay Engineering Company, Inc.
P.O. Box 1220
Leander, Texas 78646-1220
Tel: (512) 259-3882 Fax: (512) 259-8016
TEXAS REGISTERED ENGINEERING FIRM F-4780

THE RIDGE at CROSS CREEK
REVISED PRELIMINARY PLAT

OVERALL LAYOUT

CLEAR ROCK, LLC

SCALE: AS NOTED | DWN: JJD | DESIGN: SDK | DATE: MARCH 2017
DWG. NO. AS NOTED | JOB NO. 204-004-20

Sheet No. 2 Of 7

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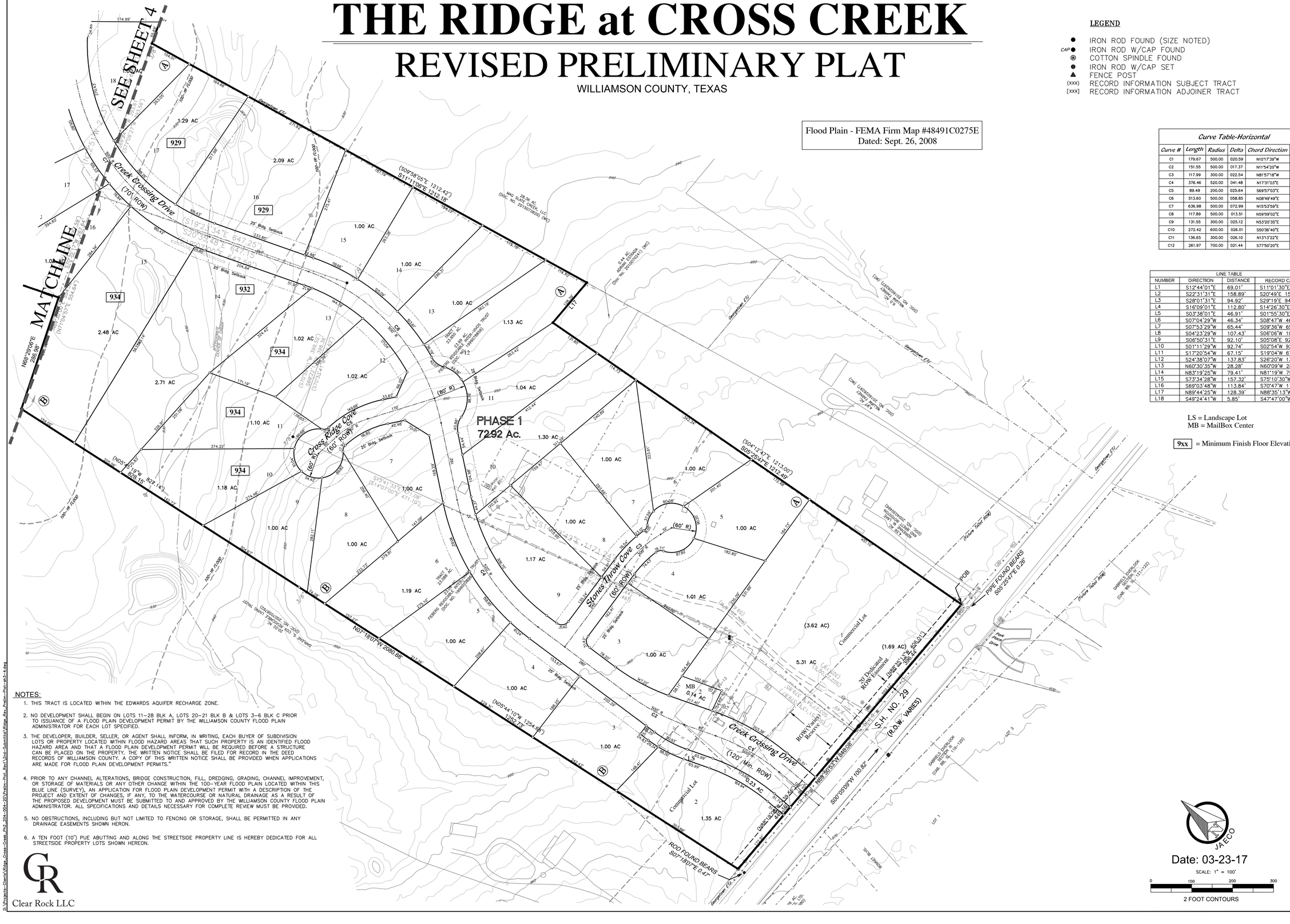
THE RIDGE at CROSS CREEK

REVISED PRELIMINARY PLAT

WILLIAMSON COUNTY, TEXAS



Flood Plain - FEMA Firm Map #48491C0275E
Dated: Sept. 26, 2008

LEGEND

- ● IRON ROD FOUND (SIZE NOTED)
- CAP● IRON ROD W/CAP FOUND
- ⊛ COTTON SPINDLE FOUND
- ● IRON ROD W/CAP SET
- ▲ FENCE POST
- (xxx) RECORD INFORMATION SUBJECT TRACT
- [xxx] RECORD INFORMATION ADJOINER TRACT

Curve Table-Horizontal

Curve #	Length	Radius	Delta	Chord Direction	Chord
C1	179.67	500.00	020.59	N10°17'39"W	178.70'
C2	151.55	500.00	017.37	N11°54'20"W	150.97'
C3	117.99	300.00	022.54	N81°57'18"W	117.24'
C4	376.46	520.00	041.48	N17°31'03"E	368.30'
C5	89.49	200.00	025.64	S69°57'03"E	88.75'
C6	513.60	500.00	058.85	N08°49'49"E	491.32'
C7	636.98	500.00	072.99	N15°53'59"E	594.77'
C8	117.89	500.00	013.51	N59°09'02"E	117.62'
C9	131.55	300.00	025.12	N53°20'35"E	130.50'
C10	272.42	600.00	026.01	S50°36'40"E	270.09'
C11	136.65	300.00	026.10	N13°13'22"E	135.47'
C12	261.97	700.00	021.44	S77°50'20"E	260.45'

LINE TABLE			
NUMBER	DIRECTION	DISTANCE	RECORD CALLS
L1	S12°44'01"E	69.01'	S11°01'30"E 69.02'
L2	S22°31'31"E	158.89'	S20°49'E 158.91'
L3	S28°01'31"E	94.92'	S29°19'E 94.93'
L4	S16°09'01"E	112.80'	S14°26'30"E 112.81'
L5	S03°38'01"E	46.91'	S01°55'30"E 46.91'
L6	S07°04'29"W	46.34'	S08°47'W 46.34'
L7	S07°53'29"W	65.44'	S09°36'W 65.45'
L8	S04°23'29"W	107.43'	S06°06'W 107.44'
L9	S06°50'31"E	92.10'	S05°08'E 92.11'
L10	S01°11'29"W	92.74'	S02°54'W 92.75'
L11	S17°20'54"W	67.15'	S19°04'W 67.04'
L12	S24°38'07"W	137.83'	S26°20'W 137.98'
L13	N60°30'35"W	28.28'	N60°09'W 28.32'
L14	N83°19'25"W	79.41'	N81°19'W 79.61'
L15	S73°34'28"W	157.32'	S75°10'30"W 157.11'
L16	S69°03'48"W	113.84'	S70°47'W 113.63'
L17	N89°44'25"W	128.39'	N88°35'13"W 128.39'
L18	S49°24'41"W	5.85'	S47°47'00"W 5.78'

LS = Landscape Lot
MB = MailBox Center

9xx = Minimum Finish Floor Elevation

NOTES:

1. THIS TRACT IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
2. NO DEVELOPMENT SHALL BEGIN ON LOTS 11–28 BLK A, LOTS 20–21 BLK B & LOTS 3–6 BLK C PRIOR TO ISSUANCE OF A FLOOD PLAIN DEVELOPMENT PERMIT BY THE WILLIAMSON COUNTY FLOOD PLAIN ADMINISTRATOR FOR EACH LOT SPECIFIED.
3. THE DEVELOPER, BUILDER, SELLER, OR AGENT SHALL INFORM, IN WRITING, EACH BUYER OF SUBDIVISION LOTS OR PROPERTY LOCATED WITHIN FLOOD HAZARD AREAS THAT SUCH PROPERTY IS AN IDENTIFIED FLOOD HAZARD AREA AND THAT A FLOOD PLAIN DEVELOPMENT PERMIT WILL BE REQUIRED BEFORE A STRUCTURE CAN BE PLACED ON THE PROPERTY. THE WRITTEN NOTICE SHALL BE FILED FOR RECORD IN THE DEED RECORDS OF WILLIAMSON COUNTY. A COPY OF THIS WRITTEN NOTICE SHALL BE PROVIDED WHEN APPLICATIONS ARE MADE FOR FLOOD PLAIN DEVELOPMENT PERMITS."
4. PRIOR TO ANY CHANNEL ALTERATIONS, BRIDGE CONSTRUCTION, FILL, DREDGING, GRADING, CHANNEL IMPROVEMENT, OR STORAGE OF MATERIALS OR ANY OTHER CHANGE WITHIN THE 100–YEAR FLOOD PLAIN LOCATED WITHIN THIS BLUE LINE (SURVEY), AN APPLICATION FOR FLOOD PLAIN DEVELOPMENT PERMIT WITH A DESCRIPTION OF THE PROJECT AND EXTENT OF CHANGES, IF ANY, TO THE WATERCOURSE OR NATURAL DRAINAGE AS A RESULT OF THE PROPOSED DEVELOPMENT MUST BE SUBMITTED TO AND APPROVED BY THE WILLIAMSON COUNTY FLOOD PLAIN ADMINISTRATOR. ALL SPECIFICATIONS AND DETAILS NECESSARY FOR COMPLETE REVIEW MUST BE PROVIDED.
5. NO OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO FENCING OR STORAGE, SHALL BE PERMITTED IN ANY DRAINAGE EASEMENTS SHOWN HERON.
6. A TEN FOOT (10') PUE ABUTTING AND ALONG THE STREETSIDE PROPERTY LINE IS HEREBY DEDICATED FOR ALL STREETSIDE PROPERTY LOTS SHOWN HEREON.

Clear Rock LLC

SAMUEL D. KIGER 89353 PROFESSIONAL ENGINEER 3-24-17

no.	date	Revisions	appv.

Jay Engineering Company, Inc.
P.O. Box 1220
Leander, Texas 78646-1220
Tel: (512) 259-3882 Fax: (512) 259-8016
TEXAS REGISTERED ENGINEERING FIRM F-4780

THE RIDGE at CROSS CREEK
REVISED PRELIMINARY PLAT

LAYOUT (100' Scale)

CEAR ROCK, LLC

SCALE: AS NOTED	DWN: JJD	DESIGN: SIK	DATE: MARCH 2017
DWG. NO. AS NOTED		JOB NO. 204-004-20	

Sheet No. 3 Of 7

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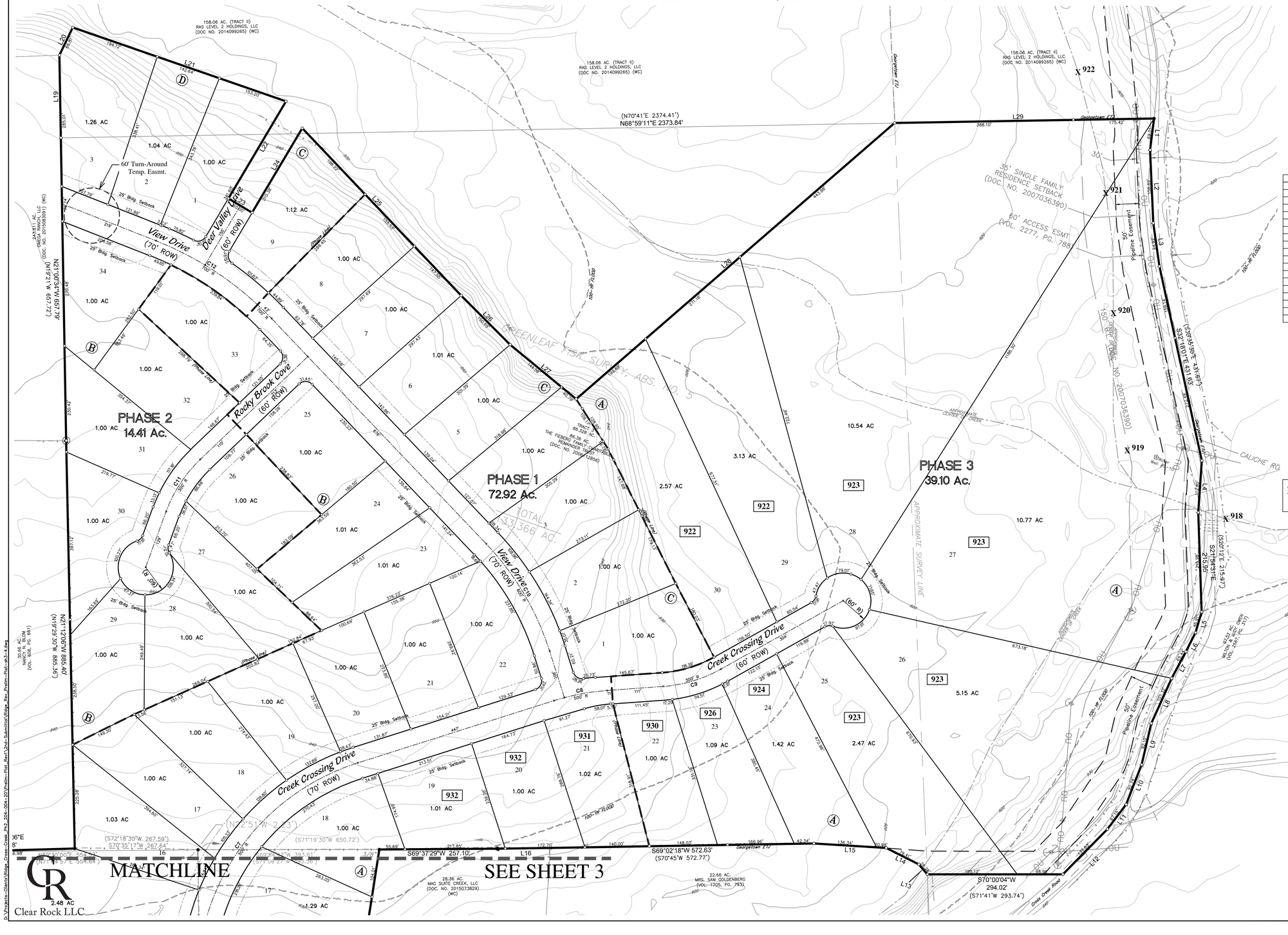
THE RIDGE at CROSS CREEK

REVISED PRELIMINARY PLAT

WILLIAMSON COUNTY, TEXAS

LEGEND

- ● IRON ROD FOUND (SIZE NOTED)
- CAP● IRON ROD W/CAP FOUND
- ⊛ COTTON SPINDLE FOUND
- ● IRON ROD W/CAP SET
- ▲ FENCE POST
- (xxx) RECORD INFORMATION SUBJECT TRACT
- [xxx] RECORD INFORMATION ADJOINER TRACT


158.06 AC. (TRACT II)
RAS LEVEL 2 HOLDINGS, LLC
(DOC NO. 2014099265) (WC)
(N70°41'E 2374.41')
N68°59'11"E 2373.84'
Georgetown ETJ
X 922
X 921
X 920
X 919
X 918
L29
388.10'
175.42'
30' Pipeline Easement
50' Pipeline Easement
100'-R FLOOD
356' SINGLE FAMILY RESIDENCE SETBACK (DOC. NO. 2007036390)
60' ACCESS ESMT. (VOL. 2277, PG. 788)
APPROXIMATE CENTER OF CROSS CREEK
APPROXIMATE SURVEY LINE
GREENLEAF FISK SURVEY, ABS. NO. 5
Cross Creek Road
CALICHE RD.
S32°18'01"E 431.65'
(S32°55'35"E 431.65')
S32°18'01"E 431.65'
(S32°55'35"E 431.65')
S32°18'01"E 431.65'
(S32°55'35"E 431.65')

Flood Plain - FEMA Firm Map #48491C0275E
Dated: Sept. 26, 2008

xx+xx HEC RAS Cross-Sections

DA2
519.33 AC

DA1
1212.81 AC

CROSS CREEK LN.

CROSS CREEK LN.

RONALD REAGAN BLVD.

STATE HWY 29

KAUFFMAN LOOP

CR 267

PARK PLACE

CROSS CREEK RD.

THE RIDGE at CROSS CREEK

100 YR Flood

FEMA ZONE AE

FEMA ZONE X

1+00

15+00

16+70

20+00

24+00

27+00

28+50

30+50

The Ridge at Cross Creek
TR 55 Off Site Drainage Summary

Drainage Area	Acres	RCN	Tc hrs	Q_{10} cfs	Q_{25} cfs	Q_{100} cfs
1A	1216	78	2.787	477.16	680.39	1080.74
2A	519	77	2.484	201.16	289.99	466.36

Clear Rock LLC

JAECO

SCALE: 1" = 600'

0 600 1200 1800

10 FOOT CONTOURS

SAMUEL D. KIGER 89353 PROFESSIONAL ENGINEER 3-16-17

no.	date	Revisions	appv.

Jay Engineering Company, Inc.
P.O. Box 1220
Leander, Texas 78646-1220
Tel: (512) 259-3502 Fax: (512) 259-8016
TEXAS REGISTERED ENGINEERING FIRM F-4780

THE RIDGE at CROSS CREEK
REVISED PRELIMINARY PLAT

OVERALL DRAINAGE PLAN

CLEAR ROCK, LLC

SCALE: AS NOTED | DWN: JJD | DESIGN: SDK | DATE: MARCH 2017
DWG. NO. AS NOTED | JOB NO. 204-004-20

Sheet No. 5 Of 7

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Flood Plain - FEMA Firm Map #48491C0275E
Dated: Sept. 26, 2008

LEGEND

- ● IRON ROD FOUND (SIZE NOTED)
- CAP ● IRON ROD W/CAP FOUND
- ⊛ COTTON SPINDLE FOUND
- ● IRON ROD W/CAP SET
- ▲ FENCE POST
- (xxx) RECORD INFORMATION SUBJECT TRACT
- [xxx] RECORD INFORMATION ADJOINER TRACT

THE RIDGE at CROSS CREEK

STREET INFORMATION

STREET NAME	LENGTH	ROW WIDTH	ROAD WIDTH	DESIGN SPD.
CROSS RIDGE COVE	319 LF	60'	24' B-B	30 MPH
STONES THROW COVE	395 LF	60'	24' B-B	30 MPH
CREEK CROSSING DRIVE	548/3340 LF	60'/70'	24'/28' B-B	30/35 MPH
DEER VALLEY DRIVE	150 LF	60'	24' B-B	30 MPH
VIEW DRIVE	1552 LF	70'	28' B-B	35 MPH
ROCKY BROOK COVE	575 LF	60'	24' B-B	30 MPH

TOTAL STREETS 6,880 L.F.

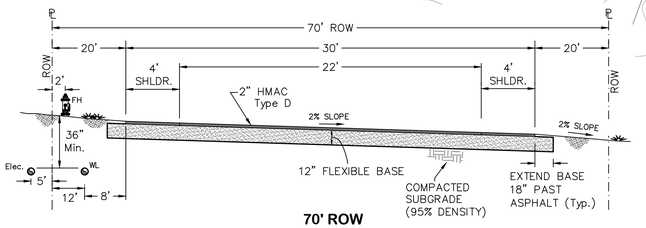
LS = Landscape

PHASE 3
39.10 Ac.

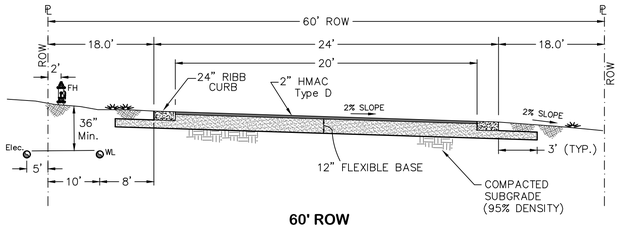
PHASE 2
14.41 Ac.

PHASE 1
72.92 Ac.

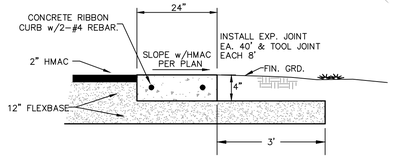
60' Turn-Around
Temp. Esmt.



70' ROW
TYPICAL CROSS SLOPE STREET SECTION
with/ UTILITY LOCATIONS
SCALE: N.T.S.



60' ROW
TYPICAL CROSS SLOPE STREET SECTION
with/ UTILITY LOCATION
SCALE: N.T.S.



RIBBON CURB
N.T.S.

Date: 03-23-17

SCALE: 1" = 200'
0 200 400 600
2 FOOT CONTOURS

Clear Rock LLC

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THE RIDGE at CROSS CREEK
REVISED PRELIMINARY PLAT

OVERALL STREET PLAN

CEAR ROCK, LLC
SCALE: AS NOTED DWN: JJD DESIGN: SDK DATE: MARCH 2017
DWG. NO. AS NOTED JOB NO. 204-004-20

Sheet No. 6 Of 7

no.	date	Revisions	appv.

Jay Engineering Company, Inc.
P.O. Box 1220
Leander, Texas 78646-1220
Tel: (512) 259-3502 Fax: (512) 259-8016
TEXAS REGISTERED ENGINEERING FIRM F-4780

STATE OF TEXAS
SAMUEL D. KIGER
89353
PROFESSIONAL ENGINEER
3-24-17

NOTE:

1. EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE. CONTRACTOR IS TO VERIFY LOCATIONS OF ALL EXISTING UTILITY LINES PRIOR TO COMMENCING WORK.
2. FIRE HYDRANT LOCATIONS ARE APPROXIMATE, EXACT LOCATION SHOULD BE NEAREST PRACTICAL LOCATION TO THAT WHICH IS SHOWN AVOIDING CURB INLETS, DRIVEWAYS, AND WASTEWATER.

Flood Plain - FEMA Firm Map #48491C0275E
Dated: Sept. 26, 2008

Legend

- Exist. Waterline
- Exist. Gate Valve
- Exist. Fire Hydrant
- Proposed Water Transmission Main
- Proposed Gate Valve
- Proposed Fire Hydrant
- Double Water Service
- Single Water Service
- Air Release Valve

PHASE 2
60.45 Ac.

PHASE 1
72.92 Ac.

(1) Flush Valve
(1) 8" Cap/Plug

(1) 8"x8" Tee
(1) 8" Gate Valve

(1) 8"x8" Tee
(2) 8" Gate Valves

(1) ARV
(1) Flush Valve
(1) 8" Cap/Plug

(1) 8"x8" Tee
(2) 8" Gate Valves

(1) 8"x8" Tee
(2) 8" Gate Valves

(1) ARV

(1) 8"x8" Tee
(2) 8" Gate Valves

Cap/Plug
8" WL

(1) 8"x8" Tee
(1) 8" Gate Valve

Tie-Into Existing 10" WL
(1) 10" Tapping Sleeve
(1) 8" Gate Valve

Date: 03-23-17

SCALE: 1" = 200'

0 200 400 600

2 FOOT CONTOURS

ESTIMATED QUANTITIES - WATER	
8" PVC (C-900)	7,128 L.F.
10"x8" TEE (Hot Tap)	1
8" CROSS	0
8" TEES	7
8" 45° BENDS	0
8" GATE VALVES w/BOX	11
8" CAP/PLUG	3
AIR RELEASE VALVE - 2"	2
6" GATE VALVES w/BOX	15
FIRE HYDRANTS w/Lead	15
FH MARKERS	15
FLUSHING VALVES	2

8" WATER LINE SHALL BE, C-900 PVC PIPE, UNLESS OTHERWISE SHOWN

Clear Rock LLC

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STATE OF TEXAS
SAMUEL D. KIGER
89353
LICENSED PROFESSIONAL ENGINEER
3-16-17

no.	date	Revisions
		appv.

Jay Engineering Company, Inc.
P.O. Box 1220
Lakeway, Texas 78646-1220
Tel: (512) 259-3882, Fax: (512) 259-8016
TEXAS REGISTERED ENGINEERING FIRM F-4780

THE RIDGE at CROSS CREEK
REVISED PRELIMINARY PLAT

WATER DISTRIBUTION PLAN

CEAR ROCK, LLC

SCALE: AS NOTED | DWN: JJD | DESIGN: SDK | DATE: MARCH 2017
DWG. NO. AS NOTED | JOB NO. 204-004-20

Sheet No. 7 of 7

Commissioners Court - Regular Session **15.**

Meeting Date: 04/04/2017

Discuss consider and take appropriate action on approving a license agreement with San Gabriel Hidden Creek Estates LLC - Pct 3

Submitted For: Terron Evertson **Submitted By:** Patrick Hughes, Unified Road System

Department: Unified Road System

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on approving a license agreement with San Gabriel Hidden Creek Estates, LLC - Pct 3.

Background

This standard licence agreement is for the Hidden Creek Estates development located along the east side of San Gabriel Ranch Road approximately 0.5 miles north of CR 214.
This agreement has been reviewed and approved by Sheets & Crossfield.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Licence Agreement - San Gabriel Hidden Creek Estates, LLC

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/27/2017 01:39 PM
Form Started By: Patrick Hughes		Started On: 03/27/2017 11:16 AM
Final Approval Date: 03/27/2017		

WILLIAMSON COUNTY
LICENSE AGREEMENT

[SAN GABRIEL HIDDEN CREEK ESTATES, LLC]

WILLIAMSON COUNTY, a political subdivision of the State of Texas (the "*County*"), and **SAN GABRIEL HIDDEN CREEK ESTATES, LLC**, a State of Texas Limited Liability Corporation (the "*Licensee*"), enter into this **LICENSE AGREEMENT** (this "*Agreement*") upon the terms and conditions set forth below.

I.
PURPOSE AND GRANT OF LICENSE AGREEMENT

Licensee has requested permission from County to install and maintain additions, including, but not limited to landscaping, lighting, fencing, signage, and irrigation (collectively referred to herein as the "*Licensee's Improvements*"), in portions of the County's right-of-way. The County grants to Licensee permission to install and maintain Licensee's Improvements in the areas of the County's right-of-way described in the attached **Exhibit "A"** (the "*Licensed Property*").

The County makes this grant solely to the extent of its right, title, and interest in the Licensed Property, without any express or implied warranties.

Licensee agrees that all construction and maintenance permitted by this Agreement will be done in compliance with the terms and conditions of this Agreement and all applicable County, State, and/or Federal police, traffic, building, health, and safety ordinances, laws, and regulations existing at the time said construction and maintenance is performed.

II.
ANNUAL FEE

The County, its governing body, and its respective successors and assigns agree that no annual fee will be assessed for the license and permission herein granted to Licensee. Licensee agrees that the County's permission and grant of a license hereunder and Licensee's ability to construct and obligation to thereafter maintain Licensee's Improvements on the Licensed Property serve as consideration to support this Agreement.

III.
COUNTY'S RIGHTS TO LICENSED PROPERTY

This Agreement is expressly subject and subordinate to the present and future rights of the County, its successors, assigns, lessees, grantees and licensees, to construct, install, establish, maintain, use, operate, and renew any public utilities facilities, franchised public utilities, roadways, or streets on, beneath, or above the surface of the Licensed Property.

Nothing in this Agreement will be construed to limit, in any way, the power of the County to widen, alter, or improve the Licensed Property pursuant to official action by the governing body of the County or its successors. The County does, however, agree to give Licensee at least thirty (30) days' written notice of such action and will cooperate with Licensee to effect the relocation and/or removal of Licensee's Improvements, at Licensee's sole cost, in the event of such widening, altering, or improvement of the Licensed Property, and further, to cooperate with Licensee wherever possible, to effect such widening, altering, or improving of the Licensed Property so that Licensee's Improvements and operations on the Licensed Property will not be materially affected

thereby.

Notwithstanding any provision in this Agreement to the contrary, the County retains the right to enter upon the Licensed Property at any time without notice to Licensee, assuming no obligation to Licensee, and remove, without liability to County, any of the Licensee's Improvements whenever such removal is deemed necessary for: (a) exercising the County's rights or duties with respect to the Licensed Property; (b) protecting persons or property; or (c) protecting the public health or safety with respect to the Licensed Property.

IV.
INSURANCE

Licensee will, at its sole expense, obtain and maintain during the term of this Agreement a commercial general liability insurance policy, written by a company acceptable to the County and licensed to do business in Texas, with a combined single limit of not less than Five Hundred Thousand and No/100 Dollars ($500,000.00), which coverage may be provided in the form of a rider and/or endorsement to a previously existing insurance policy. Such insurance coverage must specifically name the County as an additional insured and cover all perils arising from the activities of Licensee, its officers, directors, employees, agents, or contractors relative to this Agreement. Licensee will be responsible for any deductibles stated in the policy. A true copy of each instrument effecting such coverage must be delivered to the County on or before the Effective Date defined on the initial signature page hereto.

So long as Licensee is using the Licensed Property, Licensee will not cause such insurance to be canceled nor permit such insurance to lapse. All insurance certificates must include a clause to the effect that the policy will not be canceled, reduced, restricted, or otherwise limited until thirty (30) days after the County has received written notice as evidenced by a return receipt of registered or certified mail.

V.
INDEMNIFICATION

INDEMNIFICATION - EMPLOYEE PERSONAL INJURY CLAIMS. TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE WILL INDEMNIFY, DEFEND (WITH COUNSEL OF COUNTY'S CHOOSING), AND HOLD HARMLESS THE COUNTY, AND THE COUNTY'S EMPLOYEES, AGENTS, REPRESENTATIVES, PARTNERS, OFFICERS, AND DIRECTORS (COLLECTIVELY, THE "*INDEMNITEES*") AND WILL ASSUME ENTIRE RESPONSIBILITY AND LIABILITY (OTHER THAN AS A RESULT OF THE COUNTY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT) FOR ANY CLAIM OR ACTION BASED ON OR ARISING OUT OF THE PERSONAL INJURY, OR DEATH, OF ANY EMPLOYEE OF LICENSEE, OR OF ANY SUBCONTRACTOR, OR OF ANY OTHER ENTITY FOR WHOSE ACTS THEY MAY BE LIABLE, WHICH OCCURRED OR WAS ALLEGED TO HAVE OCCURRED ON THE LICENSED PROPERTY OR IN CONNECTION WITH LICENSEE'S IMPROVEMENTS. TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE HEREBY INDEMNIFIES THE INDEMNITEES EVEN TO THE EXTENT THAT SUCH PERSONAL INJURY WAS CAUSED OR ALLEGED TO HAVE BEEN CAUSED BY THE SOLE, COMPARATIVE OR CONCURRENT NEGLIGENCE OF THE STRICT LIABILITY OF ANY INDEMNITEE. THIS INDEMNIFICATION WILL NOT BE LIMITED TO DAMAGES, COMPENSATION, OR BENEFITS PAYABLE UNDER INSURANCE POLICIES, WORKERS COMPENSATION ACTS, DISABILITY BENEFITS ACTS, OR OTHER EMPLOYEES BENEFIT ACTS.

INDEMNIFICATION - OTHER THAN EMPLOYEE PERSONAL INJURY CLAIMS. TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE WILL INDEMNIFY, DEFEND (WITH COUNSEL OF COUNTY'S CHOOSING), AND HOLD HARMLESS THE INDEMNITEES FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR ALLEGED TO BE RESULTING FROM THE PERFORMANCE OF THIS AGREEMENT OR THE WORK DESCRIBED HEREIN, TO THE

EXTENT CAUSED BY THE NEGLIGENCE, ACTS, ERRORS, OR OMISSIONS OF LICENSEE OR ITS SUBCONTRACTORS, ANYONE EMPLOYED BY THEM, OR ANYONE FOR WHOSE ACTS THEY MAY BE LIABLE, REGARDLESS OF WHETHER OR NOT SUCH CLAIM, DAMAGE, LOSS OR EXPENSE IS CAUSED IN WHOLE OR IN PART BY AN INDEMNITEE HEREUNDER.

VI.
CONDITIONS

A. Licensee's Responsibilities. Licensee will be responsible for any damage to and/or for the relocation of Licensee's Improvements on the Licensed Property. Further, Licensee will reimburse the County for all costs of replacing or repairing any property of the County or of others which is damaged or destroyed as a result of activities authorized under this Agreement by, or on behalf of, Licensee.

B. Maintenance. Licensee will maintain the Licensed Property and Licensee's Improvements by keeping the area free of debris and litter. Removal of dead or dying plants will also be handled by Licensee at its expense, as required by the County. Such removal of dead or dying plants must be completed within thirty (30) days following receipt of a written request by the County to do so. If Licensee abandons or fails to maintain the Licensed Property, and the County receives no substantive response within thirty (30) days following written notification to Licensee, then the County may remove and/or replace all of Licensee's Improvements.

C. Removal or Modification. Licensee agrees that removal or modification of any improvements now existing or to be later replaced on the Licensed Property will be at Licensee's sole expense. Said removal or modification will be at Licensee's sole discretion, except where otherwise provided by this Agreement.

D. Default. In the event that Licensee fails to maintain the Licensed Property or otherwise comply with the terms or conditions as set forth herein, then the County will give Licensee written notice thereof, by registered or certified mail, return receipt requested, to the addresses set forth below. Licensee will have thirty (30) days from the date of receipt of such notice to take action to remedy the failure complained of and, if Licensee does not remedy the same to the County's complete satisfaction within the 30-day period, the County may, in addition to other remedies available herein or by law to County, (1) perform the work, (2) contract for the completion of the work, or (3) terminate this Agreement. Licensee agrees to pay, within thirty (30) days of written demand by the County, all costs and expenses incurred by the County in completing the work or contracting for the work to be completed.

VII.
COMMENCEMENT; TERMINATION BY ABANDONMENT

This Agreement will begin on the Effective Date set forth above the signature of the parties herein below, and continue thereafter for so long as the Licensed Property is used for the purposes set forth herein or until this Agreement is terminated according to the terms hereof. If Licensee abandons the use of all or any part of the Licensed Property for such purposes set forth in this Agreement, then this Agreement, as to such portion or portions abandoned, will expire and terminate following thirty (30) days' written notice to Licensee. If such abandonment has not been remedied by Licensee within such period, the County will thereafter have the same complete title to the Licensed Property so abandoned as though this Agreement had never been made and will have the right to enter on the Licensed Property so abandoned and terminate the rights of Licensee, its successors and assigns hereunder, with respect to the abandoned Licensed Property. All installations of Licensee's Improvements on Licensed Property abandoned by Licensee that are not removed prior to the County's termination of the license as to such Licensed Property will

be deemed the property of the County as of the effective date of the County's termination.

VIII.
TERMINATION

A. Termination by Licensee. This Agreement may be terminated by Licensee as to all or any portion of the Licensed Property by delivering written notice of termination to the County not later than thirty (30) days before the effective date of termination. If Licensee so terminates, then Licensee will, within the 30-day notice period, remove from the portion of the Licensed Property as to which this Agreement is being terminated, installations of Licensee's Improvements. Any of Licensee's Improvements within the portion of the Licensed Property as to which this Agreement is being terminated that are not removed within said period will become the property of the County. Licensee hereby agrees and acknowledges that Licensee will be liable to the County for any damages caused to the Licensed Property by the removal of Licensee's Improvements.

B. Termination by County. This Agreement may be revoked and terminated in whole or in part at any time by resolution of the Williamson County Commissioners Court if such revocation and termination is reasonably required by the public interest (as hereinafter set forth), after providing thirty (30) days' written notice to the Licensee.

Subject to prior written notification to Licensee or its successors-in-interest, this Agreement is revocable by the County and deemed to be required by the public interest if:

1. the Licensee's Improvements, or a portion of them, interfere with the County's right-of-way;

2. use of the Licensed Property becomes necessary for a public purpose;

3. the Licensee's Improvements, or a portion of them, constitute a danger to the public which the County deems, in its sole discretion, not to be remediable by alteration or maintenance of such improvements;

4. despite thirty (30) days' written notice to Licensee, maintenance or alteration necessary to alleviate a danger to the public has not been made; or

5. Licensee fails to comply with the terms and conditions of this Agreement including, but not limited to, any insurance requirements specified herein.

IX.
DISTRICT AS LICENSEE

Notwithstanding any contrary provision herein, in the event that the Association ceases to exist or fails to comply with the terms, conditions, and obligations of this Agreement, the County will provide written notice to the District of the Association's nonexistence or noncompliance with this Agreement. Upon the receipt of such notice, the District will automatically assume the rights and obligations of the "Licensee" pursuant to this Agreement. Within thirty (30) days after the District's receipt of such notice, the District will remedy the Association's default and secure the insurance required pursuant to Article IV above or notify the County that the District desires to terminate this Agreement effective as of the end of such 30-day period.

X.
MISCELLANEOUS PROVISIONS

A. Venue and Governing Law. Each party to this Agreement hereby agrees and acknowledges that venue and jurisdiction of any suit, right, or cause of action arising out of or in connection with this Agreement will lie exclusively in Williamson County, Texas. Furthermore, this Agreement will be governed by and construed in accordance with the laws of the State of Texas, excluding, however, its choice of law rules.

B. Severability. If any provision of this Agreement are held invalid or unenforceable by any court of competent jurisdiction, such holding will not invalidate or render unenforceable any other provision hereof, but rather this entire Agreement will be construed as if not containing the particular invalid or unenforceable provision or provisions, and the rights and obligation of the parties will be construed and enforced in accordance therewith. The parties acknowledge that if any provision of this Agreement is determined to be invalid or unenforceable, it is the desire and intention of each that such provision be reformed and construed in such a manner that it will, to the maximum extent practicable, give effect to the intent of this Agreement and be deemed to be validated and enforceable.

C. Covenant Running with Land; Waiver of Default. This Agreement and all of the covenants herein will run with the land; therefore, the conditions set forth herein will inure to and bind each party's successors and assigns. Any party may waive any default of another at any time, without affecting or impairing any right arising from any subsequent or other default.

D. Assignment. Licensee will not assign, sublet, or transfer its interest in this Agreement without the written consent of the County, which consent will not be unreasonably withheld. In the event that the County agrees to Licensee's assignment of its interest in this Agreement and subject to the assignee's compliance with the insurance requirements set forth herein, Licensee will furnish to the County a copy of any such assignment or transfer of any of Licensee's rights in this Agreement, including the name, date, address, and contact person.

E. Notices. All notices, demands, and requests for delivery of documents or information hereunder must be in writing and will be deemed to have been properly delivered and received as of the time of delivery if personally delivered, as of the time deposited in the mail system if sent by United States certified mail, return receipt requested, and postage prepaid, or as of the time of delivery to Federal Express (or comparable express delivery system) if sent by such method with all costs prepaid. All notices, demands, and requests hereunder will be addressed as follows or to such other addresses which a party may so designate by sending notice as aforesaid:

To the Licensee at:

SAN GABRIEL HIDDEN CREEK ESTATES, LLC
9508 East Hwy 71
Spicewood, TX 78669
Attn: Davy Roberts

To the County at:

Williamson County Judge
Dan A. Gattis (or successor)
710 Main Street, Ste. 101
Georgetown, Texas 78626

with a copy to:

Williamson County Engineer
Terron Evertson (or successor)
3151 S. E. Inner Loop, Suite B
Georgetown, Texas 78626

F. No Third Party Beneficiaries. This Agreement is for the sole and exclusive benefit of the parties hereto, and nothing in this Agreement, express or implied, is intended to confer or will be construed as conferring upon any other person any rights, remedies or any other type or types of benefits.

G. Compliance with Laws. Each party to this Agreement will comply with all federal, state, and local laws, statutes, ordinances, rules, and regulations and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Agreement

H. Gender, Number and Headings. Words of any gender used in this Agreement will be held and construed to include any other gender, and words in the singular number will be held to include the plural, unless the context otherwise requires. The headings and section numbers are for convenience only and will not be considered in interpreting or construing this Agreement.

I. Construction. Each party to this Agreement acknowledges that it and its counsel have reviewed this Agreement and that the normal rules of construction are not applicable and there will be no presumption that any ambiguities will be resolved against the drafting party in the interpretation of this Agreement.

J. No Waiver of Immunities. Nothing in this Agreement will be deemed to waive, modify, or amend any legal defense available at law or in equity to the County or the District, or their respective past or present officers, employees, or agents, nor to create any legal rights or claim on behalf of any third party. Neither the County nor the District waives, modifies, or alters to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.

K. Entire Agreement. This Agreement represents the entire and integrated Agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either oral or written. This Agreement may be amended only by written instrument signed by each party to this Agreement. NO OFFICIAL, EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE COUNTY HAS ANY AUTHORITY, EITHER EXPRESS OR IMPLIED, TO AMEND THIS AGREEMENT, EXCEPT PURSUANT TO SUCH EXPRESS AUTHORITY AS MAY BE GRANTED BY THE COUNTY COMMISSIONERS COURT.

L. Counterparts. This Agreement may be executed in multiple counterparts, each of which will be deemed an original and all of which together will constitute a single instrument.

TERMS AND CONDITIONS ACCEPTED, this the _____ day of _____, 2014

(the "*Effective Date*").

COUNTY:

WILLIAMSON COUNTY, a political subdivision of the State of Texas

By:_____
Dan A. Gattis,
Williamson County Judge

THE STATE OF TEXAS §
§
COUNTY OF WILLIAMSON §

This instrument was acknowledged before me on this the _____ day of _____, 2014 by Dan A. Gattis, as County Judge of WILLIAMSON COUNTY, a political subdivision of the state of Texas, on behalf of said political subdivision.

_____
NOTARY PUBLIC, State of Texas

LICENSEE:

SAN GABRIEL HIDDEN CREEK ESTATES, LLC, a Texas Limited Liability Company

By:_____
Davy Roberts
Co-Owner and Agent

THE STATE OF TEXAS §
§
COUNTY OF Williamson §

This instrument was acknowledged before me on this the 27th day of March, 2017, by Davy Roberts of <NAME OF DEVELOPMENT/ENTITY>, a Texas non-profit corporation, on behalf of said non-profit corporation.

San Gabriel Hidden Creek Estates, LLC.

_____
NOTARY PUBLIC, State of Texas

MICHELLE ANN FERGUSON
Notary Public, State of Texas
Comm. Expires 01-14-2021
Notary ID 129265542

EXHIBIT "A"
LICENSED PROPERTY

The portions of all public rights-of-way between the edge of pavement or back of curb to the outer boundary of said rights-of-way within and adjacent to the portion of the **San Gabriel Hidden Creek Estates** Subdivision as more particularly described on **Exhibit "A"**

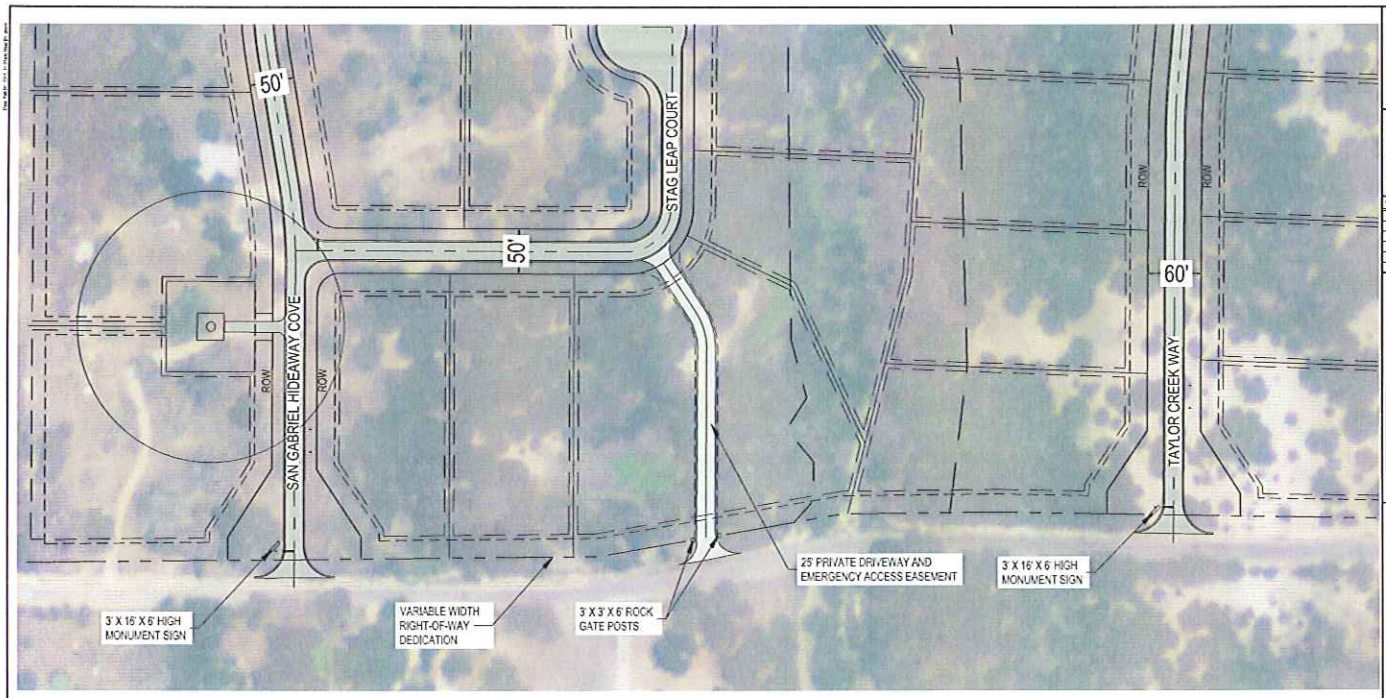

EXHIBIT "A"
LICENSED PROPERTY

The portions of all public rights of way between the edge of pavement or back of curb to the outer boundary of said rights of way within and adjacent to the portion of the San Gabriel Hidden Creek Estates

"This document is released for REVIEW PURPOSES ONLY, NOT FOR CONSTRUCTION and was prepared under the authorization of Gerald D. Keller, Registered Professional Engineer, State of Texas, Registration No. 111515, on 15 FEB 2017."

MATKIN HOOVER ENGINEERING & SURVEYING

SITE PLAN SIGNAGE
FOR
PROJECT NAME
LOCATION

CS100A

JOB NO. XX.XX
DESIGNED BY C.D.
DRAWN BY C.D.
CHECKED BY A.N.

Commissioners Court - Regular Session **16.**

Meeting Date: 04/04/2017

Discuss consider and take appropriate action on approval of the final plat for the Melchor Estates subdivision - Pct 2

Submitted For: Terron Evertson **Submitted By:** Katheryn Cromwell, Unified Road System

Department: Unified Road System

Agenda Category: Consent

Information

Agenda Item

Discuss, consider, and take appropriate action on approval of the final plat for the Melchor Estates subdivision - Pct 2.

Background

This subdivision consists of one new single family lot and no new public roads.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Melchor Estates

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 07:59 AM
Form Started By: Katheryn Cromwell		Started On: 03/29/2017 02:13 PM
Final Approval Date: 03/30/2017		

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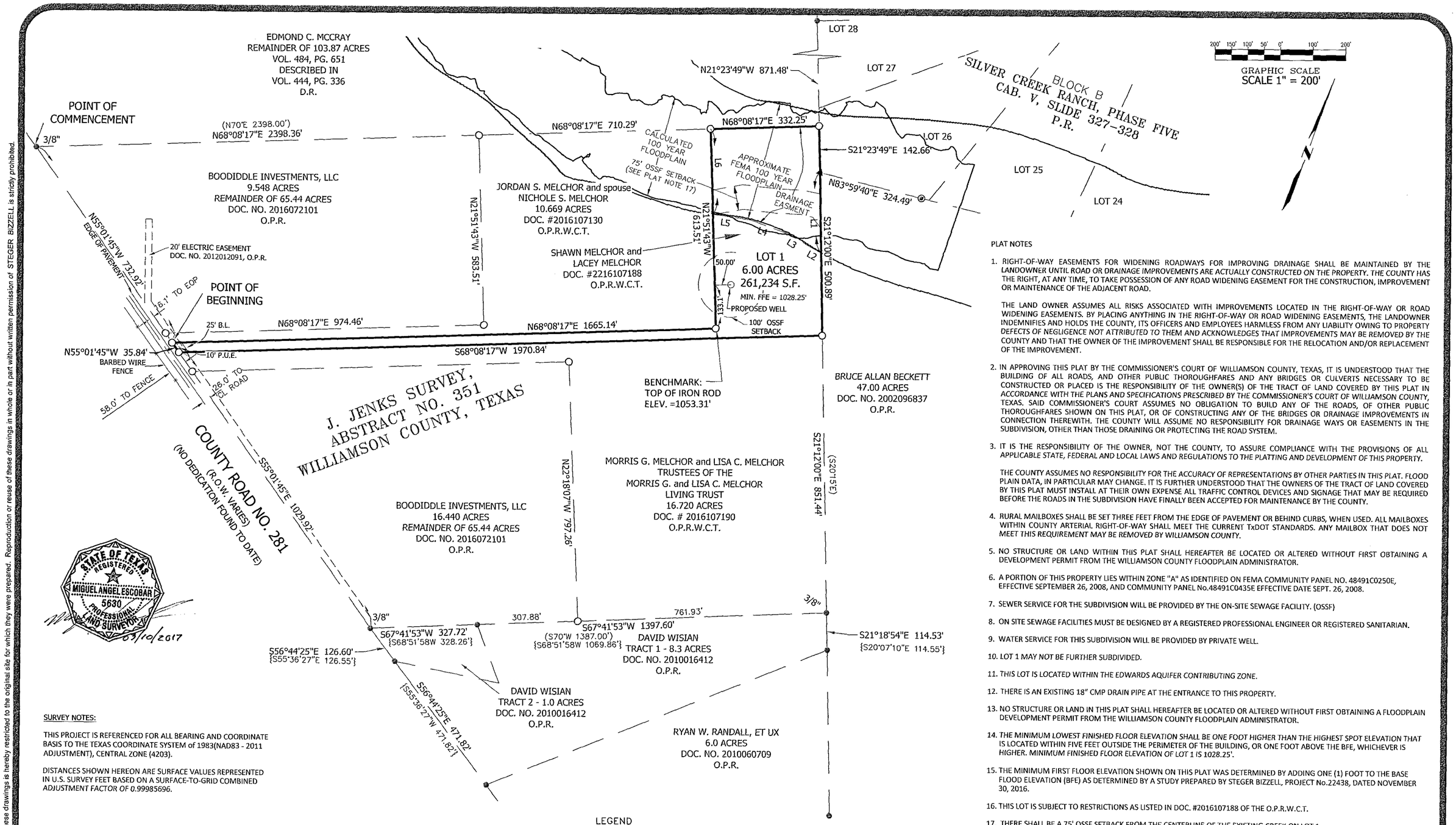


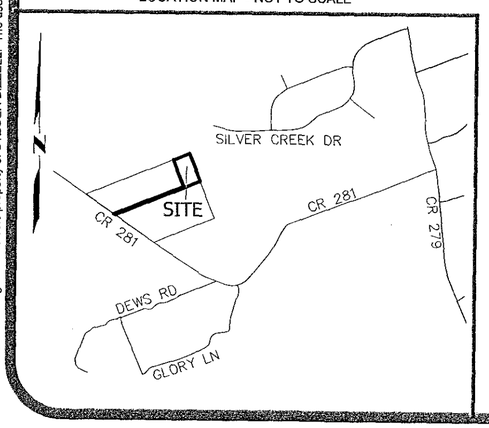
STATE OF TEXAS
REGISTERED
MIGUEL ANGEL ESCOBAR
5630
PROFESSIONAL LAND SURVEYOR
03/10/2017

SURVEY NOTES:

THIS PROJECT IS REFERENCED FOR ALL BEARING AND COORDINATE BASIS TO THE TEXAS COORDINATE SYSTEM of 1983(NAD83 - 2011 ADJUSTMENT), CENTRAL ZONE (4203).

DISTANCES SHOWN HEREON ARE SURFACE VALUES REPRESENTED IN U.S. SURVEY FEET BASED ON A SURFACE-TO-GRID COMBINED *ADJUSTMENT FACTOR OF 0.99985696.*

LOCATION MAP - NOT TO SCALE



OWNER:
SHAWN & LACEY MELCHOR
2833 GARNET RIDGE
LEANDER, TX 78641

ENGINEER/SURVEYOR:
STEGER BIZZELL
1978 S. AUSTIN AVE.
GEORGETOWN, TEXAS 78626

TOTAL AREA OF PLAT: *6.00 ACRES*
TOTAL NUMBER OF LOTS: 1
TOTAL NUMBER OF BLOCKS: 0

LEGEND

⊙	IRON REBAR WITH CAP FOUND (STAMPED "CARSON")
●	IRON REBAR FOUND (1/2", OR AS NOTED)
○	IRON REBAR WITH CAP SET (1/2" STAMPED "RPLS 5784")
▲	NAIL FOUND (60D, OR AS NOTED)
O.R.	OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
O.P.R.	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
D.R.	DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
P.R.	PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS
R.O.W.	RIGHT-OF-WAY
P.O.C.	POINT OF COMMENCING
P.O.B.	POINT OF BEGINNING
P.U.E.	PUBLIC UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
B.L.	BUILDING LINE
OSSF	ON SITE SEWAGE FACILITY

DRAINAGE EASEMENT

Line Table		
Line #	Direction	Length
L1	S21° 12' 00"E	247.53'
L2	N80° 50' 11"W	38.72'
L3	N79° 16' 46"W	75.34'
L4	S89° 57' 56"W	125.73'
L5	S78° 11' 32"W	116.64'
L6	N21° 51' 43"W	262.53'

PLAT NOTES

1. RIGHT-OF-WAY EASEMENTS FOR WIDENING ROADWAYS FOR IMPROVING DRAINAGE SHALL BE MAINTAINED BY THE LANDOWNER *UNTIL ROAD OR DRAINAGE IMPROVEMENTS ARE ACTUALLY CONSTRUCTED ON THE PROPERTY. THE COUNTY* HAS THE RIGHT, AT ANY TIME, TO TAKE POSSESSION OF ANY ROAD WIDENING EASEMENT FOR THE CONSTRUCTION, IMPROVEMENT OR MAINTENANCE OF THE ADJACENT ROAD.

   THE LAND OWNER ASSUMES ALL RISKS ASSOCIATED WITH IMPROVEMENTS LOCATED IN THE RIGHT-OF-WAY OR ROAD WIDENING EASEMENTS. BY PLACING ANYTHING IN THE RIGHT-OF-WAY OR ROAD WIDENING EASEMENTS, THE LANDOWNER INDEMNIFIES AND HOLDS THE COUNTY, ITS OFFICERS AND EMPLOYEES HARMLESS FROM ANY LIABILITY OWING TO PROPERTY *DEFECTS OF NEGLIGENCE NOT ATTRIBUTED TO THEM AND ACKNOWLEDGES THAT IMPROVEMENTS MAY BE REMOVED BY THE* COUNTY AND THAT THE OWNER OF THE IMPROVEMENT SHALL BE RESPONSIBLE FOR THE RELOCATION AND/OR REPLACEMENT OF THE IMPROVEMENT.

2. IN APPROVING THIS PLAT BY THE COMMISSIONER'S COURT OF WILLIAMSON COUNTY, TEXAS, IT IS UNDERSTOOD THAT THE BUILDING OF ALL ROADS, AND OTHER PUBLIC THOROUGHFARES AND ANY BRIDGES OR CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IS THE RESPONSIBILITY OF THE OWNER(S) OF THE TRACT OF LAND COVERED BY THIS PLAT IN *ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY THE COMMISSIONER'S COURT OF WILLIAMSON COUNTY,* TEXAS. SAID COMMISSIONER'S COURT ASSUMES NO OBLIGATION TO BUILD ANY OF THE ROADS, OF OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT, OR OF CONSTRUCTING ANY OF THE BRIDGES OR DRAINAGE IMPROVEMENTS IN CONNECTION THEREWITH. THE COUNTY WILL ASSUME NO RESPONSIBILITY FOR DRAINAGE WAYS OR EASEMENTS IN THE SUBDIVISION, OTHER THAN THOSE DRAINING OR PROTECTING THE ROAD SYSTEM.

3. IT IS THE RESPONSIBILITY OF THE OWNER, NOT THE COUNTY, TO ASSURE COMPLIANCE WITH THE PROVISIONS OF ALL *APPLICABLE STATE, FEDERAL AND LOCAL LAWS AND REGULATIONS TO THE PLATTING AND DEVELOPMENT OF THIS PROPERTY.*

   THE COUNTY ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF REPRESENTATIONS BY OTHER PARTIES IN THIS PLAT. FLOOD PLAIN DATA, IN PARTICULAR MAY CHANGE. IT IS FURTHER UNDERSTOOD THAT THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT MUST INSTALL AT THEIR OWN EXPENSE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE THAT MAY BE REQUIRED BEFORE THE ROADS IN THE SUBDIVISION HAVE FINALLY BEEN ACCEPTED FOR MAINTENANCE BY THE COUNTY.

4. RURAL MAILBOXES SHALL BE SET THREE FEET FROM THE EDGE OF PAVEMENT OR BEHIND CURBS, WHEN USED. ALL MAILBOXES WITHIN COUNTY ARTERIAL RIGHT-OF-WAY SHALL MEET THE CURRENT TxDOT STANDARDS. ANY MAILBOX THAT DOES NOT *MEET THIS REQUIREMENT MAY BE REMOVED BY WILLIAMSON COUNTY.*

5. NO STRUCTURE OR LAND WITHIN THIS PLAT SHALL HEREAFTER BE LOCATED OR ALTERED WITHOUT FIRST OBTAINING A DEVELOPMENT PERMIT FROM THE WILLIAMSON COUNTY FLOODPLAIN ADMINISTRATOR.

6. A PORTION OF THIS PROPERTY LIES WITHIN ZONE "A" AS IDENTIFIED ON FEMA COMMUNITY PANEL NO. 48491C0250E, EFFECTIVE SEPTEMBER 26, 2008, AND COMMUNITY PANEL No.48491C0435E EFFECTIVE DATE SEPT. 26, 2008.

7. SEWER SERVICE FOR THE SUBDIVISION WILL BE PROVIDED BY THE ON-SITE SEWAGE FACILITY. (OSSF)

8. ON SITE SEWAGE FACILITIES MUST BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER OR REGISTERED SANITARIAN.

9. WATER SERVICE FOR THIS SUBDIVISION WILL BE PROVIDED BY PRIVATE WELL.

10. LOT 1 *MAY NOT BE FURTHER SUBDIVIDED.*

11. *THIS LOT IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE.*

12. THERE IS AN EXISTING 18" CMP DRAIN PIPE AT THE ENTRANCE TO THIS PROPERTY.

13. NO STRUCTURE OR LAND IN THIS PLAT SHALL HEREAFTER BE LOCATED OR ALTERED WITHOUT FIRST OBTAINING A FLOODPLAIN DEVELOPMENT PERMIT FROM THE WILLIAMSON COUNTY FLOODPLAIN ADMINISTRATOR.

14. *THE MINIMUM LOWEST FINISHED FLOOR ELEVATION SHALL BE ONE FOOT HIGHER THAN THE HIGHEST SPOT ELEVATION THAT* IS LOCATED WITHIN FIVE FEET OUTSIDE THE PERIMETER OF THE BUILDING, OR ONE FOOT ABOVE THE BFE, WHICHEVER IS *HIGHER. MINIMUM FINISHED FLOOR ELEVATION OF LOT 1 IS 1028.25'.*

15. THE MINIMUM FIRST FLOOR ELEVATION SHOWN ON THIS PLAT WAS DETERMINED BY ADDING ONE (1) FOOT TO THE BASE FLOOD ELEVATION (BFE) AS DETERMINED BY A STUDY PREPARED BY STEGER BIZZELL, PROJECT No.22438, DATED NOVEMBER 30, 2016.

16. THIS LOT IS SUBJECT TO RESTRICTIONS AS LISTED IN DOC. #2016107188 OF THE O.P.R.W.C.T.

17. THERE SHALL BE A 75' OSSF SETBACK FROM THE CENTERLINE OF THE EXISTING CREEK ON LOT 1.

FINAL PLAT OF

MELCHOR ESTATES

A 6.00 ACRE SUBDIVISION SITUATED IN THE
J. JENKS SURVEY, ABSTRACT NO. 351,
WILLIAMSON COUNTY, TEXAS

STEGER BIZZELL

ADDRESS 1978 S. AUSTIN AVENUE | GEORGETOWN, TX 78626
METRO 512.930.9412 | TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 | WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

JOB No. 22438 DATE: NOV. ,2017 SHEET 1 of 2 | DRAWN BY: | REVIEWED BY: | APPROVED BY:

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PROPERTY DESCRIPTION

BEING 6.000 ACRES OF LAND SITUATED IN THE J. JENKS SURVEY, ABSTRACT NO. 351, IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 65.44 ACRE TRACT OF LAND REFERENCED IN A WARRANTY DEED TO BOODIDDLE INVESTMENTS, LLC, RECORDED IN DOCUMENT NO. 2016072101, OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 6.000 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING AT A 3/8-INCH IRON REBAR FOUND FOR THE WEST CORNER OF SAID 65.44 ACRE TRACT AND THE SOUTH CORNER OF THE REMAINDER PORTION OF A CALLED 103.87 ACRE TRACT OF LAND REFERENCED IN AN ASSIGNMENT OF CONTRACT OF VETERANS' LAND BOARD CONTRACT OF SALE AND PURCHASE TO EDMOND C. MCCRAY, RECORDED IN VOLUME 484, PAGE 651, OF THE DEED RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING DESCRIBED BY METES AND BOUNDS IN VOLUME 444, PAGE 336, OF SAID DEED RECORDS, ALSO BEING IN THE NORTHEASTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD NO. 281 (A VARIABLE WIDTH RIGHT-OF-WAY, NO DEDICATION FOUND TO DATE);

THENCE, SOUTH 55°01'45" EAST, ALONG THE SOUTHWEST LINE OF SAID 65.44 ACRE TRACT AND SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD NO. 281, A DISTANCE OF 732.93 FEET TO A 1/2-INCH IRON REBAR WITH CAP STAMPED "RPLS 5784" SET FOR THE **POINT OF BEGINNING** OF THE HEREIN DESCRIBED TRACT;

THENCE, DEPARTING SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD NO. 281, OVER AND ACROSS SAID 65.44 ACRE TRACT, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

1. **NORTH 68°08'17" EAST,** A DISTANCE OF **1665.14 FEET** TO A 1/2-INCH IRON REBAR WITH CAP STAMPED "RPLS 5784" SET;
2. **NORTH 21°51'43" WEST,** A DISTANCE OF **613.51 FEET** TO A 1/2-INCH IRON REBAR WITH CAP STAMPED "RPLS 5784" SET IN THE NORTHWEST LINE OF SAID 65.44 ACRE TRACT, SAME BEING THE SOUTHEAST LINE OF SAID REMAINDER PORTION OF THE 103.87 ACRE TRACT;

THENCE, **NORTH 68°08'17" EAST,** WITH SAID NORTHWEST LINE OF THE 65.44 ACRE TRACT AND SAID SOUTHEAST LINE OF THE REMAINDER PORTION OF THE 103.87 ACRE TRACT, A DISTANCE OF **332.25 FEET** TO A 1/2-INCH IRON REBAR WITH CAP STAMPED "RPLS 5784" SET FOR THE NORTH CORNER OF SAID 65.44 ACRE TRACT AND THE SOUTHEAST CORNER OF SAID REMAINDER PORTION OF THE 103.87 ACRE TRACT, ALSO BEING IN THE SOUTHWEST LINE OF LOT 26, BLOCK B, SILVER CREEK RANCH, PHASE FIVE, A SUBDIVISION RECORDED IN CABINET V, SLIDE 327-328, OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS;

THENCE, **SOUTH 21°23'49" EAST,** WITH THE NORTHEAST LINE OF SAID 65.44 ACRE TRACT AND THE SOUTHWEST LINE OF SAID SILVER CREEK RANCH, PHASE FIVE, A DISTANCE OF **142.66 FEET** TO A 60D NAIL FOUND FOR THE SOUTHWEST CORNER OF SAID LOT 26 AND THE NORTHWEST CORNER OF A CALLED 47.00 ACRE TRACT OF LAND DESCRIBED IN A SPECIAL WARRANTY DEED TO BRUCE ALLAN BECKETT, RECORDED IN DOCUMENT NO. 2002096837, OF SAID OFFICIAL PUBLIC RECORDS;

THENCE, **SOUTH 21°12'00" EAST,** CONTINUING WITH SAID NORTHEAST LINE OF THE 65.44 ACRE TRACT AND THE SOUTHWEST LINE OF SAID 47.00 ACRE TRACT, A DISTANCE OF **500.89 FEET** TO A 1/2-INCH IRON REBAR WITH CAP STAMPED "RPLS 5784" SET FOR THE SOUTHEAST CORNER OF THE HEREIN DESCRIBED TRACT, FROM WHICH A 3/8-INCH IRON REBAR FOUND FOR THE EAST CORNER OF SAID 65.44 ACRE TRACT BEARS SOUTH 21°12'00" EAST, A DISTANCE OF 851.44 FEET;

THENCE, **SOUTH 68°08'17" WEST,** OVER AND ACROSS SAID 65.44 ACRE TRACT, A DISTANCE OF **1970.84 FEET** TO A 1/2-INCH IRON REBAR WITH CAP STAMPED "RPLS 5784" SET IN SAID SOUTHWEST LINE OF THE 65.44 ACRE TRACT AND SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD NO. 281, FROM WHICH A 3/8-INCH IRON REBAR FOUND FOR THE SOUTH CORNER OF SAID 65.44 ACRE TRACT BEARS SOUTH 55°01'45" EAST, A DISTANCE OF 1029.92 FEET;

THENCE, **NORTH 55°01'45" WEST,** WITH SAID SOUTHWEST LINE OF THE 65.44 ACRE TRACT AND SAID NORTHEASTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD NO. 281, A DISTANCE OF **35.84 FEET** TO THE **POINT OF BEGINNING** AND CONTAINING 6.000 ACRES OF LAND MORE OR LESS.

STATE OF TEXAS §
COUNTY OF WILLIAMSON §
KNOW ALL MEN BY THESE PRESENTS

I, MIGUEL A. ESCOBAR, A REGISTERED PROFESSIONAL LAND SURVEYOR, AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF LAND SURVEYING, DO HEREBY CERTIFY THAT THIS PLAT COMPLIES WITH THE SURVEY RELATED PORTIONS OF THE UNIFIED DEVELOPMENT CODE PUBLISHED BY WILLIAMSON COUNT, TEXAS, IS TRUE AND CORRECT TO THE BEST OF MY BELIEF, AND WAS PREPARED FROM AN ON-THE-GROUND SURVEY PERFORMED UNDER MY SUPERVISION. THE FIELD WORK WAS COMPLETED IN OCTOBER, 2016.

MIGUEL A. ESCOBAR, LSLS, RPLS
TEXAS REG. NO. 5630

3/10/2017
DATE

STATE OF TEXAS REGISTERED MIGUEL ANGEL ESCOBAR 5630 PROFESSIONAL LAND SURVEYOR

STATE OF TEXAS §
COUNTY OF WILLIAMSON §
KNOW ALL MEN BY THESE PRESENTS

I, DAVID L. PLATT, REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS SUBDIVISION IS NOT LOCATED IN THE EDWARDS AQUIFER RECHARGE ZONE AND IS ENCROACHED BY A ZONE "A" FLOOD AREA, AS DENOTED HEREIN, AND AS DEFINED BY FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION FLOOD HAZARD BOUNDARY MAP, COMMUNITY-PANEL NUMBER 48491C0435E, EFFECTIVE DATE SEPTEMBER 26, 2008, AND COMMUNITY PANEL No.48491C0250E, EFFECTIVE DATE SEPTEMBER 26, 2008.

THE FULLY DEVELOPED, CONCENTRATED STORMWATER RUNOFF RESULTING FROM THE ONE HUNDRED (100) YEAR FREQUENCY STORM IS CONTAINED WITHIN THE DRAINAGE EASEMENTS SHOWN AND/OR PUBLIC RIGHTS-OF-WAY DEDICATED BY THIS PLAT.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT GEORGETOWN, WILLIAMSON COUNTY, TEXAS

THIS THE 20TH DAY OF MARCH, 2017, A.D.

DAVID L. PLATT
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS - NO. 115964

STATE OF TEXAS DAVID L. PLATT 115964 LICENSED PROFESSIONAL ENGINEER

OWNER'S DEDICATION

STATE OF TEXAS §
COUNTY OF WILLIAMSON §
KNOWN ALL MEN BY THESE PRESENTS;

WE, SHAWN MELCHOR & LACEY MELCHOR, SOLE OWNERS OF THE CERTAIN TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. 2016107188 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND DO HEREBY SUBDIVIDE, SAID TRACT AS SHOWN HEREON, AND DO HEREBY CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY FOREVER DEDICATE TO THE PUBLIC ROADS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON FOR SUCH PUBLIC PURPOSES AS WILLIAMSON COUNTY MAY DEEM APPROPRIATE, AND DO HEREBY STATE THAT ALL NEW PUBLIC ROADWAYS AND EASEMENTS IF ANY AS SHOWN ON THIS PLAT ARE FREE OF LIENS. THIS SUBDIVISION IS TO BE KNOWN AS: "**MELCHOR ESTATES**"

TO CERTIFY WHICH, WITNESS BY MY HAND THIS 13TH DAY OF March, 2017

SHAWN MELCHOR
2833 GARNET RIDGE
LEANDER, TEXAS 78641

3.13.17
DATE

LACEY MELCHOR
2833 GARNET RIDGE
LEANDER, TEXAS 78641

3.13.17
DATE

STATE OF TEXAS §
COUNTY OF WILLIAMSON §
KNOW ALL MEN BY THESE PRESENTS

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED SHAWN MELCHOR KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT. GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS 13TH DAY OF March, 2017.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS
MY COMMISSION EXPIRES ON: 11-2-2020

HALEY R. WISIAN NOTARY PUBLIC - STATE OF TEXAS ID# 130886586-3 COMM. EXP. 11-02-2020

STATE OF TEXAS §
COUNTY OF WILLIAMSON §
KNOW ALL MEN BY THESE PRESENTS

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED LACEY MELCHOR KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS 13TH DAY OF March, 2017.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS
MY COMMISSION EXPIRES ON: 11-2-2020

HALEY R. WISIAN NOTARY PUBLIC - STATE OF TEXAS ID# 130886586-3 COMM. EXP. 11-02-2020

STATE OF TEXAS §
COUNTY OF WILLIAMSON §
KNOW ALL MEN BY THESE PRESENTS

I, RONNIE SHOEMAKER, VICE PRESIDENT, INDEPENDENT BANK, LIEN HOLDER OF THE CERTAIN 6.00 TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. 2016107188 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CONSENT TO THE SUBDIVISION OF SAID TRACT AS SHOWN HEREON, AND DO FURTHER HEREBY JOIN, APPROVE AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY DEDICATE TO THE CITY OF GEORGETOWN OR WILLIAMSON COUNTY THE STREETS, ALLEYS, RIGHTS-OF-WAY, EASEMENTS AND PUBLIC PLACES SHOWN HEREON. THIS SUBDIVISION IS TO BE KNOWN AS: "**MELCHOR ESTATES**"

TO CERTIFY WHICH, WITNESS BY MY HAND THIS 20TH DAY OF March, 2017.

RONNIE SHOEMAKER, VICE PRESIDENT INDEPENDENT BANK

STATE OF TEXAS §
COUNTY OF WILLIAMSON §
KNOW ALL MEN BY THESE PRESENTS

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED Ronnie Shoemaker KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT.GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS 20th DAY OF March, 2017.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS
MY COMMISSION EXPIRES ON: 9-12-19

CATHIE JO DUGGAN Notary Public State of Texas ID # 435160-4 Comm. Expires 09-12-2019

CITY OF LIBERTY HILL APPROVAL

THE CITY OF LIBERTY HILL, TEXAS ACKNOWLEDGES RECEIPT OF THIS PLAT FOR REVIEW AND/OR APPROVAL IN CONJUNCTION WITH PLANNING PURPOSES AND PAYMENT OF APPLICABLE FEES FOR THE PROVISION OF WATER AND/OR WASTEWATER SERVICES.

CITY OF LIBERTY HILL, TEXAS

March 27, 2017
DATE

FLOODPLAIN ADMINISTRATOR APPROVAL

BASED UPON THE REPRESENTATIONS OF THE ENGINEER OR SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER REVIEW OF THIS PLAT AS REPRESENTED BY SAID ENGINEER OR SURVEYOR, I FIND THAT THIS PLAT COMPLIES WITH THE WILLIAMSON COUNTY FLOODPLAIN REGULATIONS. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REPRESENTATIONS AND SHOULD NOT BE RELIED UPON FOR VERIFICATIONS OF THE FACTS ALLEGED. WILLIAMSON COUNTY DISCLAIMS ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC FOR THE INDEPENDENT VERIFICATION OF THE REPRESENTATIONS, FACTUAL OR OTHERWISE, CONTAINED IN THIS PLAT AND THE DOCUMENTS ASSOCIATED WITHIN IT.

J. TERRON EVERTSON
WILLIAMSON COUNTY FLOODPLAIN ADMINISTRATOR

3/28/17
DATE

HEALTH DISTRICT APPROVAL

BASED UPON THE ABOVE REPRESENTATIONS OF THE ENGINEER OF SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER A REVIEW OF THE PLAT AS REPRESENTED BY THE SAID ENGINEER OF SURVEYOR, I FIND THAT THIS PLAT COMPLIES WITH THE REQUIREMENTS OF EDWARDS AQUIFER REGULATIONS FOR WILLIAMSON COUNTY AND WILLIAMSON COUNTY ON-SITE SEWAGE FACILITY REGULATIONS. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REPRESENTATIONS AND SHOULD NOT BE RELIED UPON FOR VERIFICATIONS OF THE FACTS ALLEGED. THE WILLIAMSON COUNTY AND THE CITIES HEALTH DISTRICT (WCCHD) AND WILLIAMSON COUNTY DISCLAIM ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC FOR INDEPENDENT VERIFICATION OF THE REPRESENTATIONS, FACTUAL, OR OTHERWISE, CONTAINED IN HE PLAT AND DOCUMENTS ASSOCIATED WITH IT.

Deborah L. Marlow, RS.
DEBORAH L. MARLOW, RS, OS0029596
DIRECTOR, ENVIRONMENTAL HEALTH SERVICES, WCCHD

03/21/2017
DATE

ROAD NAME AND 911 ADDRESSING APPROVAL

ROAD NAME AND ADDRESS ASSIGNMENTS VERIFIED THIS THE 24TH DAY OF March, 2017 A.D.

~~TERESA BAKER~~
WILLIAMSON COUNTY ADDRESSING COORDINATOR

COUNTY JUDGE'S APPROVAL

STATE OF TEXAS §
COUNT OF WILLIAMSON §
KNOW ALL ME BY THESE PRESENTS;

I, DAN GATTIS, COUNTY JUDGE OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CERTIFY THAT THIS MAP OF PLAT, WITH FIELD NOTES HEREON, FOR A SUBDIVISION HAVING BEEN FULLY PRESENTED TO THE COMMISSIONER'S COURT OF WILLIAMSON COUNTY, TEXAS, AND BY THE SAID COURT DULY CONSIDERED, WERE ON THIS DAY APPROVED AND THAT THIS PLAT AUTHORIZED TO BE REGISTERED AND RECORDED IN THE PROPER RECORDS OF THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

COUNTY JUDGE
WILLIAMSON COUNTY, TEXAS

DATE

COUNTY CLERK'S CERTIFICATION

STATE OF TEXAS §
COUNTY OF WILLIAMSON §
KNOW ALL MEN BY THESE PRESENTS;

I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 2017 A.D., AT _____ O'CLOCK, __.M., IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN THE INSTRUMENT NO. _____ TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

NANCY RISTER, CLERK COUNTY COURT
OF WILLIAMSON COUNTY, TEXAS

BY: _____, DEPUTY

FINAL PLAT OF
MELCHOR ESTATES
A 6.00 ACRE SUBDIVISION SITUATED IN THE J. JENKS SURVEY, ABSTRACT NO. 351, WILLIAMSON COUNTY, TEXAS

STEGER BIZZELL

ADDRESS 1978 S. AUSTIN AVENUE | GEORGETOWN, TX 78626
METRO 512.930.9412 | TEXAS REGISTERED ENGINEERING FIRM F-181 TBPLS FIRM No.10003700 | WEB STEGERBIZZELL.COM
SERVICES >>ENGINEERS >>PLANNERS >>SURVEYORS

JOB No. 22438 DATE: NOV. ,2017 SHEET 2 of 2 | DRAWN BY: | REVIEWED BY: | APPROVED BY:

Commissioners Court - Regular Session **17.**

Meeting Date: 04/04/2017

Resolution for National Telecommunicator Week

Submitted For: Scott Parker **Submitted By:** Scott Parker, Emergency Communications

Department: Emergency Communications

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on a Resolution declaring the week of April 9th-15th, 2017, as "Public Safety Telecommunicator Week" for Williamson County.

Background

National Public Safety Telecommunicator Week recognizes the hard work, commitment, and performance of the 9-1-1 Operators and Radio Dispatchers. This includes the Emergency Communications employees of Williamson County and the other 9-1-1 Dispatch Centers in and around Williamson County.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

WC-911 Telecommunicator Week - 2017

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/22/2017 10:40 AM
Form Started By: Scott Parker		Started On: 03/20/2017 12:07 PM
Final Approval Date: 03/22/2017		

State of Texas
County of Williamson
Know all men by these presents:

That on the 4th day of April, 2017, the Commissioners Court of Williamson County, Texas met in duly called session at the Williamson County Courthouse, 710 Main Street, Georgetown, Texas, with the following members present:

Dan A. Gattis, County Judge
Terry Cook, Commissioner Precinct One
Cynthia P. Long, Commissioner Precinct Two
Valerie Covey, Commissioner Precinct Three
Larry Madsen, Commissioner Precinct Four

And at said meeting, among other business, the Court considered the following:

RESOLUTION

A RESOLUTION RECOGNIZING
NATIONAL TELECOMMUNICATOR WEEK
IN WILLIAMSON COUNTY

WHEREAS: Williamson County serves as the County Government for the people of Williamson County and the Communities of Bartlett, Cedar Park, Coupland, Florence, Georgetown, Granger, Hutto, Jarrell, Jonah, Leander, Liberty Hill, Round Rock, Taylor, Thrall, and Weir; and,

WHEREAS: Williamson County is committed to providing the highest quality emergency communications system and services to the citizens of the region; and,

WHEREAS: Williamson County recognizes the professional and unending services of the telecommunicators who answer 9-1-1 calls on a daily basis; and,

WHEREAS: The 9-1-1 telecommunicators are the link between people calling for help in an emergency situation and the emergency response agencies who arrive on the scene; and,

WHEREAS: The 9-1-1 telecommunicators are the true backbone of the 9-1-1 system; and,

WHEREAS: The Governor of the State of Texas has historically acknowledged the second full week of April as National Telecommunicator Week.

NOW THEREFORE BE IT RESOLVED: That, on behalf of the more than 100 Telecommunicators in Williamson County employed by Cedar Park, Georgetown, Leander, Round Rock, Taylor, and Williamson County, the Commissioners Court of Williamson County do hereby declare the Week of April 9th-15th, 2017:

"PUBLIC SAFETY TELECOMMUNICATOR WEEK"

RESOLVED THIS 4th DAY OF APRIL 2017.

_____
Dan A. Gattis, County Judge

Commissioners Court - Regular Session **18.**

Meeting Date: 04/04/2017

report on HB 2321 (85th Legislature) on the LIRAP and LIP program

Submitted For: Gary Boyd **Submitted By:** Gary Boyd, Parks

Department: Parks

Agenda Category: Regular Agenda Items

Information

Agenda Item

Hear report on Texas 85th Legislature House Bill 2321 regarding changes to the ?Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Retirement Program (LIRAP) and the Associated Local Initiative Program (LIP).

Background

On 3/28/17 the House Environmental Regulations Committee held a public hearing on HB 2321, which would make a number of changes to the LIRAP/Drive a Clean Machine and Local Initiative Projects (LIP) programs. Some of the key elements of the bill:

1. Allows for new vehicle leases rather than just new vehicles purchases
2. Increases the vehicle repair assistance from $600 to $800
3. Increases amounts for vehicle replacement from $3,000 to $4,000 for regular vehicles and $3,500 to $4,500 for hybrids
4. Changes allowable model years for new vehicles from 2-3 or 3-4 depending on vehicle type
5. Increases max odometer reading for the new vehicle from 70,000 to 85,000
6. Allows up to 50% of the funding for LIRAP/DACM and LIP to be used for LIP (currently limited to just 10%)
7. Makes local initiative project approval only contingent upon approval by a county court

As of June 2016 Travis County and Williamson County manage the DriveACleanMachine Program under an Inter Local Agreement approved by Commissioners Court. The Local Initiative Program (LIP) remains under Williamson County auspices.

Representative Dale (District 136) is a member of the House Committee on Environmental Regulation.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

HB 2321 - 85th Legislature

TX House Committee on Environmental Regulation (85th)

HB 2321 fact sheet (by Travis County)

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/28/2017 01:51 PM
Form Started By: Gary Boyd		Started On: 03/28/2017 11:16 AM
Final Approval Date: 03/28/2017		

85R8122 JXC-F

By: Turner H.B. No. 2321

A BILL TO BE ENTITLED
AN ACT

relating to low-income vehicle repair assistance, retrofit, and accelerated vehicle retirement programs and local initiative projects.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Section 382.201, Health and Safety Code, is amended by adding Subdivision (4-a) to read as follows:

(4-a) "Purchase" means a transaction in which a person:

(A) buys a vehicle; or

(B) leases a vehicle for a period of at least three years under an agreement that allows the vehicle to be driven at least 12,000 miles a year without a penalty.

SECTION 2. Section 382.202(g), Health and Safety Code, is amended to read as follows:

(g) The commission shall:

(1) use part of the fee collected under Subsection (e) to fund county [~~low-income vehicle repair assistance, retrofit, and accelerated vehicle retirement~~] programs and projects as provided by Section 382.220 [~~created under Section 382.209~~]; and

(2) to the extent practicable, distribute available funding created under Subsection (e) to participating counties in reasonable proportion to the amount of fees collected under Subsection (e) in those counties or in the regions in which those counties are located.

SECTION 3. Sections 382.209(b) and (e), Health and Safety Code, are amended to read as follows:

(b) The commission shall provide funding for local low-income vehicle repair assistance, retrofit, and accelerated vehicle retirement programs as provided by Section 382.220 [~~with available funds collected under Section 382.202, 382.302, or other designated and available funds~~]. The programs shall be administered in accordance with Chapter 783, Government Code. Program costs may include call center management, application oversight, invoice analysis, education, outreach, and advertising. Not more than 10 percent of the money provided to a local low-income vehicle repair assistance, retrofit, and accelerated vehicle retirement program [~~under this section~~] may be used for the administration of the program [~~programs~~], including program costs.

(e) A vehicle is not eligible to participate in a low-income vehicle repair assistance, retrofit, and accelerated vehicle retirement program established under this section unless:

(1) the vehicle is capable of being operated;

(2) the registration of the vehicle:

(A) is current; [~~and~~]

(B) was issued by the county implementing the program; and

(C) reflects that the vehicle has been registered in the county implementing the program for at least 12 of the 15 months preceding the application for participation in the program;

(3) the commissioners court of the county

administering the program determines that the vehicle meets the eligibility criteria adopted by the commission, the Texas Department of Motor Vehicles, and the Public Safety Commission;

(4) if the vehicle is to be repaired, the repair is done by a repair facility recognized by the Department of Public Safety, which may be an independent or private entity licensed by the state; and

(5) if the vehicle is to be retired under this subsection and Section 382.213, the replacement vehicle is a qualifying motor vehicle.

SECTION 4. Sections 382.210(a), (b), and (f), Health and Safety Code, are amended to read as follows:

(a) The commission by rule shall adopt guidelines to assist a participating county in implementing a low-income vehicle repair assistance, retrofit, and accelerated vehicle retirement program authorized under Section 382.209. The guidelines at a minimum shall recommend:

(1) a [~~minimum and~~] maximum amount for repair assistance of at least $800;

(2) an [~~a minimum and maximum~~] amount to be put toward the purchase price of a replacement vehicle qualified for the accelerated retirement program, based on vehicle type and model year, of at least [~~with the maximum amount not to exceed~~]:

(A) $4,000 [~~$3,000~~] for a replacement car of the current model year or the previous four [~~three~~] model years, except as provided by Paragraph (C);

(B) $4,000 [~~$3,000~~] for a replacement truck of the current model year or the previous three [~~two~~] model years, except as provided by Paragraph (C); and

(C) $4,500 [~~$3,500~~] for a replacement vehicle of the current model year or the previous four [~~three~~] model years that:

(i) is a hybrid vehicle, electric vehicle, or natural gas vehicle; or

(ii) has been certified to meet federal Tier 2, Bin 3 or a cleaner Bin certification under 40 C.F.R. Section 86.1811-04, as published in the February 10, 2000, Federal Register;

(3) criteria for determining eligibility, taking into account:

(A) the vehicle owner's income, which may not exceed 300 percent of the federal poverty level;

(B) the fair market value of the vehicle; and

(C) any other relevant considerations;

(4) safeguards for preventing fraud in the repair, purchase, or sale of a vehicle in the program; and

(5) procedures for determining the degree and amount of repair assistance a vehicle is allowed, based on:

(A) the amount of money the vehicle owner has spent on repairs;

(B) the vehicle owner's income; and

(C) any other relevant factors.

(b) A replacement vehicle described by Subsection (a)(2) must:

(1) except as provided by Subsection (c), be a vehicle in a class or category of vehicles that has been certified to meet federal Tier 2, Bin 5 or a cleaner Bin certification under 40 C.F.R.

Section 86.1811-04, as published in the February 10, 2000, Federal Register;

(2) have a gross vehicle weight rating of less than 10,000 pounds;

(3) have an odometer reading of not more than 85,000 [~~70,000~~] miles; and

(4) be a vehicle the total purchase price [~~cost~~] of which does not exceed:

(A) for a vehicle described by Subsection (a)(2)(A) or (B), $35,000; or

(B) for a vehicle described by Subsection (a)(2)(C), $45,000.

(f) For the purposes of Subsection (b), a reference to the total purchase price of a motor vehicle that is sold [~~In this section, "total cost"~~] means the total amount of money paid or to be paid for the purchase of a motor vehicle as set forth as "sales price" in the form entitled "Application for Texas Certificate of Title" promulgated by the Texas Department of Motor Vehicles. In a transaction that does not involve the use of that form, the term means an amount of money that is equivalent, or substantially equivalent, to the amount that would appear as "sales price" on the Application for Texas Certificate of Title if that form were involved.

SECTION 5. Section 382.220, Health and Safety Code, is amended to read as follows:

Sec. 382.220. COUNTY USE OF MONEY FROM VEHICLE EMISSIONS INSPECTION FEES; [~~FUNDING FOR~~] LOCAL INITIATIVE PROJECTS. (a) The commission:

(1) shall provide funding to participating counties for local low-income vehicle repair assistance, retrofit, and accelerated vehicle retirement programs under Section 382.209 using:

(A) available funds derived from fees collected through vehicle emissions inspection and maintenance programs under Sections 382.202 and 382.302; and

(B) other designated and available funds; and

(2) may provide funding to participating counties for local initiative projects under Subsection (b) using available funds derived from fees collected through vehicle emissions inspection and maintenance programs under Sections 382.202 and 382.302.

(a-1) A participating county that implements a local initiative project under Subsection (b) must use at least 50 percent of the money made available to the county under Section 382.202(g) or 382.302 for the county's low-income vehicle repair assistance, retrofit, and accelerated vehicle retirement program.

(a-2) Money that is made available to participating counties under Section 382.202(g) or 382.302 may be appropriated only for programs administered in accordance with Chapter 783, Government Code, to improve air quality.

(a-3) A participating county may agree to contract with any appropriate entity, including a metropolitan planning organization or a council of governments, to implement a program under Section 382.202 or[~~,~~] 382.209[~~,~~] or a project under Subsection (b) [~~this section~~].

(b) A participating county may implement a local initiative project to improve air quality if approved by the commissioners

court of the county. A local initiative project [~~program under this section must be implemented in consultation with the commission and~~] may include a program to:

(1) expand and enhance the AirCheck Texas Repair and Replacement Assistance Program;

(2) develop and implement programs or systems that remotely determine vehicle emissions and notify the vehicle's operator;

(3) develop and implement projects to implement the commission's smoking vehicle program;

(4) develop and implement projects in consultation with the director of the Department of Public Safety for coordinating with local law enforcement officials to reduce the use of counterfeit registration insignia and vehicle inspection reports by providing local law enforcement officials with funds to identify vehicles with counterfeit registration insignia and vehicle inspection reports and to carry out appropriate actions;

(5) develop and implement programs to enhance transportation system improvements; or

(6) develop and implement new air control strategies designed to assist local areas in complying with state and federal air quality rules and regulations.

(c) Money that is made available for the implementation of a local initiative project [~~program~~] under Subsection (b) may not be expended for local government fleet or vehicle acquisition or replacement, call center management, application oversight, invoice analysis, education, outreach, or advertising purposes.

[~~(d) – – Fees collected under Sections 382.202 and 382.302 may be used in an amount not to exceed $7 million per fiscal year for projects described by Subsection (b), of which $2 million may be used only for projects described by Subsection (b)(4). The remaining $5 million may be used for any project described by Subsection (b). The fees shall be made available only to counties participating in the low-income vehicle repair assistance, retrofit, and accelerated vehicle retirement programs created under Section 382.209 and only on a matching basis, whereby the commission provides money to a county in the same amount that the county dedicates to a project authorized by Subsection (b). The commission may reduce the match requirement for a county that proposes to develop and implement independent test facility fraud detection programs, including the use of remote sensing technology for coordinating with law enforcement officials to detect, prevent, and prosecute the use of counterfeit registration insignia and vehicle inspection reports.~~]

SECTION 6. Section 382.302(e), Health and Safety Code, is amended to read as follows:

(e) A participating county may participate in the program established under Section 382.209 and may implement a local initiative project under Section 382.220.

SECTION 7. This Act takes effect September 1, 2017.

House Committee on Environmental Regulation

Rep. Pickett, Joe C. - District 79 – Committee Chair - El Paso (part)

Rep. Thompson, Ed - District 29 – Committee Vice Chair - Brazoria (part)

Rep. Cyrier, John P. - District 17 - Bastrop, Caldwell, Gonzales, Karnes, Lee Counties

Rep. Dale, Tony - District 136 – Williamson (part)

Rep. Kacal, Kyle - District 12 - Brazos (part) Falls, Limestone, McLennan (part) Robertson-

Rep. Landgraf, Brooks - District 81 -Andrews, Winkler, Ector, Ward

Rep. Lozano, J. M. - District 43 - Bee, Jim Wells, Kleberg, San Patricio

Rep. Reynolds, Ron - District 27 - Fort Bend (part)

Rep. Rodriguez, Eddie - District 51 – Travis (part)

HB 2321 -- LIRAP and LIP Reform to Make the Program More Efficient at Improving Air Quality

LIRAP stands for the Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Retirement Program. **LIP** stands for the Local Initiative Projects program. LIRAP and LIP are air quality improvement programs overseen by the Texas Commission on Environmental Quality (TCEQ).

LIRAP and LIP are self-funded by a surcharge added to each vehicle emissions inspection in participating counties. *See list at right.*

LIRAP assists owners of high-emitting automobiles to reduce their air emissions by offering financial incentives to repair or replace them. The incentive amounts are capped in law, and have not been changed in 10 years.

LIP assists with air quality improvement strategies developed locally, such as a Counterfeit Motor Vehicle Inspection Program to combat counterfeit, fictitious, and improper State inspection certificates for polluting vehicles in the region.

House Bill 2321 seeks to modernize these programs:

- It updates the incentive limits to provide real, practical assistance to low-income consumers seeking to repair or replace their cars
- It removes the cap on LIP funds so that local areas can develop more realistic programs to reduce air emissions
- It allows grant funds to be used over multiple years to maximize their effectiveness

HB 2321 is supported by the North Texas Council of Governments, which administers the programs in that part of the state, and by the Travis County and Williamson County commissioner courts. It also has widespread support from the automobile sales and repair industry.

Counties that participate in LIRAP/LIP

NONATTAINMENT COUNTIES

Brazoria
Collin
Dallas
Denton
Ellis
Fort Bend
Galveston
Harris
Johnson
Kaufman
Montgomery
Parker
Rockwall
Tarrant

NEAR-NONATTAINMENT COUNTIES

Travis
Williamson

Commissioners Court - Regular Session **19.**

Meeting Date: 04/04/2017

CAFR and PAFR Presentation 04-04-2017

Submitted For: Melanie Denny **Submitted By:** Angela Schmidt, County Auditor

Department: County Auditor

Agenda Category: Regular Agenda Items

Information

Agenda Item

Receive and discuss the 2016 Comprehensive Annual Financial Report (CAFR) and Popular Annual Financial Report (PAFR). Only if necessary, take any appropriate action regarding same.

Background

This presentation will be made by Julie Kiley and Adam McCane of Weaver and Tidwell.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

2016 CAFR

2016 PAFR

2016 Governance Letter

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/28/2017 01:51 PM
Form Started By: Angela Schmidt		Started On: 03/28/2017 08:11 AM
Final Approval Date: 03/28/2017		

WILLIAMSON COUNTY, TEXAS

COMPREHENSIVE ANNUAL
FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 2016

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WILLIAMSON COUNTY, TEXAS

COMPREHENSIVE
ANNUAL FINANCIAL REPORT

FISCAL YEAR ENDED

SEPTEMBER 30, 2016

PRINCIPAL OFFICIALS

COUNTY JUDGE	DAN A. GATTIS
COMMISSIONER, PRECINCT I	LISA BIRKMAN
COMMISSIONER, PRECINCT II	CYNTHIA LONG
COMMISSIONER, PRECINCT III	VALERIE COVEY
COMMISSIONER, PRECINCT IV	VACANT
COUNTY AUDITOR	DAVID U. FLORES
TAX ASSESSOR-COLLECTOR	DEBORAH HUNT
COUNTY CLERK	NANCY RISTER
COUNTY ATTORNEY	DOYLE “DEE” HOBBS
COUNTY TREASURER	JERRI L. JONES
DISTRICT CLERK	LISA DAVID
DISTRICT ATTORNEY	JANA DUTY
SHERIFF	JAMES WILSON

OFFICIAL ISSUING REPORT

DAVID U. FLORES
COUNTY AUDITOR

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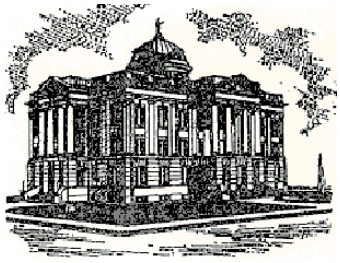
INTRODUCTORY SECTION



AUDITOR'S OFFICE
Williamson County Courthouse
710 Main Street, Suite 301
Georgetown, Texas 78626
Phone: 512/943-1500
Fax: 512/943-1567

February 28, 2017

The Honorable District Judges
Betsy Lambeth, 425th Judicial District
Donna King, 26th Judicial District
Stacey Mathews, 277th Judicial District
Rick J. Kennon, 368th Judicial District
Ryan D. Larson, 395th Judicial District

The Honorable Commissioner's Court, Williamson County, Texas
Dan A. Gattis, County Judge
Terry Cook, County Commissioner, Precinct I
Cynthia Long, County Commissioner, Precinct II
Valerie Covey, County Commissioner, Precinct III
Larry Madsen, County Commissioner, Precinct IV

The Citizens of Williamson County

Ladies, Gentlemen and Citizens:

State law requires that all general-purpose local governments publish within six months of the close of each fiscal year a complete set of financial statements presented in conformity with generally accepted accounting principles (GAAP) and audited in accordance with generally accepted auditing standards by a firm of licensed certified public accountants. Pursuant to that requirement, we hereby issue the comprehensive annual financial report of Williamson County for the fiscal year ended September 30, 2016.

The County Auditor has oversight of all financial records of the county. It is the County Auditor's responsibility to prescribe the systems and procedures for handling the finances of the county, certifying available funds for county budget, and examining, auditing and approving all disbursements from county funds prior to their submission to the Commissioners court for approval. In addition, the County Auditor serves as the Chief Financial Officer for federal and state financial award programs, Juvenile Service Department and Adult Probation Department.

This report consists of management's representations concerning the finances of Williamson County. Consequently, management assumes full responsibility for the completeness and reliability of the information presented in this report. To provide a reasonable basis for making these representations, management of Williamson County has established a comprehensive internal control framework that is designed both to protect the government's assets from loss, theft, or misuse and to compile sufficient reliable information for the preparation of Williamson County's financial statements in conformity with GAAP. The County Auditor's Office audits the following: all fee collecting offices; contracts; purchasing; payroll which is prepared by the departments; and all invoices/payments requested and approved by county departments. Because the cost of internal controls should not outweigh their benefits, Williamson County's comprehensive framework of internal controls has been designed to provide reasonable rather than absolute assurance that the financial statements will be free from material misstatement. As financial management, we assert that, to the best of our knowledge and belief, this financial report is complete and reliable in all material respects.

Williamson County's financial statements have been audited by Weaver and Tidwell, L.L.P., a firm of licensed certified public accountants. The goal of the independent audit was to provide reasonable assurance that the financial

statements of Williamson County for the fiscal year ended September 30, 2016, are free of material misstatement. The independent audit involved examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; assessing the accounting principles used and significant estimates made by management; and evaluating the overall financial statement presentation. The independent auditor concluded, based upon the audit, that there was a reasonable basis for rendering an unqualified opinion that Williamson County's financial statements for the fiscal year ended September 30, 2016 are fairly presented in conformity with GAAP. The independent auditor's report is presented as the first component of the financial section of this report.

The independent audit of the financial statements of Williamson County was part of a broader, federally mandated "Single Audit" designed to meet the special needs of federal and state grantor agencies. The standards governing Single Audit engagements require the independent auditor to report not only on the fair presentation of the financial statements, but also on the audited government's internal controls and legal requirements involving the administration of federal and state awards. These reports are available in the last section of this report.

GAAP requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement MD&A and should be read in conjunction with it. Williamson County's MD&A can be found immediately following the report of the independent auditors.

Profile of the Government

Williamson County, organized in 1848, is located in the central part of the state, which is considered to be the top growth area in the state, and one of the top growth areas in the country. Williamson County currently occupies a land area of 1,135 square miles and serves an estimated population of 508,514.

Williamson County is a political subdivision of the State of Texas. Williamson County is empowered to levy a property tax on both real and personal properties located within its boundaries. This levy provides 80% of the revenue for the General Fund and 85% of the revenue for the Debt Service Fund. It has no legislative powers and restrictive judicial and administrative powers. The governing body of the County is the Commissioner's Court of five members. The County Judge is the chairperson of the court and the Commissioner from each of the precincts are also members. The Court has only such powers as are conferred upon it by the Constitution and the Statutes or by necessary implication therefrom. None has the authority to act on their own but must act only as a whole.

Williamson County provides essential things that make our communities livable: roads and bridges, public improvements, juvenile detention and education, law enforcement and corrections, a court system to protect our legal rights, secure storage of our important public records and protection against threats to public health, to include providing health care to the indigent. Williamson County beyond the Texas Constitutional requirements also provides parks and emergency medical services that add to the quality of life for local residents.

In accordance with Local Government Code Chapter, 111, when a county has reached a population of more than 125,000 the Commissioner's Court may appoint a Budget Officer. The Budget Officer is responsible for preparing a county budget for the fiscal year. In preparing or monitoring the budget, the budget officer may require the county auditor or any other district, county, or precinct officer of the county to provide any information necessary for the budget officer to properly prepare or monitor the budget. The budgets must be carefully itemized to make possible a comparison of the proposed expenditures with the expenditures of the preceding year. The budget must show as definitely as possible or with reasonable accuracy the purpose of each expenditure and the amount of money to be spent.

By statute, the County Auditor is solely responsible for projecting the revenues for the county. Once these processes are complete, the Budget Officer files a copy of the proposed budget with the County Clerk. The Commissioner's Court holds a public hearing on the proposed budget. Any taxpayer of the County may attend and may participate in the hearing.

At the conclusion of the public hearing, the Commissioner's Court takes action on the proposed budget. The Commissioner's Court may make any changes in the proposed budget that it considers warranted by law and required in the best interest of the taxpayers.

The Commissioner's Court may levy taxes only in accordance with the budget. After final approval of the budget, the County Auditor shall file the budget with the County Clerk and may spend county funds only in strict compliance with the budget, except in an emergency.

The Commissioner's Court may authorize an emergency expenditure as an amendment to the original budget only in a case of grave public necessity to meet an unusual and unforeseen condition that could not have been included in the original budget through the use of reasonably diligent thought and attention. If the Court amends the original budget to meet an emergency, the Court files a copy of its order amending the budget with the County Clerk. The clerk attaches the copy to the original budget.

The Commissioner's Court, by order, may amend the budget to transfer an amount budgeted for one item to another budgeted item within the same fund without authorizing an emergency expenditure.

State Law requires counties to adopt a budget before they adopt a tax rate. The Commissioner's Court may levy taxes only in accordance with the budget. Chapter 26 of the Property Tax Code requires taxing units to comply with truth-in-taxation laws in setting their tax rates. This law has two purposes:

- to make the taxpayers more knowledgeable about tax rate proposals;
- and, in certain cases, to allow taxpayers to roll back or limit a tax increase.

Factors Affecting Financial Condition

The information presented in the financial statements is perhaps best understood when it is considered from the broader perspective of the specific environment within which Williamson County operates.

Local Economy. Williamson County continues to be one of the fastest growing counties in the state. Since 2010, the county's population has grown by 20 percent. It is the 12th most populous county in Texas. Williamson County's growth has been fueled by its location on the I-35 corridor and close access to Austin, Texas. The county's economic base has developed to be home to many major industries, including high tech, manufacturing, healthcare and higher education. The regional economy continues to expand. The county has a diverse workforce. This attracts new businesses to locate to the area. Job creation has caused many of the cities in the county to be some of the fastest growing cities in the country. New housing, building permits and new roads also demonstrate the growth. The diversity in the economy makes the county less vulnerable to economic downturns. The unemployment rate has been lower than the national average. The county unemployment rate slightly increased from 3.4% in September 2015 to 3.6% in September of this year; the rate was significantly lower than the national rate for September, which decreased from 4.9% in 2015 to 4.8% this year.

Williamson County has benefited from the population growth. The county has experienced major job growth and proliferation of business and residential development. Business incentives, a low tax rate and affordable housing are major factors that have contributed to the job growth. The latest population forecasts project Williamson County population could grow to more than 1 million people by 2040.

With the job and population growth in the county, several areas of the county have become key commercial and residential developments. UPS will build a 225,000 square foot package-distribution and warehouse facility in Round Rock. It is expected to employ at least 314 employees. ProPortion Foods LLC is moving to Round Rock. It is a food-based company that will be moving its offices, food processing and storage facility. It is projected the company will employ up to 400 employees. Also, AirCo Mechanical, a commercial and a residential heating, ventilation, and air conditioning service provider, relocated to Round Rock. The move will bring at least 365 new jobs. Voltabox will move to Cedar Park. The manufacturer of high-tech lithium ion battery systems plans to build a 22,000 square-foot facility. Noren Products will relocate its headquarters to Taylor. It is expected to bring 40 new jobs to the city. The company broke ground on a 30,000 square foot building. Several new shopping centers

throughout the county have been completed or are in the development stages. HEB opened a 121,000 square foot store near I-130 at Star Ranch. This store is the first large grocery store in the Hutto area. The Parke, is a 380,000 square-foot shopping center in Cedar Park. The Parke will be anchored by Whole Foods, Nordstrom Rack and Dick's Sporting Goods.

The Sheraton Hotel and Conference Center in Georgetown opened in July. The 222-room hotel has 30,000 square feet of meeting space. This is a part of the 32-acre development The Summit at Rivery Park, which will include retail and restaurant space as well as apartments and townhomes. Kalahari Resorts is planning to build in Round Rock. The resort will include a 975-room hotel, 150,000 square foot convention center, waterpark, restaurants and a spa. It is expected to create approximately 700 full-time and part-time jobs. These developments will have an economic impact on the county and attract visitors to the county.

High demand for housing continues throughout the county. Several new developments throughout the county are under construction or in the planning stages. Georgetown has several large developments. Saddlecreek broke ground in April. The first phase includes 427 single-family lots. Wolf Ranch Hillwood Georgetown has started phase 1 of a master planned community. New developments such as Cedar Grove, Whitestone Landing and Leander Crossing will be developed.

Health care facilities continue to expand throughout the county. St. David's Georgetown completed a $7.7 million expansion of the intensive care unit. Also included was a new emergency entrance off the I-35 frontage. Baylor Scott and White broke ground to build a 100,000 square foot cancer center in Round Rock. The center will offer integrated and comprehensive care in one location. St. David's opened a new surgical hospital in Round Rock at La Frontera.

Area school districts are addressing the new growth. New campuses and renovations are under construction throughout the county. Austin Community College broke ground on its new San Gabriel campus in Leander. This is the 12th campus in the ACC district.

Williamson County is a part of the Austin-Round Rock metropolitan area. The metropolitan area continues to be a top performer in numerous national rankings. In 2016, the U.S. Census Bureau named the city of Georgetown the fastest growing city in the U.S. of at least 50,000. MoneyRate.com named the Austin-Round Rock MSA as the best city for young entrepreneurs. Williamson County was ranked as the third healthiest county in Texas, by the Robert Wood Johnson Foundation and the University of Wisconsin. Since 2010, the county has been listed as one of the healthiest counties in Texas. In 2016, the Austin-Round Rock metro area tied for second place in the Milken Institute's Best Cities Index. The Milken Institute ranks US metropolitan areas by how well they are creating and sustaining jobs and economic growth.

Long-term Financial Planning. Williamson County continues to address safety and mobility improvements necessary to adapt to the county's growth. Williamson County's 2006 bond election approved $228 million for General Obligation Road Bond projects, these bonds spent approximately $10.8M this fiscal year. In 2016, several current road projects under construction were IH-35 Northbound Frontage Road and Ramps ($1.7M), County Road 258 Phase II ($1.5M), and Tradesman Drive ($1.1M).

In November 2013, Williamson County voters approved $275 million in road construction and improvement bonds and $40 million in bonds for parks. The $275 million General Obligation Road Bond projects spent $28.8 million this fiscal year. In FY16, the Road Bonds have started several new construction projects such as Hero Way West ($5.0M), County Road 110 South Phase 1 ($3.6M), Bill Pickett Trail ($2.4M), Reagan Boulevard at IH-35 Bridge ($1.8M), Kauffman Loop Phase I ($1.5M), County Road 101 Phase 1 ($1.5M), and SH 29 Bypass/Inner Loop ($1.3M). Williamson County has joined with other entities to complete some of the road projects. City of Leander is in the process of constructing Hero Way from 183 to Lakeline Boulevard through an Interlocal Agreement with Williamson County to contribute fifty percent of construction not to exceed $9,150,000. In FY16, Bill Pickett Trail construction was completed providing additional access to the Williamson County Expo Center from Chandler Road. The County has $75M of authorized but unissued General Obligation Bonds for road improvements.

In FY16, the $40 million General Obligation Park Bonds spent $10 million. The Park Bonds major project of the fiscal year was the Williamson County Exposition Center with a total cost of $12M of which $9.2M expenditures occurred this fiscal year completed in September 2016. Park Bonds also spent $255K on River Ranch County Park to start designing the first phase of construction for this park.

In May 2016, Williamson County issued $59,645,000 of Certificates of Obligation to construct several buildings which include facilities for Sheriff Office Training Facility, Animal Shelter Expansion, Tower Upgrades, Georgetown Annex and North Campus Improvements. In fiscal year 2016, the Certificates of Obligation had a total of $3.9 million in expenditures. The projects that make up the majority of the $3.9M expenditures are North Campus ($1.2M) and Granger Simulcast Tower Upgrade ($1.7M).

Relevant Financial Polices.

Financial Policy. The Williamson County Commissioner's Court ensures financial stability within the County government by adopting proactive, responsible policies that allow the County to respond to growth and infrastructure needs while maintaining a high standard of County-provided services. The Financial Policy is intended as a guide for the members of Commissioner's Court in evaluating the impact of policies and funding decisions on future County services. The court will continue to act with speed in identifying early opportunities to reprioritize projects and investments and adjust strategies where necessary.

Debt Management Policy. This policy has been adopted to provide a conceptual framework for the issuance and management of debt. This policy recognizes the capital improvement needs of a growing County and the need to balance the taxpayer's ability to pay. The county will consider various factors before the issuance of debt and take a prudent approach.

Fund Balance Policy. The County has adopted a policy to maintain an appropriate level of fund balance. The level of the Unassigned Fund Balance for the General fund shall not be less than 35% of total General Fund budgeted expenditures.

County Investment Policy. The objectives of the County's investment policy are to match the suitability of investments to financial requirements; achieve safety of principal; maintain liquidity; diversify the portfolio by investment type, issuer and maturity sector; and to seek the highest possible yield within policy and cash flow constraints. The policy adheres to the statutory requirements of Local Government Code 116.112(a) and /or Title X, Chapter 2256, Section 2556.005 (f) and (g) of the Texas Government Code.

The conservative fiscal stewardship and county policies contributed to the affirmation of the county's bond rating of AAA by Standard & Poor's and Fitch Ratings throughout 2016. This rating enables the county to have lower interest rates when issuing bonds resulting in substantial savings to the taxpayers.

Special Recognition and Appreciation. Traditionally, the Auditor's Office recognizes an individual in this report who has significantly contributed to our efforts to improve and better the business of Williamson County. This year, we would like to recognize Connie Watson for her hard work and dedication to the County. As Public Affairs Manager for almost 13 years, Connie has assisted this office and the county with communications to the press and public. She has been a part of the team in telling the County's financial story and providing financial transparency. Her support to the County Auditor's office and various other departments around the County, along with her willingness to help day or night, make her an invaluable asset to Williamson County.

Awards and Acknowledgements

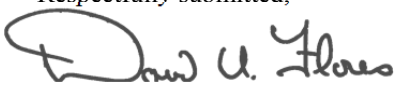
CAFR: The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to Williamson County for its comprehensive annual financial report for the fiscal year ended September 30, 2015. This was the 24th consecutive year that the government has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must

satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility of another certificate. A copy of this report can be found on the County website at www.wilco.org.

PAFR: The Government Finance Officers Association of the United States and Canada (GFOA) has given an Award for Outstanding Achievement in Popular Annual Financial Reporting to Williamson County for its Popular Annual Financial Report for the fiscal year ended September 30, 2015. The Award for Outstanding Achievement in Popular Annual Financial Reporting is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government popular reports. In order to receive an Award for Outstanding Achievement in Popular Annual Financial Reporting, a government unit must publish a Popular Annual Financial Report, whose contents conform to program standards of creativity, presentation, understandability and reader appeal. An Award for Outstanding Achievement in Popular Annual Financial Reporting is valid for a period of one year only. We believe our current report continues to conform to the Popular Annual Financial Reporting requirements, and we are submitting it to GFOA. A copy of this report can be found on the County website at www.wilco.org.

This report is possible because of the efficient and dedicated service of the audit team of Weaver and Tidwell, L.L.P. In addition, allow me to express my appreciation to the Commissioner's Court and the Audit Committee for their interest and continued support and for the responsive and progressive manner in which they support the financial position and operations of the County. Also, I am grateful to all elected officials and employees concerning all matters related to the operation of this office during the past year and for their efforts toward improving County business.

Respectfully submitted,



David U. Flores
County Auditor

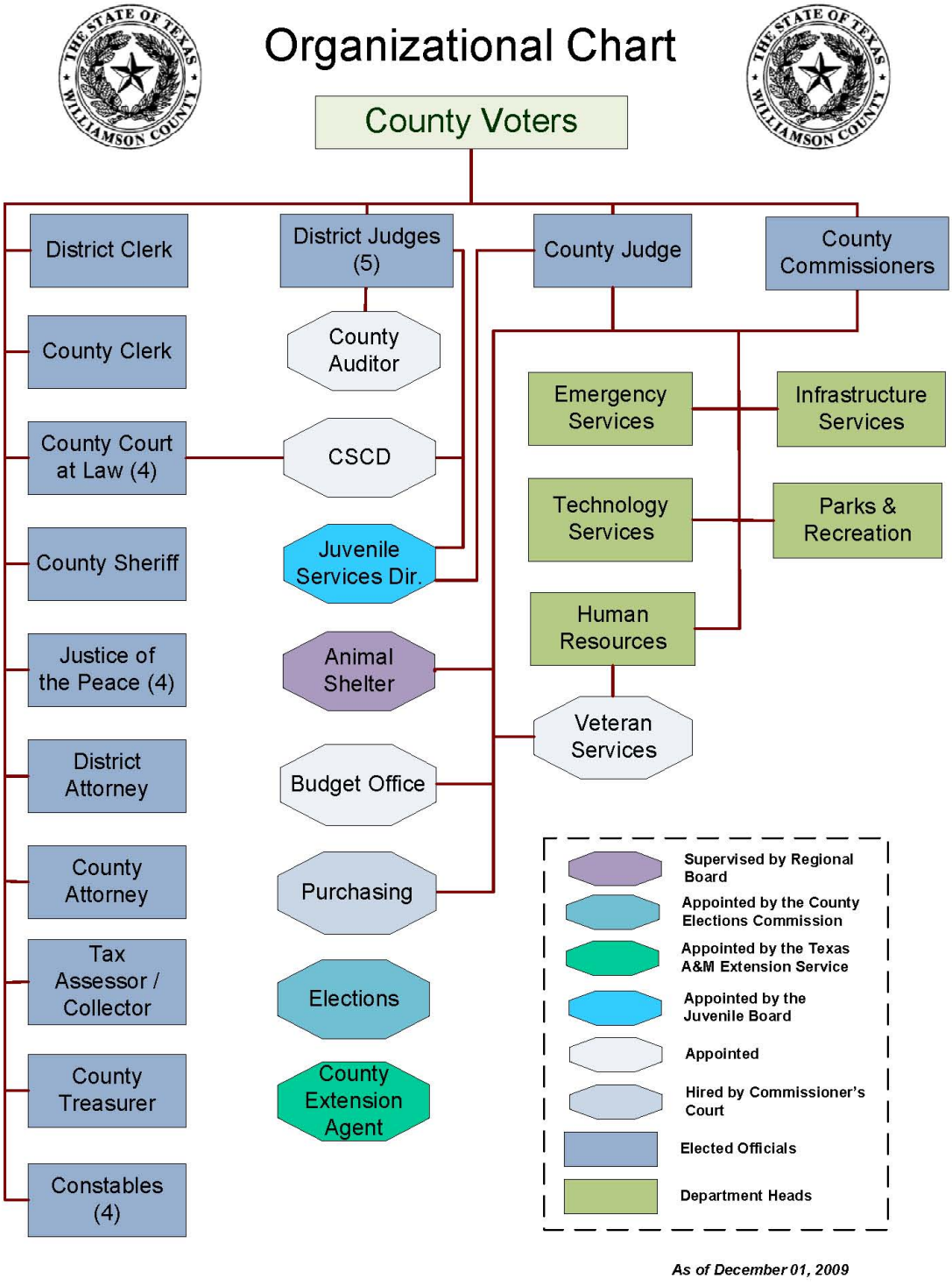
Williamson County, Texas

Officials*

Title	Name
Judge, 425th Judicial District Court	Betsy Lambeth
Judge, 26th Judicial District Court	Donna King
Judge, 277th Judicial District Court	Stacey Mathews
Judge, 368th Judicial District Court	Rick J. Kennon
Judge, 395th Judicial District Court	Ryan Larson
County Auditor	David U. Flores
County Judge	Dan A. Gattis
Commissioner, Precinct 1	Lisa Birkman
Commissioner, Precinct 2	Cynthia Long
Commissioner, Precinct 3	Valerie Covey
Commissioner, Precinct 4	Vacant
Constable, Precinct 1	Robert Chody
Constable, Precinct 2	Rick Coffman
Constable, Precinct 3	Kevin Stofle
Constable, Precinct 4	Marty Ruble
County Clerk	Nancy Rister
Judge, County Court at Law #1	Suzanne Brooks
Judge, County Court at Law #2	Laura Barker
Judge, County Court at Law #3	Doug Arnold
Judge, County Court at Law #4	John B. McMaster
District Attorney	Jana Duty
District Clerk	Lisa David
Justice of the Peace, Precinct 1	Dain Johnson
Justice of the Peace, Precinct 2	Edna Staudt
Justice of the Peace, Precinct 3	Bill Gravell, Jr.
Justice of the Peace, Precinct 4	Judy S. Hobbs
County Attorney	Doyle Hobbs
Sheriff	James Wilson
Tax Assessor/Collector	Deborah M. Hunt
County Treasurer	Jerri L. Jones
Budget Officer	Ashlie Koenig
Senior Director of Emergency Services	John Sneed
Elections Administrator	Christopher J. Davis
Senior Director of Human Resources	Tara Raymore
Senior Director of Technology Services	Jay Schade
Senior Director of Infrastructure	Robert Daigh
Senior Director of Parks and Recreation	Randy Bell
Purchasing Agent	Max Brica
Director of Veterans Services	Donna Harrell
County Extension Coordinator	Chelsea Stevens
Community Supervision and Corrections Department Director	Steve Morrison
Juvenile Services Director	Scott Matthew
Animal Services Director	Cheryl Schneider

* As of September 30, 2016

Organizational Chart



As of December 01, 2009

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

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Williamson County

Texas

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

September 30, 2015

Executive Director/CEO

FINANCIAL SECTION

weaver
Assurance • Tax • Advisory

INDEPENDENT AUDITOR'S REPORT

To the Honorable County Judge,
and County Commissioners
Williamson County, Texas

Report on the Financial Statements

We have audited the accompanying financial statements of the governmental activities, each major fund, and the aggregate remaining fund information of Williamson County, Texas (the County), as of and for the year ended September 30, 2016, and the related notes to the financial statements, which collectively comprise the County's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatements, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

To the Honorable County Judge,
and County Commissioners
Williamson County, Texas

Opinions

In our opinion, the financial statements referred to previously present fairly, in all material respects, the respective financial position of the governmental activities, each major fund, and the aggregate remaining fund information of the County as of September 30, 2016 and the respective changes in financial position and, where applicable, cash flows thereof and the respective budgetary comparison for the General Fund and Special Road and Bridge Fund for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, Texas County District Retirement System Schedule of Changes in the Employers Net Pension Liability and Related Ratios and the Texas County District Retirement System Schedule of Employer Contributions on pages 4 to 16, 65, and 66, respectively, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information, because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the County's basic financial statements. The introductory section, combining and individual nonmajor fund financial statements and schedules, and statistical section are presented for purposes of additional analysis and are not a required part of the basic financial statements. The schedule of expenditures of federal awards is presented for purposes of additional analysis as required by Title 2 U.S. Code of Federal Regulations (CFR) Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)*, and is also not a required part of the basic financial statements.

To the Honorable County Judge,
and County Commissioners
Williamson County, Texas

The combining and individual nonmajor fund financial statements and schedules and the schedule of expenditures of federal awards are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the combining and individual nonmajor fund financial statements and schedules, and the schedule of expenditures of federal awards are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated February 28, 2017, on our consideration of the County's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the County's internal control over financial reporting and compliance.

Weaver and Tidwell, L.L.P.

WEAVER AND TIDWELL, L.L.P.

Austin, Texas
February 28, 2017

MANAGEMENT'S DISCUSSION AND ANALYSIS

Management's Discussion and Analysis

As management of Williamson County (the County), we offer readers of the Williamson County financial statements this narrative overview and analysis of the financial activities of Williamson County for the fiscal year ended September 30, 2016. We encourage readers to consider the information presented here in conjunction with additional information that we have furnished in our letter of transmittal, which can be found on pages i – vi of this report.

Financial Highlights

- The assets and deferred outflows of resources of Williamson County exceeded its liabilities at the close of the most recent fiscal year by $127,233,725.

- Restricted net position of $49.9 million are funds set aside for specific purposes such as: road and bridge, capital projects, debt service and tobacco funds.

- As of the close of the current fiscal year, Williamson County's governmental funds reported combined ending fund balances of $527.1 million.

- The unassigned fund balance for the General Fund was $82.6 million, or 56% of total General Fund expenditures, down from 57% last year. The major factors for the variances in revenues and expenditures are explained later in the analysis.

- The County issued several bonds this year. In October 2015, $16.2 million Limited Tax Refunding Bonds was issued. The County issued $18.4 million Park Bonds in May 2016. These bonds were approved by the voters in November 2013. $37.9 million Limited Tax Refunding Bonds was issued in July 2016.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to Williamson County's basic financial statements. The County's basic financial statements comprise three components: 1) government-wide financial statements 2) fund financial statements and 3) notes to the financial statements. This report also contains other supplementary information in addition to the basic financial statements themselves.

Government-wide Financial Statements. The government-wide financial statements are designed to provide readers with a broad overview of Williamson County's finances in a manner similar to a private-sector business.

The statement of net assets presents information on all of the County's assets, deferred inflows of resources, and liabilities, with the difference between them reported as net position. Over time,

increases or decreases in net position may serve as a useful indicator of whether the financial position of Williamson County is improving or deteriorating.

The statement of activities presents information showing how the County's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods (e.g., uncollected taxes, debt payments, and earned but unused vacation leave).

In the Statement of Net position and the Statement of Activities, the County presents information of the primary government (governmental activities):

> **Governmental Activities** – Most of the County's basic services are reported here such as public safety, parks, and community services. Property taxes finance most of these activities.

The government-wide financial statements can be found on pages 17 and 18 of this report.

Fund Financial Statements. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The County, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. All of the funds of the County can be divided into three categories: governmental funds, proprietary funds, and fiduciary funds.

Governmental Funds. Governmental funds are used to account for essentially the same functions reported as governmental activities in the government-wide financial statements. However, unlike the government-wide financial statements, governmental fund financial statements focus on near-term inflows and outflows of available resources, as well as on balances of unencumbered resources available at the end of the fiscal year. Such information may be useful in evaluating a government's near-term financing requirements.

Because the focus of governmental funds is narrower than government-wide financial statements, it is useful to compare the information presented for governmental funds with similar information presented for governmental activities in the government-wide financial statements. By doing so, readers may better understand the long-term impact of the government's near-term financing decisions. Both the governmental fund balance sheet and the governmental fund statement of revenues, expenditures, and changes in fund balances provide a reconciliation to facilitate this comparison between governmental funds and governmental activities.

Williamson County maintains 47 individual governmental funds. Information is presented separately in the governmental fund balance sheet and in the governmental fund statements of revenues, expenditures, and changes in fund balances for the General Fund, Special Road and Bridge Fund, Debt Service Fund, Capital Project Fund, and Pass-through Funding Program, all of which are considered to be major funds. Data from the other 42 governmental funds are

combined into a single, aggregated presentation. Individual fund data for each of these non-major governmental funds is provided in the form of combining statements elsewhere in this report.

Williamson County adopts an annual appropriated budget for its General Fund, certain Special Revenue Funds, and the Debt Service Fund. Budgetary comparison statements have been provided for the General Fund and Special Road and Bridge Fund to demonstrate compliance with these budgets.

The basic governmental fund financial statements can be found on pages 19 to 24 of this report.

Proprietary Funds. The only type of proprietary fund that Williamson County maintains is Internal Service Funds which are an accounting device used to accumulate and allocate costs internally among the County's various functions. Williamson County uses two Internal Service Funds to account for the Fleet Maintenance Fund and the Benefits Fund. Because both of these services predominantly benefit the government, they have been included within governmental activities in the government-wide financial statements.

The proprietary fund financial statements provide separate information for the Fleet Maintenance Fund and the Benefits Fund. Both Internal Service Funds are combined into a single, aggregated presentation in the proprietary fund financial statements. Individual fund data for the Internal Service Funds is provided in the form of combining statements elsewhere in the report.

The basic proprietary fund financial statements can be found on pages 25 to 27 of this report.

Fiduciary Funds. Fiduciary funds are used to account for resources held for the benefit of parties outside the County. Fiduciary funds are *not* reflected in the government-wide financial statement because the resources of those funds are *not* available to support Williamson County's own programs. The accounting used for fiduciary funds is similar to that used for proprietary funds.

The basic fiduciary fund financial statements can be found on pages 28 to 29 of this report.

Notes to the Financial Statements. The notes provide additional information that is essential to a full understanding of the data provided in the government-wide and fund financial statements. The notes to the financial statements can be found on pages 30 to 64 of this report.

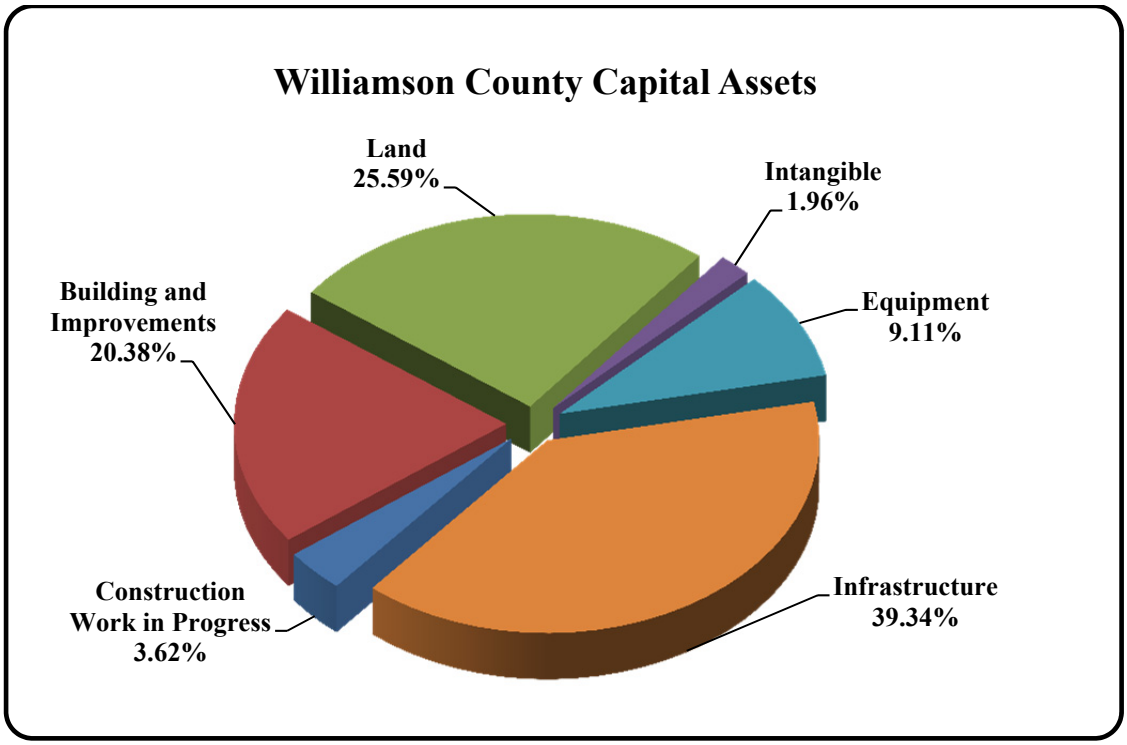
The combining statements referred to earlier in connection with non-major governmental funds and Internal Service Funds are presented immediately following the notes to the financial statements. Combining and individual fund statements and schedules can be found on pages 67 - 121 of this report.

Financial Analysis of Government-wide Statements

Summary of Statement of Net Position

	Primary Government	
	Governmental Activities	
	2016	**2015**
Current Assets and Other Assets	$575,153,108	$614,470,838
Capital Assets	$687,310,787	$628,185,486
Total Assets	$1,262,463,895	$1,242,656,324
Deferred Outflows of Resources	$82,544,536	$53,490,401
Total Deferred Outflows of Resources	$82,544,536	$53,490,401
Current Liabilities	$33,095,971	$85,008,483
Noncurrent Liabilities	$1,184,678,735	$1,072,150,173
Total Liabilities	$1,217,774,706	$1,157,158,656
Net Position:		
Net Investment in Capital Assets	$365,342,452	$445,160,755
Restricted	49,879,697	42,611,846
Unrestricted	(287,988,424)	(348,784,532)
Total Net Position	$127,233,725	$138,988,069

Total net position decreased by $11.8 million compared to 2015. There are significant changes in the statement of net position at September 30, 2016 from September 30, 2015. Capital assets increased by $59.1 million as a result of the acceptance of several new subdivisions. The continued growth in the County has caused an increase of new homes. The roads in these subdivisions such as Siena, Highlands at Mayfield Ranch and Paloma Lake will be maintained by the County. The County continues to construct new roads and has begun to make improvements and construct new County buildings such as the Williamson County EXPO Center have contributed to the increase. In addition, the County's net pension liability increased by $83.9 million offset slightly by an increase in the deferred outflows related to pension totaling $28.9 million. This increase is primarily a result of actuarial changes used to determine the total pension liability, including an assumption of a repeating cost of living adjustment (COLA) and an update to annuity rates for future retirees.



A portion of the County's net position ($687.3 million) reflects investment in capital assets (e.g., land, buildings, infrastructure, machinery, and equipment). Williamson County uses these capital assets to provide services to citizens; consequently, these assets are not available for future spending. It should be noted that the resources needed to repay the debt associated with these capital assets must be provided from other sources, since the capital assets themselves cannot be used to liquidate these liabilities.

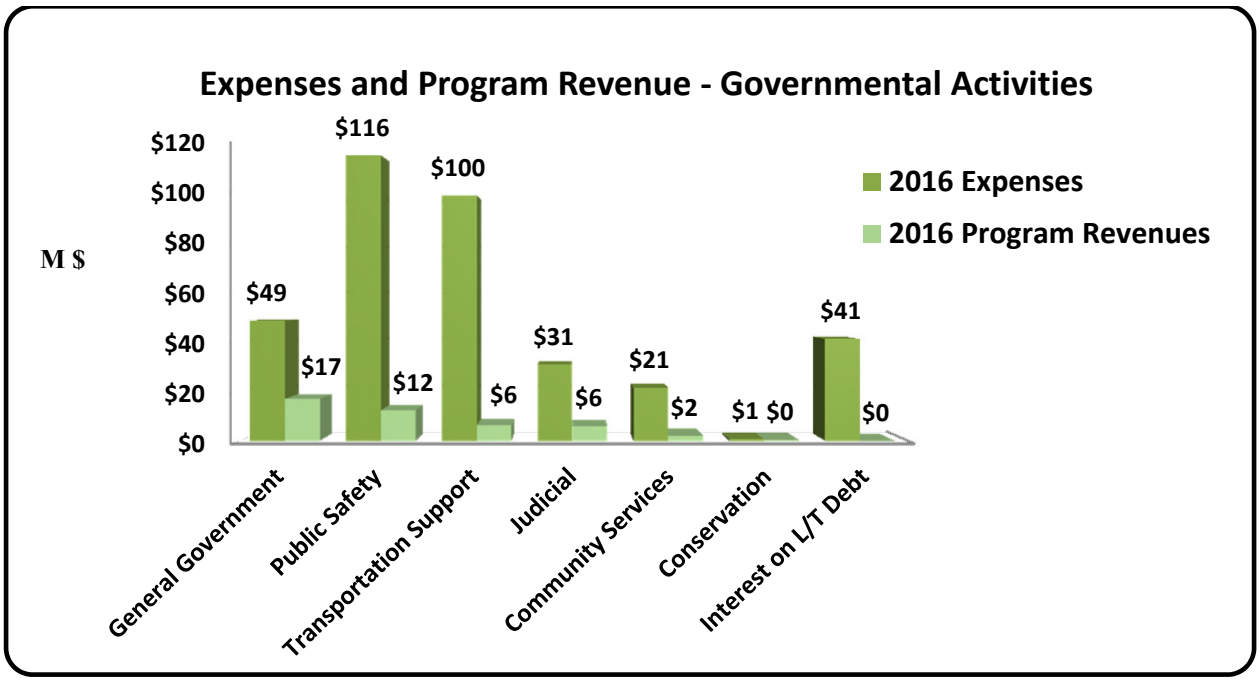
However, the investment in capital assets does not necessarily correlate directly with changes in capital assets as a whole. Many road projects, once completed, are contributed to the local entity involved thus removing the asset from the County's books. In 1999, County Commissioners recognized the need to address transportation needs in the County. Discussions with local and state governments and community leaders led to the development of a Multi-Corridor Plan. Since 2000, in order to facilitate economic growth and to increase the quality of life, the County started responsibly issuing road bonds to address road improvements countywide. As road projects are completed, ownership of many of the new roads is transferred to the appropriate local entity. This plan has benefited the County over the years making travel faster and safer throughout the County.

Williamson County's Changes in Net Position

	Primary Government	
	Governmental Activities 2016	Governmental Activities 2015
Revenues		
Program revenues:		
Charges for services	$43,949,358	$44,423,946
Operating grants and contributions	7,021,670	7,327,581
Capital grants and contributions	63,114,526	59,565,089
General revenues:		
Property taxes	226,537,897	204,275,713
Other taxes	1,328,610	1,118,611
Investment earnings	2,826,060	1,291,116
Miscellaneous	1,785,938	2,602,864
Total Revenues	346,564,059	320,604,920
Expenses		
General government	48,471,235	33,113,079
Public safety	115,818,653	87,932,683
Transportation support	99,775,558	78,977,229
Judicial	31,025,054	23,581,105
Community services	21,383,743	18,727,680
Interest on long-term debt	41,283,450	40,308,534
Conservation	560,710	407,345
Total Expenses	358,318,403	283,047,655
Change in Net Position	(11,754,344)	37,557,265
Net Position, Beginning	138,988,069	115,131,859
Prior Period Adjustment	-	(13,701,055)
Net Position, Ending	$127,233,725	$138,988,069

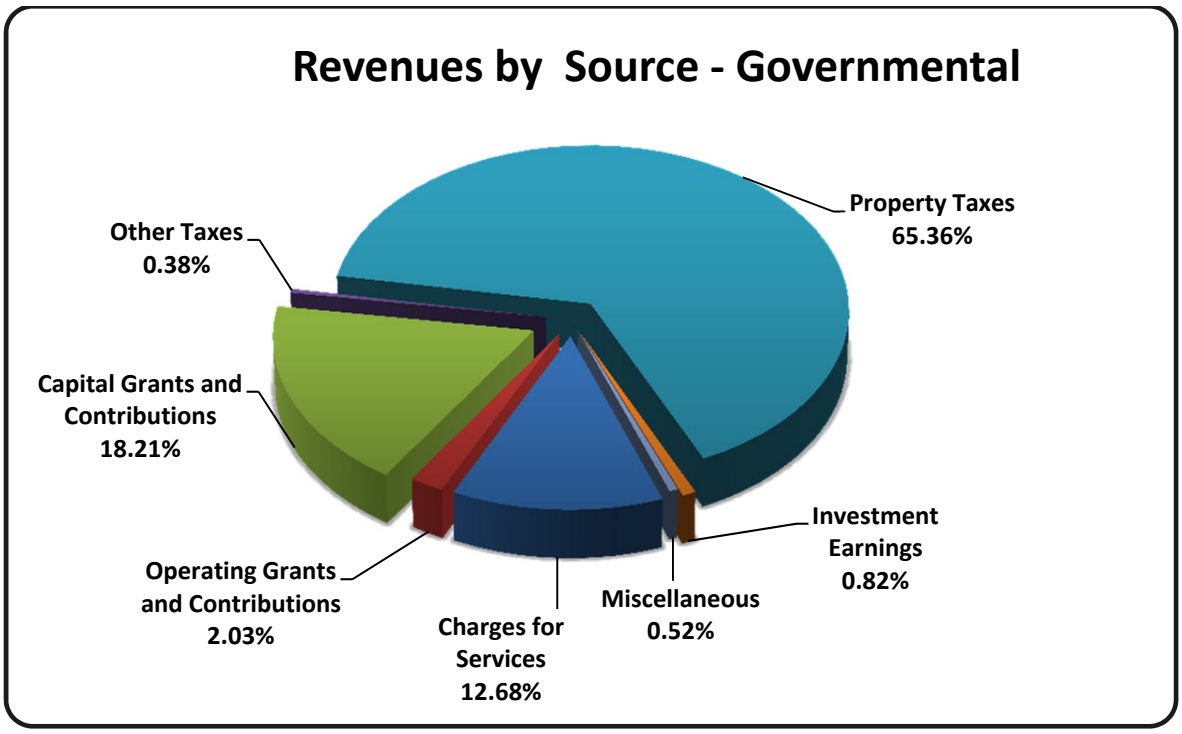
Changes in net position from year to year are a result of the net impact of the change in revenues and expenses from one year to the next. Total revenues for 2016 increased, primarily as a result of property tax revenues, which exceeded property taxes for 2015 by $22.3 million. For 2016, tax rates slightly decreased; however, property values increased by 12% and along with new improvements this resulted in an increase in revenues. Capital grants and contributions increased $3.5 million. The continued growth has added several subdivisions throughout the County. Many of these subdivisions will be maintained by the County. Expenses increased in 2016 compared to 2015, primarily as a result of an increase in transportation support related to the continued

growth of the County, and the benefits expense recorded across all departments as a result of the increased pension liability discussed with the statement of activities.

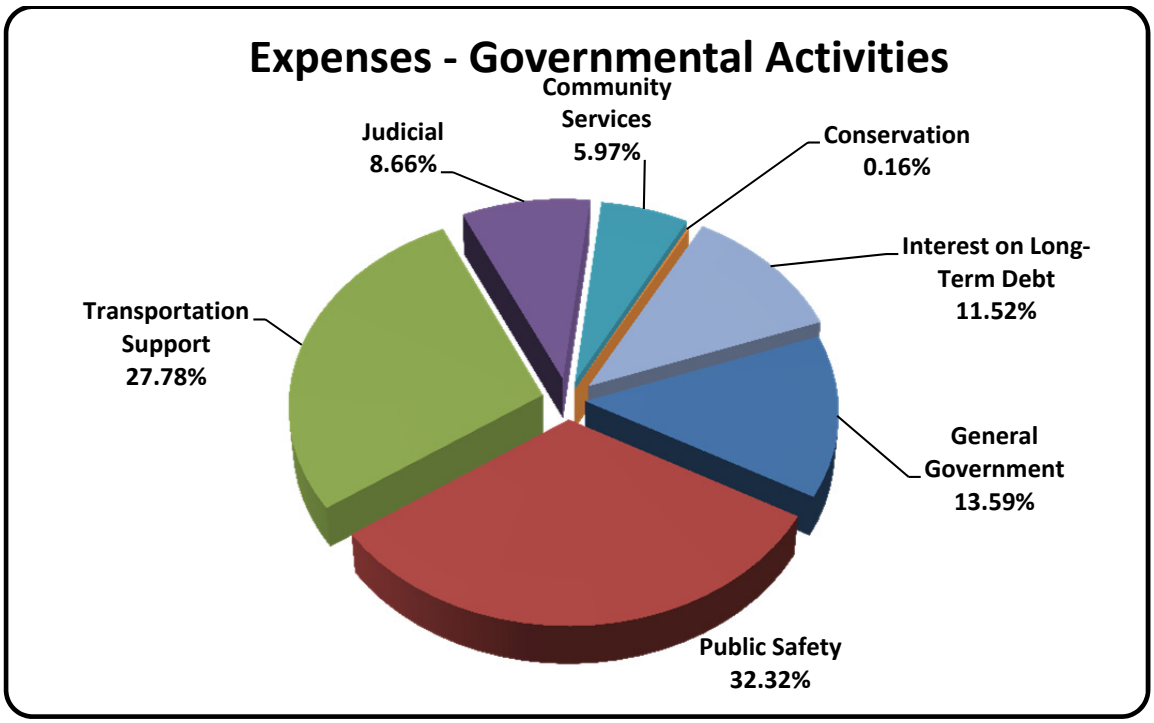


The chart above compares expenses and direct revenues associated with like County services.

The pie chart below includes other revenues, i.e. tax collections that are not tied to individual services provided by the County.



The pie chart below breaks out all expenses by type of service provided by the County.



Financial Analysis of the Governmental Funds

As noted earlier, Williamson County uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements.

Governmental Funds. The focus of this section is to provide information on near-term inflows, outflows, and balances of spendable resources. Such information is useful in assessing Williamson County's financing requirements. In particular, the unreserved fund balance may serve as a useful measure of a government's net resources available for spending at the end of the fiscal year.

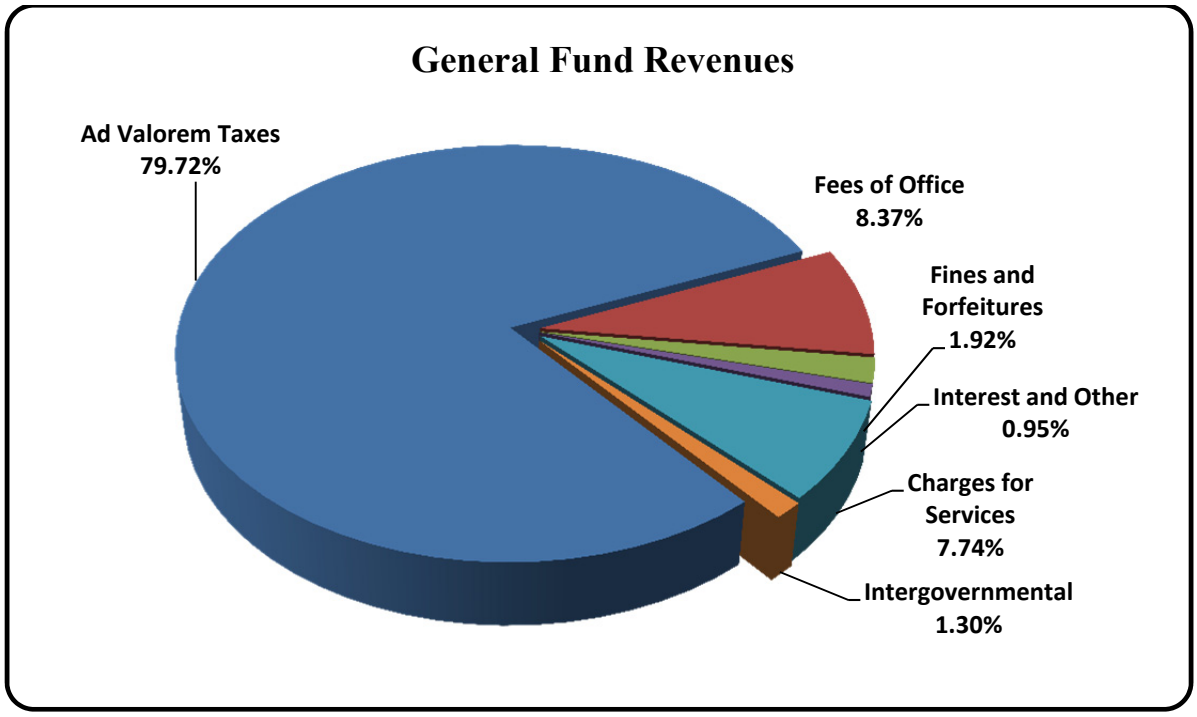
As of the current fiscal year end, Williamson County's governmental funds reported combined ending fund balances of $527.1 million, a decrease of $18.5 million compared to the prior year. This decrease is primarily driven by the construction of capital bond projects for roads and parks. $105.2 million of the fund balance is nonspendable. The majority of the nonspendable amount is due to a receivable due from the Texas Department of Transportation for the Pass-Through Financing Program. $339.3 million of the fund balance is restricted and committed. This means that these funds are earmarked for specific purposes that have been either imposed by state legislation or by formal action taken by commissioner's court. The remaining balance is unassigned and can be used for any purpose.

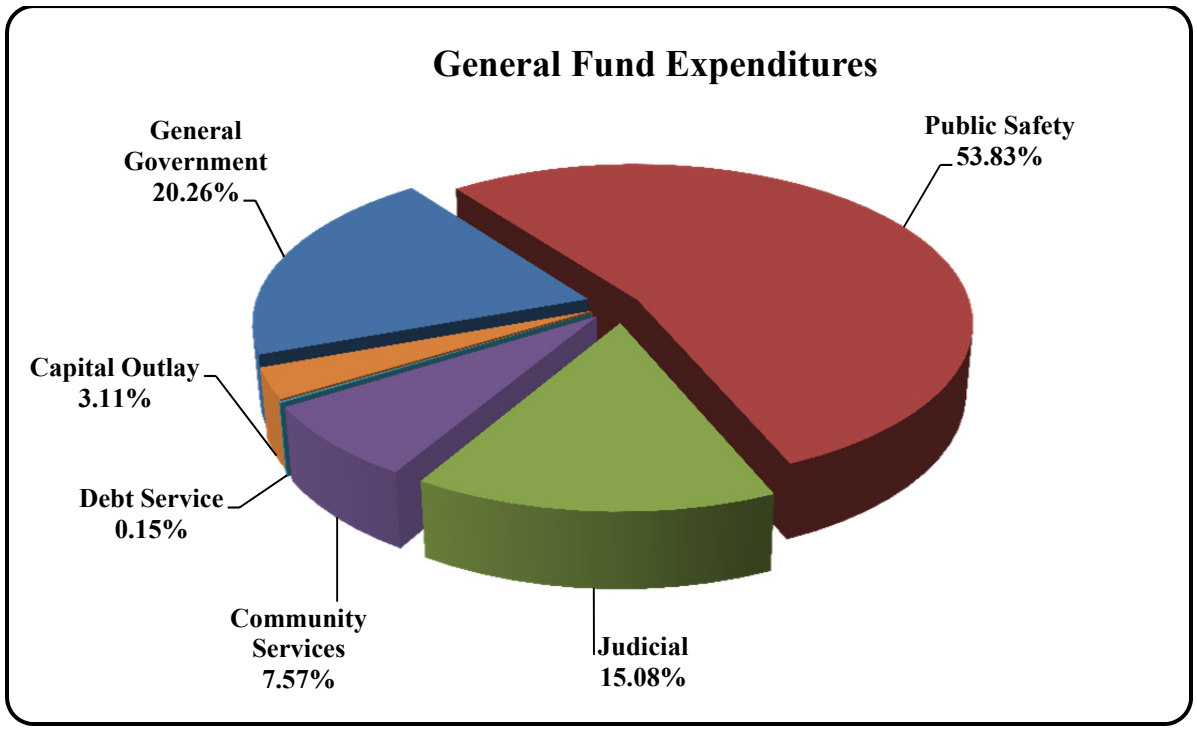
General Fund. The General Fund is the chief operating fund of the County. At the end of the current fiscal year, total fund balance of the General Fund was $87 million with an $858 thousand nonspendable fund balance for investment in capital leases and prepaid expenses. In 2013, the County established a plan to reduce excess reserves to fund various County capital projects. $3.5 million of the General Fund balance is committed to fund the remaining 2013 - 2016 capital projects not completed at year-end. As a measure of the General Fund's liquidity, it is useful to compare both unassigned fund balance and total fund balance to total fund expenditures. Unassigned fund balance for 2016 represents 56% of total General Fund expenditures. This significant fund balance to total expenditure ratio indicates a healthy financial position. The County has adopted a policy to maintain an appropriate level of unreserved General Fund balance to protect against a reduction of services due to temporary revenue shortfalls or unexpected one-time expenditures. A Fund Balance Policy adopted by the Commissioner's Court in 2009 states that the level shall not be less than 35% of total General Fund budgeted expenditures.

The fund balance of Williamson County's General Fund has increased by 4% during the current fiscal year. Although the tax revenue increased by $12 million; the growth of the County has created an increase in the demand for services. A major increase was attributable to personnel. 35 new positions are approved in the general fund. Thirteen positions are approved in general government and fourteen positions are in public safety. Other new positions are approved for the newly remodeled EXPO center. $10 million was budgeted to pay for debt reduction. While being fiscally conservative, the County growth has caused increases to the overall expenditures. Conservative spending resulted in lower than budgeted operational costs. Actual revenues are

$4.4 million higher than budgeted. Property tax revenues and charges for services is higher than projected. The increase in revenue budgeted amounts allowed for an almost $3 million increase to the fund balance in the general fund beyond the budgeted amount.

General Fund revenues and expenditures are graphically depicted below.





Long-term Debt. At the end of the current fiscal year, the County had total bonded debt outstanding of $1 billion. Williamson County's debt has decreased by $25.2 million during the current fiscal year. In May 2016, a portion of the 2013 voter approved park bonds were issued for a total amount of $18.4 million. The debt is backed by the full faith and credit of the County. To take advantage of the low interest rates, the County refinanced existing debt. In October 2015, Williamson County issued a refunding bond in the amount of $16.2 million with a significant cost savings of $2.7 million over the next 11 years. In July 2016, Williamson County issued a refunding in the amount of $38 million with a cost savings of approximately $4.2 million net present value savings over a 20 year period.

Additional information on Williamson County's long-term debt can be found in NOTE 10 on pages 51 to 55 of this report.

Debt Service Fund. The total fund balance at year-end is $6.2 million, all of which is restricted for the payment of debt service. This balance reflects a current year net increase of $400 thousand. The fund balance remains relatively unchanged. Property tax collections are slightly higher than projected. The Commissioners Court approved a $10 million cash defeasance to pay off existing debt. A $10 million transfer from General Fund was used to pay the debt. These differences caused the fund balance to remain unchanged.

The County's continued investment in infrastructure has resulted in substantial growth of the tax base. In 2006, County management pledged to the citizens a stabilization of the portion of the tax rate supporting debt service. The current fund balance is sufficient to maintain this goal while continuing to address the needs of the County.

Additional information on Williamson County's long-term debt can be found in NOTE 10 on pages 51 to 55 of this report.

Capital Projects Fund. The Capital Projects Fund has a total fund balance of $254.5 million, which is a decrease from FY 2015 of $30.3 million. The majority of the decrease to fund balance is the issuance of 2013 Park Bonds proceeds received this fiscal year is a lesser amount than last year's bond issuance of Road Bonds and Certificate of Obligations. The bond funds are the second issuance in the amount of $20 million out of the $40 million voter approved bonds issued to be spent on Park improvements. Interest earnings increased this year due to the investing of the bond proceeds. Expenditures increased $7.8 million. The Park Bonds finished construction of the Williamson County Exposition Center spending $9.2 million. During this fiscal year, the road bonds have started construction on several projects. The projects anticipate to increase in expenditures next year as several new projects will be starting. Total expenditures from the Capital Projects Fund were $55.8 million with capital outlay expenditures accounting for $29.2 million. The major expenditures during the year include $9.2 million on the Williamson County Exposition Center, $5.0 million on Hero Way West, $3.6 million on Bill Pickett Trail, $1.8 million on Reagan Boulevard at IH-35 Bridge, $1.5 million on Kaufmann Loop Phase 1, $1.5 million on County Road 101 Phase 1, and $1.3 million on SH 29 Bypass/Inner Loop.

Capital Assets. Williamson County's investment in capital assets as of September 30, 2016 amounts to $687.3 million (net of accumulated depreciation). This investment includes land, buildings, system improvements, machinery and equipment, park facilities, roads, highways, and bridges.

Major capital asset additions during the current fiscal year include the following:

- Clearwater Ranch Phase 2
- Highlands at Mayfield Ranch Section 3
- Highlands at Mayfield Ranch Section 5
- Highlands at Mayfield Ranch Section 8
- Paloma Lake Section 8
- Paloma Lake Section 12
- Paloma Lake Section 14
- Paloma Lake Section 26
- Rancho Sienna Section 14 Phase 1
- Rancho Sienna Section 15
- Santa Rita Ranch South Section 15
- Siena Section 16
- Siena Section 20
- Summerlyn South Section 4
- Wireless Communications' Microwave Replacement Project

Additional information on Williamson County's capital assets can be found in NOTE 7 on pages 48 and 49 of this report.

Special Road and Bridge Fund. The Special Road and Bridge Fund has a total fund balance of $19.5 million, with a net increase of $2.4 million. County Commissioners adopted a tax rate of $.04/100 for Road & Bridge activities for the third year in a row. The increase in property taxes allows the County to implement an increase in county road maintenance and improvement projects. This additional funding is part of a long-range plan for maintaining and improving county roads.

Proprietary Funds. Proprietary funds are made up of two Internal Service Funds, which include the Fleet Service Fund and the Benefits Fund.

Economic Factors and Next Year's Budgets and Rates

Economic Conditions. Williamson County's population growth has been driven in part by its location in Central Texas. The population boom has contributed to housing demands and job growth. Low tax rates, affordable housing and business incentives are major factors that have contributed to the County's growth. The regional economy continues to expand. The economy continues to diversify, with unemployment rates below state and national averages. New residents to the County, new houses and new businesses are projected to continue for many

years. The growth has caused a demand for services in the areas of law enforcement, emergency services, indigent health care and legal defense. In June 2016, the County sold general obligation bonds in the amount of $18.4 million for acquiring land, construction and improvements for parks and recreational purposes. The bonds will allow the County to continue to address the infrastructure needs of a growing county.

The taxable assessed valuation (TAV) growth has been solid, spurred by affordable home prices and ample developable land which fuels property tax revenue growth. An increase of 12% TAV was recorded in fiscal 2015. In 2016, TAV grew 11%. Property tax collections remain consistent with historic levels. The average collection rate is 99.65%.

The economic base has grown significantly; commercial developments have resulted in the expansion of retail, higher education, and the healthcare sector. Several areas of the County are becoming key economic corridors. These areas are attracting new businesses to the County. The availability of jobs benefits Williamson County.

Unemployment. September 2016 unemployment rate for Williamson County was 3.6%, which is a slight increase from the rate of 3.4% a year ago. This compares favorably to the state's unemployment rate of 4.9% and the national rate of 4.8%.

All of these factors were considered in preparing Williamson County's budget for FY 2017.

Requests for Information

This financial report is designed to provide a general overview of Williamson County's finances for all those with an interest in its finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the following:

Office of the County Auditor
710 S. Main Street, Suite 301
Georgetown, Texas 78626
jkiley@wilco.org

BASIC FINANCIAL STATEMENTS

WILLIAMSON COUNTY, TEXAS
STATEMENT OF NET POSITION
SEPTEMBER 30, 2016

	Primary Government
	Governmental Activities
ASSETS	
Cash and investments	$ 447,423,563
Accounts receivable (net of allowance)	8,428,292
Due from other governments	108,470,004
Inventories	674,899
Prepaid items	51,458
Deferred contributions	9,280,176
Investment in lease	824,716
Capital assets	
Land	238,569,934
Intangible	18,275,438
Buildings and improvements	190,070,247
Infrastructure	366,910,588
Equipment	84,983,852
Construction in progress	33,770,981
Less: accumulated depreciation	(245,270,253)
Total capital assets	687,310,787
Total assets	1,262,463,895
DEFERRED OUTFLOWS OF RESOURCES	
Deferred losses on refunding	41,192,011
Deferred outflows related to pension	41,352,525
Total deferred outflows of resources	82,544,536
LIABILITIES	
Accounts payable	20,371,173
Accrued liabilities	3,677,840
Due to other governments	2,906,252
Unearned revenues	1,429,814
Accrued interest	4,710,892
Noncurrent liabilities	
Due within one year	57,867,716
Due in more than one year	1,126,811,019
Total liabilities	1,217,774,706
NET POSITION	
Net investment in capital assets	365,194,341
Restricted for	
Debt service	8,269,822
Road and bridge	19,725,893
Tobacco fund	3,823,257
Records management	5,528,124
Public safety	1,766,013
State and federal programs	10,766,588
Unrestricted	(287,840,313)
Total net position	$ 127,233,725

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
STATEMENT OF ACTIVITIES
YEAR ENDED SEPTEMBER 30, 2016

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions	Program Revenues: Capital Grants and Contributions	Net (Expense) Revenue and Changes in Net Position: Primary Government: Governmental Activities
Primary government					
Governmental activities					
General government	$ 48,471,235	$ 16,936,279	$ 1,280,981	$ -	$ (30,253,975)
Public safety	115,818,653	12,310,097	2,696,760	-	(100,811,796)
Transportation support	99,775,558	6,267,221	-	63,114,526	(30,393,811)
Judicial	31,025,054	5,920,681	535,510	-	(24,568,863)
Community services	21,383,743	2,145,587	2,398,660	-	(16,839,496)
Conservation	560,710	369,493	109,759	-	(81,458)
Interest on long-term debt	41,283,450	-	-	-	(41,283,450)
Total primary government	$ 358,318,403	$ 43,949,358	$ 7,021,670	$ 63,114,526	(244,232,849)
General revenues					
Taxes					
Property taxes, levied for general purposes					128,577,499
Property taxes, levied for farm to market					18,552,068
Property taxes, levied for debt service					79,408,330
Other taxes					1,328,610
Investment earnings					2,826,060
Miscellaneous					1,785,938
Total general revenues					232,478,505
Change in net position					(11,754,344)
NET POSITION, beginning of year					138,988,069
Prior period adjustment					-
NET POSITION, end of year					$ 127,233,725

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
BALANCE SHEET – GOVERNMENTAL FUNDS
SEPTEMBER 30, 2016

ASSETS	General	Special Road and Bridge	Debt Service	Capital Projects	Pass-through Funding Program	Other Governmental	Total Governmental Funds
Cash and investments	$ 93,323,429	$ 21,089,556	$ 6,191,124	$ 267,657,782	$ 28,384,740	$ 26,541,639	$ 443,188,270
Accounts receivable (net of allowance)	6,087,074	447,719	929,466	138,872	-	723,854	8,326,985
Due from other governments	216,461	-	-	1,918,614	103,798,198	2,536,731	108,470,004
Inventories	-	530,865	-	-	-	-	530,865
Prepaid items	33,028	-	-	-	-	3,199	36,227
Investment in capital lease	824,716	-	-	-	-	-	824,716
Total assets	$ 100,484,708	$ 22,068,140	$ 7,120,590	$ 269,715,268	$ 132,182,938	$ 29,805,423	$ 561,377,067
LIABILITIES							
Accounts payable	$ 3,678,190	$ 2,145,210	$ -	$ 13,863,071	$ 342	$ 495,712	$ 20,182,525
Accrued liabilities	2,474,396	184,161	-	-	-	160,979	2,819,536
Due to other governments	2,857,659	-	-	-	-	48,593	2,906,252
Unearned revenue	241,437	12,876	-	-	-	1,175,501	1,429,814
Total liabilities	9,251,682	2,342,247	-	13,863,071	342	1,880,785	27,338,127
DEFERRED INFLOWS OF RESOURCES							
Deferred revenues	4,255,120	199,867	896,467	1,402,232	-	180,532	6,934,218
Total deferred inflows of resources	4,255,120	199,867	896,467	1,402,232	-	180,532	6,934,218
FUND BALANCES							
Nonspendable	857,744	530,865	-	-	103,798,198	3,199	105,190,006
Restricted	-	18,995,161	6,224,123	254,449,965	28,384,398	27,740,907	335,794,554
Committed	3,534,167	-	-	-	-	-	3,534,167
Unassigned	82,585,995	-	-	-	-	-	82,585,995
Total fund balances	86,977,906	19,526,026	6,224,123	254,449,965	132,182,596	27,744,106	527,104,722
Total liabilities, deferred inflows of resources, and fund balances	$ 100,484,708	$ 22,068,140	$ 7,120,590	$ 269,715,268	$ 132,182,938	$ 29,805,423	$ 561,377,067

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
RECONCILIATION OF THE GOVERNMENTAL FUNDS BALANCE SHEET TO THE STATEMENT OF NET POSITION
SEPTEMBER 30, 2016

Total fund balances - governmental funds	$	527,104,722
Amounts reported for governmental activities in the statement of net position are different because:		
The County uses internal service funds to charge the costs of certain activities such as fleet and self-insurance to appropriate functions in other funds. The assets and liabilities of the internal service funds are included in the governmental activities in the statements of net position.		3,566,204
Capital assets, including accumulated depreciation, used in governmental activities are not financial resources and, therefore, are not reported in the funds.		687,193,496
Deferred contributions are not financial resources and, therefore, are not reported in the funds.		9,280,176
Losses on bond refundings are deferred and amortized in the government-wide financial statements.		41,192,011
Net pension liability, the related deferred outflows of resources, and net OPEB obligation are not due and payable in the current period, and, therefore, have not been included in the fund financial statements.		(106,675,369)
Revenues earned but not available within 60 days of the year end are not recognized as revenue on the fund financial statements.		6,934,218
Interest payable on long term debt does not require current financial resources; therefore, interest payable is not reported as a liability in governmental funds balance sheet.		(4,710,892)
Long-term liabilities are not due and payable in the current period and therefore are not reported in the funds.		(1,036,650,841)
Net position of governmental activities	$	127,233,725

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES – GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	General	Special Road and Bridge	Debt Service	Capital Projects	Pass-through Funding Program	Other Governmental	Total Governmental Funds
REVENUES							
Taxes	$129,961,131	$ 18,565,553	$ 78,178,335	$ -	$ -	$ 1,249,383	$ 227,954,402
Fees of office	13,645,196	-	-	-	-	4,346,412	17,991,608
Fines and forfeitures	3,127,507	-	-	-	-	136,956	3,264,463
Intergovernmental	2,125,167	526,827	120,437	2,502,601	7,742	7,124,051	12,406,825
Charges for services	12,613,273	840,076	-	-	-	1,450,454	14,903,803
Motor vehicle registration	-	4,896,590	-	-	-	-	4,896,590
Investment earnings	803,325	170,045	93,595	1,532,101	147,620	64,511	2,811,197
Miscellaneous	747,882	21,219	58,988	62,198	-	1,530,559	2,420,846
Total revenues	163,023,481	25,020,310	78,451,355	4,096,900	155,362	15,902,326	286,649,734
EXPENDITURES							
Current							
General government	29,990,280	-	-	88,281	-	2,692,482	32,771,043
Public safety	79,733,092	-	-	1,967	-	3,650,137	83,385,196
Transportation support	-	20,277,160	-	26,035,697	4,428	-	46,317,285
Judicial	22,343,088	-	-	-	-	958,809	23,301,897
Community services	11,214,745	-	-	253,024	-	5,006,411	16,474,180
Conservation	-	-	-	-	-	308,850	308,850
Debt service							
Principal	226,178	-	50,422,763	-	-	920,000	51,568,941
Interest and other charges	2,674	-	39,385,932	-	-	315,873	39,704,479
Bond issuance fees	-	-	703,920	217,873	-	326,545	1,248,338
Capital outlay	4,607,883	2,565,118	-	29,147,621	-	801,267	37,121,889
Total expenditures	148,117,940	22,842,278	90,512,615	55,744,463	4,428	14,980,374	332,202,098
Excess (deficiency) of revenues over expenditures	14,905,541	2,178,032	(12,061,260)	(51,647,563)	150,934	921,952	(45,552,364)
OTHER FINANCING SOURCES (USES)							
Issuance of long-term debt	-	-	54,155,000	18,350,000	-	8,210,000	80,715,000
Premium on issuance of long-term debt	-	-	8,764,582	1,905,173	-	406,238	11,075,993
Proceeds from sale of capital assets	224,813	203,362	-	-	-	-	428,175
Transfers in	25,000	-	11,750,000	1,109,215	-	589,273	13,473,488
Discount on issuance of long-term debt	-	-	-	(25,300)	-	(11,178)	(36,478)
Payment to bond escrow agent	-	-	(62,202,473)	-	-	(2,902,163)	(65,104,636)
Transfers out	(11,681,442)	(17,046)	-	-	(1,750,000)	(25,000)	(13,473,488)
Total other financing sources (uses)	(11,431,629)	186,316	12,467,109	21,339,088	(1,750,000)	6,267,170	27,078,054
NET CHANGE IN FUND BALANCES	3,473,912	2,364,348	405,849	(30,308,475)	(1,599,066)	7,189,122	(18,474,310)
FUND BALANCES, beginning of year	83,503,994	17,161,678	5,818,274	284,758,440	133,781,662	20,554,984	545,579,032
FUND BALANCES, end of year	$ 86,977,906	$ 19,526,026	$ 6,224,123	$ 254,449,965	$ 132,182,596	$ 27,744,106	$ 527,104,722

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES OF GOVERNMENTAL FUNDS TO THE STATEMENT OF ACTIVITIES
YEAR ENDED SEPTEMBER 30, 2016

Net change in fund balances - total governmental funds	$	(18,474,310)
Amounts reported for governmental activities in the statement of activities are different because:		
The County uses internal service funds to charge the costs of certain activities such as fleet and self-insurance to appropriate functions in other funds. The net income of the internal service funds are reported with the governmental activities.		366,791
Governmental funds report outlays for capital assets as expenditures. However, in the statement of activities the cost of those assets is allocated over their useful lives and reported as depreciation expense. This is the amount by which capital outlays exceeded depreciation in the current period.		8,195,071
Governmental capital assets donated to the County are not current financial resources and therefore, are not reported in the fund statements. Capital assets donated to the County in the current fiscal year increased net position.		61,766,464
Governmental funds report expenditures for costs of assets under construction that will be contributed on completion to another entity. However, in the statement of activities, the cost of those assets will be expensed when the completed asset is transferred.		(19,363,893)
Governmental funds report the entire net sales price (proceeds) from sale of an asset as revenue because it provides current financial resources. In contrast, the statement of activities reports only the gain or loss on the sale of the assets. In addition, the cost basis of assets donated to other entities is reported as expenses on the statement of activities in the period donated. The sum of these items totals:		(10,857,485)
Revenues in the statement of activities that do not provide current financial resources are not reported as revenues in the funds.		(2,209,239)
Expenditures related to the County's participation in the Texas County and District Retirement System are recorded as they are paid in the governmental funds, but are recognized based on the change in net pension liability in the Statement of Activities.		(55,091,608)
The issuance of long-term debt (e.g., bonds) provides current financial resources to governmental funds, while the repayment of the principal of long-term debt consumes the current financial resources of governmental funds. Neither transaction, however, has any effect on net assets. Also, governmental funds report the effect of issuance costs, premiums, discounts, and similar items when debt is first issued, whereas these amounts are deferred and amortized in the statement of activities. This amount is the net effect of these differences in the treatment of long-term debt and related items.		25,035,121
Some expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in governmental funds.		(1,121,256)
Change in net position of governmental activities	$	(11,754,344)

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
GENERAL FUND
YEAR ENDED SEPTEMBER 30, 2016

	Budgeted Amounts		Actual Amounts	Variance with Final Budget – Positive (Negative)
	Original	Final		
REVENUES				
Taxes	$ 128,379,222	$ 128,379,222	$ 129,961,131	$ 1,581,909
Fees of office	12,876,250	12,876,250	13,645,196	768,946
Fines and forfeitures	3,114,200	3,114,200	3,127,507	13,307
Intergovernmental	1,999,215	2,126,504	2,125,167	(1,337)
Charges for services	11,362,859	11,370,444	12,613,273	1,242,829
Investment earnings	400,000	400,000	803,325	403,325
Miscellaneous	358,000	384,485	747,882	363,397
Total revenues	158,489,746	158,651,105	163,023,481	4,372,376
EXPENDITURES				
Current				
General government	32,177,244	31,378,020	29,990,280	1,387,740
Public safety	82,726,537	83,713,183	79,733,092	3,980,091
Judicial	22,554,249	23,568,161	22,343,088	1,225,073
Community services	11,220,262	11,329,221	11,214,745	114,476
Debt service				
Principal	-	226,178	226,178	-
Interest and other charges	-	2,674	2,674	-
Capital outlay	5,317,114	5,942,260	4,607,883	1,334,377
Total expenditures	153,995,406	156,159,697	148,117,940	8,041,757
Excess of revenues over expenditures	4,494,340	2,491,408	14,905,541	12,414,133
OTHER FINANCING SOURCES (USES)				
Proceeds from sale of capital assets	200,000	200,000	224,813	24,813
Transfers in	25,000	25,000	25,000	-
Transfers out	(10,020,932)	(13,655,125)	(11,681,442)	1,973,683
Total other financing sources (uses)	(9,795,932)	(13,430,125)	(11,431,629)	1,998,496
Net change in fund balances	(5,301,592)	(10,938,717)	3,473,912	14,412,629
FUND BALANCES, beginning of year	83,503,994	83,503,994	83,503,994	-
FUND BALANCES, end of year	$ 78,202,402	$ 72,565,277	$ 86,977,906	$ 14,412,629

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
SPECIAL ROAD AND BRIDGE FUND
YEAR ENDED SEPTEMBER 30, 2016

	Budgeted Amounts			Variance with Final Budget - Positive (Negative)
	Original	Final	Actual Amounts	
REVENUES				
Taxes	$ 18,373,128	$ 18,379,128	$ 18,565,553	$ 186,425
Intergovernmental	187,000	187,000	526,827	339,827
Charges for services	800,000	800,000	840,076	40,076
Motor vehicle registration	4,360,000	4,360,000	4,896,590	536,590
Investment earnings	50,000	50,000	170,045	120,045
Miscellaneous	10,000	10,000	21,219	11,219
Total revenues	23,780,128	23,786,128	25,020,310	1,234,182
EXPENDITURES				
Current				
Transportation support	22,948,676	24,043,729	20,277,160	3,766,569
Capital outlay	3,616,630	3,540,635	2,565,118	975,517
Total expenditures	26,565,306	27,584,364	22,842,278	4,742,086
Excess (deficiency) of revenues over expenditures	(2,785,178)	(3,798,236)	2,178,032	5,976,268
OTHER FINANCING SOURCES (USES)				
Proceeds from sale of capital assets	75,000	75,000	203,362	128,362
Transfers in	-	-	-	-
Transfers out	(792,000)	(31,946)	(17,046)	14,900
Total other financing sources (uses)	(717,000)	43,054	186,316	143,262
NET CHANGE IN FUND BALANCES	(3,502,178)	(3,755,182)	2,364,348	6,119,530
FUND BALANCES, beginning of year	17,161,678	17,161,678	17,161,678	-
FUND BALANCES, end of year	$ 13,659,500	$ 13,406,496	$ 19,526,026	$ 6,119,530

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
STATEMENT OF NET POSITION
PROPRIETARY FUNDS
SEPTEMBER 30, 2016

	Governmental Activities Internal Service
ASSETS	
Current assets	
Cash and investments	$ 4,235,293
Accounts receivable	101,307
Inventory	144,034
Prepaid expenses	15,231
Total current assets	4,495,865
Noncurrent assets	
Capital assets	
Machinery and equipment	482,948
Less accumulated depreciation	(365,657)
Total noncurrent assets	117,291
Total assets	4,613,156
LIABILITIES	
Current liabilities	
Accounts payable	188,648
Accrued liabilities	858,304
Total liabilities	1,046,952
NET POSITION	
Net investment in capital assets	117,291
Unrestricted	3,448,913
TOTAL NET POSITION	$ 3,566,204

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
PROPRIETARY FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	Governmental Activities Internal Service
OPERATING REVENUES	
Employer contributions	$ 15,475,600
Employee contributions	3,558,308
Charges for services	3,004,714
Total operating revenues	22,038,622
OPERATING EXPENSES	
Claims	16,135,346
Insurance	1,210,930
Administration	1,493,833
Supplies and parts	2,827,814
Depreciation	18,771
Total operating expenses	21,686,694
Operating income	351,928
NONOPERATING REVENUES	
Interest and investment revenues	14,863
Total nonoperating revenues	14,863
Change in net position	366,791
NET POSITION, beginning of year	3,199,413
NET POSITION, end of year	$ 3,566,204

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	Governmental Activities Internal Service
CASH FLOWS FROM OPERATING ACTIVITIES	
Receipts from customers and users	$ 22,126,913
Payments to suppliers	(19,970,544)
Payments to employees	(1,485,761)
Net cash flows provided by operating activities	670,608
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	
Acquisition and construction of capital assets	(40,022)
Net cash flows used in capital and related financing activities	(40,022)
CASH FLOWS FROM INVESTING ACTIVITIES	
Investment earnings	14,863
Net cash flows provided by investing activities	14,863
Change in cash and cash equivalents	645,449
CASH AND CASH EQUIVALENTS, beginning of year	3,589,844
CASH AND CASH EQUIVALENTS, end of year	$ 4,235,293
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
Operating income	$ 351,928
Adjustments to reconcile operating income to net cash provided by operating activities	
Depreciation	18,771
Change in assets and liabilities	
Accounts receivable	88,291
Due from other funds	37,827
Prepaids and other assets	(15,231)
Inventory	21,671
Accounts payable	(101,199)
Accrued liabilities	268,550
Net cash provided by operating activities	$ 670,608

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
STATEMENT OF FIDUCIARY NET POSITION
FIDUCIARY FUNDS
SEPTEMBER 30, 2016

	Private Purpose Trust – Available School	Agency Fund
ASSETS		
Cash and investments	$ 39	$ 17,079,132
Accounts receivable	-	1,554,469
Total assets	39	$ 18,633,601
LIABILITIES		
Due to others	-	$ 18,633,601
Total liabilities	-	$ 18,633,601
NET POSITION		
Held in trust for benefits and other purposes	39	
Total net position	$ 39	

The Notes to the Basic Financial Statements are an integral part of these statements.

WILLIAMSON COUNTY, TEXAS
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FIDUCIARY FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	Private Purpose Trust – Available School
ADDITIONS	
Investment earnings	$ -
DEDUCTIONS	
Apportionment to schools	-
CHANGE IN NET POSITION	-
NET POSITION, beginning of year	39
NET POSITION, end of year	$ 39

The Notes to the Basic Financial Statements
are an integral part of these statements.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Williamson County, Texas (the County) uses a commission form of government under the laws and statutes of the constitution of the State of Texas. The County provides various services to advance the welfare, health, morals, comfort, safety, and convenience of the County and its inhabitants. A summary of the significant accounting policies consistently applied in the preparation of the accompanying financial statements follows:

Financial Reporting Entity

The Governmental Accounting Standards Board (GASB) has issued Statement No. 14, *The Financial Reporting Entity* and Statement No. 61, *The Financial Reporting Entity: Omnibus*, which established standards for defining and reporting on the financial reporting entity. The discussion that follows includes not only the minimum guidelines for an entity's inclusion in the County's financial statements, but also the reasons that certain entities were excluded from the statements.

The definition of the reporting entity is based primarily on the notion of financial accountability. The elected officials governing Williamson County are accountable to their constituents for their public policy decisions, regardless of whether those decisions are carried out directly through the operations of the County or by their appointees through the operations of a separate entity. Therefore, the County is not only financially accountable for the organizations that make up its legal entity, it is also financially accountable for legally separate organizations if its officials appoint a voting majority of an organization's governing body and either it is able to impose its will on that organization or there is a potential for the organization to provide specific financial benefits to, or to impose specific financial burdens on the County.

Depending upon the significance of the County's financial and operational relationships with various separate entities, the organizations are classified as blended or discretely presented component units, related organizations, joint ventures, or jointly governed organizations, and the financial disclosure is treated accordingly.

Related Organizations – Where the Williamson County Commissioners' Court (Commissioners' Court) is responsible for appointing a majority of the Members of a board of another organization, but the County's accountability does not extend beyond making such appointments, disclosure is made in the form of the relation between the County and such organization.

Blended Component Units

Avery Ranch Road District *(*the District*)* was formed by the Commissioners' Court in accordance with the Texas Government Code in February of 2001. The District issues unlimited tax bonds for the purpose of developing roads within the District. The bonds constitute direct obligations of the Avery Ranch Road District payable from ad valorem taxes levied upon all taxable property located within the District. Avery Ranch District is considered to be a blended component unit due to the component unit's governing body being made up of Commissioner Court members and management of the primary government has operational responsibility for the component unit.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES – CONTINUED

Financial Reporting Entity – Continued

Blended Component Units – Continued

Pearson Place Road District (the Pearson District) was formed by the Commissioner's Court in accordance with the Texas Government Code in July of 2010. The Pearson District issues unlimited tax bonds for the purpose of developing roads within the District. The bonds constitute direct obligations of the Pearson Place Road District payable from ad valorem taxes levied upon all taxable property located with the Pearson District. Pearson Place Road District is considered to be a blended component unit due to the component unit's governing body being made up of Commissioner Court members and management of the primary government has operations responsibility for the component unit.

Williamson County Conservation Foundation is a nonprofit corporation formed under the laws of the Texas Nonprofit Corporation Act. It was formed by the Commissioners' Court in December of 2002, as a pro-active approach to providing for conservation and the recovery of endangered species in the Williamson County area. The Foundation is governed by a Board appointed by the Commissioners' Court, of which, two members are County Commissioners, and, therefore, the Foundation's board is substantively the same as the county's board. Additionally, there is a financial burden relationship between the primary government and the component unit. Finally, the appointed Board may also be removed by the Commissioners' Court and management of the primary government has operational responsibility for the component unit.

Complete financial statements for each of the individual component units may be obtained at the Williamson County Auditor's office.

Based upon the foregoing criteria, the following entities are not included in the accompanying financial statements: the Williamson County and Cities Health District and the Williamson County Crisis Center.

Government-wide and Fund Financial Statements

The government-wide financial statements (i.e., the statement of net position and the statement of activities) report information on all of the nonfiduciary activities of the government. For the most part, the effect of interfund activity has been removed from these statements. Governmental activities are normally supported by taxes and intergovernmental revenue.

The statement of activities demonstrates the degree to which the direct expenses of a given function or segment are offset by program revenue. Direct expenses are those that are clearly identifiable with a specific function or segment. Program revenue includes 1) charges to customers or applicants who purchase, use, or directly benefit from goods, services, or privileges provided by a given function or segment, and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not properly included among program revenue are reported instead as general revenues.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES – CONTINUED

Measurement Focus, Basis of Accounting and Financial Statement Presentation

Separate financial statements are provided for governmental funds, proprietary funds and fiduciary funds, even though the latter are excluded from the government-wide financial statements. Major individual governmental funds are reported as separate columns in the fund financial statements.

The government-wide financial statements are reported using the economic resources measurement focus and the accrual basis of accounting, as are the proprietary fund financial statements. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Property taxes are recognized as revenue in the year for which they are levied. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the County considers revenue to be available if collected within 60 days of the end of the current fiscal period. Expenditures generally are recorded when a liability is incurred, as under accrual accounting. However, debt service expenditures, as well as expenditures related to compensated absences and claims and judgments, are recorded only when payment is due.

Property taxes and interest associated with the current fiscal period are all considered to be susceptible to accrual and so have been recognized as revenue of the current fiscal period. All other revenue items are considered to be measurable and available only when cash is received by the County.

The County reports the following major governmental funds:

The ***General Fund*** is the County's primary operating fund. It accounts for all financial resources of the general government, except those required to be accounted for in another fund.

The ***Special Road and Bridge Fund*** is a special revenue fund used to account for revenue derived from ad valorem taxes, vehicle registration fees, and rebates from the State of Texas. Expenditures are legally restricted for maintenance and construction of County roads and bridges.

The ***Debt Service Fund*** is used to account for the accumulation of resources for, and payment of, general long-term debt principal, interest, and related costs.

The ***Capital Projects Fund*** is used to account for the acquisition of capital assets or construction of major capital projects.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES – CONTINUED

Measurement Focus, Basis of Accounting and Financial Statement Presentation – Continued

The ***Pass-Through Funding Program*** is a Special Revenue Fund used to account for reimbursements from the Texas Department of Transportation (TxDOT) related to the Pass-Through Road Financing Program. The pass-through program allows the County to manage the improvements of state highways. Reimbursements from TxDOT are based on a per vehicle usage after completion of these projects. The monies will be used for the payment of the debt related to these projects. Any funds remaining after all debt has been retired will be used for road projects.

Additionally, the County reports the following fund types:

Internal Service Funds account for the Benefits Program and Fleet Maintenance services provided to other departments or agencies of the government, or to other governments, on a cost reimbursement basis.

The ***Private-Purpose Trust Fund*** is used to account for investments, interest, rents, and royalties for the benefit of various school districts in the County. The revenues are distributed to the various school districts.

Agency Funds are used to account for assets held by the County on behalf of individuals and other governments. Examples include taxes, fines, bonds, and restitution. Agency Funds are custodial in nature and do not include measurements of results of operations.

As a general rule, the effect of interfund activity has been eliminated from the government-wide financial statements with the exception of interfund services provided and used.

Amounts reported as program revenues include: 1) charges to customers or applicants for goods, services, or privileges provided, 2) operating grants and contributions, and 3) capital grants and contributions. Internally dedicated resources are reported as general revenues rather than as program revenues. Likewise, general revenue includes all taxes. Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the County's internal service funds are charges to customers for services. Operating expenses for the internal service funds include the cost of services, administrative expenses, and depreciation on capital assets. All revenue and expenses not meeting this definition are reported as nonoperating revenue and expenses.

NOTE 2. DETAILED RECONCILIATION OF GOVERNMENT-WIDE AND FUND FINANCIAL STATEMENTS

Explanation of Certain Differences between the Governmental Fund Balance Sheet and the Government-wide Statement of Net Position

The governmental fund balance sheet includes the reconciliation between total fund balances – governmental funds and net position of governmental activities as reported in the government-wide statement of net position. One element of that reconciliation explains, "long-term liabilities are not due and payable in the current period and therefore are not reported in the funds." The details of this ($1,036,651,841) difference are as follows:

Bonds payable	$	(945,654,942)
Bond issuance discount		843,174
Bond issuance premium		(78,328,812)
Accumulated accretion on capital appreciation bonds		(8,475,650)
Compensated absences		(5,034,611)
Net adjustment to reduce fund balance - governmental funds to arrive at net position of governmental activities	$	(1,036,650,841)

Explanation of Certain Differences between the Governmental Fund Statement of Revenues, Expenditures, and Changes in Fund Balance and the Government-wide Statement of Activities

The governmental fund statement of revenues, expenditures, and changes in fund balances includes a reconciliation between net change in fund balances – total governmental funds and change in Net Position of governmental activities as reported in the government-wide statement of activities. One element of that reconciliation explains, "Governmental funds report outlays for capital assets as expenditures. However, in the statement of activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense." The details of this $8,195,071 difference are as follows:

Capital outlay	$	35,781,395
Depreciation expense		(27,586,324)
Net adjustment to increase net change in fund balances - total governmental funds to arrive at change in net position of governmental activities	$	8,195,071

NOTE 2. DETAILED RECONCILIATION OF GOVERNMENT-WIDE AND FUND FINANCIAL STATEMENTS – CONTINUED

Explanation of Certain Differences between the Governmental Fund Statement of Revenues, Expenditures, and Changes in Fund Balance and the Government-wide Statement of Activities – Continued

Another element of that reconciliation states, "Revenues in the statement of activities that do not provide current financial resources are not reported as revenues in the funds." The details of this ($2,209,239) difference are as follows:

Property taxes	$	(87,895)
Adjudicated fines		11,849
Emergency medical services		(931,799)
Investment in capital lease		(48,179)
Animal shelter fees		9,065
Intergovernmental reimbursements		(1,162,280)
Net adjustment to decrease net change in fund balances - total governmental funds to arrive at changes in net position of governmental activities	$	(2,209,239)

Another element of the reconciliation states, "The issuance of long-term debt provides current financial resources to governmental funds, while the repayment of the principal of long-term debt consumes the current financial resources of governmental funds. Neither transaction, however, has any effect on Net Position. Also governmental funds report the effect of issuance costs, premiums, discounts, and similar items when debt is first issued, whereas these amounts are deferred and amortized in the statement of activities." The details of this $25,035,121 difference are as follows:

Issuance of bonds	$	(80,715,000)
Discount on bond issuance		36,478
Premium on bond issuance		(11,075,993)
Deferred loss on refunding		5,519,636
Principal payments on tax notes and bonds		111,270,000
Net adjustment to increase net change in fund balances - total governmental funds to arrive at changes in net position of governmental activities	$	25,035,121

NOTE 2. DETAILED RECONCILIATION OF GOVERNMENT-WIDE AND FUND FINANCIAL STATEMENTS – CONTINUED

Explanation of Certain Differences between the Governmental Fund Statement of Revenues, Expenditures and Changes in Fund Balance and the Government-wide Statement of Activities – Continued

Another element of the reconciliation states, "Some expenses reported in the statement of activities do not require the use of current financial resources and therefore are not reported as expenditures in governmental funds." The details of this ($1,121,256) difference are as follows:

Amortization of bond issuance discount	$	(177,803)
Amortization of bond issuance premium		6,179,286
Amortization of loss on refunding bonds		(5,297,999)
Accretion of capital appreciation bonds		(371,638)
Decrease in compensated absences		494,300
Decrease in accrued interest payable		677,572
Increase in net OPEB obligation		(2,624,974)
Net adjustment to decrease net change in fund balances - total governmental funds to arrive at changes in net position of governmental activities	$	(1,121,256)

NOTE 3. ASSETS, LIABILITIES AND NET POSITION OR FUND BALANCE

Cash and Investments

The County pools cash resources of some funds and invests these funds jointly. Each fund owns a pro rata share of the cash and investments. The County is entitled to invest in obligations of the United States, the State of Texas, and certificates of deposit of state or national banks or savings and loan associations within the State. All investments are stated at fair market value.

Investment earnings are allocated to the respective funds based on the cash balances outstanding at the end of each month.

The County's cash and cash equivalents are considered to be cash on hand, demand deposits, and short-term investments with original maturities of three months or less from the date of acquisition.

Receivables and Payables

Activity between funds that are representative of lending/borrowing arrangements outstanding at the end of the fiscal year are referred to as either "due to/from other funds" (i.e., the current portion of interfund loans) or "advances to/from other funds" (i.e., the noncurrent portion of interfund loans). All other outstanding balances between funds are reported as "due to/from other funds."

NOTE 3. ASSETS, LIABILITIES AND NET POSITION OR FUND BALANCE – CONTINUED

Receivables and Payables – Continued

Advances between funds, as reported in the fund financial statements, are offset by a fund balance reserve account in applicable governmental funds to indicate that they are not available for appropriation and are not expendable available financial resources.

All trade and property tax receivables are shown net of an allowance for uncollectible amounts. Trade accounts receivable in excess of 60 days comprise the trade accounts receivable allowance for uncollectible amounts.

Ad valorem property taxes attach as enforceable liens as of January 1. Taxes are levied prior to September 30, payable on October 1, and are delinquent on February 1. The majority of the County's property tax collections occur during December and early January each year. To the extent that County property tax revenue result in current receivables as defined by the GASB they are recognized when levied.

Inventories and Prepaid Items

All inventories are valued at cost using the first-in/first-out (FIFO) method.

Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaid items in both government-wide and fund financial statements.

Deferred Contributions

Deferred contributions include the construction costs primarily of roads within the County that will be contributed upon completion to another governmental entity. Upon completion of the project, these assets will be transferred to another governmental entity and expensed in the statement of activities.

Capital Assets

Capital assets, which include property, plant, equipment and infrastructure assets (e.g. roads, bridges, sidewalks and similar items) and intangible assets (i.e., mitigation credits) are reported in the governmental activities column in the government-wide financial statements. The County defines capital assets as assets with an initial, individual cost of more than $5,000 (amount not rounded) and an estimated useful life in excess of one year. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at estimated acquisition value at the date of donation.

Intangible assets were modified to comply with GASB Statement No. 51. Intangible assets are not physical in nature, do not have monetary form, and are identifiable. Intangible assets include mitigation credits, unregistered trademarks, easements, and software (acquired or internally developed). Like capital assets, the County defines intangible assets with an initial cost of more than $5,000 and an estimated useful life in excess of one year.

Intangible assets with definite estimated useful lives from 2 to 60 years are amortized using the straight-line method.

NOTE 3. ASSETS, LIABILITIES AND NET POSITION OR FUND BALANCE – CONTINUED

Capital Assets – Continued

The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend assets' lives are not capitalized. Major outlays for capital assets and improvements are capitalized as projects are constructed.

Property, plant, and equipment are depreciated using the straight-line method over the following estimated useful lives:

Assets	Years
Buildings and improvements	25 - 40
Vehicles	3 - 14
Machinery and equipment	5 - 15
Infrastructure	5 - 50
Improvements other than buildings	10 - 40

Federal and State Grants

Revenue from federal and state grants is recognized on the basis of actual expenditures incurred, limited to the amount of the total grant award. Shared revenue is recognized based on the fiscal period to which the entitlements received apply.

Compensated Absences

The Williamson County Personnel Policy provides employees with vacation leave and nonvesting accumulating rights to sick pay benefits. The policy allows all employees to accumulate a range of 80 to 160 hours of vacation per year. Employees are allowed to carry their vacation balance forward to the next fiscal year in an amount not to exceed 80 to 160 hours, respectively. Employees may also accrue up to 240 hours of compensatory time. Additionally, holiday time is accrued up to a maximum of 200 hours. Unused compensatory time and vacation leave time is paid upon termination. Governmental fund liability and expenditures are not recognized until they come due for payment.

Long-Term Obligations

In the government-wide financial statements and proprietary fund types in the fund financial statements, long-term debt and other long-term obligations are reported as liabilities. Bond premiums and discounts, as well as issuance costs, are deferred and amortized over the life of the bonds. Bonds payable are reported net of the applicable bond premium or discount. Bond issuance costs are reported as deferred charges and amortized over the term of the related debt.

In the fund financial statements, governmental fund types recognize bond premiums and discounts, as well as bond issuance costs during the current period. The face amount of debt issued is reported as other financing sources. Premiums received on debt issuances are reported as other financing sources while discounts on debt issuances are reported as other financing uses. Issuance costs, whether or not withheld from the actual debt proceeds received, are reported as debt service expenditures.

NOTE 3. ASSETS, LIABILITIES AND NET POSITION OR FUND BALANCE – CONTINUED

Fund Balances and Net Position

Government-wide Financial Statements

Net Position on the Statement of Net Position includes the following categories:

Net investment in capital assets – the component of net position that reports the difference between capital assets less both the accumulated depreciation and the outstanding balance of debt, net of premiums and discounts, excluding unspent proceeds, that are directly attributable to the acquisition, construction or improvement of these capital assets.

Restricted – net position are reported as restricted when there are limitations imposed on their use either through the enabling legislation adopted by the County or through external restrictions imposed by creditors, grantors, or laws or regulations of other governments.

Unrestricted – the difference between the assets and liabilities that is not reported in any of the classifications above.

Governmental Fund Financial Statements

The County has adopted the provisions of GASB Statement No. 54, *Fund Balance Reporting and Government Fund Type Definitions* (GASB 54). The objective of the statement is to enhance the usefulness of fund balance information by providing clearer fund balance classifications that can be more consistently applied and by clarifying the existing government fund type definitions. The statement establishes fund balance classifications that comprise a hierarchy based primarily on the extent to which a government is bound to observe constraints imposed upon the use of the resources reported in governmental funds. Fund balance classifications, under GASB 54 are nonspendable, restricted, committed, assigned, and unassigned. These classifications reflect not only the nature of funds, but also provide clarity to the level of restriction placed upon fund balance. Fund balance can have different levels of constraint, such as external versus internal compliance requirements. Unassigned fund balance is a residual classification within the General Fund. The General Fund should be the only fund that reports a positive unassigned balance. In all other funds, unassigned is limited to negative residual fund balance.

NOTE 3. ASSETS, LIABILITIES AND NET POSITION OR FUND BALANCE – CONTINUED

Fund Balances and Net Position

Governmental Fund Financial Statements – Continued

In accordance with GASB 54, the County classifies governmental fund balances as follows:

Nonspendable – includes amounts that cannot be spent because they are either not in spendable form, or, for legal or contractual reasons, must be kept intact.

Restricted – includes fund balance amounts that are constrained for specific purposes, which are externally imposed by providers, such as creditors, or amount restricted due to constitutional provisions or enabling legislation.

Committed – includes fund balance amounts that are constrained for specific purposes that are internally imposed by the County through formal action of the highest level of decision-making authority. Committed fund balance is reported pursuant to resolution passed by the County Commissioners Court.

Unassigned – includes residual positive fund balance within the General Fund, which has not been classified within the other above-mentioned categories. Unassigned fund balance may also include negative balances for any governmental fund if expenditures exceed amounts restricted, committed, or assigned for those specific purposes.

When both restricted and unrestricted resources are available for use, it is the County's policy to use restricted resources first, then unrestricted resources as they are needed. Furthermore, committed fund balances are reduced first, followed by assigned amounts and then unassigned amounts where expenditures are incurred for purposes for which amounts in any of those unrestricted fund balance classifications can be used.

The County has established a minimum fund balance policy whereby the County’s unassigned general fund balance will be maintained at levels sufficient to protect the County’s creditworthiness as well as its financial position from unforeseeable emergencies. The County will strive to maintain the unassigned general fund balance at a minimum level of 35% of total general fund budgeted expenditures.

NOTE 3. ASSETS, LIABILITIES AND NET POSITION OR FUND BALANCE – CONTINUED

Fund Balances and Net Position – Continued

Governmental Fund Financial Statements – Continued

A summary of the nature and purpose of fund balances at September 30, 2016, is as follows:

	General	Special Road and Bridge	Debt Service	Capital Projects	Pass-through Funding Program	Other Governmental	Total Governmental Funds
Fund balances							
Nonspendable							
Inventory	$ -	$ 530,865	$ -	$ -	$ -	$ -	$ 530,865
Prepaid items	33,028	-	-	-	-	3,199	36,227
Long-term receivables	-	-	-	-	103,798,198	-	103,798,198
Investment in capital lease	824,716	-	-	-	-	-	824,716
Total nonspendable	857,744	530,865	-	-	103,798,198	3,199	105,190,006
Restricted for							
Construction and maintenance of roads and bridges	-	18,995,161	-	-	28,384,398	-	47,379,559
Payment of general long-term debt principal, interest and related costs	-	-	6,224,123	-	-	596,924	6,821,047
Acquisition of capital assets	-	-	-	254,449,965	-	5,263,200	259,713,165
Court mediations	-	-	-	-	-	293,276	293,276
Third Court of Appeals	-	-	-	-	-	320	320
Child safety, health or nutrition	-	-	-	-	-	681,904	681,904
The conservation of endangered species	-	-	-	-	-	1,456,037	1,456,037
Technological enhancements	-	-	-	-	-	536,194	536,194
The County Attorney's office	-	-	-	-	-	10,023	10,023
The County jail	-	-	-	-	-	1,766,013	1,766,013
The Radio communication system	-	-	-	-	-	24,981	24,981
Drug cases, drug education or equipment for law enforcement	-	-	-	-	-	1,008,970	1,008,970
Maintenance, digitalization and preservation of County and court records	-	-	-	-	-	5,528,124	5,528,124
Court reporter	-	-	-	-	-	1,159,101	1,159,101
Teen Court Program	-	-	-	-	-	1,113	1,113
Courthouse and Justice of the Peace security	-	-	-	-	-	318,459	318,459
Welfare fraud	-	-	-	-	-	1,339	1,339
The specialty court	-	-	-	-	-	108,683	108,683
Voting and election services	-	-	-	-	-	849,156	849,156
Juvenile and guardianship programs	-	-	-	-	-	764,107	764,107
Law library	-	-	-	-	-	323,189	323,189
Medical services	-	-	-	-	-	3,823,257	3,823,257
Training	-	-	-	-	-	47,112	47,112
Regional Animal Shelter	-	-	-	-	-	677,264	677,264
The City of Hutto and Hutto ISD	-	-	-	-	-	388,228	388,228
Recreational facilities	-	-	-	-	-	350,153	350,153
Historical commission	-	-	-	-	-	6,972	6,972
Williamson County landfill	-	-	-	-	-	1,756,808	1,756,808
Total Restricted	-	18,995,161	6,224,123	254,449,965	28,384,398	27,740,907	335,794,554
Committed to							
Cash reduction plan	3,473,142	-	-	-	-	-	3,473,142
Employee recognition programs	61,025	-	-	-	-	-	61,025
Total committed	3,534,167	-	-	-	-	-	3,534,167
Unassigned	82,585,995	-	-	-	-	-	82,585,995
Total fund balances	$ 86,977,906	$ 19,526,026	$ 6,224,123	$ 254,449,965	$ 132,182,596	$ 27,744,106	$ 527,104,722

NOTE 3. ASSETS, LIABILITIES AND NET POSITION OR FUND BALANCE – CONTINUED

Pensions

The County has adopted accounting policy in response to GASB Statement No. 68, *Accounting and financial Reporting for Pensions, An Amendment of GASB Statement No. 27* (GASB 68). For purposes of measuring the net pension liability, pension related deferred outflows and inflows of resources, and pension expense, the County specific information about its Fiduciary Net Positon in the Texas County and District Retirement System (TCDRS) and additions to/deductions from the County's Fiduciary Net Position have been determined on the same basis as they are reported by TCDRS. For this purpose, plan contributions are recognized in the period that compensation is reported for the employee, which is when contributions are legally due. Benefit payments and refunds are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value. Information regarding the County's Total Pension Liability is obtained from TCDRS through a report prepared for the County by TCDRS consulting actuary, Milliman, in compliance with GASB 68.

Deferred Outflows/Inflows of Resources

In addition to assets, the statement of financial position and/or balance sheet will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/expenditure) until then. The County has the following items that qualify for reporting in this category.

- Deferred charges on refundings – A deferred charge on refunding results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt.
- Pension contributions after measurement date – These contributions are deferred and recognized in the following fiscal year.
- Difference in projected and actual earnings on pension assets – This difference is deferred and amortized over a closed five-year period.

In addition to liabilities, the statement of financial position and/or balance sheet will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. The County has only one type of item that qualifies for reporting in this category. The difference in expected and actual pension experience is deferred and recognized over the estimated average remaining lives of all members determined as of the measurement date.

Use of Estimates

The preparation of financial statements, in conformity with generally accepted accounting principles, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual amounts could differ from those estimates.

NOTE 4. STEWARDSHIP, COMPLIANCE AND ACCOUNTABILITY

Budgetary Information

In accordance with the Local Government Budget and Fiscal Control Act, the County follows these procedures in establishing the budgetary data reflected in the financial report:

1) The Budget Officer submits to the County Commissioners a proposed operating budget for the fiscal year commencing the following October. The operational budget includes proposed expenditures and the means of financing them.

2) Public hearings are conducted to obtain taxpayer comments.

3) The budget is legally enacted through passage of an ordinance by September 30 each year.

The County Commissioners may amend the budget ordinance at any time after its adoption so long as the amended ordinance continues to meet the requirements of "Local Government Budget and Fiscal Control Act". During the year, several supplementary appropriations to the original budget were necessary. The County's legally adopted budget is at the function level. For internal management purposes, the budgets are detailed by line item and entered into the accounting records. Comparisons of actual expenditures or expenses to budget are made on an ongoing basis. Budgets of the General, Special Revenue, and Debt Service are prepared on an annual basis. Formal budgetary integration is not employed for Capital Projects Funds because budgetary control is achieved through legally binding construction contracts.

Budgets are adopted on a basis consistent with generally accepted accounting principles. Annual appropriated budgets are adopted for the General, Special Revenue (except as noted in the following paragraph), and Debt Service Funds. All annual appropriations lapse at fiscal year-end.

Annually appropriated budgets are not adopted for all Special Revenue Funds. The Appellate Judicial System, Child Abuse Prevention, Child Safety, County and District Court Technology, County Sheriff, Court Records Preservation, Grants, Juvenile Delinquency Prevention, Pass-through Funding Program, Record Technology, WM-City of and Hutto ISD, WM-Community Recreation Facility, WM-Future Environmental Liability, and WM-Master Site Development do not have legally adopted budgets. Accordingly, budget and actual comparisons do not include these funds.

Deficit Unrestricted Net Position

A deficit unrestricted net position of approximately $288,000,000 exists in governmental activities as of September 30, 2016. This deficit is primarily the result of the County issuing bonds to finance the construction of infrastructure contributed to other governmental entities. As of September 30, 2016, the amount of bonds outstanding that were used to finance construction of assets transferred to another governmental entity was approximately $825,000,000. These bonds will be paid with future property tax revenues restricted for debt service.

NOTE 5. DEPOSITS AND INVESTMENTS

The Public Funds Investment Act (Government Code Chapter 2256) contains specific provisions in the areas of investment practices, management reports, and establishment of appropriate policies. Among other things, it requires the County to adopt, implement, and publicize an investment policy. That policy must address the following areas: (1) safety of principal and liquidity, (2) portfolio diversification, (3) allowable investments, (4) acceptable risk levels, (5) expected rates of return, (6) maximum allowable stated maturity of portfolio investments, (7) maximum average dollar-weighted maturity allowed based on the stated maturity date for the portfolio, (8) investment staff quality and capabilities, and (9) bid solicitation preferences for certificates of deposit. Statutes authorize the County to invest in (1) obligations of the U.S. Treasury, certain U.S. agencies, and the State of Texas; (2) certificates of deposit, (3) certain municipal securities, (4) money market savings accounts, (5) repurchase agreements, (6) bankers acceptances, (7) Mutual Funds, (8) investment pools, (9) guaranteed investment contracts, and (10) common trust test procedures related to investment practices as provided by the Act. The County is in substantial compliance with the requirements of the Act and with local policies.

The County's investment pools are 2a7-like pools. A 2a7-like pool is one which is not registered with the Securities and Exchange Commission (SEC) as an investment company, but nevertheless has a policy that it will, and does, operate in a manner consistent with the SEC's Rule 2a7 of the Investment Company Act of 1940. The County’s investments in these pools is the same as the value of the pool shares, which are valued based on quoted market rates.

The County invests in Texas Local Government Investment Pool (TexPool), which was created under the Interlocal Cooperation Act, Texas Government Code Ann. Chapter 791, and the Texas Public Funds Investment Act. The Texas Treasury Safekeeping Trust Company (the Trust) is trustee of TexPool and is a limited purpose trust company authorized pursuant to Texas Government Code Ann. Section 404.103 for which the Texas State Comptroller is sole officer, director, and shareholder. The advisory board of TexPool is composed of members appointed pursuant to the requirements of the Texas Public Funds Investment Act.

The County also invests in Texas Short Term Asset Reserve Program (TexSTAR) which has been organized in conformity with the Texas Government Code, and the Public Funds Investment Act. J.P. Morgan Investment Management, Inc. (JPMIM) or the (investment manager) and First Southwest Asset Management, Inc. (FSAM) serve as co-administrators for TEXSTAR. JPMIM provides investment management services, and FSAM provides participant services and marketing. Custodial, transfer agency, fund accounting, and depository services are provided by JPMorgan Chase Bank, N.A., and/or its subsidiary J.P. Morgan Investor Services Co. The 12-member board of directors for TexSTAR is comprised of individuals from participating government entities in the pool. Additionally, in September 2005, TexSTAR and LOGIC merged. A separate board for each pool holds legal title to all money, investments, and assets and has the authority to employ personnel, contract for services, and engage in other administrative activities necessary or convenient to accomplish the objectives of TexSTAR and LOGIC. The business and affairs of TexSTAR and LOGIC are managed by their Boards in accordance with their bylaws. The Bylaws set forth procedures governing the selection of, and action taken by, the Board. Board oversight of TexSTAR and LOGIC is maintained through daily, weekly, and monthly reporting requirements.

The County categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. GASB Statement No. 72, *Fair Value Measurement and Application* provides a framework for measuring fair value which establishes a three-level fair value hierarchy that describes the inputs that are used to measure assets and liabilities.

NOTE 5. DEPOSITS AND INVESTMENTS – CONTINUED

- Level 1 inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets that a government can access at the measurement date.
- Level 2 inputs are inputs – other than quoted prices included within Level 1- that are observable for an asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs for an asset or liability.

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3 inputs. If a price for an identical asset or liability is not observable, a government should measure fair value using another valuation technique that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs. If the fair value of an asset or a liability is measured using inputs from more than one level of the fair value hierarchy, the measurement is considered to be based on the lowest priority level input that is significant to the entire measurement.

The County has recurring fair value measurements as presented in the table below. The County's investment balances and weighted average maturity of such investments are as follows:

Investment Type	September 30, 2016	Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Observable Inputs (Level 3)	Weighted Average Maturity (Days)
Investments not subject to Fair Value (amortized cost)					
TexPool	$ 14,273,931	$ -	$ -	$ -	45
TexPool Prime	48,384,137	-	-	-	65
TexStar	4,238,962	-	-	-	36
LOGIC	92,054,010	-	-	-	78
CD Investments	-	723,761	-	-	691
Investments by Fair Value Level					
U.S. Equity Securities	-	3,033,328	-	-	138
U.S. Agency Securities	-	131,755,122	-	-	314
U.S. Treasury Bonds	-	19,018,974	-	-	90
Dallas Waterworks					
Commercial Paper	-	-	4,990,500	-	731
Kaiser Foundation Hospital Paper	-	-	39,046,942	-	66
Toyota Mtr Commercial Paper	-	42,869,551	-	-	91
JP Morgan Commercial Paper	-	44,833,650	-	-	215
Total	$ 158,951,040	$ 242,234,386	$ 44,037,442	$ -	

Interest Rate Risk. In accordance with its investment policy, the County manages its exposure to declines in fair market values by limiting the average dollar-weighted maturity of its portfolio to a maximum of 365 days.

NOTE 5. DEPOSITS AND INVESTMENTS – CONTINUED

Custodial Credit Risk. In the case of deposits, this is the risk that in the event of a bank failure, the County's deposits may not be returned to it. State statutes require that all deposits in financial institutions be fully collateralized by U. S. Government Obligations or its agencies and instrumentalities or direct obligations of Texas or its agencies and instrumentalities that have a fair value of not less than the principal amount of deposits. As of September 30, 2016, the County's balances on deposit with financial institutions were collateralized with securities held by the pledging financial institution in the County's name or FDIC insurance. At September 30, 2016, the carrying amount of the County's demand deposits was $20,352,135 and the bank balance was $23,312,568.

Credit Risk. It is the County's policy, as defined in the Texas Public Funds Investment Act, to limit its investments to investment types with an investment quality rating not less than A or its equivalent by a nationally recognized statistical rating organization. The money market and CD investments are not rated.

The remainder of the County's investments are rated as follows:

Investment Type	Rating	Rating Agency
TexPool	AAAm	Standard & Poor's
TexPool Prime	AAAm	Standard & Poor's
TexStar	AAAm	Standard & Poor's
LOGIC	AAAm	Standard & Poor's
U.S. Agency Securities	AA+	Standard & Poor's
Kaiser Foundation Hospital Paper	A-1+	Standard & Poor's
Toyota Mtr Commercial Paper	AA+	Standard & Poor's
JP Morgan Commercial Paper	AA+	Standard & Poor's
Dallas Waterwork Commercial Paper	AAA	Standard & Poor's

NOTE 6. RECEIVABLES AND UNEARNED REVENUE

Receivables as of year-end for the County's individual major funds and nonmajor funds in the aggregate, including the applicable allowances for uncollectible accounts, are as follows:

	Governmental Funds						
	General	Special Road and Bridge	Debt Service	Capital Projects	Pass-through Funding Program	Other Governmental Funds	Total
Receivables							
Property taxes	$ 1,557,035	$ 207,778	$ 929,466	$ -	$ -	$ 2,918	$ 2,697,197
Adjudicated fines	3,001,106	-	-	-	-	-	3,001,106
Emergency medical services	4,075,222	-	-	-	-	-	4,075,222
Intergovernmental	216,461	9,333	-	1,918,614	103,798,198	2,536,731	108,479,337
Interest	112,635		-	138,872	-	-	251,507
Other	1,032,619	230,608	-	-	-	720,936	1,984,163
Gross receivables	9,995,078	447,719	929,466	2,057,486	103,798,198	3,260,585	120,488,532
Less: allowance for uncollectibles	3,691,543	-	-	-	-	-	3,691,543
Net total receivables	$ 6,303,535	$ 447,719	$ 929,466	$ 2,057,486	$ 103,798,198	$ 3,260,585	$ 116,796,989

NOTE 6. RECEIVABLES AND UNEARNED REVENUE – CONTINUED

Governmental funds report deferred revenue in connection with receivables for revenue that is not considered to be available to liquidate liabilities of the current period, which will be reported as the deferred inflow of resources in the government funds. Governmental funds also record unearned revenues in connection with resources that have been received, but not yet earned. At the end of the current fiscal year, the various components of deferred revenue and unearned revenue reported in the governmental funds were as follows:

	Unavailable	Unearned
General fund		
Delinquent property taxes receivable	$ 1,503,908	$ -
Adjudicated fines	956,480	-
Emergency medical services	970,016	-
Investment in capital lease	824,716	-
Other	-	241,437
Total general fund	4,255,120	241,437
Special road and bridge		
Delinquent property taxes receivable	199,867	-
Other	-	12,876
Total special road and bridge	199,867	12,876
Debt service fund		
Delinquent property taxes receivable	896,467	-
Total debt service fund	896,467	-
Capital projects fund		
Intergovernmental	1,402,232	-
Total capital projects fund	1,402,232	-
Other governmental funds		
Delinquent property taxes receivable	2,827	-
Animal shelter fees	177,705	-
Other	-	1,175,501
Total other governmental funds	180,532	1,175,501
Total governmental funds	$ 6,934,218	$ 1,429,814

NOTE 7. CAPITAL ASSETS

Capital asset activity for the year ended September 30, 2016, was as follows:

	Beginning Balance	Additions/ Transfers to	Disposals/ Transfers from	Ending Balance
Governmental activities				
Capital assets, not being depreciated				
Land	$ 208,396,978	$ 36,098,536	$ (5,925,580)	$ 238,569,934
Intangibles	6,303,012	-	(262,200)	6,040,812
Construction in progress	16,579,244	17,191,737	-	33,770,981
Total assets not being depreciated	231,279,234	53,290,273	(6,187,780)	278,381,727
Capital assets, being depreciated				
Buildings and improvements	189,028,782	1,041,465	-	190,070,247
Infrastructure	341,551,199	32,430,258	(7,070,869)	366,910,588
Intangible	11,631,025	614,321	(10,720)	12,234,626
Machinery and equipment	77,288,652	10,212,381	(2,517,181)	84,983,852
Total capital assets being depreciated	619,499,658	44,298,425	(9,598,770)	654,199,313
Less accumulated depreciation				
Buildings and improvements	58,749,643	5,252,155	-	64,001,798
Infrastructure	117,267,936	15,419,043	(2,633,363)	130,053,616
Intangible	6,338,072	1,097,010	(10,720)	7,424,362
Machinery and equipment	40,237,757	5,836,887	(2,284,167)	43,790,477
Total accumulated depreciation	222,593,408	27,605,095	(4,928,250)	245,270,253
Total capital assets being depreciated, net	396,906,250	16,693,330	(4,670,520)	408,929,060
Governmental activities capital assets, net	$ 628,185,484	$ 69,983,603	$ (10,858,300)	$ 687,310,787

NOTE 7. CAPITAL ASSETS – CONTINUED

Depreciation expense was charged to functions/programs of the County as follows:

Governmental activities	
General government	$ 2,279,355
Public safety	6,181,826
Transportation support	16,735,899
Judicial	844,652
Community services	1,544,592
Capital assets held by the County's internal service funds are charged to the various functions based on their usage of the assets	18,771
Total depreciation expense - governmental activities	$ 27,605,095

Construction Commitments

The County has active construction projects as of September 30, 2016. The projects include road construction, parks and park improvements, as well as facilities construction. As of September 30, 2016, the County's commitments with contractors were as follows:

Project	Spent-to-date	Remaining Commitment
Road construction, parks and park improvements, facilities construction	$ 1,206,412,220	$ 23,913,006

NOTE 8. INTERFUND RECEIVABLES, PAYABLES, AND TRANSFERS

The composition of interfund transfers for the year ended September 30, 2016 is as follows:

	Transfers In					
	General	Debt Service	Capital Projects	Special Road and Bridge	Other Governmental Funds	Total
Transfers out:						
General fund	$ -	$ 10,000,000	$ 1,092,169	$ -	$ 589,273	$ 11,681,442
Special road and bridge	-	-	17,046	-	-	17,046
Pass-through toll fund	-	1,750,000	-	-	-	1,750,000
Other governmental funds	25,000	-	-		-	25,000
Total transfers out	$ 25,000	$ 11,750,000	$ 1,109,215	$ -	$ 589,273	$ 13,473,488

Transfers are used to: (1) move revenues from the fund required by statute or budget to collect them to the fund required by statute or budget to expend them; and (2) fund the County's match portion for grants.

NOTE 9. INVESTMENT IN LEASES

The County has a 30-year agreement to lease a building to the Children's Advocacy Center. For accounting purposes, the County has classified the lease as a direct financing lease. At September 30, 2016, the future minimum lease payments to be received under the lease are as follows:

Year Ending September 30,	Payment
2017	$ 24,000
2018	24,000
2019	24,000
2020	24,000
2021	24,000
2022-2026	120,000
2027-2031	120,000
2032-2036	120,000
2037-2038	44,000
Total minimum lease payments receivable	524,000
Less: unearned income	(382,558)
Estimated unguaranteed residual value	660,910
Net investment in capital lease	$ 802,352

The County has agreements to lease radio equipment to other governments. For accounting purposes, the County has classified the lease as a direct financing lease. At September 30, 2016, the future minimum lease payments to be received under the lease are as follows:

Year Ending September 30,	Payment
2017	$ 11,430
2018	10,382
2019	4,143
Total minimum lease payments receivable	25,955
Less: unearned income	(3,591)
Net investment in capital lease	$ 22,364

NOTE 10. LONG-TERM LIABILITIES

The following is a summary of the long-term liability transactions of the County, including blended component units, for the year ended September 30, 2016:

	Balance September 30, 2015	Additions	Retirements	Balance September 30, 2016	Amounts Due Within One Year
Governmental activities					
Bonds payable	$ 976,209,942	$ 80,715,000	$ 111,270,000	$ 945,654,942	$ 47,535,000
Accumulated accretion	8,104,012	371,638	-	8,475,650	-
Deferred amounts					
For issuance premium	73,432,105	11,075,993	6,179,286	78,328,812	5,361,161
For issuance discount	(984,499)	(36,478)	(177,803)	(843,174)	(63,056)
Total bonds payable	1,056,761,560	92,126,153	117,271,483	1,031,616,230	52,833,105
Net pension liability	26,234,118	104,426,847	20,502,741	110,158,224	-
Net OPEB obligation	35,244,696	6,491,662	3,866,688	37,869,670	-
Compensated absences	5,528,911	3,857,660	4,351,960	5,034,611	5,034,611
Total governmental activities	$ 1,123,769,285	$ 206,902,322	$ 145,992,872	$ 1,184,678,735	$ 57,867,716

The compensated absences liability will be liquidated primarily by the General Fund and the Special Road and Bridge Fund. The OPEB obligation will be liquidated primarily by the General Fund. The net pension liability will be liquidated primarily by the General Fund.

Per Williamson County policy, sick leave is not paid out upon termination and is not included in the compensated absences calculation. Compensated absences includes accrued vacation, holiday and comp time that will be paid within the following year. It is expected that the entire amount will be expended during the following year.

Approximately $491,000,000 of the County's bonds outstanding as of September 30, 2016 were issued to construct or acquire capital assets for the County. The remainder of the outstanding bonds are used for construction of County infrastructure that is not a County owned asset, and therefore is not capital related, but benefits County citizens.

NOTE 10. LONG-TERM LIABILITIES – CONTINUED

Bonds

Long-term debt of the County consists of various issues of General Obligation Bonds and Certificates of Obligation. General Obligation Bonds require voter approval at a public election before issuance, while Certificates of Obligation are issued upon the vote of the Commissioner's Court. Both types are backed by the full faith and credit of the County. Debt service is primarily paid from ad valorem taxes with the exception of the Pass Through Toll Revenue and Limited Tax Certificates of Obligation which are payable from pass-through toll revenue from TXDOT.

Issue Date	Description	Maturity	Original Amount	Interest Rate / Coupon Date
4/13/2004	Limited Tax Refunding Bonds Series 2004A	2/15/2019	$ 62,110,000	3.0 - 5.25% 2/15, 8/15
4/5/2005	Unlimited Tax Refunding Bonds Series 2005	2/15/2018	83,590,000	5.0 - 5.25% 2/15, 8/15
3/3/2009	Limited Tax Bonds Series 2009	2/15/2023	8,000,000	3.0 - 5.0% 2/15, 8/15
3/3/2009	Pass Through Toll & Limited Tax Series 2009	2/15/2021	89,235,000	3.0 - 5.125% 2/15,8/15
7/14/2010	Pass Through Toll & Limited Tax Series 2010	2/15/2035	33,995,000	3.0 - 5.0 2/15, 8/15
11/18/2010	Limited Tax Refunding Bonds Series 2010	2/15/2026	12,930,000	2.0 - 4.0% 2/15, 8/15
4/12/2011	Unlimited Tax Road Bonds Series 2011	2/15/2036	76,860,000	2.0 - 5.0% 2/15, 8/15
11/30/2011	Limited Tax Refunding Bonds Series 2011	2/15/2025	36,565,000	3.0 - 5.0% 2/15, 8/15
11/30/2011	Pass Through Toll & Limited Tax Series 2011	2/15/2031	10,000,000	2.0 - 4.0% 2/15, 8/15
3/21/2012	Limited Tax Refunding Bonds Series 2012	2/15/2030	140,640,000	4.5 - 5.0% 2/15, 8/15

NOTE 10. LONG-TERM LIABILITIES – CONTINUED

Bonds – Continued

Issue Date	Description	Maturity	Original Amount	Interest Rate / Coupon Date
12/1/2012	Limited Taxable Refunding Bonds Series 2012	2/15/2029	$ 32,895,000	0.55 - 3.0% 2/15, 8/15
4/15/2013	Limited Tax Refunding Bonds Series 2013	2/15/2032	71,750,000	1.0 - 4.0% 2/15,8/15
4/15/2013	Pass Through Revenue & LTD Tax Bonds Series 2013	2/15/2033	14,985,000	1.0 - 4.0% 2/15, 8/15
4/10/2014	Unlimited Tax Road Bonds Series 2014	2/15/2039	91,750,000	2.0 - 5.0% 2/15, 8/15
4/10/2014	Limited Tax Park Bonds Series 2014	8/15/2034	19,530,000	3.0 - 4.0% 2/15, 8/15
10/28/2014	Limited Tax Refunding Bonds Series 2014	2/15/2025	77,345,000	3.06% 2/15, 8/15
4/23/2015	Limited Tax Refunding Bonds Series 2015	2/15/2034	74,295,000	2.0 - 5.0% 2/15, 8/15
4/23/2015	Limited Tax Refunding Bonds, Taxable Series 2015	2/15/2022	29,290,000	.550 - 2.323% 2/15, 8/15
5/28/2015	Unlimited Tax Road Bonds Series 2015	2/15/2040	90,205,000	4.0 -5.0% 2/15, 8/15
5/28/2015	Combination Tax & Revenue Certificates Series 2015	2/15/2040	59,645,000	2.0 -5.0% 2/15, 8/15
10/15/2015	Limited Tax Refunding Bonds Series 2015A	2/15/2026	16,175,000	2.0 – 4.0% 2/15, 8/15
6/1/2016	Limited Tax Park Bonds Series 2016	2/15/2036	18,350,000	2.0 – 5.0% 2/15, 8/15
7/1/2016	Limited Tax Refunding Bonds Series 2016	2/15/2036	37,980,000	1.5 – 5.25% 2/15, 8/15

At September 30, 2016, authorized but unissued general obligation bonds for road improvements totaled $75,000,000.

NOTE 10. LONG-TERM LIABILITIES – CONTINUED

Refunding Bonds (from table) – Continued

In October of 2015, Limited Tax Refunding Bonds, Series 2015A in the amount of $16,175,000 were issued. These bonds were used to currently refund the outstanding Unlimited Tax Refunding Bonds Series 2006 ($15,785,000) and Limited Tax Refunding Bonds, Series 2006A ($1,885,000). As a result, the refunded bonds are considered to be defeased and the liability has been removed from the governmental activities column of the statement of net position. The reacquisition price exceeded the net carrying amount of the old debt by $397,575. This advance refunding was undertaken to decrease total debt service payments over the next 11 years by $3,353,404, and resulted in an economic gain of $2,710,887.

In July of 2016, Limited Tax Refunding Bonds, Series 2016 in the amount of $37,980,000 were issued. These bonds were used to purchase U. S. Government State and Local Government Series Securities that were placed in an irrevocable trust for the purpose of generating resources for all future debt service payments of $39,070,000 of Limited Tax Bonds, Series 2009, Pass-Through Toll Revenue and Limited Tax Bonds, Series 2009 and Series 2010, and Unlimited Tax Road bonds, Series 2011. As a result, the refunded bonds are considered to be defeased and the liability has been removed from the governmental activities column of the statement of net position. The reacquisition price exceeded the net carrying amount of the old debt by $5,064,898. This advance refunding was undertaken to decrease total debt service payments over the next 20 years by $5,681,259, and resulted in an economic gain of $4,257,927.

The irrevocable trust account assets and liabilities for the defeased bonds are not included in the County's financial statements. On September 30, 2016, $119,970,000 of bonds considered defeased are still outstanding.

Blended Component Unit – Avery Ranch Road District #1

Issue Date	Description	Maturity	Original Amount	Interest Rate / Coupon Date
3/21/2012	Unlimited Tax Refunding Bonds Series 2012	9/30/2025	$ 7,475,000	2.0 - 4.0% 2/15, 8/15
5/15/2016	Unlimited Tax Refunding Bonds Series 2016	8/15/2022	2,895,000	2.0% 2/15, 8/15

The bonds listed above were issued by Avery Ranch Road District, a blended component unit of Williamson County. The bonds constitute direct obligations of the Avery Ranch Road District payable from ad valorem taxes levied upon all taxable property located within the Road District.

NOTE 10. LONG-TERM LIABILITIES – CONTINUED

Refunding Bonds (Blended Component Unit – Avery Ranch Road District #1)

Unlimited Tax Refunding Bonds, Series 2016 in the amount of $2,895,000 were issued by the Avery Ranch Road District. These bonds were used to currently refund the outstanding Unlimited Tax Refunding Bonds, Series 2007 ($2,845,000). As a result, the refunded bonds are considered to be defeased and the liability has been removed from the governmental activities column of the statement of net position. The reacquisition price exceeded the net carrying amount of the old debt by $57,163. This advance refunding was undertaken to decrease the total debt service payments over the next five years by $164,660, and resulted in an economic gain of $152,844.

Refunding Bonds (Blended Component Unit)

On September 30, 2015, there were no bonds considered defeased that were still outstanding.

Blended Component Unit – Pearson Place Road District

Issue Date	Description	Maturity	Original Amount	Interest Rate / Coupon Date
8/15/2016	Unlimited Tax Road Bonds Series 2016	8/15/2041	$ 5,315,000	2.0 - 4.0% 2/15, 8/15

The bonds listed above were issued by Pearson Place Road District, a blended component unit of Williamson County. The bonds constitute direct obligations of the Pearson Place Road District payable from ad valorem taxes levied upon all taxable property located within the Road District.

Debt Service Requirement – All Bonds and Tax Anticipation Notes

The debt service requirements to maturity on all bonds and tax anticipation notes are:

Fiscal Year Ending September 30,	Principal	Interest	Total
2017	$ 47,535,000	$ 36,771,265	$ 84,306,265
2018	49,350,000	34,808,688	84,158,688
2019	51,415,000	33,344,757	84,759,757
2020	45,930,000	31,584,673	77,514,673
2021	48,839,986	37,018,372	85,858,358
2022-2026	286,134,956	120,048,932	406,183,888
2027-2031	203,015,000	65,575,597	268,590,597
2032-2036	155,255,000	28,086,509	183,341,509
2037-2041	58,180,000	5,098,150	63,278,150
Total	$ 945,654,942	$ 392,336,943	$ 1,337,991,885

Included in the above principal amounts are accreted interest amounts that have not yet been recognized at September 30, 2016 totaling approximately $10,000,000.

NOTE 11. RETIREMENT PLAN

The County provides retirement, disability, and death benefits for all of its fulltime employees through a nontraditional defined benefit pension plan in the statewide Texas County and District Retirement System (TCDRS). The Board of Trustees of TCDRS is responsible for the administration of the statewide agent multiple-employer public employee retirement system consisting of 586 nontraditional defined benefit pension plans. TCDRS, in the aggregate, issues a comprehensive annual financial report (CAFR) on a calendar year basis. The CAFR is available upon written request from the TCDRS Board of Trustees at P.O. Box 2034, Austin, Texas 78768-2034.

The plan provisions are adopted by the governing body of the employer, within the options available in the Texas state statutes governing TCDRS (TCDRS Act). Members can retire at ages 60 and above with eight or more years of service, with 30 years of service regardless of age, or when the sum of their age and years of service equals 75 or more.

Members are vested after eight years of service, but must leave their accumulated deposits in the plan to receive any employer-financed benefit. Members who withdraw their personal deposits in a lump sum are not entitled to any amounts contributed by their employer.

Benefit amounts are determined by the sum of the employee's contributions to the plan, with interest, and employer-financed monetary credits. The level of these monetary credits is adopted by the governing body of the employer within the actuarial constraints imposed by the TCDRS Act so that the resulting benefits can be expected to be adequately financed by the employer's commitment to contribute. At retirement, death, or disability, the benefit is calculated by converting the sum of the employee's accumulated deposits and the employer financed monetary credits to a monthly annuity using annuity purchase rates prescribed by the TCDRS Act.

Contributions: The County has elected the annually determined contribution rate (variable-rate) plan provisions of the TCDRS Act. The plan is funded by monthly contributions from both employee members and the employer based on the covered payroll of employee members. Under the TCDRS Act, the contribution rate of the employer is actuarially determined annually. The employer contributed using the actuarially determined rate of 12.81% for the months of the accounting year in 2015, and 12.81% for the months of the accounting year in 2016.

The deposit rate payable by the employee members for calendar year 2014 and 2015 is the rate of 7.0% as adopted by the governing body of the employer. The employee contribution rate and the employer contribution rate may be changed by the governing body of the employer within the options available in the TCDRS Act.

NOTE 11. RETIREMENT PLAN – CONTINUED

Actuarial Assumptions

The Total Pension Liability in the December 31, 2015 actuarial valuation was determined using the following actuarial assumptions:

Valuation date	December 31, 2015
Actuarial Cost Method	Entry Age
Asset Valuation Method	
Smoothing period	5 Years
Recognition method	Non-asymptotic
Corridor	None
Inflation	3.00%
Salary Increase	4.90%
Investment Rate of Return	8.10%
Payroll Growth	3.50%
COLA	Annual 60% CPI COLA

Discount Rate

The discount rate used to measure the total pension liability was 8.10%. There was no change in the discount rate since the previous year. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and those of the contributing employers and the non-employer contributing entity are made at the statutorily required rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability. The long-term rate of return on pension plan investments is 8.10%. The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

NOTE 11. RETIREMENT PLAN – CONTINUED

Best estimates of geometric real rates of return for each major asset class included in the Systems target asset allocation as of December 31, 2015 are summarized below:

Asset Class	Target Allocation	Rate of Return
US Equities	14.5%	5.45%
Private Equity	14.0%	8.45%
Global Equities	1.5%	5.75%
International Equities-Developed	10.0%	5.45%
International Equities-Emerging	8.0%	6.45%
Investment-Grade Bonds	3.0%	1.00%
High-Yield Bonds	3.0%	5.10%
Opportunistic Credit	2.0%	5.09%
Direct Lending	5.0%	6.40%
Distressed Debt	3.0%	8.10%
REIT Equities	3.0%	4.00%
Master Limited Partnerships	3.0%	6.80%
Private Real Estate Partnerships	5.0%	6.90%
Hedge Funds	25.0%	5.25%
Total	100.0%	

Discount Rate Sensitivity Analysis

The following schedule shows the impact of the Net Pension Liability if the discount rate used was 1% less than and 1% greater than the discount rate that was used (8.10%) in measuring the net pension liability at December 31, 2015:

	1% Decrease in Discount Rate (7.10%)	Discount Rate (8.10%)	1% Increase in Discount Rate (9.10%)
Total pension liability	$ 490,891,828	$ 423,224,598	$ 368,209,840
Fiduciary net pension	313,066,374	313,066,374	313,066,374
Net pension liability	$ 177,825,454	$ 110,158,224	$ 55,143,466

NOTE 11. RETIREMENT PLAN – CONTINUED

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At September 30, 2016, the County reported $110,158,224 for the net pension liability and pension expense of $67,926,412 related to the December 31, 2015 valuation. The breakdown of the components of pension expense follows:

	January 1, 2015 to December 31, 2015
Service cost	$ 14,815,355
Interest on total pension liability (1)	29,475,312
Effect of plan changes	47,337,431
Administrative expenses	224,964
Member contributions	(6,511,719)
Expected investment return net of investments expenses	(25,694,798)
Recognition of deferred inflows/outflows of resources	
Recognition of economic/demographic gains or losses	611,986
Recognition of assumption changes or inputs	707,678
Recognition of investment gains or losses	7,093,774
Other (2)	(133,571)
Pension expense / (income)	$ 67,926,412

(1) Reflects the change in the liability due to the time value of money. TCDRS does not change fees or interest.

The County reported deferred outflows of resources related to the pension from the following sources:

	Deferred Outflows of Resources
Differences between expected and actual economic experience	$ 2,447,943
Changes in actuarial assumptions	2,830,710
Difference between projected and actual investment earnings	27,466,907
Contributions subsequent to the measurement date	8,606,965
Total	$ 41,352,525

NOTE 11. RETIREMENT PLAN – CONTINUED

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions – Continued

Deferred outflows of resources related to pensions resulting from contributions subsequent to the measurement date of $8,606,965 will be recognized as a reduction of the net pension liability for the measurement year ending December 31, 2016 (i.e. recognized in the County's financial statements September 30, 2017). Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended December 31	Pension Expense Amount
2016	$ 8,413,438
2017	8,413,438
2018	8,413,438
2019	7,505,248
Total	$ 32,745,562

NOTE 12. POSTEMPLOYMENT HEALTH CARE

Plan Description and Funding Policy. In addition to the pension benefits described in the previous note, the Commissioners' Court established a medical insurance benefit plan for retirees. The County administers this single-employer defined benefit medical plan (the Retiree Medical Plan). The Retiree Medical Plan does not issue a publicly available financial report. Eligible retirees will be provided medical insurance benefits at a set premium rate based on County service at the time of retirement. Dental insurance benefits for retirees have a set premium rate that closely approximates the County employees' rate. Eligible retirees may also cover their eligible dependents. Retirees are responsible for paying the premiums. A retiree is defined as someone who is receiving lifetime monthly Texas County and District retirement pension benefit payments and who retired directly from active employment with Williamson County. The County will stop insurance coverage on the retiree and dependent on the last day of the month when one of the following occurs:

1. The retiree reaches age 65; or
2. The retiree fails to submit the required set premium rate.

NOTE 12. POSTEMPLOYMENT HEALTH CARE – CONTINUED

Annual OPEB Cost and Net OPEB Obligation. The County's annual other postemployment benefit (OPEB) cost is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement 45. The ARC represents a level of funding that if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a closed period not to exceed 24 years. The following table shows the components of the County's annual OPEB cost for the year, the amount actually contributed to the plan, and changes in the County's OPEB obligation to the postemployment medical plan.

Fiscal Year	2014	2015	2016
Annual Required Contribution (ARC)	$ 6,365,694	$ 5,081,874	$ 5,081,874
Interest on Net OPEB Obligation	1,126,453	1,287,286	1,409,788
Adjustment to the ARC	(1,802,662)	(2,110,725)	(2,311,588)
Annual OPEB Cost	5,689,485	4,258,435	4,180,074
Contributions Made	(1,668,668)	(1,195,880)	(1,555,100)
Increase in Net OPEB Obligation	4,020,817	3,062,555	2,624,974
Net OPEB Obligation beginning of year	28,161,324	32,182,141	35,244,696
Net OPEB Obligation, end of year	$ 32,182,141	$ 35,244,696	$ 37,869,670

Fiscal Year Ended	Annual OPEB Cost	Actual Contribution Made	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
9/30/2014	$ 5,689,485	$ 1,668,668	29.3%	$ 32,182,141
9/30/2015	4,258,435	1,195,880	28.1%	35,244,696
9/30/2016	4,180,074	1,555,100	37.2%	37,869,670

NOTE 12. POSTEMPLOYMENT HEALTH CARE – CONTINUED

Funded Status and Funding Progress. The funding status of the post-employment medical plan as of the most recent actuarial valuation date is as follows:

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
10/1/2010	$ -	$ 47,659,778	$ 47,659,778	0.00%	$ 69,109,762	69.0%
10/1/2012	-	$41,418,618	$41,418,618	0.00%	$72,032,763	57.5%
10/1/2014	-	35,011,547	35,011,547	0.00%	82,264,296	42.6%

Actuarial valuations of an ongoing plan involve estimates of the value reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. A schedule of funding progress presents multi-trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits. The County's schedule of funding progress appears above.

Actuarial Methods and Assumptions. Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

In the October 1, 2014 actuarial valuation, the projected unit credit actuarial cost method was used. The actuarial assumptions include a 4.0% investment rate of return compounded annually (net of administrative expenses), which is a blended rate of the expected long-term investment returns on plan assets and on the employer's own investments calculated based on the funded level of the plan at the valuation date, an annual health care cost trend rate of 6.2% in the first year, 5.8% in the second year, 6.8% in the third year, 5.9% in the fourth year, and ultimately grade down to 4.5% per year after the 81st year. The actuarial value of assets was determined using techniques that spread the effects of short-term volatility in the market value of investments over a five-year period. The UAAL is being amortized as a level dollar over a closed 24-year period.

NOTE 13. EMPLOYEE BENEFITS PLAN

The County provides group medical benefits to its employees on a self-funded basis. Stop-loss coverage is provided by an insurance company and an independent company serves as Claim Administrator.

All full-time County employees (regularly scheduled to work at least 30 hours per week) are eligible for coverage under the Plan. Employees can enroll for personal coverage and dependent coverage.

A reconciliation of claims liabilities is shown below.

	2016	2015
Claims liabilities at October 1	$ 533,748	$ 1,977,846
Incurred claims	16,135,643	14,699,740
Payments on claims	(15,841,229)	(16,143,838)
Claims liabilities at September 30	$ 828,162	$ 533,748

All claim liabilities are due within one year.

NOTE 14. RISK MANAGEMENT

The County is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; and natural disasters. The County provides for the management of risks through a combination of self-insurance and traditional insurance. The amount of settlements has not exceeded insurance coverage for each of the past three fiscal years.

NOTE 15. COMMITMENTS AND CONTINGENCIES

The County is the defendant in a number of lawsuits arising principally in the normal course of operations. In the opinion of management, the outcome of these lawsuits will not have a material adverse effect on the accompanying combined financial statements, and accordingly, no provision for losses has been recorded.

The County participates in numerous state and federal grant programs, which are governed by various rules and regulations of the grantor agencies. Costs charged to the respective grant programs are subject to audit and adjustment by the grantor agencies; therefore, to the extent that the County has not complied with the rules and regulations governing the grants, refunds of any money received may be required and the collectability of any related receivable at September 30, 2016, may be impaired. In the opinion of the County, there are no significant contingent liabilities relating to compliance with the rules and regulations governing the respective grants; therefore, no provision has been recorded in the accompanying basic financial statements for such contingencies.

NOTE 16. FUTURE FINANCIAL REPORTING REQUIREMENTS

GASB has issued the following statements which will become effective in future years.

Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* – This statement changes the focus of accounting of postemployment benefits other than pensions from whether they are responsibility funding the benefits over time to a point-in-time liability that is reflected on the employer's financial statements for any actuarially unfunded portion of benefits earned to date. This statement will become effective for the County in fiscal year 2018.

Statement No. 77, *Tax Abatement Disclosures* – This statement requires governments that enter into tax abatement agreements to provide certain disclosures regarding these commitments. This statement will become effective for the County in fiscal year 2017.

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REQUIRED SUPPLEMENTARY INFORMATION

WILLIAMSON COUNTY
REQUIRED SUPPLEMENTARY INFORMATION
TEXAS COUNTY DISTRICT RETIREMENT SYSTEM
SCHEDULE OF CHANGES IN THE EMPLOYER'S
NET PENSION LIABILITY AND THE RELATED RATIOS (UNAUDITED)

	2015	2014
Total pension liability		
Service cost	$ 14,815,355	$ 13,778,283
Interest (on the total pension liability)	29,475,312	24,866,979
Effect of plan changes	47,337,431	2,458,015
Effect of assumption changes or inputs	3,538,388	-
Effect of economic/demographic (gains) or losses	1,861,263	1,438,400
Benefit payments/refunds of contributions	(10,769,887)	(9,052,920)
Net change in total pension liability	86,257,862	33,488,757
Total pension liability, beginning of year	336,966,736	303,477,979
Total pension liability, end of year (a)	$ 423,224,598	$ 336,966,736
Plan fiduciary net position		
Contributions, employer	$ 11,916,442	$ 11,388,189
Contributions, employee	6,511,719	6,237,665
Investment income net of investment expenses	(5,233,124)	18,970,796
Benefit payments/refunds of contributions	(10,769,887)	(9,052,920)
Administrative expense	(224,965)	(229,176)
Other	133,571	136,544
Net change in plan fiduciary net position	2,333,756	27,451,098
Plan fiduciary net position, beginning of year	310,732,618	283,281,520
Plan fiduciary net position, end of year (b)	$ 313,066,374	$ 310,732,618
Net pension liability, end of year (a) - (b)	$ 110,158,224	$ 26,234,118
Plan fiduciary net position as a percentage of total pension liability	73.97%	92.21%
Covered employee payroll	$ 93,024,552	$ 89,109,498
Net pension liability as a percentage of covered employee payroll	118.42%	29.44%

Notes to Schedule:
As of December 31 - measurement date

Benefit changes. There were no changes of benefit terms that affected measurement of the total pension liability during the measurement period.

Changes of assumptions. Effective with the 2015 calendar year, employer contributions reflect that a 60% CPI COLA was adopted.

Only two years of data is presented in accordance with GASB 68, Paragraph 138. "The information for all periods for the 10-year schedules that are required to be presented as required supplementary information may not be available initially. In these cases, during the transition period, that information should be presented for as many years as are available. The schedules should not include information that is not measured in accordance with the requirements of this Statement."

WILLIAMSON COUNTY
REQUIRED SUPPLEMENTARY INFORMATION
TEXAS COUNTY DISTRICT RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER CONTRIBUTIONS (UNAUDITED)

	Year Ended December 31,			
	2012	2013	2014	2015
Actuarially determined contribution	$ 9,545,367	$ 10,079,882	$ 11,388,190	$ 11,916,442
Contributions in relation to the actuarially determined contribution	9,545,367	10,079,882	11,388,190	11,916,442
Contribution deficiency (excess)	$ -	$ -	$ -	$ -
Covered-employee payroll	$ 79,810,886	$ 82,217,691	$ 89,109,498	$ 93,024,552
Contributions as a percentage of covered-employee payroll	11.96%	12.26%	12.78%	12.81%

Notes to Schedule:

Valuation date

Actuarially determined contribution rates are calculated as of December 31, two years prior to the end of the fiscal year in which the contributions are reported.

Methods and assumptions used to determine contribution rates:

Actuarial Cost method	Entry Age
Amoritization method	Level percentage of payroll, closed
Remaining amortization period	14.6 years
Asset valuation method	5-year smoothed market
Inflation	3.00%
Salary increases	Variance by age and service. 4.9% over career including inflation.
Investment rate of return	8.00%, net of investment expenses, including inflation
Retirement age	Members who are eligible for service retirement are assumed to commence receiving benefit payments based on age. The average age at service retirement for recent retirees is 61.
Mortality	In the 2015 actuarial valuation, assumed life expectancies were adjusted as a result of adopting a new projection scale (110% of the MP-2014 Ultimate Scale) for 2014 and later. Previously Scale AA had been used. The base table is the RP-2000 table projected with Scale AA to 2014.

Only four years of data is presented in accordance with GASB 68, Paragraph 138. "The information for all periods for the 10-year schedules that are required to be presented as required supplementary information may not be available initially. In these cases, during the transition period, that information should be presented for as many years as are available. The schedules should not include information that is not measured in accordance with the requirements of this Statement."

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COMBINING AND INDIVIDUAL FUND STATEMENTS AND SCHEDULES

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES – BUDGET AND ACTUAL
GENERAL FUND
YEAR ENDED SEPTEMBER 30, 2016

	Budgeted Amounts		Actual	Variance Positive
	Original	Final	Amounts	(Negative)
Revenues				
Taxes				
Ad valorem taxes	$ 126,545,722	$ 126,545,722	$ 127,469,776	$ 924,054
Penalty and interest	763,000	763,000	1,170,472	407,472
Other taxes	1,070,500	1,070,500	1,320,883	250,383
Total taxes	128,379,222	128,379,222	129,961,131	1,581,909
Fees of office				
County sheriff	285,000	285,000	305,588	20,588
County clerk	3,342,500	3,342,500	3,736,786	394,286
Tax assessor/collector	6,800,000	6,800,000	7,037,451	237,451
District clerk	578,000	578,000	555,697	(22,303)
Justice of the peace, precinct #1	62,500	62,500	56,609	(5,891)
Justice of the peace, precinct #2	55,000	55,000	56,531	1,531
Justice of the peace, precinct #3	106,500	106,500	89,979	(16,521)
Justice of the peace, precinct #4	107,000	107,000	81,777	(25,223)
Constable, precinct #1	175,000	175,000	196,200	21,200
Constable, precinct #2	175,500	175,500	214,659	39,159
Constable, precinct #3	239,000	239,000	302,231	63,231
Constable, precinct #4	240,000	240,000	242,029	2,029
Personal bond office	121,000	121,000	98,469	(22,531)
County attorney	58,000	58,000	52,318	(5,682)
Other	531,250	531,250	618,872	87,622
Total fees of office	12,876,250	12,876,250	13,645,196	768,946
Fines and forfeitures				
County clerk	855,500	855,500	810,291	(45,209)
District clerk	482,000	482,000	510,021	28,021
Justice of the peace	1,200	1,200	6,442	5,242
Justice of the peace, precinct #1	167,500	167,500	119,897	(47,603)
Justice of the peace, precinct #2	106,000	106,000	102,034	(3,966)
Justice of the peace, precinct #3	898,000	898,000	1,037,967	139,967
Justice of the peace, precinct #4	604,000	604,000	540,855	(63,145)
Total fines and forfeitures	3,114,200	3,114,200	3,127,507	13,307
Charges for services				
Emergency medical service	8,293,984	8,301,569	9,072,695	771,126
County sheriff	-	-	103,623	103,623
Constables	-	-	26,719	26,719
Parks	215,850	215,850	277,559	61,709
Other	2,853,025	2,853,025	3,132,677	279,652
Total charges for services	11,362,859	11,370,444	12,613,273	1,242,829
Intergovernmental				
Federal payments in lieu of taxes	65,000	65,000	74,132	9,132
Prisoner payments	180,000	180,000	182,177	2,177
State shared	1,754,215	1,881,504	1,868,858	(12,646)
Total intergovernmental	1,999,215	2,126,504	2,125,167	(1,337)
Investment income and other				
Investment income	400,000	400,000	803,325	403,325
Other	358,000	384,485	747,882	363,397
Total investment income and other	758,000	784,485	1,551,207	766,722
Total revenues	$ 158,489,746	$ 158,651,105	$ 163,023,481	$ 4,372,376

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF EXPENDITURES – BUDGET AND ACTUAL
GENERAL FUND
YEAR ENDED SEPTEMBER 30, 2016

	Budgeted Amounts		Actual	Variance Positive
	Original	Final	Amounts	(Negative)
Expenditures				
General government				
County judge	$ 967,619	$ 914,757	$ 871,012	$ 43,745
Commissioners, precinct #1	278,632	278,632	276,738	1,894
Commissioners, precinct #2	282,112	282,112	262,465	19,647
Commissioners, precinct #3	298,179	298,179	285,276	12,903
Commissioners, precinct #4	286,681	289,371	242,087	47,284
County clerk	783,985	759,537	688,930	70,607
Non-departmental	5,141,441	3,993,028	3,993,028	-
County auditor	2,501,956	2,508,039	2,398,879	109,160
County treasurer	553,289	552,856	434,085	118,771
Budget office	227,887	236,046	233,743	2,303
Tax assessor/collector	3,668,380	3,668,380	3,470,304	198,076
Infrastructure department	363,988	324,367	316,386	7,981
Office buildings	6,297,846	6,733,134	6,723,905	9,229
Information technology services	6,954,654	6,961,868	6,543,396	418,472
Human resources	979,558	978,299	929,292	49,007
General elections	1,856,719	1,859,754	1,635,681	224,073
Purchasing	734,318	739,661	685,073	54,588
Total general government	32,177,244	31,378,020	29,990,280	1,387,740
Public safety				
Constable, precinct #1	1,111,708	1,112,642	1,049,646	62,996
Constable, precinct #2	1,218,353	1,221,841	1,162,619	59,222
Constable, precinct #3	1,356,465	1,361,150	1,244,547	116,603
Constable, precinct #4	1,305,336	1,308,361	1,187,429	120,932
County sheriff	22,163,859	22,151,600	21,463,621	687,979
Department of public safety	132,166	115,817	100,804	15,013
Jail and law enforcement	21,507,812	22,500,221	21,553,849	946,372
Juvenile services	10,743,629	10,713,629	9,843,412	870,217
Adult probation	204,660	204,660	189,125	15,535
Emergency services	769,707	495,326	298,267	197,059
Emergency medical services	14,453,538	14,669,133	14,652,587	16,546
Emergency management	414,169	420,351	383,404	36,947
Emergency haz-mat	420,887	436,482	434,066	2,416
Emergency 911 communications	5,862,454	5,881,241	5,170,836	710,405
Mobile outreach team	774,917	828,128	742,011	86,117
Wireless communication	286,877	292,601	256,869	35,732
Total public safety	82,726,537	83,713,183	79,733,092	3,980,091
Judicial				
County courts-at-law	1,263,074	1,335,634	1,335,634	-
County courts-at-law, precinct #1	500,672	500,672	488,931	11,741
County courts-at-law, precinct #2	592,292	602,262	453,520	148,742
County courts-at-law, precinct #3	476,010	476,010	462,093	13,917
County courts-at-law, precinct #4	569,733	569,733	557,961	11,772
District courts	1,778,323	2,284,339	2,265,608	18,731
26th Judicial court	259,737	259,737	230,232	29,505
277th Judicial court	268,459	269,981	269,981	-
368th Judicial court	260,380	263,347	259,552	3,795
395th Judicial court	269,233	276,608	209,900	66,708
425th Judicial court	261,783	261,783	260,170	1,613
District attorney	3,354,843	3,421,016	3,169,152	251,864
District clerk	1,844,477	1,844,477	1,719,490	124,987
Justice court, precinct #1	949,446	1,019,046	971,362	47,684
Justice court, precinct #2	965,978	1,034,978	914,255	120,723

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF EXPENDITURES – BUDGET AND ACTUAL
GENERAL FUND – CONTINUED
YEAR ENDED SEPTEMBER 30, 2016

	Budgeted Amounts		Actual	Positive
	Original	Final	Amounts	(Negative)
Expenditures (Continued)				
Judicial (Continued)				
Justice court, precinct #3	$ 1,265,959	$ 1,265,959	$ 1,220,754	$ 45,205
Justice court, precinct #4	1,092,939	1,173,493	1,173,493	-
County attorney	4,618,647	4,722,374	4,537,777	184,597
County clerk	1,113,693	1,138,141	1,060,129	78,012
Magistrate office	682,504	682,504	636,976	45,528
Personal bond office	166,067	166,067	146,118	19,949
Total judicial	22,554,249	23,568,161	22,343,088	1,225,073
Community services				
Veterans service	323,303	333,562	322,839	10,723
Health department	7,799,622	7,792,158	7,792,158	-
Museum	225,834	225,834	225,834	-
Agricultural extension service	280,655	271,995	232,502	39,493
Parks department	1,720,101	1,845,931	1,781,671	64,260
Public welfare	765,747	765,247	765,247	-
Child welfare	104,000	93,494	93,494	-
WC historical commission	1,000	1,000	1,000	-
Total community services	11,220,262	11,329,221	11,214,745	114,476
Debt service				
Principal	-	226,178	226,178	-
Interest and other charges	-	2,674	2,674	-
Total debt service	-	228,852	228,852	-
Capital outlay	5,317,114	5,942,260	4,607,883	1,334,377
Total expenditures	$ 153,995,406	$ 156,159,697	$ 148,117,940	$ 8,041,757

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
DEBT SERVICE FUND
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Taxes	$ 77,425,968	$ 78,178,335	$ 752,367
Intergovernmental	120,400	120,437	37
Investment earnings	20,000	93,595	73,595
Miscellaneous revenues	-	58,988	58,988
Total revenues	77,566,368	78,451,355	884,987
EXPENDITURES			
Debt service			
Principal	50,765,000	50,422,763	342,237
Interest and other charges	39,721,186	39,385,932	335,254
Bond issuance fees	837,044	703,920	133,124
Total expenditures	91,323,230	90,512,615	810,615
Excess (deficiency) of revenues over (under) expenditures	(13,756,862)	(12,061,260)	1,695,602
Other financing sources (uses)			
Issuance of long-term debt	54,155,000	54,155,000	-
Premium on issuance of long-term debt	8,764,582	8,764,582	-
Transfers in	14,067,671	11,750,000	(2,317,671)
Payment to bond escrow agent	(62,206,536)	(62,202,473)	(4,063)
Total other financing sources and uses	14,780,717	12,467,109	(2,313,608)
Net change in fund balance	1,023,855	405,849	(618,006)
FUND BALANCE, beginning	5,818,274	5,818,274	-
FUND BALANCE, ending	$ 6,842,129	$ 6,224,123	$ (618,006)

NONMAJOR SPECIAL REVENUE FUNDS

Special Revenue Funds are used to account for the proceeds of specified revenue sources or to finance specified activities as required by law or administrative regulation.

The following comprise the County's nonmajor Special Revenue Funds:

Alternate Dispute Resolution – This fund was set up to aid in a week long mass mediation session held annually to clear open cases and finalize documentation in question. The monies are spent on mailing notices and coordinating parties who wish to participate in the mediation process.

Appellate Judicial System Fund – Each county in the Third Court of Appeals is required to establish an Appellate Judicial Fund to assist the court of appeals in the processing of appeals and to defray costs incurred by the county. Fees are assessed for court cases filed in a county court, county court at law, probate court and district courts.

Avery Ranch Road District – Avery Ranch Road District #1 was formed by the Commissioner's Court in 2001. The District issues unlimited tax bonds for the purpose of developing roads in the district. The District is governed by a Board comprised of the Williamson County Commissioner's Court. The bonds are scheduled to be paid in full on August 15, 2025.

Child Abuse Prevention Fund – This fund is used to account for the $100 fee assessed in certain child sexual assault and related convictions. These funds are to be used for child abuse prevention programs.

Child Safety – This fund is used to account for $1.50 tax collected during the vehicle registration process. These funds are also collected by justice, county, or district courts for violations that occur within a school-crossing zone up to $25 per violation. This fund is used to provide a school crossing guard program and/or programs designed to enhance child safety, health, or nutrition.

Conservation Foundation – This fund was formed by the Williamson County Commissioner's Court in December of 2002, as a pro-active approach to providing for conservation of the recovery of endangered species in the Williamson County area.

County and District Court Technology – This fund accounts for money charged to a defendant convicted of a criminal offense in a County or District Court. It is designated for the purpose of financing the purchase of technological enhancements for a county court, statutory court, or district court.

County Attorney Hot Check – This fund is used to account for monies received from fees collected on the payment of hot checks. Expenditures are made for the improvement of the operation of the County Attorney's office.

County Sheriff – This fund is used to account for jail inmates' purchase of food and toiletry items or other supplies. Expenditures are for the purchase of these items. Any revenue generated may be used for the benefit of the inmate.

County Sheriff Asset Forfeitures – This fund is used to account for monies received from Federal and State court cases dealing with illegal drug violations. Money is distributed to entities involved in the resolution of the drug case and used for education or equipment needed to enhance law enforcement activities.

County Radio Communications Systems (RCS) – This fund is used to account for money collected from governmental entities utilizing the countywide radio communication system. The funds are used for operations and maintenance of the system.

Court Records Preservation – This fund is used to account for monies collected from fees charged by the County and District Clerks. They are used only to digitize court records and preserve the records from natural disasters.

Court Reporter – The clerk of each court that has an official court reporter shall collect a court reporter service fee of $15 as a court cost in each civil case filed with the clerk to maintain a court reporter who is available for assignment in the court.

Courthouse Security – This fund is used to collect court costs of defendants convicted of felony and misdemeanor offenses. The clerks collect the costs and pay them to the County treasurer where it is designated for security purposes such as, metal detectors, identification cards, and surveillance cameras.

District Attorney Asset Forfeitures – This fund is used to account for monies received from Federal and State court cases dealing with illegal drug violations. Money is distributed to entities involved in the resolution of the drug case and used for education or equipment needed to enhance law enforcement activities.

District Attorney Welfare Fraud – This fund is used to account for monies received from fees collected from the Health and Human Services Commission for prosecuting welfare fraud cases. Expenditures are made for the prosecution of welfare fraud cases.

Election Chapter 19 – The state allocates funding based on the number of new, canceled and updated voter registrations processed in the preceding calendar year. These funds are only to be used for any activities designed to enhance the voter registration process.

Election HAVA – The fund was created to account for the rental fees collected from the use of voter equipment purchased with funds from the HAVA grant. The use of these fee revenues includes but is not limited to the maintenance, license fees and upgrades for the voting equipment as well as new equipment, training, storage and other costs associated with the operation and maintenance of the voting systems.

Election Services Contract – This fund is used to support and contain costs generated from an election. Contracts between political parties and other entities are handled through the court and paid by the contracting party for administering election services.

Grants – This fund is used to account for federal and state monies provided for the enhancement of programs not fully funded by the County.

Guardianship – This fund is used to account for the collection of a $20.00 "supplemental court-initiated guardianship fee" required by the State of Texas for support of judiciary guardianship initiated under Section 683 of the Texas Probate Code. The fees are to be used to supplement, not supplant, the compensation of a court-appointed guardian ad litem or attorney ad litem and to fund local guardianship programs for indigent, incapacitated persons who do not have a family member suitable and willing to serve in that capacity.

Justice Court Technology – This fund accounts for money charged to a defendant convicted of a misdemeanor in a justice court. It is designated for the purpose of financing the purchase of technological enhancements for a justice court.

Justice of the Peace Security – This fund is used to collect court costs of defendants convicted of misdemeanor offenses. The clerks collect the costs and deposit them with the County Treasurer where it is designated for security purposes, such as metal detectors, identification cards, and surveillance cameras for justice courts not housed in the County courthouse.

Juvenile Delinquency Prevention – This fund is used to repair damage and reward the public for identifying and aiding in the apprehension of offenders who vandalize public and personal property. Funds are also used for recognition and recreation programs for teens; local teen court programs; local juvenile probation department and educational and intervention programs to prevent juveniles from engaging in delinquent conduct.

Juvenile Justice Alternative Education Program (JJAEP) Tier II – The Texas Probation Commission provides funding for costs that are reasonable, necessary and directly related to the creation and ongoing operation of a JJAEP to include the purchase of equipment, renovations, or construction. This program is designed to provide an educational setting for students that have been expelled from the public schools. The goal of the program is to reduce delinquency, increase offender accountability, and rehabilitate offenders through a comprehensive, coordinated community-based juvenile probation system.

Law Library – Monies collected through civil cases filed in the County or district court are accounted for through this fund. Monies collected are used to support the management and expenditures necessary to maintain law libraries throughout the County.

Pearson Place Road District Operating Fund - Pearson Place Road District was formed by the Commissioner's Court in 2010. The District issues unlimited tax bonds for the purpose of developing roads in the district. The fund is used to reimburse the developer for construction of the four-lane divided portion of Neenah Avenue within the District and pay for the long-term debt expenditures for the district. The District is governed by a Board comprised of the Williamson County Commissioner's Court.

Probate Court – This fund accounts for fees from all probate court cases filed and used for training for County Courts at Law personnel.

Records Archive – This fund was established specifically to support the preservation and restoration services performed by the County Clerk in connection with maintaining archived records. These monies support and will be dedicated to assisting County Clerks with maintaining public documents filed before January 1, 1990.

Records Management and Preservation – This fund is compiled of the fees for records management and preservation services performed by the County Clerk and District Clerk. All records are documented, filed and must be paid for at the time the document is filed. This fee may be used for specific records preservation and automation projects.

Records Management – This fund is used to account for monies collected from fees charged by the County and District Clerk. These funds are used Countywide for records management, records management training and for the disposal of large quantities of outdated documents.

Records Technology – This fund accounts for money charged when filing suit in a district court. It is designated for the purpose of preservation and restoration services performed in connection with maintaining a district court records archive.

Regional Animal Shelter (WCRAS) – This fund accounts for the County's percentage share of revenues collected as adoption fees, surrender fees, etc. at the WCRAS. Expenditures are made for the day-to-day operations of the facility. The other regional participants in the shelter share proportionately in the operations cost.

Specialty Court – Section121.00 of the Texas Government Code allows the creation of Specialty Court programs. Williamson County has two active programs, The DWI/Drug court and Veteran court. The programs are funded by collection of the court costs of a conviction for certain intoxication and drug related offenses. The fund retains 50% of the total fee to be used exclusively to develop and maintain drug court programs. A service fee of 10% is revenue deposited into the General Fund. The remaining 40% of the total fee is sent to the state.

Teen Court Program – The purpose of this fund is to account for the receipt of fees for juveniles who are participating in the Teen Court Program.

Tobacco – Monies received by the County from the state as pro rata distributions from the lump sum payment made by tobacco companies are accounted for through this fund. The money collected from the state is to be spent on health-related issues.

Truancy Program – This fund is used to account for the collection of a $5.00 court cost fee allowed by the State of Texas and ordered by the Williamson County Commissioners' Court to finance the salary and benefits of a juvenile case manager helping to administer the Truancy Program for the justice courts. The program has been established through cooperation with local governments, school districts and agencies to assist with local truancy cases.

WC Historical Commission – The fund is used to account for the monies received from memorial brick sales and donations to the Williamson County Historical Commission. The funds can be used for county historic preservation.

WM – City of Hutto and Hutto ISD – Monies received from the Contractor of the Williamson County Landfill to be expended for the benefit of the City of Hutto and Hutto ISD. Contractor pays 2% of the total Tip Fees collected.

WM – Community Recreational Facility – Monies received from the Contractor of the Williamson County Landfill to pay for recreational facility use within Williamson County. Contractor pays 1% of the total Tip Fees collected.

WM – Future Environmental Liability – Monies received from the Contractor of the Williamson County Landfill to pay for any environmental liability related to the Landfill beyond those costs covered by closure and post-closure trust funds. Contractor pays 2% of the total Tip Fees collected.

WM – Master Site Development – Monies received from the Contractor of the Williamson County Landfill to pay for site development of the facility. Contractor pays 1% of the total Tip Fees collected.

WILLIAMSON COUNTY, TEXAS
COMBINING BALANCE SHEET
NONMAJOR GOVERNMENTAL FUNDS
SEPTEMBER 30, 2016

	Alternate Dispute Resolution	Appellate Judicial System	Avery Ranch Road District	Child Abuse Prevention	Child Safety	Conservation Foundation
ASSETS						
Cash and investments	$295,234	$ 3,225	$ 440,539	$ 209	$ 681,684	$ 1,437,779
Accounts receivable (net of allowance)	192	320	2,918	11		35,153
Due from other funds	-	-	-	-	-	-
Due from other governments	-	-	-	-	-	-
Prepaids	-	-	-	-	-	-
TOTAL ASSETS	$295,426	$ 3,545	$ 443,457	$ 220	$ 681,684	$ 1,472,932
LIABILITIES, DEFERRED INFLOW OF RESOURCES AND FUND BALANCES						
LIABILITIES						
Accounts payable	$ 1,939	$ 3,225	$ -	$ -	$ -	$ 13,770
Accrued liabilities	211	-	-	-	-	3,125
Due to other governments	-	-	-	-	-	-
Unearned revenue	-	-	-	-	-	-
Total liabilities	2,150	3,225	-	-	-	16,895
DEFERRED INFLOWS OF RESOURCES						
Deferred property taxes	-	-	2,827	-	-	-
Total deferred inflows of resources	-	-	2,827	-	-	-
FUND BALANCES						
Restricted	293,276	320	440,630	220	681,684	1,456,037
Total fund balances	293,276	320	440,630	220	681,684	1,456,037
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$295,426	$ 3,545	$ 443,457	$ 220	$ 681,684	$ 1,472,932

WILLIAMSON COUNTY, TEXAS
COMBINING BALANCE SHEET – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
SEPTEMBER 30, 2016

County and District Court Technology	County Attorney Hot Check	County Sheriff	County Sheriff Asset Forfeitures	County Radio Communications System (RCS)	Court Records Preservation	Court Reporter	Courthouse Security	District Attorney Asset Forfeitures
$ 72,786	$ 10,023	$ 1,829,892	$ 779,539	$ 134,316	$ 469,183	$ 1,162,941	$ 193,508	$ 236,339
285	-	-	-	2,498	670	960	2,480	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	1,699	-	-	-	-
$ 73,071	$ 10,023	$ 1,829,892	$ 779,539	$ 138,513	$ 469,853	$ 1,163,901	$ 195,988	$ 236,339
$ -	$ -	$ 63,879	$ 2,680	$ 106,464	$ -	$ 4,800	$ 238	$ 3,968
-	-	-	-	5,369	-	-	3,721	260
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	63,879	2,680	111,833	-	4,800	3,959	4,228
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
73,071	10,023	1,766,013	776,859	26,680	469,853	1,159,101	192,029	232,111
73,071	10,023	1,766,013	776,859	26,680	469,853	1,159,101	192,029	232,111
$ 73,071	$ 10,023	$ 1,829,892	$ 779,539	$ 138,513	$ 469,853	$ 1,163,901	$ 195,988	$ 236,339

WILLIAMSON COUNTY, TEXAS
COMBINING BALANCE SHEET – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
SEPTEMBER 30, 2016

	District Attorney Welfare Fraud	Election Chapter 19	Election HAVA	Election Services Contract	Grants	Guardianship
ASSETS						
Cash and investments	$ 1,339	$ (1,114)	$ 556,618	$ 247,738	$ (1,159,774)	$ 114,400
Accounts receivable (net of allowance)	-	1,812	-	52,777	-	80
Due from other funds		-	-	-	-	-
Due from other governments	-	-	-	-	2,536,731	-
Prepaids	-	-	-	-	-	-
TOTAL ASSETS	$ 1,339	$ 698	$ 556,618	$ 300,515	$ 1,376,957	$ 114,480
LIABILITIES, DEFERRED INFLOW OF RESOURCES AND FUND BALANCES						
LIABILITIES						
Accounts payable	$ -	$ -	$ 3,015	$ 4,845	$ 66,448	$ -
Accrued liabilities	-	698	-	117	103,195	-
Due to other governments	-	-	-	-	31,813	-
Unearned revenue	-	-	-	-	1,175,501	-
Total liabilities	-	698	3,015	4,962	1,376,957	-
DEFERRED INFLOWS OF RESOURCES						
Deferred property taxes	-	-	-	-		-
Total deferred inflows of resources	-	-	-	-	-	-
FUND BALANCES						
Restricted	1,339	-	553,603	295,553	-	114,480
Total fund balances	1,339	-	553,603	295,553	-	114,480
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$ 1,339	$ 698	$ 556,618	$ 300,515	$ 1,376,957	$ 114,480

WILLIAMSON COUNTY, TEXAS
COMBINING BALANCE SHEET – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
SEPTEMBER 30, 2016

Justice Court Technology	Justice of the Peace Security	Juvenile Delinquency Prevention	Law Library	Pearson Place Road District	Probate Court	Records Archive	Records Management and Preservation
$ 467,120	$ 127,706	$ 8,170	$ 331,936	$ 5,419,494	$ 47,092	$ 2,122,255	$ 2,223,332
452	113	-	1,920	-	20	7,500	15,908
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
$ 467,572	$ 127,819	$ 8,170	$ 333,856	$ 5,419,494	$ 47,112	$ 2,129,755	$ 2,239,240
$ 4,449	$ 1,389	$ -	$ 10,667	$ -	$ -	$ 35,914	$ 35,342
-	-	-	-	-	-	6,755	12,139
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
4,449	1,389	-	10,667	-	-	42,669	47,481
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
463,123	126,430	8,170	323,189	5,419,494	47,112	2,087,086	2,191,759
463,123	126,430	8,170	323,189	5,419,494	47,112	2,087,086	2,191,759
$ 467,572	$ 127,819	$ 8,170	$ 333,856	$ 5,419,494	$ 47,112	$ 2,129,755	$ 2,239,240

WILLIAMSON COUNTY, TEXAS
COMBINING BALANCE SHEET – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
SEPTEMBER 30, 2016

	Records Management	Records Technology	Regional Animal Shelter (WCRAS)	Specialty Court	JJAEP Tier II	Tobacco
ASSETS						
Cash and investments	$523,676	$258,489	$ 345,505	$156,204	$ 360,101	$ 3,823,257
Accounts receivable (net of allowance)	2,052	550	594,619	-	-	-
Due from other funds	-	-	-	-	-	-
Due from other governments	-	-	-	-	-	-
Prepaids	-	-	1,500	-	-	-
TOTAL ASSETS	$525,728	$259,039	$ 941,624	$156,204	$ 360,101	$ 3,823,257
LIABILITIES, DEFERRED INFLOW OF RESOURCES AND FUND BALANCES						
LIABILITIES						
Accounts payable	$ 5,341	$ -	$ 44,351	$ 47,521	$ 170	$ -
Accrued liabilities	-	-	24,024	-	-	-
Due to other governments	-	-	16,780	-	-	-
Unearned revenue	-	-	-	-	-	-
Total liabilities	5,341	-	85,155	47,521	170	-
DEFERRED INFLOWS OF RESOURCES						
Deferred property taxes	-	-	177,705	-	-	-
Total deferred inflows of resources	-	-	177,705	-	-	-
FUND BALANCES						
Restricted	520,387	259,039	678,764	108,683	359,931	3,823,257
Total fund balances	520,387	259,039	678,764	108,683	359,931	3,823,257
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES	$525,728	$259,039	$ 941,624	$156,204	$ 360,101	$ 3,823,257

WILLIAMSON COUNTY, TEXAS
COMBINING BALANCE SHEET – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
SEPTEMBER 30, 2016

Teen Court Program	Truancy Program	WC Historical Commission	WM - City of Hutto and Hutto ISD	WM-Community Recreation Facility	WM - Future Environmental Liability	WM - Master Site Development	Total Governmental Funds
$ 1,695	$ 282,417	$ 8,597	$ 388,228	$ 383,153	$1,216,414	$ 540,394	$ 26,541,639
-	564	-	-	-	-	-	723,854
	-	-	-	-	-	-	-
-	-	-	-	-	-	-	2,536,731
-	-	-	-	-	-	-	3,199
$ 1,695	$ 282,981	$ 8,597	$ 388,228	$ 383,153	$1,216,414	$ 540,394	$ 29,805,423
$ 582	$ 90	$ 1,625	$ -	$ 33,000	$ -	$ -	$ 495,712
-	1,365	-	-	-	-	-	160,979
-	-	-	-	-	-	-	48,593
-	-	-	-	-	-	-	1,175,501
582	1,455	1,625	-	33,000	-	-	1,880,785
-	-	-	-	-	-	-	180,532
-	-	-	-	-	-	-	180,532
1,113	281,526	6,972	388,228	350,153	1,216,414	540,394	27,744,106
1,113	281,526	6,972	388,228	350,153	1,216,414	540,394	27,744,106
$ 1,695	$ 282,981	$ 8,597	$ 388,228	$ 383,153	$1,216,414	$ 540,394	$ 29,805,423

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
NONMAJOR GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	Alternate Dispute Resolution	Appellate Judicial System	Avery Ranch Road District	Child Abuse Prevention	Child Safety	Conservation Foundation
REVENUES						
Taxes	$ -	$ -	$ 1,249,383	$ -	$ -	$ -
Fees of office	20,138	34,543	-	164	681,684	-
Fines and forfeitures	-	-	-	-	-	-
Charges for services	-	-	-	-	-	-
Intergovernmental	-	-	-	-	-	-
Investment earnings	636	-	3,505	-	865	3,570
Miscellaneous	-	-	-	-	-	482,552
Total revenues	20,774	34,543	1,252,888	164	682,549	486,122
EXPENDITURES						
Current						
General government	-	-	15,436	-	-	-
Public safety	-	-	-	-	-	-
Judicial	4,805	34,413	-	-	-	-
Community services	-	-	-	-	627,174	-
Conservation	-	-	-	-	-	308,850
Transportation	-	-	-	-	-	-
Debt service						
Principal	-	-	920,000	-	-	-
Interest and other charges	-	-	315,873	-	-	-
Bond issuance fees	-	-	106,904		-	-
Capital outlay	-	-	-	-	-	-
Total expenditures	4,805	34,413	1,358,213	-	627,174	308,850
EXCESS (DEFICIENCY) OF REVENUES OVER (UNDER) EXPENDITURES	15,969	130	(105,325)	164	55,375	177,272
OTHER FINANCING SOURCES (USES)						
Issuance of long-term debt	-	-	2,895,000	-	-	-
Premium on issuance of long-term debt	-	-	72,875	-	-	-
Discount on issuance of long-term debt	-	-	-	-	-	-
Payment to bond escrow agent	-	-	(2,902,163)	-	-	-
Transfers in	-	-	-	-	-	-
Transfers out	-	-	-	-	-	-
Total other financing sources and uses	-	-	65,712	-	-	-
NET CHANGE IN FUND BALANCES	15,969	130	(39,613)	164	55,375	177,272
FUND BALANCES, BEGINNING	277,307	190	480,243	56	626,309	1,278,765
FUND BALANCES, ENDING	$ 293,276	$ 320	$ 440,630	$ 220	$ 681,684	$ 1,456,037

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2016

County and and District Court Technology	County Attorney Hot Check	County Sheriff	County Sheriff Asset Forfeitures	County Radio Communications System (RCS)	Court Records Preservation	Court Reporter	Courthouse Security	District Attorney Asset Forfeitures
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10,774	21,610	-	-	-	74,812	100,689	213,186	-
-	-	-	122,197	-	-	-	-	14,759
-	-	297,778	-	1,152,676	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	1,461	1,024	-	-	3,141	302	355
-	-	-	-	6,756	-	-	-	-
10,774	21,610	299,239	123,221	1,159,432	74,812	103,830	213,488	15,114
-	-	-	-	-	-	-	-	-
-	-	115,055	134,679	1,099,355	-	-	-	-
5,443	1,020	-	-	-	10,320	79,687	196,034	29,194
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	164,369	33,397	-	-	27,820	3,680
5,443	1,020	115,055	299,048	1,132,752	10,320	79,687	223,854	32,874
5,331	20,590	184,184	(175,827)	26,680	64,492	24,143	(10,366)	(17,760)
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	(25,000)	-	-	-	-	-	-	-
-	(25,000)	-	-	-	-	-	-	-
5,331	(4,410)	184,184	(175,827)	26,680	64,492	24,143	(10,366)	(17,760)
67,740	14,433	1,581,829	952,686	-	405,361	1,134,958	202,395	249,871
$ 73,071	$ 10,023	$ 1,766,013	$ 776,859	$ 26,680	$ 469,853	$ 1,159,101	$ 192,029	$ 232,111

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	District Attorney Welfare Fraud	Election Chapter 19	Election HAVA	Election Services Contract	Grants	Guardianship
REVENUES						
Taxes	$ -	$ -	$ -	$ -	$ -	$ -
Fees of office	-	-	-	541,044	-	23,740
Fines and forfeitures	-	-	-	-	-	-
Charges for services	-	-	-	-	-	-
Intergovernmental	-	103,766	-	-	5,552,349	-
Investment earnings	-	-	-	-	5,780	-
Miscellaneous	-	-	-	1,078	64,207	-
Total revenues	-	103,766	-	542,122	5,622,336	23,740
EXPENDITURES						
Current						
General government	-	53,526	33,974	378,818	1,175,715	-
Public safety	-	-	-	-	2,264,580	-
Judicial	-	-	-	-	191,357	18,000
Community services	-	-	-	-	1,816,689	-
Conservation	-	-	-	-	-	-
Transportation	-	-	-	-	-	-
Debt service						
Principal	-	-	-	-	-	-
Interest and other charges	-	-	-	-	-	-
Bond issuance fees	-	-	-	-	-	-
Capital outlay	-	50,260	-	21,539	173,995	-
Total expenditures	-	103,786	33,974	400,357	5,622,336	18,000
EXCESS (DEFICIENCY) OF REVENUES OVER (UNDER) EXPENDITURES	-	(20)	(33,974)	141,765	-	5,740
OTHER FINANCING SOURCES (USES)						
Issuance of long-tern debt	-	-	-	-	-	-
Premium on issuance of long-term debt	-	-	-	-	-	-
Discount on issuance of long-term debt	-	-	-	-	-	-
Payment to bond escrow agent	-	-	-	-	-	-
Transfers in	-	-	118,143	-	-	-
Transfers out	-	-	-	(118,143)	-	-
Total other financing sources and uses	-	-	118,143	(118,143)	-	-
NET CHANGE IN FUND BALANCES	-	(20)	84,169	23,622	-	5,740
FUND BALANCES, BEGINNING	1,339	20	469,434	271,931	-	108,740
FUND BALANCES, ENDING	$ 1,339	$ -	$ 553,603	$ 295,553	$ -	$ 114,480

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2016

Justice Court Technology	Justice of the Peace Security	Juvenile Delinquency Prevention	Law Library	Pearson Place Road District	Probate Court	Records Archive	Records Management and Preservatior
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
59,059	14,635	17	207,253	-	5,801	589,295	1,257,141
-	-	-	-	-	-	-	-
-	-	-	-	-	-		-
-	-	-	-	-	-	-	-
1,335	-	-	923	1,950	-	4,842	5,158
-	-	-	228	-	-	-	-
60,394	14,635	17	208,404	1,950	5,801	594,137	1,262,299
-	-	-	-	-	-	308,681	651,492
-	-	-	-	-	-	-	-
85,759	4,354	-	241,281	-	3,244	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	219,641	-	-	-
-	-	-	-	-	-	-	308,094
85,759	4,354	-	241,281	219,641	3,244	308,681	959,586
(25,365)	10,281	17	(32,877)	(217,691)	2,557	285,456	302,713
-	-	-	-	5,315,000	-	-	-
-	-	-	-	333,363	-	-	-
-	-	-	-	(11,178)			
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	5,637,185	-	-	-
(25,365)	10,281	17	(32,877)	5,419,494	2,557	285,456	302,713
488,488	116,149	8,153	356,066	-	44,555	1,801,630	1,889,046
$ 463,123	$ 126,430	$ 8,170	$ 323,189	$ 5,419,494	$ 47,112	$ 2,087,086	$ 2,191,759

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	Records Management	Records Technology	Regional Animal Shelter (WCRAS)	Specialty Court	JJAEP Tier II	Tobacco
REVENUES						
Taxes	$ -	$ -	$ -	$ -	$ -	$ -
Fees of office	105,278	52,089	201,832	40,346	-	-
Fines and forfeitures	-	-	-	-	-	-
Charges for services	-	-	-	-	-	-
Intergovernmental	-	-	972,260	-	126,784	368,892
Investment earnings	1,226	-	-	-	-	23,990
Miscellaneous	-	-	227,140	7,092	-	-
Total revenues	106,504	52,089	1,401,232	47,438	126,784	392,882
EXPENDITURES						
Current						
General government	30,221	-	-	-	-	-
Public safety	-	-	-	-	36,468	-
Judicial	-	-	-	52,727	-	-
Community services	-	-	1,480,314	-	-	496,160
Conservation	-	-	-	-	-	-
Debt service						
Principal	-	-	-	-	-	-
Interest and other charges	-	-	-	-	-	-
Bond issuance fees	-	-	-	-	-	-
Capital outlay	-	-	-	-	-	-
Total expenditures	30,221	-	1,480,314	52,727	36,468	496,160
EXCESS (DEFICIENCY) OF REVENUES OVER (UNDER) EXPENDITURES	76,283	52,089	(79,082)	(5,289)	90,316	(103,278)
OTHER FINANCING SOURCES (USES)						
Issuance of long-term debt	-	-	-	-	-	-
Premium on issuance of long-term debt	-	-	-	-	-	-
Discount on issuance of long-term debt	-	-	-	-	-	-
Payment to bond escrow agent	-	-	-	-	-	-
Transfers in	-	-	589,273	-	-	-
Transfers out	-	-	-	-	-	-
Total other financing sources and uses	-	-	589,273	-	-	-
NET CHANGE IN FUND BALANCES	76,283	52,089	510,191	(5,289)	90,316	(103,278)
FUND BALANCES, BEGINNING	444,104	206,950	168,573	113,972	269,615	3,926,535
FUND BALANCES, ENDING	$ 520,387	$ 259,039	$ 678,764	$ 108,683	$ 359,931	$ 3,823,257

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES – CONTINUED
NONMAJOR GOVERNMENTAL FUNDS
YEAR ENDED SEPTEMBER 30, 2016

Teen Court Program	Truancy Program	WC Historical Commission	WM - Community WM - City of and Hutto ISD	WM - Community Recreation Facility	WM - Future Environmental Liability	WM - Master Site Development	Total Governmental Funds
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,249,383
310	90,972	-	-	-	-	-	4,346,412
-	-	-	-	-	-	-	136,956
-	-	-	-	-	-	-	1,450,454
-	-	-	-	-	-	-	7,124,051
-	-	-	-	-	4,448	-	64,511
1,500	-	500	246,194	123,559	246,194	123,559	1,530,559
1,810	90,972	500	246,194	123,559	250,642	123,559	15,902,326
-	44,619	-	-	-	-	-	2,692,482
-	-	-	-	-	-	-	3,650,137
1,171	-	-	-	-	-	-	958,809
-	-	4,074	450,000	132,000	-	-	5,006,411
-	-	-	-	-	-	-	308,850
-	-	-	-	-	-	-	920,000
-	-	-	-	-	-	-	315,873
-	-	-	-	-	-	-	326,545
-	-	-	-	18,113	-	-	801,267
1,171	44,619	4,074	450,000	150,113	-	-	14,980,374
639	46,353	(3,574)	(203,806)	(26,554)	250,642	123,559	921,952
-	-	-	-	-	-	-	8,210,000
-	-	-	-	-	-	-	406,238
-	-	-	-	-	-	-	(11,178)
-	-	-	-	-	-	-	(2,902,163)
-	-	-	-	-	-	-	707,416
-	-	-	-	-	-	-	(143,143)
-	-	-	-	-	-	-	6,267,170
639	46,353	(3,574)	(203,806)	(26,554)	250,642	123,559	7,189,122
474	235,173	10,546	592,034	376,707	965,772	416,835	20,554,984
$ 1,113	$ 281,526	$ 6,972	$ 388,228	$ 350,153	$ 1,216,414	$ 540,394	$ 27,744,106

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
ALTERNATE DISPUTE RESOLUTION
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 19,000	$ 20,138	$ 1,138
Investment earnings	100	636	536
Total revenues	19,100	20,774	1,674
EXPENDITURES			
Current			
Judicial	8,284	4,805	3,479
Total expenditures	8,284	4,805	3,479
Net change in fund balance	10,816	15,969	5,153
FUND BALANCE, beginning	277,307	277,307	-
FUND BALANCE, ending	$ 288,123	$ 293,276	$ 5,153

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
AVERY RANCH ROAD DISTRICT
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Taxes	$ 1,244,713	$ 1,249,383	$ 4,670
Investment earnings	600	3,505	2,905
Total revenues	1,245,313	1,252,888	7,575
EXPENDITURES			
Current			
General government	20,500	15,436	5,064
Debt service			
Principal	920,000	920,000	-
Interest and other charges	315,883	315,873	10
Bond issuance fees	106,904	106,904	-
Total expenditures	1,363,287	1,358,213	5,074
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	(117,974)	(105,325)	12,649
OTHER FINANCING SOURCES (USES)			
Issuance of long-term debt	2,895,000	2,895,000	-
Premium on issuance of long-term debt	72,875	72,875	-
Payment to bond escrow agent	(2,902,163)	(2,902,163)	-
Total other financing sources and (uses)	65,712	65,712	-
Net change in fund balance	(117,974)	(39,613)	78,361
FUND BALANCE, beginning	480,243	480,243	-
FUND BALANCE, ending	$ 362,269	$ 440,630	$ 78,361

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
CONSERVATION FOUNDATION
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Investment earnings	$ -	$ 3,570	$ 3,570
Miscellaneous	3,147	482,552	479,405
Total revenues	3,147	486,122	482,975
EXPENDITURES			
Current			
Conservation	503,431	308,850	194,581
Total expenditures	503,431	308,850	194,581
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	(500,284)	177,272	677,556
OTHER FINANCING SOURCES (USES)			
Transfers in	-	-	-
Transfers out	-	-	-
Total other financing sources and uses	-	-	-
Net change in fund balance	(500,284)	177,272	677,556
FUND BALANCE, beginning	1,278,765	1,278,765	-
FUND BALANCE, ending	$ 778,481	$ 1,456,037	$ 677,556

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
COUNTY ATTORNEY HOT CHECK
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 25,000	$ 21,610	$ (3,390)
Total revenues	25,000	21,610	(3,390)
EXPENDITURES			
Current			
Judicial	1,695	1,020	675
Total expenditures	1,695	1,020	675
EXCESS OF REVENUES OVER EXPENDITURES	23,305	20,590	(2,715)
OTHER FINANCING USES			
Transfers out	(25,000)	(25,000)	-
Total other financing sources and uses	(25,000)	(25,000)	-
Net change in fund balance	(1,695)	(4,410)	(2,715)
FUND BALANCE, beginning	14,433	14,433	-
FUND BALANCE, ending	$ 12,738	$ 10,023	$ (2,715)

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
COUNTY SHERIFF DRUG ENFORCMENT
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fines and forfeitures	$ 32,604	$ 122,197	$ 89,593
Investment earnings	-	1,024	1,024
Total revenues	32,604	123,221	90,617
EXPENDITURES			
Current			
Public safety	794,465	134,679	659,786
Capital outlay	172,339	164,369	7,970
Total expenditures	966,804	299,048	667,756
Net change in fund balance	(934,200)	(175,827)	758,373
FUND BALANCE, beginning	952,686	952,686	-
FUND BALANCE, ending	$ 18,486	$ 776,859	$ 758,373

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
COUNTY RADIO COMMUNICATIONS SYSTEM (RCS)
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Charges for services	$ 1,135,683	$ 1,152,676	$ 16,993
Miscellaneous	6,180	6,756	576
Total revenues	1,141,863	1,159,432	17,569
EXPENDITURES			
Current			
Public safety	1,246,219	1,099,355	146,864
Capital outlay	50,500	33,397	17,103
Total expenditures	1,296,719	1,132,752	163,967
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	(154,856)	26,680	181,536
OTHER FINANCING SOURCES			
Transfers in	154,856	-	(154,856)
Total other financing sources	154,856	-	(154,856)
Net change in fund balance	-	26,680	26,680
FUND BALANCE, beginning	-	-	-
FUND BALANCE, ending	$ -	$ 26,680	$ 26,680

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
COURT REPORTER
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 95,000	$ 100,689	$ 5,689
Investment earnings	250	3,141	2,891
Total revenues	95,250	103,830	8,580
EXPENDITURES			
Current			
Judicial	79,687	79,687	-
Total expenditures	79,687	79,687	-
Net change in fund balance	15,563	24,143	8,580
FUND BALANCE, beginning	1,134,958	1,134,958	-
FUND BALANCE, ending	$ 1,150,521	$ 1,159,101	$ 8,580

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
COURTHOUSE SECURITY
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 207,000	$ 213,186	$ 6,186
Investment earnings	-	302	302
Total revenues	207,000	213,488	6,488
EXPENDITURES			
Current			
Judicial	263,195	196,034	67,161
Capital Outlay	29,150	27,820	1,330
Total expenditures	292,345	223,854	68,491
Net change in fund balance	(85,345)	(10,366)	74,979
FUND BALANCE, beginning	202,395	202,395	-
FUND BALANCE, ending	$ 117,050	$ 192,029	$ 74,979

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
DISTRICT ATTORNEY ASSET FORFEITURES
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fines and forfeitures	$ -	$ 14,759	$ 14,759
Investment earnings	-	355	355
Total revenues	-	15,114	15,114
EXPENDITURES			
Current			
Judicial	76,163	29,194	46,969
Capital outlay	9,700	3,680	6,020
Total expenditures	85,863	32,874	52,989
Net change in fund balance	(85,863)	(17,760)	68,103
FUND BALANCE, beginning	249,871	249,871	-
FUND BALANCE, ending	$ 164,008	$ 232,111	$ 68,103

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
ELECTION CHAPTER 19
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Intergovernmental	$ -	$ 103,766	$ 103,766
Total revenues	-	103,766	103,766
EXPENDITURES			
Current			
General government	75,782	53,526	22,256
Capital outlay	50,500	50,260	240
Total expenditures	126,282	103,786	22,496
Net change in fund balance	(126,282)	(20)	126,262
FUND BALANCE, beginning	20	20	-
FUND BALANCE, ending	$ (126,262)	$ -	$ 126,262

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
ELECTION HAVA
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES	$ -	$ -	$ -
EXPENDITURES			
Current			
General government	65,000	33,974	31,026
Total expenditures	65,000	33,974	31,026
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	(65,000)	(33,974)	31,026
OTHER FINANCING SOURCES			
Transfers in	-	118,143	118,143
Total other financing sources and uses	-	118,143	118,143
Net change in fund balance	(65,000)	84,169	149,169
FUND BALANCE, beginning	469,434	469,434	-
FUND BALANCE, ending	$ 404,434	$ 553,603	$ 149,169

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
ELECTION SERVICES CONTRACT
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ -	$ 541,044	$ 541,044
Miscellaneous	-	1,078	1,078
Total revenues	-	542,122	542,122
EXPENDITURES			
Current			
General government	388,038	378,818	9,220
Capital outlay	47,000	21,539	25,461
Total expenditures	435,038	400,357	34,681
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	(435,038)	141,765	576,803
OTHER FINANCING SOURCES (USES)			
Transfers out	(196,008)	(118,143)	77,865
Total other financing sources and uses	(196,008)	(118,143)	77,865
Net change in fund balance	(631,046)	23,622	654,668
FUND BALANCE, beginning	271,931	271,931	-
FUND BALANCE, ending	$ (359,115)	$ 295,553	$ 654,668

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
GUARDIANSHIP
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 20,000	$ 23,740	$ 3,740
Total revenues	20,000	23,740	3,740
EXPENDITURES			
Current			
Judicial	18,000	18,000	-
Total expenditures	18,000	18,000	-
Net change in fund balance	2,000	5,740	3,740
FUND BALANCE, beginning	108,740	108,740	-
FUND BALANCE, ending	$ 110,740	$ 114,480	$ 3,740

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
JUSTICE COURT TECHNOLOGY
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 70,230	$ 59,059	$ (11,171)
Investment earnings	225	1,335	1,110
Total revenues	70,455	60,394	(10,061)
EXPENDITURES			
Current			
Judicial	187,995	85,759	102,236
Capital outlay	25,000	-	25,000
Total expenditures	212,995	85,759	127,236
Net change in fund balance	(142,540)	(25,365)	117,175
FUND BALANCE, beginning	488,488	488,488	-
FUND BALANCE, ending	$ 345,948	$ 463,123	$ 117,175

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
JUSTICE OF THE PEACE SECURITY
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 17,280	$ 14,635	$ (2,645)
Total revenues	17,280	14,635	(2,645)
EXPENDITURES			
Current			
Judicial	30,260	4,354	25,906
Total expenditures	30,260	4,354	25,906
Net change in fund balance	(12,980)	10,281	23,261
FUND BALANCE, beginning	116,149	116,149	-
FUND BALANCE, ending	$ 103,169	$ 126,430	$ 23,261

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
LAW LIBRARY
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 192,000	$ 207,253	$ 15,253
Investment earnings	200	923	723
Miscellaneous	500	228	(272)
Total revenues	192,700	208,404	15,704
EXPENDITURES			
Current			
Judicial	276,200	241,281	34,919
Total expenditures	276,200	241,281	34,919
Net change in fund balance	(83,500)	(32,877)	50,623
FUND BALANCE, beginning	356,066	356,066	-
FUND BALANCE, ending	$ 272,566	$ 323,189	$ 50,623

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
PROBATE COURT
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 5,000	$ 5,801	$ 801
Total revenues	5,000	5,801	801
EXPENDITURES			
Current			
Judicial	3,800	3,244	556
Total expenditures	3,800	3,244	556
Net change in fund balance	1,200	2,557	1,357
FUND BALANCE, beginning	44,555	44,555	-
FUND BALANCE, ending	$ 45,755	$ 47,112	$ 1,357

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
RECORDS ARCHIVE
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 520,000	$ 589,295	$ 69,295
Investment earnings	625	4,842	4,217
Total revenues	520,625	594,137	73,512
EXPENDITURES			
Current			
General government	344,994	308,681	36,313
Total expenditures	344,994	308,681	36,313
Net change in fund balance	175,631	285,456	109,825
FUND BALANCE, beginning	1,801,630	1,801,630	-
FUND BALANCE, ending	$ 1,977,261	$ 2,087,086	$ 109,825

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
RECORDS MANAGEMENT AND PRESERVATION
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 1,116,250	$ 1,257,141	$ 140,891
Investment earnings	250	5,158	4,908
Total revenues	1,116,500	1,262,299	145,799
EXPENDITURES			
Current			
General government	1,056,524	651,492	405,032
Capital outlay	325,000	308,094	16,906
Total expenditures	1,381,524	959,586	421,938
Net change in fund balance	(265,024)	302,713	567,737
FUND BALANCE, beginning	1,889,046	1,889,046	-
FUND BALANCE, ending	$ 1,624,022	$ 2,191,759	$ 567,737

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
RECORDS MANAGEMENT
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 105,250	$ 105,278	$ 28
Investment earnings	225	1,226	1,001
Total revenues	105,475	106,504	1,029
EXPENDITURES			
Current			
General government	118,925	30,221	88,704
Capital outlay	-	-	-
Total expenditures	118,925	30,221	88,704
Net change in fund balance	(13,450)	76,283	89,733
FUND BALANCE, beginning	444,104	444,104	-
FUND BALANCE, ending	$ 430,654	$ 520,387	$ 89,733

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
REGIONAL ANIMAL SHELTER (WCRAS)
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 203,500	$ 201,832	$ (1,668)
Intergovernmental	695,430	972,260	276,830
Miscellaneous	177,032	227,140	50,108
Total revenues	1,075,962	1,401,232	325,270
EXPENDITURES			
Current			
Community services	1,744,823	1,480,314	264,509
Total expenditures	1,744,823	1,480,314	264,509
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	(668,861)	(79,082)	589,779
OTHER FINANCING SOURCES			
Transfers in	718,333	589,273	(129,060)
Total other financing sources	718,333	589,273	(129,060)
Net change in fund balance	49,472	510,191	460,719
FUND BALANCE, beginning	168,573	168,573	-
FUND BALANCE, ending	$ 218,045	$ 678,764	$ 460,719

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
SPECIALTY COURT
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 36,800	$ 40,346	$ 3,546
Miscellaneous	-	7,092	7,092
Total revenues	36,800	47,438	10,638
EXPENDITURES			
Current			
Judicial	56,650	52,727	3,923
Total expenditures	56,650	52,727	3,923
Net change in fund balance	(19,850)	(5,289)	14,561
FUND BALANCE, beginning	113,972	113,972	-
FUND BALANCE, ending	$ 94,122	$ 108,683	$ 14,561

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
JJAEP TIER II
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Intergovernmental	$ -	$ 126,784	$ 126,784
Total revenues	-	126,784	126,784
EXPENDITURES			
Current			
Public safety	65,718	36,468	29,250
Total expenditures	65,718	36,468	29,250
Net change in fund balance	(65,718)	90,316	156,034
FUND BALANCE, beginning	269,615	269,615	-
FUND BALANCE, ending	$ 203,897	$ 359,931	$ 156,034

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
TOBACCO
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Intergovernmental	$ 350,000	$ 368,892	$ 18,892
Investment income	25,000	23,990	(1,010)
Total revenues	375,000	392,882	17,882
EXPENDITURES			
Current			
Community services	511,000	496,160	14,840
Total expenditures	511,000	496,160	14,840
Net change in fund balance	(136,000)	(103,278)	32,722
FUND BALANCE, beginning	3,926,535	3,926,535	-
FUND BALANCE, ending	$ 3,790,535	$ 3,823,257	$ 32,722

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
TEEN COURT PROGRAM
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 200	$ 310	$ 110
Miscellaneous	-	1,500	1,500
Total revenues	200	1,810	1,610
EXPENDITURES			
Current			
Judicial	2,250	1,171	1,079
Total expenditures	2,250	1,171	1,079
Net change in fund balance	(2,050)	639	2,689
FUND BALANCE, beginning	474	474	-
FUND BALANCE, ending	$ (1,576)	$ 1,113	$ 2,689

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
TRUANCY PROGRAM
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Fees of office	$ 92,695	$ 90,972	$ (1,723)
Total revenues	92,695	90,972	(1,723)
EXPENDITURES			
Current			
Judicial	206,195	44,619	161,576
Total expenditures	206,195	44,619	161,576
Net change in fund balance	(113,500)	46,353	159,853
FUND BALANCE, beginning	235,173	235,173	-
FUND BALANCE, ending	$ 121,673	$ 281,526	$ 159,853

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE – BUDGET AND ACTUAL
WC HISTORICAL COMMISSION
YEAR ENDED SEPTEMBER 30, 2016

	Final	Actual	Variance Positive (Negative)
REVENUES			
Miscellaneous	$ 1,000	$ 500	$ (500)
Total revenues	1,000	500	(500)
EXPENDITURES			
Current			
Community service	4,074	4,074	-
Total expenditures	4,074	4,074	-
Net change in fund balance	(3,074)	(3,574)	(500)
FUND BALANCE, beginning	10,546	10,546	-
FUND BALANCE, ending	$ 7,472	$ 6,972	$ (500)

INTERNAL SERVICE FUNDS

Internal Service Funds are used to account for the financing of goods or services provided by one department to other departments of the County on a cost-reimbursement basis.

Benefits Program – This fund is used to account for the accumulation and allocation of costs associated with medical and dental benefits.

Fleet Maintenance – This fund is used to account for the maintenance and repair of motor vehicle and related costs.

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF NET POSITION
INTERNAL SERVICE FUNDS
SEPTEMBER 30, 2016

	Benefits Program	Fleet Management	Total
ASSETS			
Current assets			
Cash and investments	$ 3,389,614	$ 845,679	$ 4,235,293
Accounts receivables	98,268	3,039	101,307
Inventory	-	144,034	144,034
Prepaid expenses	15,231	-	15,231
Total current assets	3,503,113	992,752	4,495,865
Non-current assets			
Capital assets			
Machinery and equipment	-	482,948	482,948
Less accumulated depreciation	-	(365,657)	(365,657)
Total non-current assets	-	117,291	117,291
Total assets	3,503,113	1,110,043	4,613,156
LIABILITIES			
Current liabilities			
Accounts payable	31,845	156,803	188,648
Accrued liabilities	834,057	24,247	858,304
Total current liabilities	865,902	181,050	1,046,952
NET POSITION			
Net investment in capital assets	-	117,291	117,291
Unrestricted	2,637,211	811,702	3,448,913
TOTAL NET POSITION	$ 2,637,211	$ 928,993	$ 3,566,204

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF REVENUES, EXPENSES
AND CHANGES IN FUND NET POSITION
INTERNAL SERVICE FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	Benefits Program	Fleet Management	Total
OPERATING REVENUES			
Employer contributions	$ 15,475,600	$ -	$ 15,475,600
Employee contributions	3,558,308	-	3,558,308
Charge for services	-	3,004,714	3,004,714
Total operating revenues	19,033,908	3,004,714	22,038,622
OPERATING EXPENSES			
Claims	16,135,346	-	16,135,346
Insurance	1,210,930	-	1,210,930
Administration	1,493,833	-	1,493,833
Supplies and parts	-	2,827,814	2,827,814
Depreciation	-	18,771	18,771
Total operating expenses	18,840,109	2,846,585	21,686,694
OPERATING INCOME	193,799	158,129	351,928
NON-OPERATING REVENUES			
Interest and investment revenue	14,863	-	14,863
Total non-operating revenues	14,863	-	14,863
CHANGE IN NET POSITION	208,662	158,129	366,791
TOTAL NET POSITION, beginning	2,428,549	770,864	3,199,413
TOTAL NET POSITION, ending	$ 2,637,211	$ 928,993	$ 3,566,204

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF CASH FLOWS
INTERNAL SERVICE FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	Benefits Program	Fleet Management	Total
CASH FLOWS FROM OPERATING ACTIVITIES			
Receipts from customers and users	$ 19,111,850	$ 3,015,063	$ 22,126,913
Payments to suppliers	(17,209,956)	(2,760,588)	(19,970,544)
Payments to employees	(1,485,761)	-	(1,485,761)
Net cash flows provided by operating activities	416,133	254,475	670,608
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES			
Acquisition and construction of capital assets	-	(40,022)	(40,022)
Net cash flows used in capital and related financing activities	-	(40,022)	(40,022)
CASH FLOWS FROM INVESTING ACTIVITIES			
Investment earnings	14,863	-	14,863
Net cash flows provided by investing activities	14,863	-	14,863
Change in cash and cash equivalents	430,996	214,453	645,449
CASH AND CASH EQUIVALENTS, beginning	2,958,618	631,226	3,589,844
CASH AND CASH EQUIVALENTS, ending	$ 3,389,614	$ 845,679	$ 4,235,293
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES			
Operating income	$ 193,799	$ 158,129	$ 351,928
Adjustments to reconcile operating income to net cash provided by operating activities			
Depreciation	-	18,771	18,771
Change in assets and liabilities			
Accounts receivable	77,942	10,349	88,291
Due from other funds	8,072	29,755	37,827
Inventory	-	21,671	21,671
Prepaid expenses	(15,231)	-	(15,231)
Accounts payable	(137,513)	36,314	(101,199)
Accrued liabilities	289,064	(20,514)	268,550
Net cash provided by operating activities	$ 416,133	$ 254,475	$ 670,608

FIDUCIARY FUNDS

Agency Funds

Agency Funds serve primarily as clearing mechanisms for cash resources, which are collected by a governmental unit, held as such for a brief period, and then distributed to authorized recipients.

The following comprise the County's Agency Funds:

- CCA-ICE Billing
- Child Fatality Review Team
- County Attorney Hot Check Restitution
- County Clerk Trust
- District Attorney
- District Clerk Trust
- Historical Commission
- Inmate Trust
- Justice of the Peace Bond
- Juvenile Probation
- Outreach Program
- Sheriff Special Cash Bond
- Tax Assessor – Collector

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF CHANGES IN ASSETS AND LIABILITIES – ALL AGENCY FUNDS
YEAR ENDED SEPTEMBER 30, 2016

	Balance Beginning of Year	Additions	Deductions	Balance End of Year
FLEX BENEFITS - AETNA				
Assets				
Cash and investments	$ 178,345	$ 765,727	$ 755,934	$ 188,138
Liabilities				
Due to others	$ 178,345	$ 765,727	$ 755,934	$ 188,138
CCA/ICE BILLING				
Assets				
Cash and investments	$ -	$ 18,361,772	$ 16,774,636	$ 1,587,136
Accounts receivable	1,519,931	1,554,469	1,519,931	1,554,469
Total assets	$ 1,519,931	$ 19,916,241	$ 18,294,567	$ 3,141,605
Liabilities				
Due to others	$ 1,519,931	$ 19,916,241	$ 18,294,567	$ 3,141,605
CHILD FATALITY REVIEW TEAM				
Assets				
Cash and investments	$ -	$ -	$ -	$ -
Liabilities				
Due to others	$ -	$ -	$ -	$ -
COUNTY ATTORNEY				
HOT CHECK RESTITUTION				
Assets				
Cash and investments	$ 83,916	$ 203,452	$ 277,860	$ 9,508
Liabilities				
Due to others	$ 83,916	$ 203,452	$ 277,860	$ 9,508
COUNTY CLERK TRUST				
Assets				
Cash and investments	$ 2,217,372	$ 9,549,011	$ 8,281,453	$ 3,484,930
Liabilities				
Due to others	$ 2,217,372	$ 9,549,011	$ 8,281,453	$ 3,484,930
DISTRICT ATTORNEY				
Assets				
Cash and investments	$ 336,183	$ 772,423	$ 530,481	$ 578,125
Liabilities				
Due to others	$ 336,183	$ 772,423	$ 530,481	$ 578,125
DISTRICT CLERK TRUST				
Assets				
Cash and investments	$ 1,895,674	$ 2,724,817	$ 2,004,019	$ 2,616,472
Liabilities				
Due to others	$ 1,895,674	$ 2,724,817	$ 2,004,019	$ 2,616,472

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF CHANGES IN ASSETS AND LIABILITIES – ALL AGENCY FUNDS – CONTINUED
YEAR ENDED SEPTEMBER 30, 2016

	Balance Beginning of Year	Additions	Deductions	Balance End of Year
INMATE TRUST				
Assets				
Cash and investments	$ 102,378	$ 2,194,037	$ 2,195,020	$ 101,395
Liabilities				
Due to others	$ 102,378	$ 2,194,037	$ 2,195,020	$ 101,395
JUSTICE OF THE PEACE BOND				
Assets				
Cash and investments	$ 4,372	$ 9,214	$ 10,435	$ 3,151
Liabilities				
Due to others	$ 4,372	$ 9,214	$ 10,435	$ 3,151
JUVENILE PROBATION				
Assets				
Cash and investments	$ 417,015	$ 113,672	$ 125,613	$ 405,074
Liabilities				
Due to others	$ 417,015	$ 113,672	$ 125,613	$ 405,074
OUTREACH PROGRAM				
Assets				
Cash and investments	$ 2,426	$ 29,395	$ 28,488	$ 3,333
Liabilities				
Due to others	$ 2,426	$ 29,395	$ 28,488	$ 3,333

WILLIAMSON COUNTY, TEXAS
COMBINING STATEMENT OF CHANGES IN ASSETS AND LIABILITIES – ALL AGENCY FUNDS – CONTINUED
YEAR ENDED SEPTEMBER 30, 2016

	Balance Beginning of Year	Additions	Deductions	Balance End of Year
SHERIFF SPECIAL CASH BOND				
Assets				
Cash and investments	$ 51,715	$ 1,401,867	$ 1,378,980	$ 74,602
Liabilities				
Due to others	$ 51,715	$ 1,401,867	$ 1,378,980	$ 74,602
TAX ASSESSOR-COLLECTOR				
Assets				
Cash and investments	$ 7,857,131	$ 2,391,937,619	$ 2,391,767,482	$ 8,027,268
Liabilities				
Due to others	$ 7,857,131	$ 2,391,937,619	$ 2,391,767,482	$ 8,027,268
TOTALS - ALL AGENCY FUNDS				
Assets				
Cash and investments	$ 13,146,527	$ 2,428,063,006	$ 2,424,130,401	$ 17,079,132
Accounts receivable	1,519,931	1,554,469	(1,519,931)	1,554,469
	14,666,458	2,429,617,475	2,422,610,470	18,633,601
Liabilities				
Due to others	$ 14,666,458	$ 2,429,617,475	$ 2,425,650,332	$ 18,633,601

STATISTICAL SECTION
(Unaudited)

This portion of Williamson County's comprehensive annual financial report presents multiple years of data to provide a historical perspective for understanding the information available in the financial statements, note disclosures, and required supplementary information and for assessing the County's overall financial health.

Contents **Page**

Financial Trends 123
These schedules contain trend information to help the reader understand how the County's financial performance and well-being have changed over time.

Revenue Capacity 127
These schedules contain trend information to help the reader assess the County's most significant local revenue resource.

Debt Capacity 132
These schedules contain trend information to help the reader assess the affordability of the County's current levels of outstanding debt and the County's ability to issue additional debt in the future.

Economic and Demographic Indicators 136
These schedules contain economic and demographic information to help the reader understand the environment within which the County's financial activities take place.

Operating Information 140
These schedules contain service and infrastructure data to help the reader understand how the information in the County's financial report relates to the services and activities performed by the County.

Miscellaneous Information 143
These pages contain additional data about the area, communities, colleges, medical facilities, and County government offices.

TABLE 1

WILLIAMSON COUNTY, TEXAS
NET POSITION BY COMPONENT
LAST TEN FISCAL YEARS
(Full accrual basis of accounting)

	Fiscal Year									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Government Activities										
Net investment in capital assets	$ 365,342,452	$ 445,160,755	$ 253,798,426	$ 264,889,158	$ 206,599,134	$ 210,678,161	$ 176,951,689	$ 199,531,984	$ 140,117,628	$ 184,660,300
Restricted	49,879,697	42,611,846	35,850,736	32,752,322	38,938,961	45,121,020	154,293,857	49,826,237	37,344,812	31,411,957
Unrestricted	(287,988,424)	(348,784,532)	(174,517,303)	(183,515,394)	(38,966,492)	(49,146,501)	(144,080,084)	(164,631,030)	(160,037,655)	(183,152,945)
Total government activities net position	$ 127,233,725	$ 138,988,069	$ 115,131,859	$ 114,126,086	$ 206,571,603	$ 206,652,680	$ 187,165,462	$ 84,727,191	$ 17,424,785	$ 32,919,312
Primary Government										
Net investment in capital assets	$ 365,342,452	$ 445,160,755	$ 253,798,426	$ 264,889,158	$ 206,599,134	$ 210,678,161	$ 176,951,689	$ 199,531,984	$ 140,117,628	$ 184,660,300
Restricted	49,879,697	42,611,846	35,850,736	32,752,322	38,938,961	45,121,020	154,293,857	49,826,237	37,344,812	31,411,957
Unrestricted	(287,988,424)	(348,784,532)	(174,517,303)	(183,515,394)	(38,966,492)	(49,146,501)	(144,080,084)	(164,631,030)	(160,037,655)	(183,152,945)
Total primary government net position	$ 127,233,725	$ 138,988,069	$ 115,131,859	$ 114,126,086	$ 206,571,603	$ 206,652,680	$ 187,165,462	$ 84,727,191	$ 17,424,785	$ 32,919,312

Source: Comprehensive Annual Financial Report

Notes:
Financial data includes Avery Ranch and Pearson Place Road Districts (blended component unit).

TABLE 2

WILLIAMSON COUNTY, TEXAS
CHANGES IN NET POSITION
LAST TEN FISCAL YEARS
(Full accrual basis of accounting)

	Fiscal Year									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Expenses										
Government activities										
General government	$ 48,471,235	$ 33,113,079	$ 32,522,582	$ 30,908,617	$ 30,302,088	$ 28,267,782	$ 26,637,924	$ 27,928,481	$ 24,893,815	$ 23,497,198
Public safety	115,818,653	87,932,683	88,098,767	80,001,178	79,174,507	78,208,556	75,872,505	72,323,851	61,670,538	90,897,137
Transportation support	99,775,558	78,977,229	87,436,401	185,691,679	58,930,917	65,354,413	67,938,312	31,965,828	70,415,173	20,028,127
Judicial	31,025,054	23,581,105	22,685,570	20,693,148	20,150,173	19,997,874	20,022,346	18,790,314	17,135,891	15,557,642
Community services	21,383,743	18,727,680	16,796,646	16,431,859	12,808,543	11,714,612	17,361,323	15,523,563	11,981,593	9,646,823
Conservation	560,710	407,345	347,751	773,438	676,913	247,844	219,592	187,912	-	-
Interest on long term debt	41,283,450	40,308,534	35,634,706	33,244,626	36,995,878	37,591,938	38,843,957	34,418,384	34,786,909	25,108,101
Total government activities expenses	358,318,403	283,047,655	283,522,423	367,744,545	239,039,019	241,383,019	246,895,959	201,138,333	220,883,919	184,735,028
Total primary government expenses	358,318,403	283,047,655	283,522,423	367,744,545	239,039,019	241,383,019	246,895,959	201,138,333	220,883,919	184,735,028
Program Revenues										
Government activities										
Fees, Fines and Charges for Services:										
General government	16,936,279	15,659,297	13,561,355	12,991,449	10,862,040	9,840,478	8,672,102	8,527,672	8,159,720	8,016,465
Public safety	12,310,097	14,976,278	15,081,873	15,954,635	14,108,707	12,971,784	14,282,342	10,521,690	10,889,257	43,221,647
Transportation support	6,267,221	6,155,099	5,944,938	5,311,044	5,111,192	5,552,097	5,055,053	5,517,109	6,058,560	6,014,536
Judicial	5,920,681	6,019,784	6,862,678	7,036,985	6,924,358	7,361,257	7,213,109	7,319,186	7,666,021	7,809,982
Community services	2,515,080	1,613,488	1,610,982	1,579,830	1,460,491	1,361,504	1,308,480	1,259,111	1,379,501	723,092
Operating grants and contributions	7,021,670	7,327,581	11,059,515	16,559,081	17,329,641	20,693,428	24,456,855	7,218,056	7,373,406	11,570,786
Capital grants and contributions	63,114,526	59,565,089	49,107,663	40,505,315	14,209,320	35,698,166	65,803,237	62,746,368	1,807,836	1,998,962
Total governmental activities program revenues	114,085,554	111,316,616	103,229,004	99,938,339	70,005,749	93,478,714	126,791,178	103,109,192	43,334,301	79,355,470
Total primary government program revenues	114,085,554	111,316,616	103,229,004	99,938,339	70,005,749	93,478,714	126,791,178	103,109,192	43,334,301	79,355,470
Net (expense) revenue										
Government Activities	(244,232,849)	(171,842,498)	(180,293,419)	(267,806,206)	(169,033,270)	(147,904,305)	(120,104,781)	(98,029,141)	(177,549,618)	(105,379,558)
Total Primary government net expense	(244,232,849)	(171,842,498)	(180,293,419)	(267,806,206)	(169,033,270)	(147,904,305)	(120,104,781)	(98,029,141)	(177,549,618)	(105,379,558)
General Revenues and other Changes in Net Position										
Government Activities										
Taxes										
Property taxes, levied for general purposes	$ 128,577,499	$ 116,814,321	$ 104,957,462	$ 99,126,344	$ 97,647,471	$ 96,497,886	$ 97,632,658	$ 89,753,407	$ 81,973,085	$ 72,536,843
Property taxes, levied for farm to market	18,552,068	16,521,025	14,681,846	13,815,558	10,261,395	10,063,148	10,135,443	10,894,429	10,376,729	9,688,093
Property taxes, levied for debt service	79,408,330	70,940,367	63,279,169	59,780,481	58,518,962	57,347,077	57,980,103	55,094,237	54,244,437	46,495,030
Other taxes	1,328,610	1,118,611	987,258	712,987	561,950	594,840	577,272	542,286	558,929	493,372
Investment earnings	2,826,060	1,291,116	564,343	739,574	1,048,743	2,149,871	5,704,603	9,017,001	14,777,336	12,767,274
Gain on sale/retirement of capital assets	-	-	-	-	-	-	-	-	-	-
Miscellaneous	1,785,938	2,602,864	3,464,348	1,185,745	913,672	738,701	946,945	30,187	124,575	91,256
Total Governmental Activities	232,478,505	209,288,304	187,934,426	175,360,689	168,952,193	167,391,523	172,977,024	165,331,547	162,055,091	142,071,868
Total Primary Government	232,478,505	209,288,304	187,934,426	175,360,689	168,952,193	167,391,523	172,977,024	165,331,547	162,055,091	142,071,868
Change in Net Position										
Governmental Activities	(11,754,344)	37,445,806	7,641,007	(92,445,517)	(81,077)	19,487,218	52,872,243	67,302,406	(15,494,527)	36,692,310
Total Primary Government	$ (11,754,344)	$ 37,445,806	$ 7,641,007	$ (92,445,517)	$ (81,077)	$ 19,487,218	$ 52,872,243	$ 67,302,406	$ (15,494,527)	$ 36,692,310
Prior period adjustment	$ -	$ (13,701,055)	$ (6,635,234)	$ -	$ -	$ -	$ 49,566,028	$ -	$ -	$ 13,549,612

Source: Comprehensive Annual Financial Report

Notes:
Financial data includes Avery Ranch and Pearson Place Road Districts (blended component unit).

TABLE 3

WILLIAMSON COUNTY, TEXAS
FUND BALANCES
GOVERNMENTAL FUNDS
LAST TEN FISCAL YEARS
(Modified accrual basis of accounting)

	Fiscal Year									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
General fund										
Nonspendable	$ 857,744	$ 885,700	$ 940,866	$ 1,361,210	$ 1,100,387	$ 1,222,914	$ -	$ -	$ -	$ -
Commited	3,534,167	5,475,348	4,926,787	2,753,462	36,198	22,050		-	-	-
Unassigned	82,585,995	77,142,946	69,784,418	72,282,339	73,795,666	68,557,094		-		
Reserved*	-	-	-	-	-	-	1,408,086	1,455,016	1,580,512	
Unreserved	-	-	-	-	-	-	58,909,804	51,050,420	47,756,679	40,663,714
Total general fund	$ 86,977,906	$ 83,503,994	$ 75,652,071	$ 76,397,011	$ 74,932,251	$ 69,802,058	$ 60,317,890	$ 52,505,436	$ 49,337,191	$ 40,663,714
All other governmental funds										
Nonspendable	$ 104,332,262	$ 116,846,937	$ 127,582,740	$ 131,595,069	$ 445,019	$ 601,831	$ -	$ -	$ -	$ -
Restricted for	335,794,554	345,228,101	208,524,559	122,870,856	288,414,746	348,991,227	-	-	-	-
Committed	-	-	-	760,215	1,366,480	1,360,754	-	-	-	-
Reserved for:										
Capital projects fund	-	-	-	-	-	-	-	-	-	-
Designated for:										
Capital projects fund	-	-	-	-	-	-	-	-	113,753	50,000
Unreserved, reported in:										
Special Revenue Fund	-	-	-	(3,201)	-	-	136,252,756	29,396,121	28,023,654	24,283,185
Debt Service Fund	-	-	-	-	-	-	21,876,358	24,244,442	12,143,357	8,652,890
Capital projects fund	-	-	-	-	-	-	174,188,055	249,168,865	216,052,596	288,560,531
Total all other governmental funds	$ 440,126,816	$ 462,075,038	$ 336,107,299	$ 255,222,939	$ 290,226,245	$ 350,953,812	$ 332,317,169	$ 302,809,428	$ 256,333,360	$ 321,546,606

Source: Comprehensive Annual Financial Report

Notes:

Financial data includes Avery Ranch and Pearson Place Road Districts (blended component unit).

In fiscal year 2011, the County implemented GASB 54 which changed the fund balance classifications presented above. Refer to the Note 3 on basic financial statements for further information.

TABLE 4

WILLIAMSON COUNTY, TEXAS
CHANGES IN FUND BALANCES
GOVERNMENTAL FUNDS
LAST TEN FISCAL YEARS
(Modified accrual basis of accounting)

	Fiscal Year									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
REVENUES:										
Taxes:										
Ad valorem	$ 227,954,402	$ 205,237,263	$ 184,102,492	$ 173,039,011	$ 167,093,325	$ 164,597,739	$ 166,639,051	$ 156,522,999	$ 147,070,997	$ 129,088,118
Fees of office	17,991,608	16,644,320	15,051,769	14,833,479	12,954,173	11,842,128	10,998,340	10,919,809	11,008,180	10,841,922
Fines and forfeitures	3,264,463	3,671,853	4,551,770	4,320,898	3,975,297	4,472,356	4,904,224	4,687,053	4,991,691	4,922,538
Assessments	-	-	-	-	-	-	-	362	86	1,331
Charges for services	14,903,803	16,044,809	16,485,490	15,630,864	13,979,270	14,125,179	11,761,607	9,863,213	9,645,113	8,374,733
Intergovernmental	12,406,825	14,269,803	20,137,133	31,786,143	23,109,980	49,216,594	70,813,527	16,767,352	10,380,199	46,530,656
Motor vehicle registration	4,896,590	4,521,887	4,851,806	4,905,182	4,931,746	4,882,799	4,865,667	5,307,091	5,613,275	5,489,139
Investment Income	2,811,197	1,248,350	560,000	734,809	1,043,465	2,133,026	5,436,289	8,374,817	14,182,060	13,957,255
Miscellaneous	2,420,846	5,821,987	4,070,263	1,739,117	2,696,797	1,576,308	2,238,636	645,845	518,257	1,088,487
Total Revenues	286,649,734	267,460,272	249,810,723	246,989,503	229,784,053	252,846,129	277,657,341	213,088,541	203,409,858	220,294,179
EXPENDITURES										
General government	32,771,043	30,565,849	29,166,461	28,338,383	27,475,074	25,763,464	24,446,725	25,356,840	22,609,264	23,462,700
Public safety	83,385,196	80,998,693	79,103,035	73,476,288	71,801,965	68,631,677	66,875,588	62,290,400	58,029,442	87,225,958
Transportation support	46,317,285	42,642,651	49,468,705	47,230,638	63,987,750	85,170,274	104,789,246	57,018,386	48,905,035	27,874,393
Judicial	23,301,897	22,482,926	21,054,436	19,504,540	18,767,804	18,169,857	18,341,712	17,102,998	16,200,005	14,730,003
Community services	16,474,180	17,081,838	14,891,428	14,755,545	10,995,460	11,100,789	15,369,591	13,764,903	10,770,909	9,934,119
Conservation	308,850	407,345	347,751	773,438	676,913	247,844	219,592	187,912	-	-
Capital outlay	37,121,889	27,084,792	26,185,167	43,503,998	34,621,156	29,687,307	34,155,679	30,447,017	61,599,221	49,215,141
Debt Service										
Principal	51,568,941	41,150,000	35,955,107	34,316,148	28,442,621	25,786,563	22,750,713	21,900,061	20,457,972	18,650,000
Interest	39,704,479	35,162,235	33,779,930	34,151,447	37,850,525	36,286,550	38,172,372	33,779,802	32,567,790	31,201,896
Bond issuance costs	1,248,338	2,669,173	1,021,908	1,213,658	2,103,426	1,328,636	388,061	-	-	-
Other	-	-	-	-	-	-	-	-	-	-
Total expenditures	332,202,098	300,245,502	290,973,928	297,264,083	296,722,694	302,172,961	325,509,279	261,848,319	271,139,638	262,294,210
EXCESS (DEFICIENCY) OF REVENUES OVER (UNDER) EXPENDITURES	(45,552,364)	(32,785,230)	(41,163,205)	(50,274,580)	(66,938,641)	(49,326,832)	(47,851,938)	(48,759,778)	(67,729,780)	(42,000,031)
OTHER FINANCING SOURCES (USES):										
Transfers in	13,473,488	17,530,126	17,385,872	18,138,712	7,918,291	9,265,224	2,932,336	3,474,026	2,043,298	1,873,113
Transfers out	(13,473,488)	(17,530,126)	(17,385,872)	(18,132,463)	(7,918,291)	(10,123,951)	(3,061,532)	(3,474,026)	(2,043,298)	(1,873,113)
Proceeds from sale of capital assets	428,175	353,219	354,481	366,489	229,783	234,887	330,100	284,834	345,933	231,995
Proceeds from capital lease	-	-	-	-	-	-	-	-	844,078	-
Payment to bond escrow agent	(65,104,636)	(189,149,021)	-	(110,662,302)	(214,803,039)	(13,405,896)	-	-	-	(115,236,116)
Bond discount	(36,478)	(227,380)	-	-	(386,008)	(294,217)	(263,649)	(43,127)	-	(614,069)
Bond premium	11,075,993	24,851,074	9,764,144	7,395,598	31,620,531	1,981,596	1,673,850	927,384	-	10,645,837
Bond issued	80,715,000	330,780,000	111,280,000	119,630,000	194,680,000	89,790,000	33,995,000	97,235,000	10,000,000	273,379,942
Total other financing sources (uses):	27,078,054	166,607,892	121,398,625	16,736,034	11,341,267	77,447,643	35,606,105	98,404,091	11,190,011	168,407,589
NET CHANGE IN FUND BALANCES	$ (18,474,310)	$ 133,822,662	$ 80,235,420	$ (33,538,546)	$ (55,597,374)	$ 28,120,811	$ (12,245,833)	$ 49,644,313	$ (56,539,769)	$ 126,407,558
Prior period adjustment	$ -	$ -	$ -	$ -	$ -	$ -	$ 49,566,028	$ -	$ -	$ -
Debt services (principal & interest) as percentage of noncapital expenditures	30.8%	27.9%	26.3%	27.0%	25.3%	22.8%	20.9%	24.1%	26.0%	23.5%

Source: Comprehensive Annual Financial Report

Note:
Financial data includes blended component unit (Avery Ranch and Pearson Place Road Districts).

TABLE 5

WILLIAMSON COUNTY, TEXAS
ASSESSED VALUE AND ACTUAL VALUE OF TAXABLE PROPERTY
LAST TEN FISCAL YEARS
(UNAUDITED)

General and Debt Service

Fiscal Year	Residential Property	Commercial Property	Other Property	Personal Property	Less: Tax-Exempt Property	Total Taxable Assessed Value	Total Direct Tax Rate
2016	$ 33,460,572,390	$ 17,123,217,809	$4,392,702,538	$3,418,803,516	$ 10,977,773,906	$ 47,417,522,347	0.441529
2015	29,587,478,395	15,422,168,902	4,336,197,330	3,165,493,480	10,568,711,913	41,942,626,194	0.446529
2014	25,488,470,689	13,990,566,361	3,979,136,557	2,943,383,260	9,257,107,767	37,144,449,100	0.449029
2013	23,904,564,642	13,332,025,999	4,017,799,750	2,715,642,405	8,913,356,944	35,056,675,852	0.449029
2012	23,316,653,461	12,579,062,940	4,089,036,731	2,516,944,446	8,586,848,425	33,914,849,153	0.457687
2011	22,731,190,836	12,170,331,765	4,180,854,644	2,406,882,877	8,301,996,159	33,187,263,963	0.459999
2010	22,536,370,182	12,350,492,269	4,283,090,122	2,534,252,977	8,053,782,353	33,650,423,197	0.459999
2009	22,334,769,118	11,657,221,227	4,077,250,113	2,650,620,127	7,673,782,813	33,046,077,772	0.439425
2008	19,836,021,861	10,095,823,007	3,652,223,403	2,391,442,420	6,643,909,687	29,331,601,004	0.459100
2007	16,949,243,233	8,648,223,231	3,062,299,235	2,124,454,124	5,575,552,434	25,208,667,389	0.467492

Road and Bridge

Fiscal Year	Residential Property	Commercial Property	Other Property	Personal Property	Less: Tax-Exempt Property	Total Taxable Assessed Value	Total Direct Tax Rate
2016	$ 33,460,583,239	$ 17,123,218,356	$4,392,702,538	$3,418,803,516	$ 10,571,189,710	$ 47,824,117,939	0.040000
2015	29,587,485,425	15,422,206,819	4,336,197,330	3,165,493,480	10,197,587,059	42,313,795,995	0.040000
2014	25,488,480,238	13,990,566,361	3,979,136,557	2,943,383,260	8,919,988,694	37,481,577,722	0.040000
2013	23,904,574,191	13,332,025,999	4,017,799,750	2,715,642,405	8,612,776,947	35,357,265,398	0.040000
2012	23,316,653,461	12,579,062,940	4,089,036,731	2,516,944,446	8,329,968,260	34,171,729,318	0.030000
2011	22,731,190,836	12,170,331,765	4,180,854,644	2,406,882,877	7,997,293,754	33,491,966,368	0.030000
2010	22,536,370,182	12,350,492,269	4,283,090,122	2,534,252,977	7,934,857,334	33,769,348,216	0.030000
2009	22,334,769,118	11,657,221,227	4,077,250,113	2,650,620,127	7,647,893,604	33,071,966,981	0.028899
2008	19,836,021,861	10,095,823,007	3,652,223,403	2,391,442,420	6,473,716,698	29,501,793,993	0.030000
2007	16,949,243,233	8,648,223,231	3,062,299,235	2,124,454,124	5,429,196,627	25,355,023,196	0.032165

Source:
Williamson County Appraisal District

Notes:
Property is required to be reappraised at least once every three years according to Texas Tax Code Section 26.18(b).

Property is assessed at actual value; therefore, the assessed values are equal to actual value.

Tax rates are per $100 of assessed value.

The assessed values represent the Appraisal Review Board's approved totals from the last supplement as the respective fiscal year end.

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TABLE 6

WILLIAMSON COUNTY, TEXAS
DIRECT AND OVERLAPPING PROPERTY TAX RATE
(PER $100 ASSESSED VALUE)
LAST TEN FISCAL YEARS
(UNAUDITED)

	Fiscal Year									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
County direct rates										
General	$ 0.274029	$ 0.279029	$ 0.281529	$ 0.281529	$ 0.287687	$ 0.289999	$ 0.289999	$ 0.271291	$ 0.275000	$ 0.283355
Debt Service	0.167500	0.167500	0.167500	0.167500	0.170000	0.170000	0.170000	0.168134	0.184100	0.184137
Road & Bridge	0.040000	0.040000	0.040000	0.040000	0.030000	0.030000	0.030000	0.028899	0.030000	0.032165
Total direct rate	0.481529	0.486529	0.489029	0.489029	0.487687	0.489999	0.489999	0.468324	0.489100	0.499657
City and Town rates										
Austin	0.458900	0.480900	0.502700	0.502900	0.481100	0.457100	0.420900	0.401200	0.403400	0.412600
Bartlett	0.578200	0.579100	0.580000	0.590200	0.588300	0.558400	0.524400	0.585500	0.631400	0.602700
Cedar Park	0.479500	0.485000	0.492500	0.493501	0.493501	0.493501	0.489001	0.489001	0.508070	0.518070
Coupland	0.250000	0.250000	0.250000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Florence	0.717906	0.712892	0.773998	0.784714	0.741697	0.636019	0.527860	0.500000	0.500000	0.500000
Georgetown	0.434000	0.434000	0.439500	0.410000	0.387500	0.356220	0.356220	0.356220	0.356590	0.367280
Granger	0.836986	0.869470	0.884745	0.877164	0.888817	0.888817	0.887461	0.864290	0.829595	0.829595
Hutto	0.528500	0.528691	0.528691	0.528691	0.516545	0.507580	0.499154	0.499154	0.493520	0.493521
Jarrell	0.430000	0.431233	0.447980	0.469854	0.469854	0.377100	0.287171	0.290000	0.137495	0.137495
Leander	0.632920	0.652920	0.667920	0.670420	0.670420	0.650420	0.600420	0.602590	0.607591	0.598291
Liberty Hill	0.527842	0.536426	0.536426	0.536426	0.442573	0.353888	0.291600	0.291600	0.271600	0.221600
Pflugerville	0.540500	0.533600	0.573600	0.594000	0.599000	0.604000	0.609000	0.614000	N/A	N/A
Round Rock	0.414650	0.414650	0.419490	0.420350	0.423210	0.417280	0.396610	0.365220	0.365220	0.371050
Taylor	0.813893	0.813893	0.813893	0.813893	0.813893	0.813893	0.790000	0.790000	0.790000	0.795000
Thorndale	0.810000	0.810000	0.833300	0.823600	0.840000	0.850000	0.850000	0.850000	0.850000	0.850000
Thrall	0.474446	0.490000	0.499648	0.489556	0.504140	0.500000	0.500000	0.455170	0.435906	0.435906
Weir	0.242648	0.246484	0.272230	0.269884	0.265234	0.265339	0.258417	0.255271	0.260187	0.257702
School District rates										
Bartlett	1.154680	1.154680	1.154680	1.154680	1.154680	1.154680	1.154680	1.154680	1.173360	1.459400
Burnet Consolidated	1.330000	1.262500	1.262500	1.262500	1.270000	1.265000	1.250000	1.250000	1.275000	1.597800
Coupland	1.040050	1.040050	1.040050	1.040050	1.040050	1.040050	1.040050	1.040050	1.040050	1.370000
Florence	1.350000	1.330000	1.300000	1.300000	1.300000	1.280000	1.230000	1.230000	1.230000	1.560000
Georgetown	1.398000	1.398000	1.398000	1.398000	1.358000	1.290000	1.290000	1.290000	1.290000	1.625000
Granger	1.105000	1.105000	1.105000	1.105000	1.105000	1.105000	1.105000	1.105000	1.085000	1.417300
Hutto	1.670000	1.670000	1.670000	1.670000	1.540050	1.535000	1.485000	1.435000	1.410000	1.705000
Jarrell	1.367500	1.390000	1.390000	1.390000	1.390000	1.390000	1.370000	1.290000	1.270000	1.620000
Leander	1.511570	1.511870	1.511870	1.511870	1.499760	1.454800	1.422340	1.379240	1.333400	1.643800
Lexington	1.220000	1.119000	1.119000	1.040000	1.119000	1.119000	1.119000	1.113900	1.104000	1.419260
Liberty Hill	1.540000	1.540000	1.540000	1.450000	1.335000	1.260000	1.260000	1.250000	1.250000	1.640000
Pflugerville	1.540000	1.540000	1.540000	1.540000	1.480000	1.460000	1.460000	1.460000	N/A	N/A
Round Rock	1.332500	1.337500	1.367400	1.380000	1.335000	1.380000	1.380000	1.332426	1.323805	1.640646
Taylor	1.450000	1.450000	1.450000	1.450000	1.450000	1.470000	1.490000	1.200000	1.200000	1.540000
Thorndale	1.310000	1.310000	1.310000	1.330000	1.330000	1.315000	1.315000	1.315000	1.315000	1.472000
Thrall	1.284000	1.199000	1.210000	1.210000	1.210000	1.194000	1.194000	1.194000	1.180000	1.490000
Municipal Utility Districts rates										
Anderson Mill	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.400000	0.464000	0.464000
Anderson Mill Limited District	0.126000	0.130000	0.136686	0.130000	0.130000	0.130000	0.130000	N/A	N/A	N/A
Blockhouse	0.827000	0.842300	0.866000	0.866000	0.866000	0.846000	0.846000	0.846000	0.859900	0.862400
Brushy Creek (BC)	0.470000	0.480000	0.500000	0.500000	0.500000	0.500000	0.500000	0.500000	0.500000	0.520000
BC - Cornerstone Defined Area	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.360000	0.360000	0.360000
BC - Sendero Springs Defined Area	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.360000	0.360000	0.360000
BC-Defined Areas	0.270000	0.350000	0.360000	0.360000	0.360000	0.360000	0.360000	N/A	N/A	N/A
Fern Bluff	0.464500	0.509500	0.509500	0.509500	0.509500	0.509500	0.509500	0.509500	0.509500	0.509500
Highlands at Mayfield Ranch	0.950000	0.950000	0.950000	0.950000	N/A	N/A	N/A	N/A	N/A	N/A
Lakeside #3	0.847000	0.877500	0.900000	0.900000	0.900000	0.900000	0.900000	0.900000	N/A	N/A
Leander #1	1.000000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Leander #2	1.000000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Leander TODD #1	0.350000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Meadows of Chandler Creek	0.435000	0.440000	0.450000	0.450000	0.420000	0.420000	0.420000	0.420000	0.540000	0.584000
North Austin #1	0.317000	0.339900	0.345000	0.371900	0.381900	0.381900	0.380100	0.405000	0.418000	0.450000
Palmera Ridge	0.400000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paloma Lakes #1	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	N/A
Paloma Lakes #2	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	N/A
Parkside at Mayfield Ranch	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	0.950000	N/A	N/A
Ranch at Cypress Creek #1	0.365000	0.433000	0.512800	0.633300	0.706500	0.706500	0.630400	0.610200	0.628200	0.692700
Sienna MUD #1	0.950000	0.950000	0.950000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sienna MUD #2	0.950000	0.950000	0.950000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sonterra	0.950000	0.950000	0.850000	0.850000	0.850000	0.773300	0.773300	0.773300	0.650000	N/A
Springwoods	N/A	N/A	N/A	N/A	N/A	0.445000	0.455000	0.499900	0.509000	0.511900
Stonewall Ranch	0.901500	0.918200	0.950000	0.950000	0.950000	0.950000	0.950000	1.000000	1.000000	N/A
Walsh Ranch	0.720000	0.750000	0.800000	0.690000	0.670000	0.650000	0.650000	0.650000	0.560000	0.490000
Watch Hill	0.650000	0.650000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wells Branch	0.390000	0.430000	0.460000	0.470000	0.470000	0.470000	0.470000	0.470000	N/A	N/A
West Williamson County #1	0.900000	0.900000	0.900000	0.900000	0.900000	0.900000	N/A	N/A	N/A	N/A
Vista Oaks	0.610000	0.665900	0.730000	0.740000	0.740000	0.740000	0.740000	0.740000	0.750800	0.812600
Williamson County #10	0.670000	0.780000	0.850000	0.850000	0.850000	0.850000	0.880000	0.900000	0.900000	0.900000
Williamson County #11	0.750000	0.860000	0.900000	0.900000	0.900000	0.900000	0.900000	0.900000	0.900000	0.900000
Williamson County #12	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000
Williamson County #13	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000	0.850000
Williamson County #15	0.900000	0.900000	0.900000	0.900000	0.900000	0.900000	0.900000	0.900000	N/A	N/A
Williamson County #19	0.850000	0.850000	0.850000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Williamson County #19A	0.850000	0.850000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Williamson County #22	0.950000	0.950000	0.950000	0.950000	N/A	N/A	N/A	N/A	N/A	N/A
Williamson County #23	0.950000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Williamson County #25	0.920000	0.920000	0.920000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Williamson County #26	0.900000	0.900000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Williamson-Liberty Hill	0.950000	0.950000	0.950000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Williamson-Travis #1	0.510000	0.540000	0.615000	0.657000	0.662000	0.664000	0.714000	0.722500	0.717000	0.734200

TABLE 6

WILLIAMSON COUNTY, TEXAS
DIRECT AND OVERLAPPING PROPERTY TAX RATE
(PER $100 ASSESSED VALUE) – CONTINUED
LAST TEN FISCAL YEARS
(UNAUDITED)

	Fiscal Year									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Emergency Service Districts										
ESD #1	$ 0.100000	$ 0.100000	$ 0.100000	$ 0.100000	$ 0.100000	$ 0.100000	$ 0.100000	$ 0.100000	$ 0.100000	$ 0.100000
ESD #2	0.100000	0.100000	0.100000	0.099749	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000
ESD #3	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000
ESD #4	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.099400	0.100000	0.100000	0.100000
ESD #5	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000
ESD #6	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000
ESD #7	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000
ESD #8	0.950000	0.095000	0.955530	0.955530	0.095000	0.091795	0.090798	0.090491	0.098511	0.100000
ESD #9	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000
ESD #10	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000	0.100000
ESD #11	0.100000	0.100000	0.100000	0.100000	N/A	N/A	N/A	N/A	N/A	N/A
ESD #12	0.100000	0.100000	0.100000	0.100000	N/A	N/A	N/A	N/A	N/A	N/A
Other Taxing District rates										
Austin Community College	0.100500	0.094200	0.094900	0.095100	0.094800	0.095100	0.094600	0.095400	0.095800	0.096500
Avery Ranch Road District	0.097500	0.103705	0.116240	0.122200	0.133500	0.144480	0.144480	0.144670	0.171500	0.233490
Donahoe Creek Watershed	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000
EWC Higher Education Center	0.045905	0.049784	0.050000	0.050000	0.500000	N/A	N/A	N/A	N/A	N/A
Georgetown Village PID	0.200000	0.200000	0.200000	0.200000	0.200000	0.200000	0.200000	0.200000	0.200000	0.200000
Lakeside WCID 2A/MUD #2A	0.970000	0.970000	0.970000	0.970000	0.970000	0.970000	0.970000	0.970000	N/A	N/A
Upper Brushy Creek WCID 1A	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000	0.020000
Williamson County WSID #3	0.730600	0.808200	0.815000	0.815000	0.815000	0.815000	0.799900	0.773000	0.773000	0.850000
Wmsn -Trav WCID #1D	N/A	N/A	N/A	N/A	0.421000	0.421000	0.421000	0.541200	N/A	N/A

Source: Williamson County Tax Assessor/Collector

Notes: N/A - Not applicable

Texas Tax Code Section 26.07(a)
If the governing body of a taxing unit other than a school district adopts a tax rate that exceeds the rollback tax rate calculated, the qualified voters of the taxing unit by petition may require that an election be held to determine whether or not to reduce the tax rate adopted for the current year to the rollback tax rate calculated.

TABLE 7

WILLIAMSON COUNTY, TEXAS
PRINCIPAL PROPERTY TAXPAYERS
CURRENT YEAR AND NINE YEARS AGO

	2016			2007		
Taxpayer	Taxable Assessed Value [a]	Rank	Percentage of Total County Taxable Assessed Value	Taxable Assessed Value	Rank	Percentage of Total County Taxable Assessed Value
Dell Computer Holdings LP	$ 297,994,581	1	0.63 %	$ 194,489,650	1	0.77 %
Parmer Lane Austin LP	159,000,000	2	0.34	-		-
Oncor Electric Delivery Company[b]	156,686,900	3	0.33	112,615,112	2	0.45
CPG Round Rock LP & SPG Round Rock NS LP	138,431,301	4	0.29			-
Lakeline Developers	100,547,179	5	0.21	97,152,305	3	0.39
Inland Western Cedar Park 1890 Ranch LP	92,900,096	6	0.20			-
Dell Computer Corporation	91,256,835	7	0.19	60,076,470	8	0.24
HEB Grocery Company LP	84,056,275	8	0.18	59,010,421	9	0.23
Baltgem Development Corp ETAL	77,884,064	9	0.16	89,922,556	4	0.36
Cedar Park Health System LP	76,854,617	10	0.16			-
Atlantic Financial Group LTD				80,000,000	5	0.32
Southwestern Bell Telephone				72,101,966	6	0.29
Toppan Photomasks				66,942,729	7	0.27
Lakeline Plaza Developers				54,533,897	10	0.22
						-
Total	$ 1,275,611,848		2.69 %	$ 886,845,106		3.52 %
Total Taxable Assessed Value	$ 47,417,522,347		100.00 %	$ 25,208,667,389		100.00 %

Source:
Williamson County Tax Assessor/Collector
Williamson County Appraisal District

Note:
a - The assessed values represent the Appraisal Review Board's approved totals from the last supplement as the respective fiscal year end.
b - In 2007, known as TXU Electric Delivery Company

TABLE 8

WILLIAMSON COUNTY, TEXAS
PROPERTY TAX LEVIES AND COLLECTIONS
LAST TEN FISCAL YEARS
(UNAUDITED)

General and Debt Service

Fiscal Year	Tax Levy for Fiscal Year (Original)	Adjustments	Adjusted Tax Levy	Collected within the Fiscal Year of the Levy		Subsequent Collections[a]	Total Collections to Date	
				Amount	Percentage of Original Levy		Amount	Percentage of Adjusted Levy
2016	$ 204,948,985	$ -	$ 204,948,985	$ 204,238,533	99.65 %	$ -	$ 204,238,533	99.65 %
2015	184,437,586	(21,020)	184,416,566	183,586,256	99.54	535,964	184,122,220	99.84
2014	165,388,338	(23,034)	165,365,304	164,725,252	99.60	455,193.69	165,180,446	99.89
2013	156,400,025	(176,695)	156,223,330	155,672,873	99.54	393,173	156,066,047	99.90
2012	154,047,508	(251,991)	153,795,517	153,242,932	99.48	418,390	153,661,322	99.91
2011	151,481,692	(207,580)	151,274,112	150,453,907	99.32	702,993	151,156,900	99.92
2010	153,441,556	(363,625)	153,077,931	152,265,274	99.23	705,368	152,970,642	99.93
2009	144,256,830	(185,596)	144,071,234	142,833,932	99.01	1,157,425	143,991,357	99.94
2008	133,810,940	(348,470)	133,462,470	132,745,977	99.20	655,018	133,400,995	99.95
2007	117,413,150	(314,555)	117,098,595	116,456,546	99.19	582,630	117,039,176	99.95

Road and Bridge

Fiscal Year	Tax Levy for Fiscal Year (Original)	Adjustments	Adjusted Tax Levy	Collected within the Fiscal Year of the Levy		Subsequent Collections[a]	Total Collections to Date	
				Amount	Percentage of Original Levy		Amount	Percentage of Adjusted Levy
2016	$ 18,399,217	$ -	$ 18,399,217	$ 18,336,167	99.66 %	$ -	$ 18,336,167	99.66 %
2015	16,345,948	(786)	16,345,162	16,270,897	99.54	48,823	16,319,720	99.84
2014	14,548,619	(1,332)	14,547,287	14,490,783	99.60	41,238	14,532,021	99.90
2013	13,710,641	(14,915)	13,695,726	13,647,328	99.54	35,131	13,682,459	99.90
2012	10,198,960	(15,856)	10,183,105	10,143,789	99.46	29,279	10,173,068	99.90
2011	9,999,202	(13,328)	9,985,874	9,929,979	99.31	47,171	9,977,150	99.91
2010	10,078,858	(23,738)	10,055,121	9,999,959	99.22	47,243	10,047,202	99.92
2009	9,529,573	(12,305)	9,517,268	9,434,159	99.00	77,195	9,511,354	99.94
2008	8,829,899	(22,867)	8,807,032	8,758,487	99.19	44,007	8,802,494	99.95
2007	8,133,742	(21,833)	8,111,909	8,066,568	99.17	40,887	8,107,455	99.95

Source:
Williamson County Tax Assessor/Collector

Notes:
Tax levies consider supplemental value changes during the initial fiscal year. Data for fiscal year does not include Agriculture Rollbacks.
a - Data represents subsequent collections of the respective fiscal year's tax in later fiscal years.

TABLE 9

WILLIAMSON COUNTY, TEXAS
RATIOS OF OUTSTANDING DEBT BY TYPE
LAST TEN FISCAL YEARS
(UNAUDITED)

	Governmental Activities								
Fiscal Year	General Obligation Bonds	Accumulated Accretion of Interest [b]	Certificate of Obligations	Tax Anticipation Notes [c]	Revenue Bonds	Other Obligations	Total Primary Government	Percentage of Personal Income [a]	Per Capita [a]
2016	$ 679,486,575	$ 8,475,650	$ 343,654,005	$ -	$ -	$ -	$ 1,031,616,230	N/A	$ 2,028.69
2015	683,872,137	8,104,014	364,785,409	-	-	-	1,056,761,560	6.27%	2,159.96
2014	668,185,330	7,748,728	245,033,236	1,575,000	-	-	922,542,295	4.84%	1,958.63
2013	573,000,664	7,409,063	257,873,307	3,095,000	-	-	841,378,033	5.67%	1,786.31
2012	592,491,796	7,059,391	253,553,228	4,565,000	-	-	857,669,416	6.50%	1,879.90
2011	598,220,987	6,724,007	249,119,892	5,985,000	-	-	860,049,886	6.39%	1,942.38
2010	537,396,192	6,427,211	256,748,019	7,355,000	-	-	807,926,422	6.64%	1,911.44
2009	552,416,601	6,143,472	229,124,377	8,680,000	-	-	796,364,450	6.91%	1,939.11
2008	552,457,293	5,872,194	145,016,457	17,875,000	-	-	721,220,944	6.54%	1,829.61
2007	563,874,858	5,612,871	151,235,921	12,125,000	-	-	732,848,650	7.18%	1,962.83

Notes:
Details regarding the County's outstanding debt can be found in the notes to the financial statements.
This schedule includes Avery Ranch and Pearson Place Road Districts (blended component unit).

N/A - Not available
a - See Table 13 for personal income and population data.
b - Accumulated accretion of interest on capital appreciation bonds. The face amount of the capital appreciation bonds are included with the general obligation bonds.
c- General governmental resources will be used to repay debt.

TABLE 10

WILLIAMSON COUNTY, TEXAS
RATIOS OF GENERAL BONDED DEBT OUTSTANDING
LAST TEN FISCAL YEARS
(UNAUDITED)

	General Bonded Debt Outstanding								
Fiscal Year	General Obligation Bonds	Accumulated Accretion of Interest [c]	Certificate of Obligations	Tax Anticipation Notes [d]	Total	Less: Amounts Available for Debt Service	Total	Percentage of Actual Taxable Property Value [a]	Per Capita [b]
2016	$ 679,486,575	$ 8,475,650	$ 343,654,005	$ -	$ 1,031,616,230	$ 8,269,822	$ 1,023,346,408	2.16%	$ 2,012.43
2015	683,872,137	8,104,014	364,785,409	-	1,056,761,560	1,825,778	1,054,935,782	2.52%	2,156.23
2014	668,185,330	7,748,728	245,033,236	1,575,000	922,542,295	2,099,876	920,442,419	2.48%	1,954.17
2013	573,000,664	7,409,063	257,873,307	3,095,000	841,378,033	3,102,238	838,275,795	2.39%	1,779.73
2012	592,491,796	7,059,391	253,553,228	4,565,000	857,669,416	6,253,224	851,416,192	2.51%	1,866.19
2011	598,220,987	6,724,007	249,119,892	5,985,000	860,049,886	14,329,756	845,720,130	2.55%	1,910.01
2010	537,396,192	6,427,211	256,748,019	7,355,000	807,926,422	18,762,284	789,164,138	2.35%	1,867.05
2009	552,416,601	6,143,472	229,124,377	8,680,000	796,364,450	21,175,995	775,188,455	2.35%	1,887.55
2008	552,457,293	5,872,194	145,016,457	17,875,000	721,220,944	9,914,275	711,306,669	2.43%	1,804.46
2007	563,874,858	5,612,871	151,235,921	12,125,000	732,848,650	6,863,874	725,984,776	2.88%	1,944.45

Notes:
Details regarding the County's outstanding debt can be found in the notes to the financial statements.

This schedule includes Avery Ranch and Pearson Place Road Districts (blended component unit).

N/A - Not available
a - Used General & Debt Service's taxable assessed property value in calculation. See Table 5 for property value data.
b - See table 13 for population data.
c - Accumulated accretion of interest on capital appreciation bonds. The face amount of the capital appreciation bonds are included with the General Obligation Bonds.
d- General governmental resources will be used to repay debt.

TABLE 11

WILLIAMSON COUNTY, TEXAS
DIRECT AND OVERLAPPING GOVERNMENTAL ACTIVITIES DEBT
SEPTEMBER 30, 2016
(UNAUDITED)

Governmental Unit	Debt Outstanding [1]	Estimated Percentage Applicable [1, a]	Estimated Share of Overlapping Debt
Debt repaid with property taxes			
City and Town			
Austin	$ 1,366,924,994	4.77%	$ 65,202,322
Bartlett	1,025,000	58.58%	600,445
Cedar Park	203,000,000	89.05%	180,771,500
Florence	620,000	100.00%	620,000
Georgetown	172,455,000	100.00%	172,455,000
Granger	1,120,000	100.00%	1,120,000
Hutto	81,200,000	100.00%	81,200,000
Jarrell	11,180,000	100.00%	11,180,000
Leander	111,297,000	83.08%	92,465,548
Liberty Hill	6,330,000	100.00%	6,330,000
Pflugerville	222,765,000	0.24%	534,636
Round Rock	176,635,000	96.79%	170,965,017
Taylor	44,400,000	100.00%	44,400,000
City and Town Subtotal	2,398,951,994		827,844,468
School Districts			
Bartlett	1,195,000	46.11%	551,015
Burnet Consolidated	44,570,000	0.94%	418,958
Florence	8,405,000	84.46%	7,098,863
Georgetown	322,145,000	100.00%	322,145,000
Granger	625,000	100.00%	625,000
Hutto	188,246,115	100.00%	188,246,115
Jarrell	53,275,836	100.00%	53,275,836
Leander	1,032,727,817	59.65%	616,022,143
Lexington	8,630,000	0.53%	45,739
Liberty Hill	146,843,047	100.00%	146,843,047
Pflugerville	489,480,000	0.08%	391,584
Round Rock	756,435,000	76.24%	576,706,044
Taylor	70,684,943	100.00%	70,684,943
Thorndale	135,000	12.30%	16,605
Thrall	9,255,000	100.00%	9,255,000
School Districts Subtotal	3,132,652,758		1,992,325,892
Municipal Utility Districts			
Avery Ranch Road District #1	8,740,000	100.00%	8,740,000
Block House	13,530,000	100.00%	13,530,000
Brushy Creek (BC)	31,145,000	100.00%	31,145,000
Brushy Creek (BC) Defined Areas	12,685,000	100.00%	12,685,000
Fern Bluff	4,580,000	100.00%	4,580,000
Highlands at Mayfield Ranch	3,700,000	100.00%	3,700,000
Lakeside #3	12,335,000	0.51%	62,909
Meadows at Chandler Creek	4,090,000	100.00%	4,090,000
North Austin #1	6,705,000	91.11%	6,108,926
Paloma Lake #1	22,230,000	100.00%	22,230,000
Paloma Lake #2	12,365,000	100.00%	12,365,000
Parkside at Mayfield Ranch	24,000,000	100.00%	24,000,000
Ranch at Cypress Creek #1	2,715,000	65.87%	1,788,371
Siena #1	13,000,000	100.00%	13,000,000
Siena #2	2,600,000	100.00%	2,600,000
Sonterra	19,339,989	100.00%	19,339,989
Stonewall Ranch	2,760,000	100.00%	2,760,000
Vista Oaks	2,945,000	100.00%	2,945,000
Walsh Ranch	6,185,000	100.00%	6,185,000
Wells Branch	290,000	1.42%	4,118
Williamson County #10	18,085,000	100.00%	18,085,000
Williamson County #11	25,705,000	100.00%	25,705,000
Williamson County #12	8,280,000	100.00%	8,280,000
Williamson County #13	19,455,000	100.00%	19,455,000
Williamson County #15	25,265,000	100.00%	25,265,000
Williamson County #19	2,300,000	100.00%	2,300,000
Williamson County #22	4,100,000	100.00%	4,100,000
Williamson/Travis County #1	3,495,000	78.55%	2,745,323
Municipal Utility Districts Subtotal	312,624,989		297,794,636
Other			
Austin Community College	304,153,659	19.45%	59,157,887
Williamson County Water, Sewer, Irrigation, Drainage District #3	31,965,000	85.17%	27,224,591
Other Subtotal	336,118,659		86,382,478
Total Overlapping Debt	6,180,348,400		3,204,347,474
County Debt [2]			
Williamson County	1,016,749,045	100.00%	1,016,749,045
Avery Ranch Road District (blended component unit)	9,230,000	100.00%	9,230,000
Pearson Place Road District (blended component unit)	5,637,185	100.00%	5,637,185
Total County Wide Direct Debt	1,031,616,230		1,031,616,230
Total direct and overlapping debt	$ 7,211,964,630		$ 4,235,963,704

Source:
1 - Municipal Advisory Council of Texas
2 - Williamson County Auditor's Office

Note:
a - The percentage of overlapping debt applicable is estimated using taxable assessed property values. Applicable percentages were estimated by determining the portion of another governmental unit's taxable assessed value that is within the county's boundaries and dividing it by each unit's total taxable assessed value.

TABLE 12

WILLIAMSON COUNTY, TEXAS
LEGAL DEBT MARGIN INFORMATION
LAST TEN FISCAL YEARS
(UNAUDITED)

	Fiscal Year									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total taxable value	$ 47,417,522,347	$ 41,942,626,194	$ 37,144,449,100	$ 35,056,675,852	$ 33,914,849,153	$ 33,187,263,963	$ 33,650,423,197	$ 33,046,077,772	$ 29,331,601,004	$ 25,208,667,389
Assessed value of real property	43,998,718,831	38,777,132,714	34,201,065,840	32,341,033,447	31,397,904,707	30,780,381,086	31,116,170,220	30,395,457,645	26,940,158,584	23,084,213,265
Debt limit rate	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Debt limit	10,999,679,708	9,694,283,179	8,550,266,460	8,085,258,362	7,849,476,177	7,695,095,272	7,779,042,555	7,598,864,411	6,735,039,646	5,771,053,316
Debt applicable to limit:										
General bonded debt	1,031,616,230	1,056,761,560	922,542,295	841,378,033	857,669,416	860,049,886	807,926,422	796,364,450	721,220,944	732,848,650
Less: amount set aside for repayment of general bonded debt	8,269,822	1,825,778	2,099,876	3,102,238	6,253,224	14,329,756	18,762,284	21,175,995	9,914,275	6,863,874
Total net debt applicable to limit	1,023,346,408	1,054,935,782	920,442,419	838,275,795	851,416,192	845,720,130	789,164,138	775,188,455	711,306,669	725,984,776
Legal debt margin	$ 9,976,333,300	$ 8,639,347,397	$ 7,629,824,041	$ 7,246,982,567	$ 6,998,059,985	$ 6,849,375,142	$ 6,989,878,417	$ 6,823,675,956	$ 6,023,732,977	$ 5,045,068,540
Total net debt applicable to the limit as a percentage of debt limit	9.30%	10.88%	10.77%	10.37%	10.85%	10.99%	10.14%	10.20%	10.56%	12.58%

Notes:

This schedule includes Avery Ranch and Pearson Place Road Districts (blended component unit).

Texas Constitution Art. 3 Section 52(B)

Under Legislative provision, any county, any political subdivision of a county, any number of adjoining counties, or any political subdivision of the state, or any defined district now or hereafter to be described and defined within the State of Texas, and which may or may not include towns, villages, or municipal corporations, upon a vote of two-thirds majority of the resident property taxpayers voting thereon who are qualified electors of such district or territory to be affected thereby, in addition to all other debts, any issue bonds or otherwise lend its credit in any amount not to exceed one-fourth of the assessed valuation of the real property of such district or territory, except that the total bonded indebtedness of any city or town shall never exceed the limits imposed by other provisions of this Constitution, and levy and collect taxes to pay the interest thereon and provide a sinking fund for the redemption thereof.

TABLE 13

WILLIAMSON COUNTY, TEXAS
DEMOGRAPHIC AND ECONOMIC STATISTICS
LAST TEN FISCAL YEARS
(UNAUDITED)

	County					State of Texas	United States
Year	Estimated Population [a]	Personal Income (thousands of dollars) [a]	Per Capita Personal Income [a]	School Enrollment [b]	Unemployment Rate [c]	Per Capita Personal Income [a]	Per Capita Personal Income [a]
2016	508,514	N/A	N/A	89,765	3.6%	N/A	N/A
2015	489,250	16,855,771	33,147	89,365	3.4%	28,210	29,979
2014	471,014	19,050,320	31,709	87,215	4.3%	26,513	28,555
2013	471,014	14,827,843	31,481	86,709	5.4%	26,327	28,184
2012	456,232	13,187,194	28,905	84,279	5.5%	25,359	27,319
2011	442,782	13,462,310	30,404	84,459	7.7%	24,682	26,708
2010	422,679	12,161,743	28,773	81,219	6.9%	23,863	26,059
2009	410,686	11,518,921	28,048	79,627	7.8%	24,077	26,409
2008	394,193	11,024,001	27,966	76,816	4.9%	25,096	27,589
2007	373,363	10,208,118	27,341	72,667	3.9%	23,938	26,688

Notes:
N/A - Not available

Sources:
a - 2007 - 2015 --U.S. Department of Commerce (Bureau of Economic Analysis)
2007 - 2016 --U.S. Census Bureau
b - School enrollment provided by the Independent School Districts within the County.
Several school districts cross the county line.
c - Annual rate for 2007 - 2016 --U.S. Department of Labor
September rate for 2007 - 2016 --Texas Workforce Commission
September rate for 2007 - 2016 --Tracer Texas Labor Market Information website

TABLE 14

WILLIAMSON COUNTY, TEXAS
PRINCIPAL EMPLOYERS
CURRENT YEAR AND NINE YEARS AGO
(UNAUDITED)

	2016			2007		
Employer	Employees [a]		Percentage of Total County Employment	Employees [a]		Percentage of Total County Employment
Dell Computer	14,000	1	6.33%	11,599	1	10.94%
Round Rock ISD	5,800	2	2.62%	5,175	2	4.88%
Leander ISD	4,823	3	2.18%	3,297	3	3.11%
Williamson County	1,646	4	0.74%	1,313	6	1.24%
Sears (Teleserve)	1,600	5	0.72%	1,192	8	1.12%
Georgetown ISD	1,543	6	0.70%	1,576	5	1.49%
HEB Grocery	995	7	0.45%	2,491	4	2.35%
City of Round Rock	890	8	0.40%	743	10	0.70%
Emerson Process Management	880	9	0.40%	-		0.00%
Round Rock Premium Outlets	800	10	0.36%	N/A		N/A
State Farm Mutual Auto Insurance Co.	N/A		N/A	1,123	9	1.06%
Wal-mart and Sam's Club	N/A		N/A	1,308	7	1.23%
Total	32,977		14.90%	29,817		28.12%
Total Avg. Employees for the 2nd Qtr per TWC's website (www.tracer2.com)	260,818			106,000		

Source:
a - Individual cities provided employee count.

TABLE 15

WILLIAMSON COUNTY, TEXAS
COUNTY GOVERNMENT EMPLOYEES BY FUNCTION
LAST TEN FISCAL YEARS
(UNAUDITED)

	Fiscal Year									
Function	2016[a]	2015[a]	2014[a]	2013[a]	2012[a]	2011[a]	2010 [a]	2009 [a]	2008 [a]	2007 [a]
General Government	252	246	235	229	227	225	217	207	209	197
Judicial	231	226	215	209	208	209	210	218	207	197
Public Safety	989	973	961	932	922	908	909	895	871	849
Transportation	129	124	123	123	123	123	125	130	130	128
Community Services	46	42	36	36	35	37	39	40	36	31
Total:	1646	1611	1571	1530	1,516	1,502	1,500	1,490	1,453	1,402

Source: Williamson County Human Resource or Payroll Department

Note:
a - Budgeted positions

WILLIAMSON COUNTY, TEXAS
COUNTY GOVERNMENT EMPLOYEES BY FUNCTION/PROGRAM
Last Ten Fiscal Years
(Unaudited)

Function/Program or Department	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
General Government										
Commissioners Court	12	12	12	12	12	12	12	12	22	22
Building Maintenance	28	28	26	25	25	25	25	25	25	24
Budget Office	2	2	2	2	2	2	2	0	0	0
County Auditor	29	28	26	26	26	26	26	25	24	24
County Clerk	25	25	25	25	25	25	25	25	25	27
County Judge	7	6	6	6	6	6	4	0	0	0
County Treasurer	5	5	5	5	5	5	5	5	5	5
County Wide Records Mgmt	0	2	1	1	1	1	1	1	1	1
Elections	11	11	11	11	11	10	10	10	8	7
Fleet Services	17	17	17	17	17	17	17	17	15	15
HUD CDBG	1	1	1	1	1	1	1	1	1	1
Air Check Grant	0	0	1	1	1	1	1	1	1	0
MHMR Grant	0	2	1	1	1	1	0	0	1	0
Human Resources	14	13	13	12	11	9	10	10	10	9
Information Techonology Services	38	35	31	27	26	26	24	22	19	16
Infrastructure	2	2	2	2	2	2	1	0	0	0
Purchasing	9	7	7	7	7	7	7	7	7	5
Tax Assessor/Collector	52	50	49	49	49	49	46	46	45	41
	252	246	235	229	227	225	217	207	209	197

TABLE 15

WILLIAMSON COUNTY, TEXAS
COUNTY GOVERNMENT EMPLOYEES BY FUNCTION – CONTINUED
LAST TEN FISCAL YEARS
(UNAUDITED)

Function/Program or Department	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Judicial										
County Attorney	52	51	48	45	45	46	47	47	47	45
District Attorney	33	31	29	27	27	28	28	27	26	26
County Clerk	20	20	19	19	19	19	19	19	18	18
District Clerk	28	27	27	27	27	27	27	25	25	25
County Courts at Law	16	16	16	16	16	16	17	25	17	16
District Courts	25	25	23	22	21	20	19	20	20	19
Justice of the Peace	51	51	48	48	48	48	48	47	47	42
Courthouse Security	3	3	3	3	3	3	3	6	5	5
Personal Bond Office	3	2	2	2	2	2	2	2	2	1
	231	226	215	209	208	209	210	218	207	197
Public Safety										
911 Communications/EOC	82	72	70	71	68	58	55	55	53	48
911 Addressing	3	3	2	2	2	2	2	2	2	2
Constables	52	52	51	51	51	51	51	48	47	45
DPS	2	2	2	2	2	3	4	4	4	4
EMS	145	145	145	127	124	124	127	127	115	115
Jail	313	311	307	307	307	307	307	307	305	299
Juvenile Services	162	162	162	155	155	152	151	142	143	141
Mobile Outreach	13	15	15	13	9	7	8	5	4	4
Sheriff	217	211	207	204	204	204	204	204	197	190
Texas Youth Commission	0	0	0	0	0	0	0	1	1	1
	989	973	961	932	922	908	909	895	871	849
Transportation										
Road and Bridge	129	124	123	123	123	123	125	130	130	128
Community Services										
Agricultural Extension Service	3	4	4	4	4	5	8	8	8	7
Animal Shelter	18	17	16	16	15	15	15	15	14	11
Conservation	2	2	1	1	1	1	1	1	0	0
Parks and Recreation	18	14	11	11	11	12	11	11	10	10
Recycling Center	0	0	0	0	0	0	0	1	1	1
Veterans Services	5	5	4	4	4	4	4	4	3	2
	46	42	36	36	35	37	39	40	36	31
	1646	1611	1571	1,530	1,516	1,502	1,500	1,490	1,453	1,402

Source: Williamson County Human Resource or Payroll Department

TABLE 16

WILLIAMSON COUNTY, TEXAS
OPERATING INDICATORS BY FUNCTION/PROGRAM
LAST TEN FISCAL YEARS
(UNAUDITED)

	Fiscal Year									
Function/Program	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
General Government										
Number of A/P checks issued	14,477	16063	17,487	15,869	17,014	20,355	19,471	20,038	18,943	18,497
Number of outgoing A/P wires	138	170	119	152	104	216	174	130	155	132
Number of invoices processed	41,304	41663	40,655	40,038	43,822	42,081	41,136	42,320	40,819	42,410
Number of Pcard charges	9,712	8484	7,580	8,146	6,688	7,248	6,827	6,046	5,280	4,217
Number of electronic payments	3,462	2094	682	3,422	2,019	-	-	-	-	-
Judicial										
Hot Check Cases										
Number of checks processed	804	1,159	1,853	3,316	4,323	4,478	6,169	6,651	7,784	7,559
Number of theft by check cases filed	120	100	403	430	611	700	686	876	1,097	1,323
Public Safety										
Number of 911 calls received	86,049	94,829	65,371	84,997	93,280	173,981	115,848	110,946	108,004	102,009
EMS 911 runs	21,318	24,781	25,725	23,895	24,132	23,828	24,334	23,458	22,145	20,995
EMS transfer runs	847	884	909	411	542	1,108	1,578	2,070	1,587	2,442
Number of total EMS runs	22,655	25,665	26,634	24,306	24,674	24,936	25,912	25,528	23,732	23,437
Average EMS response time in minutes	7:53	8:14	7:52	7:26	6:54	6:38	6:25	5:50	6:33	6:45
Average Jail daily population	647	578	620	566	569	586	608	568	559	573
Jail bookings	13,826	13,583	15,052	16,003	16,564	16,439	16,839	16,028	15,381	15,903
Jail releases	13,687	13,591	15,041	16,004	16,567	16,486	16,890	15,942	15,433	15,937
Jail inmates at 9/30/XXXX	796	572	606	582	568	553	637	635	567	618
Violations reported by Sheriff Office	20,445	21,809	20,097	22,898	47,181	55,043	53,670	53,902	62,831	54,836
Transportation*										
Roadway resurfacing (CL miles)	102	90	118	130	83	186	127	148	90	100
Hot Mix Asphalt Overlay (CL miles)	0.5	-	-	2	N/A	N/A	N/A	N/A	N/A	N/A
Crack Seal Applied (CL miles)	77	168	174	118	N/A	N/A	N/A	N/A	N/A	N/A
Asphalt Patches Applied (Tons)	23,500	26,000	27,000	24,600	N/A	N/A	N/A	N/A	N/A	N/A
Bridge / Bridge Class Culvert Replacement (each)	-	1	30	2	N/A	N/A	N/A	N/A	N/A	N/A
Culvert Replacement and Maintenance (each)	234	220	197	153	N/A	N/A	N/A	N/A	N/A	N/A
Major Roadway Rehabilitation (CL miles)	13	18	16	14	N/A	N/A	N/A	N/A	N/A	N/A
Mowing / Vegetation control along roadways (miles) **	9,386	13,350	40,820	42,138	5,707	6,328	7,321	7,338	9,730	8,536
Ditch and culvert cleaning (CL miles)	14	14.3	0	9	4	8	21	20	39	54
Striping and Delineation Applied (CL miles)	62	32	55	44	N/A	N/A	N/A	N/A	N/A	N/A
Signage Replaced (each)	2,348	2,573	2,560	1,727	N/A	N/A	N/A	N/A	N/A	N/A
Grade and Shape Gravel Roads (CL miles)	101	198	105	105	N/A	N/A	N/A	N/A	N/A	N/A
Community Services										
Participants using sport fields	148,361	66,809	87,966	141,275	130,284	156,858	157,704	111,956	105,937	103,244
Parks Dept. reservations	6,497	4,733	1,174	1,159	4,585	577	713	519	437	311
Riders of the miniature train	32,583	29,713	20,016	18,845	16,742	13,202	14,653	14,691	17,606	13,818

Source:
Various County departments

*Beginning with FY2013, Transportation is reported in greater detail. "CL miles" refer to Center Line Miles

**Mowing is now reported in Total Miles instead of Center Line Miles.

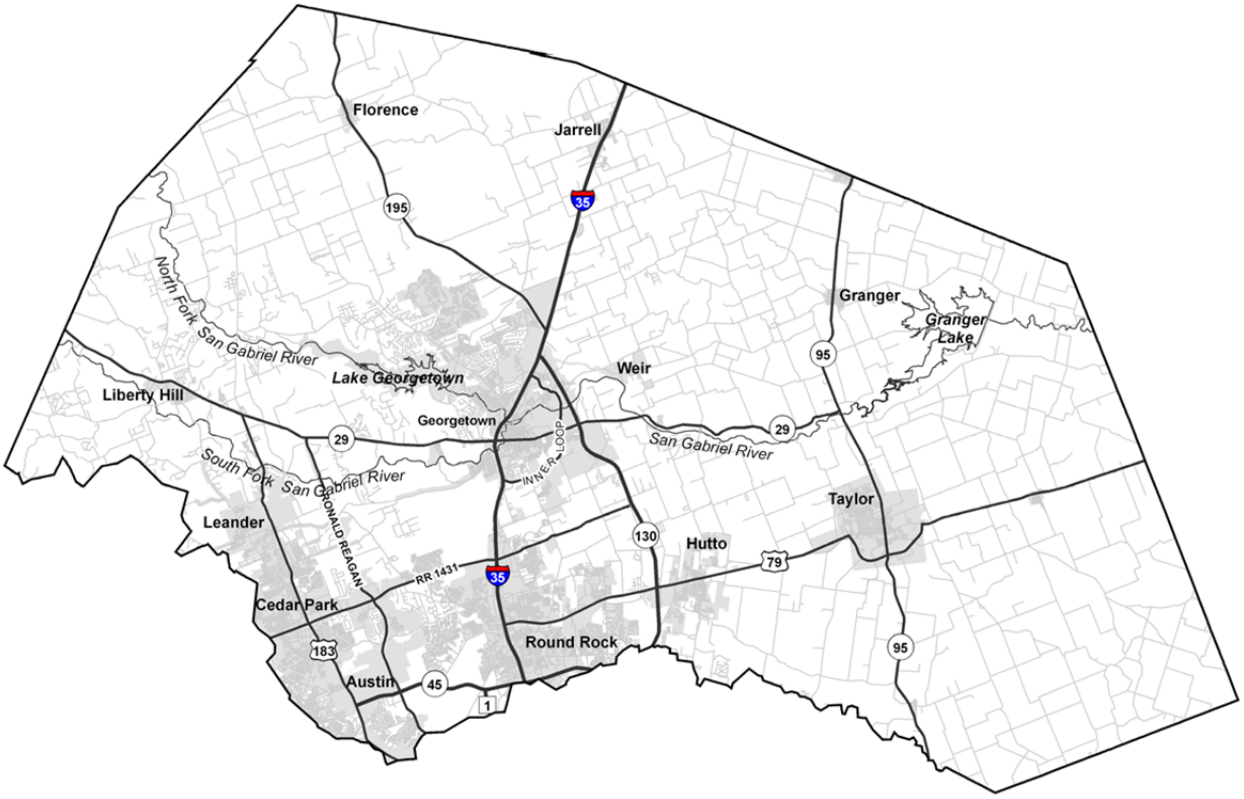
TABLE 17

WILLIAMSON COUNTY, TEXAS
CAPITAL ASSETS BY FUNCTION/PROGRAM
LAST TEN FISCAL YEARS
(UNAUDITED)

	Fiscal Year									
Function/Program	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
General Government										
Buildings/Facilities - all functions	65	65	61	59	58	57	49	47	48	45
Vehicles	51	47	43	40	41	35	31	32	31	28
Judicial										
Vehicles	12	11	10	11	11	10	10	10	10	10
Public Safety										
Vehicles	436	461	384	463	472	403	381	382	350	331
Transportation										
Miles of roadway maintained	1474	1,463	1440	1422	1,416	1,418	1,413	1,406	1,430	1,401
Bridges	212	212	212	209	208	206	201	202	171	171
Vehicles	269	346	306	345	345	202	131	127	129	126
Community Services										
Parks acreage										
Developed	363.5	363.5	363.5	363.5	363.5	363.5	363.5	335.5	358.0	358.0
Total	3389.8	3386.7	3296	3252	3,178.0	3,021.6	3,021.6	2,991.6	2,841.0	1,337.0
Hike & bike trails (miles)	28.25	20.25	18.05	18.05	15.27	15.27	15.27	13.27	10.52	10.52
Fields										
Cricket	1	1	1	1	1	1	1	1	1	1
Soccer	11	11	11	11	11	11	11	11	11	11
Softball	2	2	2	2	2	2	2	2	2	2
Courts										
Basketball	6	6	6	6	6	6	6	6	6	6
Tennis	8	8	8	8	8	8	8	8	8	8
Splash pads	2	2	2	2	1	1	N/A	N/A	N/A	N/A
Miniature train ride	1	1	1	1	1	1	1	1	1	1
Disc golf holes	18	18	18	18	18	18	18	18	18	18
Picnic pavilions	10	10	10	10	10	10	6	6	6	5
Campsites	28	28	28	28	18	18	18	18	18	18
Vehicles	36	63	66	48	49	16	6	6	7	7

Source:
Various County departments and Texas Department of Transportation

WILLIAMSON COUNTY, TEXAS



WILLIAMSON COUNTY

MISCELLANEOUS INFORMATION

Organized in 1848

Form of Government: A political subdivision of the State of Texas

Area[1]: 1,136 square miles (1,124 sq. miles/land; 12 sq. miles/water)

Population: 2016 Texas State Data Center: 508,514

Quality of Life:

Health Ranking: The County Health Rankings, released in February 2016 by the University of Wisconsin's Population Health Institute and the Robert Wood Johnson Foundation, ranked Williamson County third among Texas Counties in the health outcomes category (how healthy people are and how long they live) and second overall in health factors (how healthy they can be). These findings are with regards to key factors that affect health such as smoking, obesity, binge drinking, access to primary care providers, rates of high school graduation, rates of violent crime, air pollution levels, access to healthy foods, unemployment rates and number of children living in poverty.

Hospitals: St. David's Hospitals are located in Round Rock and Georgetown. Baylor Scott & White and Seton Medical Center Williamson are also in Round Rock. Cedar Park Regional Medical Center is located in Cedar Park.

Recreation:

Athletics: Round Rock Express (AAA Minor League Baseball team), Texas Stars AHL hockey team, Austin Spurs NBA D-League basketball team, community athletic leagues including softball, tennis, kickball, baseball, basketball, and aquatics; recreational/fitness centers; golf courses; and numerous running and cycling activities, both competitive and recreational, hosted by Williamson County cities.

Parks & Outdoors: Fishing, camping, water sports and wading on Lake Georgetown and Lake Granger; five county parks and numerous city parks (including 15.27 miles of hiking, biking, and running trails; sport fields, disc golf course, playgrounds, splash park); hunting on lands near Lake Granger; Cedar Rock Railroad miniature train in the Southwest Regional Park.

Family & Educational: Austin Community College has campuses in Cedar Park and Round Rock with another campus being built in Leander. Temple College offers classes in Taylor and Hutto. Southwestern University is located in Georgetown. Round Rock also offers classes from Texas State University and Texas A&M Health Science Center. The East Williamson County Higher Education Center, in Hutto, offers classes from Temple College, Texas State Technical College Waco and Texas A&M University.

Williamson County Historic Courthouse tours conducted by the Williamson Museum in Georgetown. Other museums include the Dan Moody Museum in Taylor and Palm House Museum in Round Rock. Family fun is available on the Hill Country Flyer steam train in Cedar Park and Inner Space Caverns in Georgetown.

Community Events: Music and entertainment events at the Cedar Park Center, Williamson County Sheriff Posse Rodeo, Chisholm Trail Days, Georgetown Red Poppy Festival, Round Rock Daffodil Days, Cedar Park's 4th of July Celebration at Milburn Park, Hutto Old Tyme Days, Taylor International Barbecue Cook-off, and other annual community festivals thrive in the County.

Economic Resources[2]:

Business: High-tech industries, agricultural and agribusiness, manufacturing and assembly, construction, real estate, government and educational sectors are significant economic contributors. Williamson County is a member of the Austin MSA, one of the fastest growing areas in the country. The booming population paired with abundant available resources allows a range of business endeavors to flourish.

Minerals: Building stone, sand, gravel and oil

Agriculture[3]: The area consists primarily of rolling prairie, however mixed hardwood timber and brush is prevalent in many areas. The major field crops of the area are corn, cotton, and grain sorghum.

The 2016 Williamson County annual agriculture increment report shows that in 2016 the county had 89,162 acres of feed corn which averaged 105 bu./ac. for a total crop value of $40,348,153; 13,590 acres of grain sorghum which averaged 75 bu./ac. for a total crop value of $6,148,562; 11,653 acres of cotton which averaged 2,012 pounds of lint and 1,500 pounds of seed lbs./ac. for a total crop value of $15,943,028; 22,000 acres of wheat for grain which averaged 50 bu./ac. for a total crop value of $5,033,100; 700 acres of oats for grain which averaged 55 bu./ac. for a total crop value of $163,625; 675 acres of pecans which averaged 60 lbs./ac for a total crop value of $7,125; nursery and horticulture production revenues totaled $6,320,000 and the county had approximately 250,000 acres of native grasslands.

Livestock revenues included: 2000 hens with $10,000 of total production revenue; 12,000 stockers for a total production revenue of $15,600,000; 47,000 beef cows and calves for a total production revenue of $78,108,300; 2,804 goats for a total revenue of $98,380 and 700 honey bee hives producing 50,000 lbs of honey for a total revenue of $45,000.

There are an estimated 30,000 to 40,000 acres in hunting and recreation leases totaling $1,750,000 in revenue. Corn and Cotton acre productions have increased while Milo production has decreased. Cattle numbers continues to grow in 2016 for Williamson County. An unreliable horse market has provided an unmonitored liquidation of horses.

Sources:

1. U. S. Census Bureau
2. Economic Development and Parks and Recreation Departments for the Cities of: Georgetown, Round Rock, Cedar Park, Leander, Taylor & Hutto
3. Texas A&M AgriLife Extension Service

Students Enrolled in Colleges and Universities Located Near or Within the County [a]:

University	Fall 2016 Enrollment
Austin Community College	41,543
Concordia University Texas	2,730
Huston-Tillotson University	1,006
St. Edward's University	4,601
Southwestern University	1,489
Temple College	5,147
Texas A&M Health Science Center	2,689
Texas State University	1,829
University of Texas	51,331

Health Care Facilities Located Near or Within the County [b]:

Hospitals:

Cedar Park Regional Medical Center
Baylor Scott & White University Medical Campus
Reliant Rehabilitation Hospital Central Texas
St. David's Georgetown Hospital
St. David's Round Rock Medical Center
Baylor Scott & White Hospital, Taylor
Georgetown Behavioral Health Institute
Rock Springs, Georgetown
Seton Medical Center Williamson, Round Rock

Clinic facilities:

Austin Diagnostic Clinic – Cedar Park, Round Rock
Austin Regional Clinic – Cedar Park, Hutto, Round Rock
Brushy Creek Family Medical Associates
Cedar Park Family Practice
Central Texas Diagnostic Clinic
Dell Children's Circle of Care Pediatrics-
Round Rock Health Clinic
Lake Aire Medical Center, Georgetown
Texas A&M HSC Whitestone, Cedar Park
Pediatrics at Hutto
Express Urgent Care, Round Rock
EasyCare Round Rock, Austin Diagnostic Clinic
Family Medical Center of Cedar Park
Family Medical Center of Georgetown
Family Medicine Associates of Round Rock
Family Medicine Clinic of Georgetown
FasMed Urgent Care – Georgetown, Taylor
Georgetown Medical Clinic
Health Center at Scott and White Hospital, Taylor
Hill Country Family Health Specialists
Leander Healthcare Center
Lone Star Circle of Care Federally Qualified Health Ctr
Dell Children's-Circle of Care Adolescent Health at Texas A&M HSC, Round Rock
A.W. Grimes Medical Offices, Round Rock
Family Medicine at Lake Aire Medical Center, Georgetown
Senior Health Care Lake Aire Medical Center, Georgetown
Seton-Circle of Care Family Medicine at Texas A&M HSC, Round Rock
LSCC OB/GYN, Round Rock
Seton-Circle of Care Women's Services at Texas A&M HSC, Round Rock
Psychiatry & Behavioral Health at Lake Aire Medical Center, Georgetown
Seton-Circle of Care Behavioral Health at Texas A&M HSC, Round Rock
Psychiatry & Behavioral Health at Round Rock Health Clinic, Round Rock

Minute Clinic – Cedar Park, Georgetown, Round Rock
NextCare Urgent Care-Austin North, Georgetown, Round Rock
Northwest Diagnostic Clinic Cedar Park
Physician Associates of Georgetown
Physician's Center, P.A., Georgetown
Pro-Med Minor Emergency Center, N. Hwy 183
Rapid Care Clinic – Leander
Redi Clinic – Cedar Park, Round Rock
Baylor Scott & White Clinic – Cedar Park, Cedar Park West, Georgetown, Hutto, Johns (Taylor), University (Round Rock), Round Rock West
Seton Cedar Park
St. David's Urgent Care, Round Rock
St. David's Emergency Center, Cedar Park
Texas MedClinic - Round Rock
Town Center Family Medicine of Cedar Park
T&K Physician Associates, Georgetown
Town Center Family Medicine of Cedar Park
Urgent and Family Care, Parmer Lane

Public Health Centers:
Williamson County and Cities Health District– Cedar Park, Georgetown, Round Rock, Taylor

Volunteer Clinic Facilities:
Samaritan Health Ministries
Sacred Heart Community Clinic – Round Rock
Pflugerville Community Health Center North (Low Cost Clinic)

Note: This is not an exhaustive list. Not included are individual practitioners, specialty care practices, or pediatric practices. New facilities are opening on an ongoing basis.

Source: a – Respective college or university
b – Williamson County and Cities Health District

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WILLIAMSON COUNTY, TEXAS

GOVERNMENT OFFICE INFORMATION

The government of Williamson County, Texas is subdivided into several different offices; each with its own legally constituted duties as prescribed by the constitution and/or legislative act. The head of some offices are elected officials while others are appointed by the Commissioners' Court or the District Judges of Williamson County as provided by law.

Constitutional Offices

Williamson County is a political body. The general governing body of the County is the Commissioners' Court, which has none of the functions of a traditional court, but has powers and duties clearly set forth and defined in the constitution and statutes. The Commissioners' Court is comprised of four commissioners, each of whom is elected by the qualified voters of one of four precincts in the County, and a County Judge, who is elected Countywide as presiding officer. Commissioners' Court, as a political subdivision of the state, was created to carry out policy common to the state. Therefore, it was not mainly created to advance the interest of the particular locality in which it is located. The election of the various County officials ensures, in most instances, the application of state laws and regulations, in light of local needs and statutes, and to establish a courthouse and jail, appoint numerous officials, fill vacancies in certain County offices, let contracts in the name of the County, build roads and bridges, administer the County's public welfare services, perform numerous duties in regard to elections, set the County tax rate, issue bonds, and adopt the County budget.

District Courts

There are five District Courts in Williamson County, each of which is a court of general jurisdiction and may try both civil and criminal cases. The judge of each of the respective courts is elected Countywide. The District Courts have original jurisdiction in all criminal cases of the grade of felony, and all suits on behalf of the state to recover penalties, forfeitures and escheat. The District Courts preside over all cases of divorce, misdemeanors involving official misconduct, suits to recover damages, slander or defamation of character, suits for title of land and for enforcement of liens thereon, suits for the right of property levied upon by virtue of any writ of execution, sequestration, or attachment when the property levied on is valued at an amount of $500 (exclusive of interest) and all suits concerning contested elections.

These courts and the judges thereof have power to issue writs of habeas corpus, mandamus, injunction, certiorari and all writs necessary to enforce their jurisdictions. The District Courts also have appellate jurisdiction and general supervisory control over the County Commissioners' Court. They have general original jurisdiction over all causes of action which a remedy or jurisdiction is not provided by law or the Constitution. The District Court, concurrently with County Court, has the general jurisdiction of a probate court and may do all things associated with the duties of a probate court enumerated under County Court. In addition, the District Courts share concurrent jurisdiction with the County Courts at Law when the matter in controversy exceeds $500, but is less than $10,000. Along with these constitutional and statutory responsibilities, the District Judges have the statutory responsibility of appointing the County Auditor and Court Reporters for each of the respective District Courts. The District Judges, along with the County Court-at-Law Judges, appoint the Community Supervision and Corrections Department Director. The District Judges, along with the County Judge serve on the County Juvenile Board which oversees the operations of the Juvenile Probation Department and appoints the Chief Juvenile Probation Officer.

Constables

In general, the duties of the Constable are to perform a service or act, execute and return, as provided by law, all civil and criminal processes, writs, citations, subpoenas, summons, warrants, and precepts, directed and delivered by a lawful official, anywhere in the constable's County, or in a County contiguous to the constable's County, and in other locations as provided by law. The Constable may seize and sell real estate and personal property upon order of the court, take eviction action and attend justice court proceedings. The Constable may enforce all state laws and arrest offenders with or without warrant for felonies or misdemeanor offenses committed against the peace and dignity of the state.

County Attorney

The Countywide electorate elects the County Attorney. Duties include representation of the State of Texas in all criminal proceedings under investigation or pending before the County Courts at Law and Justice Courts of the County, examination and prosecution of all cases pending before the Juvenile Courts, and representation of the State in all cases appealed to or from any of these courts. The County Attorney also processes felony and misdemeanor hot checks, obtains protective orders for victims of domestic violence, represents the Department of Protective and Regulatory Services in cases involving abuse or neglect of children or helpless adults, and obtains commitment orders for mental illness and substance abuse. The County Attorney attends Commissioners' Court as the civil lawyer for the County and provides a full range of legal services in that capacity. Also provided by the County Attorney is legal advice to all County officials and employees. Where applicable, the County Attorney oversees the representation of officials and employees who are involved in litigation.

County Clerk

The Countywide electorate elects the County Clerk and the duties and fees collected by the office are prescribed by the legislature. The County Clerk is the clerk of the County and of Commissioners' Court and is the official recorder of County business. By legislation in Williamson County, the County Clerk functions as the clerk of the court for each of the County Courts at Law. In addition, the County Clerk acts as recorder of deeds and other instruments, records and issues death and birth certificates, issues marriage licenses, registers cattle brands, records and retains all plats, and maintains records of mental health commitments. The County Clerk serves as clerk of the Probate and Civil Court and keeps all records, books, paper, and proceedings of the probate court as well as the County Courts at Law criminal dockets. Additional responsibilities include keeping all records properly indexed, arranged and preserved.

District Attorney

The legislature may create the Office of the District Attorney in any judicial district in the state and prescribe the duties of the office. Such an office in Williamson County has been created and the District Attorney is a constitutional officer. The Countywide electorate elects the District Attorney. The duties of the office in general are to represent the State of Texas on all criminal matters before the District Courts of Williamson County. These matters include grand jury proceedings along with bond and asset forfeitures. The District Attorney also handles all appeals from any such matters that are taken to the Court of Appeals, Texas Court of Criminal Appeals, the Texas Supreme Court and the United States Supreme Court.

District Clerk

The Countywide electorate elects the District Clerk. In general, the functions of this office are to serve in an administrative capacity for the District Courts (state courts), to perform judicial or quasi-judicial duties in connection therewith, to act as custodian of the court records, to receive money in the clerk's official capacity, and to perform general assessed duties as are enjoined by statute or imposed by the lawful authority of the court. The District Clerk of Williamson County also maintains the files for all criminal, civil, family, and tax cases handled by these courts.

Justice of the Peace Courts

There are four Justice of the Peace Courts in Williamson County. Each Justice of the Peace is elected by the voters living within their respective precinct. Justices of the Peace have jurisdiction in all Class C misdemeanor criminal matters where such fines are established by statute. Also, the Justices of the Peace have jurisdiction in civil matters either in Small Claims Court or Justice Court where the amount in controversy is $10,000 or less (exclusive of interest) of which exclusive original jurisdiction is not given to the County or District Courts. Appeals to the County Court shall be allowed in all cases decided in Justice Court, however, in civil cases, only when the judgment is for more than $20 (exclusive of costs). The Small Claims Court exercises concurrent jurisdiction with the Justice Courts in all actions for recovery of money by any person, association of persons, corporations or by any attorney for such parties or other legal entity where the amount involved, exclusive of cost, does not exceed the sum of $10,000. Small Claims courts may only recover money. All decisions of Small Claims Court and Justice Courts, provided that the amount in controversy, exclusive of costs, exceeds the sum of $20 may, upon rendition of final judgment by the Judge of the Court, be appealed to the County Court or County Courts at Law. Other duties of the Justices of the Peace in Williamson County include death inquests, mental probable cause hearings, criminal prisoner admonishments, peace bond hearings, school truancy cases, juvenile magistrate statements, animal cruelty hearings, and other administrative duties per code.

Sheriff

The qualified voters of the County elect the Sheriff to office. The duties of the Sheriff are prescribed by the legislature. The Sheriff may employ guards for the safekeeping of prisoners in the jail and, subject to regulations of Commissioners' Court, has charge and control of the courthouse. In addition, the Sheriff shall execute all processes and precepts directed by legal authority and make return thereof to the proper court. The Sheriff is the Chief Law Enforcement Officer for the County and custodian of the County jail. In addition to apprehending criminals and serving writs and other legal papers for the Civil, County, and District Courts, the Sheriff is also charged with keeping order in the courtrooms. The Sheriff also administers proactive programs aimed at crime prevention and substance abuse control such as the Drug Abuse Resistance Education (DARE) program.

Tax Assessor-Collector

The Tax Assessor-Collector is elected by the Countywide electorate and performs all of the duties with respect to assessing property for the purpose of taxation and collection of taxes as may be prescribed by the legislature. The duties of the office consist of assessing and collecting County property taxes. The officer may serve in a similar capacity for any incorporated city, town, village, school districts--independent or otherwise, drainage district, and water control in the County. The Assessor-Collector of Williamson County, in addition to assessing and collecting for taxable real and personal property within the County, collects the taxes for many independent cities and districts. Other duties include collecting state and county license fees, occupation fees, and state automobile transaction taxes.

County Treasurer

The Countywide electorate elects the County Treasurer. The duties of the County Treasurer are to receive County funds and disburse them, subject to the County Auditor's countersignature. The function of this office is an essential part of internal control in financial matters in that all monies due to the County must be placed in the treasurer's custody. Monies are forwarded to the County Treasury and can be withdrawn upon the signature of the County Treasurer and countersignature of the County Auditor. Additional responsibilities of the County Treasurer include signatory authority for all payroll related payments with the countersignature of the County Auditor. Also, the County Treasurer is responsible for the reconciliation of all bank accounts upon which the Treasurer acts as signatory. The County Treasurer prepares and submits all required reports and payments to the State of Texas and serves as Secretary to the Bail Bond Board. In addition, the County Treasurer serves as the Certified Investment Officer for the County relative to all requirements of the Public Funds Investment Act.

OFFICES CREATED BY LEGISLATIVE LAW

County Court-at-Law

There are four County Courts-at-Law in Williamson County, each created by the legislature. The Countywide electorate elects each of the County Court-at-Law judges. These courts have jurisdiction in all misdemeanor cases, probate, and mental illness and chemical dependency matters. The County Courts-at-Law have concurrent jurisdiction with the District Courts in family law cases, including divorces, child custody cases and in civil matters where the amount in controversy does not exceed $100,000 (exclusive of punitive or exemplary damages, costs, and interest). The County Courts-at-Law have appellate jurisdiction in all appeals in criminal and civil cases from Justice Courts and Municipal Courts. Along with these duties, the County Court-at-Law Judges and the District Judges appoint the Community Supervision and Corrections Department Director.

County Auditor

The County Auditor is appointed by the District Judges and serves as the Chief Accounting Officer of the County. The County Auditor has general oversight of all County records and is responsible per statute, for projecting revenue during the budget process. The County Auditor must sign all checks written for the County. It is the responsibility of the County Auditor's office to audit each department of the County at least once each quarter. Financial reporting is also performed by the County Auditor's office. The creation of the Comprehensive Annual Financial Report (CAFR) and the Popular Annual Financial Report (PAFR), that is submitted each year to the Government Finance Officers Association for review, is the responsibility of the County Auditor. In addition, the County Auditor oversees the payroll and accounts payable function for the entire County. Other responsibilities include managing fixed assets and administering and reporting all grant funds received from the state and federal government and other entities. The County Auditor also serves as the fiscal officer for the Community Services and Corrections Department and Chief Fiscal Officer for Juvenile Services.

Budget Officer

In a county with a population of more than 125,000, the Commissioners Court may appoint a Budget Officer. The Budget officer is responsible for preparing a county budget for the fiscal year. In preparing or monitoring the budget, the budget officer may require the county auditor or any other district, county, or precinct officer of the county to provide any information necessary for the budget officer to properly prepare or monitor the budget. The county budget is approved by Commissioners Court.

Regional Animal Shelter Director

The mission of the Regional Shelter Director is to ensure humane care is provided to all animals in the shelter, to assist the participating entities in enforcing state law and local ordinances, and to otherwise serve the citizens in a cost-effective manner. The Regional Shelter Director takes responsibility for animal shelter operations and staff by developing and enforcing policies and procedures that are compliant with local, state and federal law. Priorities include development and maintenance of budgetary and financial goals, communication and relationships with regulatory agencies, Commissioners' Court, Shelter Board and officials from all city/county entities. The director also monitors and reports trends which may be used to facilitate planning of programs consistent with the success of overall shelter goals. The Shelter Director is hired by County officials utilizing input from the Regional Animal Shelter's Board of Directors.

Chief Juvenile Probation Officer

The County Juvenile Board, comprised of five District Judges and the County Judge, appoints the Chief Juvenile Probation Officer. The general duties of this office are to properly investigate, process, and handle all cases referred to them by the courts, law enforcement agencies, parents, and other agencies. The Juvenile Probation Department compiles and prepares a detailed social history on all referred offenders and recommends corrective action to the Juvenile Court. The department provides professional casework services and supervision to delinquent children who are placed on probation by the Juvenile Court. Juvenile detention and intensive residential care is also provided by and through the Juvenile Services Department. Each of these units provides care 365 days a year. Several specialized programs are operated through Juvenile Services to include Community Services and Restitution, Gang Intervention, and Juvenile Drug and Delinquency Prevention. One specialized sex offender caseload officer is also provided through Juvenile Services.

County Emergency Services Senior Director

The County Judge, with the advice and consent of Commissioners' Court, appoints the Senior Director of Emergency Services of Williamson County. It is the Senior Director's duty to control and direct the areas of Emergency Management, HazMat (Hazardous Materials), MOT (Mobile Outreach Team), Dispatch, Wireless Communications, and EMS (Emergency Medical Services). It is the responsibility of the senior director to serve as liaison between municipal districts, county, regional, state and federal emergency management functions as well as other emergency management organizations. Emergency Management will respond to local disasters by coordinating recovery activities with local, regional and state entities. The area of HazMat is responsible for responding to hazardous material spills within the county and the region. MOT responds to mental health crisis calls in the county in coordination with the various law enforcement agencies within the county. Dispatch handles all 911 communications between the general public and County, City and Special District Agencies tasked with rapid response. Wireless Communications manages the radio system between the various Public Safety Agencies within the County. EMS responds to all emergency medical calls and handles transport of patients within the county.

County Extension Service Agent

The Williamson County Office of the Texas Agricultural Extension Service is a unique partnership between the County Commissioners' Court and the Texas A & M University System. County Extension Agents provide outreach education to the citizens of Williamson County in the areas of Agriculture, Family and Consumer Sciences, 4-H, Youth Development, and Horticulture. Agents utilize research-based information to conduct workshops, clinics, tours, meetings and programs, as well as preparing news releases and web-based education. The Extension Service values and promotes citizen and community involvement, research-based education, lifelong learning, and volunteerism.

CSCD Director

The Community Supervision and Corrections Department (also known as Adult Probation Department) Director is appointed by the District and County Court-at-Law Judges with criminal jurisdiction. The department is responsible for supervising adult misdemeanor offenders placed on community supervision (adult probation), offenders placed under pre-trial supervision, and offenders placed in the department's 90-bed intensive inpatient substance abuse program referred to as the Central Texas Treatment Center. The department's mission is to protect the community and rehabilitate offenders. The department operates a number of rehabilitation programs for the supervision of offenders and specialized caseloads for sex offenders, special needs offenders, offenders required to be monitored on electronic monitoring or surveillance, and offenders required to have ignition interlock devices that monitor alcohol use in their vehicles. The department receives most of its funding from state funds and offender fees. The Texas Department of Criminal Justice-Community Justice Assistance Division provides grant and operational funds, and oversight to the department.

Elections Administrator

The Elections Administrator is the County Elections Official and is appointed by the Williamson County Elections Commission. The duties of the Elections Administrator include all voter registration activities for over 264,014 registered voters in 88 precincts and the conduct of election activities for more than 44 county, city and school governments, as well as 54 municipal and special utility districts. Duties also include the preparation and maintenance of appropriate political jurisdiction maps. The Administrator prepares elections contracts and conducts elections for federal and state elections, and for local elections when requested. Duties include the selection and coordination of poll sites, selection and training of poll workers, and preparation of ballot materials. The Elections Administrator coordinates the use of grant funds from the Help America Vote Act (HAVA) with the County Judge and the Auditor and maintains all electronic voting equipment and peripherals. The Administrator serves as the repository for local officials' campaign and expenditure reports. The Elections Administrator provides information to the public regarding voter registration and elections and serves as a liaison to the Secretary of State regarding elections issues.

Human Resource Senior Director

The Human Resource (HR) Senior Director for Williamson County is appointed by the County Benefits Committee and the Commissioners' Court. The Senior Director must ensure the County is in compliance with state and federal hiring laws, that applicants meet the qualifications of a particular job opening and that the public is notified when a job opening becomes available within the County. The HR Senior Director is responsible for the management of the Self-Funded Benefits Plan and various other medical and dental benefit plans offered by the County as well as life and long-term disability insurance, workers' compensation insurance, the wellness program and the employee assistance program. The HR Senior Director also monitors the claims disbursement made under the Self-Funded Benefits Plan and must ensure the various benefits plans are administered in compliance with federal laws and regulation. The HR Senior Director must ensure the County complies with the Drug-Free Workplace Policy, the Family and Medical Leave Act (FMLA) and the Americans with Disabilities Act (ADA).

Infrastructure Services Senior Director

The County Judge, with the advice and consent of the Commissioners' Court, appoints the Senior Director of Infrastructure Services of Williamson County. It is the Senior Director's duty to control and direct the areas of Facilities Maintenance, Fleet Services, the County Engineer's Office and the Road and Bridge Division. It is the responsibility of the senior director to serve as a liaison with local, state, county, and federal organizations. The area of Facilities maintenance oversees all County real estate transactions and facilities construction activities. Facilities Maintenance personnel additionally ensure the quality and completion of maintenance and repair for all County-owned buildings and grounds. Fleet Services personnel maintain Williamson County's fleet of vehicles and equipment; make recommendations, during the Budget process, for equipment replacement needs of county departments as well as assisting in defining what types of equipment should be purchased. The Road and Bridge Division of Williamson County has the responsibility for the maintenance and repair of all County roads, bridges, drainage structures and ditches pertaining to the road system in Williamson County. The County Engineer's Office is responsible for planning, design and inspection of roadway and drainage facilities required to provide for the safe, economical and productive operation of the County's transportation system. The County Engineer's Office is additionally responsible for land development coordination activities such as plat review for the unincorporated areas within the County.

Parks Department Senior Director

The County Judge appoints the Parks Department Senior Director with the advice and consent of the Commissioners' Court. The Senior Director is responsible for the development, operation, and maintenance of County parks, trails and preserves. The senior director also provides for safe and secure facilities and coordinates park related development and activities with cities in the County.

Purchasing Agent

The Purchasing Agent is appointed by the Commissioners' Court. The Purchasing Agent is responsible for carrying out the purchasing function as prescribed by law and for administering the procedures prescribed by law for notice and public bidding for county purchases and contracts. The County Purchasing Agent purchases all supplies, materials and equipment required or used by the county and contracts for all repairs to purchased equipment, as needed.

Technology Services Senior Director

The County Judge, with the advice and consent of the Commissioners' Court, appoints the Technology Services Senior Director of Williamson County. It is the Senior Director's duty to oversee the functions of Technology Services (TS), Geographic Information Systems (GIS), 911 Addressing and Records Management (RM) for the County. TS includes installing new systems, protecting computer-stored records, maintaining control of daily Data Lifecycle functions, troubleshooting within County offices as computer-related issues arise as well as supporting County-wide telecommunications. GIS includes management of the central GIS database and interfaces as well as providing GIS, GPS, and related services to County departments and the public. 911 Addressing includes maintaining the 911 telephone database for the entire County and providing addressing services for the unincorporated areas and small cities. RM functions include warehousing and protecting records from the various County departments, monitoring and coordinating destruction schedules, and warehousing and coordinating the disposal of assets as the assets exceed their useful life. In addition, the director oversees County mail courier functions.

Veterans Services

In a county with a population of 200,000 or more, the Commissioners Court shall maintain a veterans county service office. The Commissioner's Court appoints the veterans county service officer and the number of assistant veterans county service officers that it considers necessary. Veterans Services staff assists veterans and their families with information on programs and services that are available for individuals that have served in the armed forces. They also help them file for and receive their entitled benefits from the Department of Veterans Affairs. Programs and services available include educational benefits, vocational benefits, disability retirement, obtaining lost military records and more.

FEDERAL AND STATE AWARD PROGRAMS

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Honorable County Judge
and County Commissioners
Williamson County, Texas

We have audited, in accordance with the auditing standards generally accepting in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the governmental activities, each major fund, and the aggregate remaining fund information of Williamson County, Texas (the County), as of and for the year ended September 30, 2016, and the related notes to the financial statements, which collectively comprise the County's basic financial statements, and have issued our report thereon dated February 28, 2017.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the County's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the County's internal control. Accordingly, we do not express an opinion on the effectiveness of the County's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be significant deficiencies or material weaknesses. However, significant deficiencies or material weaknesses may exist that have not been identified.

To the Honorable County Judge
and County Commissioners
Williamson County, Texas

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the County's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Weaver and Tidwell, L.L.P.

WEAVER AND TIDWELL, L.L.P.

Austin, Texas
February 28, 2017

INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE FOR EACH MAJOR PROGRAM AND REPORT ON INTERNAL CONTROL OVER COMPLIANCE IN ACCORDANCE WITH THE UNIFORM GUIDANCE AND STATE OF TEXAS UNIFORM GRANT MANAGEMENT STANDARDS

To the Honorable County Judge
and County Commissioners
Williamson County, Texas

Report on Compliance for Each Major Federal and State Program

We have audited the compliance of Williamson County, Texas' (the County) with the types of compliance requirements described in the U.S. *Office of Management and Budget (OMB) Compliance Supplement* and the State of Texas Uniform Grant Management Standards (UGMS) that could have a direct and material effect on its major federal and state programs for the year ended September 30, 2016. The County's major federal and state programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with the requirements of laws, regulations, contracts, and grants applicable to its federal and state programs.

Auditor's Responsibility

Our responsibility is to express an opinion on compliance for each of the County's major federal and state programs based on our audit of the types of compliance requirements referred to above.

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; the audit requirements of Title 2 U.S. Code of Federal Regulations (CFR) Part 200, *Uniform Administrative Requirements, Cost principles, and Audit Requirements for Federal Awards* (Uniform Guidance), and UGMS. Those standards, the Uniform Guidance, and UGMS require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal or state program occurred. An audit includes examining, on a test basis, evidence about the County's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

To the Honorable County Judge
and County Commissioners
Williamson County, Texas

We believe that our audit provides a reasonable basis for our opinion on compliance for each of the County's major federal and state program. However, our audit does not provide a legal determination of the County's compliance.

Opinion on Each Major Federal and State Program

In our opinion, the County complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal and state programs for the year ended September 30, 2016.

Report on Internal Control Over Compliance

Management of the County is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the County's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal and state program as a basis for designing auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal and state program and to test and report on internal control over compliance in accordance with the Uniform Guidance and UGMS, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the County's internal control over compliance.

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct noncompliance with a type of compliance requirement of a federal or state program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal or state program will not be prevented, or detected and corrected on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal or state program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

To the Honorable County Judge
and County Commissioners
Williamson County, Texas

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance and UGMS. Accordingly, this report is not suitable for any other purpose.

Weaver and Tidwell, L.L.P.

WEAVER AND TIDWELL, L.L.P.

Austin, Texas
February 28, 2017

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
YEAR ENDED SEPTEMBER 30, 2016

SECTION I – SUMMARY OF AUDITOR'S RESULTS

Financial Statements

An unmodified opinion was issued on the financial statements.

Internal control over financial reporting:

Material weakness(es) identified?	____ Yes	X No
Significant deficiencies identified that are not considered to be material weakness(es)?	____ Yes	X None reported
Noncompliance material to financial statements noted?	____ Yes	X No

Federal and State Awards

Internal control over major programs:

Material weakness(es) identified?	____ Yes	X No
Significant deficiencies identified that are not considered to be material weakness(es)?	____ Yes	X None reported

An unmodified opinion was issued on compliance for major programs.

Any audit findings disclosed that are required to be reported in accordance with the Uniform Guidance, or State of Texas Uniform Grant Management Standards?	____ Yes	X No

Identification of major federal programs:

14.218	Community Development Block Grant

Identification of major state programs:

	Indigent Defense Formula AirCheck Texas
Dollar threshold use to distinguish between type A and type B programs?	$750,000 – Federal $300,000 – State
Auditee qualified as low-risk auditee?	X Yes ____ No

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF FINDINGS AND QUESTIONED COSTS – CONTINUED
YEAR ENDED SEPTEMBER 30, 2016

SECTION II – FINANCIAL STATEMENT FINDINGS

NONE

SECTION III – FEDERAL AND STATE AWARD FINDINGS AND QUESTIONED COSTS

NONE

SECTION IV – SCHEDULE OF PRIOR AUDIT FINDINGS AND QUESTIONED COSTS

FINDING 2015-001 – Continuing Legal Education Requirement

MAJOR PROGRAM: Indigent Defense Formula Grant

TYPE OF FINDING: Compliance; Significant deficiency

QUESTIONED COST: None

DESCRIPTION OF PRIOR AUDIT FINDING: Chapter 174 of the Indigent Defense Policies and Standards state that an attorney shall complete a minimum of 10 hours of continuing legal education (CLE) in the area of criminal law and procedure each year, including one hour of ethics relating to the practice of criminal law. All attorneys on the appointment list must file a certificate with the court administration office each year attesting to completion of the required CLE or submit documentation showing that the attorney is certified as a specialist in criminal law. CLE documentation and requirement for one attorney was not kept by the County.

STATUS: For the year ended September 30, 2016, appropriate CLE certification documentation was retained by the County for attorneys under the grant.

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF EXPENDITURES OF FEDERAL AND STATE AWARDS
YEAR ENDED SEPTEMBER 30, 2016

Federal Grantor/ Pass Through Grantor Program Title	Federal CFDA Number	Pass Through Entity Identifying Number	Expenditures
FEDERAL AWARDS			
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES			
Passed Through Texas Department of Family and Protective Services			
Title IV-E Contract (Legal)	93.658	23939896	$ 31,555
Total Passed Through Texas Department of Family and Protective Services			31,555
Total U.S. Department of Health and Human Services			$ 31,555
U.S. DEPARTMENT OF AGRICULTURE			
Passed Through Texas Department of Agriculture			
FY '16 National School Lunch Program	10.555	75M1002/TX-246-2005	$ 91,070
FY '17 National School Lunch Program	10.555	75M1002/TX-246-2005	7,844
Total Passed Through Department of Agriculture			98,914
Total U.S. Department of Agriculture			$ 98,914
U.S. DEPARTMENT OF HOMELAND SECURITY			
Passed Through Texas Office of the Governor - Division of Emergency Management			
2014 Homeland Security	97.067	14-SR48491-01	$ 8,648
2015 Homeland Security - Hazmat Trailer	97.067	EMW-2015-SS-00080-2957501	70,714
2015 Homeland Security - Mercury Analyzer	97.067	EMW-2015-SS-00080-2957301	47,920
2016 Homeland Security - SWAT medic	97.067	EMW-2015-SS-00080-2957401	4,500
2016 Homeland Security - Flourine detector	97.067	EMW-2015-SS-00080-2957101	8,000
2016 Homeland Security - Monitor/Maint	97.067	EMW-2015-SS-00080-2957201	29,695
Total Passed Through Texas Office of the Governor - Division of Emergency Management			$ 169,477
Passed Through Texas Department of Public Safety - Division of Emergency Management			
Multiple Flood Damage Grants	97.036	PA-06-TX-4223-PW-XXXX	$ 303,668
Emergency Management Performance Grant	97.042	16TX-EMPG-1418	84,923
Emergency Management Performance Grant	97.042	15TX-EMPG-1418	13,355
Total Passed Through Texas Department of Public Safety - Division of Emergency Management			401,946
Total U.S. Department of Homeland Security			$ 571,423
U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT			
Direct Programs			
Community Development Block Grant	14.218	BC-12-UC-48-0502	$ 17,464
Community Development Block Grant	14.218	BC-13-UC-48-0502	216,062
Community Development Block Grant	14.218	BC-14-UC-48-0502	696,632
Community Development Block Grant	14.218	BC-15-UC-48-0502	141,618
Total Direct Programs			1,071,776
Total U.S. Department of Housing and Urban Development			$ 1,071,776
U.S. DEPARTMENT OF JUSTICE			
Direct Programs			
Equitable Sharing Program	16.922		$ 104,131
Total Direct Programs			104,131
Total U.S. Department of Justice			$ 104,131

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF EXPENDITURES OF FEDERAL AND STATE AWARDS – CONTINUED
YEAR ENDED SEPTEMBER 30, 2016

Federal Grantor/ Pass Through Grantor Program Title	Federal CFDA Number	Pass Through Entity Identifying Number	Expenditures
FEDERAL AWARDS			
U.S. DEPARTMENT OF TRANSPORTATION			
Passed Through Texas Department of Transportation			
IH-35 NBFR at Georgetown Railroad	20.205	0015-09-160	$ 329,645
IH-35 @ RM 2243 Preventive Maintenance Project	20.205	0015-09-170	62,099
IH-35 from RM 1431 to SH 45 Operational Study	20.205	0015-09-167	59,480
Passed Through Texas Department of Transportation - Pass Through Toll Financing			
FM 1660 CR 134 to CR 101	20.205	PT2005-001-01-PTT1566-01-009	7,742
Total Passed Through Texas Department of Transportation			458,966
Total U.S. Department of Transportation			$ 458,966
U.S. DEPARTMENT OF TREASURY			
Direct Programs			
Internal Revenue Service Equitable Sharing Program	21.000	TX2460000 410412	$ 75,945
Total Direct Programs			75,945
Total U.S. Department of Treasury			$ 75,945
TOTAL EXPENDITURES OF FEDERAL AWARDS			$ 2,412,710
STATE AWARDS			
OFFICE OF THE ATTORNEY GENERAL			
Direct Programs			
2015 Texas Vine Program		1013085	$ 27,715
Total Direct Programs			27,715
Total Office of the Attorney General			$ 27,715
OFFICE OF THE GOVERNOR			
Passed Through Criminal Justice Division			
2016 DWI/Drug Court		1869510	$ 108,330
2017 DWI/Drug Court		1869511	479
2016 Williamson County Veterans		2758102	82,229
2017 Williamson County Veterans		2758103	64
Total Passed Through Criminal Justice Division			191,102
Total Office of the Governor			$ 191,102

WILLIAMSON COUNTY, TEXAS
SCHEDULE OF EXPENDITURES OF FEDERAL AND STATE AWARDS – CONTINUED
YEAR ENDED SEPTEMBER 30, 2016

State Grantor/ Pass Through Grantor Program Title	Federal CFDA Number	Pass Through Entity Identifying Number	Expenditures
STATE AWARDS			
TEXAS DEPARTMENT OF STATE HEALTH SERVICES			
Passed Through Bluebonnet MHMR			
2016 Bluebonnet MHMR		N/A	$ 94,098
Total Passed Through Bluebonnet MHMR			94,098
Total Texas Department of State Health Services			$ 94,098
TEXAS PARKS AND WILDLIFE DEPARTMENT			
Direct Programs			
2014 Go!		52-000583	$ 4,230
Total Direct Programs			$ 4,230
Passed Through Texas Commission on Environmental Quality			
2016 AirCheck		582-12-20269	$ 103,939
Total Passed Through Texas Commission on Environmental Quality			103,939
Total Texas Parks and Wildlife Department			$ 108,169
TEXAS INDIGENT DEFENSE COMMISSION			
Direct Programs			
Indigent Defense Formula Grant		212-16-246	$ 334,610
2015 TIDC Technical Support		212-TS-246	255
Total Direct Programs			334,865
Total Texas Task Indigent Defense Commission			$ 334,865
TOTAL EXPENDITURES OF STATE AWARDS			$ 755,949
TOTAL EXPENDITURES OF FEDERAL AND STATE AWARDS			$ 3,168,659

WILLIAMSON COUNTY, TEXAS
NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AND STATE AWARDS
YEAR ENDED SEPTEMBER 30, 2016

NOTE 1. GENERAL

The accompanying schedule of expenditures of federal and state awards presents the activity of all applicable federal and state awards of Williamson County, Texas (the County). The County's reporting entity is defined in Note 1 to the County's financial statements. Federal and state awards received directly from federal and state agencies as well as federal and state awards passed through other government agencies are included in the respective schedule. Negative amounts shown in the schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures. The County did not elect to use the 10% de minimus cost rate as allowed in the Uniform Guidance.

NOTE 2. BASIS OF ACCOUNTING

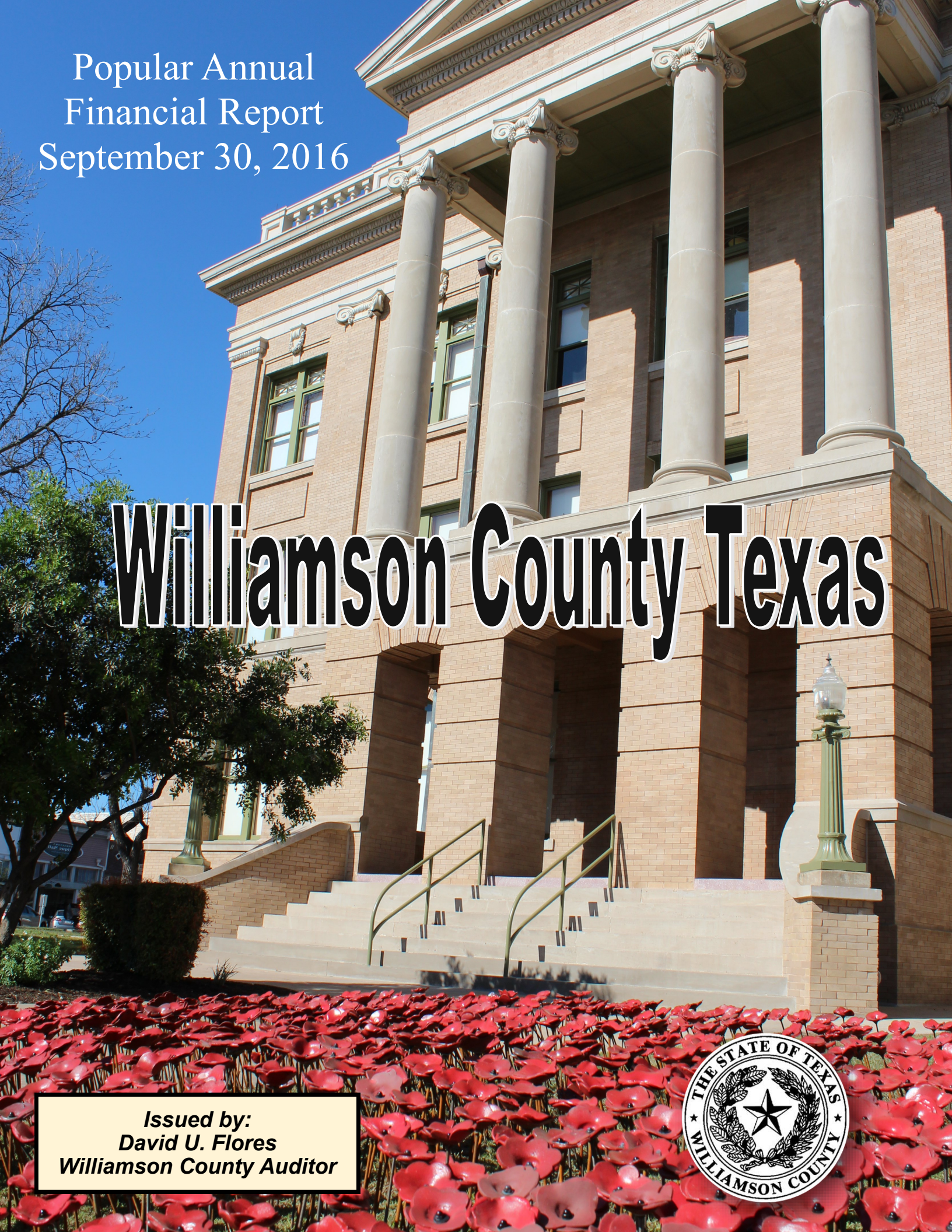
The accompanying schedule of expenditures of federal and state awards is presented using the modified accrual basis of accounting, which is described in Note 1 to the County's financial statements. The schedule includes $1,071,776 of federal awards provided to subrecipients from the Community Development Grant cluster and $3,000 of state awards provided to subrecipients from the AirCheck Program.

NOTE 3. RELATIONSHIP TO FEDERAL FINANCIAL REPORTS

Grant expenditure reports as of September 30, 2016, which have been submitted to grantor agencies will, in some cases, differ slightly from amounts disclosed herein. The reports prepared for grantor agencies are typically prepared at a later date and often reflect refined estimates of year-end accruals. The reports will agree at termination of the grant as the discrepancies noted are timing differences.

Popular Annual
Financial Report
September 30, 2016

Williamson County Texas



Issued by:
David U. Flores
Williamson County Auditor

County Auditor

Dear Citizens of Williamson County,

I am pleased to present the annual Williamson County Citizens' Financial Report (also known as the Popular Annual Financial Report or "PAFR") for fiscal year ended September 30, 2016. This financial summary provides a less technical discussion of County finances. It also includes discussions of County initiatives and trends in the local economy. This important economic data presents a brief explanation of where county-wide resources come from and how those dollars are spent; then, focusing only on the County's major funds, how those transactions affect you, the citizen.

The Williamson County Auditor's Office has generated this Citizens' Report using financial information taken from the 2016 Comprehensive Annual Financial Report (CAFR) that was audited by Weaver and Tidwell, LLP, and received an unqualified opinion. An unqualified opinion indicates that the financial statements are prepared according to Generally Accepted Accounting Principles (GAAP) and are free of material misstatement concerning the overall financial position of the County. Unlike the CAFR, this report is not presented according to GAAP and reporting standards, meaning it's a financial report that is user-friendly.

This report is not intended to replace the CAFR; it is simply presented as a means of increasing public confidence in County government. For a complete set of County financials, please refer to the CAFR, which is available from the Williamson County Auditor's Office located in the historic Williamson County Courthouse at 710 Main St., Suite #301, Georgetown, TX 78626. In addition, both the CAFR and PAFR are available on the County website at www.wilco.org. I invite you to share any questions, concerns, feedback or recommendations you may have by contacting jkiley@wilco.org or 512/943-1500.

Respectfully submitted,

David U. Flores

Message from the County Auditor

Williamson County Auditor's Office

VISION

To be the Top County in the State of Texas Instilling Public Trust in All Fiscal Matters.

The County Auditor's Role

The Williamson County Auditor's Office is the supervisory body of County funds. Maintaining the integrity of financial administration in County government is essential and is provided by the Auditor's Office through an independent system of checks and balances. As the County's Chief Financial Officer (CFO), it is the Auditor's responsibility to:

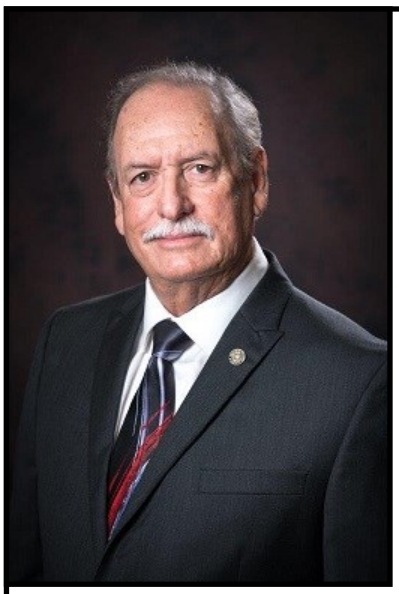
- Properly account for millions of dollars received by the County annually.
- Manage and account for County debt.
- By statute, audit all books and records of County Officials.
- Oversee all County Financial Records.
- Maintain independence, integrity, and enforce all Texas laws and regulations governing County finances.
- Act as advisor to Commissioner's Court concerning financial conditions and County policy.
- Approve and issue payments with authorized funds in conjunction with Commissioner's Court.
- Administer, report, and forecast revenues in the County budget as set by the Commissioner's Court.
- Issue payments for all County obligations through Accounts Payable, including administering the County payroll.
- Prepare the County's Comprehensive Annual Financial Report (CAFR) as required by law.
- Provide day to day financial information on the County website.
- Ensure financial transparency in government.

There are many reasons to have a County Auditor, but the main one is to maintain integrity of financial administration in county government. Every two years, the state District Judges in Williamson County appoint the County Auditor. Because the auditor is neither appointed by nor under the hierarchical control of Commissioner's Court, the integrity of county finances is protected by a dual system of "checks and balances". The purpose of this report is to present an easy to read financial position of Williamson County government. We hope to instill taxpayer confidence in their government and to highlight some of the services provided to our citizens. We hope you find this report helpful and informative about what County government does for you.

Williamson County Auditor's Office History

In 1905, the State of Texas 29th Legislature created the Office of the County Auditor under the District Court's supervision . The purpose of the County Auditor is to maintain the financial records for the County. The duty of the County Auditor is financial oversight to protect the taxpayers' money and ensure the financial laws of Texas are strictly and fairly enforced. In addition, the County Auditor serves as a check on the financial operations of other county offices and recordkeeping responsibility. The County Auditor is appointed by the District Judge in counties with a population over 10,200 (Local Government Code, Sec. 84.002). The qualifications of a County Auditor are good moral character and intelligence, competent business ability, and two years experience as an accountant (Local Government Code, Sec. 84.006). Since 1905, Williamson County has had 4 County Auditors. A biography of each County Auditor is listed in reverse order from the most current to oldest Williamson County Auditor.

David U. Flores
County Auditor: January 1, 1989 to February 28, 2017



David U. Flores has a BBA from Texas A&I University-Kingsville, Texas. He was a teacher and a merchant before becoming the County Auditor for Dimmit County. He served as the County Auditor for Dimmit County for 9 years from 1980 - 1988 and has since served as the County Auditor for Williamson County, having been sworn in during January of 1989. He has been a trustee for the Texas County and District Retirement System and is a past president for the Texas Association of County Auditors. Mr. Flores served as the Chairman of the Investment Committee for the Texas Association of Counties from 2008 to 2012.

David Flores served Williamson County in his position for 28 years. During his tenure, Mr. Flores has brought financial innovation to Williamson County by advancing and shaping the county's financial policies, managed tremendous growth, and increased the County's cash reserves to $84.2 million. Achieved and maintained a "AAA" bond rating which is the highest rating possible for a government entity. In order to improve the County's bond rating, he converted the County books from a cash basis to an accrual basis of accounting. Mr. Flores has enhanced financial transparency to improve and ensure trust with the County's taxpayers. David Flores stated, "Williamson County has been in a continuous mode of growth and change, making it truly a welcome challenge in working in the Auditor's role. I depart with an unusual feeling of fulfillment in the enjoyment of my work and in the accomplishments of the office. Working with a fine staff, the building of our financial strength, investing in road infrastructure, and the progressive work in the transparency of our business are amongst the personal highlights of my tenure".

Congressman Carter was one of the original District Judges who appointed David Flores in 1989. Upon his retirement, Congressman Carter presented Mr. Flores with a congressional declaration that will be available in the Congressional Record made accessible by the Government Publishing Office. Over his tenure, Mr. Flores' achievements have been recognized with a multitude of well deserved awards.

Prior Williamson County Auditors

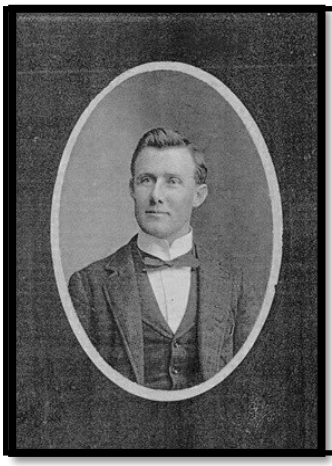
Ben W. Kurio
County Auditor: September 1961 to March 1988

Ben W. Kurio received a BBA from the University of Texas at Austin, Texas on August 31, 1947. From January 1949 to June 1949, Mr. Kurio began his career as an auditor with Benson, Powell, and Morrison in Alice, Texas. From July 1949 to May 1955, he was the General Manager at Henry Doering Company in Walburg, Texas. He began his career with Williamson County as the Chief Deputy in the Tax Assessor-Collector's Office from June 1955 to August 1957. In conjunction , he was a part-time instructor at the Williamson County Vocational School in Georgetown, Texas in which he taught bookkeeping and accounting courses. From September 1957 to August 1961, he served as the First Assistant County Auditor for Williamson County. From September 1961 to March 1988, he served as the Williamson County Auditor.

Henry A. Hodges
County Auditor: 1919-1961

Henry A. Hodges received his education from the Georgetown Public School system and Southwestern University. He worked as a bookkeeper and supervisor for twelve years for various firms owned by the Belford Lumber Company. He spent a year setting up William Cameron and Company in Chilton, Texas. He also worked at Stone Drug Store and Brothers Book Store. At the time of Mr. Hodges appointment as County Auditor in 1919, Williamson County had one district judge that was responsible for appointing the Auditor. Mr. Hodges theory on the County Auditor's responsibility was to help save the County money. The floods of 1921 destroyed many of the County roads and most of the bridges which had to be constructed. He watched the state and county rebuild roads which phased into a reconstruction of hard surface roads. From 1919 to 1961, Mr. Hodges was the longest serving County Auditor for 42 years.

William W. Jenkins
County Auditor: 1910 to 1919



William W. Jenkins was born in Jollyville, Williamson County, Texas on November 27, 1870 and Died in Jollyville, Williamson County, Texas January 19, 1934. He attended Southwestern University and subsequently graduated from the Texas State Normal School. In 1891, he began his work as an educator and continued to teach in public schools until 1905. From 1898 to 1910, he was an instructor at Southwestern University Summer Normal School. From 1905 to 1910, he was elected as the Williamson County Superintendent of Public Instruction in which he resigned his position to serve as the Williamson County Auditor. On July 11, 1919, he became the editor of the Williamson County Sun Newspaper. He is buried in Bagdad Cemetery in Leander, Williamson County, Texas.

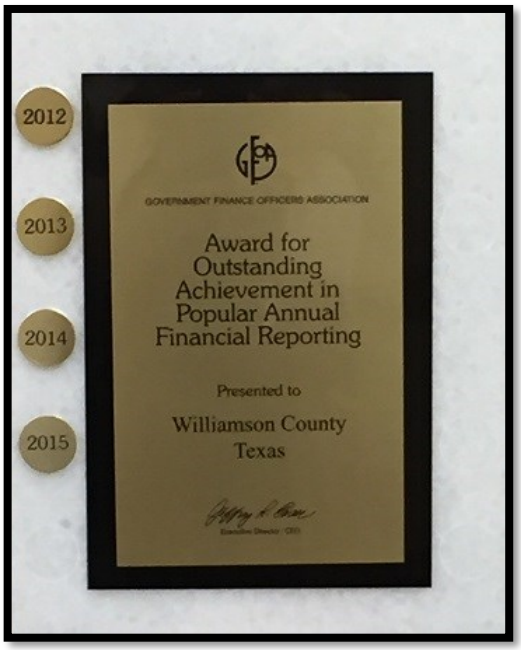
Award for Outstanding Achievement in Popular Annual Financial Reporting

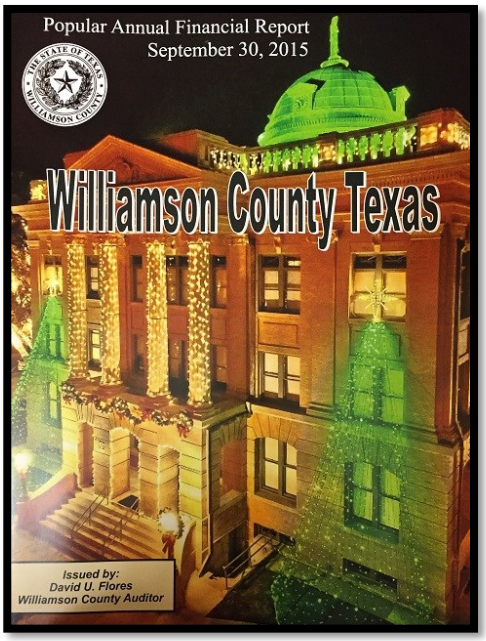
The Government Finance Officers Association of the United States and Canada (GFOA) has given an Award for Outstanding Achievement in Popular Annual Financial Reporting to Williamson County for its Popular Annual Financial Report for the fiscal year ended September 30, 2015. The Award for Outstanding Achievement in Popular Annual Financial Reporting is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government popular reports.

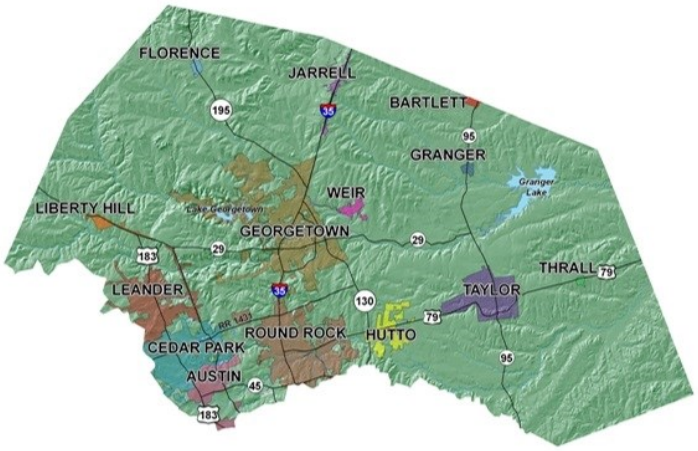
In order to receive an Award for Outstanding Achievement in Popular Annual Financial Reporting, a government unit must publish a Popular Annual Financial Report, whose contents conform to program standards of creativity, presentation, understandability and reader appeal.

An Award for Outstanding Achievement on the Popular Annual Financial Reporting is valid for a period of one year only. We believe our current report continues to conform to the Popular Annual Financial Reporting requirements, and we are submitting the current year report to GFOA.

The 2016 report can also be found at: wilco.mygovcenter.com/financial-reports







WILLIAMSON COUNTY, TEXAS

Williamson County is blessed with a mild climate offering more than 300 sunny days each year, affordable housing, a low cost of living, clean air, and beautiful scenic vistas. The County is well known for a very low crime rate and friendly, neighborly people. County taxes are among the lowest in the state for comparable counties, and, unlike most states, Texas has no state personal income tax. All these reasons make Williamson County one of the most desirable places to live and work in the United States.

COUNTY STRUCTURE AND SERVICES

Williamson County, organized in 1848, is located in the central part of the state, which is considered to be the top growth area in the state, and one of the top growth areas in the country. Williamson County currently occupies a land area of 1,135 square miles and serves an estimated population of 508,514.

Williamson County is a political subdivision of the State of Texas. Williamson County is empowered to levy a property tax on both real and personal properties located within its boundaries. It has no legislative powers and restrictive judicial and administrative powers. The governing body of the County is the Commissioner's Court of five members. The County Judge is the chairperson of the court and the Commissioner from each of the precincts are also members. The Court has only such powers as are conferred upon it by the Constitution and the Statutes or by necessary implication therefrom. None has the authority to act on their own but must act only as a whole.

ECONOMY

Williamson County's economy continues to experience tremendous growth. The current unemployment rate is 3.6% which remains considerably lower than the U.S. unemployment rate of 4.8%. Future job growth for Williamson County is excepted to continue at a fast pace.

POPULATION

In 2016, Williamson County population slightly exceeds a half-million (508,514). Williamson County ranks as the seventh fastest growing county in the nation.

ROBERT M. WILLIAMSON

The County was organized in 1848 and named for Robert M. Williamson, pioneer leader and veteran of the Battle of San Jacinto. He was a newspaper publisher, lawyer, judge and state legislator. Because of a childhood illness, one of his legs was bent back and he also had a wooden leg extending from the knee, giving him the nickname "Three-Legged Willie."

Williamson County Highlights

On June 6, 2016, Commissioner's Court recognized Williamson County EMS (WCEMS) who earned the American Heart Association Mission Lifeline Gold Award. The award recognizes WCEMS for their continued work, training and commitment in improving overall quality of care for the STEMI (heart attack) patients in Williamson County. Loni Dene RN, BSN, Senior Director of Mission Lifeline/Quality & Systems Improvement, states "Williamson County EMS upholds the highest level of care for heart attack patients. This group has shown that they can meet the treatment guidelines and time goals, as well as work with hospitals and cardiologists in the region to get patients to the hospital and receive treatment as quickly as possible to save lives".

On August 31, 2016, Commissioner's Court recognized Williamson County EMS (WCEMS) for being granted accreditation by the Commission on Accreditation of Ambulance Services (CAAS). WCEMS joins an elite group of only 9 out of 782 Texas EMS systems and 175 out of approximately 16,000 EMS systems in the United States to be granted this accreditation. The accreditation process requires the completion of a comprehensive application and on-site review by national experts in Emergency Medical Services. CAAS extended the accreditation to WCEMS for outstanding achievement in compliance with national standards for best practice in the Emergency Medical Services industry. The primary focus of the Commission's standards is clinical and operational excellence. The Commission established national standards, also known as the "Gold Standards", which not only address the delivery of patient care, but the organization's total operation including relationships with other agencies , the general public and the medical community. Kenny Schnell, Wilco EMS Director states, "Gaining such a prestigious accreditation demonstrates that we are true leaders in the EMS industry, and that we are committed to demonstrating excellence every day".

Williamson County Highlights

On August 4, 2016, Commissioner's Court recognized the Budget Office who received the GFOA (Government Finance Officers Association) Distinguished Budget Presentation Award for the sixth consecutive year. The award reflects the commitment of the County and staff to meet the highest principles of governmental budgeting. In order to receive the budget award, the budget office must meet the guidance of four categories of policy document, financial plan, operations guide and communication device. The budget documents must be "proficient" in all four categories to include fourteen mandatory criteria within those categories to receive the award.

On September 13, 2016, Commissioner's Court recognized the Williamson County Tax Assessor Deborah M. Hunt on the receipt of the Marillyn Albert Achievement Award presented by Texas Association of Assessing Officers (TAAO) Annual Conference on August 30, 2016. The achievement award is TAAO's highest honor and named in memory of their past president and executive director, Marillyn Albert Harkins. The award recognizes a TAAO member who consistently performs high quality work, is devoted to excellence, and maintains a professional image. Following in the footsteps of Marillyn Albert, Deborah Hunt has led the Williamson County Tax Assessor/ Collector's Office to be a premier tax office by being a leader not only in the tax field but volunteering for numerous pilot programs enhancing services that are provided to the citizens of Williamson County.

WILLIAMSON COUNTY RECEIVES AAA BOND RATING

On August 2, 2016, the Williamson County Commissioners Court was informed the county saved nearly $6 million when it recently refunded more than $39 million in debt service. Dan Wegmiller with Specialized Public Finance also reported that since 2004, the county has saved more than $72.7 million total by refunding existing debt.

Interest rates were lowered on the original bonds from an average interest rate of 4.99% down to 2.74% on the new issuance.

Williamson County also affirmed its AAA bond rating from both Fitch Ratings and Standard & Poor's Ratings Services. The rating reflects the strength of the management of the county, strong local economy, and strong budgeting.

"Williamson County has consistently received a AAA bond rating since June 2010. It is this excellent rating that allows us to obtain the lower interest rates and save millions in interest for the citizens of Williamson County," said Williamson County Auditor David Flores.

Williamson County—2016 Debt / Bond Activity

Pass-Through Toll Revenue and Limited Tax Bonds:

This program represents 15% of the county's outstanding bonds payable. Debt payments for this type of bond are backed by a revenue source other than tax revenues. Tax revenues will only be used should the primary revenue source default on payments. Currently, Williamson County has two such pass through agreements with the Texas Department of Transportation (TxDOT). In 2006, TxDOT and Williamson County signed an agreement for the County to build US 183A, US 79 (3 Sections), IH-35 Turnaround Bridges (Georgetown), RM 2338 and FM 1660. A maximum of $151,942,000 will be reimbursed to Williamson County from TxDOT. The reimbursement is paid semi-annually based on $0.10 per vehicle mile traveled to allow no more than $15,194,200 annually compensated on the projects. The traffic counts are taken before each reimbursement in March and September. In 2011, Williamson County signed a second Pass Through Agreement with TxDOT for the construction of northbound frontage roads and ramps on IH-35 in Georgetown. TxDOT will reimburse a maximum of $12,096,700. The reimbursement from TxDOT to Williamson County is based on a calculation of $0.07 per vehicle mile traveled to allow no more than $1,099,700 compensated annually on the completed project. The projects that are part of the 2006 agreement are open and are being billed to TxDOT. The project for the 2011 agreement has been open since Spring 2016.

Voter Approved Bonds:

On Tuesday, November 5, 2013, Williamson County voters approved $275 million in road bonds and $40 million in park bonds. In June 2016, $18,350,000 of $40,000,000 authorized Park Bonds were issued. The park bonds have all been issued and $75,000,000 is remaining to be issued on the 2013 voter approved Road Bonds. As of September 30, 2016, our total outstanding bonds payable debt is $931,599,942 of which $123,287,550 is reimbursable Pass Through revenue bonds. As of September 30, 2016, $48,321,237 has been reimbursed from TxDOT.

Refunding Bonds:

Refunding bonds are issued to pay off outstanding debt to take advantage of lower interest rates. Refundings are only issued if the benefit is to save the Williamson County tax payer's money. Two refundings were issued in fiscal year 2016. In October 2015, Williamson County issued a refunding bond in the amount of $16,175,000 with a significant cost savings of $3,353,403.54 over the next 11 years. In July 2016, Williamson County issued a refunding in the amount of $37,980,000 with a cost savings of approximately $5,681,259.45 net present value savings over a 20 year period.

Williamson County Organization

As of September 30, 2016, Williamson County currently has a total of 1,646 county employees. Public safety constitutes the majority of the county employees. Public Safety is comprised of Law Enforcement and Emergency Services. Below are the number of employees in each category and a list of departments under these categories.

Williamson County
Number of County Employees
TOTAL 1,646

Law Enforcement (760)

- COUNTY SHERIFF
- COUNTY JAIL
- COUNTY CONSTABLES (4 Precincts)
- JUVENILE SERVICES
- VICTIM ASSISTANCE

Emergency Services (228)

- EMERGENCY MEDICAL SERVICES
- HAZ-MAT
- OFFICE OF EMERGENCY MANAGEMENT
- 911 COMMUNICATIONS

General Government (205)

- COUNTY JUDGE
- COUNTY COMMISSIONERS (4 Precincts)
- COUNTY TAX ASSESSOR/COLLECTOR
- COUNTY TREASURER
- COUNTY AUDITOR
- ELECTIONS
- HUMAN RESOURCES
- INFORMATION TECHNOLOGY
- PURCHASING

Judicial Branch (231)

- 5 DISTRICT COURTS
- 4 COUNTY COURTS
- 4 JUSTICE COURTS
- DISTRICT ATTORNEY
- COUNTY ATTORNEY
- DISTRICT CLERK

Williamson County

Employees

Community Services (46)

- VETERAN SERVICES
- PARKS
- WILLIAMSON MUSEUM
- AGRICULTURE EXTENSION SERVICE
- REGIONAL ANIMAL SHELTER

Department of Infrastructure (176)

- COUNTY ENGINEER
- FACILITY MAINTENANCE
- FLEET SERVICES
- ROAD AND BRIDGE

Major Capital Projects Annual Expenditures FY 2016

Project Name	$M	Type
Williamson County Expo Center	$10.4	Building
Hero Way West	$5.0	Road
CR 110 (US 79-Limmer Loop)	$3.6	Road
Bill Pickett Trail	$2.4	Road
IH-35 Northbound Frontage Rd/Ramps	$2.2	Road
CR 258 Phase 2	$2.1	Road
Reagan Blvd @ IH-35 Bridge	$1.8	Road
Kaufmann Loop Phase 1	$1.5	Road

Williamson County Expo Center

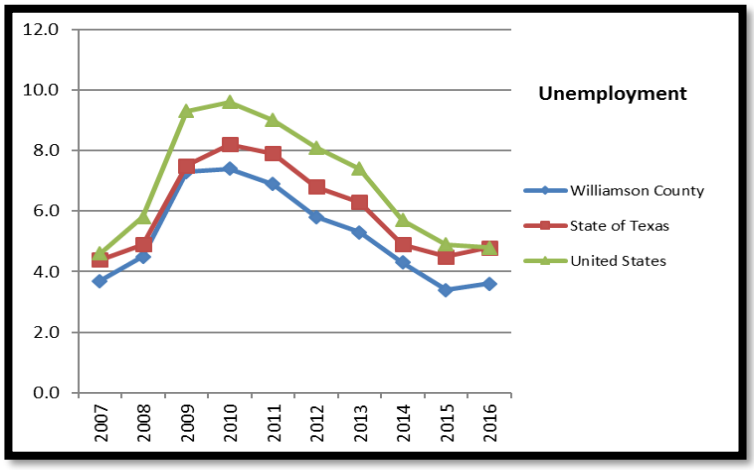
On Thursday, November 10, 2016, Williamson County held a ribbon cutting on the completion of the new Williamson County Exposition Center. The Expo Center is located on more than 95 acres at 210 Carlos G. Park Boulevard in Taylor, Texas. In September 2015, Williamson County broke ground on the Expo Center to renovate and enhance the facility. The renovation included the original 29,400 square foot arena. In addition, a new 15,000 square foot climate controlled indoor Expo Halls and 15,000 square foot outdoor covered Expo Hall which includes ticket booths, administrative offices, conference room, meeting room, catering kitchen, paved parking, wash racks, covered warm -up areas, A/V and set-up equipment available for rent, newly constructed restrooms, electrical drops,WiFi, and concessions building with a show office. The total cost of the renovation cost is $12 million.

The added facilities allow a variety of events such as livestock shows, rodeos, farmer's markets, banquets, concerts, proms, festivals, weddings, family reunions, trainings, meetings, and much more. The building was also built to allow future expansion. The building opened up to public view on November 12, 2016 , with a welcoming ceremony followed by music and performances by local groups through out the county. The first official event was the Taylor Rodeo held on September 23 and 24, 2016. For more information on events and the facility, go to www.wilcoexpo.com.

Bill Pickett Trail

On November 10, 2016, Williamson County also had a ribbon cutting on the completion of Bill Pickett Trail. The new roadway provides a bridge over Turkey Creek connecting Carlos G. Parker Boulevard to Chandler Road to have additional access to the Expo Center. The project includes turn lanes on Chandler Road to Bill Pickett Trail and a driveway for Taylor ISD. The road was designed by K. Friese and Associates. The total cost of the roadway is $3.7 million .

Williamson County Financial Activity

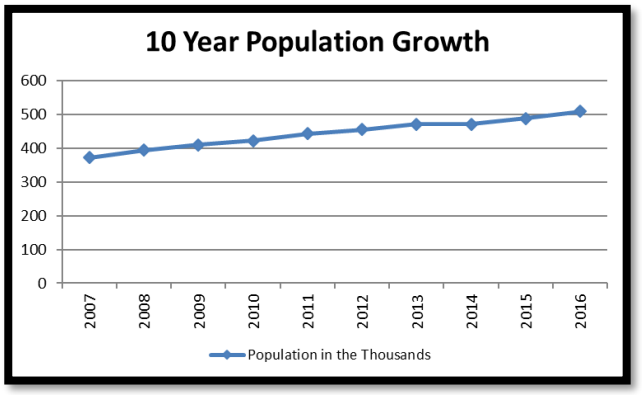


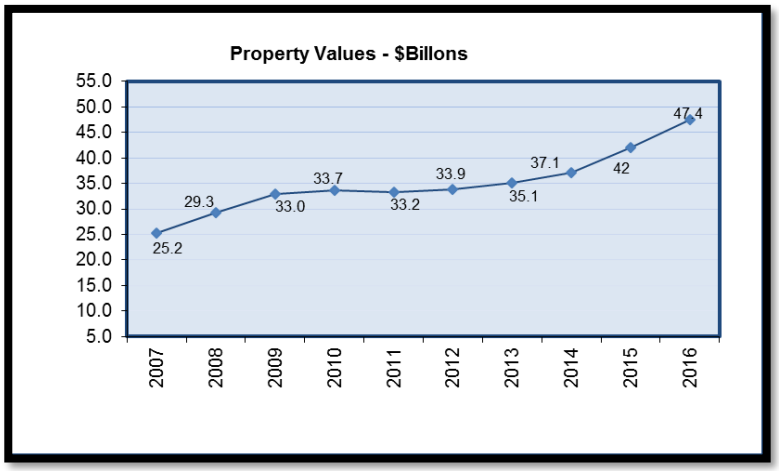
Williamson County continues to be one of the fastest growing counties in the state. Since 2010, the county's population has grown by 20 percent. It is the 12th most populous county in Texas. Williamson County's growth has been fueled by its location on the I-35 corridor and close access to Austin, Texas. The county's economic base has developed to be home to many major industries, including high tech, manufacturing, healthcare and higher education. The regional economy continues to expand. The county has a diverse workforce. This attracts new businesses to locate to the area. Job creation has caused many of the cities in the county to be some of the fastest growing cities in the country. New housing, building permits and new roads also demonstrate the growth. The diversity in the economy makes the county less vulnerable to economic downturns. The unemployment rate has been lower than the national average. The county unemployment rate slightly increased from 3.4% in September 2015 to 3.6% in September of this year; the rate was significantly lower than the national rate for September, which decreased from 4.9% in 2015 to 4.8% this year.

Williamson County has benefited from the population growth. The county has experienced major job growth and proliferation of business and residential development. Business incentives, a low tax rate and affordable housing are major factors that have contributed to the job growth. The latest population forecasts project Williamson County population could grow to more than 1 million people by 2040.

With the job and population growth in the county, several areas of the county have become key commercial and residential developments. UPS will build a 225,000 square foot package-distribution and warehouse facility in Round Rock. It is expected to employ at least 314 employees. ProPortion Foods LLC is moving to Round Rock. It is a food-based company that will be moving its offices, food processing and storage facility. It is projected the company will employ up to 400 employees.

Also, AirCo Mechanical, a commercial and residential heating, ventilation, and air conditioning service provider relocated to Round Rock. The move will bring at least 365 new jobs. Voltabox will move to Cedar Park. The manufacturer of high-tech lithium ion battery systems plans to build a 22,000 square-foot facility. Noren Products will relocate its headquarters to Taylor. It is expected to bring 40 new jobs to the city. The company broke ground on a 30,000 square foot building. Several new shopping centers throughout the county have been completed or are in the development stages. HEB opened a 121,000 square foot store near SH-130 at Star Ranch. This store is the first large grocery store in the Hutto area. The Parke, is a 380,000 square-foot shopping center in Cedar Park. The Parke will be anchored by Whole Foods, Nordstrom Rack and Dick's Sporting Goods.





Principal Property Taxpayers - FY 2016			
Taxpayer	Assessed Value $Mil-lions	Rank	% of Total County Assessed
Dell Computer Holdings, LP	297,994,584	1	0.63%
Parmer Lane Austin, LP	159,000,000	2	0.34%
Oncor Electric Delivery Company	156,686,900	3	0.33%
CPG Round Rock, LP & SPG Round	138,431,301	4	0.29%
Lakeline Developers	100,547,179	5	0.21%
Inland Western Cedar Park 1890	92,900,096	6	0.20%
Dell Computer Corporation	91,256,835	7	0.19%
HEB Grocery Company LP	84,056,275	8	0.18%
Baltgem Development Corp ETAL	77,884,064	9	0.16%
Cedar Park Health System, LP	76,854,617	10	0.16%

The Sheraton Hotel and Conference Center in Georgetown opened in July. The 222-room hotel has 30,000 square feet of meeting space. This is a part of the 32-acre development, the Summit at Rivery Park, which will include retail and restaurant space as well as apartments and townhomes. Kalahari Resorts is planning to build in Round Rock. The resort will include a 975-room hotel, 150,000 square foot convention center, waterpark, restaurants and a spa. It is expected to create approximately 700 full-time and part-time jobs. These developments will have an economic impact on the county and attract visitors to the county.

High demand for housing continues throughout the county. Several new developments throughout the county are under construction or in the planning stages. Georgetown has several large developments. Saddlecreek broke ground in April. The first phase includes 427 single-family lots. Wolf Ranch Hillwood Georgetown has started phase 1 of a master planned community. New developments such as Cedar Grove, Whitestone Landing and Leander Crossing will be developed.

Healthcare facilities continue to expand throughout the county. St. David's Georgetown completed a $7.7 million expansion of the intensive care unit. Also included was a new emergency entrance off the I-35 frontage. Baylor Scott and White broke ground to build a 100,000 square foot cancer center in Round Rock. The center will offer integrated and comprehensive care in one location. St. David's opened a new surgical hospital in Round Rock at La Frontera. Area school districts are addressing the new growth. New campuses and renovations are under construction throughout the county. Austin Community College broke ground on its new San Gabriel campus in Leander. This is the 12th campus in the ACC district.

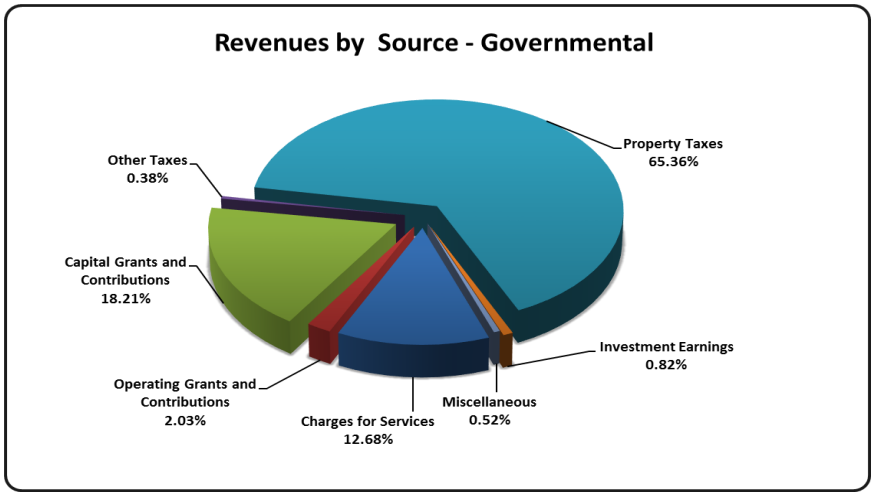
Williamson County is a part of the Austin-Round Rock metropolitan area. The metropolitan area continues to be a top performer in numerous national rankings. In 2016, the U.S. Census Bureau named the city of Georgetown the fastest growing city in the U.S. of at least 50,000. MoneyRate.com named the Austin-Round Rock MSA as the best city for young entrepreneurs. Williamson County was ranked as the third healthiest county in Texas, by the Robert Wood Johnson Foundation and the University of Wisconsin. Since 2010, the county has been listed as one of the healthiest counties in Texas. In 2016, the Austin-Round Rock metro area tied for second place in the Milken Institute's Best Cities Index. The Milken Institute ranks US metropolitan areas by how well they are creating and sustaining jobs and economic growth.

Principal Employers - FY 2016			
Employer	Number of Employees	Rank	% of Total County Em-ployment
Dell Computer	14,000	1	6.33%
Round Rock ISD	5,800	2	2.62%
Leander ISD	4,823	3	2.18%
Williamson County	1,646	4	0.72%
Sears (Teleserve)	1,600	5	0.72%
Georgetown ISD	1,543	6	0.70%
HEB Grocery	995	7	0.40%
City of Round Rock	890	8	N/A
Emerson Process Manage-ment	880	9	0.34%
Round Rock Premium Outlet	800	10	N/A

GOVERNMENTAL REVENUES

The County receives its funding from a variety of sources, of which the largest single source is property taxes. **Property Taxes** represent a tax on all real estate and improvements within the County. Property taxes are considered to be a general revenue source, meaning it is available to fund all programs of the County. **Fees of Office** and **Charges for Services** represent fees paid by individuals, businesses, or other governments who purchase, use, or directly benefit from the goods or services provided. **Intergovernmental** revenues include payments or donations from other governmental entities through contractual agreements under which many of the funds are restricted for use in a particular program. **Investment Earnings** consists of interest income and other income from investment activities.

	2016 $M
Property Taxes	$226.60
Charges for Services	$ 44.00
Operating Grants and Contributions	$ 7.00
Capital Grants and Contributions	$ 63.10
Other Taxes	$ 13.00
Investment Earnings	$ 2.80
Miscellaneous	$ 1.80
	$358.30



Revenue Sources

- PROPERTY TAXES
- FEES OF OFFICE/CHARGES FOR SERVICES
- FINES AND FORFEITURES
- PUBLIC AND PRIVATE GRANTING AGENCIES
- INTERGOVERNMENTAL REVENUES
- INVESTMENT EARNINGS

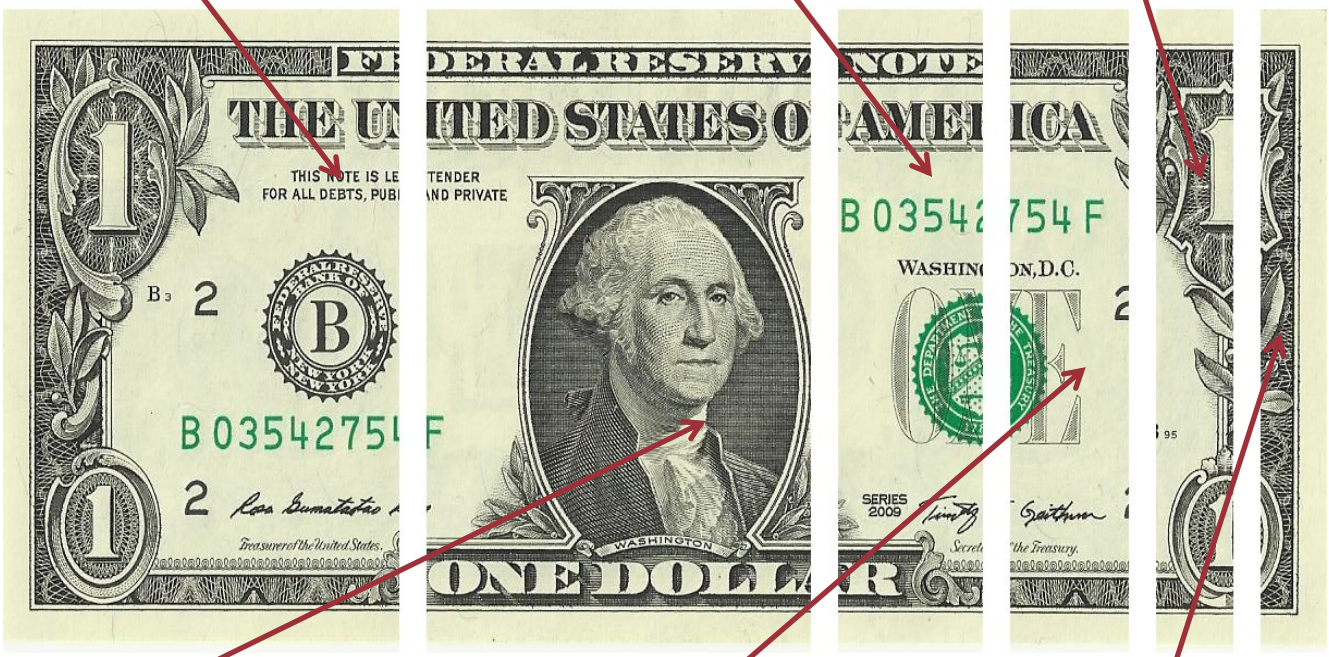
GOVERNMENTAL EXPENSE

General Government includes all administrative aspects of County business. Community Services consist of Veteran Services, Public Health, Parks, Agriculture Extension Service and the Regional Animal Shelter. Debt Service pays off the bonds issued for the construction of major projects.

Transportation Support 28%

Int. on L/T Debt 11%

Judicial Services 9%



Public Safety 32%

General Government 14%

Community Services 6%

	2016 $M
General Government	$ 48.50
Public Safety	$ 115.80
Transportation Support	$ 99.80
Judicial Services	$ 31.00
Community Services	$ 21.40
Conservation	$ 0.56
Interest on L/T Debt	$ 41.30
	$ 358.36

The ***Statement of Activities*** provides readers with an overview of money received and spent during the year in the County ***as a whole***, in an approach similar to a private-sector business. Explanations of these accounts are provided as a tool to understanding these activities.

Money Received

Property taxes come from three different sources: taxes for general purposes ($.274029) taxes for road & bridge purposes ($.04) and taxes for debt service ($.1675) to repay debt of the County. The total tax rate for 2016 is $.481529 per $100 value and was composed by the total of these three sources. Charges for Services are monies received from the public when the County performs a service to the citizens, such as, Emergency Medical Services. Operating Grants & Contributions is money the County receives from other governmental agencies, corporations, and private contributors. Investment Earnings is interest earned on County investments. Miscellaneous is money received that does not fit in the above-mentioned accounts but are still classified as revenue.

Services Rendered

This is money spent to provide services to citizens. See pages 10-11 of this report for a detailed explanation of what services are included in each of the categories: General Government, Public Safety, Transportation Support, Judicial Services and Community Services.

Variance Analysis and Trends

Property taxes are collected to support government activities for the primary government. Property tax revenues increased $22.3 million from the last fiscal year. The total property taxes collected was $226.6 million for the year. For 2016, tax rates slightly decreased; however, property values increased by 12% and along with new improvements this resulted in an increase in revenues. The continued growth in the county has added several subdivisions throughout the county. Many of these subdivisions roads will be maintained by the county. The increase in capital grants and contributions is due to the county's acceptance of these new subdivisions.

Williamson County Financial Activity Statement

Money Received	**2016**	**2015**	**2014**
Property Taxes:			
Levied for general purposes	$128,577,499	$116,814,321	$104,957,462
Levied for road & bridge	$18,552,068	$16,521,025	$14,681,846
Levied for debt service	$79,408,330	$70,940,367	$63,279,169
Other taxes	$1,328,610	$1,118,611	$987,258
Charges for Services	$43,949,358	$44,423,946	$43,061,826
Operating grants & contributions	$7,021,670	$7,327,581	$11,059,515
Capital grants & contributions	$63,114,526	$59,565,089	$49,107,663
Investment earnings	$2,826,060	$1,291,116	$564,343
Miscellaneous	$1,785,938	$2,602,864	$3,464,348
Total Money Received	**$346,564,059**	**$320,604,920**	**$291,163,430**
Services Rendered			
General Government	$48,471,235	$33,113,079	$32,522,582
Public Safety	$115,818,653	$87,932,683	$88,098,767
Transportation Support	$99,775,558	$78,977,229	$87,436,401
Judicial	$31,025,054	$23,581,105	$22,685,570
Community Services	$21,383,743	$18,727,680	$16,796,646
Conservation	$560,710	$407,345	$347,751
Interest on long-term debt	$41,283,450	$40,308,534	$35,634,706
Total Services Rendered	**$358,318,403**	**$283,047,655**	**$283,522,423**
Monies Received over Services Rendered	**($11,754,344)**	**$37,557,265**	**$7,641,007**

Williamson County Condensed Statement of Net Position		
Assets	**2016**	**2015**
Current Assets	$ 575,153,108	$614,470,838
Capital Assets	$ 687,310,787	$628,185,486
Total Assets	**$1,262,465,911**	**$1,242,656,324**
Deferred Outflows of Resources	$ 82,544,536	$53,490,401
Total Deferred Outflows of Resources	**$ 82,544,536**	**$53,490,401**
Liabilities		
Current Liabilities	$ 33,095,971	$85,008,483
Noncurrent Liabilities	$1,184,678,735	$1,072,150,173
Total Liabilities	**$1,217,774,706**	**$1,157,158,656**
Net Position		
Invested in Capital Assets, net of Related Debt	$ 365,342,452	$445,160,755
Restricted	$ 49,879,697	$42,611,846
Unrestricted	$ (287,988,424)	($348,784,532)
Total Net Position	**$ 127,233,725**	**$138,988,069**

Total net position decreased by $11.8 million compared to 2015. There are significant changes in the statement of net position at September 30, 2016 from September 30, 2015. Capital assets increased by $59.1 million as a result of the acceptance of several new subdivisions. The continued growth in the county has caused an increase of new homes. The roads in these subdivisions such as Siena, Highlands at Mayfield Ranch and Paloma Lake will be maintained by the county. The county continues to construct new roads and has begun to make improvements and construct new county buildings, such as the Williamson County EXPO Center, which contributed to the increase. In addition, the county's net pension liability increased by $83.9 million offset slightly by an increase in the deferred outflows related to pension totaling $28.9 million. This increase is primarily a result of actuarial changes used to determine the total pension liability, including an assumption of a repeating cost of living adjustment (COLA) and an update to annuity rates for future retirees. A portion of the County's net position ($687.3 million) reflects investment in capital assets (e.g., land, buildings, infrastructure, machinery, and equipment). Williamson County uses these capital assets to provide services to citizens; consequently, these assets are not available for future spending

Benefits

Current Assets include:

- Cash on-hand to pay obligations
- Accounts Receivable
- Prepaid items / Inventory

Capital Assets include:

- Land / Buildings
- Infrastructure
- Equipment
- Construction in Progress

Obligations

Current Liabilities include:

- Accounts Payable
- Accrued Liabilities
- Unearned Revenue
- Accrued Interest Payable

Non-current Liabilities are items that are due in more than one year.

This statement includes all funds to provide an overall picture of County-wide finances. Net Assets refers to the purchase costs of County assets less the accumulated depreciation of those assets.

Net Assets

Net Investment in Capital Assets represents the value of assets less depreciation and the associated outstanding debt incurred to purchase that asset.

Restricted Assets include:

- Debt Service
- Road & Bridge
- Conservation Foundation
- Tobacco Fund
- Other purposes that limit the use of certain assets

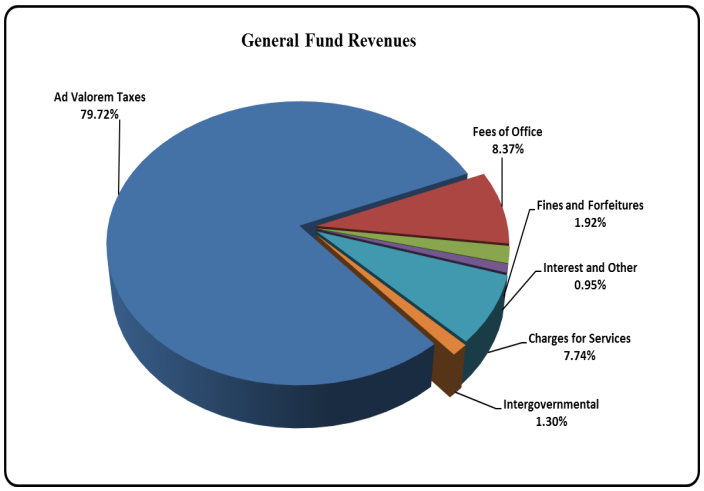
Unrestricted Net Assets are items that do not have to be held for specific reasons.

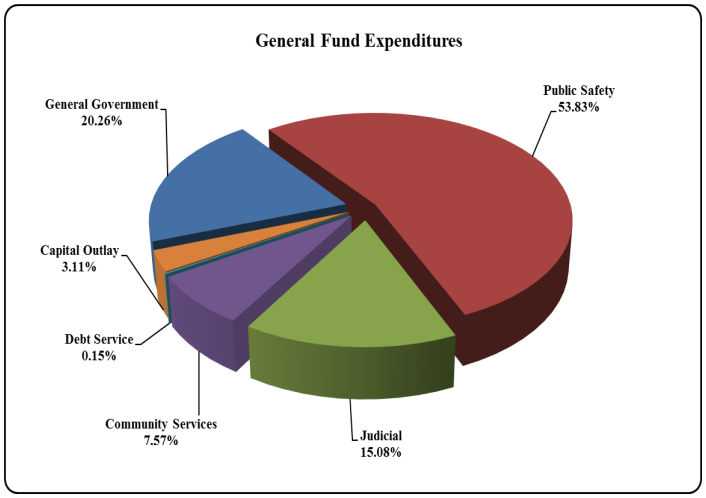
Financial Position Statement shown does not conform to generally accepted accounting principles (GAAP). The purpose of this presentation is to provide the citizen with a summarized version of the information contained in the County's Comprehensive Annual Financial Report

Statement of Revenues, Expenditures and Changes in Fund Balance		
	2016	2015
Revenue		
Taxes	$129,961,131	$117,875,752
Fees of Office	13,645,196	12,845,615
Fines & Forfeitures	3,127,507	3,393,875
Charges for Services	12,613,273	13,218,199
Intergovernmental	2,125,167	2,213,795
Investment Income & Other	803,325	602,856
Miscellaneous	747,882	3,359,877
Total Revenue	**$163,023,481**	**$153,509,969**
Expenditures		
Current:		
General Government	$29,990,280	$26,512,916
Public Safety	79,733,092	76,799,400
Judicial	22,343,088	21,209,145
Community Services	11,214,745	5,547,454
Debt Service:		
Principal	226,178	0
Interest and other charges	2,674	0
Capital Outlay	4,607,883	4,556,929
Total Expenditures	**$148,117,940**	**$134,625,844**
Excess of Revenues over Expenditures	$14,905,541	$18,884,125
Other Financing Sources (Uses)		
Transfers In	$25,000	$0
Transfers Out	(11,681,442)	(11,155,189)
Capital Lease Issued	0	0
Proceeds from Sale of Capital Assets	224,813	122,987
Total Other Financing Sources (Uses)	($11,431,629)	($11,032,202)
Net Change in Fund Balances	$3,473,912	$7,851,923
Fund Balance, Beginning	83,503,994	75,652,071
Fund Balance, Ending	**$86,977,906**	**$83,503,994**

The General Fund is the chief operating fund of the County. At the end of the current fiscal year, total fund balance of the General Fund was $87 million with an $857 thousand nonspendable fund balance for investment in capital leases and prepaid expenses. In 2013, the county established a plan to reduce excess reserves to fund various county capital projects. $3.5 million of the General Fund balance is committed to fund the remaining 2013 - 2016 capital projects not completed at year end. As a measure of the General Fund's liquidity, it is useful to compare both unassigned fund balance and total fund balance to total fund expenditures. Unassigned fund balance for 2016 represents 56% of total General Fund expenditures. This significant fund balance to total expenditure ratio indicates a healthy financial position. The County has adopted a policy to maintain an appropriate level of unreserved General Fund balance to protect against a reduction of services due to temporary revenue shortfalls or unexpected one-time expenditures. A Fund Balance Policy adopted by the Commissioner's Court in 2009 states that the level shall not be less than 35% of total General Fund budgeted expenditures.

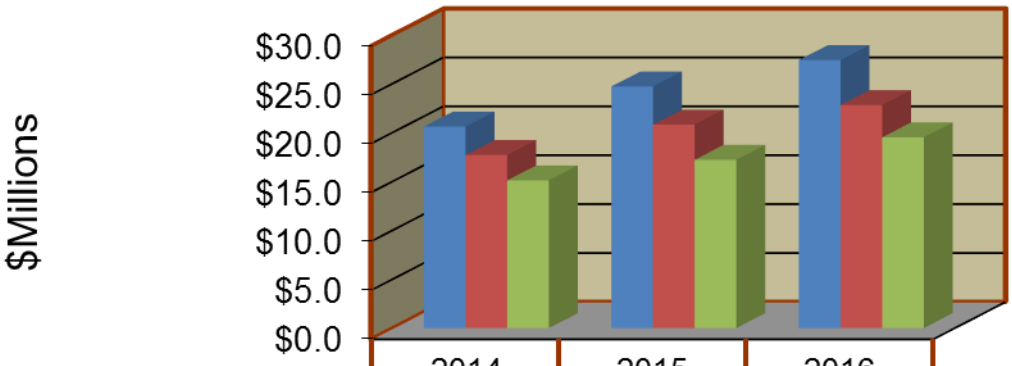
The fund balance of Williamson County's General Fund has increased by 4% during the current fiscal year. Although the tax revenue increased by $12 million; the growth of the county has created an increase in the demand for services. A major increase was attributable to personnel. 35 new positions are approved in the general fund. 13 positions are approved in general government and 14 positions are in public safety. Other new positions are approved for the newly remodeled EXPO center. $10 million was budgeted to pay for debt reduction. While being fiscally conservative, the county growth has caused increases to the overall expenditures. Conservative spending resulted in lower than budgeted operational costs. Actual revenues are $4.4 million higher than budgeted. Property tax revenues and charges for services is higher than projected. The increase in revenue budgeted amounts allowed for an almost $3 million increase to the fund balance in the general fund beyond the budgeted amount.



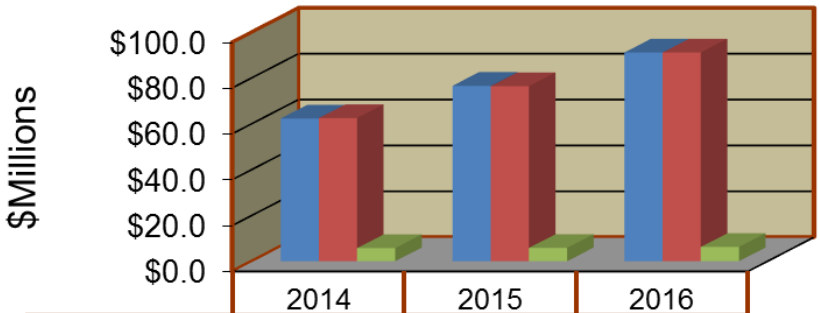


Road and Bridge Fund

The Road & Bridge Fund is a special revenue fund used to account for money received from taxes, vehicle registration and rebates from the State of Texas. Expenditures in this fund are for maintenance and construction of County roads and bridges. The chart provided on the right illustrates the fund's revenue, expenditures, and ending fund balance over the past three years.



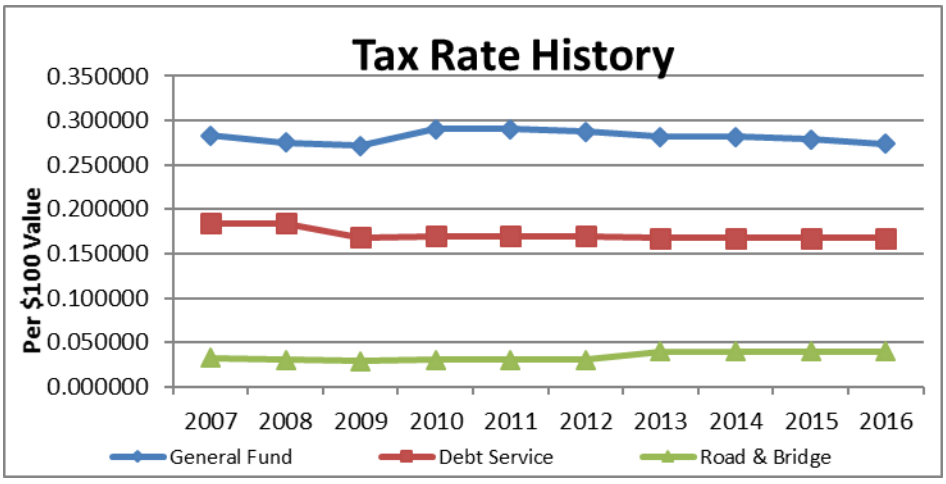
	2014	2015	2016
Revenue	$20.6	$24.7	$27.4
Expenditures	$17.7	$20.8	$22.8
Ending Fund Balance	$15.1	$17.2	$19.5



	2014	2015	2016
Revenue	$62.2	$76.5	$91.0
Expenditures	$62.4	$76.3	$91.0
Ending Fund Balance	$5.7	$5.8	$6.2

Debt Service Fund

The Debt Service Fund is used to account for the accumulation of resources for, and payment of, general long-term debt, principal, interests and costs. In order to fulfill the demands of a growing economy, the County is in need of new infrastructure that required new issuance of debt this year. Existing debt was also refinanced saving taxpayers in future interest costs. The chart shown on the left compares revenues, expenditures and fund balance over the last three years.



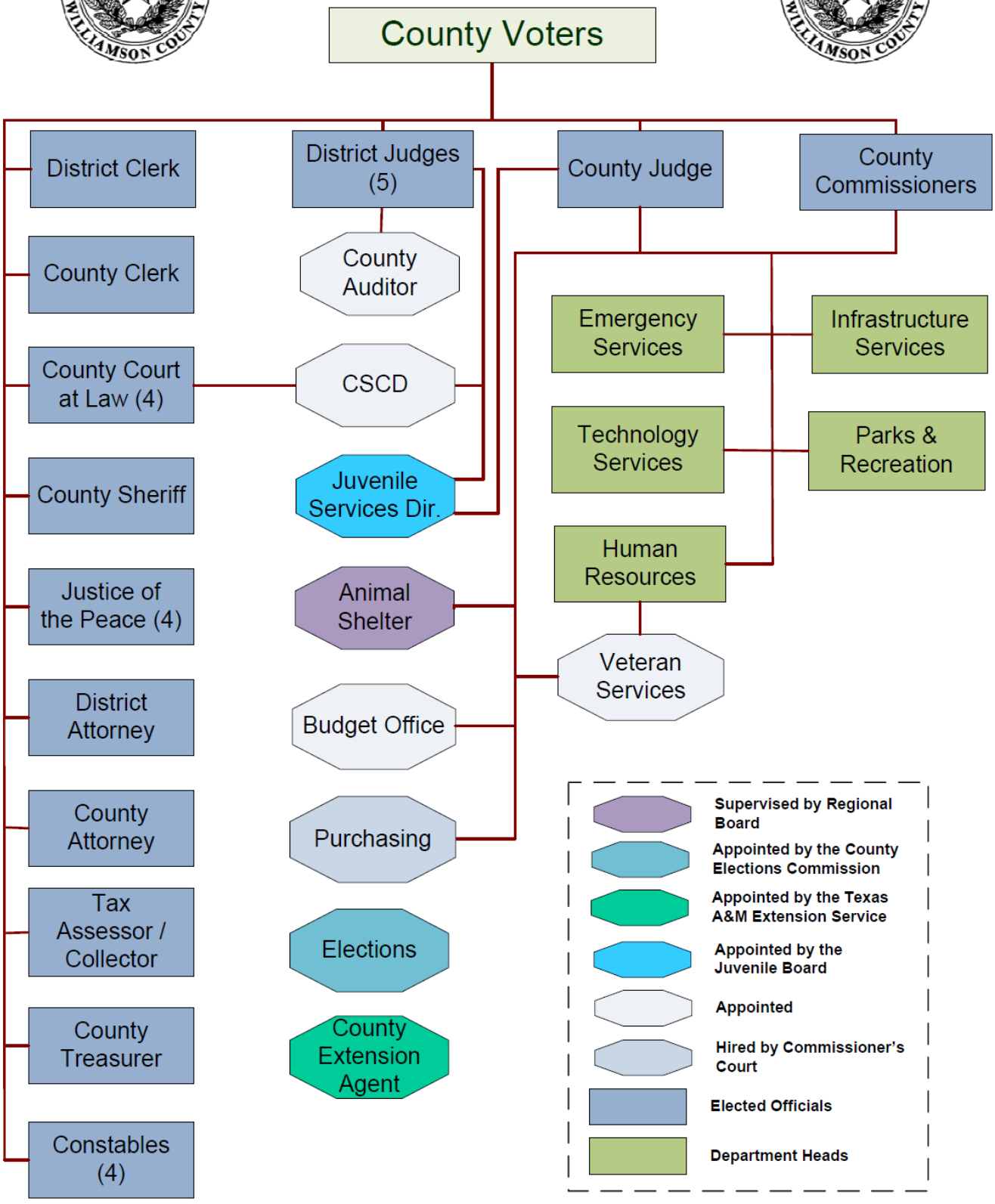
Tax Rate Stability

Williamson County determines tax rates in three areas: the General Fund, Debt Service, and Road & Bridge. Therefore, existing debt is a factor in the County's tax rate. The 2016 tax rate is $0.481259 per $100 value and separated as follows: $0.274029 for General Fund, $0.1675 for Debt Service, and $0.04 for Road and Bridge. The graph shown here reflects the changes in tax rates by each source since 2007. A total of $684 million of voter-authorized debt for road improvements and parks is reflected in the Debt Service rates. The 2015 Tax Rate was adopted for Fiscal Year 2016.

Williamson County Elected Officials:

District Judges:	***Donna King***	**Judge, 26th Judicial District**
	Stacey Mathews	**Judge, 277th Judicial District**
	Rick J. Kennon	**Judge, 368th Judicial District**
	Ryan D. Larson	**Judge, 395th Judicial District**
	Betsy Lambeth	**Judge, 425th Judicial District**
County Court At Law:	***Suzanne Brooks***	**Judge, County Court at Law #1**
	Laura Barker	**Judge, County Court at Law #2**
	Doug Arnold	**Judge, County Court at Law #3**
	John B. McMaster	**Judge, County Court at Law #4**
Commissioner's Court:	***Dan A. Gattis***	**County Judge**
	Terry Cook	**Commissioner, Precinct #1**
	Cynthia Long	**Commissioner, Precinct #2**
	Valerie Covey	**Commissioner, Precinct #3**
	Larry Madsen	**Commissioner, Precinct #4**
Justice of the Peace:	***Dain Johnson***	**Justice of the Peace, Pct #1**
	Edna Staudt	**Justice of the Peace, Pct #2**
	Bill Gravell, Jr.	**Justice of the Peace, Pct #3**
	Judy Hobbs	**Justice of the Peace, Pct #4**
Constables:	***Vinnie Cherrone***	**Constable, Precinct #1**
	Richard Coffman	**Constable, Precinct #2**
	Kevin Stofle	**Constable, Precinct #3**
	Marty Ruble	**Constable, Precinct #4**
County Offices:	***Shawn Dick***	**District Attorney**
	Doyle "Dee" Hobbs	**County Attorney**
	Lisa David	**District Clerk**
	Nancy Rister	**County Clerk**
	Robert Chody	**County Sheriff**
	Jerri L. Jones	**County Treasurer**
	Larry Gaddes	**Tax Assessor/Collector**

Organizational Chart



As of December 01, 2009

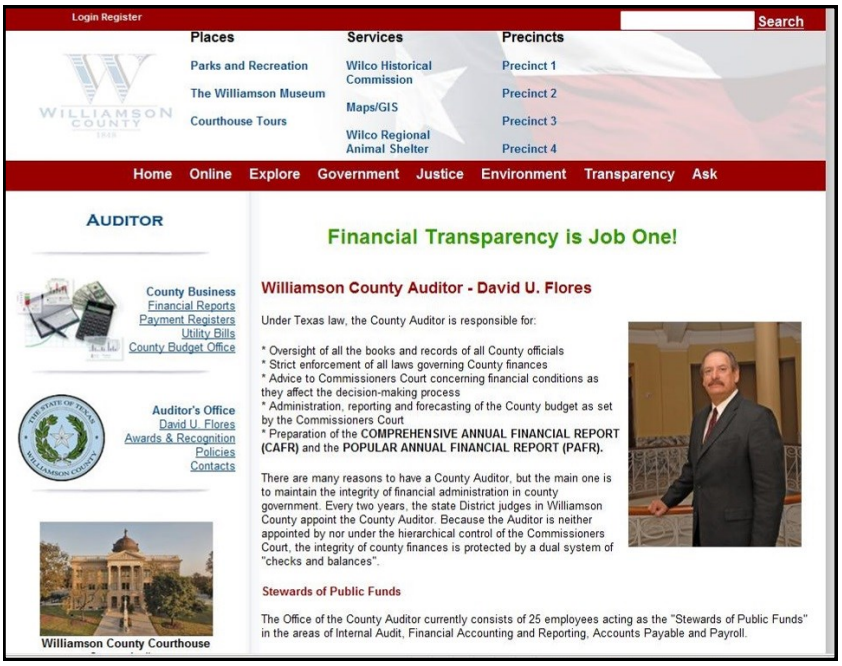
Looking Forward— AAA/Stable

According to the Austin American Statesman, "Williamson County is ranked the seventh fastest in the nation with an estimated population of slightly more than a half-million people, according to the numbers released by the United States Census Bureau. The continuous influx of people, the county received 19,086 new residents in 2015 alone, has contributed to the Austin-Round Rock area becoming the fastest growing metropolitan with a population over 1 million. It is the fifth year in a row the area has been the fastest growing in the nation.

Williamson County Key Financial Goals

- Maintain Adequate Cash Reserves
- Maintain AAA Rating
- Stabilize Tax Rates
- Invest in Technology Infrastructure
- Retain & Train a Productive Work Force
- Invest In Road Infrastructure to Keep up with Rapid Population Growth
- Adopt Best Practices and Highest Standards in Approaching Our County Business

Visit us on the web at:
www.wilco.org
and click:



County Auditor's Office:

David U. Flores, County Auditor

Julie Kiley, First Assistant County Auditor

Melanie Denny, Financial Director

Financial Accounting:
Pam Navarrette (Assistant Financial Director), ***Jody Cook, Tomika Lynce, Cortney Meier, Lisa Moore, Angela Schmidt,*** **and** ***Kelsey Rollins***

Accounts Payable / Payroll:
Nathan Zinsmeyer (Manager), ***Karen Knightstep*** (Lead)***, Heather Alberts, Nicole Alderete, Debbie Frazier, Leticia Gomez, Aracelia Kent, Diane Ostolaza, Este Riley, Loretta Ryden*** **and** ***Miranda Stubbs***

Internal Audit:
Kathy Wierzowiecki, Internal Audit Director
Jalyn Morris (Assistant Internal Audit Director), ***Donald Carlson, Jolene Crist, Sara Greer, Michael Hansen,*** **and** ***Kira Sidatt***

Phone: 512/943-1500
Email: jkiley@wilco.org

WILLIAMSON COUNTY, TEXAS

710 S. Main Street, Suite 301
Georgetown, TX 78626
512.943.1500

www.wilco.org

Popular Annual Financial Report — September 30, 2016

February 28, 2017

To the Honorable Judge,
and County Commissioners
Williamson County, Texas

We have audited the financial statements of Williamson County as of and for the year ended September 30, 2016, and have issued our report thereon dated February 28, 2017. Professional standards require that we advise you of the following matters relating to our audit.

Our Responsibility in Relation to the Financial Statement Audit

As communicated in our engagement letter dated September 15, 2016, our responsibility, as described by professional standards, is to form and express an opinion(s) about whether the financial statements that have been prepared by management with your oversight are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America. Our audit of the financial statements does not relieve you or management of your respective responsibilities.

Our responsibility, as prescribed by professional standards, is to plan and perform our audit to obtain reasonable, rather than absolute, assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control over financial reporting. Accordingly, as part of our audit, we considered the internal control of Williamson County solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.

We are also responsible for communicating significant matters related to the audit that are, in our professional judgment, relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures for the purpose of identifying other matters to communicate to you.

Planned Scope and Timing of the Audit

We conducted our audit consistent with the planned scope and timing we previously communicated to you.

Compliance with All Ethics Requirements Regarding Independence

The engagement team, others in our firm, as appropriate, our firm, and our network firms have complied with all relevant ethical requirements regarding independence.

Qualitative Aspects of the Entity's Significant Accounting Practices

Significant Accounting Policies

Management has the responsibility to select and use appropriate accounting policies. A summary of the significant accounting policies adopted by Williamson County is included in Note 1 to the financial statements. There have been no initial selection of accounting policies and no changes in significant accounting policies or their application during 2016. No matters have come to our attention that would require us, under professional standards, to inform you about (1) the methods used to account for significant unusual transactions and (2) the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus.

Significant Accounting Estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's current judgments. Those judgments are normally based on knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ markedly from management's current judgments.

The most sensitive accounting estimates affecting the financial statements are management's estimate of the net pension liability and other post-employment benefits (OPEB) liability. The net pension liability is based on actuarial calculations provided by Texas County and District Retirement Systems (TCDRS). The OPEB estimate is also based on actuarial calculations performed by independent third parties. We evaluated key factors and assumptions used to develop these estimates in determining that they are responsible in relation for the financial statements taken as a whole.

Financial Statement Disclosures

The financial statement disclosures are neutral, consistent, and clear.

Significant Difficulties Encountered during the Audit

We encountered no significant difficulties in dealing with management relating to the performance of the audit.

Uncorrected and Corrected Misstatements

For purposes of this communication, professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that we believe are trivial, and communicate them to the appropriate level of management. Further, professional standards require us to also communicate the effect of uncorrected misstatements related to prior periods on the relevant classes of transactions, account balances or disclosures, and the financial statements as a whole and each applicable opinion unit. The attached schedule summarizes uncorrected financial statement misstatements whose effects in the current and prior periods, as determined by management, are immaterial, both individually and in the aggregate, to the financial statements taken as a whole and each applicable opinion unit.

In addition, professional standards require us to communicate to you all material, corrected misstatements that were brought to the attention of management as a result of our audit procedures. The addition attached schedule summarizes those material misstatements that we identified as a result of our audit procedures and were brought to the attention of, and corrected by, management.

Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting, or auditing matter, which could be significant to Williamson County's financial statements or the auditor's report. No such disagreements arose during the course of the audit.

Representations Requested from Management

We have requested certain written representations from management, which are included in the attached letter dated February 28, 2017.

Management's Consultations with Other Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters. Management informed us that, and to our knowledge, there were no consultations with other accountants regarding auditing and accounting matters.

Other Significant Matters, Findings, or Issues

In the normal course of our professional association with Williamson County, we generally discuss a variety of matters, including the application of accounting principles and auditing standards, operating and regulatory conditions affecting the entity, and operational plans and strategies that may affect the risks of material misstatement. None of the matters discussed resulted in a condition to our retention as Williamson County's auditors.

Other Information in Documents Containing Audited Financial Statements

Pursuant to professional standards, our responsibility as auditors for other information in documents containing Williamson County's audited financial statements does not extend beyond the financial information identified in the audit report, and we are not required to perform any procedures to corroborate such other information. However, in accordance with such standards, with respect to the supplementary information accompanying the financial statements, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying records used to prepare the financial statements or to the financial statements themselves.

Our responsibility also includes communicating to you any information which we believe is a material misstatement of fact. Nothing came to our attention that caused us to believe that such information, or its manner of presentation, is materially inconsistent with the information, or manner of its presentation, appearing in the financial statements.

This report is intended solely for the information and use of the Commissioners Court of Williamson County, the Audit Committee, and management of Williamson County and is not intended to be and should not be used by anyone other than these specified parties.

Weaver and Tidwell, L.L.P.

WEAVER AND TIDWELL, L.L.P.

ACM:mlm

SCHEDULE OF UNCORRECTED MISSTATEMENTS
SEPTEMBER 30, 2016

Governmental Activities

GW PAJE # 3001		
To correctly state transportation expense and beginning net position for deferred asset that was disposed of in Oct.		
Transportation Expense	4,087,213	
Net Position		4,087,213
Total	**0.00**	**0.00**

GW PAJE # 3002		
To correctly state the deferred loss on refunding that should have been added in the CY and correct amount recognized as an expense		
Beginning Net Position	1,266,793	
Deferred Loss on Refunding		1,266,793
Deferred Loss on Refunding	157,107	
Bond Interest Expense		157,107
Total	**1,423,900**	**1,423,900**

GW PAJE # 3003		
To correctly state NPO and related accounts due to other entities included in payroll		
Net Pension Liability	8,139,660	
Pension Expense		5,364,063
Deferred Outflow of Resources		2,775,597
Total	**8,139,660**	**8,139,660**

Governmental Funds

Proposed Journal Entries JE # 3001			
To enter AP and Expenditure for invoices found after year end that the client wished to pass upon.			
0777-0200-009005	P&G-OPER/MAINT	329,698.00	
0777-0000-202011	A/P LIABILITY AUDIT ADJ		329,698.00
Total		**329,698.00**	**329,698.00**
	Total Proposed Journal Entries	**329,698.00**	**329,698.00**
	Total All Journal Entries	**329,698.00**	**329,698.00**

Commissioners Court - Regular Session **20.**

Meeting Date: 04/04/2017

Discuss consider and take appropriate action on the Department of Infrastructure projects and issues update

Submitted For: Robert Daigh **Submitted By:** Vicky Edwards, Unified Road System

Department: Unified Road System

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on the Department of Infrastructure projects and issues update.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/29/2017 01:41 PM
Form Started By: Vicky Edwards		Started On: 03/29/2017 08:29 AM
Final Approval Date: 03/29/2017		

Commissioners Court - Regular Session **21.**

Meeting Date: 04/04/2017

2006 ROAD BOND TRANSFER REQUEST

Submitted By: Emmeline Palma, County Auditor

Department: County Auditor

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on approving 2006 Road Bond Transfer Request per Mike Weaver, Road Bond Manager. To move $280,000 from I35 Frontage Road (P162) to Corridor A1/FM1660 (P458) of $70,000, Corridor C/SH29 Bypass (P459) of $70,000, Corridor E1/FM3349 (P460) of $70,000 and Corridor F/US183 (P461) of $70,000.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Budget Transfer LTP Corridor

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 12:16 PM
Form Started By: Emmeline Palma		Started On: 03/30/2017 11:25 AM
Final Approval Date: 03/30/2017		

1508 S. Lamar Blvd.
Austin, Texas 78704
(512) 445-7074 voice
(512) 445-7064 fax

Prime Strategies, Inc.

Memo

To: Pam Navarrette
Williamson County Auditor's Office

From: Michael J. Weaver

Date: 3/30/2017

Re: Budget Transfer – LTP Corridor Studies

Road Bond funds need to be allocated to the five (5) LTP Corridor Studies to cover Program Management costs related to the development and planning of those corridors. Please make the following budget transfers:

- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor A1/FM1660 – new P#
- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor C/SH29 Bypass – new P#
- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor E1/FM3349 – new P#
- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor F/US813 – new P#
- Move $70,000.00 from P-291 SH29@Cedar Hollow to Corridor H/Sam Bass – new P#

If you have any questions please let me know.

Cc: Robert B. Daigh, P.E., Williamson County Senior Director of Infrastructure
Christen Eschberger, P.E., HNTB
Marie Walters, PSI

Commissioners Court - Regular Session **22.**

Meeting Date: 04/04/2017

2013 ROAD BOND TRANSFER REQUEST

Submitted By: Emmeline Palma, County Auditor

Department: County Auditor

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on approving 2013 Road Bond Transfer Request per Mike Weaver, Road Bond Manager. To move $70,000 from SH29@Cedar Hollow (P291) to Corridor H/Sam Bass (P462). Also move $3,983,960 from Non Departmental (P290) to Corrdior A1/FM1160 (P458) $909,765, Corridor C/SH29 Bypass (P459) $595,735, Corridor E1/FM3349 (P460) $997,360, Corridor F/US1853 (P461) $989,320 and Corridor H/Sam Bass (P462) $491,780.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

LTP Corridor Transfer

LTP Corridor Transfer Request

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 12:16 PM
Form Started By: Emmeline Palma		Started On: 03/30/2017 11:36 AM
Final Approval Date: 03/30/2017		

1508 S. Lamar Blvd.
Austin, Texas 78704
(512) 445-7074 voice
(512) 445-7064 fax

Prime Strategies, Inc.

Memo

To: Pam Navarrette
Williamson County Auditor's Office

From: Michael J. Weaver

Date: 3/30/2017

Re: Budget Transfer – LTP Corridor Studies

Road Bond funds need to be allocated to the five (5) LTP Corridor Studies to cover Program Management costs related to the development and planning of those corridors. Please make the following budget transfers:

- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor A1/FM1660 – new P#
- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor C/SH29 Bypass – new P#
- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor E1/FM3349 – new P#
- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor F/US813 – new P#
- Move $70,000.00 from P-291 SH29@Cedar Hollow to Corridor H/Sam Bass – new P#

If you have any questions please let me know.

Cc: Robert B. Daigh, P.E., Williamson County Senior Director of Infrastructure
Christen Eschberger, P.E., HNTB
Marie Walters, PSI

1508 S. Lamar Blvd.
Austin, Texas 78704
(512) 445-7074 voice
(512) 445-7064 fax

Prime Strategies, Inc.

Memo

To: Pam Navarrette
Williamson County Auditor's Office

From: Michael J. Weaver

Date: 3/30/2017

Re: Budget Transfer – LTP Corridor Studies

Road Bond funds need to be allocated to the five (5) LTP Corridor Studies to cover Program Management costs related to the development and planning of those corridors. Please make the following budget transfers:

- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor A1/FM1660 – new P#
- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor C/SH29 Bypass – new P#
- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor E1/FM3349 – new P#
- Move $70,000.00 from P-162 IH35 Frontage Road to Corridor F/US813 – new P#
- Move $70,000.00 from P-291 SH29@Cedar Hollow to Corridor H/Sam Bass – new P#

If you have any questions please let me know.

Cc: Robert B. Daigh, P.E., Williamson County Senior Director of Infrastructure
Christen Eschberger, P.E., HNTB
Marie Walters, PSI

Commissioners Court - Regular Session **23.**

Meeting Date: 04/04/2017

Sheriff's Office Training Center - Oncor Agreement

Submitted By: Gina Wrehsnig, Facilities Maintenance

Department: Facilities Maintenance

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on an Agreement between Williamson County and Oncor Electric Delivery Company, LLC for installation of electrical infrastructure in relation to the Sheriff's Office Training Facility Project.

Background

To install electric infrastructure from Chandler along east side of property to underground transformer for service to the Williamson County Training Center project. The easement for said utilities was previously approved by Commissioner Court March 21, 2017, item #44. Funding for this will be taken from allowances provide in the construction contract.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

SOTC Oncor Agreement

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/27/2017 10:17 AM
Form Started By: Gina Wrehsnig		Started On: 03/27/2017 08:50 AM
Final Approval Date: 03/27/2017		

Oncor Electric Delivery LLC
a Delaware limited liability company

Wilson Giraldo
Major Design Associate
350 Texas Avenue
Round Rock, Texas
wilson.giraldo@oncor.com 512-244-5670

WR #: 3327289

Transaction ID: 4856

Robert J, Lubecker
Project Manager
Williamson County
rlubecker@wilco.org

Re: Williamson County Training Facility

Dear Mr. Lubecker

Williamson County ('Customer') has requested that Oncor Electric Delivery Company LLC, a Delaware limited liability company ('Company'), provide additional electric facilities sufficient to provide electric service for N/A kW or 1 lots / units at 8160 Chandler Hutto, Texas.

Pursuant to company's Tariff for Retail Delivery Service, Customer is responsible for $8,807.11 as payment for the Customer's portion of the cost of installation of Company's additional electric delivery facilities, such payment to be and remain the property of the Company. Customer's payment in full is due at the time this agreement is returned to Company.

Company at all times shall have title to and complete ownership and control over said facilities.

Customer is responsible for providing, without cost to the Company: (1) suitable space on customer's premises for the installation of the facilities; and (2) rough site grading to final grade along the route of the facilities and clearing the area of all obstructions.

Customer has elected to provide, without cost to the Company, all civil construction necessary to install Oncor Electric Delivery facilities on the Customer's premises, including labor and material. Customer agrees to provide all civil construction in accordance with the Company's standards.

Customer has disclosed to Company all underground facilities owned by Customer or any other party that is not a public utility or governmental entity, that are located within real property owned by Customer. In the event that Customer has failed to do so, or in the event of the existence of such facilities of which Customer has no knowledge, Company, its agents and contractors, shall have no liability, of any nature whatsoever, to Customer, or Customer's agents or assignees, for any actual or consequential damages resulting from damage to such undisclosed or unknown facilities.

This agreement supersedes all previous agreements or representation, either written or oral, between Company and Customer made with respect to the matters herein contained, and when duly executed constitutes the agreement between the parties hereto and is not binding upon Company unless and until signed by one of its duly authorized representatives.

This agreement, if not accepted within 30 days of the date of this letter, will be of no force and effect. Acceptance shall consist of delivery of an executed copy of this agreement to Company.

Please be aware that the start date of this project will be no earlier than three weeks following the execution of this agreement along with any payment that may be required pursuant to Company's Tariff for Retail Delivery Service. A more definitive installation schedule will be provided upon your delivery of this agreement to assist in your planning for this project.

Sincerely,

Wilson Giraldo

If Williamson County agrees to the conditions set forth in this agreement, please execute the agreement and return to me at the address above.

Signature _____ Printed Name _____

Title _____ Date _____

Commissioners Court - Regular Session **24.**

Meeting Date: 04/04/2017

CR 101 Contract

Submitted For: Charlie Crossfield **Submitted By:** Charlie Crossfield, Road Bond

Department: Road Bond

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on a Real Estate Contract with Douglas and Rebecca Schernik for right of way needed on CR 101. (Parcel 12)

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Schernik Contract

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 10:21 AM
Form Started By: Charlie Crossfield		Started On: 03/30/2017 09:57 AM
Final Approval Date: 03/30/2017		

REAL ESTATE CONTRACT
CR 101 Right of Way—Parcel 12

THIS REAL ESTATE CONTRACT ("Contract") is made by DOUGLAS M. SCHERNIK and REBECCA J. SCHERNIK (referred to in this Contract as "Seller") and WILLIAMSON COUNTY, TEXAS (referred to in this Contract as "Purchaser"), upon the terms and conditions set forth in this Contract.

ARTICLE I
PURCHASE AND SALE

By this Contract, Seller sells and agrees to convey, and Purchaser purchases and agrees to pay for, the tract(s) of land described as follows:

> All of that certain 0.647 acre (28,171 Sq. Ft.) tract of land in the Patrick O. Daugherty Survey, Abstract No. 184, Williamson County, Texas; being more fully described by metes and bounds in Exhibit "A", attached hereto and incorporated herein (**Parcel 12**)

together with all and singular the rights and appurtenances pertaining to the property, including any right, title and interest of Seller in and to adjacent streets, alleys or rights-of-way (all of such real property, rights, and appurtenances being referred to in this Contract as the "Property"), and any improvements situated on and attached to the Property described in Exhibit "A" not otherwise agreed herein to be retained by Seller, for the consideration and upon and subject to the terms, provisions, and conditions set forth below.

ARTICLE II
PURCHASE PRICE

Purchase Price

2.01. The Purchase Price for the Property described in Exhibit "A", any improvements on the Property, and any damage to or cost to cure for the remaining property of Seller shall be the sum of FIFTEEN THOUSAND ONE HUNDRED and 00/100 Dollars ($15,100.00).

Payment of Purchase Price

2.02. The Purchase Price shall be payable in cash at the Closing.

Special Provisions

2.03. As an obligation which shall survive the Closing of this transaction, to the extent allowed by law Purchaser shall indemnify Seller against any loss and damage which shall be caused by the exercise of the rights of ingress and egress or by any wrongful or negligent act or omission of Grantee's agents or employees in the course of their employment during construction of roadway facilities upon the Property. Purchaser shall be responsible for the correction of, or compensation for, any damage to Seller's remainder property which is the direct result of actions of Purchaser and its use of the Property during construction or maintenance of public roadway facilities.

ARTICLE III
PURCHASER'S OBLIGATIONS

Conditions to Purchaser's Obligations

3.01. The obligations of Purchaser hereunder to consummate the transactions contemplated hereby are subject to the satisfaction of each of the following conditions (any of which may be waived in whole or in part by Purchaser at or prior to the Closing).

Miscellaneous Conditions

3.02. Seller shall have performed, observed, and complied with all of the covenants, agreements, and conditions required by this Contract to be performed, observed, and complied with by Seller prior to or as of the closing.

ARTICLE IV
REPRESENTATIONS AND WARRANTIES OF SELLER

Seller hereby represents and warrants to Purchaser as follows, which representations and warranties shall be deemed made by Seller to Purchaser also as of the Closing Date, to the best of Seller's current actual knowledge:

(1) There are no parties in possession of any portion of the Property as lessees, tenants at sufferance, or trespassers, other than as previously disclosed to Purchaser;

(2) Seller has complied with all applicable laws, ordinances, regulations, statutes, rules and restrictions relating to the Property, or any part thereof;

The Property herein is being conveyed to Purchaser under threat of condemnation.

ARTICLE V
CLOSING

Closing Date

5.01. The Closing shall be held at the office of Independence Title Company on or before May 15, 2017, or at such time, date, and place as Seller and Purchaser may agree upon, or within 10 days after the completion of any title curative matters if necessary for items as shown on the Title Commitment or in the contract (which date is herein referred to as the "Closing Date").

Seller's Obligations at Closing

5.02. At the Closing Seller shall:

(1) Deliver to Purchaser a duly executed and acknowledged Deed conveying good and indefeasible title to Williamson County, Texas in fee simple to all of the Property described in Exhibit "A", free and clear of any and all liens and restrictions, except for the following:

(a) General real estate taxes for the year of closing and subsequent years not yet due and payable;

(b) Any exceptions approved by Purchaser pursuant to Article III hereof; and

(c) Any exceptions approved by Purchaser in writing.

The Deed shall be in the form as shown in Exhibit "B" attached hereto and incorporated herein.

(2) Deliver to Purchaser a Texas Owner's Title Policy at Purchaser's sole expense, issued by Title Company, in Grantee's favor in the full amount of the Purchase Price, insuring Purchaser's contracted interests in and to the Property subject only to those title exceptions listed herein, such other exceptions as may be approved in writing by Purchaser, and the standard printed exceptions contained in the usual form of Texas Owner's Title Policy, provided, however:

(a) The boundary and survey exceptions shall be deleted;

(b) The exception as to restrictive covenants shall be endorsed "None of Record", if applicable; and

(c) The exception as to the lien for taxes shall be limited to the year of Closing and shall be endorsed "Not Yet Due and Payable".

(d) Deliver to Purchaser possession of the Property if not previously done.

Purchaser's Obligations at Closing

5.03. At the Closing, Purchaser shall:

(a) Pay the cash portion of the Purchase Price.

Prorations

5.04. General real estate taxes for the then current year relating to the Property shall be prorated as of the Closing Date and shall be adjusted in cash at the closing. If the Closing shall occur before the tax rate is fixed for the then current year, the apportionment of taxes shall be upon the basis of the tax rate for the next preceding year applied to the latest assessed valuation. Agricultural roll-back taxes, if any, shall be paid by Purchaser.

Closing Costs

5.05. All costs and expenses of closing in consummating the sale and purchase of the Property shall be borne and paid as follows:

(1) Owner's Title Policy and survey to be paid by Purchaser.

(2) Deed, tax certificates, and title curative matters, if any, paid by Purchaser.

(3) All other closing costs shall be paid by Purchaser.

(4) Attorney's fees paid by each respectively.

ARTICLE VI
BREACH BY SELLER

In the event Seller shall fail to fully and timely perform any of its obligations hereunder or shall fail to consummate the sale of the Property for any reason, except Purchaser's default, Purchaser may: (1) enforce specific performance of this Contract; or (2) request that the Escrow Deposit, if any, shall be forthwith returned by the title company to Purchaser.

ARTICLE VII
BREACH BY PURCHASER

In the event Purchaser should fail to consummate the purchase of the Property, the conditions to Purchaser's obligations set forth in Article III having been satisfied and Purchaser being in default and Seller not being in default hereunder, Seller shall have the right to receive the Escrow

Deposit, if any, from the title company, the sum being agreed on as liquidated damages for the failure of Purchaser to perform the duties, liabilities, and obligations imposed upon it by the terms and provisions of this Contract, and Seller agrees to accept and take this cash payment as its total damages and relief and as Seller's sole remedy hereunder in such event. If no Escrow Deposit has been made then Seller shall receive the amount of $500 as liquidated damages for any failure by Purchaser.

ARTICLE VIII
MISCELLANEOUS

Notice

8.01. Any notice required or permitted to be delivered hereunder shall be deemed received when sent by United States mail, postage prepaid, certified mail, return receipt requested, addressed to Seller or Purchaser, as the case may be, at the address set forth opposite the signature of the party.

Texas Law to Apply

8.02. This Contract shall be construed under and in accordance with the laws of the State of Texas, and all obligations of the parties created hereunder are performable in Williamson County, Texas.

Parties Bound

8.03. This Contract shall be binding upon and inure to the benefit of the parties and their respective heirs, executors, administrators, legal representatives, successors and assigns where permitted by this Contract.

Legal Construction

8.04. In case any one or more of the provisions contained in this Contract shall for any reason be held to be invalid, illegal, or unenforceable in any respect, this invalidity, illegality, or unenforceability shall not affect any other provision hereof, and this Contract shall be construed as if the invalid, illegal, or unenforceable provision had never been contained herein.

Prior Agreements Superseded

8.05. This Contract constitutes the sole and only agreement of the parties and supersedes any prior understandings or written or oral agreements between the parties respecting the within subject matter.

Time of Essence

8.06. Time is of the essence in this Contract.

Gender

8.07. Words of any gender used in this Contract shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, and vice versa, unless the context requires otherwise.

Memorandum of Contract

8.08. Upon request of either party, the parties shall promptly execute a memorandum of this Contract suitable for filing of record.

Compliance

8.09 In accordance with the requirements of Section 20 of the Texas Real Estate License Act, Purchaser is hereby advised that it should be furnished with or obtain a policy of title insurance or Purchaser should have the abstract covering the Property examined by an attorney of Purchaser's own selection.

Effective Date

8.10 This Contract shall be effective as of the date it is approved by Williamson County, Texas which date is indicated beneath the County Judge's signature below.

Counterparts

8.11 This Contract may be executed in any number of counterparts, which may together constitute the Contract. Signatures transmitted by facsimile or electronic mail may be considered effective as originals for purposes of this Contract.

[signature page follows]

SELLER:

Douglas M. Schernik

Address: 5700 CR 101
Taylor, Tx 76574

Date: 3-29-17

Rebecca J. Schernik

Address: 5700 C.R. 101
Taylor, Tx. 76574

Rebecca J. Schernik

Date: 3-29-17

PURCHASER:

WILLIAMSON COUNTY, TEXAS

By: _____
Dan A. Gattis
County Judge

Address: 710 Main Street, Suite 101
Georgetown, Texas 78626

Date: _____

EXHIBIT A

County: Williamson
Parcel: 12
Highway: County Road 101

METES & BOUNDS DESCRIPTION FOR PARCEL 12

METES & BOUNDS DESCRIPTION FOR A 0.647 ACRE (28,171 SQUARE FOOT) TRACT OF LAND SITUATED IN THE PATRICK O. DAUGHERTY SURVEY, ABSTRACT NO. 184, WILLIAMSON COUNTY, TEXAS AND BEING A PORTION OF A REMAINDER OF A CALLED 89.87 ACRE TRACT OF LAND AS CONVEYED TO DOUGLAS M. SCHERNIK AND WIFE, REBECCA J. SCHERNIK BY DEED WITH VENDOR'S LIEN RECORDED IN VOLUME 908, PAGE 80 OF THE DEED RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 0.647 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS AND SHOWN ON THE ATTACHED SKETCH:

COMMENCING FOR POINT OF REFERENCE at a 1/2-inch iron pipe found on the west right-of-way line of County Road 101 at the southeast corner of the above described Schernik tract at the northeast corner of a 150-acre tract as conveyed to Emmanuel Anderson by executor's deed as recorded in Document Number 2000018292 of the Official Public Records of Williamson County, Texas, from which a 1" iron pipe found at the common west corner of said Schernik tract and said Anderson tract bears S 68°33'37" W a distance of 2,475.29 feet; Thence, with the west right-of-way line of said County Road 101, N 21°36'03" W a distance of 292.78 feet to a 1/2-inch iron rod with aluminum cap stamped "WILCO ROW 5777" (NAD-83, Central Zone Grid Coordinates: N: 10,182,622.86, E: 3,190,781.80) set on the east line of said Schernik tract, for the south corner and **POINT OF BEGINNING** of the herein described tract, 28.33 feet left of County Road 101 baseline station 75+38.00;

THENCE, leaving the west right-of-way line of said County Road 101, over and across said Schernik tract, **N 36°24'28" W** a distance of **166.73** feet to a 1/2-inch iron rod with aluminum cap stamped "WILCO ROW 5777" set at an angle point, 70.00 feet left of County Road 101 baseline station 77+00.00;

THENCE, continuing over and across said Schernik tract, **N 28°59'32" W** a distance of **301.38** feet to a 1/2-inch iron rod with aluminum cap stamped "WILCO ROW 5777" set at an angle point, 105.00 feet left of County Road 101 baseline station 80+00.00;

THENCE, continuing over and across said Schernik tract, **N 22°25'27" W** a distance of **205.71** feet to a 1/2-inch iron rod with aluminum cap stamped "WILCO ROW 5777" set at a point of curvature of a curve to the right, 105.00 feet left of County Road 101 baseline station 82+05.71;

THENCE, continuing over and across said Schernik tract, along said curve to the right, an arc distance of **108.06** feet, having a radius of **10,105.00** feet, a central angle of **0°36'46"** and a chord which bears **N 22°07'04" W** a distance of **108.06** feet to a 1/2-inch iron rod with aluminum cap stamped "WILCO ROW 5777" set for corner, 105.00 feet left of County Road 101 baseline station 83+12.65;

THENCE, continuing over and across said Schernik tract, **N 21°48'41" W** a distance of **224.42** feet to a 1/2-inch iron rod with aluminum cap stamped "WILCO ROW 5777" set on the north line of said Schernik tract, on the south line of a called 17.44-acre tract as conveyed to Paul J. Anderson by warranty deed with vendor's lien as recorded in Document Number 2001082527 of the Official Public Records of Williamson County, Texas, for the northwest corner of the herein described tract, 105.00 feet left of County Road 101 baseline station 85+37.07, from which a 1/2-inch iron pipe found at an angle point in the north line of said Schernik tract bears, N 72°24'26" W a distance of 608.39 feet;

THENCE, with the north line of said Schernik tract, **S 72°24'26" E** a distance of **33.11** feet to a 1/2-inch iron rod found at the common east corner of said Schernik tract and said Paul J. Anderson tract, on the west right-of-way line of said County Road 101, for the northeast corner of the herein described tract;

THENCE, with the west right-of-way line of said County Road 101, and the east line of said Schernik tract the following four (4) courses:

1) **S 21°50'06" E** a distance of **442.74** feet to a calculated angle point;

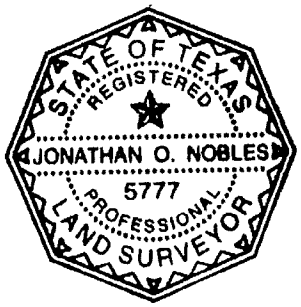
2) **S 31°14'06" E** a distance of **214.39** feet to calculated angle point;

3) **S 27°01'36" E** a distance of **240.99** feet to a calculated angle point; and

4) **S 21°36'03" E** a distance of **83.30** feet to the **POINT OF BEGINNING** and containing 0.647 acre (28,171 square feet) of land, more or less.

Bearing orientation is based on the Texas State Plane Coordinate System NAD-83, Central Zone 4203. All distances are surface and may be converted to grid by dividing by a scale factor of 1.00012352.

I hereby certify that these notes were prepared by BGE from a survey made on the ground under my supervision on February 26, 2016 and are true and correct to the best of my knowledge. A sketch accompanies this description.

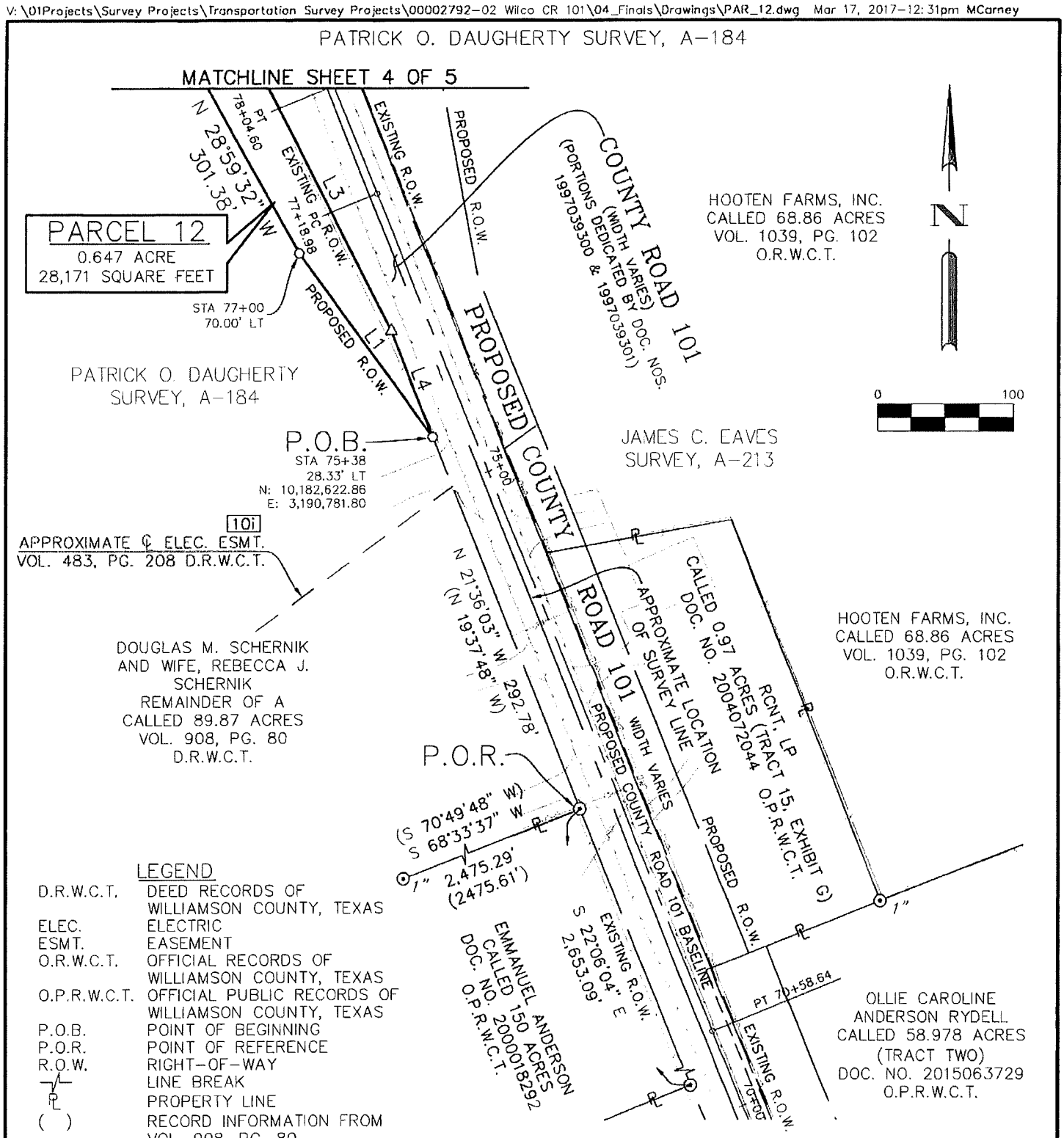


Jonathan O. Nobles RPLS No. 5777
Brown & Gay Engineers, Inc.
7000 North Mopac, Suite 330
Austin, Texas 78731
Telephone: (512) 879-0400
TBPLS Licensed Surveying Firm No. 10106502

3/20/2017
Date

Client:	Williamson County
Date:	November 14, 2016
Revised:	March 20, 2017
Job No:	2792-02

V:\01Projects\Survey Projects\Transportation Survey Projects\00002792-02 Wilco CR 101\04_Finals\Drawings\PAR_12.dwg Mar 17, 2017-12:31pm MCarney



LEGEND

D.R.W.C.T.	DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
ELEC.	ELECTRIC
ESMT.	EASEMENT
O.R.W.C.T.	OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
O.P.R.W.C.T.	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
P.O.B.	POINT OF BEGINNING
P.O.R.	POINT OF REFERENCE
R.O.W.	RIGHT-OF-WAY
⌐/└	LINE BREAK
℄	PROPERTY LINE
( )	RECORD INFORMATION FROM VOL. 908, PG. 80
[ ]	RECORD INFORMATION FROM DOC. NO. 1997039301
●	FOUND 1/2" IRON ROD
⊙	FOUND 1/2" IRON PIPE
▲	FOUND 60-D NAIL IN FENCE POST
○	SET 1/2" IRON ROD WITH "WILCO ROW 5777" CAP
△	CALCULATED POINT
	OVERHEAD POWER
	BARBED WIRE FENCE
	CHAIN LINK FENCE
	GUARDRAIL
	EDGE OF ASPHALT

Brown & Gay Engineers, Inc.
7000 North Mopac, Suite 330, Austin, TX 78731
Tel: 512-879-0400 • www.browngay.com
TBPLS Licensed Surveying Firm No 10106502

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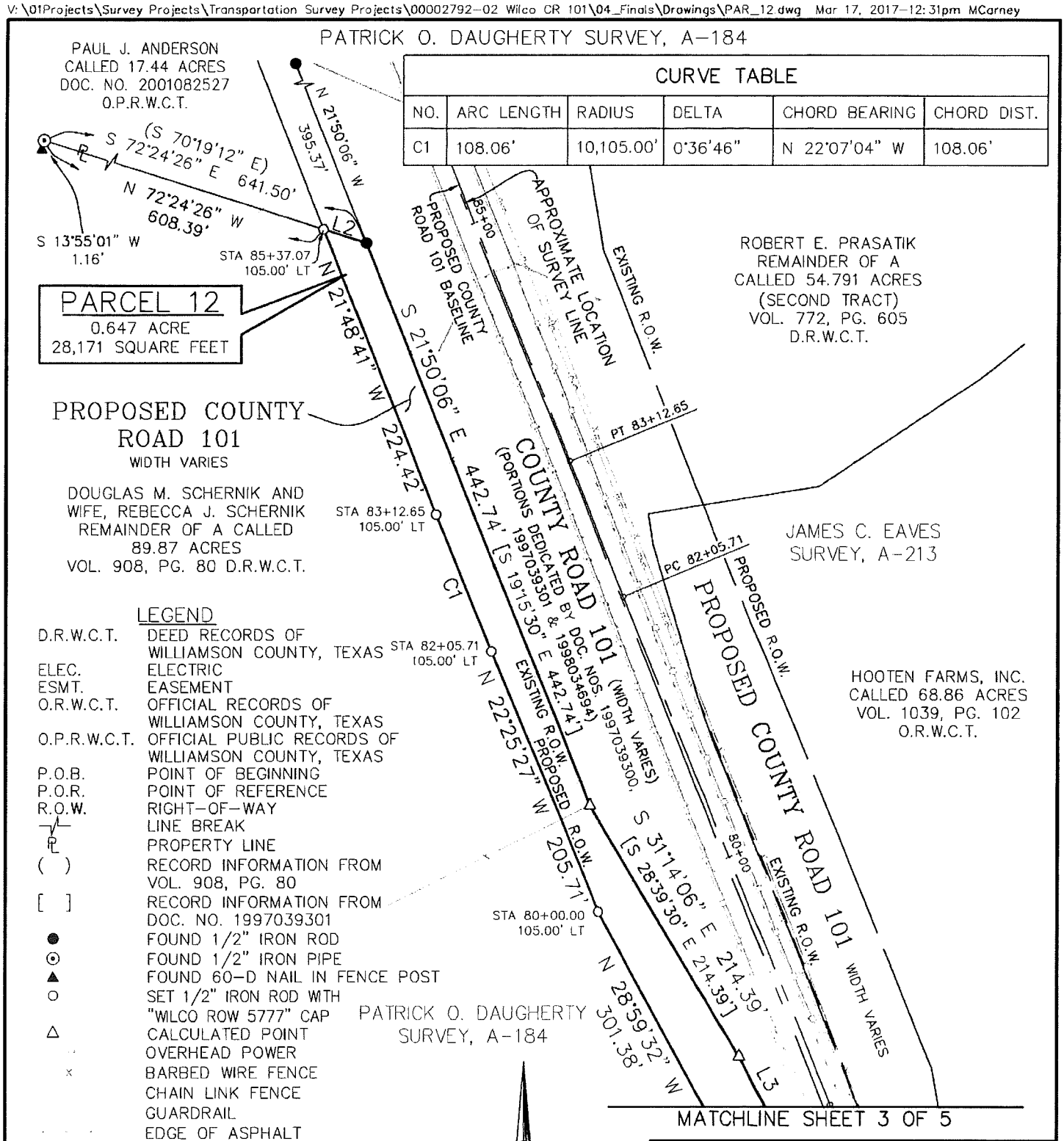
PARCEL PLAT
SHOWING PARCEL 12
0.647 ACRE (28,171 S.F.)
COUNTY ROAD 101
WILLIAMSON COUNTY

Scale:	Job No.:	Date:	Page:
1"=100'	2792-02	03/20/2017	3 of 5



CURVE TABLE					
NO.	ARC LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DIST.
C1	108.06'	10,105.00'	0°36'46"	N 22°07'04" W	108.06'

LEGEND

D.R.W.C.T.	DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
ELEC.	ELECTRIC
ESMT.	EASEMENT
O.R.W.C.T.	OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
O.P.R.W.C.T.	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
P.O.B.	POINT OF BEGINNING
P.O.R.	POINT OF REFERENCE
R.O.W.	RIGHT-OF-WAY
	LINE BREAK
℄	PROPERTY LINE
( )	RECORD INFORMATION FROM VOL. 908, PG. 80
[ ]	RECORD INFORMATION FROM DOC. NO. 1997039301
●	FOUND 1/2" IRON ROD
⊙	FOUND 1/2" IRON PIPE
▲	FOUND 60-D NAIL IN FENCE POST
○	SET 1/2" IRON ROD WITH "WILCO ROW 5777" CAP
△	CALCULATED POINT
	OVERHEAD POWER
x	BARBED WIRE FENCE
	CHAIN LINK FENCE
	GUARDRAIL
	EDGE OF ASPHALT

LINE TABLE		
NUMBER	BEARING	DISTANCE
L1	N 36°24'28" W	166.73'
L2	S 72°24'26" E	33.11'
L3	S 27°01'36" E	240.99'
	[S 24°27'00" E]	[240.99']
L4	S 21°36'03" E	83.30'
	(S 19°37'48" E)	

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WILLIAMSON COUNTY

Scale:	Job No.:	Date:	Page:
1"=100'	2792-02	03/20/2017	4 of 5

RESTRICTIVE COVENANT AND EASEMENT NOTES:

THIS SURVEY WAS MADE IN RELIANCE UPON THAT CERTAIN COMMITMENT FOR TITLE INSURANCE ISSUED BY TITLE RESOURCES GUARANTY COMPANY AND COUNTERSIGNED BY INDEPENDENCE TITLE UNDER G.F. NUMBER 1622691-GTN, DATED EFFECTIVE JUNE 22, 2016 AND ISSUED ON JULY 1, 2016.

10e. ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINE(S) EASEMENT GRANTED TO TEXAS POWER & LIGHT COMPANY BY INSTRUMENT RECORDED IN VOLUME 287, PAGE 61, DEED RECORDS, WILLIAMSON COUNTY, TEXAS, MAY AFFECT THE SUBJECT TRACT, BUT CANNOT BE DETERMINED FROM INFORMATION CURRENTLY AVAILABLE.

10f. ELECTRIC TRANSMISSION AND/OR DISTRIBUTION LINE(S) EASEMENT GRANTED TO TEXAS POWER & LIGHT COMPANY BY INSTRUMENT RECORDED IN VOLUME 286, PAGE 189, DEED RECORDS, WILLIAMSON COUNTY, TEXAS, MAY AFFECT THE SUBJECT TRACT, BUT CANNOT BE DETERMINED FROM INFORMATION CURRENTLY AVAILABLE.

10g. ELECTRIC LINE(S) EASEMENT GRANTED TO TEXAS POWER & LIGHT COMPANY BY INSTRUMENT RECORDED IN VOLUME 335, PAGE 31, DEED RECORDS, WILLIAMSON COUNTY, TEXAS, MAY AFFECT THE SUBJECT TRACT, BUT CANNOT BE DETERMINED FROM INFORMATION CURRENTLY AVAILABLE.

10h. ELECTRIC LINE(S) EASEMENT GRANTED TO TEXAS POWER & LIGHT COMPANY BY INSTRUMENT RECORDED IN VOLUME 335, PAGE 254, DEED RECORDS, WILLIAMSON COUNTY, TEXAS, MAY AFFECT THE SUBJECT TRACT, BUT CANNOT BE DETERMINED FROM INFORMATION CURRENTLY AVAILABLE.

10i. ELECTRIC POWER LINE(S) EASEMENT GRANTED TO TEXAS POWER & LIGHT COMPANY BY INSTRUMENT RECORDED IN VOLUME 483, PAGE 208, DEED RECORDS, WILLIAMSON COUNTY, TEXAS, DOES NOT AFFECT THE SUBJECT TRACT, AS SHOWN HEREON.

10j. EASEMENT FOR FLOODWATER RETARDING STRUCTURE GRANTED TO BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT NO. 1 BY INSTRUMENT RECORDED IN VOLUME 504, PAGE 79, DEED RECORDS, WILLIAMSON COUNTY, TEXAS, MAY AFFECT THE SUBJECT TRACT, BUT CANNOT BE DETERMINED FROM INFORMATION CURRENTLY AVAILABLE.

10k. WATER LINE(S) EASEMENT GRANTED TO JONAH WATER SUPPLY CORPORATION BY INSTRUMENT RECORDED IN VOLUME 563, PAGE 714, DEED RECORDS, WILLIAMSON COUNTY, TEXAS, MAY AFFECT THE SUBJECT TRACT, BUT CANNOT BE DETERMINED FROM INFORMATION CURRENTLY AVAILABLE.

10l. ELECTRIC LINE(S) EASEMENT GRANTED TO TEXAS POWER & LIGHT COMPANY BY INSTRUMENT RECORDED IN VOLUME 710, PAGE 198, DEED RECORDS, WILLIAMSON COUNTY, TEXAS, DOES NOT AFFECT THE SUBJECT TRACT.

GENERAL NOTES:

1. BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD-83, CENTRAL ZONE 4203. SCALE FACTOR = 1.00012352
2. A SEPARATE METES AND BOUNDS DESCRIPTION OF EVEN DATE WAS PREPARED IN CONJUNCTION WITH THIS SKETCH.
3. FENCES ROADS & UTILITIES SHOWN WERE LOCATED ON THE GROUND. AERIAL IMAGERY WAS USED TO APPROXIMATE LOCATIONS OF OTHER IMPROVEMENTS SHOWN HEREON.

JONATHAN O. NOBLES RPLS NO. 5777
BROWN & GAY ENGINEERS, INC.
7000 NORTH MOPAC, SUITE 330
AUSTIN, TEXAS 78731
TELEPHONE: (512) 879-0400

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COUNTY ROAD 101
WILLIAMSON COUNTY

Scale:	Job No.:	Date:	Page:
1"=100'	2792-02	03/20/2017	5 of 5

EXHIBIT "B"

Parcel 12

DEED
County Road 101 Road Right of Way

THE STATE OF TEXAS §
§
COUNTY OF WILLIAMSON §

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OF THE FOLLOWING INFORMATION FROM THIS INSTRUMENT BEFORE IT IS FILED IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

NOW, THEREFORE, KNOW ALL BY THESE PRESENTS:

That DOUGLAS M. SCHERNIK and REBECCA J. SCHERNIK, hereinafter referred to as Grantor, whether one or more, for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration to Grantor in hand paid by Williamson County, Texas, the receipt and sufficiency of which is hereby acknowledged, and for which no lien is retained, either expressed or implied, have this day Sold and by these presents do Grant, Bargain, Sell and Convey unto WILLIAMSON COUNTY, TEXAS, all that certain tract or parcel of land lying and being situated in the County of Williamson, State of Texas, along with any improvements thereon, being more particularly described as follows:

> All of that certain 0.647 acre (28,171 Sq. Ft.) tract of land in the Patrick O. Daugherty Survey, Abstract No. 184, Williamson County, Texas; being more fully described by metes and bounds in Exhibit "A", attached hereto and incorporated herein (**Parcel 12**)

SAVE AND EXCEPT, HOWEVER, it is expressly understood and agreed that Grantor is retaining title to the following improvements located on the property described in said Exhibit "A" to wit: NONE

RESERVATIONS FROM AND EXCEPTIONS TO CONVEYANCE AND WARRANTY:

Visible and apparent easements not appearing of record;

Any discrepancies, conflicts, or shortages in area or boundary lines or any encroachments or any overlapping of improvements which a current survey would show;

Easements, restrictions, reservations, covenants, conditions, oil and gas leases, mineral severances, and encumbrances for taxes and assessments (other than liens and conveyances) presently of record in the Official Public Records of Williamson County, Texas, that affect the property, but only to the extent that said items are still valid and in force and effect at this time.

Grantor reserves all of the oil, gas and other minerals in and under the land herein conveyed but waives all rights of ingress and egress to the surface thereof for the purpose of exploring, developing, mining or drilling or pumping the same; provided, however, that operations for exploration or recovery of any such minerals shall be permissible so long as all surface operations in connection therewith are located at a point outside the acquired parcel and upon the condition that none of such operations shall be conducted so near the surface of said land as to interfere with the intended use thereof or in any way interfere with, jeopardize, or endanger the facilities of Williamson County, Texas or create a hazard to the public users thereof; it being intended, however, that nothing in this reservation shall affect the title and the rights of Grantee to take and use without additional compensation any, stone, earth, gravel, caliche, iron ore, gravel or any other road building material upon, in and under said land for the construction and maintenance of CR 101.

TO HAVE AND TO HOLD the property herein described and herein conveyed together with all and singular the rights and appurtenances thereto in any wise belonging unto Williamson County, Texas and its assigns forever; and Grantor does hereby bind itself, its heirs, executors, administrators, successors and assigns to Warrant and Forever Defend all and singular the said premises herein conveyed unto Williamson County, Texas and its assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof.

This deed is being delivered in lieu of condemnation.

IN WITNESS WHEREOF, this instrument is executed on this the ___ day of _____, 2017.

[signature pages follow]

GRANTOR:

_____
Douglas M Schernik

ACKNOWLEDGMENT

STATE OF TEXAS §
§
COUNTY OF _____ §

This instrument was acknowledged before me on this the ____ day of _____, 2017 by Douglas M. Schernik, in the capacity and for the purposes and consideration recited therein.

_____
Notary Public, State of Texas

GRANTOR:

_____
Rebecca J. Schernik

ACKNOWLEDGMENT

STATE OF TEXAS §
§
COUNTY OF _____ §

This instrument was acknowledged before me on this the ____ day of _____, 2017 by Rebecca J. Schernik, in the capacity and for the purposes and consideration recited therein.

_____
Notary Public, State of Texas

PREPARED IN THE OFFICE OF:

Sheets & Crossfield, P.C.
309 East Main
Round Rock, Texas 78664

GRANTEE'S MAILING ADDRESS:

Williamson County, Texas
Attn: County Judge
710 Main Street, Suite 101
Georgetown, Texas 78626

AFTER RECORDING RETURN TO:

Commissioners Court - Regular Session **25.**

Meeting Date: 04/04/2017

CTRMA Board Appointment

Submitted For: Cynthia Long **Submitted By:** Kathy Pierce, Commissioner Pct. #2

Department: Commissioner Pct. #2

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on accepting the resignation of John Miri and the appointment of a replacement to the Central Texas Regional Mobility Authority (CTRMA) Board of Directors for a two-year term beginning February 1, 2017 and ending on January 31, 2019.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Mark Ayotte Bio

Resignation Letter

Mitch Fuller Bio

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Rebecca Clemons	03/30/2017 08:36 AM
Form Started By: Kathy Pierce		Started On: 03/27/2017 11:23 AM
Final Approval Date: 03/30/2017		

Mark Ayotte has lived in Central Texas since 1992. After a 15 year career at Dell as a Senior Operations Manager he became an entrepreneur, owning several successful businesses over the past decade. One of Mark's passions is fighting hunger, and as part of his role helping lead local mission opportunities for his church, he serves as the Board Chairman for the Reveal Resource Center in Cedar Park. Reveal is a non-profit organization providing food and clothes to hundreds of families every week. Mark also serves on the Cedar Park 4A Economic Development Board and the city's Charter Review Committee. In his spare time, and after helping raise four children, Mark enjoys traveling with his wife and spending his summers working for the Round Rock Express.

March 26, 2017

Honorable Cynthia Long
Commissioner of Precinct Two
Williamson County Courthouse
710 Main Street
Georgetown, Texas 78626

Dear Commissioner Long:

It is with great regret that I hereby resign my position as a Board Member for the Central Texas Regional Mobility Authority (CTRMA).

I am deeply honored and humbled to have been considered for this unique opportunity to serve the public. I wish Williamson County all the best in its future growth and development.

All the best,

John Miri
217 Water Oak Drive
Cedar Park, Texas 78613

MITCH FULLER

Mitch currently serves as the Vice Chairman of the Leander Chamber of Commerce Board of Directors and represents Williamson County as an Ambassador for the Lower Colorado River Authority (LCRA). Former Governor Rick Perry appointed Mitch to the Commission on State Emergency Communications (commonly known as the 9-1-1 Commission) on December 21, 2010. The Texas Senate confirmed this appointment on February 16, 2011, and he served as a Commissioner until August 2016. In 2012, the LCRA Board of Directors appointed Mitch to its Central Basin Regional Council, which consists of Blanco, Burnet, Hays, Travis, and Williamson Counties. Mitch served as Chairman of the 30-member Central Basin Regional Council from January 30, 2013-January 29, 2014. The readers of the *Hill Country News* selected Mitch as the "Best Elected Official" in its western Williamson County circulation area for 2010 and 2011.

Mitch Fuller served on the Cedar Park City Council from August 2007-May 2014. During his time on the Cedar Park City Council, he served as Mayor Pro Tem twice: from December 2012-June 2013 and from May 2010-May 2011. He was heavily involved in water and transportation policy and projects while serving as a City Councilmember. He also represented the City of Cedar Park on the Board of Directors of the Brushy Creek Regional Utility Authority (BCRUA), a regional governmental body created to acquire water from Lake Travis for the cities of Cedar Park, Leander, and Round Rock. He served as President of the BCRUA twice, from June 2013-May 2014 and from March 2009-June 2011. He represented Cedar Park on the BCRUA Board of Directors from July 2008-May 2014.

Mitch's other community and volunteer service includes the Board of Directors of the Cedar Park Community Foundation from July 2009-July 2010; the Board of Directors of Cedar Park Economic Development Corporation (4A) from December 2006-August 2007; the Board of Directors of the National Guard Association of Texas from March 2007-March 2010; the Board of Directors of Heroes Night Out, an advocacy organization for Veterans, from 2011-2015; and the Board of Directors of Honor Flight Austin from 2014-2015. Mitch is a Life Member of the Veterans of Foreign Wars (VFW) Post # 10427, Leander, TX; the Reserve Officers Association, and is also a Charter Member of the Hunter-Morris American Legion Post #911 in Cedar Park and a member of Iraq and Afghanistan Veterans of America (IAVA). Mitch is also a Mason and is a graduate of Leadership Leander, Class of 2016 and Leadership Cedar Park, Class of 2007.

Mitch has more than 17 years of enlisted and commissioned service in the Army Reserves and Texas Army National Guard, including 10 years of active duty service. He is a Veteran of Operation Iraqi Freedom (January 2005-January 2006). His military decorations include the Bronze Star, the Meritorious Service Medal (two awards), the Iraq Campaign Medal, the Global War on Terrorism Service Medal, and the Combat Action Badge.

Prior to his military and public service, Mitch was a college professor. He taught political science at Ottawa University and Johnson County Community College in Kansas and at the University of Oklahoma. Mitch earned his Bachelor of Arts in Political Science from Southwestern Oklahoma State University, Master of Public Administration from the University of Oklahoma, and completed his Ph.D. coursework (ABD) in Political Science from the University of Missouri-Kansas City. During his time in graduate school at the University of Oklahoma from 1997 to 2000, Mitch served as the Special Assistant to former United States Ambassador Edward Perkins, who was appointed to five Ambassadorial posts by Presidents Ronald Reagan, George H.W. Bush, and Bill Clinton.

Mitch works as a Senior Consultant for J.L. Powers and Associates, advising clients on gaining access to public sector projects, strategic planning, public-private partnerships, and military and veterans' issues. He has two children: daughter Madison, age 17, and son Braxton, age 15.

Commissioners Court - Regular Session **26.**

Meeting Date: 04/04/2017

OSSF

Submitted For: Dan Gattis **Submitted By:** Hal Hawes, County Judge

Department: County Judge

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on preparing and filing all necessary documentation in order to request the delegation of authority from the Texas Commission on Environmental Quality to administer and regulate, as an Authorized Agent, the use of On-Site Sewage Facility Systems in Williamson County, Texas, and the responsibility for the implementation and enforcement of applicable rules relating to On-Site Sewage Facilities in Williamson County, Texas.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/29/2017 01:41 PM
Form Started By: Hal Hawes		Started On: 03/29/2017 10:39 AM
Final Approval Date: 03/29/2017		

Commissioners Court - Regular Session **27.**

Meeting Date: 04/04/2017

Styker EMS Protect Plan

Submitted By: Michael Knipstein, EMS

Department: EMS

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on approving the Stryker EMS Protect Service Agreement with Stryker Corporation.

Background

This is a comprehensive service agreement with Stryker for our patient care stretchers and power load device. It includes parts, labor, travel, one annual preventive maintenance inspection, unscheduled service in the event of breakage and product equipment checklists. This agreement has been reviewed by Williamson County legal.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Stryker Service Agreement

Form Review

Inbox	Reviewed By	Date
Hal Hawes	Hal Hawes	03/28/2017 02:10 PM
County Judge Exec Asst.	Wendy Coco	03/29/2017 08:08 AM
Form Started By: Michael Knipstein		Started On: 03/28/2017 11:41 AM
Final Approval Date: 03/29/2017		

ProCare

stryker

3800 E. Centre Ave
Portage, MI 49009

Sales Rep Name: Jordan Costello
ProCare Service Rep: Chris Valencia

Date: 3/13/2017
ID #: 170313123235

PROCARE PROPOSAL SUBMITTED TO:

Account Number: 1188115
Account Name: Williamson County EMS
Account Address: PO Box 873
City, State Zip: Georgetown, TX 78627

Name: Kirk Becker
Title: Support Services
Phone: 512-430-0991
Email: kbecker@wilco.org

PROCARE COVERAGE

Item No.	Model Number	Model Description	ProCare Program	Qty	Yrs	Annual Price	Total
1	6500	Power-PRO XT	EMS Protect	16	1	$15,408.00	$15,408.00
2	6506	Power-PRO XT	EMS Protect	4	1	$3,852.00	$3,852.00
3	6390	Power-LOAD	EMS Protect	1	1	$1,193.00	$1,193.00

PROGRAM INCLUDES:

EMS Protect:

Includes parts, labor, travel, 1 annual PM inspection, unscheduled service and product equipment checklists. Replacement parts do not include mattresses, batteries, and other disposable or expendable parts.

ProCare Total	$20,453.00
Discount	30%
FINAL TOTAL	**$14,317.10**

Start Date: 3/13/2017
End Date: 3/12/2018

3/22/17

Stryker Signature — Date

Customer Signature — Date

Purchase Order Number (MUST INCLUDE HARD COPY)

COMMENTS:

Please fax signed Proposal and Purchase Order to Tom Tackabury at 269-321-3501.
All information contained within this quotation is considered confidential and proprietary and is not subject to public disclosure.
**Quote pricing valid for 30 days.

SERIAL NUMBER SHEET		
Item No.	Model	Serial Number
1	6500	100141465
2	6500	100141466
3	6500	100141467
4	6500	100141468
5	6500	100141469
6	6500	100141470
7	6500	100141471
8	6500	100141472
9	6500	101239587
10	6500	101239588
11	6500	101239589
12	6500	101239590
13	6500	111139764
14	6500	111139765
15	6500	111139766
16	6500	111139767
17	6506	120839906
18	6506	130339299
19	6506	140141390
20	6506	140141391
21	6390	160439329

SERVICE AGREEMENT – (WilCo) Williamson County EMS – March, 2017

This document sets forth the entire Product Service Plan Agreement ("Agreement") between Stryker Medical, (a division of Stryker Corporation), herein and after referred to as "Stryker", and Williamson County EMS, herein and after, referred to as the "Customer". This is the entire Agreement and no other oral modifications are valid. This Agreement shall remain in effect unless canceled or modified by either party according to the following terms and conditions.

1. COVERAGE AND TERM

The product service plan coverage, term, start date, and price of the Service Plan appear on the Service Agreement attached and the Service Plan Covers the equipment set forth on Exhibit A (collectively, the "Equipment").

2. EQUIPMENT SCHEDULE CHANGES

During the term of the Agreement and upon each party's written consent, additional Equipment may be included in the Exhibit A. All additions are subject to the terms and conditions contained herein. Stryker shall adjust the charges and modify the schedule to reflect the additions.

3. INSPECTION SCHEDULING

Service inspections will be scheduled in advance at a mutually agreed upon time for such period of time as is reasonably necessary to complete the service. Equipment not made available at the specified time will be serviced at the next scheduled service inspection unless specific arrangements are made with Stryker. Such arrangements will include travel and other special charges at Stryker's then current rates.

4. INSPECTION ACTIVITY

On each scheduled service inspection, Stryker's Service Representative will inspect each available item of Equipment as required in accordance with Stryker's then current Maintenance procedures for said Equipment. If there is any discrepancy or questions on the number of inspections, price, or Equipment, Stryker may amend this Agreement.

5. SERVICE INVOICING

Invoices will be sent on the agreed payment method. All prices are exclusive of state and local use, sales or similar taxes. In states assessing upfront sales and use tax, your payments will be adjusted to include all applicable sales and use tax amortized over the Service Plan term using a rate that preserves for Stryker, its affiliates and /or assigns, the intended economic yield for the transaction described in this Agreement. All invoices issued under this Agreement are to be paid within thirty (30) days of the date of the invoice. Failure to comply with Net 30 Day terms will constitute breach of contract and future service will only be made on a prepaid or COD basis, or until the previous obligation is satisfied, or both. Stryker reserves the right, with no liability to Stryker, to cancel any contract on the basis of payment default for any previous product or service provided by Stryker Sales Corporation or any of its affiliates.

Texas Prompt Payment Act Compliance: Payment for goods and services shall be governed by Chapter 2251 of the Texas Government Code. An invoice shall be deemed overdue the 31st day after the later of (1) the date licensee receives the goods under the contract; (2) the date the performance of the service under the contract is completed; or (3) the date the Williamson County Auditor receives an invoice for the goods or services. Interest charges for any overdue payments shall be paid by licensee in accordance with Texas Government Code Section 2251.025. More specifically, the rate of interest that shall accrue on a late payment is the rate in effect on September 1 of licensee's fiscal year in which the payment becomes due. The said rate in effect on September 1 shall be equal to the sum of one percent (1%); and (2) the prime rate published in the Wall Street Journal on the first day of July of the preceding fiscal year that does not fall on a Saturday or Sunday.

6. PRICE CHANGES

The Service prices specified herein are those in effect as of the date of acceptance of this Agreement and will continue in effect throughout the term of the Service Plan.

7. INITIAL INSPECTION

This Agreement shall be applicable only to such Equipment as listed in Exhibit A, which has been determined by a Stryker's Representative to be in good operating condition upon his/her initial inspection thereof.

8. OPERATION MAINTENANCE

Stryker's service is ancillary to and not a complete substitute for the requirements of Customer to adhere to the routine maintenance instructions provided by Stryker, it's Equipment and operations manuals, and accompanying labels and/or inserts for each item of Equipment. Customer's appropriate user personnel should be entirely familiar with the instructions and contents of those manuals, labels and inserts and implement them accordingly.

9. SERVICE PLAN WARRANTY AND LIMITATIONS

During the term of the Service Plan, Stryker will maintain the Equipment in good working condition. Equipment and Equipment components repaired or replaced under this Service Plan continue to be warranted as described herein during the Service Plan term. When Equipment or component is replaced, the item provided in replacement will be the customer's property and the replaced item will be Stryker's property. If a refund is provided by Stryker, the Equipment for which the refund is provided must be returned to Stryker and will become Stryker's property. There are no express or implied warranties by Stryker other than the warranties hereinabove described with respect to the Service Plan or the

Equipment covered thereunder, including without limitation, warranty of merchantability or fitness for a particular purpose Notwithstanding any other provision of this Agreement, the Service Plan does not include repairs or other services made necessary by or related to, the following: (1) Abnormal wear or damage caused by misuse or by failure to perform normal and routine maintenance as set out in the Stryker Maintenance Manual or Operating Instructions. (2) Accidents (3) Catastrophe (4) Acts of God (5) Any malfunction resulting from faulty maintenance, improper repair, damage and/or alteration by non-Stryker authorized personnel (6) Equipment on which any original serial numbers or other identification marks have been removed or destroyed; or (7) Equipment that has been repaired with any unauthorized or non-Stryker components. In addition, in order to ensure safe operation of Stryker Equipment, only Stryker accessories should be used. Stryker reserves the right to invalidate the Service Plan and complimentary loaner programs if Equipment is used with accessories not manufactured by Stryker.

10. WAIVER EXCLUSIONS

No failure to exercise and no delay by Stryker in exercising any right, power or privilege hereunder shall operate as a waiver thereof. No waiver of any breach of any provision by Stryker shall be deemed to be a waiver by Stryker of any preceding or succeeding breach of the same or any other provision. No extension of time by Stryker for performance of any obligations or other acts hereunder or under any other Agreement shall be deemed to be an extension of time for performances of any other obligations or any other acts by Stryker.

11. LIMITATION OF LIABILITY

Stryker's liability on any claim whether in contract or otherwise, for any loss or damage arising out of, connected with or resulting from the repair of any product furnished hereunder shall in no event exceed the price paid for said repair which gives rise to the claim. In no event shall Stryker be liable for incidental, consequential or special damages. Notwithstanding the foregoing, nothing herein shall be deemed to disclaim Stryker's liability to third parties resulting from the sole negligence of Stryker as determined by a court of law.

12. TERMINATION

The Agreement may be canceled by either party by giving a ninety (90) days prior written notice of any such cancellation to the other party. If this Agreement is canceled during or before the expiration date of the Agreement, Customer will owe for the months covered up to the cancellation date of the Agreement and for any parts, labor, and travel charges, required to maintain Equipment, exceeding that already paid during the Agreement.

13. FORCE MAJEURE

Neither Party to this Agreement will be liable for any delay or failure of performance that is the result of any happening or event that could not reasonably have been avoided or that is otherwise beyond its control, provided that the Party hindered or delayed immediately notifies the other Party describing the circumstances causing delay. Such happenings or events will include, but not be limited to, terrorism, acts of war, riots, civil disorder, rebellions, fire, flood, earthquake, explosion, action of the elements, acts of God, inability to obtain or shortage of material, equipment or transportation, governmental orders, restrictions, priorities or rationing, accidents and strikes, lockouts or other labor trouble or shortage.

14. INDEMNIFICATION

Stryker shall indemnify and hold Customer harmless from any loss, damage, cost or expense that Customer may incur by reason of or arising out of (1) any injury (including death) to any person arising from Stryker's providing services pursuant to this Agreement, not caused by the gross negligence or willful misconduct or omission of Customer, or (2) any property damage caused by the gross negligence or willful misconduct or omissions by Stryker or Stryker's employees agents, or contractors. The foregoing indemnification will not apply to any liability arising from (i) an injury due to the negligence of any person other than Stryker's employee or agent, (ii) the failure of any person other than Stryker's employee or agent to follow any instructions outlined in the labeling, manual, and/or instructions for use of a product(s), or (iii) the use of any product or part not purchased from Stryker or product or part that has been modified, altered or repaired by any person other than Stryker's employee or agent. Except as specifically provided herein, Stryker is not responsible for any losses or injuries arising from the selection, manufacture, installation, operation, condition, possession, or use of a Product. Customer agrees to hold Stryker harmless from and indemnify Stryker for any claims or losses or injuries arising from (i), (ii), or (iii) above arising as a result of Customer's or its employees', representatives' or agents' actions.

15. INSURANCE REQUIREMENTS

Stryker shall maintain from insurers) the following insurance coverages during the term of this Agreement: (i) commercial general liability coverage with minimum limits of $1,000,000.00 per occurrence and $2,000,000.00 general aggregate applying to bodily injury, personal injury, and property damage; (ii) automobile insurance with combined single limits of $1,000,000 for owned, hired, and non-owned vehicles; (iii) worker's compensation insurance as required by applicable law. Stryker's general liability insurance policy shall include Customer as an additional insured. Certificates of insurance shall be provided by Stryker prior to commencement of the services at any premises owned or operated by Customer. To the extent permitted by applicable laws and regulations, Stryker shall be permitted to meet the above requirements through a program of self-insurance. If we elect to self-insure, such self-insurance shall also be administered pursuant to a reasonable self-insurance program crafted by Stryker and reasonably accepted by Customer.

16. WARRANTY OF NON-EXCLUSION

Each party represents and warrants that as of the Effective Date, neither it nor any of its employees, are or have been excluded terminated, suspended, or debarred from a federal or state health care program or from participation in any federal or state procurement or non-procurement programs. Each party further represents that no final adverse action by the federal or state government has occurred or is pending or threatened against the party, its affiliates, or, to its knowledge, against any employee, Stryker, or agent engaged to provide items or services under this Agreement. Each party also represents that if during the term of this Agreement it, or any of its employees becomes so excluded,

terminated, suspended, or debarred from a federal or state health care program or from participation in any federal or state procurement or non-procurement programs, such will promptly notify the other party. Each party retains the right to terminate or modify this Agreement in the event of the other party's exclusion from a federal or state health care program.

17. COMPLIANCE

To the extent required by law the following provision applies: Customer and Stryker agree to comply with the Omnibus Reconciliation Act of 1980 (P.L. 96Z499) and it's implementing regulations (42 CFR, Part 420). To the extent applicable to the activities of Stryker hereunder, Stryker further specifically agrees that until the expiration of four (4) years after furnishing services and/or products pursuant to this Agreement, Stryker shall make available, upon written request of the Secretary of the Department of Health and Human Services, or upon request of the Comptroller General, or any of their duly authorized representatives, this Agreement and the books, documents and records of Stryker that are necessary to verify the nature and extent of the costs charged to Customer hereunder. Stryker further agrees that if Stryker carries out any of the duties of this Agreement through a subcontract with a value or cost of ten thousand dollars ($10,000) or more over a twelve (12) month period, with a related organization, such subcontract shall contain a clause to the effect that until the expiration of four (4) years after the furnishing of such services pursuant to such subcontract, the related organization shall make available, upon written request to the Secretary, or upon request to the Comptroller General, or any of their duly authorized representatives the subcontract, and books and documents and records of such organization that are necessary to verify the nature and extent of such costs.

18. HIPAA

All medical information and/or data concerning specific patients (including, but not limited to, the identity of the patients), derived from or obtained during the course of the Agreement, shall be treated by both parties as confidential so as to comply with all applicable state and federal laws and regulations regarding confidentiality of patient records, and shall not be released, disclosed, or published to any party other than as required or permitted under applicable laws. Stryker is not a "business associate" of Customer, as the term "business associate" is defined by HIPAA (the Health Insurance Portability and Accountability Act of 1996 and 45 C.F.R. parts 142 and 160Z164, as amended). To the extent Stryker in the future becomes a business associate of Customer, the parties agree to negotiate to amend the Agreement as necessary to comply with HIPAA, and if an agreement cannot be reached the Agreement will immediately terminate.

19. ASSIGNMENT

Neither party may assign or transfer their rights and/or benefits under this Agreement without the prior written consent of the other party, except that Stryker shall have the right to assign this Agreement or any rights under or interests in this Agreement to any parent, subsidiary or affiliate of Stryker. All of the terms and provisions of this Agreement shall be binding upon, shall inure to the benefit of, and be enforceable by successors and assigns of the parties to this Agreement.

20. SEVERABILITY OF PROVISIONS

The invalidity, in whole or in part, of any of the foregoing paragraphs, where determined to be illegal, invalid, or unenforceable by a court or authority of competent jurisdiction, will not affect or impair the enforceability of the remainder of the Agreement.

21. MEDIATION

The parties agree to use mediation for dispute resolution prior to and formal legal action being taken on this Contract.

22. GOVERNING LAW

Venue of this contract shall be Williamson County, Texas, and the law of the State of Texas shall govern.

23. NO WAIVER OF SOVEREIGN IMMUNITY OR POWERS

Nothing in this agreement will be deemed to constitute a waiver of sovereign immunity or powers of licensee, the Williamson County Commissioners Court, or the Williamson County Judge.

24. RIGHT TO AUDIT

Stryker agrees that Customer or its duly authorized representatives shall, until the expiration of three (3) years after final payment under this Agreement, upon written request, shall be provided photocopies of any and all books, documents, papers and records of Stryker which are directly pertinent to the services to be performed under this Agreement for the purposes of making audits, examinations, excerpts, and transcriptions. Stryker agrees that Customer shall have controlled and accompanied access during normal working hours to the specific Stryker facility where work is being performed under this contract and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. Customer shall give Stryker FIVE (5) days' advance notice of intended audits.

Commissioners Court - Regular Session **28.**

Meeting Date: 04/04/2017

Call Data Sharing with DPS

Submitted For: Scott Parker **Submitted By:** Scott Parker, Emergency Communications

Department: Emergency Communications

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on providing the Texas Department of Public Safety helicopter access to WCSO call data.

Background

The Texas Department of Public Safety helicopter (DPS 100) assists with law enforcement calls in Williamson County. The Williamson County Sheriff's Office is requesting that DPS 100 have access to CAD information for the specific calls that the helicopter is working with the Sheriff's Office.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/24/2017 08:01 AM
Form Started By: Scott Parker		Started On: 03/23/2017 06:40 AM
Final Approval Date: 03/24/2017		

Commissioners Court - Regular Session **29.**

Meeting Date: 04/04/2017

Request to advertise RFP 1703-149 Cedar Park Tax Office Renovation

Submitted For: Randy Barker **Submitted By:** Teri Jeffries, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action to authorize the Purchasing Agent to advertise and receive proposals for the Cedar Park Tax Office Renovations under RFP 1703-149.

Background

Proposal Packet RFP 1703-149 attached for your review. Estimated project costs are $465,000.00.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Proposal Packet RFP 1703-149

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/27/2017 03:24 PM
Purchasing (Originator)	Teri Jeffries	03/29/2017 12:45 PM
Form Started By: Teri Jeffries		Started On: 03/14/2017 01:47 PM
Final Approval Date: 03/29/2017		

Solicitation 1703-149

Cedar Park Tax Office Renovation Project

Bid Designation: Public

Williamson County, Texas

Bid 1703-149
Cedar Park Tax Office Renovation Project

Bid Number	1703-149
Bid Title	Cedar Park Tax Office Renovation Project
Expected Expenditure	**$465,000.00** (This price is expected - not guaranteed)
Bid Start Date	In Held
Bid End Date	May 3, 2017 10:00:00 AM CDT
Question & Answer End Date	May 1, 2017 2:00:00 PM CDT
Bid Contact	Teri Jeffries Senior Purchasing Specialist 512-**943**-1553 Teri.jeffries@wilco.org
Contract Duration	**9 months**
Contract Renewal	Not Applicable
Prices Good for	**180 days**
Pre-Bid Conference	**Apr 18, 2017 11:00:00 AM CDT** **Attendance is optional** **Location: Cedar Park Tax Office located at** **350 Discovery Blvd, Suite 101, Cedar Park, Texas 78613.** **Contractors at their option are free to bring any personnel or tradesmen they deem necessary for clarification to the pre-bid meeting.**

Bid Comments

Cedar Park Tax Office Renovation Project

Summary Scope of Work
This is a general overview. Specifications per the architect must be fully complied with.
Demolition of all existing interior areas, and remodel of all offices and public waiting areas to include all new finishes, walls, doors, windows, ceilings. Project to include all mechanical, electrical, plumbing and expansion reconfigurations per specifications. Addition of new exterior drive-thru canopy with teller window and vacuum system.
It is presumed respondent has fully read and understands all architectural and design specifications and requirements provided by MODE Design Company, and can fully comply with such.
Carefully read and understand all documents attached, which explains bond and insurance requirements. Below is an overview of part of the insurance and bond requirements.
Additionally, there is an agreement attached for your review that may be modified prior to execution, per the County.

Performance and Payment Bonds
Performance and Payment Bonds are required for this RFP.

Texas Local Government Code, Chapter 262.032(a), governs the requirements for bid bonds, as follows: If the contract is for the construction of public works or is under a contract exceeding $100,000, the bid specifications or request for proposals may require the bidder to furnish a good and sufficient bid bond in the amount of five percent of the total contract price. A bid bond must be executed with a surety company authorized to do business in this state.

Texas Government Code, Chapter 2253.021, governs the requirements for payment and performance

bonds for government entities making public work contracts. A payment bond is required if the contract is in excess of $25,000 and is to be made for the full amount of the contract. Performance bonds are required if the contract is in excess of $100,000.00, and in the full amount of the contract.

The performance and payments bonds are due within 30 days of the signing of the contract(s) to the awarded firm.
Bid Bond
The bid bond is not required.

Insurance Requirements

By signing its Proposal, respondent agrees to maintain at all times during any term of the Contract and any ensuing Agreement at Respondent's cost, insurance in accordance with the contract provisions. Respondent will be required to submit Certificates of Insurance prior to contract award and upon any renewals.
All certificates of insurance coverage as specified below must be provided to the following location:
Williamson County Purchasing Department
901 S Austin Ave
Georgetown, Texas 78626

Failure to comply with these Insurance Requirements may result in the termination of the Contract and any ensuing Agreement(s) between the Successful Respondent and County.

There is a Pre-Proposal meeting on April 18, 2017 at 11:00am at the Cedar Park Tax Office, located at 350 Discovery Blvd, #101, Cedar Park, TX 78613. This meeting is not mandatory, but all respondents are encouraged to attend.

RFP 1703-149
Cedar Park Tax Office Renovations
***Evaluation Criteria-* respondents must provide the following information. The evaluation will be based upon it.**

The price (40 points)
Price will be based upon overall costs provided, and a determination if the costs appear to adequately have addressed all specifications provided.
The Proposer's personnel designated for the project (15 points)
Please provide a single page, per criterial personnel, that will work on this project to include at least the Company Owner, Project Manager, and Superintendent(s). Each person's information should include at least person's qualifications in relationship to this project, a description of similar projects worked on by that person, and their role on that project.
Respondent's experience (15 points max)
Respondent to provide a comprehensive list of at 3 separate project completed by the respondent's company, that are similar (or larger) projects performed in Texas. For each project include project name, owner/company and contact information, project description, size/square footage and contracted dollar amount. Also, include time for completion, and if you completed the project on time.
Respondent's office location as it relates to distance from the project site (15 point max)
Provide verifiable physical address of Respondent's closest permanent location to project and length of time at that location.
Maximum score points on evaluation is 85

Item Response Form

Item	**1703-149--01-01 - Please upload all documents to this line item.**
Quantity	**1 each**
Unit Price	

Delivery Location **Williamson County, Texas**

Williamson County Purchasing Department
901 S. Austin Avenue
Georgetown TX 78626
Qty 1

Description
Please upload all proposal documents to this line item.

PUBLIC ANNOUNCEMENT AND GENERAL INFORMATION

WILLIAMSON COUNTY PURCHASING DEPARTMENT
SOLICIATION 1703-149
Cedar Park Tax Office Renovation Project

PROPOSALS MUST BE RECEIVED ON OR BEFORE:
May 3, 2017 10:00:00 AM CDT

PROPOSAL WILL BE PUBLICLY OPENED:
May 3, 2017 10:00:00 AM CDT

Notice is hereby given that sealed Proposals for the above-mentioned goods and/or services will be accepted by the Williamson County Purchasing Department. Williamson County uses BidSync to distribute and receive proposals. Specifications for this RFP may be obtained by registering at www.bidsync.com.

Williamson County prefers and requests electronic submittal of this Proposal.

All electronic proposal must be submitted via: www.bidsync.com

Electronic proposals are requested, however paper proposals will currently still be received, until further notice and may be mailed or delivered to the address listed below.

Respondents are strongly encouraged to carefully read this entire RFP.

All interested Respondents are invited to submit a Proposal in accordance with the Instructions and General Requirements, Proposal Format, Proposal Specifications, and Definitions, Terms and Conditions stated in this RFP.

Please note that a complete package must be submitted choosing one of the above two methods. Split packages submitted will be considered "unresponsive" and will not be accepted or evaluated.

Williamson County will not accept any Proposals received after the submittal deadline, and shall return such Proposals unopened to the Respondent.

General Information:

- If mailed or delivered in person, Proposal and Proposal addenda are to be delivered in sealed envelope on or before the submittal deadline, as noted in the Public Announcement and General Information listed above for this RFP, to:

  Williamson County Purchasing Department
  Attn: **PROPOSAL NAME AND NUMBER**
  901 South Austin Avenue
  Georgetown, Texas 78626

  - Respondents should list the Proposal Number, Proposal Name, Name and Address of Respondent, and the Date of the Proposal opening on the outside of the box or envelope and note "Sealed Proposal Enclosed."
  - Respondent should submit one (1) original.
  - Williamson County will NOT be responsible for unmarked or improperly marked envelopes.
  - Williamson County will not accept any responsibility for Proposals being delivered by third party carriers.
  - Facsimile transmittals will NOT be accepted.

- Proposals will be opened publicly in a manner; however, to avoid public disclosure of contents, only the names of Respondents and pricing will be read aloud.

- All submitted questions with their answers will be posted and updated on www.bidsync.com.

- It is the Respondent's responsibility to review all documents in BidSync, including any Addenda that may have been added after the document packet was originally released and posted.

  - Any Addenda and/or other information relevant to the RFP will be posted on www.bidsync.com.

  - The Williamson County Purchasing Department takes no responsibility to ensure any interested Respondent has obtained any outstanding addenda or additional information.

TAX OFFICE - CEDAR PARK

WILLIAMSON COUNTY

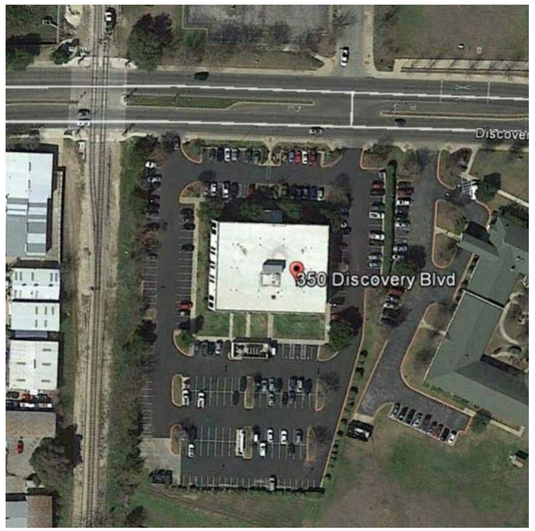
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT TEAM

ARCHITECT
MODE DESIGN COMPANY
109 S. HARRIS STE 200
ROUND ROCK, TX 78684
512 | 733-1150
RYAN HANSANUWAT
RYAN@MODEDC.US

STRUCTURAL ENGINEER
ENGINEERING 360
2851 JOE DIMAGGIO BLVD
ROUND ROCK, TX 78665
512 | 244-1966
LARRY FISHER
LARRYF@ENGR360.COM

MEP ENGINEER
HENDRIX COUNSULTING ENGINEERS
115 E. MAIN STREET
ROUND ROCK, TX 78664
512 | 218-0060
BYRON HENDRIX
BYRONH@HCENGINEER.COM



SHEET INDEX

ARCHITECTURE

A000	COVER SHEET
A001	ACCESSIBILITY DIAGRAMS
A002	ABBREVIATIONS & NOTES
A003	CODE ANALYSIS PLAN
A100	ARCHITECTURAL SITE PLAN
A101	FLOOR PLANS
A102	REFLECTED CEILING PLANS
A200	DRIVE THRU CANOPY PLANS
A201	WALL SECTIONS
A202	WALL DETAILS
A300	ENLARGED PLANS / INTERIOR ELEVATIONS
A301	ENLARGED PLANS / INTERIOR ELEVATIONS
A302	INTERIOR ELEVATIONS AND DETAILS
A400	MILLWORK DETAILS
A500	DOOR SCHEDULE & DETAILS
A501	WINDOW SCHEDULE AND DETAILS
A600	TYPICAL INTERIOR PARTITION LEGEND
A601	FINISH PLANS

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S001	STRUCTURAL NOTES
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S200	FOUNDATION DETAILS
S300	FRAMING DETAILS
S400	ELEVATIONS

MECHANICAL, ELECTRICAL AND PLUMBING

E-1.1	SCHEDULES, NOTES AND LEGENDS - ELECTRICAL
E-1.2	SCHEDULES - ELECTRICAL
E-2.1	EXISTING POWER PLAN - FOR REFERENCE ONLY
E-2.2	FLOOR PLANS LIGHTING AND POWER
MP-1.1	SCHEDULES, NOTES, AND LEGENDS - MECHANICAL
MP-1.2	SCHEDULES, NOTES AND LEGENDS - PLUMBING
MP-1.3	SCHEDULES, NOTES AND LEGENDS - PLUMBING
MP-2.1	FLOOR PLAN - EXISTING CONDITIONS - MECHANICAL AND PLUMBING
MP-2.2	FLOOR PLAN - MECHANICAL AND PLUMBING

MODE design company
1102 | s austin ave, suite 103 georgetown, tx 78626
ryan@modedc.us | www.modedc.us
+ 1 512 733 1150

REGISTERED ARCHITECT
RYAN HANSANUWAT
22737
STATE OF TEXAS

3/21/2017

TAX OFFICE - CEDAR PARK
WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
COVER SHEET

SHEET NUMBER
A000

3/20/2017 1:36:44 AM
Williamson County, Texas
Bid Pkg 1&2

GENERAL

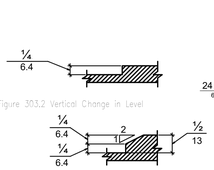


Figure 303.3 Beveled Change in Level

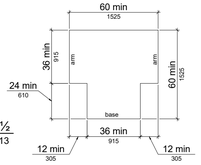


Figure 304.3.2 T-Shaped Turning Space

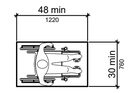


Figure 305.3 Clear Floor or Ground Space

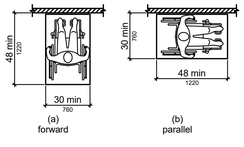


Figure 305.5 Position of Clear Floor or Ground Space

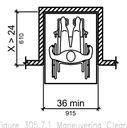


Figure 305.7.1 Maneuvering Clearance in an Alcove, Forward Approach

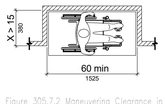


Figure 305.7.2 Maneuvering Clearance in an Alcove, Parallel Approach

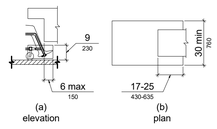


Figure 306.2 Toe Clearance

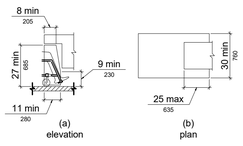


Figure 306.3 Knee Clearance

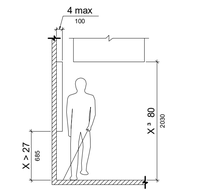


Figure 307.2 Limits of Protruding Objects

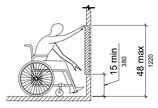


Figure 308.2.2 Obstructed High Forward Reach

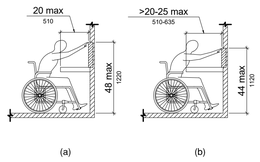


Figure 308.3.1 Unobstructed Side Reach

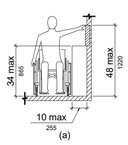
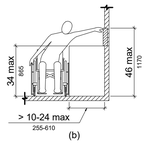


Figure 308.3.2 Obstructed High Side Reach



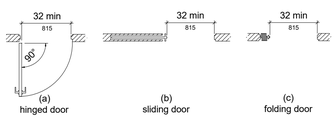


Figure 404.2.3 Clear Width of Doorways

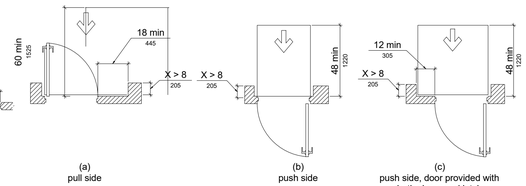


Figure 404.2.4.3 Maneuvering Clearances at Recessed Doors and Gates

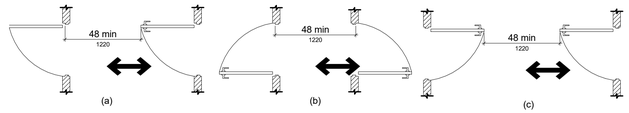


Figure 404.2.6 Doors in Series and Gates in Series

RAMPS AND STAIRS

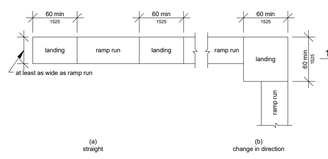


Figure 405.7 Ramp Landings

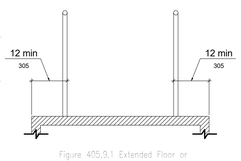


Figure 405.9.1 Extended Floor or Ground Surface Edge Protection

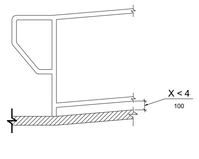


Figure 405.9.2 Curb or Barrier Edge Protection

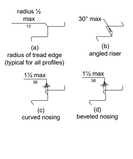


Figure 504.5 Stair Nosings

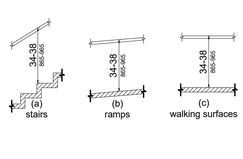


Figure 505.4 Handrail Height

Figure 505.5 Handrail Clearance

Figure 505.6 Horizontal Projections Below Gripping Surface

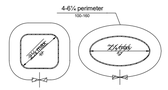


Figure 505.7.2 Handrail Non-Circular Cross Section

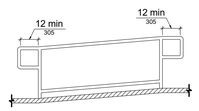


Figure 505.10.1 Top and Bottom Handrail Extension at Ramps

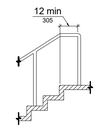


Figure 505.10.2 Top Handrail Extension at Stairs

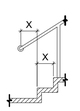


Figure 505.10.3 Bottom Handrail Extension at Stairs

TOILET AND BATHING ROOMS

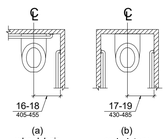


Figure 604.2 Water Closet Location

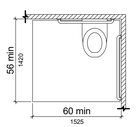


Figure 604.3.1 Size of Clearance at Water Closets

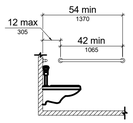


Figure 604.5.1 Side Wall Grab Bar at Water Closets

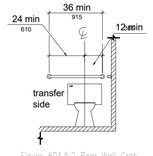


Figure 604.5.2 Rear Wall Grab Bar at Water Closets

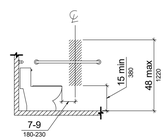


Figure 604.7 Dispenser Outlet Location

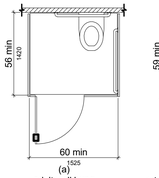


Figure 604.8.1.1 Size of Wheelchair Accessible Toilet Compartment

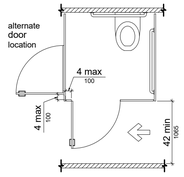


Figure 604.8.1.2 Wheelchair Accessible Toilet Compartment Doors

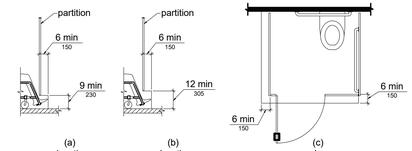


Figure 604.8.1.4 Wheelchair Accessible Toilet Compartment Toe Clearance

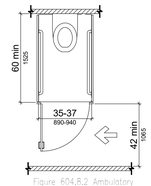


Figure 604.8.2 Ambulatory Accessible Toilet Compartment

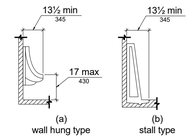
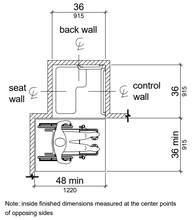
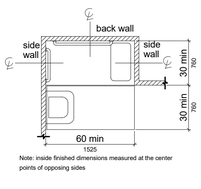


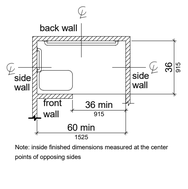
Figure 605.2 Height and Depth of Urinals



Note: inside finished dimensions measured at the center points of opposing sides
Figure 608.2.1 Transfer Type Shower Compartment Size and Clearance



Note: inside finished dimensions measured at the center points of opposing sides
Figure 608.2.2 Standard Roll-In Type Shower Compartment Size and Clearance



Note: inside finished dimensions measured at the center points of opposing sides
Figure 608.2.3 Alternate Roll-In Type Shower Compartment Size and Clearance

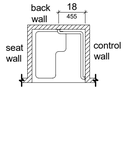


Figure 608.3.1 Grab Bars for Transfer Type Showers

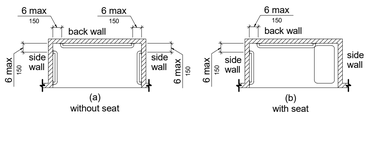


Figure 608.3.2 Grab Bars for Standard Roll-In Type Showers

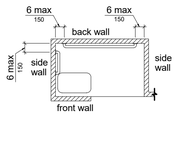


Figure 608.3.3 Grab Bars for Alternate Roll-In Type Showers

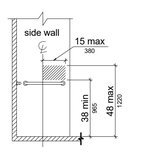


Figure 608.5.1 Transfer Type Shower Compartment Control Location

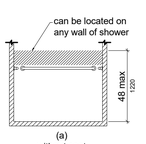
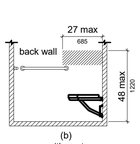


Figure 608.5.2 Standard Roll-In Type Shower Compartment Control Location



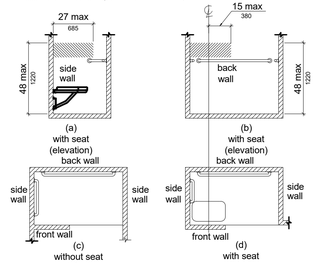


Figure 608.5.3 Alternate Roll-In Type Shower Compartment Control Location

SIGNAGE

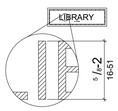


Figure 703.2.5 Height of Raised Characters

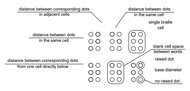


Figure 703.3.1 Braille Measurement

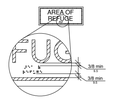


Figure 703.3.2 Position of Braille

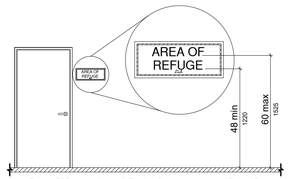


Figure 703.4.1 Height of Tactile Characters Above Finish Floor or Ground

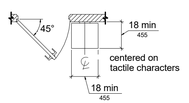


Figure 703.4.2 Location of Tactile Signs at Doors

MISC.

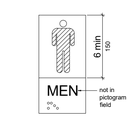


Figure 703.6.1 Pictogram Field

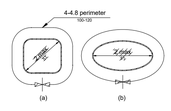


Figure 609.2.2 Grab Bar Non-Circular Cross Section

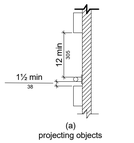


Figure 609.3 Spacing of Grab Bars

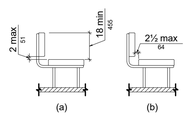


Figure 903.4 Bench Rack Support

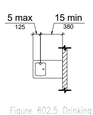


Figure 602.5 Drinking Fountain Spout Location

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1102 S Austin Ave, Suite 103
Georgetown, Tx 78626
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+ 1 512 733 1150

REGISTERED ARCHITECT
RYAN HANSANDWAT
22737
STATE OF TEXAS

3/21/2017

TAX OFFICE - CEDAR PARK

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE

ACCESSIBILITY DIAGRAMS

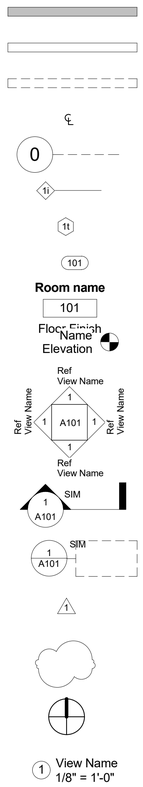
SHEET NUMBER

A001

3/20/2017 11:36 AM
Williamson County, Texas
Bid-1703-149
p-8

3/20/2017 11:36 AM

FLOOR PLAN LEGEND



NEW WALL

EXISTING WALL TO REMAIN

ITEMS TO BE DEMOLISHED

CENTERLINE

COLUMN GRID

PARTITION TYPE

WINDOW TYPE

DOOR NUMBER

ROOM NAME AND NUMBER

ELEVATION DATUM POINT

ELEVATION VIEW

SECTION/DETAIL

ENLARGED PLAN

REVISION KEY

REVISION CLOUD

NORTH ARROW

VIEW TITLE

ARCHITECTURE ABBREVIATIONS

A/C	AIR CONDITIONING	GA	GUAGE	PLAM	PLASTIC LAMINATE
ACC	ACCESS	GALV	GALVANIZED	PLMB	PLUMBING
ACP	ACOUSTICAL CEILING PANEL	GB	GRAB BAR	PLYWD	PLYWOOD
ADDL	ADDITIONAL	GC	GENERAL CONTRACTOR	PNL	PANEL
ADDM	ADDENDUM	GD	GRADE	PREFAB	PREFABRICATED
ADH	ADHESIVE	GEN	GENERAL	PREFIN	PREFINISHED
ADJ	ADJUSTABLE	GL	GLASS/GLAZING	PRF	PREFORMED
AFF	ABOVE FINISHED FLOOR	GLB	GLASS BLOCK	PSF	POUNDS PER SQUARE FOOT
AGG	AGGRETATE	GTR	GUTTER	PSI	POUNDS PER SQUARE INCH
ALT	ALTERNATE	GVL	GRAVEL	PT	PAINT
ALUM	ALUMINUM	GYP	GYPSUM	PVC	POLYVINYL CHLORIDE
APPROX	APPROXIMATELY	GYP BD	GYPSUM BOARD		
ARCH	ARCHITECT/ARCHITECTURAL			R	RADIUS
ASPH	ASPHALT	HB	HOSE BIB	RA	RETURN AIR
AUTO	AUTOMATIC	HC	HOLLOW CORE	RD	ROOF DRAIN
AV	AUDIO VISUAL	HDP	HANDICAP	RE BAR	REINFORCING BARS
		HDR	HEADER	RECP	RECEPTACLE
BD	BOARD	HDWD	HARDWOOD	REF	REFERENCE
BL	BUILDING LINE	HDWR	HARDWARE	REFR	REFRIGERATOR
BLDG	BUILDING	HM	HOLLOW METAL	REG	REGISTER
BLVD	BOULEVARD	HORZ	HORIZONTAL	REINF	REINFORCED
BM	BEAM	HT	HEIGHT	REQ'D	REQUIRED
B.M.	BENCH MARK	HTG	HEATING	RET	RETURN
BRK	BRICK	HVAC	HEATING VENTILATION AIR CONDITIONING	RH	RIGHT HAND
BRZ	BRONZE			RM	ROOM
BSMT	BASEMENT	HW	HOT WATER	RO	ROUGH OPENING
BTU	BRITISH THERMAL UNIT			ROW	RIGHT OF WAY
BVL	BEVEL/BEVELED	IBC	INTERNATIONAL BUILDING CODE	RT	RUBBER TILE
CAB	CABINET	IN	INCH	S	SOUTH
CB	CATCH BASIN	INCL	INCLUDED	SBC	STANDARD BUILDING CODE
C/C	CENTER TO CENTER	INSUL	INSULATION	SC	SOLID CORE
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	INT	INTERIOR	SCHED	SCHEDULE
				SCN	SCREEN
CI	CAST IRON	JAN	JANITOR	SEAL	SEALANT
CG	CORNER GUARD	JBOX	JUNCTION BOX	SHTH	SHEATHING
CLG	CEILING	JCT	JUNCTION	SHT	SHEET
CLK	CAULK/CAULKING	JST	JOIST	SH	SHINGLE HUNG
CLO	CLOSET	JT	JOINT	SIM	SIMILAR
CLR	CLEAR/CLEARANCE			SLV	SLEEVE
CMU	CONCRETE MASONRY UNIT	KIT	KITCHEN	SPEC	SPECIFICATIONS
CND	CONDUIT	KPL	KICKPLATE	SQ	SQUARE
COL	COLUMN	KO	KNOCK OUT	SQ FT	SQUARE FEET
COMP	COMPOSITION/COMPOSITE			SST	STAINLESS STEEL
CONC	CONCRETE	LAB	LABORATORY	STD	STANDARD
CONF	CONFERENCE	LAM	LAMINATE	STL	STEEL
CONN	CONNECTION	LAV	LAVATORY	STOR	STORAGE
CONST	CONSTRUCTION	LH	LEFT HAND	STRUCT	STRUCTURAL
CSMT	CASEMENT	LL	LIVE LOAD	SUSP	SUSPENDED
		LT	LIGHT	SYM	SYMMETRICAL
DEPT	DEPARTMENT	LWT	LIGHTWEIGHT	SYN	SYNTHETIC
DH	DOUBLE HUNG			SYS	SYSTEM
DIA	DIAMETER	MAS	MASONRY		
DIM	DIMENSION	MATL	MATERIAL	TAN	TANGENT
DN	DOWN	MAX	MAXIMUM	TAS	TEXAS ACCESSIBILITY STANDARDS
DS	DOWNSPOUT	MB	MACHINE BOLT		
DW	DISHWASHER	MECH	MECHANICAL	TECH	TECHNICAL
DWG	DRAWING	MEMB	MEMBRANE	TELE	TELEPHONE
		MEZZ	MEZZANINE	T&G	TONGUE AND GROOVE
E	EAST	MFR	MANUFACTURER	THK	THICK
EA	EACH	MH	MAN HOLE	THRES	THRESHOLD
EB	EXPANSION BOLT	MICRO	MICROWAVE	TLT	TOILET
EJ	EXPANSION JOINT	MIN	MINIMUM	TOB	TOP OF BLOCK
EL	ELEVATION	MIR	MIRROR	TOC	TOP OF CURB
ELEC	ELECTRIC/ELECTRICAL	MISC	MISCELLANEOUS	TOM	TOP OF MASONRY
ELEV	ELEVATION/ELEVATOR	MLD	MOULDING	TOP	TOP OF PARAPET
EMER	EMERGENCY	MLWK	MILLWORK	TOPL	TOP OF PLATE
ENC	ENCLOSURE	MO	MASONRY OPENING	TOS	TOP OF STEEL
ENT	ENTRANCE	MOD	MODULAR	TOSL	TOP OF SLAB
EQ	EQUAL	MTD	MOUNTED	TOW	TOP OF WALL
EQPT	EQUIPMENT	MTL	METAL	TRANS	TRANSFORMER
ESTM	ESTIMATE	MULT	MULTIPLE	TS	TUBE STEEL
EWC	ELECTRIC WATER COOLER			TV	TELEVISION
EWH	ELECTRIC WATER HEATER	N	NORTH	TYP	TYPICAL
EXC	EXCAVATE	NAT	NATURAL		
EXF	EXHAUST FAN	NIC	NOT IN CONTRACT	UBC	UNIFORM BUILDING CODE
EXH	EXHAUST	NOM	NOMINAL	UNFIN	UNFINISHED
EXT	EXTERIOR	NTS	NOT TO SCALE	UNO	UNLESS NOTED OTHERWISE
				UR	URINAL
FA	FIRE ALARM	OBS	OBSCURE		
FBD	FIBER BOARD	OC	ON CENTER	VB	VAPOR BARRIER
FBO	FURNISHED BY OWNER	OCEW	ON CENTER EACH WAY	VAR	VARIES
FBRK	FIRE BRICK	OD	OUTSIDE DIAMETER	VERT	VERTICAL
FD	FLOOR DRAIN	OH	OVERHEAD	VENT	VENTILATION
FDC	FIRE DEPARTMENT CONNECTION	OP	OPAQUE	VOL	VOLUME
FE	FIRE EXTINGUISHER	OPNG	OPENING		
FEC	FIRE EXTINGUISHER CABINET	OPP	OPPOSITE	WTW	WALL TO WALL
FF	FINISH FLOOR	OPP HD	OPPOSITE HAND	WC	WATER CLOSET
FFE	FINISHED FLOOR ELEVATION	ORIG	ORIGINAL	WH	WATER HEATER
FFL	FINISHED FLOOR LINE	OWJ	OPEN WEB JOIST	WP	WATER PROOFING
FIN	FINISHED	OZ	OUNCE	W	WEST
FIXT	FIXTURE			W/	WITH
FLOUR	FLOURESCENT	PAR	PARALLEL	W/O	WITHOUT
FLR	FLOOR	PART	PARTITION	WD	WOOD
FNDN	FOUNDATION	PART BD	PARTICLE BOARD	WDW	WINDOW
FOC	FACE OF CONCRETE	PC	PRECAST	WT	WEIGHT
FOF	FACE OF FINISH	PCF	POUNDS PER CUBIC FOOT	WI	WROUGHT IRON
FOM	FACE OF MASONRY	PED	PEDESTAL		
FOS	FACE OF STUD	PERIM	PERIMETER	YD	YARD
FP	FIREPROOF	PERM	PERMANENT		
FPL	FIREPLACE	PERP	PERPENDICULAR		
FRC	FIRE RESISTANT COATING	PFL	POUNDS PER LINEAL FOOT		
FRT	FIRE RETARDANT	PKG	PARKING		
FT	FOOT/FEET	PL	PLATE		
FTG	FOOTING	PL	PROPERTY LINE		
FURR	FURRED/FURRING	PLAS	PLASTER		
FURN	FURNISHED				

INTERIOR FINISHES ABBREVIATIONS

ACP	ACOUSTICAL CEILING PANEL	PL	PLASTIC LAMINATE	STC	STAINED CONCRETE
CONC	CONCRETE	PT	PAINT	TZ	TERRAZZO
CPT	CARPET/CARPET TILE	QT	QUARRY TILE	VCT	VINYL COMPOSITION TILE
CT	CERAMIC TILE	RAF	RAISED FLOORING	VT	VINYL TILE
F	FURNITURE	RB	RESILIENT BASE	VWC	VINYL WALL COVERING
FAB	FABRIC (FURNITURE)	RES	RESINOUS FLOORING	WD	WOOD VENEER/WOOD BASE/ WOOD TRIM
FWC	FABRIC WALLCOVERING	RF	RESILIENT FLOORING		
GL	GLASS/GLAZING	SP	SPECIALTY PRODUCTS	WDFL	WOOD FLOORING
GLB	GLASS BLOCK	SS	SOLID SURFACE	WT	WINDOW TREATMENT
MTL	METAL	ST	STONE/STONE FLOORING		

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3/21/2017

TAX OFFICE - CEDAR PARK

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

Williamson County, Texas

PROJECT PHASE
CONSTRUCTION DOCUMENTS

REVISIONS

PROJECT NUMBER
16121-00

DATE ISSUED
3/21/2017

SHEET TITLE
ABBREVIATIONS & NOTES

SHEET NUMBER
A002

Bid 1703-149

p-9

ZONING AND CODE INFORMATION:

PROJECT DESCRIPTION:
OFFICE MUNICIPAL BUILDING

JURISDICTION: CITY OF CEDAR PARK

APPLICABLE BUILDING CODES:
2012 INTERNATIONAL BUILDING CODE (IBC)
2012 INTERNATIONAL MECHANICAL CODE (IMC)
2012 INTERNATIONAL FIRE CODE (IFC) WITH LOCAL AMENDMENTS
2012 INTERNATIONAL PLUMBING CODE (IPC)
2011 NATIONAL ELECTRICAL CODE (NEC) WITH LOCAL AMENDMENTS
2015 INTERNATIONAL ENERGY CONSERVATION CODE

TDLR #: EABPRJ

CODE ANALYSIS LEGEND:

1-HR RATED WALLS

FEC — FIRE EXTINGUISHER CABINETS

EXIT LIGHT FIXTURE

EMERGENCY LIGHT FIXTURE

BUILDING CODE ANALYSIS:

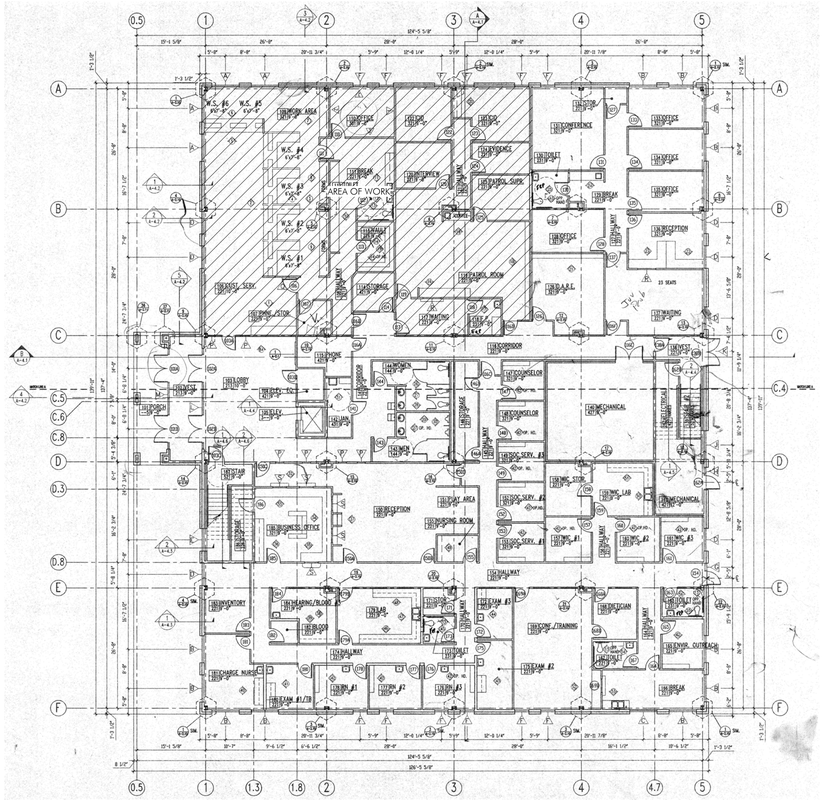
GENERAL OFFICE	IBC REGULATION		COMPLIANCE
USE AND OCCUPANCY CLASSIFICATION:	SECTION 508 MB BUSINESS		
REQUIRED SEPARATION OF OCCUPANCIES:	TABLE 508.4 1 HR SPRINKLERED		1 HR SPRINKLERED
COSTRUCTION TYPE:	SECTION 602.5 TYPE V-B		
OCCUPANT LOAD:	TABLE 1004.1.2 WAITING AREA	1,948 SF @ 7 NET = 279 OCC	302 OCCUPANTS
	BUSINESS	2,281 SF @ 100 GROSS = 23 OCC	
ALLOWABLE AREA PER SEPARATED AREA: BASIC ALLOWABLE AREA	TABLE 503 B TYPE V-B = 9,000 SF		2,281 SF < 9,000 SF
FIRE RESISTANCE RATING:	TABLE 601 TYPE V-B = 0 HR		0 HR
FIRE PROTECTION:	SECTION 903.2.1.3	N/A	SPRINKLERED
COMMON PATH OF EGRESS TRAVEL:	TABLE 1014.3 B: 100'-0" WITH SPRINKLER SYSTEM		DISTANCE < 100'-0"
EXIT ACCESS:	TABLE 1015.1 B: 1 EXIT WHEN OCCUPANT LOAD < 49		1 EXITS PROVIDED
EXIT ACCESS TRAVEL DISTANCE:	TABLE 1016.2 B: 300'-0" WITH SPRINKLER SYSTEM		DISTANCE < 300'-0"
CORRIDOR FIRE RESISTANCE:	TABLE 1018.1 B: GREATER THAN 30 OCCUPANTS WITH SPRINKLER SYSTEM - 0 HR		0 HR
MEANS OF EGRESS SIZING:	SECTION 1005.3.2 B: 23 OCC X 0.15 = 3.45"		44" MIN. PROVIDED

PLUMBING FIXTURE COUNT: TABLE 2902.1

TOTAL FIRST FLOOR BUSINESS OCCUPANTS (23 + 70 EXISTING)
WATER CLOSETS
MALE 1:25 @ 47 OCC = 1.9 REQUIRED
FEMALE 1:25 @ 47 OCC = 1.9 REQUIRED
LAVATORY
MALE 1:40 @ 47 OCC = 1.2 REQUIRED
FEMALE 1:40 @ 47 OCC = 1.2 REQUIRED
DRINKING FOUNTAIN
1:100 @ 93 OCC = 1 REQUIRED
SERVICE SINK 1 SERVICE SINK

TOTAL WAITING (A-3) @ 279 OCC
WATER CLOSETS
MALE 1:125 @ 140 OCC = 1.1 REQUIRED
FEMALE 1:65 @ 140 OCC = 2.1 REQUIRED
LAVATORY
MALE 1:200 @ 140 OCC = .7 REQUIRED
FEMALE 1:200 @ 140 OCC = .7 REQUIRED
DRINKING FOUNTAIN
1:500 @ 279 OCC = .6 REQUIRED
SERVICE SINK 1 SERVICE SINK

TOTALS		
WATER CLOSETS		
MALE 1.9 + 1.1 = 3 REQUIRED		1 WC / 2 UR / 3 UNISEX PROVIDED
FEMALE 1.9 + 2.1 = 4 REQUIRED		3 WC / 3 UNISEX PROVIDED
LAVATORY		
MALE 1.2 + .7 = 1.9 REQUIRED		2 LAV PROVIDED
FEMALE 1.2 + .7 = 1.9 REQUIRED		2 LAV PROVIDED
DRINKING FOUNTAIN		
1 + .6 = 2 REQUIRED		1 ACCESSIBLE +1 STANDING = 2 PROVIDED
SERVICE SINK	1 SERVICE SINK	1 PROVIDED

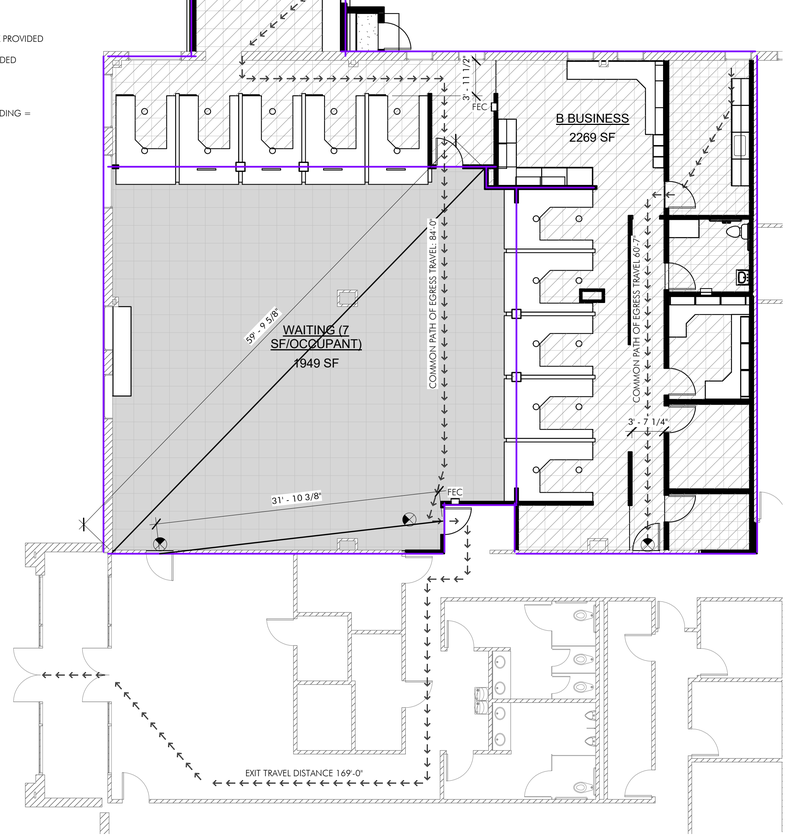


2 EXISTING PLAN
1/16" = 1'-0"

BUILDING AREA LEGEND

B BUSINESS

WAITING (7 SF/OCCUPANT)



1 LIFE SAFETY PLAN
1/8" = 1'-0"

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PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE

CODE ANALYSIS PLAN

SHEET NUMBER

A003

3/20/2017 11:36 AM
Williamson County, Texas
BM 1703-149
p-10

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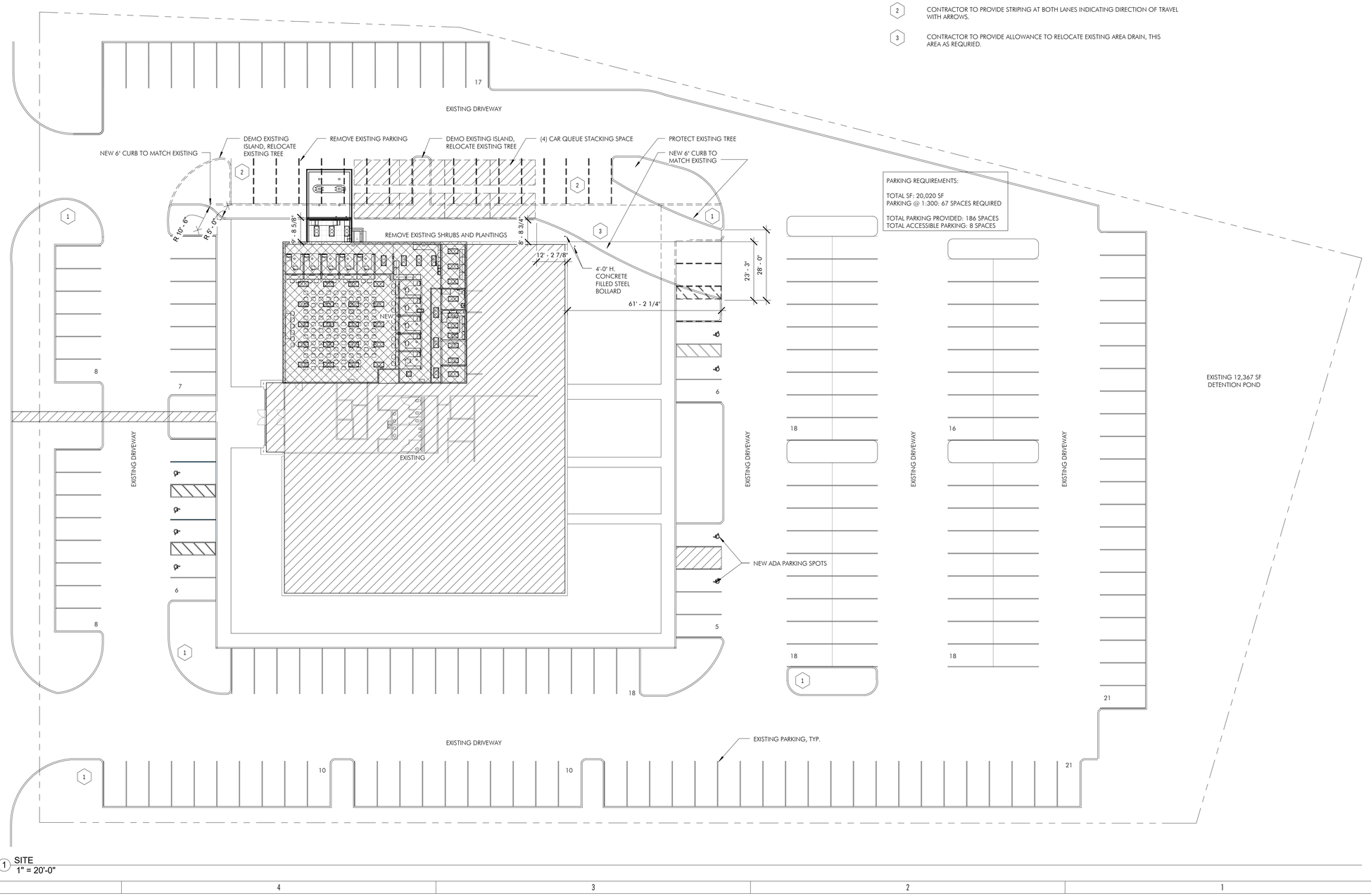
SITE PLAN KEYNOTES:

1. CONTRACTOR TO PROVIDE DIRECTIONAL SIGNAGE ON POST INDICATING "DRIVE THRU" WITH DIRECTIONAL ARROWS
2. CONTRACTOR TO PROVIDE STRIPING AT BOTH LANES INDICATING DIRECTION OF TRAVEL WITH ARROWS.
3. CONTRACTOR TO PROVIDE ALLOWANCE TO RELOCATE EXISTING AREA DRAIN, THIS AREA AS REQURIED.



PARKING REQUIREMENTS:

TOTAL SF: 20,020 SF
PARKING @ 1:300: 67 SPACES REQUIRED

TOTAL PARKING PROVIDED: 186 SPACES
TOTAL ACCESSIBLE PARKING: 8 SPACES

1 SITE
1" = 20'-0"

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PROJECT PHASE
CONSTRUCTION DOCUMENTS

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PROJECT NUMBER
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DATE ISSUED
3/21/2017
SHEET TITLE
ARCHITECTURAL SITE PLAN

SHEET NUMBER
A100

Williamson County, Texas
Bid Pkg 149

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GENERAL NOTES TO DEMOLITION PLAN:

1) FURNISH ALL LABOR AND MATERIALS AS REQUIRED TO COMPLETE DEMOLITION AND REMOVAL OF ALL ITEMS SHOWN OR NOTED ON DRAWINGS AS WELL AS ITEMS REQUIRED TO BE REMOVED TO FULFILL THE INTENT OF THE CONTRACT DOCUMENTS.

2) AT ALL TIMES PROTECT ADJACENT PROPERTY AND ITEMS NOT IN THE SCOPE OF WORK, INCLUDING BUT NOT LIMITED TO FLOORS, CEILINGS, DRYWALL SOFFITS, PUBLIC TOILETS, DOORS, AND FRAMES.

3) ERECT ALL NECESSARY DROP CLOTH PARTITIONS TO PROTECT ADJACENT BUILDING PROPERTY WHILE DEMOLITION AND CONSTRUCTION ARE IN PROGRESS.

4) ALL DEMOLITION WORK AND TRASH REMOVAL SHALL BE CONFINED TO THE TIMES AND HOURS ALLOWED AND COORDINATED WITH THE BUILDING OWNER.

5) KEEP ALL EGRESS PATHS FREE AND CLEAR OF DEBRIS AND WORKING MATERIAL AT ALL TIMES.

6) FURNISH A SYSTEM OF TEMPORARY LIGHTS THROUGHOUT THE SPACE UNDER CONSTRUCTION IF REQUIRED.

7) CAP AND FLUSH OFF BEHIND WALL, FLOOR, OR CEILING SURFACES ALL PROJECTING MATERIALS, I.E. PLUMBING OR ELECTRICAL LINES TO JUNCTION BOX, AND ITEMS WHICH ARE TO BE ABANDONED OR ARE OTHERWISE EXTRANEOUS TO THE COMPLETED PROJECT.

8) CONTRACTOR SHALL PATCH AND REPAIR AND MATCH ALL EXISTING FINISHES AT ALL FLOORS AFFECTED BY NEW MECHANICAL OR OTHERWISE CONCEALED WORK.

9) DEMO ALL CEILING AND GRID AT MAIN AND LOWER LEVEL. REMOVE LIGHT FIXTURES AND RETURN TO OWNER STOCK AT ALL LEVELS.

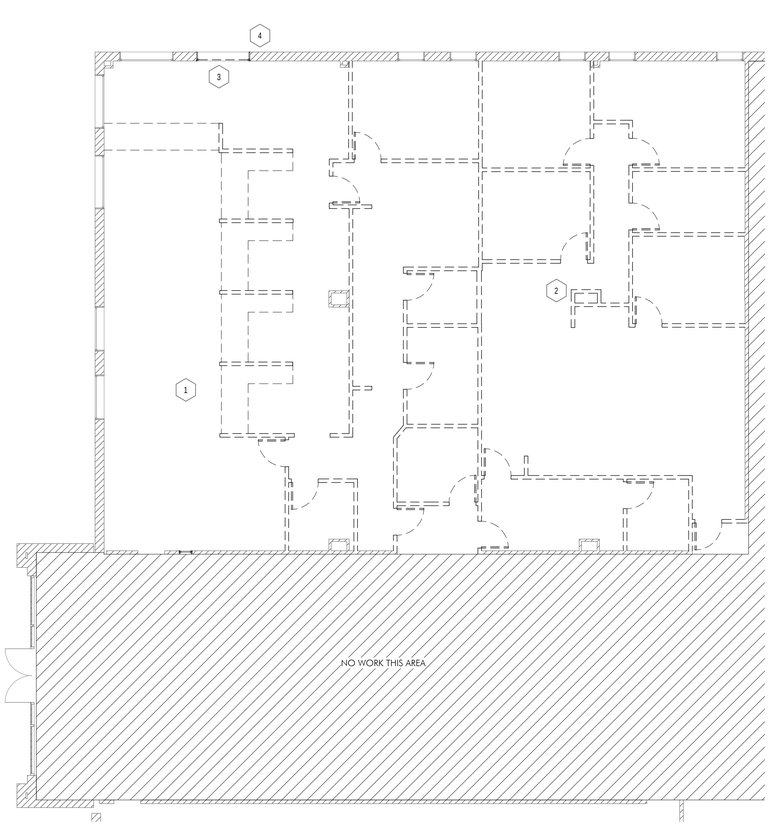
DEMOLITION PLAN KEYNOTES:

1. REMOVE ALL CEILING TILES AND GRID AND SAVE FOR REUSE AS APPROPRIATE
2. REMOVE FURRING AT EXISTING COLUMN AND VERIFY LOCATION OF COLUMN AND PLUMBING FOR COORDINATION WITH WORKSTATION MILLWORK. REPORT ANY ISSUES OR DISCREPANCIES WITH OWNER AND ARCHITECT.
3. REMOVE EXISTING EXTERIOR WINDOW AND PREPARE OPENING FOR NEW 4'-0" CASED OPENING.
4. REMOVE EXISTING STONE EXTERIOR TO STUDS. PREPARE WALL FOR NEW 5/8" GYPSUM BOARD.

DEMOLITION PLAN LEGEND:

EXISTING WALL TO BE REMOVED

EXISTING DOOR TO BE REMOVED. STORE AS DIRECTED BY OWNER



2 DEMO PLAN
1/8" = 1'-0"

GENERAL NOTES TO FLOOR PLAN:

1) ALL PARTIIONS ARE TYPE 'A-4', UNESS NOTED OTHERWISE (U.N.O.).

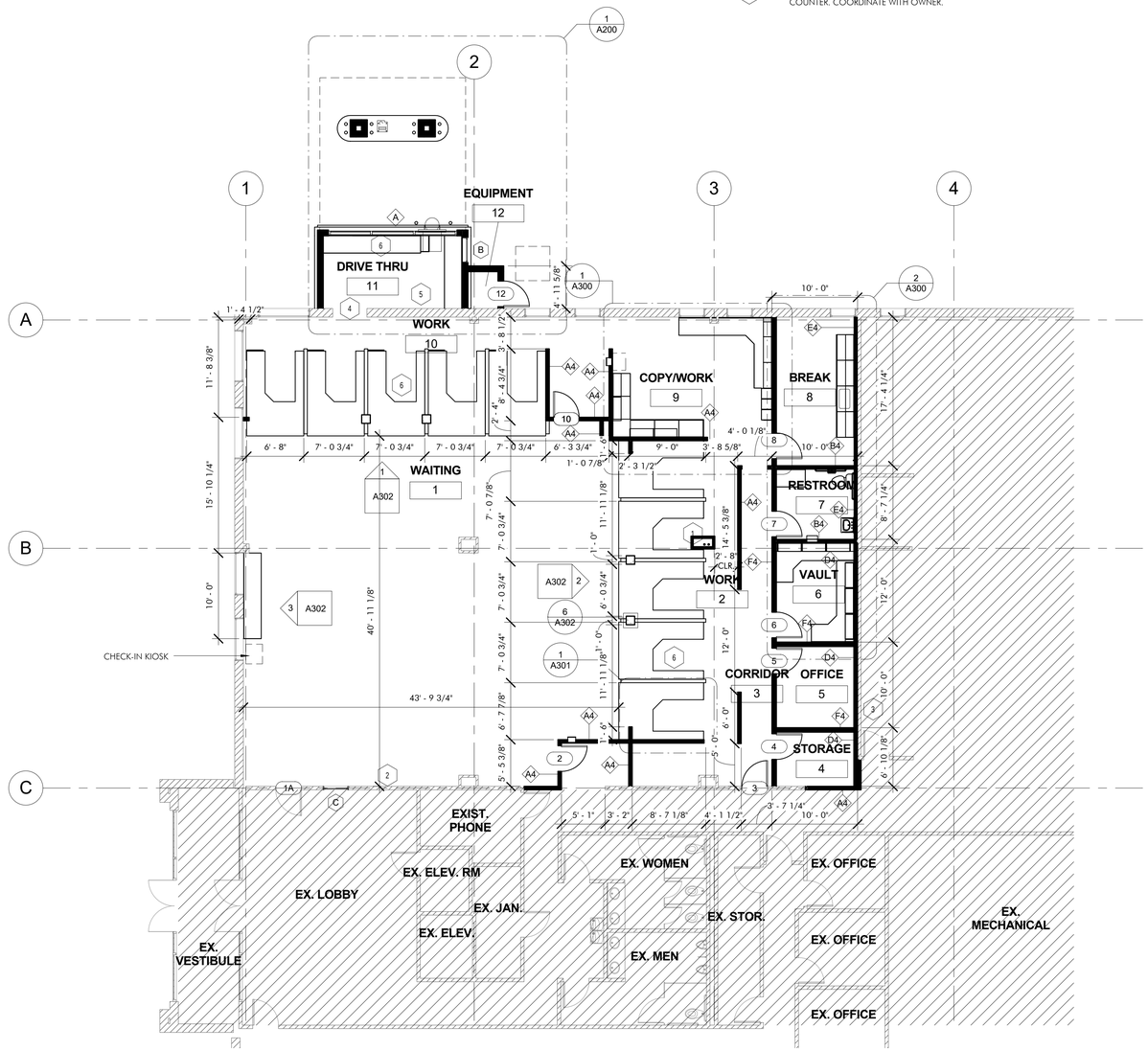
2) DIMENSIONS ARE FROM FACE OF STUD TO FACE OF STUD, U.N.O.

3) ANY CONFLICTS FOUND IN CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION BEFORE ANY WORK BEGINS.

4) WHERE DOUBLE GYPSUM BOARD PARTITION ARE IN LINE AND ABUTTS AGAINST A SINGLE GYPSUM BOARD PARTITION, ALIGN SO AS TO HAVE A FLUSH FINISH.

FLOOR PLAN KEYNOTES:

1. CONTRACTOR TO VERIFY IN FIELD LOCATION OF EXISTING COLUMN AND PLUMBING. PROVIDE FURRING TIGHT TO COLUMN OR PLUMBING. NOTIFY ARCHITECT OR OWNER OF ANY COLISIONS WITH NEW MILLWORK.
2. WALL MOUNTED TELEVISION BY OWNER. COORDINATE HEIGHT AND WEIGHT WITH OWNER. PROVIDE BLOCKING IN WALL AS REQUIRED BY SELECTED TELEVISION.
3. CONTRACTOR TO VERIFY LOCATION OF EXISTING WALL. NEW WALL TO BE HELD OFF EXISTING WALL 0-1" TO PROVIDE SOUND DAMPENING AND FLUSH FINISH.
4. PROVIDE NEW 4'-0" X 8'-0" CASED OPENING.
5. PROVIDE NEW 5/8" GYPSUM FINISH AT PREVIOUSLY EXTERIOR WALL.
6. PROVIDE 2-FINGER SECURITY DEVICES AT ALL WORKSTATIONS AND DRIVE THRU COUNTER. COORDINATE WITH OWNER.



1 FLOOR PLAN
1/8" = 1'-0"

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PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
FLOOR PLANS

SHEET NUMBER
A101

Williamson County, Texas

BC-1703-149

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GENERAL NOTES TO REFLECTED CEILING PLAN:

1) CEILING HEIGHT IS 9'-0", U.N.O.

2) ALL LIGHT FIXTURES THROUGHOUT SPACE SHALL MATCH IN COLOR AND TEMPERATURE.

3) GENERAL CONTRACTOR TO USE MULTI-GANG BOXES IN ALL POSSIBLE LOCATIONS.

4) VERIFY ALL LIGHTING PLACEMENT WITH ARCHITECT BEFORE INSTALLATION IF DIFFERENT FROM ELECTRICAL DRAWINGS.

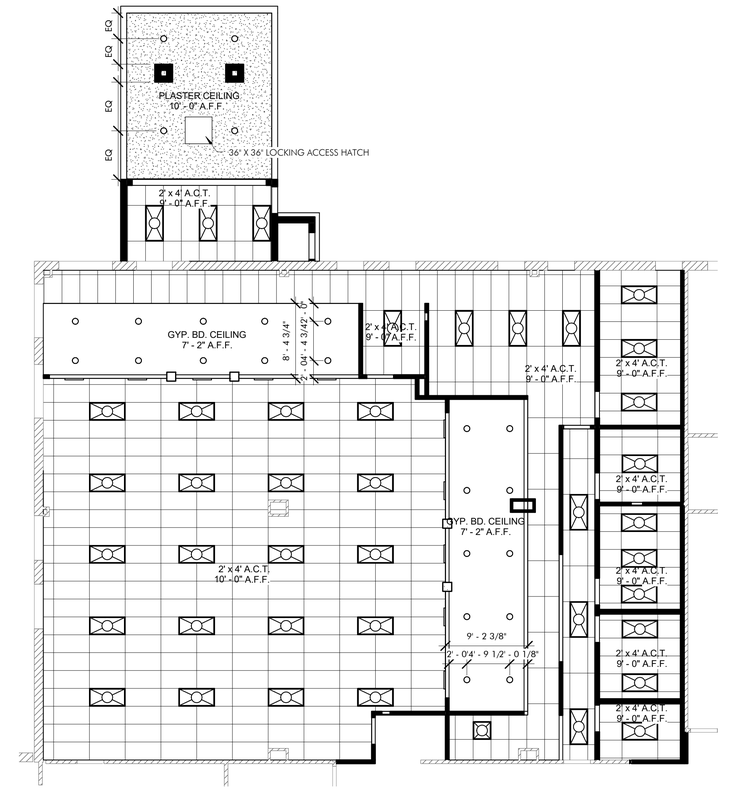
5) MOISTURE RESISTANT ACOUSTIC CEILING TILE AT ALL RESTROOM CEILINGS, U.N.O.

REFLECTED CEILING PLAN LEGEND:

2X2 LED LIGHT FIXTURE, RE: ELECTRICAL DRAWINGS

2X4 LED LIGHT FIXTURE, RE: ELECTRICAL DRAWINGS

RECESSED DOWNLIGHT, RE: ELECTRICAL DRAWINGS



1 REFLECTED CEILING PLAN
1/8" = 1'-0"

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3/21/2017

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SHEET TITLE

REFLECTED CEILING PLANS

SHEET NUMBER

A102

Williamson County, Texas

BC# 1703-149

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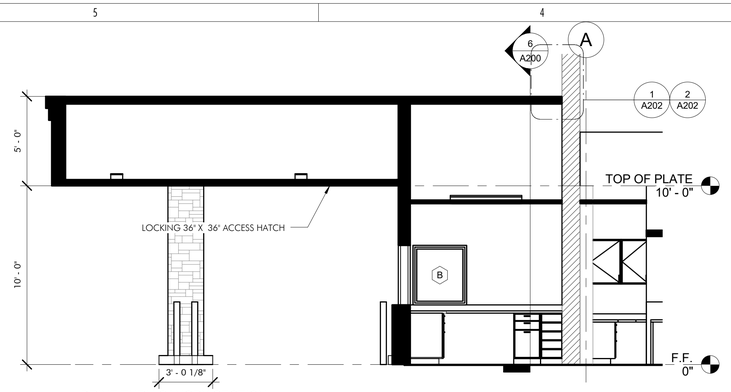
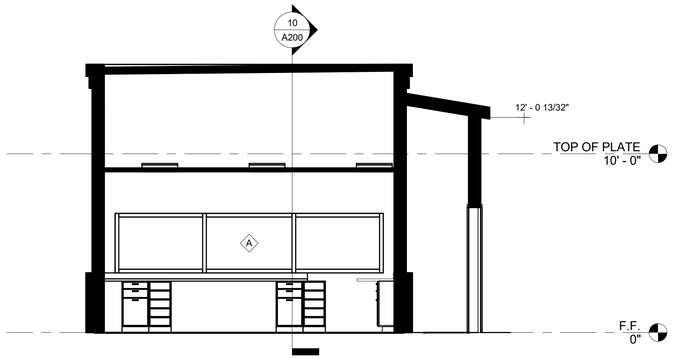
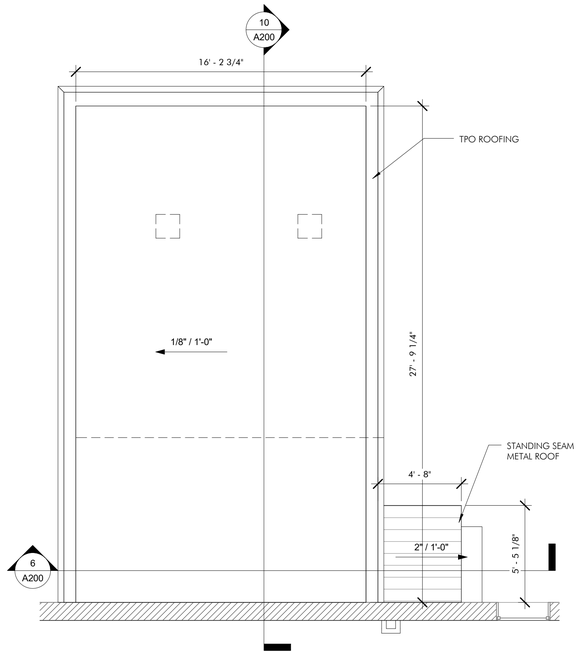
3/20/2017 11:36 AM



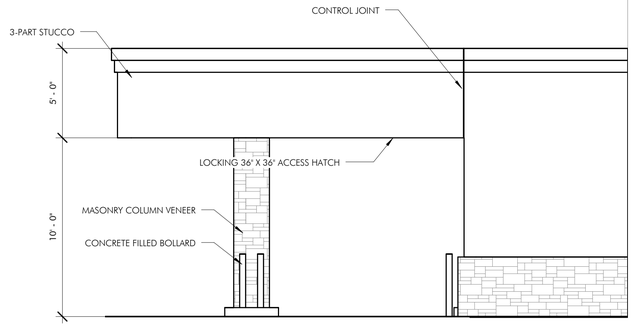
10 DRIVE THRU CANOPY SECTION
1/4" = 1'-0"



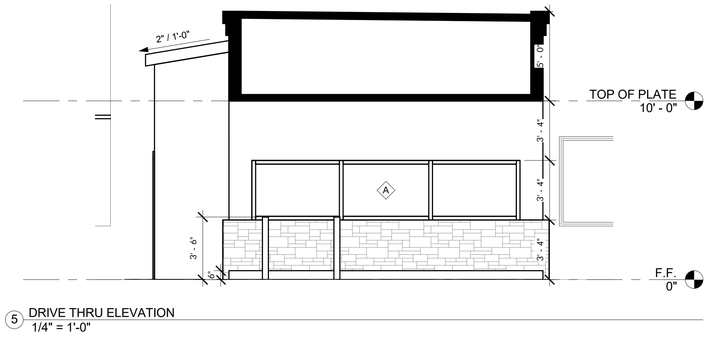
6 DRIVE THRU CANOPY SECTION 02
1/4" = 1'-0"



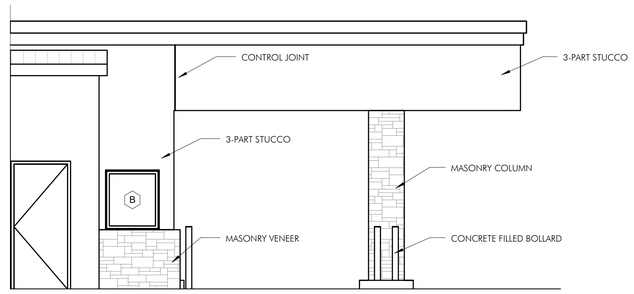
2 CANOPY ROOF PLAN
1/4" = 1'-0"



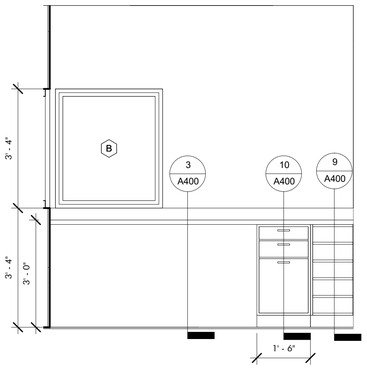
9 CANOPY ELEVATION 02
1/4" = 1'-0"



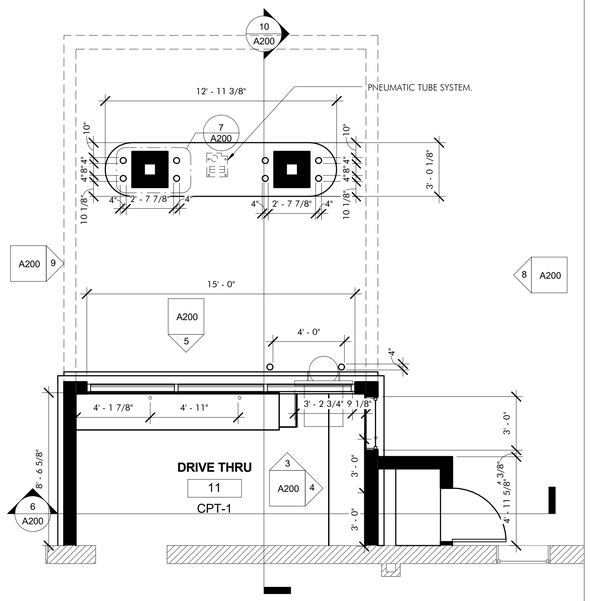
5 DRIVE THRU ELEVATION
1/4" = 1'-0"



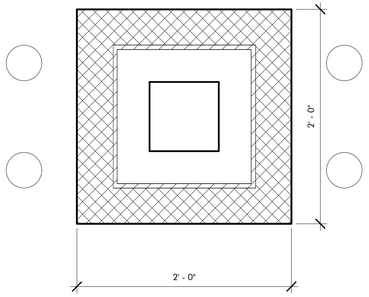
8 CANOPY ELEVATION 01
1/4" = 1'-0"



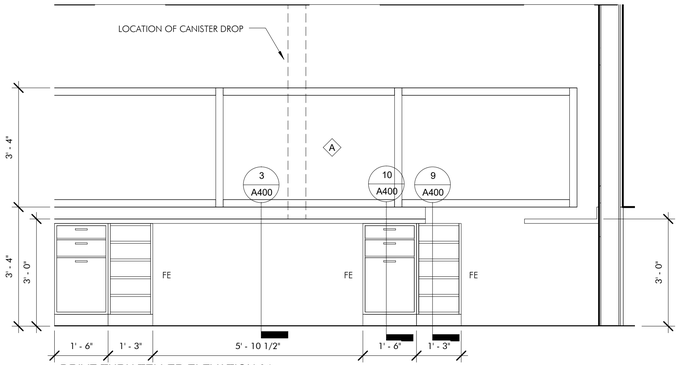
4 DRIVE THRU TELLER ELEVATION 02
1/2" = 1'-0"



1 DRIVE THRU TELLER PLAN
1/4" = 1'-0"



7 EXTERIOR COLUMN DETAIL
1 1/2" = 1'-0"



3 DRIVE THRU TELLER ELEVATION 01
1/2" = 1'-0"

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REGISTERED ARCHITECT
RYAN HANSANDWAT
22737
STATE OF TEXAS
3/21/2017

TAX OFFICE - CEDAR PARK

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

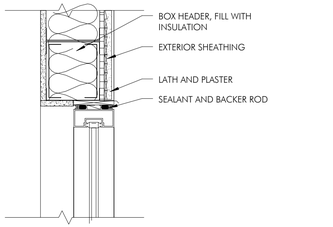
PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
DRIVE THRU CANOPY PLANS

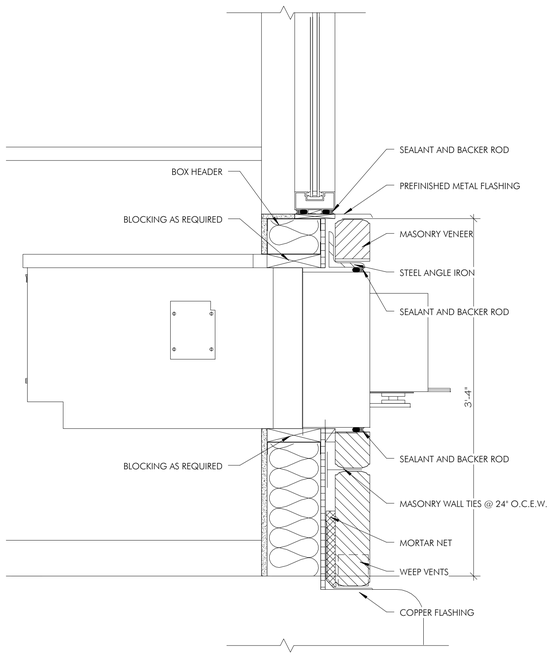
SHEET NUMBER
A200

Williamson County, Texas

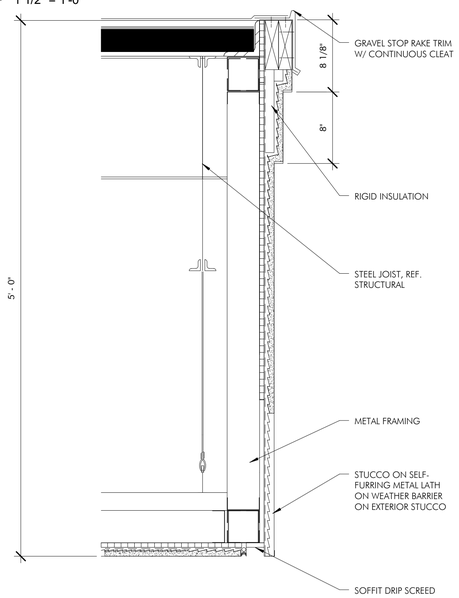
BID-1703-149

3/20/2017 11:36 AM

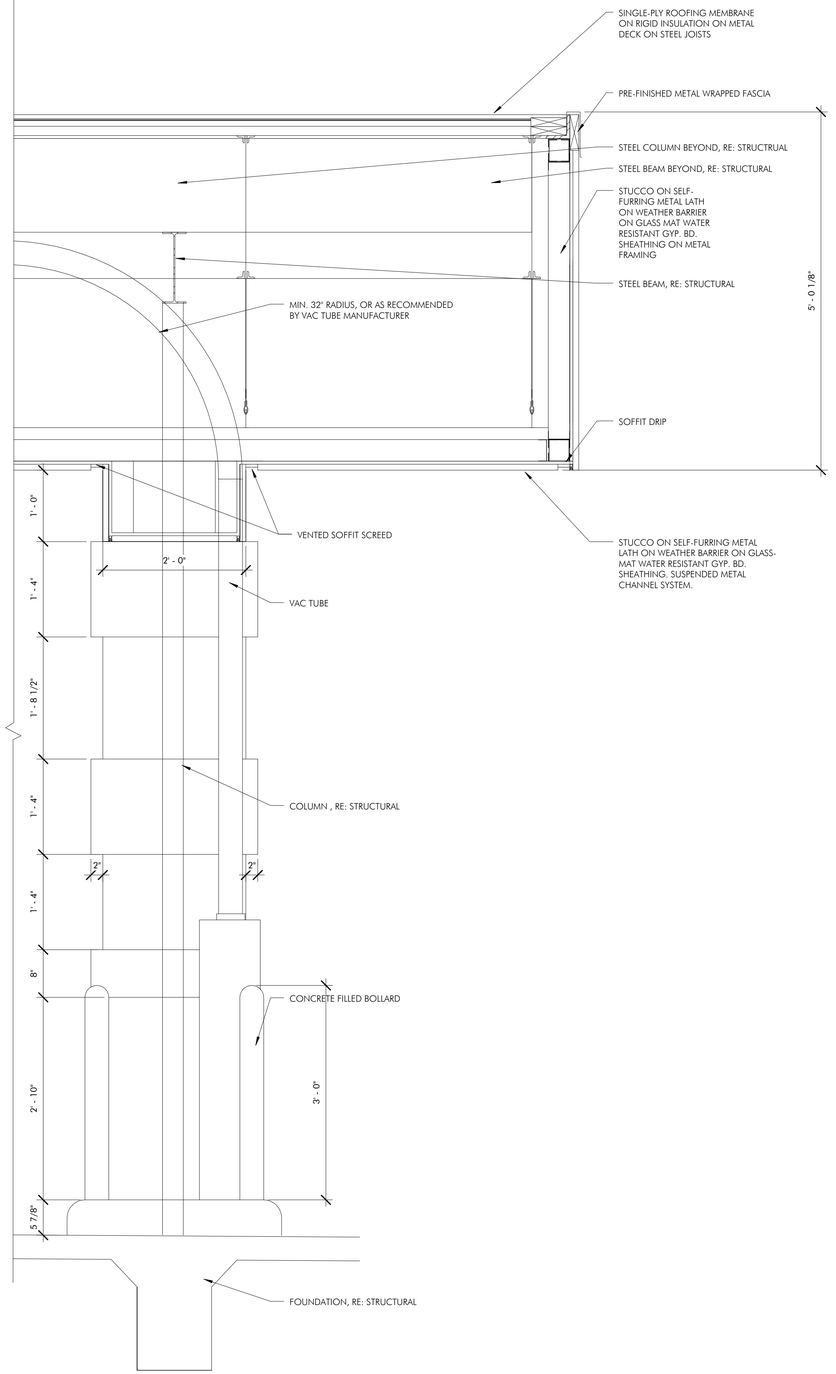




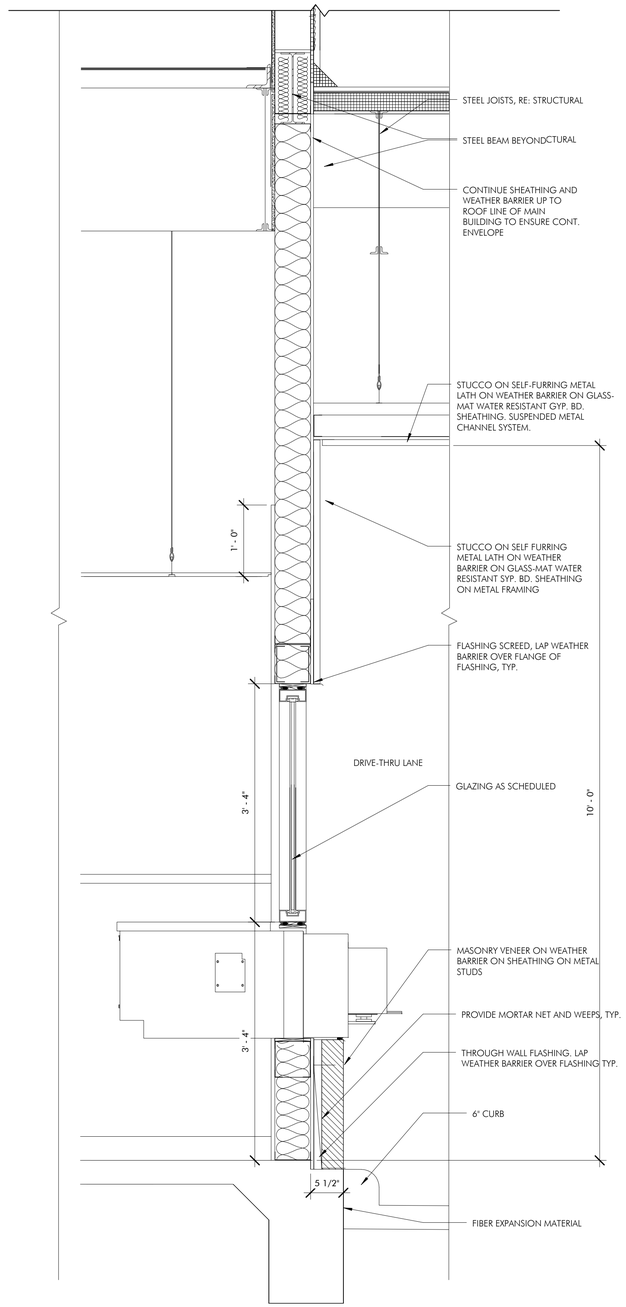
4 DEAL DRAWER DETAIL
1 1/2" = 1'-0"



3 CANOPY END WALL DETAIL
1 1/2" = 1'-0"



2 CANOPY @ END WALL
1" = 1'-0"



1 CANOPY @ EXISTING WALL
1" = 1'-0"

MODE design company
1102 s austin ave, suite 103
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+ 1 512 733 1150

REGISTERED ARCHITECT
RYAN HANSANWAT
22737
STATE OF TEXAS
3/21/2017

TAX OFFICE - CEDAR PARK

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

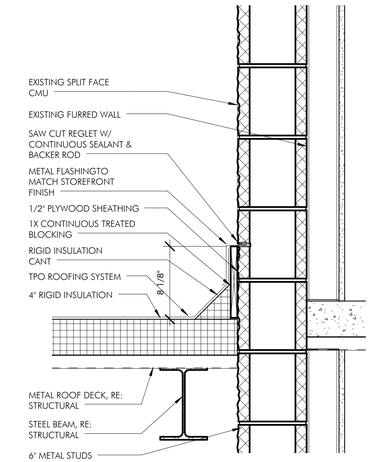
PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
WALL SECTIONS

SHEET NUMBER
A201

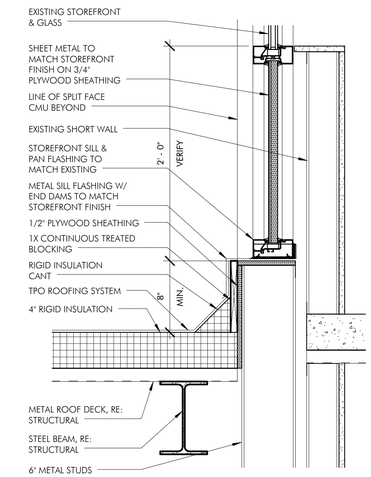
Williamson County, Texas

Bid Pkg 1-49

3/20/2017 11:36 AM



2 RAKE WALL DETAIL 02
1 1/2" = 1'-0"



1 RAKE WALL DETAIL 01
1 1/2" = 1'-0"

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RYAN HANSANDWAT
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3/21/2017

TAX OFFICE - CEDAR PARK

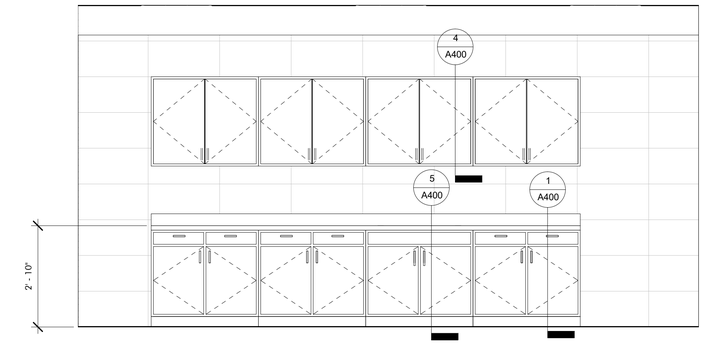
WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
WALL DETAILS

SHEET NUMBER
A202

Williamson County, Texas
Bid 1703-149

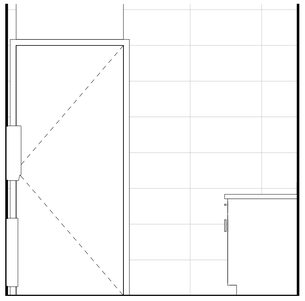


9 BREAK ROOM ELEVATION 01
1/2" = 1'-0"

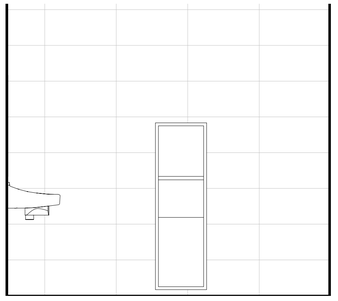
TOILET ACCESSORY LEGEND:

NOTE: THE FOLLOWING LEGEND IS INTENDED TO GIVE GENERAL INFORMATION ONLY. REFER TO SPECIFICATIONS AND MEP DRAWINGS FOR MORE INFORMATION.

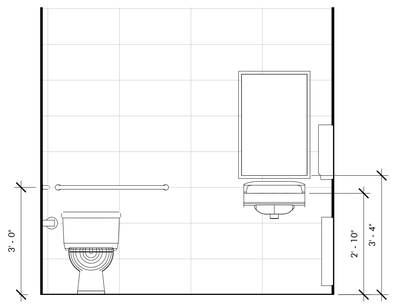
TA-1	TOILET TISSUE DISPENSER	BASIS OF DESIGN: BOBRICK B-265
TA-2	FRAMED MIRROR - 24" X 36"	BASIS OF DESIGN: BOBRICK B-165
TA-3	GRAB BAR 42"	BASIS OF DESIGN: BOBRICK B-5806 X 42
TA-4	GRAB BAR 36"	BASIS OF DESIGN: BOBRICK B-5806 X 36
TA-5	PAPER TOWEL DISPENSER / WASTE BASKET	BASIS OF DESIGN: BOBRICK B-3974



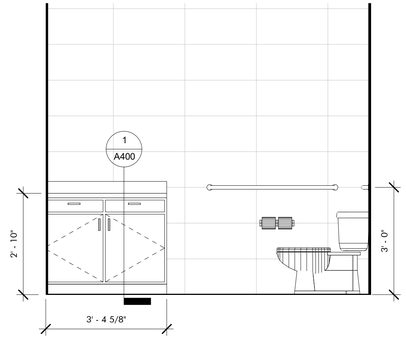
15 RESTROOM ELEVATION 04
1/2" = 1'-0"



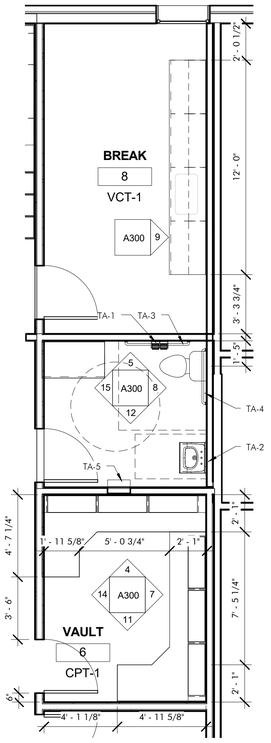
12 RESTROOM ELEVATION 03
1/2" = 1'-0"



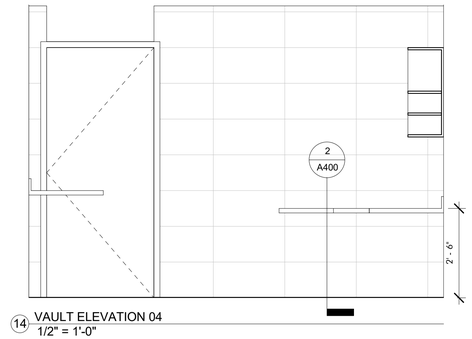
8 RESTROOM ELEVATION 02
1/2" = 1'-0"



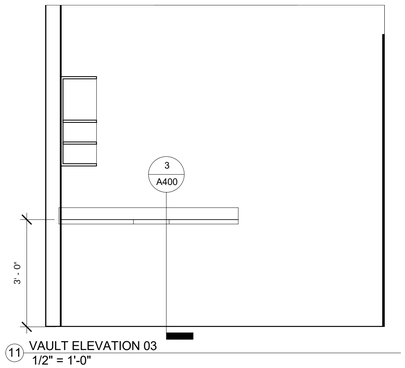
5 RESTROOM ELEVATION 01
1/2" = 1'-0"



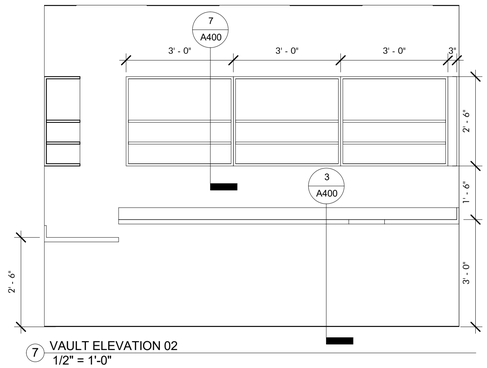
2 ENLARGED PLANS
1/4" = 1'-0"



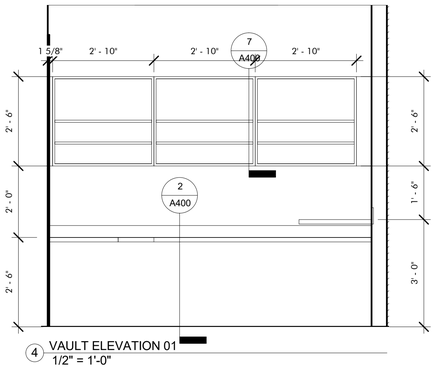
14 VAULT ELEVATION 04
1/2" = 1'-0"



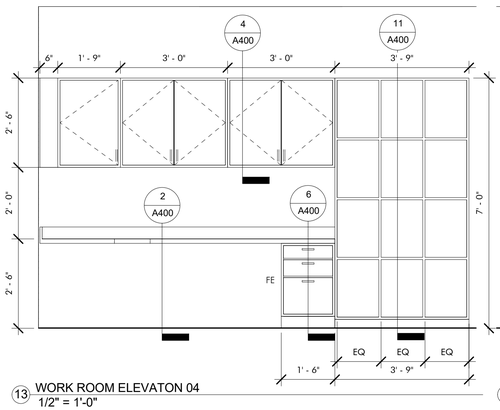
11 VAULT ELEVATION 03
1/2" = 1'-0"



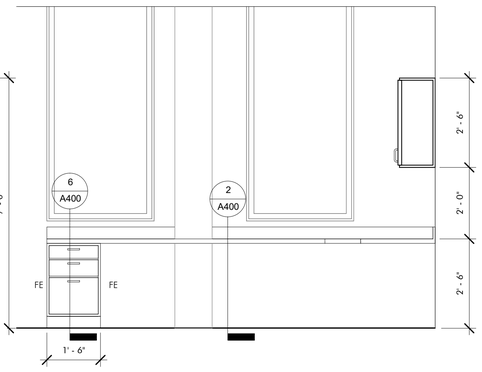
7 VAULT ELEVATION 02
1/2" = 1'-0"



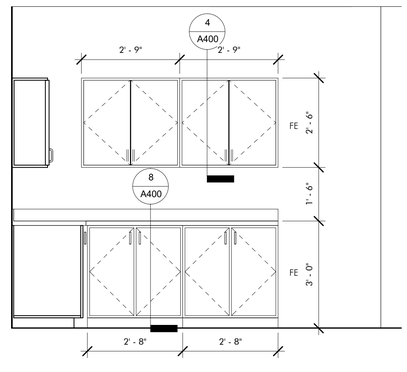
4 VAULT ELEVATION 01
1/2" = 1'-0"



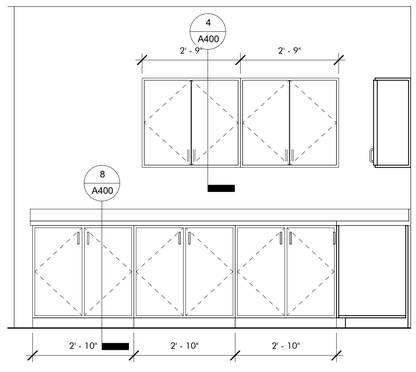
13 WORK ROOM ELEVATON 04
1/2" = 1'-0"



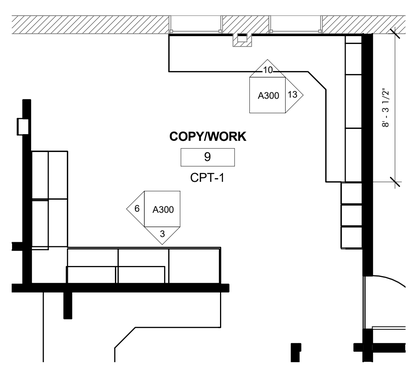
10 WORK ROOM ELEVATION 03
1/2" = 1'-0"



6 WORK ROOM ELEVATION 02
1/2" = 1'-0"



3 WORK ROOM ELEVATION 01
1/2" = 1'-0"



1 WORK ROOM PLAN
1/4" = 1'-0"

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1102 s austin ave, suite 103
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REGISTERED ARCHITECT
RYAN HANSANWAT
22737
STATE OF TEXAS

3/21/2017

TAX OFFICE - CEDAR PARK

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE

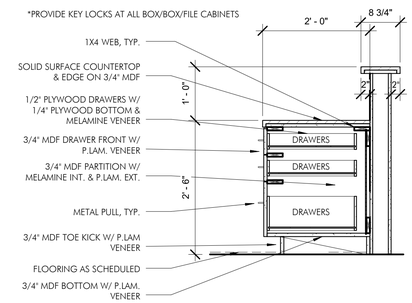
ENLARGED PLANS / INTERIOR ELEVATIONS

SHEET NUMBER

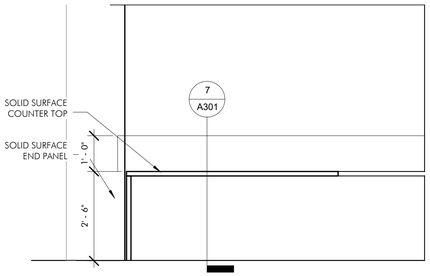
A300

3/20/2017 11:36 AM
Williamson County, Texas
Ed 1703-149

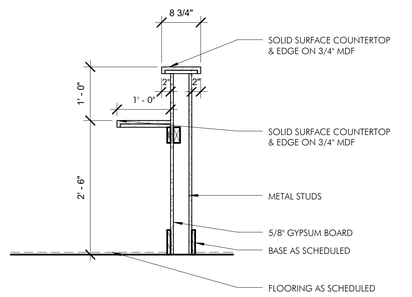
3/20/2017 11:36 AM



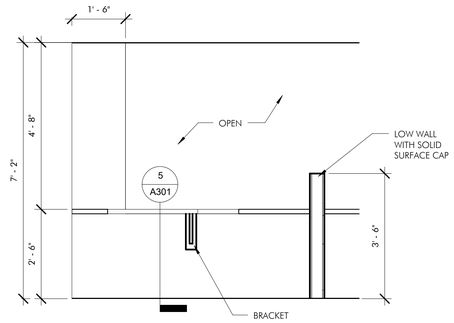
8 COUNTER DETAIL
3/4" = 1'-0"



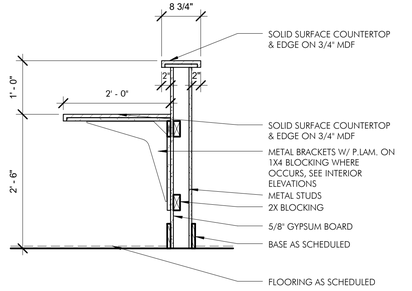
4 TYPICAL WORKSTATION ELEVATION 03
1/2" = 1'-0"



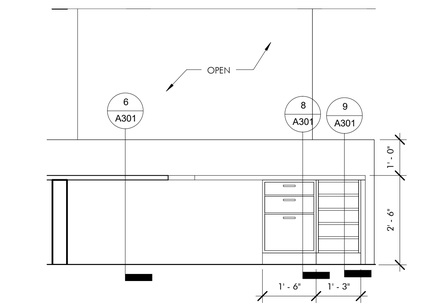
7 COUNTER DETAIL
3/4" = 1'-0"



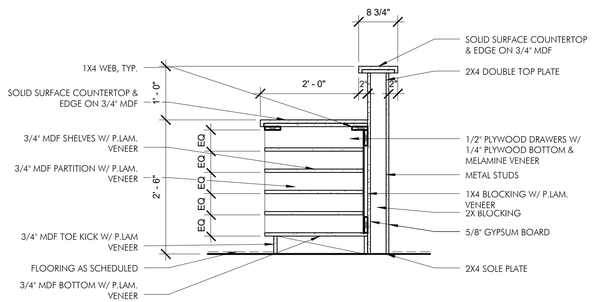
3 TYPICAL WORKSTATION ELEVATION 02
1/2" = 1'-0"



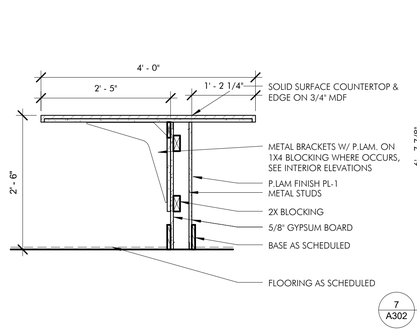
6 COUNTER DETAIL
3/4" = 1'-0"



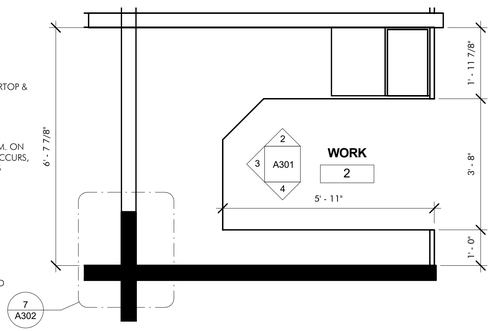
2 TYPICAL WORKSTATION ELEVATION 01
1/2" = 1'-0"



9 COUNTER DETAIL
3/4" = 1'-0"



5 COUNTER DETAIL
3/4" = 1'-0"



1 TYPICAL WORKSTATION PLAN
1/2" = 1'-0"

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REGISTERED ARCHITECT
RYAN HANSANWAT
22737
STATE OF TEXAS

3/21/2017

TAX OFFICE - CEDAR PARK

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS

REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE

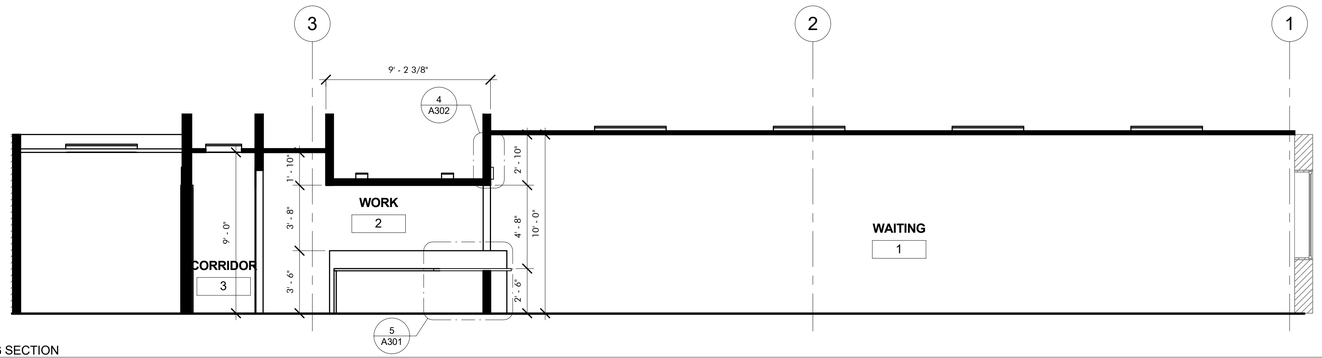
ENLARGED PLANS / INTERIOR ELEVATIONS

SHEET NUMBER

A301

Williamson County, Texas

Bid Pkg 1



5 BUILDING SECTION
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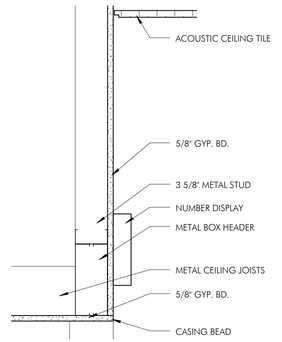
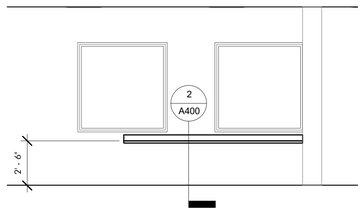
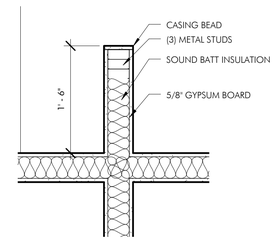


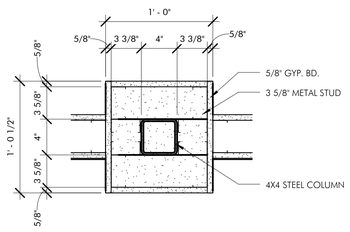
4 SOFFIT DETAIL
1 1/2" = 1'-0"



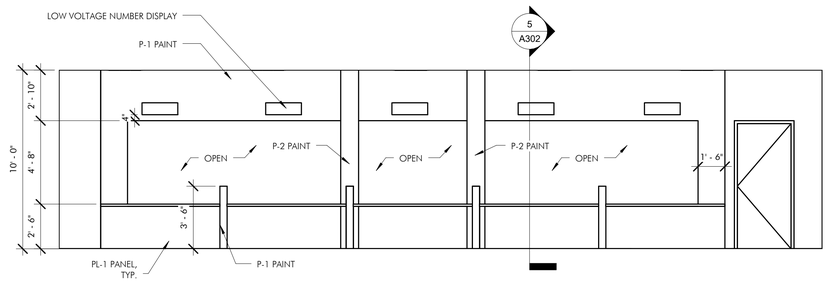
3 COUNTER ELEVATION 03
1/4" = 1'-0"



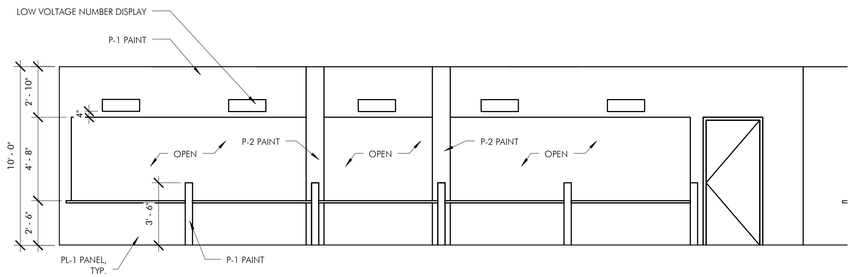
7 WORKSTATION WING WALL
1" = 1'-0"



6 INTERIOR COLUMN DETAIL
1 1/2" = 1'-0"



2 COUNTER ELEVATION 02
1/4" = 1'-0"



1 COUNTER ELEVATION 01
1/4" = 1'-0"

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TAX OFFICE - CEDAR PARK

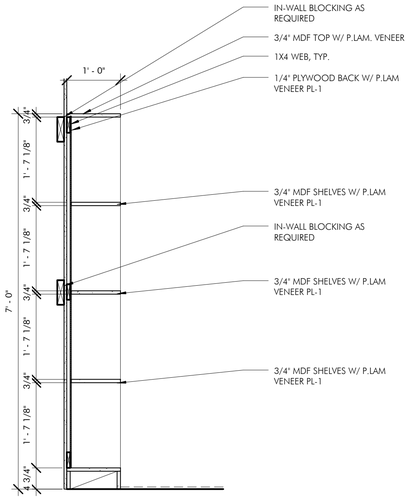
WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

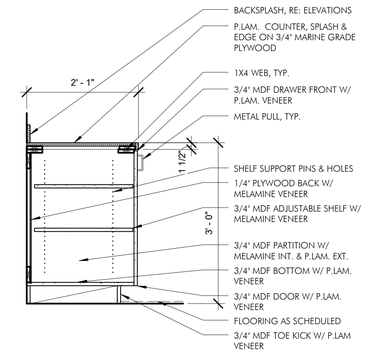
PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
INTERIOR ELEVATIONS AND DETAILS

SHEET NUMBER
A302

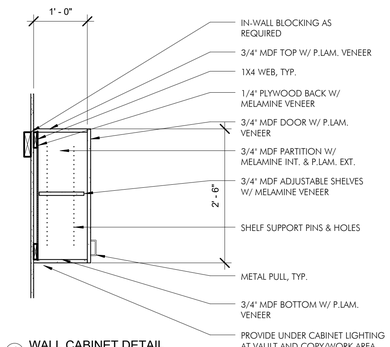
3/20/2017 11:36 AM
Williamson County, Texas
Bid 1700-149



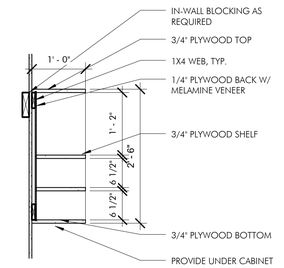
11 WALL CABINET DETAIL
3/4" = 1'-0"



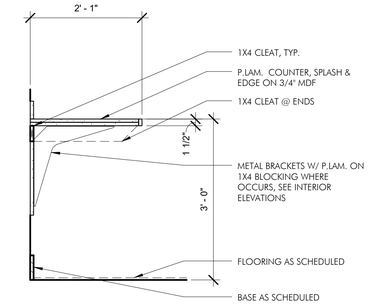
8 BASE CABINET DETAIL
3/4" = 1'-0"



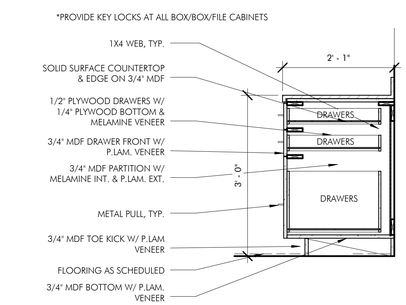
4 WALL CABINET DETAIL
3/4" = 1'-0"



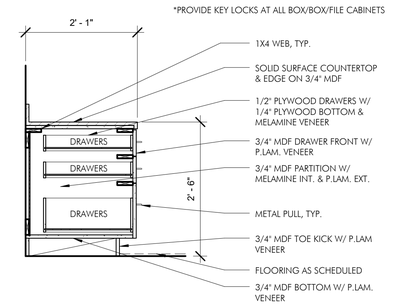
7 WALL CABINET DETAIL
3/4" = 1'-0"



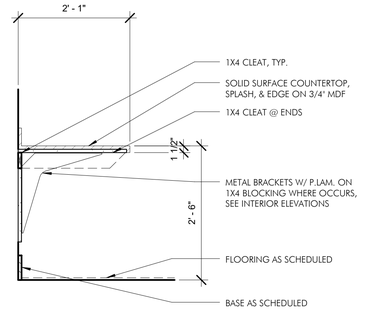
3 COUNTER DETAIL
3/4" = 1'-0"



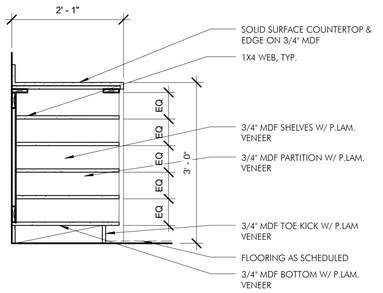
10 COUNTER DETAIL
3/4" = 1'-0"



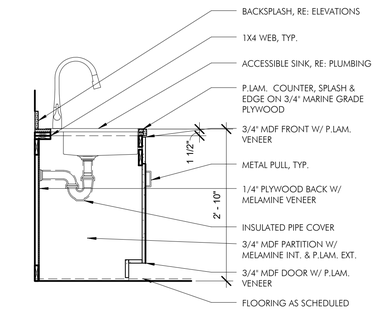
6 COUNTER DETAIL
3/4" = 1'-0"



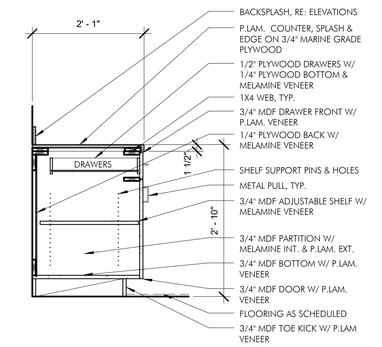
2 COUNTER DETAIL
3/4" = 1'-0"



9 COUNTER DETAIL
3/4" = 1'-0"



5 BASE CABINET DETAIL
3/4" = 1'-0"



1 BASE CABINET DETAIL
3/4" = 1'-0"

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PROJECT PHASE
CONSTRUCTION DOCUMENTS

REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
MILLWORK DETAILS

SHEET NUMBER
A400

3/20/2017 11:36 AM
Williamson County, Texas
Bid 1700-149

DOOR SCHEDULE

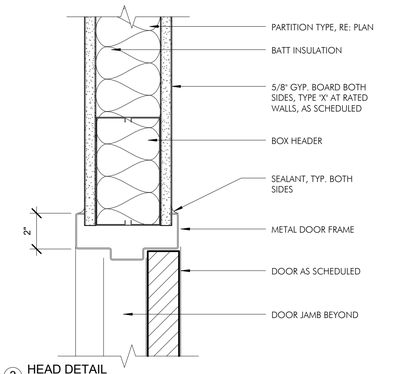
MARK	ROOM NAME	DOOR							FRAME			RATING	DETAILS			HARDWARE
		TYPE	WIDTH	HEIGHT	LEAVES	THICK	FINISH	GLAZING	TYPE	MATERIAL	FINISH		HEAD	JAMB	THRESHOLD	
1A	WAITING	A	3' - 0"	7' - 0"	1	1 3/4"	ALUM.	G1	1	ALUM.	ALUM.					SET 1
2		B	3' - 0"	7' - 0"	1	1 3/4"	WD.	-	2	HM.	P-3		3/-	2/-	1/-	SET 1
3	CORRIDOR	B	3' - 0"	7' - 0"	1	1 3/4"	WD.	-	2	HM.	P-3		3/-	2/-	1/-	SET 1
4	STORAGE	B	3' - 0"	7' - 0"	1	1 3/4"	WD.	-	2	HM.	P-3		3/-	2/-	1/-	SET 2
5	OFFICE	B	3' - 0"	7' - 0"	1	1 3/4"	WD.	-	2	HM.	P-3		3/-	2/-	1/-	SET 2
6	VAULT	B	3' - 0"	7' - 0"	1	1 3/4"	WD.	-	2	HM.	P-3		3/-	2/-	1/-	SET 2
7	RESTROOM	B	3' - 0"	7' - 0"	1	1 3/4"	WD.	-	2	HM.	P-3		3/-	2/-	1/-	SET 3
8	BREAK	B	3' - 0"	7' - 0"	1	1 3/4"	WD.	-	2	HM.	P-3		3/-	2/-	1/-	SET 3
10	WORK	B	3' - 0"	7' - 0"	1	1 3/4"	WD.	-	2	HM.	P-3		3/-	2/-	1/-	SET 1
12	EQUIPMENT	C	3' - 0"	7' - 0"	1	1 3/4"	HM.	-	2	HM.	P-3					SET 4

HARDWARE SCHEDULE:
SET 1
1 1/2 PR. BUTTS
1 CLOSER
1 POWER SUPPLY
1 WALL BUMPER
ELECTRIFIED LOCK
*COORDINATE WITH OWNER SECURITY CONSULTANT

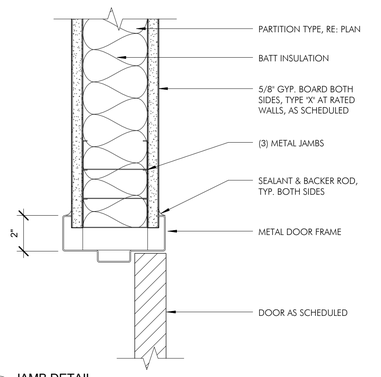
SET 2
2 PR. BUTTS
1 OFFICE LOCKSET
4 DOOR SILENCERS
1 WALL BUMPER

SET 3
2 PR BUTTS
1 PRIVACY LOCKSET
4 DOOR SILENCERS
1 WALL BUMPER

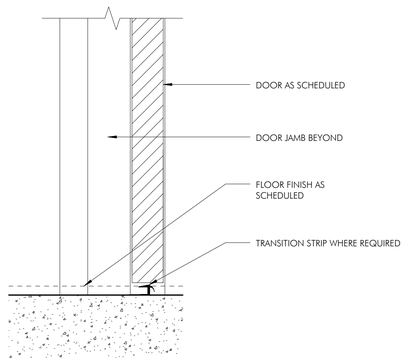
SET 4
1 1/2 PR. BUTTS
1 STOREROOM LOCKSET
1 PROTECTION PLATE
1 CLOSER
1 WEATHERSTRIP
1 DOOR BOTTOM
1 THRESHOLD



3 HEAD DETAIL
3" = 1'-0"



2 JAMB DETAIL
3" = 1'-0"



1 THRESHOLD DETAIL
3" = 1'-0"

GENERAL NOTES TO DOOR SCHEDULE AND TYPES:

1) ALL EXTERIOR AND COMMON AREA DOORS TO HAVE HEAVY DUTY HINGES, DOOR STOPS, SILENCERS, AND AUTOMATIC CLOSERS.

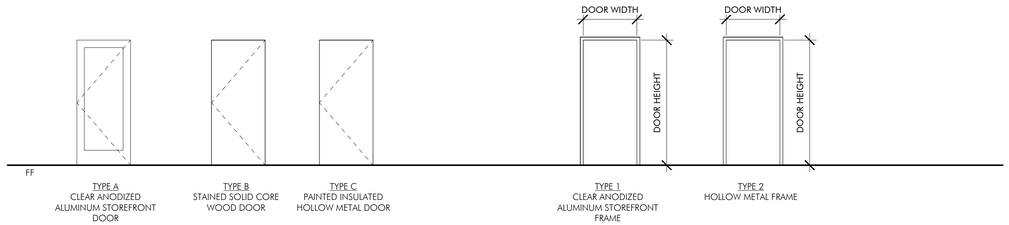
2) ALL RESTROOM DOORS TO HAVE KICK PLATES.

3) GLAZING TYPES:
G1 = 1"LOW-E INSULATED GLASS
G2 = 1/4" CLEAR TEMPERED GLASS

4) ALL EXTERIOR GLASS SHALL HAVE A MAXIMUM EXTERIOR VISIBLE REFLECTANCE OF 20%.

5) STAINED SOLID CORE DOOR SHALL BE VT INDUSTRIES RED OAK VENEER CLEAR FINISH.

6) AT EXTERIOR DOORS PROVIDE NEOPRENE SEALS AT HEAD AND JAMB OF DOOR AND OPERABLE SWEEP AT BOTTOM OF DOOR.



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WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS

REVISIONS

PROJECT NUMBER
16121-00

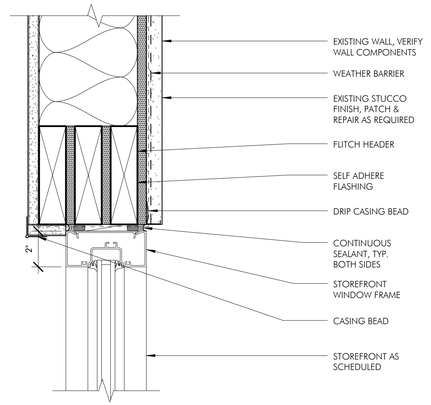
DATE ISSUED
3/21/2017

SHEET TITLE
DOOR SCHEDULE & DETAILS

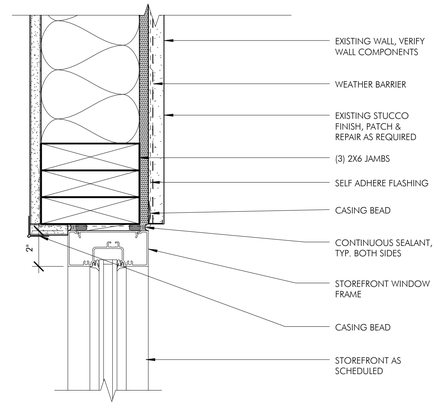
SHEET NUMBER
A500

3/20/2017 11:36 AM
Williamson County, Texas
Bid Pkg 1-4

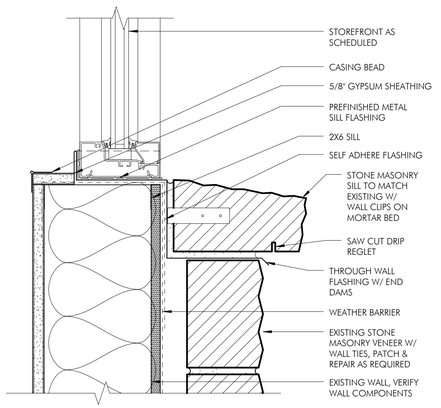
WINDOW SCHEDULE					
TYPE	GLASS TYPE	WIDTH	HEIGHT	SILL HEIGHT	COMMENTS
B	G-1	3' - 0"	3' - 4"	3' - 4"	
C	G-2	3' - 0"	3' - 4"	4' - 2"	



3 JAMB DETAIL
3" = 1'-0"



2 JAMB DETAIL
3" = 1'-0"

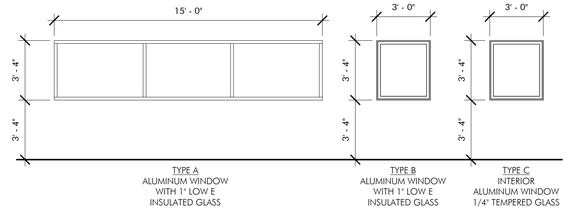


1 SILL DETAIL
3" = 1'-0"

GENERAL NOTES TO WINDOW TYPES:

1) ALL EXTERIOR WINDOWS TO HAVE SHATTER RESISTANT MATERIALS TO MATCH CONTRACT SPECIFICATIONS.

2) GLAZING TYPES-
G1 = 1" LOW-E INSULATED GLASS
G2 = 1/4" CLEAR TEMPERED GLASS
G3 = 1/4" ONE WAY MIRRORED TEMPERED GLASS



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PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
WINDOW SCHEDULE AND DETAILS
SHEET NUMBER
A501

3/20/2017 11:36 AM
Williamson County, Texas
Bid 1703-149

PARTITION TAG IDENTIFICATION:

1) THE ALPHANUMERIC DESIGNATION IN EACH PARTITION TYPE SYMBOL DESCRIBES THE PARTITION CONSTRUCTION AND THICKNESS.

2) WHERE FIRE RESISTIVE GYPSUM WALLBOARD CONSTRUCTION IS INDICATED, PROVIDE GYPSUM WALLBOARD PER UL DESIGN # AND PROVIDE RATED JOINT ASSEMBLY AT TOP AND BOTTOM AND ALL PENETRATIONS, TYPICAL BOTH SIDES OF PARTITION.

3) WHERE GYPSUM WALLBOARD IS THE SUBSTRATE FOR APPLICATION OF CERAMIC TILE OR STONE/MASONRY VENEER, PROVIDE CEMENTITIOUS BACKER BOARD.

4) WHERE MOISTURE RESISTIVE CONSTRUCTION IS INDICATED, WET AREAS I.E. JANITOR MOP SINK, RESTROOMS, ETC., PROVIDE MOISTURE RESISTANT GYPSUM BOARD. WHERE FIRE RESISTIVE CONSTRUCTION IS INDICATED, PROVIDE FIRE RESISTIVE M/R BOARD.

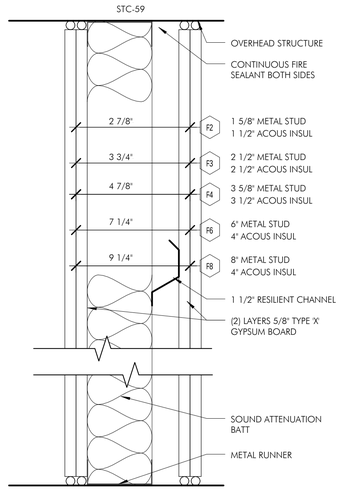
5) REFER TO FINISH SCHEDULE AND INTERIOR ELEVATIONS FOR APPLIED FINISHES TO PARTITIONS

6) REFER TO STRUCTURAL FOR LIMITING HEIGHT OF WOOD STUD PARTITIONS.

7) PROVIDE TRIPLE STUDS AT ALL EXTERIOR OPENINGS.

PARTITION TYPE F

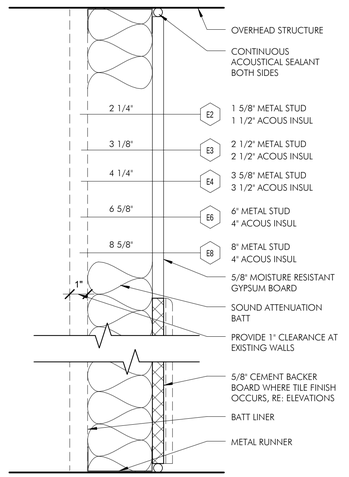
DESCRIPTION: TWO LAYERS OF 5/8" TYPE 'X' GYPSUM BOARD BOTH SIDES ON METAL STUD WITH SOUND ATTENUATION BATT FULL HEIGHT.



6 PARTITION TYPE F
3" = 1'-0"

PARTITION TYPE E

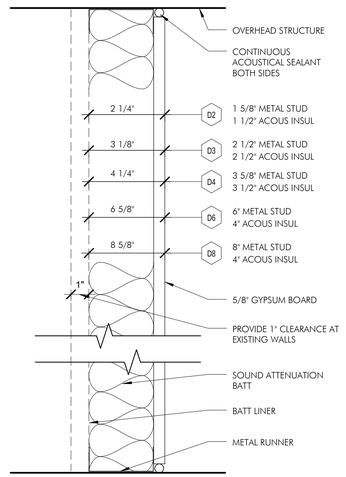
DESCRIPTION: ONE LAYER OF 5/8" MOISTURE RESISTANT GYPSUM BOARD ON METAL STUD WITH STC-45 SOUND ATTENUATION BATT FULL HEIGHT. PROVIDE 5/8" CEMENT BACKER BOARD IN LIEU OF GYPSUM BOARD WHERE TILE FINISH OCCURS.



5 PARTITION TYPE E
3" = 1'-0"

PARTITION TYPE D

DESCRIPTION: ONE LAYER OF 5/8" GYPSUM BOARD ON METAL STUD WITH STC-45 SOUND ATTENUATION BATT FULL HEIGHT.



4 PARTITION TYPE D
3" = 1'-0"

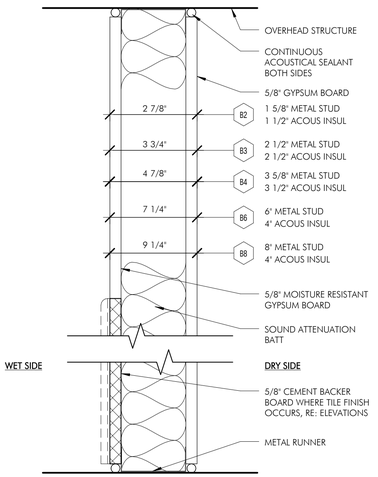
PARTITION TYPE C

NOT USED

3 PARTITION TYPE C
3" = 1'-0"

PARTITION TYPE B

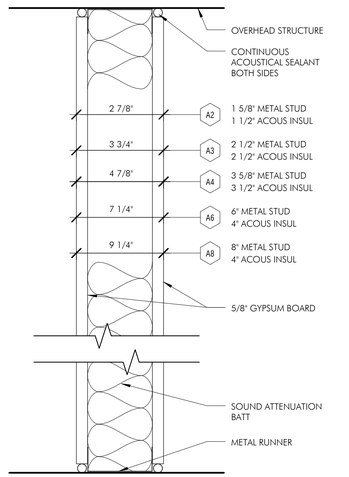
DESCRIPTION: ONE LAYER OF 5/8" MOISTURE RESISTANT GYPSUM BOARD WET SIDE AND 5/8" GYPSUM BOARD DRY SIDE ON METAL STUD WITH STC-45 SOUND ATTENUATION BATT FULL HEIGHT. PROVIDE 5/8" CEMENT BACKER BOARD IN LIEU OF GYPSUM BOARD WHERE TILE FINISH OCCURS.



2 PARTITION TYPE B
3" = 1'-0"

PARTITION TYPE A

DESCRIPTION: ONE LAYER OF 5/8" GYPSUM BOARD BOTH SIDES ON METAL STUD WITH STC-45 SOUND ATTENUATION BATT FULL HEIGHT.



1 PARTITION TYPE A
3" = 1'-0"

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3/21/2017

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PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
TYPICAL INTERIOR PARTITION LEGEND

SHEET NUMBER
A600

3/20/2017 11:36 AM
Williamson County, Texas
Bid 1703-149
p. 23

FINISH SCHEDULE								
ROOM NO.	ROOM	FLOOR	BASE	WALL NORTH	WALL EAST	WALL SOUTH	WALL WEST	CEILING
1	WAITING	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
2	WORK	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
3	CORRIDOR	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
4	STORAGE	VCT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
5	OFFICE	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
6	VAULT	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
7	RESTROOM	CT-1	CWT-1	CWT-1	CWT-1	CWT-1	CWT-1	ACT-2
8	BREAK	VCT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
9	COPY/WORK	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
10	WORK	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
11	DRIVE THRU	CPT-1	RB-1	P-1	P-1	P-1	P-1	ACT-1
12	EQUIPMENT	SC-1	N/A	P-1	P-1	P-1	P-1	N/A

FINISH LEGEND

FLOOR:
SC-1 SEALED CONCRETE
CPT-1 CARPET TILE: BASIS OF DESIGN: MANNINGTON COMMERCIAL / ENTWINED / HUSK / 24" X 24" / ACORN / 84334
VCT-1 VINYL COMPOSITION TILE: BASIS OF DESIGN: MANNINGTON COMMERCIAL / TOUCHSTONE / WHEAT / 9123
CT-1 CERAMIC TILE: BASIS OF DESIGN: DALTILE / GLAZED CERAMIC / SKYBRIDGE / 18" X 18" / OFF WHITE / SY95

BASE:
RB-1 4" RUBBER BASE: BASIS OF DESIGN: ROPPE PINNACLE / TS / COLOR TBD

WALL:
P-1 PAINT: BASIS OF DESIGN: SHERWIN WILLIAMS / EG-SHEL / COLOR TBD
P-2 PAINT: SHERWIN WILLIAMS / EG-SHEL / COLOR TBD
CWT-1 CERAMIC WALL TILE: BASIS OF DESIGN: DALTILE / GLAZED CERAMIC / SKYBRIDGE / 10 X 14 / GRAY / SY98

CEILING:
ACT-1 ACOUSTIC CEILING TILE: 2X2/TEGULAR EDGE/15/16" THICK
ACT-2 MOISTURE RESISTANT ACOUSTIC CEILING TILE: 2X2/TEGULAR EDGE/15/16" THICK

MISCELLANEOUS:
SS-1 SOLID SURFACE: BASIS OF DESIGN: WILSONART / BEIGE TEMPEST/ 1530TM
PL-1 PLASTIC LAMINATE: BASIS OF DESIGN: WILSONART / FLORENCE WALNUT / 7993
PL-2 PLASTIC LAMINATE: TBD

GENERAL NOTES TO FINISH FLOOR PLAN:

1) NO SUBSTITUTIONS OF FINISHES ARE ALLOWED WITHOUT ARCHITECT AND OWNER APPROVAL.

2) REFER TO ELEVATIONS FOR ADDITIONAL FINISH INFORMATION.

3) CONTRACTOR TO SUBMIT (3) SAMPLES OF ALL FINISHES ON APPROPRIATE SUBSTRATE TO ARCHITECT FOR APPROVAL PRIOR TO ORDERING, EACH SUBMITTAL MUST BE MIN. 12" X 12".

4) ALL MATERIALS TO BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS TO ACCOMPLISH WARRANTY.

5) CONTRACTOR TO PREPARE SLAB FOR INSTALLATION OF NEW FLOOR FINISH.

6) ALL FLOOR FINISH TRANSITIONS SHALL OCCUR AT CENTER OF DOORWAYS, U.N.O.

7) ALL CARPET SEAMS TO BE SEALED WELL.

8) ALL CARPET SHALL BE FROM THE SAME DYE LOT.

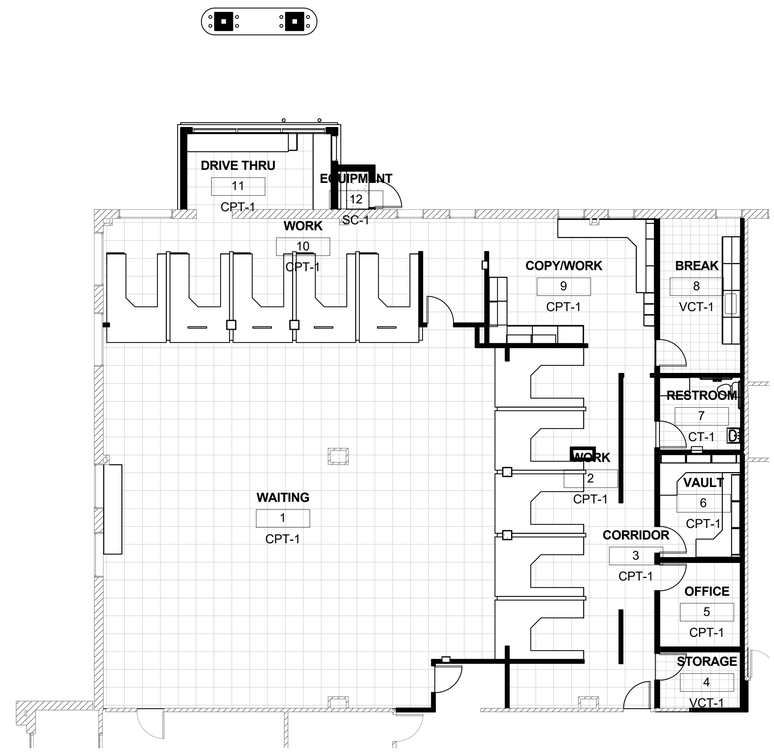
9) RUBBER OR VINYL BASE SHALL BE BEVELED, NOT WRAPPED AT INSIDE CORNERS. BASE TO COME IN ROLL FORM.

10) ALL PAINTED WALLS AND COLUMNS TO RECEIVE ONE COAT OF PRIMER AND TWO COATS OF SPECIFIED PAINT, U.N.O.

11) ALL PAINT BIDS SHALL INCLUDE A ONE TIME TOUCH UP AFTER THE WORK OF ALL TRADES HAS BEEN COMPLETED. WALLS WITH NOTICEABLE TOUCH UP MARKS SHALL BE FULLY PAINTED.

12) THE CONTRACTOR IS RESPONSIBLE FOR FINAL CLEANING OF ALL FINISHES IN ALL AREAS PRIOR TO FINAL OCCUPANCY.

13) CONTRACTOR TO PROVIDE MAINTENANCE INSTRUCTIONS FOR ALL INTERIOR/SPECIAL FINISHES.



1 FINISH PLAN
1/8" = 1'-0"

MODE design company
1102 s austin ave, suite 103
georgetown, tx 78626
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+ 1 512 733 1150

REGISTERED ARCHITECT
RYAN HANSANUWAT
22737
STATE OF TEXAS
3/21/2017

TAX OFFICE - CEDAR PARK

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

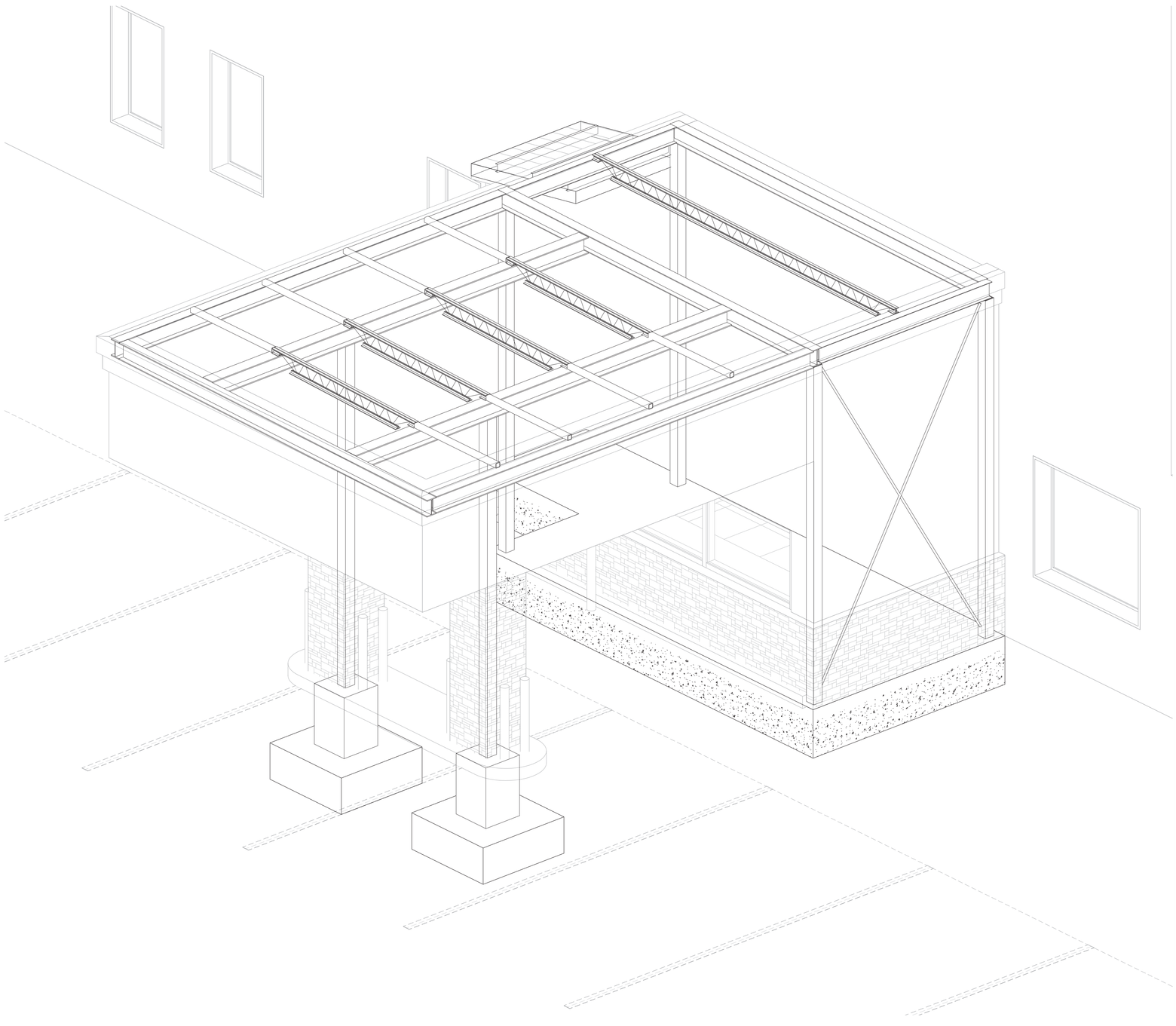
PROJECT NUMBER
16121-00
DATE ISSUED
3/21/2017
SHEET TITLE
FINISH PLANS

SHEET NUMBER
A601

3/20/2017 11:36 AM
Williamson County, Texas
Bid THD-149
9-24

3/20/2017 11:36 AM

STRUCTURAL SHEET INDEX



DRAWING SYMBOLS

- LOAD BEARING MASONRY WALL
- WOOD BLOCKING
- WELDED WIRE FABRIC
- SPAN DIRECTION OF HOLLOW CORE SLABS
- COLUMN GRIDLINE & GRID DESIGNATIONS — GRID DESIGNATION
- DETAIL TARGETS — DETAIL NUMBER, SHEET NUMBER
- EARTH/COMPACT FILL
- BEAM SPLICE LOCATION
- BEAM MOMENT CONNECTION
- PIER DIAMETER/EMBEDMENT INTO LIMESTONE STRATA
- TILTWALL PANEL NUMBER
- SECTION CUTS — SECTION NUMBER, SHEET NUMBER
- ELEVATION TARGET — SHEET NUMBER, ELEVATION NUMBER
- REVISION CLOUDS — REVISED AREA CLOUDED
- 12" X 12" BLOCKOUT FOR PLUMBING, REF. ARCHITECTURAL OR PLUMBING DRAWINGS FOR LOCATION
- CURB STEP
- TRENCH STEP
- STEP W/ SLOPE
- STEP DOWN
- SLOPE DOWN
- EXISTING CONDITION
- MECHANICAL UNIT(S)

ABBREVIATIONS

A	A.B.	ANCHOR BOLT
	ALT.	ALTERNATE
	ARCH.	ARCHITECT(URAL)
B	B.S.	BOTH SIDES
	BBE	BOTTOM BEAM ELEVATION
	BLKG.	BLOCKING
	BLDG.	BUILDING
	BM.	BEAM
	BOT.	BOTTOM
	BRG.	BEARING
	BSMT.	BASEMENT
	BTWN.	BETWEEN
	BLK.	BLOCK
C	C.J.	CONTROL JOINT
	CL	CENTER LINE
	CLR.	CLEAR(ANCE)
	C.M.U.	CONCRETE MASONRY UNIT
	C.B.	CONCRETE BLOCK
	COL.	COLUMN
	CONC.	CONCRETE
	CONN.	CONNECTION
	CONST.	CONSTRUCTION
	CONT.	CONTINOUS
	C.I.P.	CAST IN PLACE
	COMP.	COMPOSITE
D	DET.	DETAIL
	DIA.	DIAMETER
	DIAG.	DIAGONAL
	DN.	DOWN
	DWG.	DRAWING
	DBL.	DOUBLE
	D.L.	DEAD LOAD
	DO.	DITTO
E	E	EAST
	EA.	EACH
	E.S.	EACH SIDE
	ELEV.	ELEVATION
	EQ.	EQUAL
	EXIST.	EXISTING
	EXP.	EXPANSION
	EXT.	EXTERIOR
F	FD.	FLOOR DRAIN
	FDN.	FOUNDATION
	FTG.	FOOTING
	FUT.	FUTURE
	F.S.	FAR SIDE
	FAB.	FABRICATE (OR)
	FLG.	FLANGE
	F.O.B.	FACE OF BRICK
G	GA.	GAGE, GAUGE
	GALV.	GALVANIZED
	G.C.	GENERAL CONTRACT(OR)
	G.B.	GRADE BEAM
H	H.C.A.	HEADED CONCRETE ANCHOR
	HORIZ.	HORIZONTAL
	HT.	HEIGHT
	H.S.	HEADED STUDS
	HSS	TUBE STEEL
I	INFO.	INFORMATION
	I.F.	INSIDE FACE
J	JST.	JOIST
	JT.	JOINT
	J/BRG	JOIST BEARING
K	K	KIP
	K.O.	KNOCK-OUT
	K.S.I.	KIPS PER SQ. INCH
L	LLH	LONG LEG HORIZONTAL
	LLV	LONG LEG VERTICAL
	L.L.	LIVE LOAD
M	MIN.	MINIMUM
	MAS.	MASONRY
	MAX.	MAXIMUM
	MANUF.	MANUFACTURER
	MEZZ.	MEZZANINE
	MISC.	MISCELLANEOUS
	M.O.	MASONRY OPENING
	MATL.	MATERIAL
	MTL.	METAL
N	N	NORTH
	NTS	NOT TO SCALE
	N.S.	NEAR SIDE
	N.I.C.	NOT IN CONTRACT
O	O.C.	ON CENTER(S)
	O.C.E.W.	ON CENTER EACH WAY
	O.S.	OUTSIDE
	OPNG.	OPENING
	OPP.	OPPOSITE
	O.F.	OUTSIDE FACE
P	P.C.	PRECAST CONCRETE
	PERIM.	PERIMETER
	P.J.	PANEL JOINT
	PL	PLATE
	PLF	POUNDS PER LINEAR FOOT
	PMB	PRE-ENGINEERED METAL BUILDING
	PROJ.	PROJECTION
	PSF.	POUNDS PER SQ. FOOT
	PSI.	POUNDS PER SQ. INCH
	P.T.	PRESSURE TREATED
Q	QTY.	QUANTITY
R	R	RADIUS
	R.D.	ROOF DRAIN
	REV.	REVISION, REVISED(D)
	REINF	REINFORCED(D), (ING)
	REF.	REFERENCE
	REQ'D.	REQUIRED
S	S	SOUTH
	SCHED.	SCHEDULE
	SIM.	SIMILAR
	SQ.	SQUARE
	STD.	STANDARD
	STL.	STEEL
	STRUCT.	STRUCTURAL
	SPA.	SPACE(S)
	S.L.	SNOW LOAD
T	TEMP.	TEMPORARY
	TYP.	TYPICAL
	T.O.	TOP OF
	TBE.	TOP OF BEAM ELEVATION
	TDE.	TOP OF DECK ELEVATION
	TFE.	TOP OF FOOTING ELEVATION
	TSE.	TOP OF STEEL ELEVATION
	T&B	TOP AND BOTTOM
	T&G	TONGUE AND GROOVE
U	UNEXC.	UNEXCAVATED
	U.N.O.	UNLESS NOTED OTHERWISE
V	VERT.	VERTICAL
W	W	WEST
	w/	WITH
	W.P.	WORK POINT
	W.W.F.	WELDED WIRE FABRIC

DRAWING INDEX

S000 STRUCTURAL SHEET INDEX
S001 STRUCTURAL NOTES
S100 FND/FRM PLAN
S200 FOUNDATION DETAILS
S300 FRAMING DETAILS
S400 ELEVATIONS

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WILLIAMSON CO. ANNEX ADDITION

350 DISCOVERY BLVD. #101,
CEDAR PARK, TEXAS 78613

Williamson County, Texas

PROJECT PHASE
Project Status
REVISIONS

STATE OF TEXAS
LAURENCE J. FISHER
50110
REGISTERED
PROFESSIONAL ENGINEER
2/22/17

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LARRY J. FISHER, P.E. 50110

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JOB NO. 17001

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"Bringing Structure to the World"

PROJECT NUMBER

DATE ISSUED
02/22/2017

SHEET TITLE
STRUCTURAL SHEET INDEX

SHEET NUMBER
S000

3/2/2017 11:36 AM

STRUCTURAL NOTES

I. DESIGN DATA

A. BUILDING CODE
INTERNATIONAL BUILDING CODE 2012 EDITION WITH CITY OF CEDAR PARK, TEXAS AMMENDMENTS.

B. DESIGN LOADS

1.	Wind Load	Risk Category	II
		Exposure	B
		Design Wind Speed	115 MPH
2.	Roof Loads		
		Live Load (L.L)	20 PSF**
		Dead Load (Design) (D.L)	20 PSF
3.	Floor Loads		
		Live Load	100 PSF*
		Dead Load (Superimposed)	5 PSF
		Partitions	20PSF
		Storage Mezzanines	100 PSF
4.	Stairs, public corridors & Lobbies (L.L)		100 PSF
5.	Internal Pressure Coefficient		0.18 PSF
6.	Seismic Zone	Design Cat.	A
		Site Class	C

*Reduced Per I.B.C. SEC. 1607.9
** Reduced Per I.B.C. SEC. 1605.3

The contractor shall verify all dimensions and shall coordinate all structural plans and details with the architect before starting work. The engineer shall be notified of any discrepancies prior to construction.

The structural systems of the floor and roof are designed to perform as a complete unit. During demolition and repair of these structures, structural components may be unstable and it is the responsibility of the contractor to provide temporary shoring and/or bracing as required for the stability of the incomplete structure and for the safety of all on-site personnel.

C. ALTERNATE DESIGNS

Alternate structural systems & details will only be considered, provided they are submitted with calculations certified by a Professional Engineer Registered in the State of the project. The calculations must show the equivalency of the alternate & acceptance of the alternate by the engineer must be in writing.

D. FUTURE EXPANSION

This project is not designed for future expansion.

E. ROOF SLOPE

The roof has not been designed for ponding based on a roof slope of 1/8" per foot.

F. Contractor to verify all conditions at the jobsite and report any discrepancies to the engineer prior to start of any construction.

II. SITE WORK

A. SOIL REPORT

1. No Geotechnical report was available. Foundations are assumed to bear on clean limestone

2. Design net soil bearing capacity is as follows: 2,000 PSF

BUILDING PAD PREPARATION (Slab-On-Grade Areas)

1. Remove all remaining vegetation, surficial clay soil, uncontrolled fill and obstructions from the existing surface of the site to a minimum of 5'-0" outside the building lines to 3'-0".
2. Proof roll exposed subgrade and re-compact all soft areas.
3. Construct a compacted base of select fill overlaying the existing soil with a minimum thickness of 12 inches below the bottom of the slab. The select fill shall be in compliance with the specifications in item 4 below.
4. Bring building areas to planned grade using off-site fill selected and compacted in accordance with the following:
   A. Gradation
      Shall meet or exceed Texas Crushed Stone 1-1/4" screenings.
   B. Plasticity Index
      Material used for the granular fill shall have a plasticity index between 4 and 15.
   C. No organic matter is permitted.
   D. Compaction
      Compact the material to at least 95% of the maximum dry density as determined ASTM D-698 Compact Test. Hold water contents during compaction to –2% to +2% of laboratory optimum and compacted lift thickness of 8 inches maximum.
   E. Approval
      All select fill material shall be approved by the Engineer prior to it being used on the project.

III. FORMS

1. Materials:
   A. Lumber: All lumber and plywood used in the construction of forms for concrete shall be sound, clean and free of surface imperfections, and of sufficient size and thickness to rigidly support the loads involved.
   B. Plywood: Form plywood shall be sound and free of surface imperfections, and shall be manufactured with exterior glue suitable for use in forming concrete.
   C. Accessories: Form ties, clamps and other accessories shall be of such type, size, etc. as will safely support the loads to be encountered. Accessories on exposed faces shall be such as will not leave exposed metal on concrete face.
   D. Form Coating: Equal to Sonneborn Formsaver.
2. Application:
   A. The contractor shall employ an experienced surveyor to supply all necessary lines and levels to insure that all finished concrete work is properly located, straight, true and square.
   B. All vertical concrete surfaces shall be formed with wood, including edges of walks, slabs on grade, steps on grade and exposed portions of grade beams. If the earth will stand vertical and firm during excavating and concreting, no forms need to be constructed for concrete below grade.
   C. Form construction and removal shall conform to the recommendations and requirements of the appropriate sections of ACI Standard 347 and ACI Code 318, latest versions. All form work shall be placed straight, level, plumb and true to line, sufficiently supported, braced and tied to rigidly support the loads involved without movement, and constructed to maximize resistance to shortening of the member. All joints in form work shall be tight an neat to prevent leakage or irregularities in exposed surfaces.
   D. The contractor shall check with all other trades and make certain that all piping, conduit, sockets, inserts, sleeves, anchors, colts, etc., required by the various trades are properly placed and supported to prevent movement during concreting.
   E. The contractor shall obtain the Architect's and the Engineer's review and okay before placing any structural concrete, giving at least 48 hours notice before pours are scheduled. Obtain the Architect's approval before pouring non-structural concrete.
   F. The contractor shall construct form work to adequately support pressure from the wet concrete. Reinforcing shall be installed to the Engineer's satisfaction before placing concrete.
   G. Thoroughly clean all form surfaces in contact with concrete and coat with approved form coating. Oiled forms shall not be used for exposed concrete surfaces which are later to be plastered or rubbed.
   H. Leave all form work in place for a time consistent with recommendations of the American Concrete Institute. In general, the perimeter vertical beam forms may be removed within 24-28 hours after concrete is placed. Should inconsistencies and/or irregularities on the lines, levels or plumb of the concrete occur, the contractor shall make such corrections as the engineer directs, without extra cost to the owner.

IV. REINFORCING MATERIAL PROPERTIES

1. REINFORCING PROPERTIES:

		FY, KSI	ASTM
A.	All bars unless noted	60	A615
B.	Ties & stirrups	60	A615
C.	Welded wire fabric (smooth)	65	A185
D.	Post-tensioning strand	270Fpu	A416
E.	Pre-stressing strand	270Fpu	A416
F.	Weldable rebar	60	A706

V. EXPANSION AND CONTROL JOINTS

A. Control joins are to encompass an area not greater than 400 sq. ft. The minimum distance between control joints is 15'-0". Control joints shall be placed at mid span between grade beams parallel to control joint. Contractor shall submit control joint layout plan for review by architect and engineer prior to construction of slab.

VI. CAST IN PLACE CONCRETE

1. Materials
   A. Cement:
      Portland Cement shall conform to the standard specifications for Portland cement, ASTM Designation C-150, latest version Type I or Type III.
   B. Concrete Aggregates:
      Concrete aggregates shall conform to the specifications for Concrete Aggregates, ASTM C-33, latest version Type I or Type III.
   C. Water:
      Water shall be clean, potable and free of injurious amounts of acids, alkalis or organic materials.
   D. Ready Mixed Concrete:
      Ready Mixed Concrete shall conform to ASTM Specifications C-94, latest version.
   E. Expansion joints (if shown):
      Pre-molded joint filler shall consist of asphalt vegetable fiber and mineral filler between two sheets of asphalt saturated paper and shall meet the requirements of ASTM Specification D-994, latest version.
   F. Admixtures:
      Chemical compounds shall be used as an Admixture to control plastic shrinkage, improved workability and entrain 3 to 5% air. The Admixtures shall contain no chlorides, fluorides or nitrates and shall be formulated by the manufacturer for the job area and weather conditions to control setting time. Admixtures shall conform to ASTM Specifications C-260 and C-494, latest versions. The Admixtures intended for use shall be submitted to the Engineer for approval before any actual mix is made.
2. Place concrete in compliance with practices and recommendations of ACI 304.
   A. Cold Weather Placing: Comply with ACI 306.
   B. Hot Weather Placing: Comply with ACI 305.
   C. Batching, Mixing & Delivery: Comply with ACI C-94.
3. ALL CONCRETE SHALL BE CONSOLIDATED BY USE OF A MECHANICAL VIBRATOR.
4. The maximum time interval between the addition of mixing water and/or cement to the batch, and the placing of the last of the concrete batch in the forms shall not exceed ninety (90) minutes for ambient temperatures below 90 degrees and sixty (60) minutes for ambient temperatures of 90 degrees and above.
5. No concrete shall be placed where the concrete temperature exceeds 90 degrees Fahrenheit, before any water is added at the jobsite.
6. Reinforcing bars shall be designed, fabricated and placed in accordance with the latest ACI Specifications.
7. Continuous reinforcing bars shall have a minimum lap of 40 diameters or 24", whichever is greater.
8. Provide corner bars for all continuous reinforcing bars at all corners with minimum lap of 40 diameters or 24", whichever is greater.
9. Welded Wire Fabric (W.W.F.) shall conform to ASTM A185.
10. Non-shrink grout shall be ready-to use metallic aggregate product requiring only additions of water at the site, and shall have the following attributes:
    A. Be capable of producing a flowable grouting material having no drying shrinkage or settlement at any age.
    B. The compressive strength of the grout (50mm or 2" cubes) shall be not less than 5,000 psi at age 28 days. Store, mix and place non-shrink grout in strict accordance with manufacturer's recommendations, as approved by the Engineer.
11. Provide 1/2" pre-molded expansion joints where new concrete walks about the building, existing curbs and walks.
12. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to form seams or planes of weakness within the section.
13. Where a section cannot be placed continuously, provide construction joints as approved by the Engineer.
14. Place concrete at such a rate that concrete which is being integrated with fresh concrete is still plastic.
15. Deposit concrete as nearly as practicable in its final location to avoid segregation due to re-handling and flowing. Do not subject concrete to any procedure which might cause segregation. Do not use mechanical vibrators to move concrete.
16. Screed concrete which is to receive other construction to the proper level to avoid excessive shimming and grouting.
17. Do not use concrete that has become non-plastic and unworkable, or does not meet the required quality control limits or which has been contaminated by foreign materials.
18. Do not re-temper concrete after initially obtaining the proper slump on any load of concrete.
19. All reinforcing shall be supported on metal supports and securely tied to prevent movement during concreting.
20. All concrete shall be designed and constructed in accordance w/ IBC Chapter 19 & ACI-318, latest editions.
21. Provide extra reinforcing on each face around all openings 24" or larger in all slabs & walls equal to half the interrupted reinforcing bars on each side but not less than 2 - #5 bars with Class B lap but not less than 2 feet beyond edge openings.
22. Provide a 3/4" chamfer on all exposed corners of concrete.
23. The following minimum concrete cover shall be provided for reinforcement:

		MINIMUM COVER IN.
A.	Concrete cast against & permanently exposed to earth:	3"
B.	Concrete exposed to earth or weather:	
	#6 THRU #18 bars	2"
	#5 & smaller bars	
C.	Concrete not exposed to weather or in contact with ground:	1-1/2"
	slabs & walls: #14 & #18 bars	2"
	#11 & smaller bars	1"
	Beams & Columns: Primary reinforcement, ties & stirrups	1"

24. If any ponds, tree wells or abrupt grade changes occur within 5'-0" of perimeter grade beam, the grade beam must be extended a minimum of 12" below the lowest elevation of the grade change.
25. Under-slab vapor barrier shall be StegoWrap 15 mil. Or equal. Vapor retarder shall be installed in accordance with manufacturer's specifications.
26. All anchor bolts and shearwall hold down bolts are to be "wet set". Do not drill any epoxy set hold down or anchor bolts.

VII. CONCRETE MATERIAL PROPERTIES

1. CONCRETE PROPERTIES:

		F'c PSI 28 DAYS	SLUMP INCHES
A.	Footings, piers, grade beams & foundation walls	3000	4 ± 1
B.	Interior slab on grade	3000	5 ± 1
C.	Exterior slab on grade	3000	5 ± 1
D.	Topping & concrete over metal deck	3500	5 ± 1

2. All exterior concrete shall be air entrained to give the concrete an air content of 6 ± 1% by volume.
3. Cast-In-Place concrete shall be regular weight with a minimum compressive strength of 3000 psi at 28 days. The concrete mix design shall have a minimum of 5 sacks of cement for 3000 psi and 5-1/2 sacks for 3500 psi per cubic yard of concrete. The mix design shall be prepared by a testing agency and reviewed by the Engineer prior to placing any concrete. All concrete shall be by one supplier unless approved by the Engineer. The use of Fly Ash is not permitted.
4. Concrete shall have a maximum slump of 5" for slabs and 4" for all other concrete.

VIII. MASONRY

1. All CMU Walls to be reinforced with (1) #5 Vertical at 24" O.C. There shall also be (3) #5 Verticals at each corner, (4) #5 Verticals at each wall intersection and (2) #5 Verticals at each side of each opening, at wall ends and at control joints. There shall be (1) #5 Vertical per CMU block cell at each location noted above with each cell being filled with 3000 psi concrete in 4'-0" lifts maximum.
2. All CMU Walls to be reinforced horizontally with 3/16" Dur-O-Wall at 16' O.C. vertically. Dur-O-Wall to be basic bright wire with deformed side rods. Dur-O-Wall to be fully embedded in the mortar with a minimum of 5/8" cover on exterior faces. All splices shall be a minimum of 6". Bend and hook side rods at ends of walls and at openings.
3. Mortar shall be Type S, with a minimum compressive strength of 1800 psi at 28 days.
4. Control joints shall be placed at a minimum of 24'-0" spacing and at either side of each opening 6'-0" or greater or one side of other openings. Each control joint shall be properly reinforced to provide lateral support.
5. Bond Beams shall be placed at the floor and roof level and at a maximum vertical spacing of 8'-0". The bond beam shall consist of an 8" CMU with (1) #5 continuous and filled with 3000 psi concrete as specified in NOTE VI. CAST IN PLACE CONCRETE.

IX. STRUCTURAL STEEL

1. Structural Steel design and construction shall conform to UBC Chapter 22, - General design requirements. All steel shall be designed, fabricated and erected in accordance with the latest AISC Specifications for Design, Fabrication and Erection of Structural Steel for Buildings.
2. All welding shall be in accordance with the latest American Welding Society Specifications.
3. All structural steel shall be ASTM A992.
4. All bolts shall be ASTM A307.
5. All steel to be given one shop coat of rust inhibitive primer, after fabrication.
6. Structural Steel Supplier is responsible for & shall submit shop drawings for all structural steel.
7. Structural Steel Supplier shall furnish bolts for OSHA connections (see drawings for details).
8. Provide protective asphaltic coating or equal around structural steel below grade.

X. STEEL MATERIAL PROPERTIES

1. STEEL PROPERTIES:

		FY, PSI	ASTM
A.	Structural wide flange shapes	50,000	A992
B.	Other structural shapes, etc.	36,000	A36
C.	High strength bolts, U.N.O.	74,000	A325
D.	Anchor bolts (tensile strength)	60,000	A307
E.	Welding electrodes	E70XX	A233
F.	Deck welding electrodes	E60XX	A233
G.	Structural pipes	36,000	A53, GRADE B
H.	Structural tubes	46,000	A500, Grade B
I.	Headed studs	50,000	A108
J.	Expansion Bolts shall be Epcon Epoxy Anchors or pre-approved equal.		

XI. FRAMING

1. All bolts shall be ASTM A-307.
2. All beam header, rafter and ceiling joist framing lumber shall be No. 1 grade Southern Pine Kiln Dried or better. All column lumber shall be No. 1 Douglas Fir Kiln-Dried or better.
3. All wood connector and hangers shall be as manufactured by Simpson Strong-Tie Co. or equal.
4. All connectors or hangers for pressure treated material shall be stainless steel.
5. All exterior walls and interior shear walls shall be sheathed with a minimum of 7/16-24/48 C-D Exterior Plywood or OSB. Attach to framing with 10d nails @ 6" O.C.
6. All exterior walls and interior shear walls shall be anchored to the foundation with 1/2" x 12" anchor bolts at 48" O.C.
7. All roofs shall be decked with 5/8"-48/24 C-D Exterior Plywood nailed with 6d nails at 6" O.C. at all supports.
8. All wall framing shall be #2 Southern Yellow Pine or better.
9. All roof joists and ceiling joists shall be #2 Southern Yellow Pine or better.
10. No holes, notches or other cuts shall be made in any beam, joist, rafter or other framing member without written approval by the engineer.
11. No hole larger than 1" in diameter will be allowed in any load bearing or any exterior wall stud. 1" diameter and smaller holes shall be located on the centerline of the wide axis and spaced no less than 6" O.C. No other holes will be allowed without the written approval of the engineer.

XII. STEEL JOISTS

1. Steel joists shall be manufactured by a member of SJI.
2. Steel joists shall be designed, fabricated and erected in accordance with the 2005 STEEL JOIST INSTITUTE STANDARD SPECIFICATIONS.
3. No construction loads of any kind shall be placed on unbridged joists.
4. Where columns are not framed in at least two directions with structural steel members, joists at or closest to column lines shall be field bolted to add lateral stability during construction.
5. Provide bridging in accordance with the latest edition of the SJI STANDARD SPECIFICATION AND OSHA REQUIREMENTS.
6. The structural drawings are not stand alone documents. The joist supplier shall coordinate the locations and weights of all mechanical, plumbing, electrical and other equipment with the applicable drawings. The joist supplier shall account for the loads in their design.
7. Steel joist manufacturer shall design roof joists supporting mechanical units for 1.2x mechanical units weights shown. Use (20) PSF live load (non-reducible) unless noted otherwise. Contractor shall verify actual mechanical loads. Notify steel joist manufacturer of any descrepancies.
8. Steel joists shall be designed for a net wind uplift of (15) PSF unless note otherwise.
9. The dead load of miscellaneous rooftop items, including screen wall, skylights, etc. shall be accounted for in the design of the steel roof joists.

XIII. USE AND/OR RELEASE OF STRUCTURAL ENGINEERING ELECTRONIC FILE

The electronic files for the structural engineering documents will not be released for use during construction or for the preparation of shop drawings or submittals. Each supplier or fabricator is responsible for reproducing the information required for their submittal. The duplicating of any part of these documents for inclusion in shop drawings or submittals is also prohibited.

XIV. DETAIL NOTES

Details noted as typical shall apply in all cases unless specifically shown or noted otherwise.

XV. STRUCTURAL REQUIREMENTS FOR SUBMITTALS

The following are submittals required by Engineer. Use plans and spec. book for product list.

1. Select fill material
2. Soil compaction test results
3. Reinforcement & concrete accessories including vapor barrier
4. Concrete mix design
5. Anchor bolts
6. CMU block and accessories
7. Mortar mix design, grout mix design and test results
8. Structural steel
9. Concrete test results

XVI. STRUCTURAL REQUIREMENTS FOR SITE VISITS

Site visits for construction observation will not be made by Engineer until all submittals and/or testing results have been reviewed and accepted by the Engineer. Contractor is responsible for scheduling submittals to allow the Engineer adequate time to review and comment before proceeding with construction.

Representative of Engineering 360 will visit the site at the following stages of construction:

A. After forms, rebar, embeds and other accessories are in place and 48 hours prior to placement of concrete
B. All anchor bolts and embeds are to be set and adequately tied & held in position prior to the start of placing concrete
C. During construction of masonry wall while all phases of the operation are in progress, including laying up of wall courses, pouring cells and constructing bond beams
D. After steel is erected but prior to covering with other materials
E. Framing
F. After decking is in place and attached to the structure, but prior to covering with floor and roof materials

Please refer to specifications or General Notes for project specific instructions.

Contractor shall issue to the engineer a complete project schedule with the above site visits noted and notify the Engineer a minimum of 48 hours prior to the scheduled visit to confirm time and date required visit. Failure of the Contractor to accomplish this notification will not require the engineer to respond on shorter notice, nor will the Contractor proceed without the Engineer performing appropriate site visit. Additionally if the Contractor requests or schedules a site visit and construction is not at the appropriate stage for the Engineer to perform the proper observations, another site visit will be required and scheduled at the Contractor expense for all time and travel expenses of the engineer or his representative. Engineer will not issue any type or form of compliance or concurrence statement for construction without performing the above noted site observations.

Statement of Special Inspections Per IBC 2012 Chapter 17

Per Section 1704.2.3: The applicant shall submit a statement of special inspection in accordance with Section 107.1 as a condition of permit issuance. The statement shall be in accordance with Section 1704.3.

PROJECT ADDRESS: 350 DISCOVERY BLVD. #101,
CEDAR PARK, TEXAS 78613

SECTION 1705: REQUIRED VERIFICATION AND INSPECTION

Section 1705 of the International Building Code 2012, the following is a list of the required special inspections applicable for this project:

2012 IBC SECTION	INSPECTION/ ASSURANCE	TYPE OF SPECIAL INSPECTION AND EXTENT	APPLICABLE	NON APPLICABLE
1705.2	AISC 360	Steel Construction	X	
1705.2.2	IBC TABLE 1705.2.2	Steel Construction Other Than Structural Steel		X
1705.2.2.1.1	AWS D1.3	Cold-Formed Welding Inspection		X
1705.2.2.1.2	AWS D1.4 and ACI 318	Reinforced Steel Welding Inspection		X
1705.2.2.2	Indicated in Section	Cold-Formed Steel Trusses Spanning 60 Feet or Greater		X
1705.3	IBC TABLE 1705.3	Concrete Construction	X	
1705.4	Inspection: TMS 420/ACI 530/ASCE 5 Assurance: TMS 602/ACI 530.1/ASCE 6	Masonry Construction	X	
1705.5	Indicated in Section	Wood Construction: High-Load Diaphragm/Metal-Plate-Connected Wood Trusses Spanning 60 Feet or Greater		X
1705.6	Indicated in Section	Soils	X	
1705.7	Indicated in Section	Driven Deep Foundations		X
1705.8	Indicated in Section	Cast-in-Place Deep Foundations (Piers)		X
1705.9	Indicated in Section	Helical Pile Foundations		X
1705.10	Indicated in Section	Special Inspection for Wind Resistance		X
1705.11	Indicated in Section	Special Inspection for Seismic Resistance		X
1705.12	Indicated in Section	Testing and Qualification for Seismic Resistance		X
1705.13	Indicated in Section	Sprayed Fire-Resistance Materials		X
1705.14	AWCI 12-B	Mastic and Intumescent Fire-Resistance Coatings		X
1705.15	Indicated in Section & ASTM E 2570	Exterior Insulation and Finish Systems/Water-Resistive Barrier Coating		X
1705.16	Indicated in Section	Fire-Resistance Penetrations and Joints		X
1705.17	Indicated in Section	Special Inspection for Smoke Control		X

Special Inspection Reports are to conform to the requirements staed in Section 1704.2.4.

Exceptions of Special Inspection as permitted per Section 1704.2

1. Special inspections are not required for construction of a minor nature or as warranted by
2. conditions in the jurisdiction as approved by the building official.
   Unless otherwise required by the building official, special inspections are not required for
3. Group U.
   Special inspections are not required for portions of structures designed and constructed in accordance with the cold-formed steel light-frame construction provisions of IBC Section 2211.7 or the conventional light-frame construction provisions of IBC Section 2308.

Additional Special inspections shall also be required for proposed work that is, in the opinion of the building official, unusual in nature.

Additional Special Inspection per International Building Code 2012, the following is a list of the required special inspections applicable for this project:

2012 IBC SECTION	DETAILS	TYPE OF SPECIAL INSPECTION AND EXTENT	APPLICABLE	NON APPLICABLE
1706		Design Strengths of Materials		X
1707		Alternative Test Procedures		X
1708		Test Safe Load		X
1709		In-Situ Load Tests		X
1710		Preconstruction Load Tests		X
1711		Material and Test Standards		X

Per Section 1704.5 Structural Observations:

Prior to the commencement of observations, the structural observer shall submit to the building official a written statement identifyingthe frequency and extent of structural observations.

At the conclusion of work included in the permit, the structural observer shall submit to the building official a written statement that the site visits have been made and identified any reported noting deficiencies which, to the best of the structural observer's knowledge, have not been resolved.

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ryan@modedc.us | www.modedc.us
+1 512 733 1150

WILLIAMSON CO. ANNEX
ADDITION
350 DISCOVERY BLVD. #101,
CEDAR PARK, TEXAS 78613

PROJECT PHASE
Project Status
REVISIONS

PROJECT NUMBER

DATE ISSUED
02/22/2017

SHEET TITLE
STRUCTURAL NOTES

SHEET NUMBER
S001

STATE OF TEXAS
LAURENCE J. FISHER
50110
REGISTERED
PROFESSIONAL ENGINEER
2/22/17
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360 ENGINEERING INC.
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Round Rock, TX 78665
Phone (512) 244-1966
Fax (512) 388-3698
TBPE Registration No. F-12702
JOB NO. 17001
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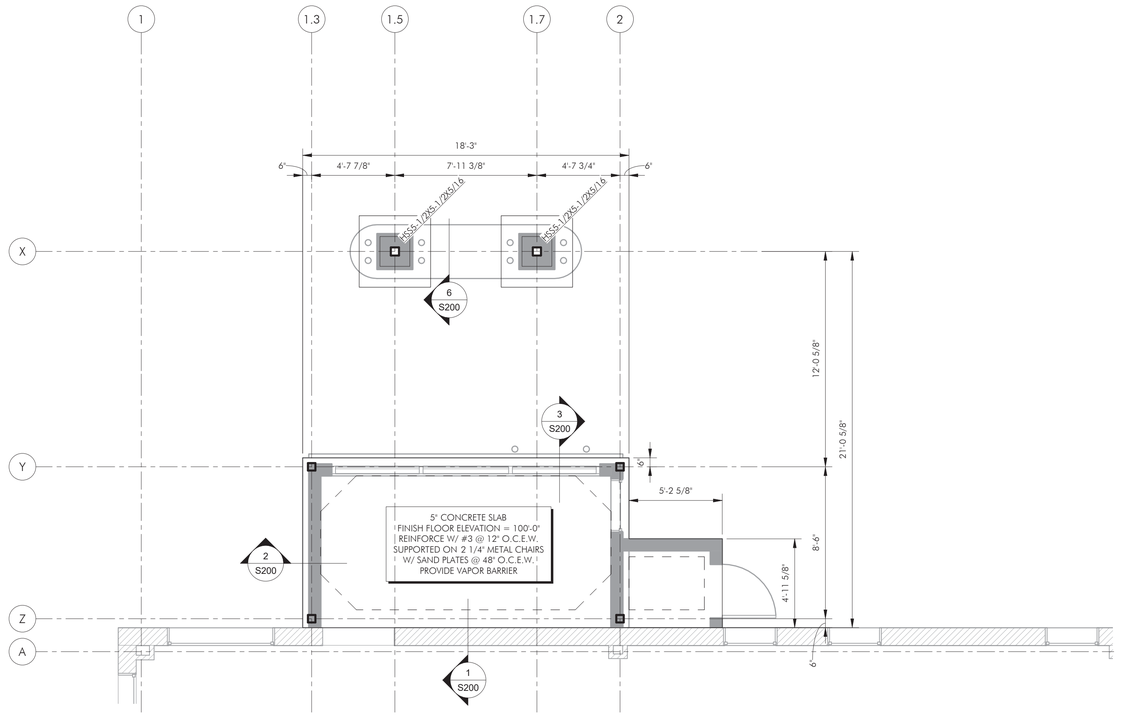
Williamson County Department - Texas
BID #1701-049

3/20/2017 11:36 AM



PLAN NOTES:

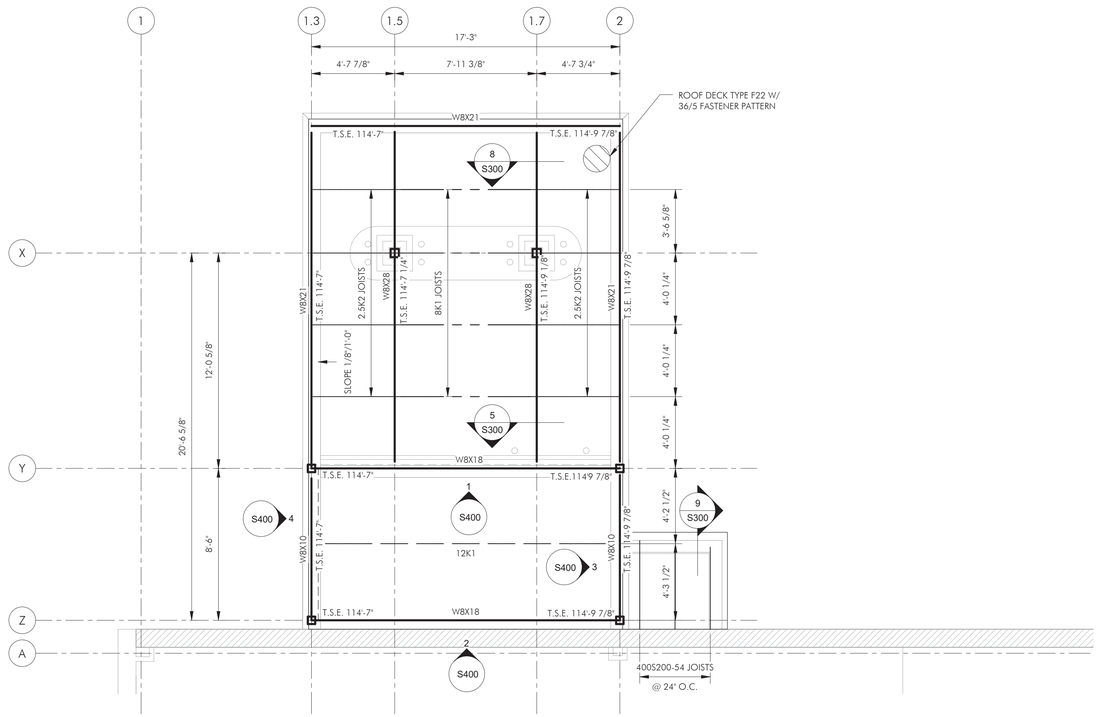
1. REFER TO CIVIL SITE PLANS FOR ACTUAL FINISH FLOOR ELEVATIONS. ASSUMED ELEVATION OF 100'-0" FOR ALL SLAB AREAS UNLESS NOTED ON FOUNDATION PLAN OR IN ARCHITECTURAL PLANS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATIONS OF SLAB DROPS AND SLOPES AND FOR COORDINATION OF ALL SLAB AND GRADE BEAM PENETRATIONS.
2. PROVIDE CORNER BARS IN GRADE BEAMS PER DETAIL 8/S200.
3. REFER TO DETAIL 9/S200 FOR ALL PIPE/CONDUIT IN THE FOUNDATION.
4. REFER TO DETAIL 10 AND 11/S200 FOR GRADE BEAM PENETRATIONS.
5. ALL COLUMNS TO BE HSS5X5X1/4 U.N.O.

NORTH

1

1/4" = 1'-0"

FOUNDATION PLAN



NORTH

2

1/4" = 1'-0"

ROOF FRAMING PLAN

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WILLIAMSON CO. ANNEX ADDITION

350 DISCOVERY BLVD. #101,
CEDAR PARK, TEXAS 78613

PROJECT PHASE
Project Status
REVISIONS

PROJECT NUMBER

DATE ISSUED
02/22/2017
SHEET TITLE

FND/FRM PLAN

SHEET NUMBER

S100

STATE OF TEXAS
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2/22/17
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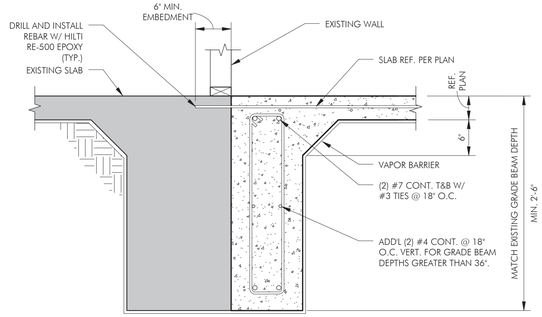
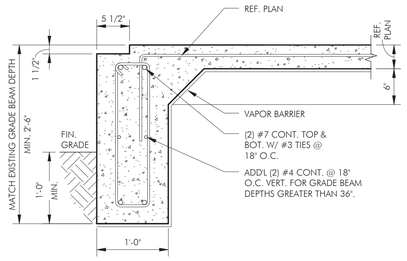
Williamson County, Texas
B04-1103-149



1 SECTION

1" = 1'-0"



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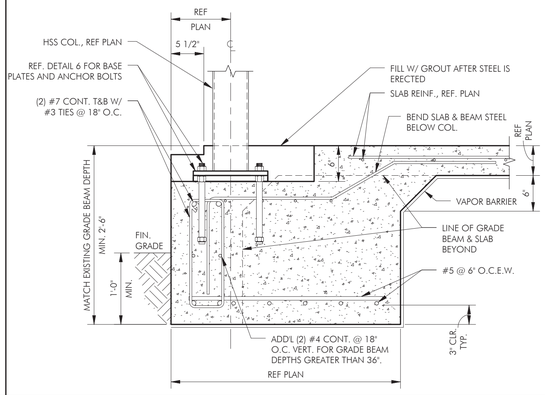

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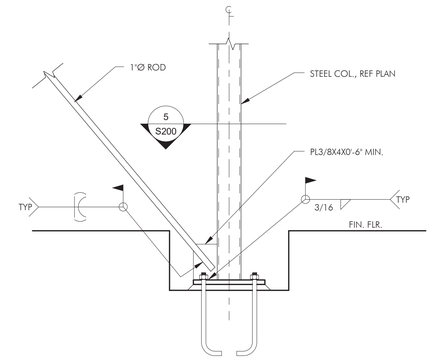

4 TYP. BRACING CONNECTION

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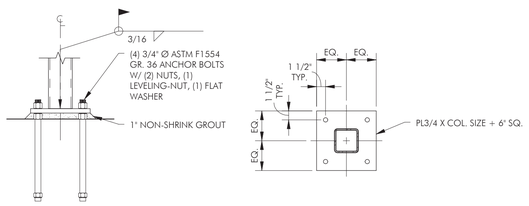

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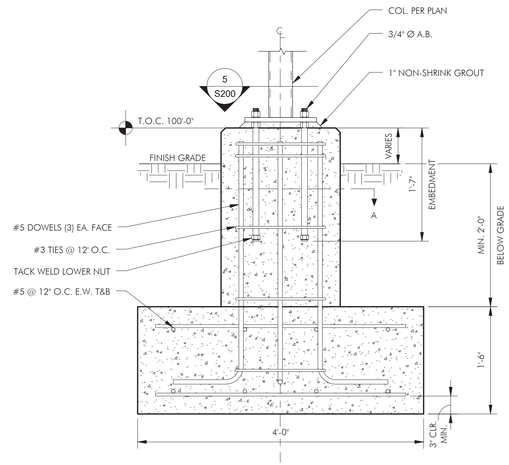

6 SECTION

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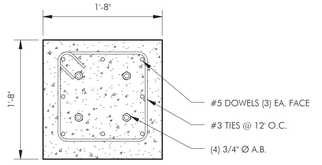
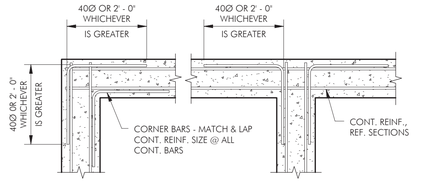


SECTION A



CORNER DISCONTINUOUS INTERSECTION

7 TYP. GRADE BEAM REINF. DETAIL

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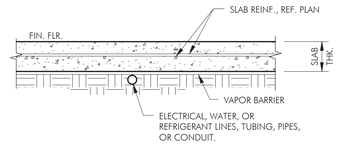

8 TYPICAL SLAB OVER UTILITIES DETAIL

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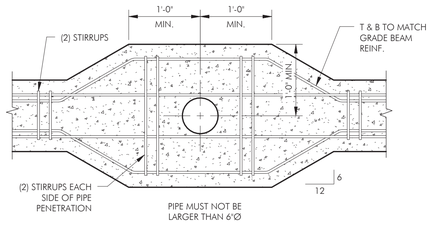

GRADE BEAM PLAN

9 TYP. GRADE BM. PENETRATION DETAIL

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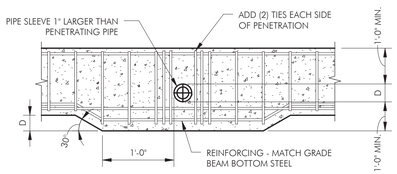

10 TYP. GRADE BM. PENETRATION DETAIL

1" = 1'-0"

MODE design company
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ryan@modedc.us | www.modedc.us
+1 512 733 1150

WILLIAMSON CO. ANNEX ADDITION

350 DISCOVERY BLVD. #101, CEDAR PARK, TEXAS 78613

Williamson County, Texas

PROJECT PHASE
Project Status
REVISIONS

PROJECT NUMBER

DATE ISSUED
02/22/2017

SHEET TITLE
FOUNDATION DETAILS

SHEET NUMBER
S200

STATE OF TEXAS
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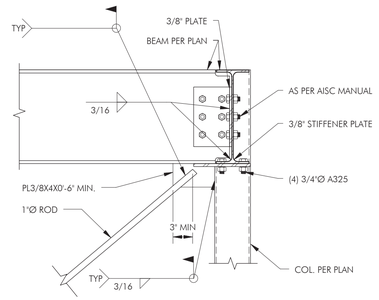

1 SECTION
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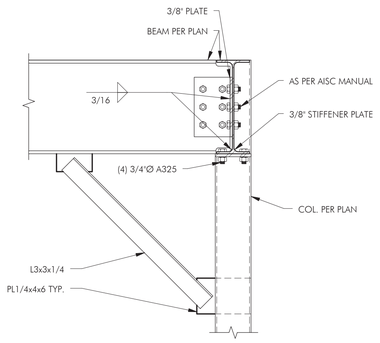

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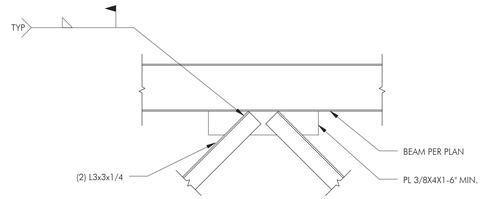

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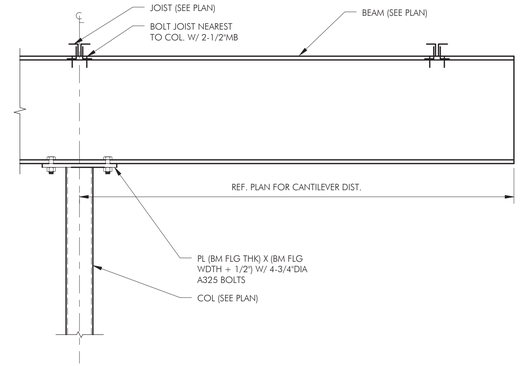

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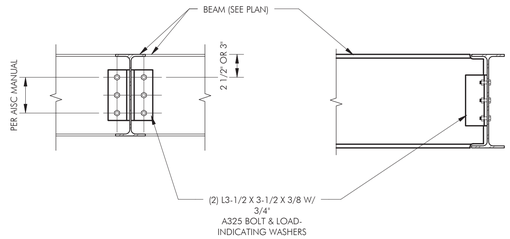
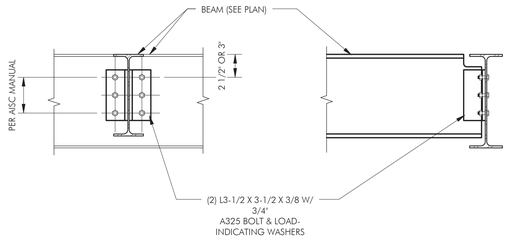
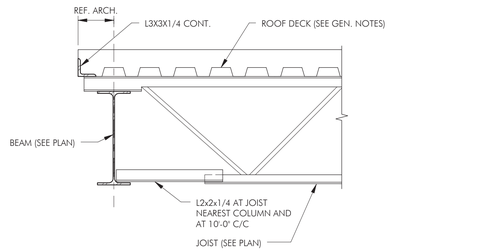


5 TYP. BEAM TO BEAM CONNECTION
1" = 1'-0"



6 TYP. BEAM TO BEAM CONNECTION
1" = 1'-0"



7 SECTION
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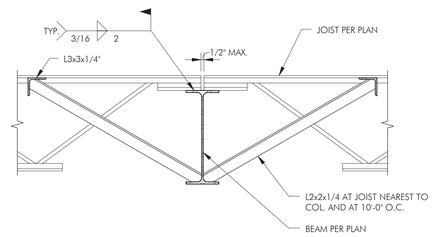

8 SECTION
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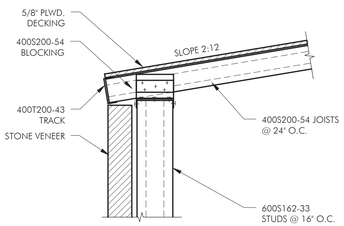
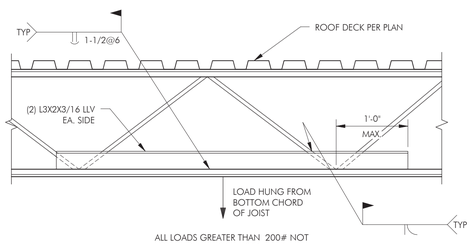
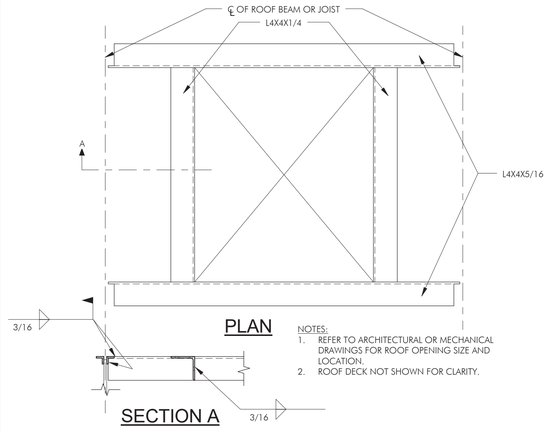


9 SECTION
1" = 1'-0"



10 TYP. JOIST REINF. DETAIL
1" = 1'-0"



11 TYPICAL ROOF HATCH OPENING
1" = 1'-0"

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WILLIAMSON CO. ANNEX ADDITION

350 DISCOVERY BLVD. #101,
CEDAR PARK, TEXAS 78613

Williamson County, Texas

PROJECT PHASE
Project Status
REVISIONS

PROJECT NUMBER

DATE ISSUED
02/22/2017

SHEET TITLE
FRAMING DETAILS

SHEET NUMBER
S300

STATE OF TEXAS
LAURENCE J. FISHER
50110
REGISTERED
PROFESSIONAL ENGINEER
2/22/17
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360 ENGINEERING INC.
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Fax (512) 388-3698
TBPE Registration No. F-12702
JOB NO. 17001
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"Bringing Structure to the World"

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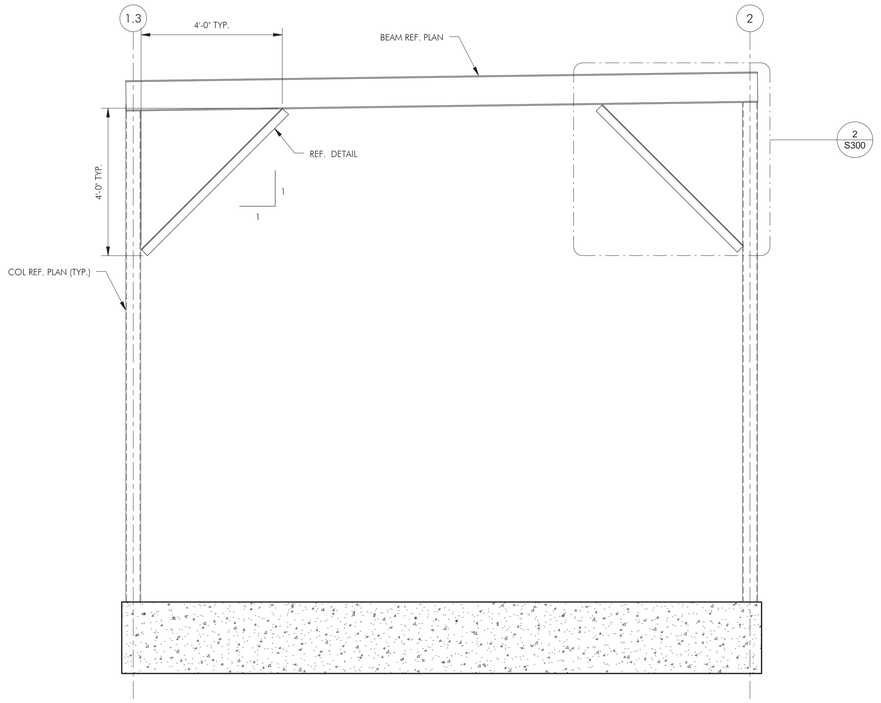
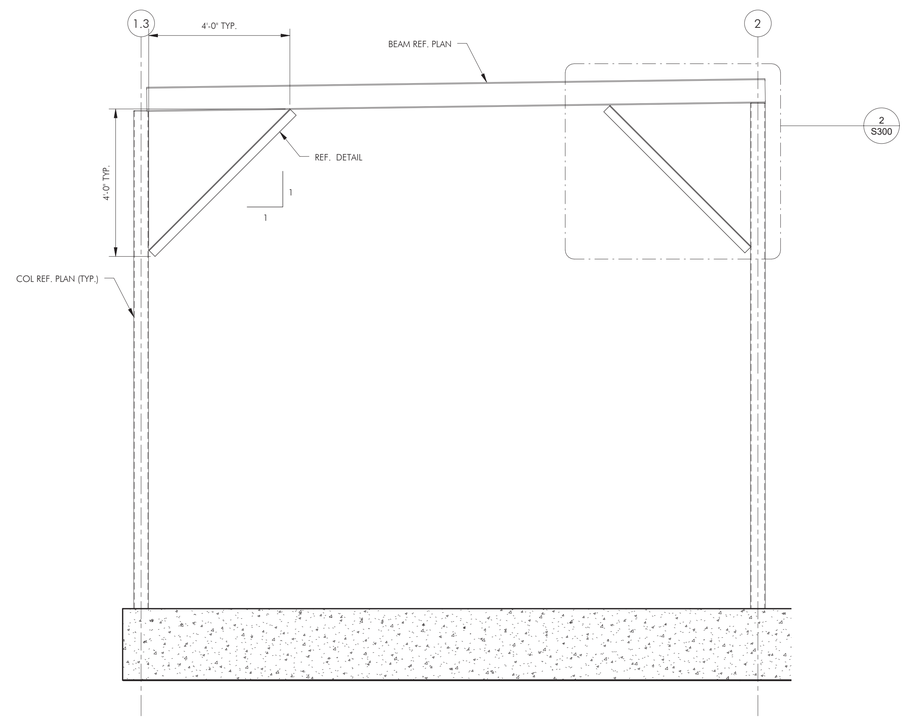
3/20/2017 11:36 AM



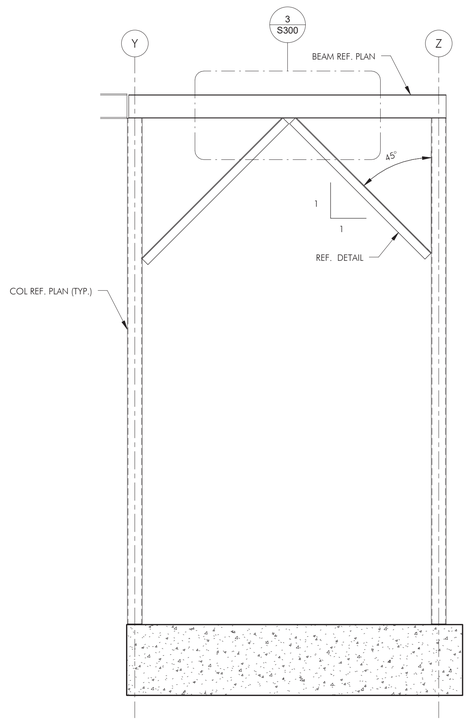
1 K - BRACING 1.2-2 COL. LINE Y

1/2" = 1'-0"



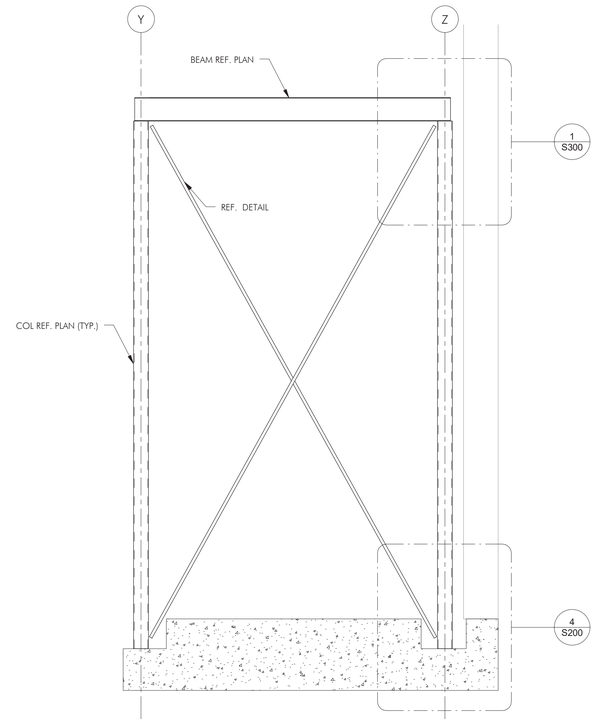
2 K - BRACING 1.3-2 COL. LINE Z

1/2" = 1'-0"



3 K - BRACING Y-Z COL. LINE 2

1/2" = 1'-0"



4 X - BRACING Y-Z COL. LINE 1.3

1/2" = 1'-0"

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WILLIAMSON CO. ANNEX ADDITION

350 DISCOVERY BLVD. #101,
CEDAR PARK, TEXAS 78613

Williamson County, Texas

PROJECT PHASE
Project Status
REVISIONS

PROJECT NUMBER

DATE ISSUED
02/22/2017
SHEET TITLE

ELEVATIONS

SHEET NUMBER

S400

STATE OF TEXAS
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BM-1043-149

GENERAL NOTES

A. THE CONTRACTOR IS TO VISIT THE SITE PRIOR TO BID TO FAMILIARIZE HIMSELF WITH ALL CONDITIONS AS THEY EXIST. SUBMISSION OF BID INDICATES THE CONTRACTOR'S UNDERSTANDING OF EXISTING CONDITIONS AND HIS WILLINGNESS TO WORK WITH THESE CONDITIONS. NO ADDITIONAL TIME OR MONEY WILL BE ALLOTTED DUE TO LACK OF COORDINATION WITH EXISTING CONDITIONS OR OTHER TRADES.

B. CONTRACTOR IS TO REVIEW AND COMPARE ALL DRAWINGS SO ALL WORK IN THEIR RESPECTIVE TRADE IS INCLUDED IN BID. EACH CONTRACTOR SHALL INCLUDE ALL MATERIALS AND INSTALLATION REQUIRED FOR HIS PARTICULAR TRADE AFTER COMPLETE REVIEW OF ALL CONTRACT DRAWINGS AND SPECIFICATIONS.

C. ALL WORK SHALL COMPLY WITH THE CURRENT APPLICABLE LOCAL, STATE AND FEDERAL CODES AND ORDINANCES. FOLLOW RECOMMENDED PRACTICES AS SET DOWN BY NFPA, BUILDING CODE, MECHANICAL CODE, PLUMBING CODE, NATIONAL ELECTRICAL CODE, ADA AND OSHA, AS THEY APPLY TO THIS PROJECT, EXCEPT IN CASES WHERE LOCAL STATUTES GOVERN. THE CONTRACTOR SHALL VERIFY WITH AUTHORITY HAVING JURISDICTION THE LATEST ADOPTED LOCAL CODES, ORDINANCES AND AMENDMENTS THAT APPLY TO THIS PROJECT.

D. THE ELECTRICAL CONTRACTOR SHALL VERIFY SIZES OF BREAKERS, FUSES, WIRES, ETC., FOR ALL EQUIPMENT PROVIDED AND REPORT DISCREPANCIES TO THE ENGINEER/ARCHITECT PRIOR TO INSTALLATION OF CONDUIT. COORDINATE WITH MECHANICAL/ELECTRICAL COORDINATION SHEET PROVIDED BY MECHANICAL CONTRACTOR FOR ACTUAL EQUIPMENT BEING USED.

E. HOMERUNS SHALL BE COORDINATED WITH PANELBOARDS. ALL WIRING AND CONDUIT SHALL BE CONCEALED, EXCEPT IN ELECTRICAL ROOMS AND EXPOSED STRUCTURE AREAS.

F. ALL WIRING SHALL BE FREE OF SHORTS AND GROUNDS. NO WIRING SHALL BE LOADED BEYOND THE PERMITTED AMPACITIES ALLOWED BY N.E.C.

G. MINIMUM WIRE/CONDUIT SIZES, EXCEPT FOR CLASS 2 LOW VOLTAGE CIRCUITS, ARE #12 AWG COPPER IN 1/2" CONDUIT. WHERE THE DISTANCE BETWEEN THE SUPPLYING PANEL AND THE FIRST BRANCH CIRCUIT RECEPTACLE OR LIGHT FIXTURE IS MORE THAN 100 FEET, UP SIZE CONDUCTOR TO ALLOW FOR MAXIMUM OF 3% VOLTAGE DROP FOR ACTUAL ROUTING OF CONDUITS TO DEVICE.

H. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO MAKE A COMPLETE AND WORKABLE SYSTEM.

I. CONFIRM THE EXACT LOCATION AND MOUNTING HEIGHTS OF LIGHTING FIXTURES WITH ARCHITECT BEFORE ROUGH-IN. COORDINATE REQUIRED CLEARANCES ABOVE FIXTURES WITH OTHER TRADES.

J. PROVIDE A TYPED PANEL DIRECTORY FOR ALL PANELBOARDS INDICATING FINAL INSTALLED CONDITION. CIRCUIT LABELING SHALL AGREE WITH EQUIPMENT DESIGNATIONS AND OWNERS FINAL ROOM NUMBERS.

K. LABEL ALL RECEPTACLES AND LIGHT SWITCHES WITH CIRCUIT NUMBER USING AN ELECTRONIC LABELER (BLACK ON CLEAR).

L. THE CONTRACTOR IS TO LAY OUT SERVICE ENTRANCE AND ELECTRIC ROOMS TO SCALE WITH ACTUAL GEAR TO BE INSTALLED TO ENSURE PROPER FIT AND CLEARANCES BEFORE INSTALLATION. COORDINATE ALL SERVICE CLEARANCE REQUIREMENTS WITH LOCAL UTILITY COMPANY. PROVIDE A 1/4" SCALE (MINIMUM) SHOP DRAWING. NOTIFY ARCHITECT/ENGINEERS OF ANY DIMENSIONAL PROBLEMS.

M. COORDINATE AND WIRE ALL DOOR HOLD OPEN DEVICES, AS REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS. ROUTE 120 VOLT POWER FROM NEAREST AVAILABLE CIRCUIT AS REQUIRED. PROVIDE ALL WIRING NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.

N. CONDUITS ROUTED TO ROOF SHALL BE INSTALLED IN SAME ROOF JACK AS MECHANICAL ELEMENTS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE ROOF JACK WHERE NO MECHANICAL ELEMENTS EXIST.

O. PROVIDE SLEEVES FOR SPECIAL SYSTEMS ABOVE EACH DOOR INTO A RATED EGRESS CORRIDOR, (1 - 2" AND 3 - 3/4"). FIRE SEAL ENDS AND UNUSED SLEEVES SHALL HAVE A SCREW CAP INSTALLED ON BOTH SIDES. USE THREADED CONDUIT.

P. ALL RECEPTACLES SERVING ELECTRIC WATER COOLERS SHALL BE LOCATED AT A HEIGHT SO AS NOT TO BE VISIBLE AFTER INSTALLATION OF EWC. COORDINATE MOUNTING HEIGHT WITH EQUIPMENT BEING PROVIDED. PROTECT WITH GFCI BREAKER.

Q. ALL CONDUITS ROUTED BELOW FINISHED FLOOR SHALL BE RUN BELOW THE GRADE BEAMS. CONDUITS AND MULTIPLE CONDUITS SHALL NOT PENETRATE GRADE BEAMS UNLESS COORDINATED WITH STRUCTURAL ENGINEER. OBTAIN WRITTEN APPROVAL FROM STRUCTURAL ENGINEER PRIOR TO BEGINNING WORK.

R. ALL EXPOSED CONDUIT SHALL BE RUN PARALLEL AND PERPENDICULAR TO STRUCTURE AND BUILDING LINES. COORDINATE FINAL CONDUIT ROUTING PATH WITH ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.

S. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL 120 VOLT WIRING AND CONNECTIONS REQUIRED TO FIRE/SMOKE DAMPERS. COORDINATE EXACT LOCATIONS OF DAMPERS WITH MECHANICAL CONTRACTOR AND RELAY REQUIREMENTS WITH FIRE ALARM CONTRACTOR. CONNECT TO NEAREST AVAILABLE UNSWITCHED CIRCUIT UNLESS OTHERWISE INDICATED ON DRAWINGS.

T. ELECTRICAL CONTRACTOR SHALL CONNECT MOTORIZED BACK DRAFT DAMPERS FOR EXHAUST FANS FROM CIRCUIT FEEDING FAN. PROVIDE ALL MATERIAL AND LABOR TO MAKE CONNECTIONS.

U. ELECTRICAL CONTRACTOR SHALL WIRE ALL EXHAUST FANS TO BE CONTROLLED PER "EXHAUST FAN SCHEDULE" ON MECHANICAL SHEET. ELECTRICAL CONTRACTOR TO PROVIDE ALL RELAYS, CONTACTORS, SPRING WOUND TIMERS, ETC., AS REQUIRED PER SCHEDULE TO OPERATE AND CONTROL EXHAUST FAN. IF NO CONTROL IS SPECIFIED, EXHAUST FAN SHALL ENERGIZE WHEN LIGHTS IN ANY ROOM IT SERVES ARE POWERED ON. REFERENCE DETAIL ON ELECTRICAL SHEET FOR ADDITIONAL INFORMATION.

V. ELECTRICAL CONTRACTOR TO SEAL ALL PENETRATIONS OF ELECTRICAL WORK IN FIRE AND SMOKE RATED PARTITIONS, CEILINGS, ETC.

W. ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECTING MEANS FOR ALL EQUIPMENT PER N.E.C. UNLESS OTHERWISE NOTED.

X. COORDINATE ALL DEVICES IN MILLWORK WITH ARCHITECTURAL MILLWORK SHOP DRAWINGS PRIOR TO ROUGH-IN.

Y. SENSOR OPERATED PLUMBING DEVICES: PLUMBING CONTRACTOR TO PROVIDE LOW VOLTAGE TRANSFORMERS FROM MANUFACTURER. ELECTRICAL CONTRACTOR IS TO PROVIDE ALL OTHER MATERIALS AND LABOR FOR COMPLETE INSTALLATION.

Z. SPRAY PAINT JUNCTION BOXES RED FOR FIRE ALARM SYSTEM. ALL OTHER SPECIAL SYSTEM JUNCTION BOXES TO BE PAINTED WHITE.

AA. DO NOT HANG ANY FIXTURES, EQUIPMENT OR CONDUIT FROM ROOF DECK.

BB. LABEL ALL JUNCTION BOXES WITH CIRCUIT NUMBERS.

CC. IDENTIFY RECEPTACLE CIRCUITS IN PANELBOARDS TO INDICATE FINAL ROOM NUMBERS. VERIFY FINAL ROOM NUMBERS PRIOR TO TYPING PANELBOARD SCHEDULES.

DD. MECHANICALLY FASTEN ALL LABELS TO EQUIPMENT.

EE. ELECTRICAL CONTRACTOR TO OBTAIN "MECH/ELEC COORDINATION SHEET" FILLED OUT FROM MECHANICAL CONTRACTOR. THIS SHEET IS TO BE INCLUDED WITH ELECTRICAL GEAR/PANELBOARD SUBMITTAL. SUBMITTAL WILL NOT BE CHECKED WITHOUT THIS FORM INCLUDED.

FF. ELECTRICAL CONTRACTOR IS TO PROVIDE ROUGH-IN FOR ALL MECHANICAL CONTROL DEVICES IN WALLS AND PENETRATIONS FOR CONTROL WIRES TO EXTERIOR UNITS. COORDINATE ALL LOCATIONS WITH MECHANICAL CONTRACTOR AND MECHANICAL SHEETS.

GG. DISCONNECTS MOUNTED ABOVE CEILING MUST BE MOUNTED TO BE READILY ACCESSIBLE NEAR UNIT. HANDLE TO BE NO MORE THAN 36" ABOVE CEILING GRID.

HH. ALL EXTERIOR DISCONNECTS ARE TO BE MOUNTED BELOW LINE OF SIGHT OF A SCREEN WALL OR IF SINGLE DISCONNECT, LEVEL WITH TOP OF CONDENSER. VERIFY LOCATION WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.

ESC-02

DISTRIBUTION SYMBOL SCHEDULE

NOTES:
A. ALL SYMBOLS DO NOT NECESSARILY APPEAR ON THESE DRAWINGS.

SYMBOL	DESCRIPTION	REMARKS
——◄——	HOMERUN (REFER TO PANEL SCHEDULES FOR CONDUIT/WIRING)	
——◄—F——	CIRCUIT ROUTED THRU CONTACTOR OR RELAY	
—UE—	UNDERGROUND ELECTRIC	
—UT—	UNDERGROUND TELEPHONE	
—OE—	OVERHEAD ELECTRIC	
—OT—	OVERHEAD TELEPHONE	
——115——	CIRCUIT INDICATORS (HOT, NEUTRAL, GROUND, SWITCHLEG)	
Ⓟ	PHOTOCELL	
Ⓙ	JUNCTION BOX	
⊡	JUNCTION BOX, FLOOR MOUNTED FLUSH	
KⒿ	JUNCTION BOX, WALL MOUNTED – 3/4"C TO ABOVE CEILING	
$M	MANUAL STARTER WITH THERMAL TRIP	
L▭	DISCONNECT SWITCH, REFER TO DISCONNECT SCHEDULE	
⊠	STARTER	
L⊠	COMBINATION STARTER/DISCONNECT SWITCH, REFER TO SCHEDULE	
▬	POWER AND/OR LIGHTING PANELBOARD, REFER TO PANELBOARD SCHEDULE	
▬	SWITCHBOARD, REFER TO SWITCHBOARD SCHEDULE	
⊘	TRANSFORMER, REFER TO TRANSFORMER SCHEDULE	

ESC-15

ELECTRICAL ABBREVIATION SCHEDULE

A	AMPERES
A/C	AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AL	ALUMINUM
AUTO	AUTOMATIC
AUX	AUXILIARY
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONTR	CONTRACTOR
CTV	CABLE TELEVISION
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
DN	DOWN
ELEC	ELECTRIC/ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EX	EXISTING
FA	FIRE ALARM
FF	FINISHED FLOOR
FLR	FLOOR/FLOORING
G	GROUND
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPT
HD	HEAVY DUTY
HP	HORSEPOWER
IMC	INTERMEDIATE METAL CONDUIT
KVA	KILOVOLT–AMPERES
KW	KILOWATTS
LGT	LIGHT/LIGHTING
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
MSB	MAIN SWITCHBOARD
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON–FUSED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER(S)
OE	OVERHEAD ELECTRIC
OT	OVERHEAD TELEPHONE
PC	PLUMBING CONTRACTOR
PH	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RE:	REFERENCE/REFER TO
RECPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL CONDUIT
RM	ROOM
SCH	SCHEDULE
SPEC	SPECIFICATIONS
TEL	TELEPHONE
TTB	TELEPHONE TERMINAL BOARD
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UL	UNDERWRITER'S LABORATORIES
UON	UNLESS OTHERWISE NOTED
UT	UNDERGROUND TELEPHONE
V	VOLTS/VOLTAGE
VA	VOLT–AMPERES
W	WATTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFMR	TRANSFORMER

ESC-05

TELECOMMUNICATION/DATA SYMBOL SCHEDULE

NOTES:
A. ALL SYMBOLS DO NOT NECESSARILY APPEAR ON THESE DRAWINGS.
B. PROVIDE 3/4" CONDUIT TO ABOVE CEILING WITH PULLSTRING AND PLASTIC BUSHING FOR ALL DEVICES, U.O.N.
C. PROVIDE 1" CONDUIT TO FLOOR MOUNTED DATA BOXES.
D. USE 4" x 4" x 2 1/8" JUNCTION BOX WITH SINGLE GANG PLASTER RING FOR ALL DEVICES.
E. REFERENCE SPECIFICATIONS FOR ALL WIRING AND REQUIREMENTS AT EACH DEVICE.
F. COMMUNICATION DROPS FOR SPECIAL SYSTEMS. EXISTING.

REMARKS:
1. 10 FEET SERVICE LOOP WITH DATA BISCUIT BOX ON END ABOVE CEILING, TIE OFF TO NEAREST JOIST. FINAL INSTALL OF AP DEVICE BY DISTRICT.

SYMBOL	DESCRIPTION	REMARKS
◀	TELEPHONE OUTLET	
◀	COMBINATION SINGLE VOICE TELEPHONE/DUAL DATA	
◁	DUAL DATA OUTLET ROUGH–IN	
◁ P	SINGLE DATA FOR VOIP WALL PHONE	
◁	TELEVISION OUTLET	2–1" CONDUITS
◁ AP	SINGLE DATA DROP FOR WIRELESS ACCESS POINT, (WALL MOUNT)	
◁ AP	SINGLE DATA DROP FOR WIRELESS ACCESS POINT, (CEILING MOUNT)	1
KⒷ	BUZZER/ PANIC BUTTON. CONFIRM EXACT LOCATION/ ELEVATION WITH OWNER.	3/4"C TO ABOVE CEILING

SPECIAL SYSTEMS SCOPE

INTERCOM SYSTEM
1. REFERENCE TECHNOLOGY DRAWINGS FOR ALL INFORMATION

FIRE ALARM SYSTEM
1. EXPAND/ REWORK EXISTING FIRE ALARM SYSTEM. MATCH ALL DEVICES TO EXISTING BRAND.
2. PROVIDE CODE REQUIRED FIRE ALARM SYSTEM/ DEVICE REQUIRED BY AHJ FOR FINISH OUT. DUCT DETECTORS SUPPLIED BY FIRE ALARM CONTRACTOR INSTALLED BY MECHANICAL CONTRACTOR. FIELD VERIFY ALL REQUIREMENTS FOR CONNECTION OR ADDITION TO CORE SYSTEM.
3. THE CONTRACTOR IS EXPECTED TO MAKE ALLOWANCES FOR NECESSARY ADJUSTMENTS DURING THE ACTUAL SYSTEM INSTALLATION, TO EXAMINE PHYSICAL CONDITIONS. COORDINATE THE ACTUAL DEVICE LOCATIONS AS NECESSARY TO ACCOMMODATE THE EXISTING CONDITIONS, OBSTRUCTIONS, MANUFACTURER'S INSTALLATION SPECIFICATIONS, APPLICABLE CODES, AND THE WORK OF OTHERS. NO EXTRA PAYMENTS WILL BE ALLOWED FOR THE CONTRACTOR ON ACCOUNT OF EXTRA WORK MADE NECESSARY BY HIS/ HER FAILURE TO MAKE SUCH ALLOWANCES.
4. CONTRACTOR TO PROVIDE ALL DEVICES REQUIRED BY CODE AND LOCAL AUTHORITIES AND SHOULD BE SHOWN ON FIRE ALARM SHOP DRAWINGS.

ESC-01

DEVICE SYMBOL SCHEDULE

NOTES:
A. ALL SYMBOLS DO NOT NECESSARILY APPEAR ON THESE DRAWINGS.
B. ALL DEVICE PART NUMBERS ARE HUBBELL UNLESS OTHERWISE NOTED.

SYMBOL	DESCRIPTION	REMARKS
⊖	SINGLE RECEPTACLE 20A/120V 16" AFF UON	HBL 5361–W
⊜	DUPLEX RECEPTACLE 20A/120V 16"AFF UON	CR20–W
u⊜	DUPLEX RECEPTACLE WITH DUAL USB 20A/120V 16" AFF UON	USB20X2W
⊜	DUPLEX RECEPTACLE 20A/120V 16" AFF UON WITH GROUND FAULT INTERRUPTER	GF20ILA
IG⊜	DUPLEX RECEPTACLE 20A/120V 16" AFF UON WITH ISOLATED/INSULATED GROUND	CR5352IG
⊕	FOURPLEX RECEPTACLE 20A/120V 16" AFF UON	(2) CR20–W
K(L)	CLOCK RECEPTACLE 120V 96" AFF UON	HBL 5235
⊜	SPECIAL PURPOSE RECEPTACLE 16" AFF SEE PLANS FOR DETAILS	
⊜	CEILING MOUNTED DUPLEX RECEPTACLE 20A/120V (FLUSH)	CR20–W
⊜	DUPLEX RECEPTACLE 20A/120V MOUNTED HORIZONTALLY 48" AFF UON	CR20–W
P⊕	FOURPLEX RECEPTACLE FOR PROJECTOR	
WP⊜	WEATHER/TAMPER–RESISTANT DUPLEX RECEPTACLE WITH "IN–USE" COVER 20A/120V 18"AFF UON	GFTR20W/ WP26M
⊜	8" ABOVE COUNTER – GFI	
SG⊜	DUPLEX RECEPTACLE W/ SURGE SUPPRESSION 20A/120V 16" AFF UON	IG5362–SA
S⊜	SAFETY TYPE DUPLEX RECEPTACLE 20A/120V 16" AFF UON	CR20TR–W
⊡	DUPLEX RECEPTACLE, FLOOR MOUNTED FLUSH	CR20–W,PFBRG1 SB3083,S3825
⊞	FOURPLEX RECEPTACLE, FLOOR MOUNTED FLUSH	(2) HBL–5362–W,PFBRG2 SB3084, (2)S3825
⊜	EXISTING DUPLEX RECEPTACLE	
⊕	EXISTING FOURPLEX RECEPTACLE	
⊜	EXISTING 208V RECEPTACLE	
$	SINGLE POLE SWITCH 20A, 48"AFF UON	CS120–W
$3	THREE–WAY SWITCH 20A, 48"AFF UON	CS320–W
$4	FOUR–WAY SWITCH 20A, 48"AFF UON	CS1224–W
$K	SINGLE POLE KEY OPERATED SWITCH 20A, 48"AFF UON	HBL 1221–RKL
$2K	DOUBLE POLE KEY OPERATED SWITCH 20A, 48" AFF UON	HBL 1222–RKL
$3K	THREE–WAY KEY OPERATED SWITCH 20A, 48"AFF UON	HBL 1223–RKL
$4K	FOUR–WAY KEY OPERATED SWITCH 20A, 48"AFF UON	HBL 1224–RKL
$D	DIMMER SWITCH, 48"AFF UON, SEE PLANS FOR DETAILS	
$P	SWITCH WITH PILOT LIGHT, 48"AFF UON	HBL1221–PL
$2	TWO POLE SWITCH 20A, 48"AFF UON	CS1222–W
$T	TIMER SWITCH, 48"AFF UON	INTERMATIC FF60MC
$F	FAN SWITCH, 48"AFF UON	RF51
$IR	WALL MOTION SENSOR: 48" AFF UON, (IR) INFRARED	WS1277–W
$US	WALL MOTION SENSOR: 48" AFF UON, (US) ULTRASONIC	AU1277W1
$DT	WALL MOTION SENSOR: 48" AFF UON, (DT) DUAL TECHNOLOGY	AD1277–W1
M US	MOTION SENSOR: US (ULTRASONIC)	ATU2000C
M IR	MOTION SENSOR: IR (INFRARED)	ATP1500C
M DT	MOTION SENSOR: DT (DUAL TECHNOLOGY)	ATD2000C

ESC-19

BRANCH CIRCUIT WIRE AND CONDUIT SCHEDULE

NOTE:
A. PROVIDE INDIVIDUAL NEUTRALS FOR EACH CIRCUIT. NO SHARED NEUTRALS ALLOWED.

C – CONDUIT G – GROUND L – LINE OR PHASE N – NEUTRAL

MARK	WIRE AND CONDUIT	SYSTEM	MARK	WIRE AND CONDUIT	SYSTEM	MARK	WIRE AND CONDUIT	SYSTEM
(1)	2#12, 1/2"C.	LN	(31)	2#4, 1#8G., 1"C.	LLG	(61)	3#1/0, 1#6G., 2" C.	LLNG
(2)	2#12, 1#12G., 1/2" C.	LNG	(32)	3#4, 1" C.	LLL	(62)	3#1/0, 1#6G., 2" C.	LLLG
(3)	2#12, 1#12G., 1/2" C.	LLG	(33)	3#4, 1#8G., 1" C.	LLNG	(63)	4#1/0, 1#6G., 2" C.	LLLNG
(4)	3#12, 1/2" C.	LLL	(34)	3#4, 1#8G., 1" C.	LLLG	(64)	2#2/0, 1 1/2" C.	LN
(5)	3#12, 1#12G., 1/2" C.	LLNG	(35)	4#4, 1#8G., 1 1/4" C.	LLLNG	(65)	2#2/0, 1#4G., 1 1/2"C.	LNG
(6)	3#12, 1#12G., 1/2" C.	LLLG	(36)	2#3, 1" C.	LN	(66)	2#2/0, 1#4G., 1 1/2" C.	LLG
(7)	4#12, 1#12G., 1/2" C.	LLLNG	(37)	2#3, 1#8G., 1"C.	LNG	(67)	3#2/0, 1 1/2" C.	LLL
(8)	2#10, 1/2"C.	LN	(38)	2#3, 1#8G., 1" C.	LLG	(68)	3#2/0, 1#4G., 2" C.	LLNG
(9)	2#10, 1#10G., 1/2" C.	LNG	(39)	3#3, 1" C.	LLL	(69)	3#2/0, 1#4G., 2" C.	LLLG
(10)	2#10, 1#10G., 1/2" C.	LLG	(40)	3#3, 1#8G., 1 1/4" C.	LLNG	(70)	4#2/0, 1#4G., 2" C.	LLLNG
(11)	3#10, 1/2" C.	LLL	(41)	3#3, 1#8G., 1 1/4" C.	LLLG	(71)	2#3/0, 1 1/2" C.	LN
(12)	3#10, 1#10G., 1/2" C.	LLNG	(42)	4#3, 1#8G., 1 1/4" C.	LLLNG	(72)	2#3/0, 1#4G., 2" C.	LNG
(13)	3#10, 1#10G., 1/2" C.	LLLG	(43)	2#2, 1"C.	LN	(73)	2#3/0, 1#4G., 2" C.	LLG
(14)	4#10, 1#10G., 1/2" C.	LLLNG	(44)	2#2, 1#8G., 1" C.	LNG	(74)	3#3/0, 2" C.	LLL
(15)	2#8, 1/2" C.	LN	(45)	2#2, 1#8G., 1" C.	LLG	(75)	3#3/0, 1#4G., 2" C.	LLNG
(16)	2#8, 1#10G., 3/4" C.	LNG	(46)	3#2, 1 1/4" C.	LLL	(76)	3#3/0, 1#4G., 2" C.	LLLG
(17)	2#8, 1#10G., 3/4" C.	LLG	(47)	3#2, 1#8G., 1 1/4" C.	LLNG	(77)	4#3/0, 1#4G., 2 1/2" C.	LLLNG
(18)	3#8, 3/4" C.	LLL	(48)	3#2, 1#8G., 1 1/4" C.	LLLG	(78)	2#4/0, 2" C.	LN
(19)	3#8, 1#10G., 3/4" C.	LLNG	(49)	4#2, 1#8G., 1 1/4" C.	LLLNG	(79)	2#4/0, 1#4G., 2" C.	LNG
(20)	3#8, 1#10G., 3/4" C.	LLLG	(50)	2#1, 1 1/4" C.	LN	(80)	2#4/0, 1#4G., 2" C.	LLG
(21)	4#8, 1#10G., 1" C.	LLLNG	(51)	2#1, 1#6G., 1 1/4" C.	LNG	(81)	3#4/0, 2" C.	LLL
(22)	2#6, 3/4" C.	LN	(52)	2#1, 1#6G., 1 1/4" C.	LLG	(82)	3#4/0, 1#4G., 2 1/2" C.	LLNG
(23)	2#6, 1#10G., 3/4" C.	LNG	(53)	3#1, 1 1/2" C.	LLL	(83)	3#4/0, 1#4G., 2 1/2" C.	LLLG
(24)	2#6, 1#10G., 3/4" C.	LLG	(54)	3#1, 1#6G., 1 1/2" C.	LLNG	(84)	4#4/0, 1#4G., 2 1/2" C.	LLLNG
(25)	3#6, 3/4"C.	LLL	(55)	3#1, 1#6G., 1 1/2" C.	LLLG			
(26)	3#6, 1#10G., 3/4" C.	LLNG	(56)	4#1, 1#6G., 1 1/2" C.	LLLNG			
(27)	3#6, 1#10G., 3/4" C.	LLLG	(57)	2#1/0, 1 1/4" C.	LN			
(28)	4#6, 1#10G., 1" C.	LLLNG	(58)	2#1/0, 1#6G., 1 1/2" C.	LNG			
(29)	2#4, 3/4" C.	LN	(59)	2#1/0, 1#6G., 1 1/2"C.	LLG			
(30)	2#4, 1#8G., 1" C.	LNG	(60)	3#1/0, 1 1/2" C.	LLL			

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REFERENCE GENERAL NOTES ON SHEETS M–1.1, P–1.1 AND E–1.1 FOR ADDITIONAL INFORMATION

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HCE job no.: 17-013

PROJECT NUMBER

DATE ISSUED
03/10/2017

SHEET TITLE

SCHEDULES, NOTES, AND LEGENDS – ELECTRICAL

SHEET NUMBER

E–1.1

Bid 1703-149
Williamson County, Texas
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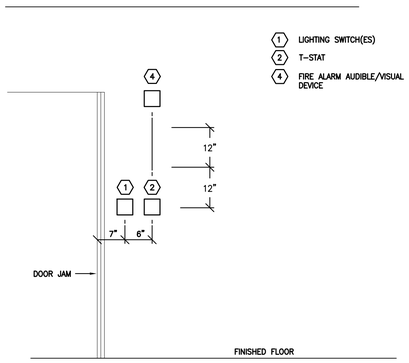
SPECIAL SYSTEM SYMBOL SCHEDULE

NOTE:
A. REFERENCE DISTRICT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
B. THIS IS FOR GENERAL LOCATION ONLY. ALL DEVICES AND CABLING PER DISTRICT SPECIFICATIONS.

SYMBOL	DESCRIPTION	REMARKS
FACP	FIRE ALARM CONTROL PANEL	
FAAP	FIRE ALARM ANNUNCIATOR PANEL	
SWP	SPEAKER, WALL MOUNTED WEATHER RESISTANT, 120" AFF U.O.N.	
WP	WEATHER PROOF EXTERIOR FIRE ALARM HORN	
	SECURITY KEY PAD, 48" AFF UON	3/4"C TO ABOVE CEILING
	BADGE READER FOR SECURITY SYSTEM, 48" AFF UON	3/4"C TO ABOVE CEILING
	LIGHTING RELAY ZONE OVERIDE CONTROL BUTTON	3/4"C TO ABOVE CEILING
B	BUZZER/ PANIC BUTTON. CONFIRM EXACT LOCATION/ ELEVATION WITH OWNER.	3/4"C TO ABOVE CEILING



NOTES:
1. THE PURPOSE OF THIS DETAIL IS TO SET A STANDARD FOR DEVICE ROUGH-IN. ADJUSTMENT FOR FIELD CONDITIONS WILL BE ALLOWED.
2. PROVIDE HORIZONTAL MULTIDEVICE BRACKET AS REQUIRED.
3. MARKER BOARD IN CLASSROOMS SHOULD BE 30" FROM DOOR TO ALLOW ALL DEVICES TO BE ROUGHED-IN PER DETAIL.

TYPICAL DEVICE OUTLET LOCATIONS ADJACENT TO DOORS

NO SCALE EDE-91

MISC. ELECTRICAL NOTES

GENERAL NOTES:
A. ELECTRICIAN TO PROVIDE 120V POWER TO ALL EQUIPMENT FROM NEAREST PANEL HAVING CAPACITY UNLESS OTHERWISE NOTED.

B. ELECTRICAL CONTRACTOR IS TO PROVIDE ALL PARTS AND LABOR TO MAKE FINAL CONNECTIONS TO ALL EQUIPMENT SHOWN IN CONTRACT DOCUMENTS. POWER MAY BE SHOWN IN GENERAL LOCATION. IT IS EXPECTED THAT ELECTRICAL CONTRACTOR COORDINATE FINAL LOCATION FOR ROUGH-IN AND CONNECTION REQUIREMENTS WITH EXACT EQUIPMENT BEING INSTALLED. THESE ITEMS INCLUDE BUT NOT LIMITED TO BOOK SECURITY, EXHAUST FANS, KILNS, HAND DRYERS, SENSOR OPERATED PLUMBING DEVICES, ETC. REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

POWER FOR SPECIAL SYSTEMS POWER SUPPLIES
1. ELECTRICAL CONTRACTOR TO PROVIDE POWER TO ALL SECURITY, FIRE ALARM, ACCESS CONTROL, POWER SUPPLIES, ETC, AS REQUIRED. PROVIDE DEDICATED LOW VOLTAGE CIRCUIT TO NEAREST PANEL HAVING CAPACITY UNLESS OTHERWISE NOTED.
2. LABEL ALL SPECIAL SYSTEMS POWER SUPPLIES WITH PANEL AND CIRCUIT NUMBERS.

NLIGHT INTERIOR LIGHTING SCHEDULE

GENERAL NOTES:

VACANCY SENSORS
PROVIDE MOTION SENSORS AS SHOWN ON PLANS. PROVIDE DUAL TECHNOLOGY MOTION SENSORS IN EVERY ROOM AS REQUIRED BY IECC 2015.

CONTROL STATION
ALL ROOMS SHALL HAVE A CONTROL STATION FOR CONTROL OF LIGHTS IN ROOM. IF NO CONTROL STATION IS SHOWN, ASSUME A TWO ZONE CONTROLLER FOR ROOMS LARGER THAN 9' X 9' AND A WALL MOUNT DUAL TECHNOLOGY CONTROLLER FOR ROOMS SMALLER THAN 9' X 9'.

SPACE TYPE DESCRIPTION:

COMMON AREAS
A. PROVIDE CONTROL STATIONS AS SHOWN ON PLANS.
B. ONE (1) OR TWO (2) BUTTON ZONE CONTROL ZONES INDICATED ON PLANS.
C. PROVIDE COMPLETE VACANCY SENSOR COVERAGE FOR MAJOR AND MINOR MOVEMENTS. SHOP DRAWING REQUIRED. WHEN NO MOTION IS DETECTED AFTER 15 MINUTES, LIGHTS SHALL BE DIMMED TO 50%. IF NO ADDITIONAL MOTION IS DETECTED AFTER 30 MINUTES, LIGHTS SHALL POWER OFF.

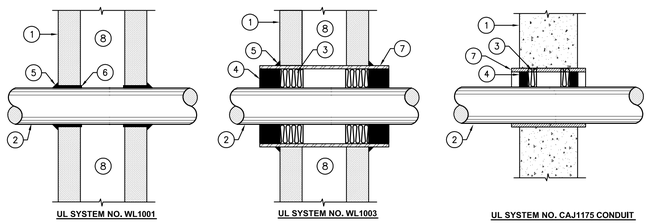
HALLWAYS
A. PROVIDE CONTROL STATIONS AS SHOWN ON PLANS.
B. PROVIDE COMPLETE VACANCY SENSOR COVERAGE FOR MAJOR MOVEMENTS. WHEN NO MOTION IS DETECTED AFTER 10 MINUTES, LIGHTS SHALL BE DIMMED TO 50%. IF NO ADDITIONAL MOTION IS DETECTED AFTER 2 HOURS, LIGHTS SHALL POWER OFF.

SINGLE ZONE ROOMS
A. PROVIDE CONTROL STATIONS AS SHOWN ON PLANS.
B. ONE OVERALL ZONE TO CONTROL ALL LIGHTS IN ROOM.
C. PROVIDE COMPLETE VACANCY SENSOR COVERAGE FOR MINOR MOVEMENTS. SHOP DRAWING REQUIRED.

LIGHT FIXTURE SCHEDULE

GENERAL NOTES:
A. CONFIRM CEILING TYPE AND CONSTRUCTION PRIOR TO ORDERING LIGHT FIXTURE. PROVIDE FLANGE KIT FOR PROPER INSTALLATION OF LAY-IN FIXTURE IN GYPSUM CEILING. PROVIDE FIXTURE TYPE 'H2' IN LIEU OF FIXTURE TYP 'A2' IN ROOMS WITH NO CEILING. CHAIN HANG AT 10' A.F.F.
B. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF WALL MOUNTED LIGHT FIXTURES WITH ARCHITECT PRIOR TO ROUGH-IN.
C. REFER TO ARCHITECTURAL REFLECTIVE CEILING PLAN FOR EXACT LOCATION OF LIGHT FIXTURE.
D. CONFIRM FINISH WITH ARCHITECT PRIOR TO ORDERING LIGHT FIXTURES.
E. 'E' DESIGNATION ADJACENT TO LIGHTING FIXTURE TYPE INDICATES FIXTURE SHALL BE PROVIDED WITH EMERGENCY BATTERY PACK UNIT (LITHONIA PS1400 OR EQUAL). LIGHT FIXTURE SHALL BE SWITCHED, BATTERY PACK SHALL BE UNSWITCHED.
F. 'N' DESIGNATION ADJACENT TO LIGHTING FIXTURE TYPE INDICATES FIXTURE SHALL BE PROVIDED WITH EMERGENCY BATTERY PACK UNIT (LITHONIA PS1400 OR EQUAL). LIGHT FIXTURE AND BATTERY PACK SHALL BE UNSWITCHED.
G. FIXTURES SHALL HAVE A MAXIMUM OF TWO (2) LAMPS PER BALLAST.
H. CONNECT ALL EXIT LIGHTING TO THE NEAREST UNSWITCHED CIRCUIT OR THE NEAREST EMERGENCY CIRCUIT.
(*) PROVIDE UNIT PRICE FOR THIS FIXTURE. INCLUDE MATERIAL AND LABOR TO BE ADDED AT ANY TIME DURING THE PROJECT.

MARK	MANUFACTURER'S CATALOG NUMBER	LAMPS NO./TYPE/WATTS	FIXTURE VOLTS/WATTS	DESCRIPTION AND COMMENTS
A2	LITHONIA 2GTL-4-40L-A12-MVOLT-LP835-BLD	1/LED 4000 LUMENS/43	MVOLT/43	2 x 4 LAY IN HIGH EFFECIENCY LED, WHITE FINISH. BI-LEVEL SWITCH (2-T8 EQUIVALENT)
H1	LITHONIA ZL1N-L46-3000LM-MDD-MVOLT-LP835-WH-NPP16D-EZ1	1/LED 3000 LUMENS/31	MVOLT/31	LED STRIP FIXTURE. AIRCRAFT CABLE OR SURFACE MOUNT DEPENDING ON APPLICATION. TYPICAL MOUNTING HEIGHT APPROX 8-12'. 1%DIMMING, NLIGHT
L1	LITHONIA LDN6-35-1000-L06-AR-LD-MVOLT-EZ1-NLIGHT	1/LED 1000 LUMENS/18	MVOLT/18	6" LED DOWNLIGHT. TRIM TO MATCH CANOPY OR SILVER. PROVIDE 'EL' BATTERY WHEN SPECIFIED. 1%DIM, NLIGHT
L2	LITHONIA LDN6-40-2000-L06-AR-LD-MVOLT-EZ1-NLIGHT	1/LED 2000 LUMENS/35	MVOLT/35	6" LED DOWNLIGHT. TRIM TO MATCH CANOPY OR SILVER. PROVIDE 'EL' BATTERY WHEN SPECIFIED. 1%DIM, NLIGHT
M2	LITHONIA 2BLT4-40L-ADP-MVOLT-EZ1-L835	1/4000L/LED	MVOLT/34	BLT SERIES 2 x 4 LAY IN LED WITH ENERGY SAVING LAMPS AND ELECTRONIC ELDO 1% DIMMING DRIVER. WHITE FINISH, SMOOTH CURVED LENS. NLIGHT WHEN SPECIFIED.
M3	LITHONIA 2FSL4-48L-MVOLT-EZ1-L835-EZ1-N100	1/4800L/LED	277/47	FSL SERIES 2 x 4 LAY IN LED WITH ENERGY SAVING LAMPS AND ELECTRONIC ELDO 1% DIMMING DRIVER. WHITE FINISH, SMOOTH CURVED LENS. NLIGHT
X1	LITHONIA LES-1R-277-ELN	INCLUDED	277/5	LED SINGLE FACE EXIT SIGN WITH DIE CAST ALUMINUM HOUSING, EMERGENCY BATTERY PACK.
X2	LITHONIA LES-2R-277-ELN	INCLUDED	277/5	LED DOUBLE FACE EXIT SIGN WITH DIE CAST ALUMINUM HOUSING, EMERGENCY BATTERY PACK.
Y1	LITHONIA ELM2-LED	INCLUDED	277/20	EMERGENCY EGRESS FIXTURE WITH POLYCARBONATE HOUSING, EMERGENCY BATTERY PACK AND AMMETER. WHITE FINISH. MOUNT FIXTURE ON WALL, AS HIGH AS POSSIBLE. CONNECT TO NEAREST UNSWITCHED 277 VOLT CIRCUIT.



KEYED NOTES
1. RATED WALL BARRIER
2. PIPE OR CONDUIT
3. FORMING MATERIAL (MINERAL - WOOL BATT INSULATION
4. FIRE CAULK
5. FIRE CAULK - CONTINUOUS BEAD AROUND PENETRATING ITEM
6. FIRE CAULK - CONTINUOUSLY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT THROUGHOUT THICKNESS OF WALL BOARD LAYERS
7. SLEEVE FOR UL SYSTEM NO. WL1003, OPTIONAL FOR UL SYSTEM NO. CAJ1175
8. WALL CAVITY

GENERAL NOTES
A. REFERENCE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL RATED WALLS, FLOORS AND CEILINGS.
B. REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION CONCERNING MATERIALS AND METHODS.
C. REFERENCE UL FIRE RESISTANCE DIRECTORY FOR ADDITIONAL DATA, INCLUDING WALL RATINGS FOR WHICH DETAILS ARE AND SUPPORT REQUIREMENTS.
D. ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH UL SYSTEM NUMBER AND MANUFACTURER'S INSTRUCTIONS PROVIDED WITH MATERIALS.
E. ONLY MATERIALS TESTED FOR SPECIFIC UL SYSTEM NUMBER MAY BE USED.
F. ANNULAR SPACE BETWEEN FIRE BARRIER SURFACE AND PENETRATING ITEM IS EXTREMELY CRITICAL. REFER TO PARTICULAR UL SYSTEM NUMBER AND FIRE RATING FOR THIS CRITERIA.

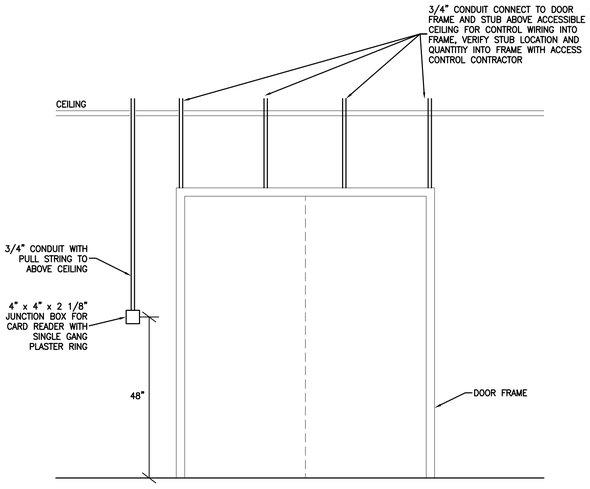
TYPICAL CONDUIT PENETRATION

NO SCALE (FIRE RATED GYPSUM/STUD WALL ASSEMBLY AND CONCRETE WALL/FLOOR ASSEMBLY) EDE-96

NLIGHT - DEVICE SYMBOL SCHEDULE

NOTES:
A. ALL SYMBOLS DO NOT NECESSARILY APPEAR ON THESE DRAWINGS.
B. ALL DEVICE PART NUMBERS ARE NLIGHT UNLESS OTHERWISE NOTED.
C. THESE DEVICES SHOULD BE USED IN ALL AREAS TO BE CONTROLLED BY NLIGHT.
D. MOTION SENSOR: WHERE MOTION SENSORS ARE SHOWN ON THE PLANS, THAT INDICATES AREA SHOULD BE COVERED IN FULL BY MOTION SENSORS. IT IS UP TO MOTION SENSOR PROVIDER TO PROVIDE APPROPRIATE QUANTITY, LAYOUT, AND TYPE OF MOTION SENSORS FOR COMPLETE COVERAGE. PROVIDE SHOP DRAWING AT SUBMITTAL PHASE.
E. PHOTOCELL: WHERE PHOTOCELLS ARE SHOWN ON PLANS OR IN TYPICAL DETAILS. IE:CLASSROOMS. PHOTOCELL LOCATION AND QUANTITY SHOULD BE DETERMINED BY PHOTOCELL PROVIDER. PHOTOCELLS ARE INTENDED TO DIM LIGHTS IN DAYLIGHT ZONES AS INDICATED BY IECC 2015.
F. IF MULTIPLE ZONE CONTROL IS INDICATED FOR A SPACE AND THOSE ZONES ARE NOT CLEAR TO CONTRACTOR, THE CONTRACTOR IS TO MAKE BEST ASSUMPTION IN SHOP DRAWING PHASE AND NOTE AREAS IN QUESTION. ENGINEER WILL REVIEW AND MAKE ANY ADJUSTMENTS TO ZONES AT THAT TIME.
G. MANUFACTURER TO PROVIDE A COMPLETE SET OF SHOP DRAWINGS INDICATING ALL ASPECTS OF LIGHTING CONTROL AT A MINIMUM OF 1/8" = 1' SCALE WITH CLEAR DESCRIPTIONS AND LEGENDS FOR SYMBOLS.
H. BASIC COMPONENTS ARE CALLED FOR HERE, IT IS EXPECTED THAT MANUFACTURER PROVIDES ALL COMPONENTS FOR A COMPLETE WORKABLE SYSTEM.
I. FACTORY START-UP IS REQUIRED FOR ALL NLIGHT SPACES.
J. CONTRACTOR SHOULD SEND COMPLETE SET OF ELECTRICAL PLANS TO NLIGHT FACTORY REP TO ENSURE A COMPLETE BID.
K. CONTRACTOR TO ASSUME ALL DEVICES INTER-CONNECTED WITH CAT-5 CABLE. PROVIDE ALL REQUIRED CABLING BETWEEN DEVICES.

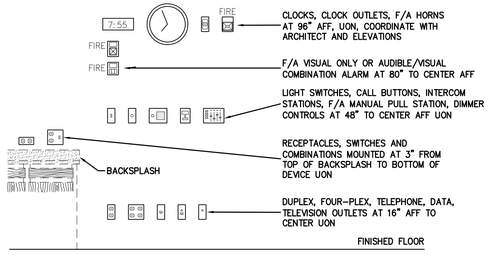
SYMBOL	DESCRIPTION	REMARKS
S^DT	DUAL TECHNOLOGY WALL MOUNT MOTION AND DIMMING	nWSX-PDT-D-SA
S^C1	ONE ZONE CONTROLLER, ON/OFF AND DIMMING	nPODM-DX
S^C2	TWO ZONE CONTROLLER, ON/OFF AND DIMMING	nPODM-2P-DX
S^C4	FOUR ZONE CONTROLLER, 4 PRESET TOGGLE BUTTONS	nPODm-4S-DX
M DT	MOTION SENSOR, DT (DUAL TECHNOLOGY)	nCM-PDT-9
M DT	MOTION SENSOR, DT (DUAL TECHNOLOGY)	nCM-PDT-10
M DT	MOTION SENSOR, DT (DUAL TECHNOLOGY)	nWV-PDT-16
P	PHOTOCELL	nCM-ADCX



NOTES:
1. ALL ACCESS CONTROL DEVICES AND WIRING BY SCHOOL DISTRICT.
2. IF DEVICE IS FOR FUTURE, PROVIDE A BLANK COVER.

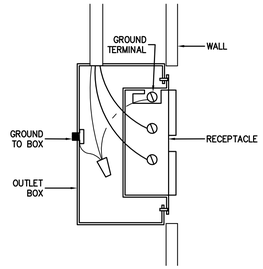
CARD SWIPE DETAIL TYPICAL

SCALE: NONE EDE-95



MOUNTING HEIGHT DETAIL

NO SCALE EDE-10



RECEPTACLE GROUNDING DETAIL

NO SCALE EDE-57

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PROJECT PHASE
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PROJECT NUMBER

DATE ISSUED
03/10/2017

SHEET TITLE
SCHEDULES - ELECTRICAL

SHEET NUMBER
E-1.2

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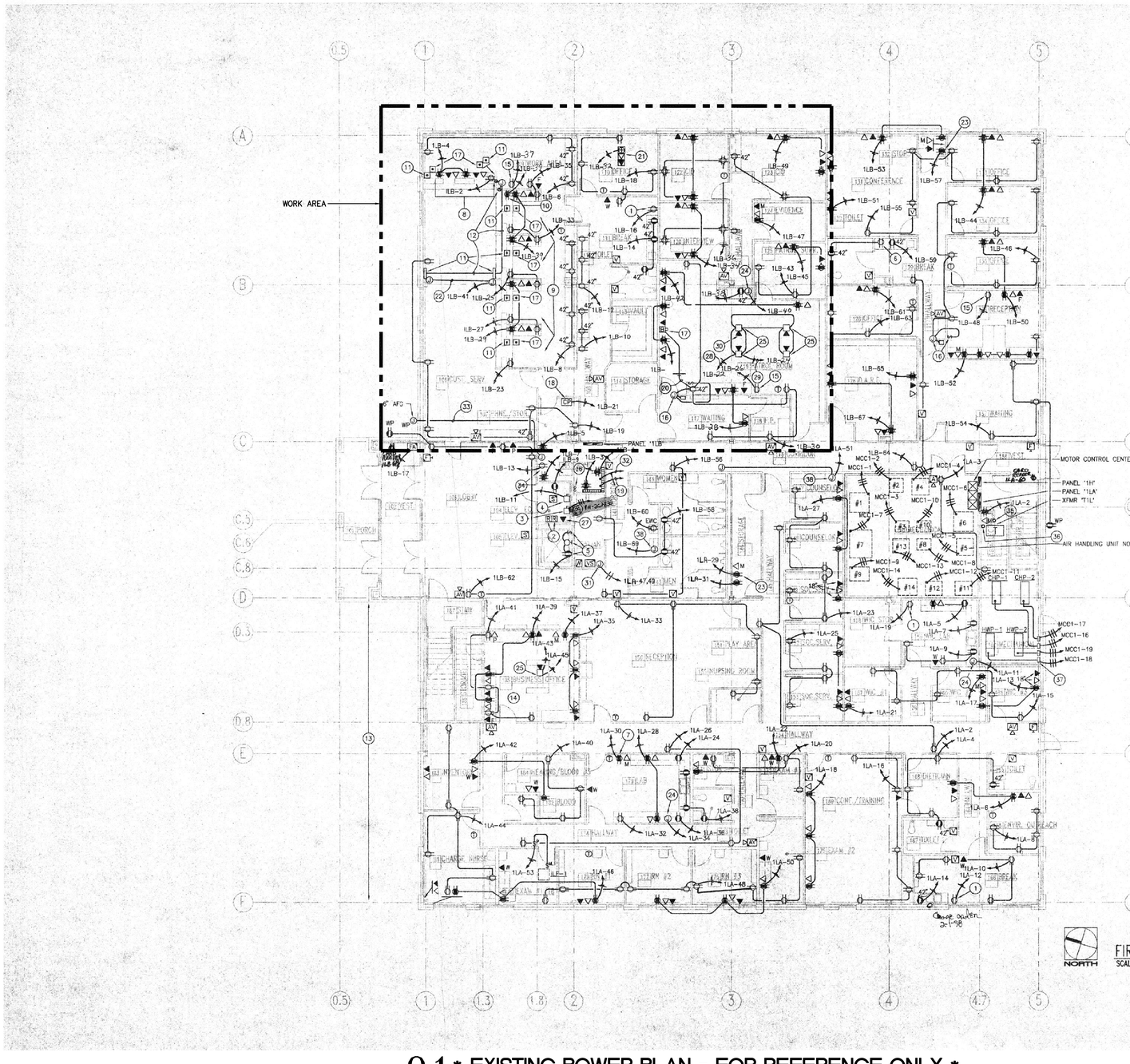
Williamson County, Texas



KEYNOTES

1. FOR REFRIGERATOR.
2. ELEVATOR RECALL RELAYS.
3. 70A/3P SHUNT TRIP GROUND FAULT INTERRUPTING ENCLOSED CIRCUIT BREAKER FOR ELEVATOR. PROVIDE D/F AUX. CONTACT
4. 20A/1P SHUNT TRIP GROUND FAULT INTERRUPTING ENCLOSED CIRCUIT BREAKER FOR ELEVATOR.
5. INSTALL SWITCH, LIGHT, AND RECEPTACLE IN ELEVATOR PIT. COORDINATE LOCATION WITH ELEVATOR MANUFACTURER. FURNISH PORCELAIN SOCKET WITH WIRE GUARD AND 60W A19 INCANDESCENT LAMP.
6. UNDERCOUNTER REFRIGERATOR.
7. REFRIGERATOR. (FUTURE MODEM LOCATION.)
8. WORK AREA 109: INSTALL OUTLETS 18" AFF IN KNEESPACE UNDER COUNTER (REFER TO ARCH. CABINET ELEVATIONS).
9. WORK STATIONS #1 THRU #4: INSTALL RECEPTACLES, DATA AND TELEPHONE OUTLETS 54" AFF, U.O.N.
10. WORK STATION #10: INSTALL DUPLEX RECEPTACLE 18" AFF UNDER COUNTER (REFER TO ARCH. CABINET ELEVATIONS).
11. CUSTOMER SERVICE 106: INSTALL OWNER FURNISHED "NOW SERVING" SYSTEM EQUIPMENT AND WIRING. INSTALL "NUMBER" SIGNS HIGH ON NORTH WALL AND ON FURR DOWN ABOVE COUNTER AND A SYSTEM PUSHBUTTON IN MILLWORK AT EACH WORKSTATION (TOTAL OF 6). VERIFY EXACT LOCATION OF ALL EQUIPMENT WITH ARCHITECT.
12. PROVIDE "NOW SERVING" SYSTEM LOW VOLTAGE WIRING ABOVE CEILING, THEN DOWN IN PARTITION TO PUSHBUTTONS AT EACH WORKSTATION (SEE KEYNOTE 11). CONCEAL ALL WIRING ABOVE THE CEILING AND IN MILLWORK. PROVIDE CONDUIT IF REQUIRED.
13. ALL DEVICES BETWEEN COLUMNS D & F ON FIRST FLOOR SHALL BE INSTALLED 42" AFF, U.O.N.
14. BUSINESS OFFICE 185: INSTALL ALL WALL MOUNTED DEVICES 18" AFF.
15. COPIER.
16. ELECTRIC DOOR STRIKE, CONTROL SWITCH (48" AFF) AND KEYPAD AT 48" AFF ON CUSTOMER SIDE OF DOOR.
17. INSTALL FIRST FLOOR PANIC ALARM SYSTEM AUDIO/ VISUAL UNIT 84" AFF IN PATROL ROOM 119, SIX (6) PANIC PUSH BUTTONS, AND ALL ASSOCIATED EQUIPMENT. INSTALL PANIC PUSH BUTTONS BELOW EACH CASH DRAWER AT WORK STATIONS NO. 1 THRU NO. 6. LOW VOLTAGE WIRING SHALL BE CONCEALED IN CABINET MILLWORK FROM PANIC PUSH BUTTONS TO ABOVE CEILING, THEN TO CONTROL PANEL. SEE "PANIC ALARM SYSTEMS DETAILS" ON SHEET E-8.
18. FIRST FLOOR PANIC ALARM SYSTEM CONTROL PANEL. SEE KEYNOTE 17.
19. INSTALL 1- #6 GND. WIRE IN 1/2" C. FROM BACKBOARD TO MAIN DISTRIBUTION PANEL EQUIPMENT GROUND BUS.
20. 120 VOLT POWER FOR TAX OFFICE PANIC BELL SYSTEM.
21. MULTISERVICE RECESSED FLOOR BOX WITH TWO DUPLEX RECEPTACLES AND TELE/DATA BRACKETS. WALKER CAT. NO. RFB4 (BOX), RAKMII (ACTIVATION COVER), TWO (2) RFB-DR (DUPLEX RECEPTACLE BRACKETS), DTB-2-2T (TELE-DATA BRACKET), AND DTB-2-SD (TELE-DATA BRACKET). INSTALL CARPET ON CARPET TRIM PLATE AFTER INSTALLATION.
22. PROVIDE 120V POWER FOR "NUMBER SYSTEM". SEE KEYNOTES 11 & 12.
23. FOR SERVER.
24. UNDERCOUNTER WATER HEATER- PROVIDE DISCONNECT SWITCH AND FINAL CONNECT.
25. PATROL ROOM 119 AND BUSINESS OFFICE 185: FURNISH AND INSTALL TELE/POWER POLES WITH ONE ISOLATED GROUND AND ONE STANDARD RECEPTACLES (WIREMOLD #2SDTP-40) AT LOCATIONS DIRECTED BY ARCHITECT.
26. CONDUIT STUB-UP LOCATION FOR TELEPHONE SERVICE CONDUITS. SEE SHEET MPE-1 FOR CONTINUATION AND REQUIREMENTS.
27. TELEPHONE LINE FOR ELEVATOR
28. ROOMS 119 AND 185: CONNECT CIRCUIT TO TELE/POWER POLE ISOLATED/ DEDICATED RECEPTACLE.
29. ROOM 119: CONNECT CIRCUIT TO TELE/POWER POLE STANDARD RECEPTACLE.
30. ROOM 119: INSTALL PHONE LINE IN EACH TELE/POWER POLE.
31. FLOOR MOUNTED ELECTRIC WATER HEATER.
32. 3/4" E.C. TO MODEM IN ELECTRICAL ROOM NEAR STAIR NO. 2.
33. 2- 3/4" E.C. FOR IRRIGATION CONTROL WIRING.
34. IRRIGATION CONTROLLER.
35. 3/4" E.C. UP TO MECHANICAL ROOM.
36. 3/4" E.C. TO CHILLER. SEE SHEET MPE-1 FOR LOCATION.
37. VARIABLE FREQUENCY DRIVES FOR PUMPS- FURNISHED BY DIV. 15, INSTALLED AND CONNECTED BY DIV. 16. (TYP. FOR 4).
38. FINAL CONNECT FIRE/ SMOKE DAMPER.
39. 3/4"C THW CU #3 3#12

GENERAL NOTE

1. EACH CIRCUIT SERVING ISOLATED GROUND RECEPTACLE SHALL CONSIST OF A PHASE CONDUCTOR, A DEDICATED NEUTRAL CONDUCTOR, AND AN ISOLATED INSULATED GROUND CONDUCTOR. (NO SHARED NEUTRAL)

NORTH

FIRST FLOOR PLAN – POWER
SCALE: 1/8" = 1'-0"

01 * EXISTING POWER PLAN - FOR REFERENCE ONLY *
SCALE: NOT TO SCALE

DATE: 03/10/17
REV:
DRW. TAD CHK. DHDJ

WILLIAMSON COUNTY ANNEX
PRECINCT 2
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CEDAR PARK, TEXAS

SPENCER GODFREY ARCHITECTS
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SHEET
E-3

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STATE OF TEXAS
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94813
LICENSED
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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY B.J. HENDRIX, P.E. NO. 94813 ON: 03/10/17

REFERENCE GENERAL NOTES ON SHEETS M-1.1, P-1.1 AND E-1.1 FOR ADDITIONAL INFORMATION

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HCE job no.: 17-013

PROJECT NUMBER

DATE ISSUED
03/10/2017

SHEET TITLE
EXISTING POWER PLAN – FOR REFERENCE ONLY

SHEET NUMBER
E-2.1

BID 17-03-149
Williamson County, Texas
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3/9/2017 11:38 AM

LIGHTING KEYED NOTES

THESE NOTES APPLY TO THIS SHEET ONLY

1 DASHED REGION INDICATES LIGHT FIXTURES IN DAYLIGHT ZONE LIGHT FIXTURES IN DAYLIGHT ZONE SHALL HAVE ADDITIONAL PHOTOCELL/ DAY LIGHTING CONTROLS.

2 LOW VOLTAGE LIGHTING CONTROL BUTTON. REFERENCE MISCELLANEOUS EQUIPMENT SCHEDULE AND NLIGHT INTERIOR LIGHTING SCHEDULE.

3 LOWER CASE LETTER DENOTES SWITCHING FUNCTION OR CONTROL ZONE.

4 COORDINATE FINAL LOCATION OF CANOPY FIXTURES WITH ARCHITECT PRIOR TO ROUGH-IN. CONNECT TO EXISTING EXTERIOR LIGHTING CIRCUIT SERVING WALLPACK ABOVE.

5 EXISTING LIGHTING CIRCUIT FEEDING AREA FIELD VERIFY.

6 PROVIDE FLANGE KIT IF NEEDED FOR GYP. CEILING. COORDINATE WITH ARCHITECT'S REFLECTED CEILING PLAN.

7 COORDINATE FINAL LOCATION OF NLIGHT DIMMER SWITCH FOR CONTROL OF UNDER CABINET LIGHTING WITH ARCHITECT PRIOR TO ROUGH-IN.

8 PROVIDE POWER FOR UNDER CABINET LIGHTS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.

9 COORDINATE FINAL LOCATION OF NLIGHT DIMMER SWITCH FOR CONTROL OF UNDER CABINET LIGHTING WITH ARCHITECT PRIOR TO ROUGH-IN. PROVIDE SEPARATE SINGLE ZONE NLIGHT CONTROLLER IF ARCHITECT SELECTS A DIFFERENT LOCATION.

POWER KEYED NOTES

THESE NOTES APPLY TO THIS SHEET ONLY

1 PER EXISTING AS-BUILTS, ALL DEMOLISHED CIRCUITS ARE FED FROM PANEL '1LB'. FIELD VERIFY EXISTING CONDITIONS. ROUTE NEW CIRCUIT TO SPACE MADE AVAILABLE BY DEMOLITION ON PANEL '1LB'.

2 COORDINATE FINAL RECEPTACLE LOCATIONS WITH MILLWORK PRIOR TO ROUGH-IN. REVIEW FINAL ARCHITECTURAL INTERIOR ELEVATIONS FOR FINAL LAYOUTS OF EQUIPMENT TO BE POWERED.

3 COORDINATE FINAL CONNECTION REQUIREMENTS WITH ACTUAL HAND DRYERS PROVIDED. INSTALL DISCONNECTING MEANS FOR HAND DRYERS ABOVE CEILING. REFERENCE MECHANICAL FAN SCHEDULE FOR CONTROL OF EXHAUST FANS.

4 TYPICAL WORKSTATION. POWER/ DATA/ BUZZER. COORDINATE TYPICAL ELEVATION OF DEVICES WITH MILLWORK AND OWNER PRIOR TO ROUGH-IN.

5 ELECTRICAL PANELS. DO NOT RUN ANY PIPING OR DUCTWORK OVER ELECTRIC PANELS.

6 CONVENIENCE RECEPTACLE MOUNTED ON WALL AT STANDARD RECEPTACLE HEIGHT. PROJECTOR/TV RECEPTACLE MOUNTED HIGH IN WALL. COORDINATE PROJECTOR/TV RECEPTACLE LOCATION WITH OWNER PRIOR TO ROUGH-IN.

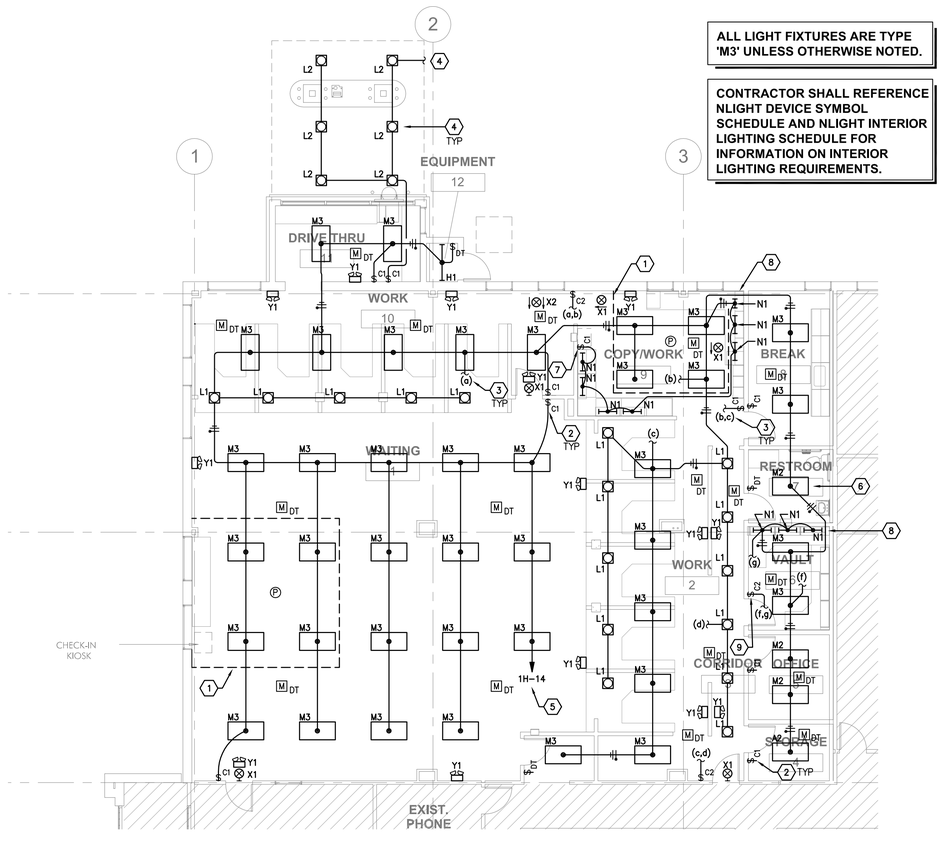
7 JBOX FOR NUMBER SIGN POWER. COORDINATE FINAL POWER AND CONNECTION REQUIREMENTS WITH ACTUAL EQUIPMENT TO BE INSTALLED.

8 POWER ABOVE CEILING FOR SPECIAL SYSTEM POWER SUPPLY. ROUGH-IN FOR CARD READER.

9 2-1" CONDUIT AND DEDICATED 20 AMP CIRCUIT TO TELLER MACHINE. COORDINATE FINAL REQUIREMENTS WITH ACTUAL MACHINE PROVIDED.

10 REFERENCE TELLER MACHINE ROUGH-IN DRAWINGS FOR ADDITIONAL CONDUIT REQUIREMENTS.

11 POWER FOR DRIVE THROUGH TELLER DEVICE. POWER REQUIREMENTS ESTIMATE. COORDINATE WITH ACTUAL DEVICE.

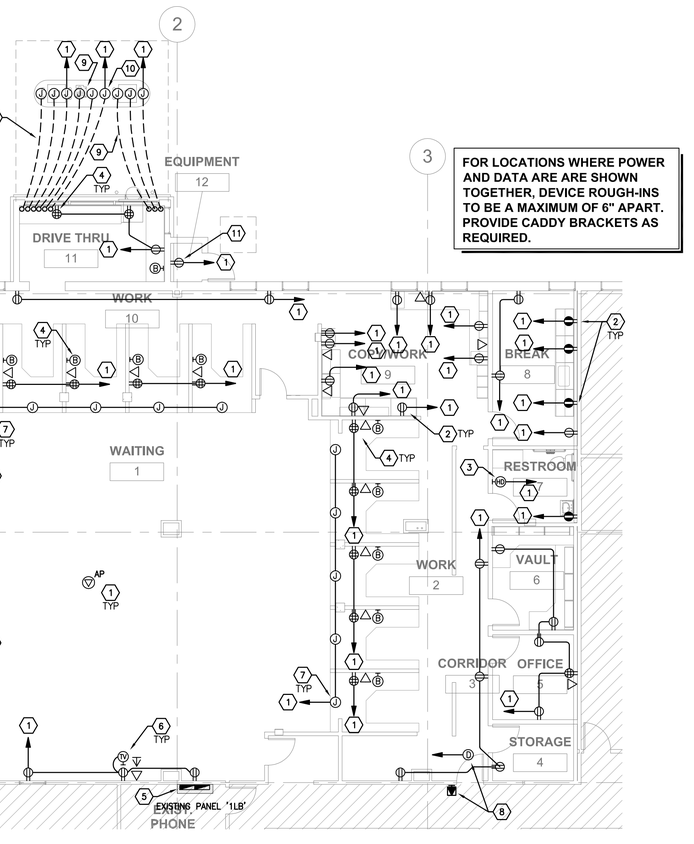


ALL LIGHT FIXTURES ARE TYPE 'M3' UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL REFERENCE NLIGHT DEVICE SYMBOL SCHEDULE AND NLIGHT INTERIOR LIGHTING SCHEDULE FOR INFORMATION ON INTERIOR LIGHTING REQUIREMENTS.

01 FLOOR PLAN - LIGHTING

SCALE: 1/8" = 1'-0"



FOR LOCATIONS WHERE POWER AND DATA ARE ARE SHOWN TOGETHER, DEVICE ROUGH-INS TO BE A MAXIMUM OF 6" APART. PROVIDE CADDY BRACKETS AS REQUIRED.

02 FLOOR PLAN - POWER

SCALE: 1/8" = 1'-0"

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PROJECT
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REVISIONS

STATE OF TEXAS
B.J. HENDRIX
94813
LICENSED
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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY B.J. HENDRIX, P.E. NO. 94813 ON: 03/10/17

REFERENCE GENERAL NOTES ON SHEETS M-1.1, P-1.1 AND E-1.1 FOR ADDITIONAL INFORMATION

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F - 4095

HCE job no.: 17-013

PROJECT NUMBER

DATE ISSUED
03/10/2017

SHEET TITLE

FLOOR PLANS
LIGHTING AND POWER

SHEET NUMBER

E-2.2

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AIR DEVICE SCHEDULE

PDSCH

MARK	NECK SIZE	FRAME SIZE	FRAME TYPE	VOLUME DAMPER	SUPPLY	RETURN	EXHAUST	MODEL	FLEX SIZE	MAXIMUM CFM
A1	9 x 9	24 x 24	LAY-IN	–	●	–	–	PRICE MODEL SMD	6"ø	100
A2	12 x 12	24 x 24	LAY-IN	–	●	–	–	PRICE MODEL SMD	8"ø	220
A3	12 x 12	24 x 24	LAY-IN	–	●	–	–	PRICE MODEL SMD	10"ø	350
A4	15 x 15	24 x 24	LAY-IN	–	●	–	–	PRICE MODEL SMD	12"ø	600
A5	18 x 18	24 x 24	LAY-IN	–	●	–	–	PRICE MODEL SMD	14"ø	900
B1	22 x 10	24 x 12	LAY-IN	–	–	●	–	PRICE MODEL 530TB	12"ø	700
B2	22 x 22	24 x 24	LAY-IN	–	–	●	–	PRICE MODEL 530TB	18"ø	1400
C1	6 x 6	15 x 15	SURFACE	–	●	–	–	PRICE MODEL SMD	6"ø	100
C2	12 x 12	18 x 18	SURFACE	–	●	–	–	PRICE MODEL SMD	8"ø	220
C3	12 x 12	18 x 18	SURFACE	–	●	–	–	PRICE MODEL SMD	10"ø	350
D1	8 x 8	10 x 10	SURFACE	●	–	–	●	PRICE MODEL 630DF	–	250
D2	12 x 12	14 x 14	SURFACE	●	–	–	●	PRICE MODEL 630DF	–	450

NOTES:

1. COORDINATE EXACT LOCATION OF DIFFUSERS WITH ARCHITECTURAL REFLECTED CEILING PLAN.
2. ALL SUPPLY DIFFUSERS SHALL BE 4-WAY THROW UNLESS NOTED OTHERWISE.
3. ALL FLEX SHALL BE SIZED AS SCHEDULED UNLESS NOTED OTHERWISE.
4. ALL DIFFUSERS SHALL BE OFF-WHITE UNLESS NOTED OTHERWISE.
5. VERIFY FRAME TYPE WITH ACTUAL CEILING TYPE PRIOR TO PURCHASE OF AIR DEVICES.
6. ALL VOLUME DAMPERS SHALL BE OPPOSED BLADE TYPE.
7. RUN-OUTS AND DROPS FROM R/A MAIN TRUNKS SHALL BE AS FOLLOWS: UP TO 250 CFM USE 10" DIAMETER OR 10" x 8"; 251 CFM TO 450 CFM USE 12" DIAMETER OR 12" x 10"; 451 CFM TO 700 CFM USE 14" DIAMETER OR 12" x 12"; 701 CFM TO 1000 CFM USE 16" DIAMETER OR 14" x 16"; 1001 CFM TO 1400 CFM USE 18" DIAMETER OR 16" x 18", UNLESS SHOWN OTHERWISE.
8. INSULATE BACKS OF ALL AIR DEVICES.
9. PROVIDE PRICE PLASTER FRAME FOR ALL AIR DEVICES LOCATED IN GYP OR PLASTER CEILINGS.
10. AIR DEVICES LOCATED IN DAMP AREAS (SHOWERS/LOCKER ROOMS/TRAINING ROOMS) ARE TO BE OF THE SAME SIZE AND TYPE AS SHOWN ON THE AIR DEVICE SCHEDULE BUT MUST BE OF ALUMINUM CONSTRUCTION. ALL DEVICES SCHEDULED TO BE ALUMINUM MUST BE ALUMINUM NO MATTER WHERE THEY ARE LOCATED.
11. TRANSITION TO AIR DEVICE NECK SIZE AS REQUIRED.
12. ALL LAY-IN AIR DEVICES ARE TO BE CONNECTED WITH FLEX DUCT. PROVIDE WITH MINIMUM 3" HIGH ROUND NECK OR SQUARE TO ROUND ADAPTER WITH 3" HIGH NECK FOR PROPER CONNECTION OF FLEX DUCT (SIZED PER SCHEDULE) TO AIR DEVICE.

*

GENERAL NOTES

A. THE CONTRACTOR IS TO VISIT THE SITE PRIOR TO BID TO FAMILIARIZE HIMSELF WITH ALL CONDITIONS AS THEY EXIST. SUBMISSION OF BID INDICATES THE CONTRACTOR'S UNDERSTANDING OF EXISTING CONDITIONS AND HIS WILLINGNESS TO WORK WITH THESE CONDITIONS. NO ADDITIONAL TIME OR MONEY WILL BE ALLOTTED DUE TO LACK OF COORDINATION WITH EXISTING CONDITIONS OR OTHER TRADES.

B. CONTRACTORS TO REVIEW AND COMPARE ALL DRAWINGS SO ALL WORK IN THEIR RESPECTIVE TRADE IS INCLUDED IN BID. EACH CONTRACTOR SHALL INCLUDE ALL MATERIALS AND INSTALLATION REQUIRED FOR HIS PARTICULAR TRADE AFTER COMPLETE REVIEW OF ALL CONTRACT DRAWINGS AND SPECIFICATIONS.

C. ALL WORK SHALL COMPLY WITH THE CURRENT APPLICABLE LOCAL, STATE AND FEDERAL CODES AND ORDINANCES. FOLLOW RECOMMENDED PRACTICES AS SET DOWN BY ASME, SMACNA, ASHRAE, NFPA, APPLICABLE BUILDING CODE, APPLICABLE MECHANICAL CODE, APPLICABLE PLUMBING CODE, NATIONAL ELECTRICAL CODE, AGA, ADA AND OSHA, AS THEY APPLY TO THIS PROJECT, EXCEPT IN CASES WHERE LOCAL STATUTES GOVERN. THE CONTRACTOR SHALL VERIFY WITH THE LATEST ADOPTED LOCAL CODES, ORDINANCES AND AMENDMENTS THAT APPLY TO THIS PROJECT WITH THE AUTHORITY HAVING JURISDICTION.

D. MECHANICAL CONTRACTOR TO COMPLETE A MECHANICAL/ELECTRICAL EQUIPMENT COORDINATION SHEET IN SPECIFICATION SECTION 20 00 00 AND SUBMIT COMPLETED FORM WITH EQUIPMENT SUBMITTAL AND PROVIDE A COMPLETED FORM TO THE ELECTRICAL CONTRACTOR.

E. CONFIRM LOCATION AND MOUNTING HEIGHT OF EACH THERMOSTAT/SENSOR PRIOR TO INSTALLATION. COORDINATE WITH ARCHITECT, OWNER, MILLWORK, SWITCHES, EQUIPMENT, FURNITURE, ETC.

F. PROVIDE ENGRAVED LABELS FOR ALL EQUIPMENT. LABEL ALL THERMOSTATS/SENSORS TO CORRESPONDING EQUIPMENT NUMBER. PROVIDE ENGRAVED ACCESS PANEL MARKERS ON THE CEILING GRID TO INDICATE ACCESS LOCATIONS FOR EQUIPMENT ABOVE CEILING.

G. WHERE STRUCTURAL BRIDGING IS REMOVED, RE-BRIDGE ON EACH SIDE OF JOIST. VERIFY WITH STRUCTURAL ENGINEER PRIOR TO REMOVING ANY BRIDGING.

H. COORDINATE WITH ALL STRUCTURAL BRACING FOR ROUTING OF DUCT AND DIFFUSERS.

I. BEFORE ANY CUTTING OR TRENCHING OPERATIONS BEGIN, VERIFY WITH OWNER'S REPRESENTATIVE, UTILITY COMPANIES AND OTHER INTERESTED PARTIES THAT ALL AVAILABLE INFORMATION HAS BEEN PROVIDED CONCERNING EXISTING UTILITY LOCATION. VERIFY LOCATIONS GIVEN. CONTACT ARCHITECT IMMEDIATELY UPON UNCOVERING UNKNOWN UTILITIES FOR FURTHER DIRECTION. INDICATE ALL UNCOVERED UTILITIES ON RECORD DRAWINGS.

J. FIRE/SMOKE AND/OR FIRE DAMPERS: INSTALL DAMPERS AT ALL DUCT PENETRATIONS OR RATED WALLS, TUNNELS AND CEILINGS. ALL DAMPERS TO BE OUT OF AIRSTREAM TYPE. DAMPERS TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. PROVIDE FACTORY WALL SLEEVE AND ANGLE KIT. ACCESS PANEL TO BE PROVIDED IN DUCT FOR ACCESS TO FUSIBLE LINK AND FOR INSPECTION AND MAINTENANCE. VERIFY THE EXACT LOCATION OF ALL RATED WALLS, TUNNELS AND CEILINGS WITH ARCHITECTURAL DRAWINGS. COMBINATION FIRE/SMOKE DAMPERS TO BE INSTALLED IN ALL SMOKE WALLS AND RATED EGRESS WAYS.

K. COORDINATE LOCATION AND MOUNTING TYPE OF ALL CEILING AIR DEVICES IN ACCORDANCE WITH ARCHITECTURAL REFLECTED CEILING PLANS.

L. INSTALL CLEAN SET OF FILTERS FOR ALL AIR HANDLING UNITS AFFECTED BY CONSTRUCTION AT COMPLETION OF PROJECT. ANY UNITS THAT ARE OPERATED DURING CONSTRUCTION SHALL HAVE FILTER MEDIA (FIBERBOND DUAL-PLY DUSTLOK MEDIA) PLACED OVER THE EXTERIOR OF RETURN AIR GRILLES. MEDIA SHALL BE CHANGED AS FREQUENTLY AS REQUIRED TO KEEP DUCTWORK CLEAN.

M. ALL MECHANICAL EQUIPMENT OR GROUPS OF EQUIPMENT SERVING A COMMON AREA AND DISCHARGING OVER 2000 CFM OR SERVING EGRESS PATHWAYS SHALL HAVE SMOKE DETECTORS LOCATED IN RETURN AND DISCHARGE AIR DUCTS, AS REQUIRED BY CODE AND LOCAL AHJ. THE MECHANICAL CONTRACTOR IS TO PROVIDE, INSTALL AND WIRE SMOKE DETECTORS COMPLETE WITH REMOTE TEST SWITCH INDICATOR UNLESS THE BUILDING HAS A FIRE ALARM SYSTEM. WHEN BUILDING HAS A FIRE ALARM SYSTEM THE ELECTRICAL/FIRE ALARM CONTRACTOR IS TO PROVIDE AND WIRE THE DUCT DETECTORS BACK INTO THE FIRE ALARM CONTROL PANEL AND PROVIDE A RELAY AT THE UNIT FOR LOCAL SHUTDOWN. MECHANICAL CONTRACTOR (CONTROLS CONTRACTOR) IS TO WIRE HIS CONTROL CIRCUIT THROUGH THE RELAY CONTACTS. REFERENCE MECHANICAL AND ELECTRICAL GENERAL NOTES, SCHEDULES, PLANS AND SPECIFICATIONS FOR MORE INFORMATION.

N. PROVIDE INTERNALLY LINED RETURN AIR BOOT WITH WITH NINETY DEGREE ELBOW OR TEE FITTING ON BACK OF ALL RETURN AIR GRILLES UNLESS OTHERWISE NOTED. REFERENCE DETAIL SHEETS AND SPECIFICATIONS FOR MORE INFORMATION.

O. PROVIDE ALL APPROPRIATE TOOLS, WRENCHES, KEYS, ETC. AS REQUIRED FOR ACCESS AND OPERATION OF VALVES, COVERS, ETC.

P. SEAL AROUND ALL DUCTWORK AND PIPING AT PENETRATIONS THROUGH SOUND WALLS WITH ACOUSTICAL SEALANT.

Q. ALL DUCTS 30" AND LARGER IN ANY DIMENSION TO HAVE DUCTMATE FITTINGS.

R. ALL ACCESS DOORS SHALL BE INSTALLED IN EASILY ACCESSIBLE LOCATIONS. RELOCATE ANY ACCESS DOOR THAT IS NOT INSTALLED IN THIS MANNER. THIS SHALL BE DONE AT NO ADDITIONAL COST TO OWNER. INSTALL MINIMUM 12" x 12" HINGED ACCESS DOORS WITH CAM LOCKS AT THE END OF ALL DUCT RUNS, AT 20' INTERVALS ALONG LENGTH OF RUN, AND ON EACH SIDE OF ELBOWS WITH TURNING VANES. REFERENCE SPECIFICATIONS FOR MORE INFORMATION.

BB. COORDINATE LOCATION OF DUCTWORK WITH LOCATION AND DEPTH OF ALL LIGHT FIXTURES PRIOR TO INSTALLATION.

CC. MECHANICAL CONTRACTOR TO HAVE STAMPED AND REVIEWED DUCT SHOP DRAWINGS PRIOR TO INSTALLATION OF ANY DUCTWORK IN FIELD.

DD. ABSOLUTELY NO PIPING OR DUCTWORK CAN BE ROUTED ABOVE ELECTRICAL PANELS, GEAR OR TRANSFORMERS. THE ONLY HVAC, PLUMBING, SPRINKLER PIPING OR DUCTWORK THAT CAN ENTER AN ELECTRIC ROOM ARE THOSE SPECIFICALLY SERVING THAT ROOM. THESE SERVICES CAN ONLY ENTER INTO ELECTRIC ROOM ABOVE ENTRY DOOR.

GG. SEAL AROUND ALL DUCTWORK AND PIPING AT PENETRATIONS THROUGH RATED WALLS WITH FIRE SEALANT. ALL PENETRATIONS THROUGH RATED WALLS ARE TO BE SEALED ACCORDING TO THE FIRE SEALANT MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUBMIT ON U.L. SYSTEM TO BE USED FOR EACH TYPE OF PENETRATION, POST A COPY OF INSTALLATION INSTRUCTIONS AT JOB SITE ACCESSIBLE TO ALL WORKERS PERFORMING WORK.

HH. ALL OPENINGS OF DUCTWORK AND MECHANICAL EQUIPMENT MUST BE COVERED WITH PLASTIC AND TIGHTLY SEALED TO PREVENT DUST AND CONSTRUCTION DEBRIS FROM ENTERING SYSTEMS, THIS INCLUDES EQUIPMENT AND DUCTWORK STORED ON SITE. IF THE MECHANICAL EQUIPMENT IS OPERATED PRIOR TO ACCEPTANCE OF THE BUILDING BY OWNER, ALL OUTLET AND INLETS OF THE SYSTEM MUST BE PROTECTED WITH ROLLED FILTER MEDIA EQUAL TO (FIBERBOND DUAL-PLY DUSTLOC MEDIA). UNITS MUST BE SHUT DOWN WHEN PAINTING, SANDING AND SIMILAR CONSTRUCTION OPERATIONS ARE BEING PERFORMED. SYSTEMS THAT ARE OPERATED DURING CONSTRUCTION MUST BE CLEANED TO NEW CONDITION BEFORE FINAL PAYMENT WILL BE APPROVED. ITEMS TO BE CLEANED INCLUDE: WHOLE DUCT SYSTEM, AIR DEVICES, BLOWERS, MOTORS, UNIT CASING, EVAPORATOR COILS, CONDENSER COILS AND ALL OTHER COMPONENT EFFECTED BY THE OPERATION OF THE SYSTEMS.

JJ. ALL SUPPLY BRANCH DUCTS ARE TO HAVE BALANCING DAMPERS WITH MANUAL LOCKING QUADRANT OPERATORS. PROVIDE STAND-OFF BRACKETS EQUIVALENT TO INSULATION THICKNESS.PROVIDE BALANCING DAMPERS IN OTHER DUCT SYSTEMS AS REQUIRED TO PROPERLY BALANCE SYSTEMS. SINGLE BLADE DAMPERS ARE ACCEPTABLE IN DUCTS 14" ROUND OR 14" TALL, LARGER DUCTS TO HAVE MULTIPLE BLADE DAMPERS. ALL DAMPER BLADES AND HARDWARE ARE TO BE FABRICATED OF SUFFICIENT GAGE AND HAVE REINFORCEMENTS AS REQUIRED TO PREVENT VIBRATION.

MECHANICAL LEGEND

SYMBOL	ABB.	DESCRIPTION
	FD	FIRE DAMPER (RE: ARCHITECTURAL DRAWINGS FOR RATED WALL LOCATIONS)
	FSD	COMBINATION FIRE/SMOKE DAMPER
	DB	DUCT BARRIER WITH SECURITY 1/2" BARS (6 x 6) EQUAL TO PRICE MODEL MSBG
T	TSTAT	THERMOSTAT/CONTROL DEVICE
TS		REMOTE TEMPERATURE SENSOR
H		HUMIDISTAT
CO2		CARBON DIOXIDE SENSOR
F		FIRESTAT
SD		SMOKE DETECTOR
AH		ABSOLUTE HUMIDITY SENSOR
M	MOD	MOTOR OPERATED DAMPER
VS		VENTILATION SWITCH
SA — SINGLE LINE		LONG RADIUS 90° ELBOW
SA — SINGLE LINE		BRANCH TAKE-OFF WITH DAMPER
SA — SINGLE LINE		RADIUS DUCT SPLIT W/LOCKING SPLITTER DAMPER
		CEILING SUPPLY AIR DEVICE
		CEILING RETURN OR EXHAUST DEVICE
D		CONDENSATE DRAIN
		BALL VALVE – 2" AND SMALLER BUTTERFLY VALVE – LARGER THAN 2"
	O.B.D.	OPPOSED BLADE DAMPER
		SMOKE SUPPLY GRILLE
		POINT OF CONNECTION
		MANUAL DAMPER (OBD WHEN ON MAU DUCTWORK)
AD		DUCT ACCESS DOOR

M/P ABBREVIATION SCHEDULE

AD	ACCESS DOOR	MAINT	MAINTENANCE
ABV	ABOVE	MAU	MAKEUP AIR UNIT
AFF	ABOVE FINISHED FLOOR	MAX	MAXIMUM
ARCH	ARCHITECT	MC	MECHANICAL CONTRACTOR
AUTO	AUTOMATIC	MBH	1000 BTU PER HOUR
AUX	AUXILIARY	MECH	MECHANICAL
AHU	AIR HANDLING UNIT	MH	MANHOLE
		MIN	MINIMUM
BD	BALANCE DAMPER	MISC	MISCELLANEOUS
BFF	BELOW FINISHED FLOOR	MTD	MOUNTED
BLDG	BUILDING	MOD	MOTOR OPERATED DAMPER
BOD	BOTTOM OF DUCT		
BOP	BOTTOM OF PIPE	NIC	NOT IN CONTRACT
BF	BOOSTER FAN	N.O.	NORMALLY OPEN
		N.C.	NORMALLY CLOSED
CLG	CEILING	NO.	NUMBER
CLR	CLEAR/CLEARANCE	NTS	NOT TO SCALE
CO	CLEANOUT		
COL	COLUMN	O/A	OUTDOOR AIR
CONC	CONCRETE	OBD	OPPOSED BLADE DAMPER
CONTR	CONTRACTOR	OC	ON CENTER(S)
CW	COLD WATER	OPNG	OPENING
CONN	CONNECTION	ORL	OVERFLOW RAINLEADER
CU	CONDENSING UNIT	OAH	OUTSIDE AIR HOOD
Cu	COPPER		
CWS	CHILLED WATER SUPPLY	PC	PLUMBING CONTRACTOR
CHR	CHILLED WATER RETURN	PH	PHASE
		PLBG	PLUMBING
DIA	DIAMETER		
DN	DOWN	R/A	RETURN AIR
DWG	DRAWING	RE:	REFERENCE/REFER TO
DH	DUCT HEATER	REFRG	REFRIGERANT
E/A	EXHAUST AIR	REF	REFRIGERATOR
EC	ELECTRICAL CONTRACTOR	REQD	REQUIRED
EF	EXHAUST FAN	RHP	RADIANT HEAT PANEL
ELEC	ELECTRIC/ELECTRICAL	RL	RAINLEADER
EQ	EQUAL	RM	ROOM
EQUIP	EQUIPMENT	RTU	ROOFTOP UNIT
EX	EXISTING		
EXH	EXHAUST	S/A	SUPPLY AIR
E.S.P.	EXTERNAL STATIC PRESSURE	SCH	SCHEDULE
ERV	ENERGY RECOVERY VENTILATOR	SP	STATIC PRESSURE
		SPEC	SPECIFICATION
FCO	FLOOR CLEAN OUT	SD	STORM DRAIN
FCU	FAN COIL UNIT	SF	SUPPLY FAN
FF	FINISHED FLOOR		
FLEX	FLEXIBLE	TSP	TOTAL STATIC PRESSURE
FLR	FLOOR/FLOORING	TYP	TYPICAL
		UON	UNLESS OTHERWISE NOTED
GA	GAUGE	UG	UNDERGROUND
GC	GENERAL CONTRACTOR	UH	UNIT HEATER
GEN	GENERAL	V	VENT (PLUMBING)
GYP	GYPSUM BOARD	V	VOLTAGE (ELECTRICAL)
		VTR	VENT THROUGH ROOF
HP	HEAT PUMP		
hp	HORSEPOWER	W/	WITH
HT	HEIGHT	W/O	WITHOUT
HW	HOT WATER	WP	WATERPROOF
HWC	HOT WATER CIRC	WT	WEIGHT
HR	HOUR	WTR	WATER
HWR	HEATING WATER RETURN	WW	WASTE WATER
HWS	HEATING WATER SUPPLY	WCO	WALL CLEANOUT
		WH	WATER HEATER
LOC	LOCATION		

STATE OF TEXAS
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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY B.J. HENDRIX, P.E. NO: 94813
ON: 03/10/17

REFERENCE GENERAL NOTES ON SHEETS M-1.1, P-1.1 AND E-1.1 FOR ADDITIONAL INFORMATION

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HCE job no.: 17-013

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WILLIAMSON COUNTY TAX OFFICE

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
100% CDs
REVISIONS

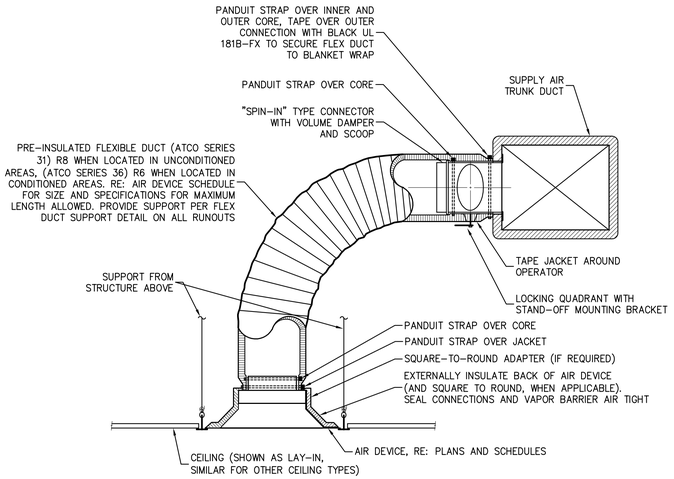
PROJECT NUMBER

DATE ISSUED
03/10/2017

SHEET TITLE
SCHEDULES, NOTES, AND LEGENDS - MECHANICAL

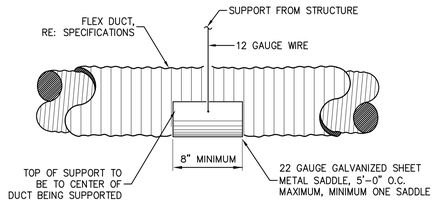
MP – 1.1

Bid 1703-149
Williamson County, Texas
G:\2017\WILCO - CEDAR PARK TAX OFFICE.013113\MP1.1.dwg, 3/10/2017 6:41:08 PM, Hendrix, Bluebeam PDF, ARCH_D_(24.00_x_36.00_Inches), 0.125:12
3/9/2017 11:38 AM



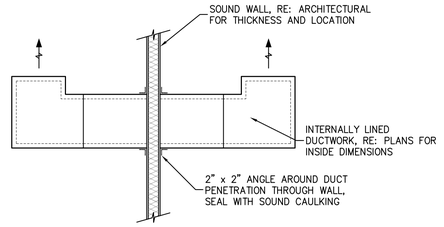
CEILING SUPPLY AIR DEVICE CONNECTION DETAIL

NO SCALE



FLEX. DUCT SUPPORT DETAIL

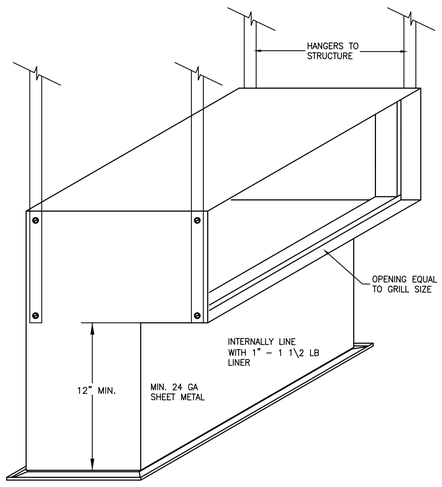
NO SCALE



SUPPORT THE ENDS OF DUCTWORK ACCORDING TO SMACNA LOW PRESSURE DUCT STANDARDS. COORDINATE WITH EXISTING CONDITIONS.

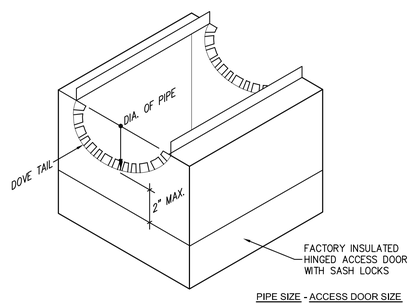
SOUND BOOT TRANSFER DUCT

NO SCALE MDE152



RETURN AIR BOOT

NO SCALE MDE80A



PIPE SIZE - ACCESS DOOR SIZE
6" ø – 10 x 10
8" ø – 10 x 10
10" ø – 10 x 10
12" ø – 12 x 12
14" ø – 12 x 12

SADDLE TAP FOR ACCESS DOOR IN ROUND PIPE

NO SCALE MDE67

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HCE job no.: 17-013

PROJECT NUMBER

DATE ISSUED
03/10/2017

SHEET TITLE
SCHEDULES, NOTES, AND LEGENDS - PLUMBING

MP-1.2

Bid 1703-149
Williamson County, Texas
G:\2017\WILCO - CEDAR PARK TAX OFFICE.013\13MP1.2.dwg, 3/10/2017 6:50:30 PM, Hendrix, Bluebeam PDF, ARCH_D_(24.00_x_36.00_Inches), 0.125:12
3/29/2017 11:36 AM

BID 17003149

PIPE SIZING REQUIREMENTS

1. ALL FLOOR DRAINS AND FLOOR SINKS MUST HAVE TRAP PRIMERS. PROVIDE INVERTED TEE CONNECTION FROM SINK TAILPIECE OR FLUSH VALVE TYPE TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS, FLOOR SINKS AND HUB DRAINS. AS LAST RESORT PROVIDE MECHANICAL TYPE TRAP PRIMER (PPP INC. "OREGON #1" TYPE). CONNECT TO NEAREST WATER SERVING THAT AREA PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. IN JURISDICTIONS WHERE PRESSURE ACTIVATED MECHANICAL PRIMERS ARE NOT ALLOWED, USE ELECTRONIC TRAP PRIMERS. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR. PROSET "TRAP GUARD" DEVICE MAY BE USED IN LIEU OF TRAP PRIMERS WHEN ALLOWED BY LOCAL CODE AUTHORITY HAVING JURISDICTION. BEFORE USING PROSET "TRAP GUARD" CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM LOCAL CODE AUTHORITY HAVING JURISDICTION AND PROVIDE COPIES TO ARCHITECT AND ENGINEER.
2. AT ALL PUBLIC LAVATORIES A HOT WATER MANIFOLD WILL BE ROUTED PARALLEL TO HOT WATER RECIRC MAIN DOWN FULL SIZE INTO ONE SIDE OF CHASE AND WILL BE CONNECTED BACK TO HOT WATER RECIRC MAIN OUT OF OPPOSITE SIDE OF CHASE TO COMPLY WITH INTERNATIONAL ENERGY CODE (IECC) MAXIMUM ALLOWABLE HOT WATER PIPING LENGTH FROM MANIFOLD. (TAP SIZE: FOR 3/8", PIPING MAXIMUM LENGTH = 3 FEET; FOR 1/2" MAXIMUM LENGTH = 2 FEET)
3. PIPING SIZE FOR WATER MAIN DROPS AND MANIFOLD IN CHASE OR WALL TO REMAIN FULL SIZE OF DROP INDICATED. REFERENCE FIXTURE CONNECTION SCHEDULE FOR INDIVIDUAL LINE SIZE TO EACH FIXTURE.
4. COORDINATE ALL WASTEWATER FLOOR PENETRATIONS AND PIPING PENETRATIONS WITH STRUCTURAL PRIOR TO INSTALLATION. PIPING MAY BE OFFSET SLIGHTLY TO AVOID STRUCTURAL CONFLICTS.
5. ROUTE VENT FROM EACH FIXTURE TO HORIZONTAL VENT HEADER IN CHASE/WALL OR TO NEAREST COMMON VTR ABOVE CEILING. REFERENCE FIXTURE CONNECTION SCHEDULE FOR INDIVIDUAL FIXTURE VENT SIZES. VENT HEADERS IN CHASE TO BE SIZED ACCORDINGLY: 1 1/2" VENT UP TO 6 DRAIN FIXTURE UNITS MAXIMUM DEVELOPED LENGTH OF 60 FEET (EXCEPT FOR WATER CLOSETS), 2" VENT UP TO 20 DRAIN FIXTURE UNITS MAXIMUM DEVELOPED LENGTH OF 120 FEET, 3" VENT UP TO 84 DRAIN FIXTURE UNITS MAXIMUM DEVELOPED LENGTH OF 212 FEET AND 4" VENT UP TO 256 DRAIN FIXTURE UNITS MAXIMUM DEVELOPED LENGTH OF 300 FEET. BRANCH VENTS EXCEEDING 40 FEET IN DEVELOPED LENGTH ARE TO BE INCREASED BY ONE PIPE SIZE. NO MORE THAN 1/3 OF THE CODE PERMITTED DEVELOPED LENGTH SHALL BE IN HORIZONTAL POSITION. EXTEND COMMON VENT UP THROUGH ROOF.
6. ROUTE ALL VENTS TO NEAREST COMMON VENT THRU ROOF (VTR) TO MINIMIZE ROOF PENETRATIONS. **VTR TO BE MINIMUM 15 FEET AWAY FROM OUTSIDE AIR INTAKES. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.**

FIXTURE CONNECTION SCHEDULE

MARK	CW	HW	WASTE	DRAIN FIXTURE UNITS	VENT	
WATER CLOSET (FLUSH VALVE)	1"	–	4"	6	2"	
WATER CLOSET (TANK TYPE)	1/2"	–	4"	4	2"	
URINAL	3/4"	–	2"	2	2"	
PUBLIC LAVATORY∗	3/8"	3/8"	2"	1	1 1/2" ∗∗	
SINK ∗∗∗	1/2"	1/2"	2"	2	1 1/2" ∗∗	
SERVICE SINK	3/4"	3/4"	3"	2	2"	
WASH FOUNTAIN ∗	1/2"	1/2"	2"	2	1 1/2" ∗∗	
EWC	1/2"	–	2"	1	1 1/2" ∗∗	
WASHING MACHINE	3/4"	3/4"	2"	2	2"	
HOSE BIBB	3/4"	–	–	–	–	
SHOWER ∗∗∗∗	1/2"	1/2"	3"	2	1 1/2"	
FLOOR DRAIN	–	–	3"	2	2"	

∗ HOT AND COLD WATER REQUIRED UNLESS NOTED OTHERWISE ON PLUMBING FIXTURE SCHEDULE. PROVIDE TEMPERATURE MIXING VALVE (ASSE 1070) AT THE FIXTURE.

∗∗ IF HORIZONTAL VENT LENGTH EXCEEDS 20 FEET, INCREASE VENT SIZE TO TWO INCHES.

∗∗∗ COMMERCIAL KITCHEN SINKS GET HOT WATER, REMAINDER TO BE PROVIDED WITH TEMPERATURE MIXING VALVE (ASSE 1070) AT THE FIXTURE.

∗∗∗∗ SHOWER VALVES TO BE BALANCED-PRESSURE, THERMOSTATIC OR COMBINATION BALANCED-PRESSURE/THERMOSTATIC CONFORMING TO ASSE 1016.

GENERAL NOTES

A. THE CONTRACTOR IS TO VISIT THE SITE PRIOR TO BID TO FAMILIARIZE HIMSELF WITH ALL CONDITIONS AS THEY EXIST. SUBMISSION OF BID INDICATES THE CONTRACTOR'S UNDERSTANDING OF EXISTING CONDITIONS AND HIS WILLINGNESS TO WORK WITH THESE CONDITIONS. NO ADDITIONAL TIME OR MONEY WILL BE ALLOTTED DUE TO LACK OF COORDINATION WITH EXISTING CONDITIONS OR OTHER TRADES.

B. CONTRACTORS TO REVIEW AND COMPARE ALL DRAWINGS SO ALL WORK IN THEIR RESPECTIVE TRADE IS INCLUDED IN BID. EACH CONTRACTOR SHALL INCLUDE ALL MATERIALS AND INSTALLATION REQUIRED FOR HIS PARTICULAR TRADE AFTER COMPLETE REVIEW OF ALL CONTRACT DRAWINGS AND SPECIFICATIONS.

C. ALL WORK SHALL COMPLY WITH THE APPLICABLE LOCAL, STATE AND FEDERAL CODES AND ORDINANCES. FOLLOW RECOMMENDED PRACTICES AS SET DOWN BY ASME, SMACNA, ASHRAE, NFPA, APPLICABLE BUILDING CODE, APPLICABLE MECHANICAL CODE, APPLICABLE PLUMBING CODE, NATIONAL ELECTRICAL CODE, AGA, ADA AND OSHA, AS THEY APPLY TO THIS PROJECT EXCEPT IN CASES WHERE LOCAL STATUTES GOVERN.

D. THE CONTRACTOR SHALL VERIFY WITH AUTHORITY HAVING JURISDICTION THE LATEST ADOPTED LOCAL CODES, ORDINANCES AND AMENDMENTS THAT APPLY TO THIS PROJECT. PROVIDE CONDENSATE DISPOSAL POINT FOR ALL MECHANICAL EQUIPMENT TO CODE APPROVED DISPOSAL. COORDINATE WITH MECHANICAL CONTRACTOR.

E. ABSOLUTELY NO PIPING OR DUCTWORK CAN BE ROUTED ABOVE ELECTRICAL PANELS, GEAR OR TRANSFORMERS. THE ONLY HVAC, PLUMBING, SPRINKLER OR DUCTWORK THAT CAN ENTER AN ELECTRIC ROOM ARE THOSE SPECIFICALLY SERVING THAT ROOM. THESE SERVICES CAN ONLY ENTER INTO ELECTRIC ROOM ABOVE ENTRY DOOR.

F. PROVIDE VALVE TAGS FOR ALL VALVES. PROVIDE CEILING ACCESS MARKERS FOR VALVES LOCATED ABOVE CEILING OR BEHIND WALL MOUNTED PANEL.

G. PLUMBING PIPING SHALL NOT BLOCK ACCESS TO EQUIPMENT, JUNCTION BOXES, DISCONNECTS, ACCESS DOORS, ETC.

H. ALL VALVES ARE TO BE ACCESSIBLE AND SHALL NOT BE LOCATED MORE THAN FOUR FEET ABOVE THE CEILING.

I. CONTRACTOR TO CONNECT COLD WATER, TEMPERED WATER, WASTE WATER AND VENT PIPING TO ALL FIXTURES PER MANUFACTURER'S RECOMMENDATIONS, UNLESS OTHERWISE NOTED ON DRAWINGS.

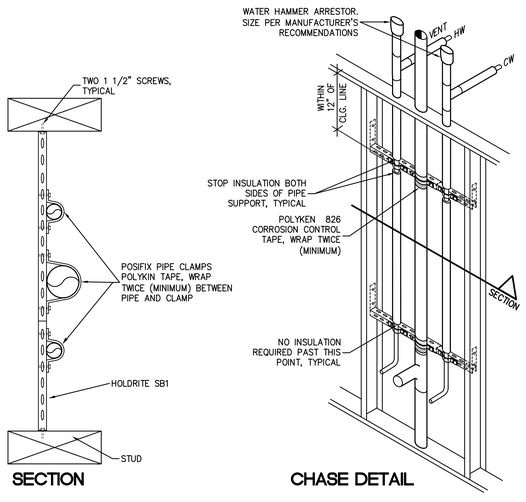
J. BEFORE ANY CUTTING OR TRENCHING OPERATIONS BEGIN, VERIFY WITH OWNER'S REPRESENTATIVE, UTILITY COMPANIES AND OTHER INTERESTED PARTIES THAT ALL AVAILABLE INFORMATION HAS BEEN PROVIDED CONCERNING EXISTING UTILITY LOCATION. VERIFY LOCATIONS GIVEN. CONTACT ARCHITECT IMMEDIATELY UPON UNCOVERING UNKNOWN UTILITIES FOR FURTHER DIRECTION. INDICATE ALL UNCOVERED UTILITIES ON RECORD DRAWINGS.

K. FIRE SEAL AROUND ALL PIPING AT PENETRATIONS THROUGH RATED WALLS, CEILINGS AND TUNNELS PER UL LISTED MATERIAL FOR ACTUAL SEALANT BEING USED. COORDINATE WITH ARCHITECTURAL PLANS FOR RATED WALL LOCATION.

L. PROVIDE ALL APPROPRIATE TOOLS, WRENCHES, KEYS, ETC. AS REQUIRED FOR ACCESS AND OPERATION OF VALVES, COVERS, ETC.

M. DO NOT ROUTE PIPING UNDER EQUIPMENT LOCATED ABOVE CEILING. ROUTE PIPING AROUND EQUIPMENT TO ALLOW FOR ACCESS AROUND EQUIPMENT AND FOR FUTURE REMOVAL OF EQUIPMENT.

N. PROVIDE HEAT TRAPS ON INCOMING AND DISCHARGE LINES FROM WATER HEATERS WHICH DO NOT HAVE THEM FACTORY INSTALLED OR ARE NOT CONNECTED TO A RECIRCULATING SYSTEM.



TYP. PLUMBING CHASE SUPPORT DETAIL

NO SCALE PDE30

PLUMBING FIXTURE SCHEDULE

NOTES:

1. REFERENCE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL WALL HUNG FIXTURES TO BE INSTALLED WITH WALL CARRIERS, VERIFY CONFIGURATION TYPE.
3. PROVIDE VANDAL RESISTANT SCREWS AT ALL FIXTURES.
4. INSTALL STAINLESS STEEL CAPS AT ALL UNUSED LAVATORY FAUCET HOLES.
5. NO OFFSET FLANGES WILL BE ALLOWED FOR WATER CLOSET INSTALLATIONS.
6. GROUT FOR LEVELING WATER CLOSETS SHALL NOT EXTEND UP ON SIDE OF WATER CLOSET BASES. TAKE GROUT BACK TO MINIMUM 1/8" UNDER BASE AND CAULK FOR FINAL FINISH. VERIFY CAULK COLOR AND TYPE WITH ARCHITECT.
7. REFERENCE ARCHITECTURAL CONTRACT DOCUMENTS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES. CONTACT ARCHITECT FOR ADDITIONAL INFORMATION AS REQUIRED.
8. PROVIDE INVERTED TEE CONNECTION FROM SINK TAILPIECE OR FLUSH VALVE TYPE TRAP PRIMER CONNECTION TO ALL FLOOR DRAINS, FLOOR SINKS AND HUB DRAINS. AS LAST RESORT PROVIDE MECHANICAL TYPE TRAP PRIMER (PPP INC. "OREGON #1" TYPE). CONNECT TO NEAREST WATER SERVING THAT AREA PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
9. ALL PLUMBING FIXTURES TO BE "LEAD FREE" AB1953 COMPLIANT (.25% OR LESS AVERAGE LEAD CONTENT). PROVIDE DOCUMENTATION IN SUBMITTALS THAT THIS REQUIREMENT IS MET FOR EACH APPLICABLE FIXTURE.

WCH
WATER CLOSET (ADA): AMERICAN STANDARD 211AA, FLOOR MOUNT, TANK TYPE WITH CHAMPION FLUSHING SYSTEM, VITREOUS CHINA, ELONGATED BOWL, INSULATED TANK, 1.28 GALLON FLUSH, 16.5" BOWL HEIGHT.
SEAT: CHURCH MODEL 295CT, STA-TITE FASTENER, OPEN FRONT LESS COVER (WHITE).

LH
LAVATORY (ADA): AMERICAN STANDARD 0356.015, 20" x 18" VITREOUS CHINA, WALL HUNG, 8" FAUCET CENTERS AND GRID STRAINER. PROVIDE WITH TEMPERATURE MIXING VALVE EQUAL TO POWERS HYDROGUARD T/P e480 SERIES, .5 GPM MINIMUM FLOW, ASSE 1070, INTEGRAL CHECKS, 1.9 GPM AT 10 psi DROP.
FAUCET: CHICAGO #404-HZ317CP, TEMPERED AND COLD WATER, 4" WRIST BLADE HANDLES, AERATOR.

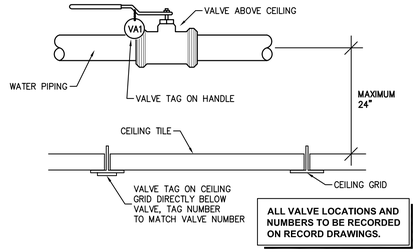
SKH
SINK (ADA): ELKAY #LRAD-2219-55 (OFF-CENTER DRAIN), 18 GAUGE STAINLESS STEEL, SELF-RIM, 18" x 14" x 5.5" DEEP BOWL, THREE (3) FAUCET HOLES WITH STAINLESS STEEL BASKET STRAINER. PROVIDE WITH TEMPERATURE MIXING VALVE EQUAL TO POWERS HYDROGUARD T/P e480 SERIES, .5 GPM MINIMUM FLOW, ASSE 1070, INTEGRAL CHECKS, 1.9 GPM AT 10 psi DROP.
FAUCET: ELKAY #2442BHC, SWING GOOSENECK, WRIST BLADE HANDLES.

WB
WALL BOX FOR CONNECTION TO REFRIGERATOR WATER AND/OR ICE MAKER EQUAL TO SOUIX CHIEF 696 SERIES WITH ABS OUTLET BOX, 1/4 TURN VALVE AND ASSE 1010 WATER HAMMER ARRESTOR.

FD
FLOOR DRAIN (GENERAL PURPOSE): C.I. BODY, FLASHING COLLAR, WEEPHOLES, ADJUSTABLE HEAVY DUTY STAINLESS STEEL OR NICKEL BRONZE ROUND TOP (6" DIAMETER). MIFAB F1000 C-6-3 SERIES.

PLUMBING NOTES

1. BEFORE ANY CUTTING OR TRENCHING OPERATIONS BEGIN, VERIFY WITH OWNER'S REPRESENTATIVE AND OTHER INTERESTED PARTIES THAT ALL AVAILABLE INFORMATION HAS BEEN PROVIDED CONCERNING ESXISTING UTILITY LOCATIONS. VERIFY LOCATIONS GIVEN. CONTACT ARCHITECT IMMEDIATELY UPON UNCOVERING UNKNOWN UTILITIES FOR FURTHER DIRECTION. INDICATE ALL UNCOVERED UTILITIES ON RECORD DRAWINGS.
2. THE INTENT IS TO CONNECT NEW PLUMBING FIXTURES TO EXISTING UTILITIES AND TO INSURE THAT THE EXISTING SERVICE TO ALL ITEMS THAT REMAIN IS NOT INTERRUPTED. RECONNECT ALL FIXTURES NOT BEING REMOVED OR REPLACED. CONNECT ALL NEW PLUMBING FIXTURES. ENTIRE NEW WATER SYSTEM IS TO BE INSULATED COPPER. PRO PRESS FITTINGS MAY BE UTILIZED.
3. CAP ANY EXISTING UNUSED UTILITIES AND INDICATE LOCATION OF UNUSED CAPED UTILITIES ON RECORD DRAWINGS.
4. TEST AND STERILIZE ALL NEW DOMESTIC PIPING.



TYPICAL VALVE IDENTIFICATION DETAIL

SCALE: NO SCALE PDE27

PLUMBING LEGEND

SYMBOL	ABB.	DESCRIPTION
—— · ——	CW	COLD WATER PIPING
—— ·· ——	HW	HOT WATER PIPING
—— ··· ——	HWR	HOT WATER RETURN PIPING
——	WW	WASTE WATER
– – – – –		VENT PIPING
— T —		TEMPERED WATER
— G —		GAS PIPING
— F —		FIRE LINE
— GT —		GREASE TRAP LINE
— A —		COMPRESSED AIR PIPING
— D —		RELIEF OR CONDENSATE DRAIN PIPING
— SD —	SD	STORM DRAIN
— RL —	RL	RAIN LEADER
— ORL —	ORL	OVERFLOW RAIN LEADER
		FULL PORT BALL PIPE ISOLATION VALVE
	HB	HOSE BIBB/WALL HYDRANT
		UNION
	FD/FS	FLOOR DRAIN/FLOOR SINK
	HD	HUB DRAIN
	CO	CLEAN OUT
		DOUBLE CLEAN OUT
	WCO	WALL CLEAN OUT
		GAS COCK
		BALANCE VALVE
		CHECK VALVE
		POINT OF CONNECTION
		GAS PRESSURE REGULATOR

M/P ABBREVIATION SCHEDULE

AD	ACCESS DOOR	MAINT	MAINTENANCE
ABV	ABOVE	MAU	MAKEUP AIR UNIT
AFF	ABOVE FINISHED FLOOR	MAX	MAXIMUM
ARCH	ARCHITECT	MC	MECHANICAL CONTRACTOR
AUTO	AUTOMATIC	MBH	1000 BTU PER HOUR
AUX	AUXILIARY	MECH	MECHANICAL
AHU	AIR HANDLING UNIT	MH	MANHOLE
		MIN	MINIMUM
BD	BALANCE DAMPER	MISC	MISCELLANEOUS
BFF	BELOW FINISHED FLOOR	MTD	MOUNTED
BLDG	BUILDING	MOD	MOTOR OPERATED DAMPER
BOD	BOTTOM OF DUCT		
BOP	BOTTOM OF PIPE	NIC	NOT IN CONTRACT
BP	BOOSTER FAN	N.O.	NORMALLY OPEN
		N.C.	NORMALLY CLOSED
CLG	CEILING	NO.	NUMBER
CLR	CLEAR/CLEARANCE	NTS	NOT TO SCALE
CO	CLEANOUT		
COL	COLUMN	O/A	OUTDOOR AIR
CONC	CONCRETE	OBD	OPPOSED BLADE DAMPER
CONTR	CONTRACTOR	OC	ON CENTER(S)
CW	COLD WATER	OPNG	OPENING
CONN	CONNECTION	ORL	OVERFLOW RAINLEADER
CU	CONDENSING UNIT	OAH	OUTSIDE AIR HOOD
Cu	COPPER		
CHS	CHILLED WATER SUPPLY	PC	PLUMBING CONTRACTOR
CHR	CHILLED WATER RETURN	PH	PHASE
		PLBG	PLUMBING
DIA	DIAMETER		
DN	DOWN		
DWG	DRAWING	R/A	RETURN AIR
DH	DUCT HEATER	RE:	REFERENCE/REFER TO
		REFRG	REFRIGERANT
E/A	EXHAUST AIR	REF	REFRIGERATOR
EC	ELECTRICAL CONTRACTOR	REQD	REQUIRED
EF	EXHAUST FAN	RHP	RADIANT HEAT PANEL
ELEC	ELECTRIC/ELECTRICAL	RL	RAINLEADER
EQ	EQUAL	RM	ROOM
EQUIP	EQUIPMENT	RTU	ROOFTOP UNIT
EX	EXISTING		
EXH	EXHAUST	S/A	SUPPLY AIR
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		V	VOLTAGE (ELECTRICAL)
HP	HEAT PUMP	VTR	VENT THROUGH ROOF
Hp	HORSEPOWER		
HT	HEIGHT	W/	WITH
HW	HOT WATER	W/O	WITHOUT
HWC	HOT WATER CIRC	WP	WATERPROOF
HR	HOUR	WT	WEIGHT
HWR	HEATING WATER RETURN	WTR	WATER
HWS	HEATING WATER SUPPLY	WW	WASTE WATER
		WCO	WALL CLEANOUT
LOC	LOCATION	WH	WATER HEATER

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PROJECT PHASE
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REVISIONS

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LICENSED PROFESSIONAL ENGINEER

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03/10/2017

SHEET TITLE
SCHEDULES, NOTES, AND LEGENDS - PLUMBING

MP–1.3

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Williamson County, Texas
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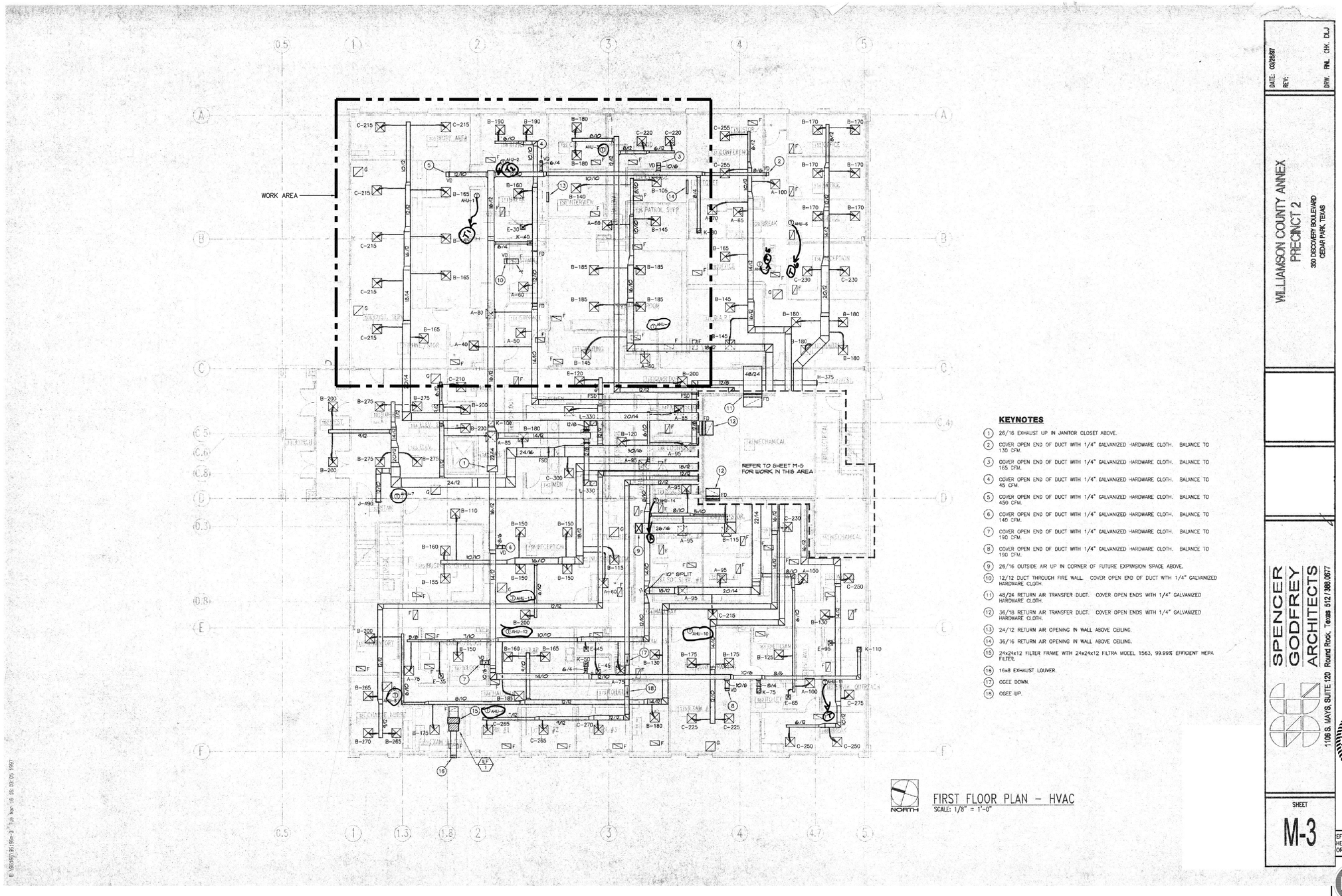

KEYNOTES

1. 26/16 EXHAUST UP IN JANITOR CLOSET ABOVE.
2. COVER OPEN END OF DUCT WITH 1/4" GALVANIZED HARDWARE CLOTH. BALANCE TO 130 CFM.
3. COVER OPEN END OF DUCT WITH 1/4" GALVANIZED HARDWARE CLOTH. BALANCE TO 165 CFM.
4. COVER OPEN END OF DUCT WITH 1/4" GALVANIZED HARDWARE CLOTH. BALANCE TO 45 CFM.
5. COVER OPEN END OF DUCT WITH 1/4" GALVANIZED HARDWARE CLOTH. BALANCE TO 450 CFM.
6. COVER OPEN END OF DUCT WITH 1/4" GALVANIZED HARDWARE CLOTH. BALANCE TO 140 CFM.
7. COVER OPEN END OF DUCT WITH 1/4" GALVANIZED HARDWARE CLOTH. BALANCE TO 190 CFM.
8. COVER OPEN END OF DUCT WITH 1/4" GALVANIZED HARDWARE CLOTH. BALANCE TO 190 CFM.
9. 26/16 OUTSIDE AIR UP IN CORNER OF FUTURE EXPANSION SPACE ABOVE.
10. 12/12 DUCT THROUGH FIRE WALL. COVER OPEN END OF DUCT WITH 1/4" GALVANIZED HARDWARE CLOTH.
11. 48/24 RETURN AIR TRANSFER DUCT. COVER OPEN ENDS WITH 1/4" GALVANIZED HARDWARE CLOTH.
12. 36/18 RETURN AIR TRANSFER DUCT. COVER OPEN ENDS WITH 1/4" GALVANIZED HARDWARE CLOTH.
13. 24/12 RETURN AIR OPENING IN WALL ABOVE CEILING.
14. 36/16 RETURN AIR OPENING IN WALL ABOVE CEILING.
15. 24x24x12 FILTER FRAME WITH 24x24x12 FILTRA MOCEL 1563, 99.95% EFFICIENT HEPA FILTER.
16. 16x8 EXHAUST LOUVER.
17. OGEE DOWN.
18. OGEE UP.

NORTH

FIRST FLOOR PLAN – HVAC
SCALE: 1/8" = 1'-0"

01 FLOOR PLAN - EXISTING CONDITIONS - MECHANICAL AND PLUMBING
SCALE: NOT TO SCALE

MODE design company
1102 s austin ave, suite 103
georgetown, tx 78626
ryan@modedc.us | www.modedc.us
+ 1 512 733 1150

DATE: 03/28/97
REV:
DRW. FNL CHK. DLJ

WILLIAMSON COUNTY ANNEX
PRECINCT 2
350 DISCOVERY BOULEVARD
CEDAR PARK, TEXAS

SPENCER GODFREY ARCHITECTS
1106 S. IAH 35, SUITE 120 Round Rock, Texas 512/388.0677

SHEET
M-3

STATE OF TEXAS
B.J. HENDRIX
94813
LICENSED PROFESSIONAL ENGINEER
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY B.J. HENDRIX, P.E. NO. 94813 ON: 03/10/17

REFERENCE GENERAL NOTES ON SHEETS M-1.1, P-1.1 AND E-1.1 FOR ADDITIONAL INFORMATION

HCE HENDRIX CONSULTING ENGINEERS

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WILLIAMSON COUNTY CEDAR PARK TAX OFFICE

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT PHASE
100% CDs
REVISIONS

PROJECT NUMBER

DATE ISSUED
03/10/2017

SHEET TITLE
FLOOR PLAN – EXISTING CONDITIONS – MECHANICAL AND PLUMBING

SHEET NUMBER
MP – 2.1

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KEYED NOTES

THESE NOTES APPLY TO THIS SHEET ONLY

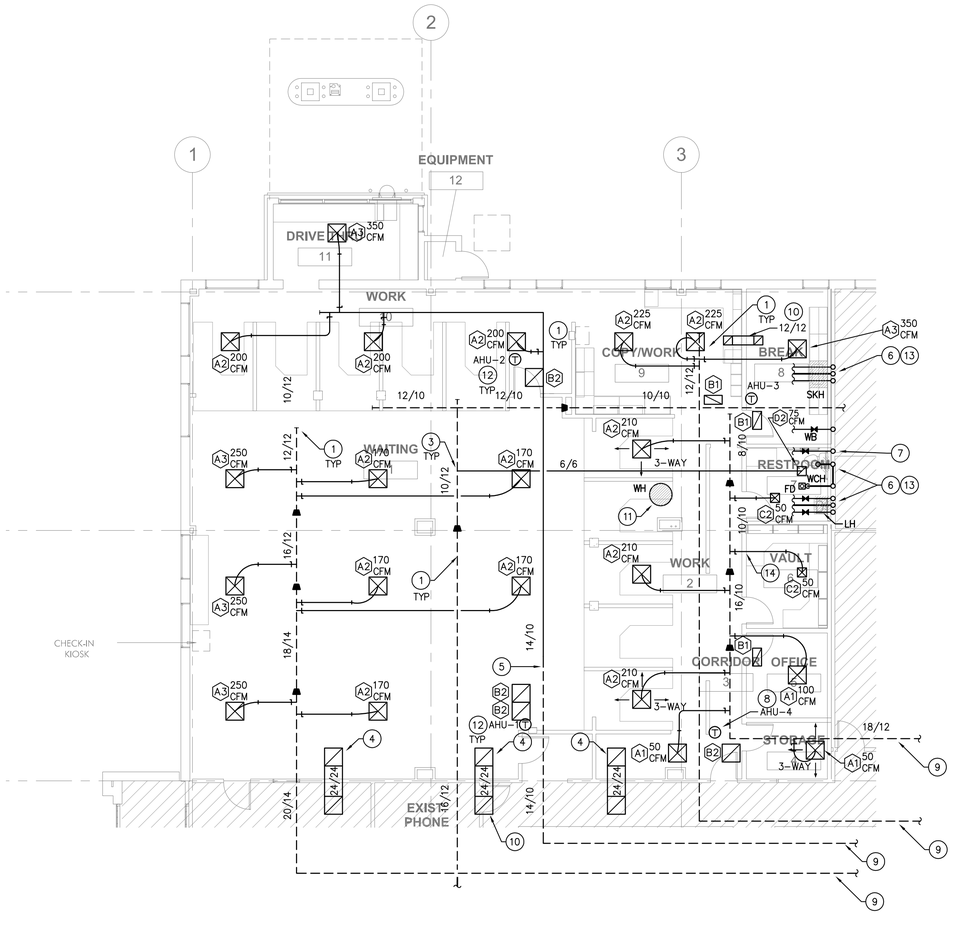
(1)	PATCH EXISTING DUCTWORK. SEAL AIR TIGHT. TYPICAL.
2	PROVIDE TYPE D2 GRILLE WITHOUT VOLUME DAMPER.
3	CONNECT TO EXISTING EXHAUST DUCT.
4	INTERNALLY LINED RETURN AIR TRANSFER DUCT THROUGH WALL TO DECK ABOVE CEILING. TURN A NINETY DEGREE ELBOW UP ON BOTH ENDS.
5	CONNECT NEW DUCT TO EXISTING DUCT. SEAL AIR TIGHT.
6	CONNECT TO EXISTING COLD WATER SUPPLY, HOT WATER SUPPLY, AND WASTE WATER LINES AS REQUIRED. FIELD VERIFY EXISTING CONDITIONS AND CONNECTION POINTS FOR ALL UTILITIES PRIOR TO INSTALLING ANY PIPING.PROVIDE ACCESSIBLE SHUT-OFF VALVES ABOVE CEILING.
7	CONNECT TO EXISTING COLD WATER SUPPLY. PROVIDE ACCESIBLE SHUT-OFF VALVE ABOVE CEILING. FIELD VERIFY EXISTING CONDITIONS.
8	RE-USE EXISTING THERMOSTAT. COORDINATE FINAL LOCATION WITH ARCHITECT. TYPICAL ALL THERMOSTATS.
9	EXISTING SUPPLY DUCTWORK FROM UNIT.
10	CONTRACTOR SHALL INSURE A PROPER RETURN AIR PATH. LOCATE RETURN AIR BOOT AS REQUIRED.
11	EXISTING HOT WATER HEATER ABOVE CEILING.
12	REINSTALL T-STAT IN NEW LOCATION. PROVIDE ALL REQUIRED MATERIAL. VERIFY UNIT AND T-STAT OPERATION AND SEQUENCE.
13	CONNECT VENT TO EXISTING VENT STUB IN BUILDING. FIELD VERIFY EXACT LOCATION.
14	PROVIDE FIRE DAMPER AS REQUIRED.

REFERENCE EXISTING SHEET FOR ADDITIONAL INFORMATION.

FIRE SPRINKLER:

REWORK FIRE SPRINKLER SYSTEM AND ALL HEADS AS REQUIRED FOR NEW REMODEL LAYOUT. PROVIDE SHOP DRAWINGS TO AHJ FOR REVIEW.

PROVIDE COMFORT BALANCE IN RENOVATED SPACE.



01 FLOOR PLAN - MECHANICAL AND PLUMBING

SCALE: 1/8" = 1'-0"

LEGEND

EXISTING DUCT: - - - - -

NEW DUCT: ———

MODE design company

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WILLIAMSON COUNTY CEDAR PARK TAX OFFICE

WILLIAMSON COUNTY
350 DISCOVERY BLVD., #101, CEDAR PARK, TX 78613

PROJECT
PHASE
100% CDs
REVISIONS

STATE OF TEXAS
B.J. HENDRIX
94813
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY B.J. HENDRIX, P.E. NO. 94813 ON 03/10/17

REFERENCE GENERAL NOTES ON SHEETS M-1.1, P-1.1 AND E-1.1 FOR ADDITIONAL INFORMATION

HCE HENDRIX CONSULTING ENGINEERS

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HCE job no.: 17-013

PROJECT NUMBER

DATE ISSUED
03/10/2017

SHEET TITLE

FLOOR PLAN – MECHANICAL AND PLUMBING

SHEET NUMBER

MP-2.2

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Williamson County, Texas
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SECTION 000107 - SEALS PAGE

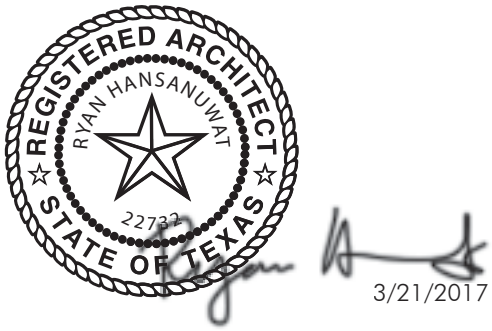
PART 1 - Seals Page

1.1 DESIGN PROFESSIONALS OF RECORD

A. Architect:

1. Ryan Hansanuwat.
2. Texas License #: 22732.
3. Responsible for Divisions 01-49 Sections except where indicated as prepared by other design professionals of record.

END OF SECTION 000107



SECTION 000115 - LIST OF DRAWING SHEETS

PART 1 - List of Drawing Sheets

1.1 LIST OF DRAWINGS

A. Drawings: Drawings consist of the Contract Drawings and other drawings listed on the Table of Contents page of the separately bound drawing set titled <**Insert drawing set title**>, dated <**Insert date**>, as modified by subsequent Addenda and Contract modifications.

B. List of Drawings: Drawings consist of the following Contract Drawings and other drawings of type indicated:

1. <**Insert, in separate subparagraphs, drawing numbers and titles. For other than Contract Drawings, include the words "Resource Drawing" or "For information" after the title**>.

END OF SECTION 000115

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Coordination with occupants.
5. Specification and drawing conventions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

A. Project Identification: Williamson County Tax Assessor - Cedar Park Annex.

1. Project Location: 350 Discovery Blvd, #101, Cedar Park, TX 78613.

B. Owner: Williamson County, 3101 SE Inner Loop, Georgetown, TX 78626.

1. Owner's Representative: Bob Lubecker.

C. Architect: Ryan Hansanuwat, MODE Design Company, 1102 S. Austin Ave., Suite 103, Georgetown, TX 78626.

D. Architect's Consultants: The Architect has retained the following design professionals who have prepared designated portions of the Contract Documents:

1. Structural Engineer: Larry Fisher, Engineering 360.
2. Mechanical, Electrical, and Plumbing Engineer: Hendrix Consulting Engineers

1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Interior remodel of existing offices and public waiting area to include demolition of all existing interior in area of work and all new finishes, walls, doors, windows and ceilings. Scope of work includes all related mechanical, electrical and plumbing work to expansion and reconfiguration of existing space. Addition of new exterior drive thru canopy with teller windows and vacuum system, and site related work as needed..

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 ACCESS TO SITE

A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

B. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

C. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

D. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.6 COORDINATION WITH OCCUPANTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General coordination procedures.
2. Coordination drawings.
3. Requests for Information (RFIs).
4. Project meetings.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

C. Related Requirements:

1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

1.6 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:

a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
f. Indicate required installation sequences.
g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
2. Mechanical and Plumbing Work: Show the following:

a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.

b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
c. Fire-rated enclosures around ductwork.

3. Electrical Work: Show the following:

a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
d. Location of pull boxes and junction boxes, dimensioned from column center lines.

4. Fire-Protection System: Show the following:

a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.

5. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make changes as directed and resubmit.

C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:

1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.
2. File Preparation Format: DWG, Version 2016, operating in Microsoft Windows operating system.
3. File Submittal Format: Submit or post coordination drawing files using Portable Data File (PDF) format.
4. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.

a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
b. Digital Data Software Program: Drawings are available in Autocad.
c. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.

1.7 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.

1. Attachments shall be electronic files in Adobe Acrobat PDF format.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.

1. The following Contractor-generated RFIs will be returned without action:

    a. Requests for approval of submittals.
    b. Requests for approval of substitutions.
    c. Requests for approval of Contractor's means and methods.
    d. Requests for coordination information already indicated in the Contract Documents.
    e. Requests for adjustments in the Contract Time or the Contract Sum.
    f. Requests for interpretation of Architect's actions on submittals.
    g. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."

    a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.8 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Conduct the conference to review responsibilities and personnel assignments.
2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect progress, including the following:

    a. Tentative construction schedule.
    b. Critical work sequencing and long-lead items.
    c. Designation of key personnel and their duties.
    d. Lines of communications.
    e. Procedures for processing field decisions and Change Orders.
    f. Procedures for RFIs.
    g. Procedures for testing and inspecting.
    h. Procedures for processing Applications for Payment.
    i. Submittal procedures.
    j. Use of the premises and existing building.
    k. Owner's occupancy requirements.
    l. Responsibility for temporary facilities and controls.
    m. Procedures for disruptions and shutdowns.
    n. Parking availability.
    o. Office, work, and storage areas.
    p. Security.
    q. Progress cleaning.

4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.
2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:

    a. Preparation of record documents.
    b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
    c. Submittal of written warranties.
    d. Requirements for preparing operations and maintenance data.
    e. Requirements for delivery of material samples, attic stock, and spare parts.
    f. Requirements for demonstration and training.

g. Preparation of Contractor's punch list.
h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
i. Submittal procedures.
j. Owner's partial occupancy requirements.
k. Installation of Owner's furniture, fixtures, and equipment.

4. Minutes: Entity conducting meeting will record and distribute meeting minutes.

D. Progress Meetings: Conduct progress meetings at regular intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner, Owner's Commissioning Authority and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1) Review schedule for next period.

b. Review present and future needs of each entity present, including the following:

1) Status of submittals.
2) Field observations.
3) Status of RFIs.
4) Status of proposal requests.
5) Pending changes.
6) Status of Change Orders.
7) Documentation of information for payment requests.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

1. Startup construction schedule.
2. Contractor's construction schedule.
3. Construction schedule updating reports.
4. Site condition reports.

B. Related Requirements:

1. Section 013300 "Submittal Procedures" for submitting schedules and reports.

1.3 INFORMATIONAL SUBMITTALS

A. Format for Submittals: Submit required submittals in the following format:

1. Working electronic copy of schedule file, where indicated.
2. PDF electronic file.

B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

C. Construction Schedule Updating Reports: Submit with Applications for Payment.

D. Site Condition Reports: Submit at time of discovery of differing conditions.

1.4 COORDINATION

A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

B. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each story or separate area as a separate numbered activity for each main element of the Work. Comply with the following:

1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
2. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
3. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
4. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
5. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.

1. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:

a. Temporary enclosure and space conditioning.
b. Substantial Completion.

D. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.

E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:

1. Unresolved issues.
2. Unanswered Requests for Information.
3. Rejected or unreturned submittals.
4. Notations on returned submittals.
5. Pending modifications affecting the Work and Contract Time.

F. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.

2.2 STARTUP CONSTRUCTION SCHEDULE

A. Bar-Chart Schedule: Submit startup, horizontal, bar-chart-type construction schedule within seven days of date established for the Notice to Proceed.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's construction schedule within 30 days of date established for the Notice to Proceed. Base schedule on the startup construction schedule and additional information received since the start of Project.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.4 REPORTS

A. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Scheduling Consultant: Engage a consultant to provide planning, evaluation, and reporting using CPM scheduling.

1. In-House Option: Owner may waive the requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
2. Meetings: Scheduling consultant shall attend all meetings related to Project progress, alleged delays, and time impact.

B. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
3. As the Work progresses, indicate final completion percentage for each activity.

C. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices.
2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Preconstruction photographs.
2. Periodic construction photographs.
3. Final completion construction photographs.

B. Related Requirements:

1. Section 013300 "Submittal Procedures" for submitting photographic documentation.
2. Section 017700 "Closeout Procedures" for submitting photographic documentation as project record documents at Project closeout.
3. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.
4. Section 024119 "Selective Structure Demolition" for photographic documentation before selective demolition operations commence.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For photographer.

B. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.

C. Digital Photographs: Submit image files within three days of taking photographs.

1. Digital Camera: Minimum sensor resolution of 8 megapixels.
2. Format: Minimum 3200 by 2400 pixels, in unaltered original files, with same aspect ratio as the sensor, uncropped, date and time stamped, in folder named by date of photograph, accompanied by key plan file.
3. Identification: Provide the following information with each image description in file metadata tag:

a. Name of Project.
b. Date photograph was taken.

PART 2 - PRODUCTS

2.1 PHOTOGRAPHIC MEDIA

A. Digital Images: Provide images in JPG format, produced by a digital camera with minimum sensor size of 8 megapixels, and at an image resolution of not less than 3200 by 2400 pixels.

PART 3 - EXECUTION

3.1 CONSTRUCTION PHOTOGRAPHS

A. Photographer: Engage a qualified photographer to take construction photographs.

B. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.

1. Maintain key plan with each set of construction photographs that identifies each photographic location.

C. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

1. Date and Time: Include date and time in file name for each image.
2. Field Office Images: Maintain one set of images accessible in the field office at Project site, available at all times for reference. Identify images in the same manner as those submitted to Architect.

D. Preconstruction Photographs: Before commencement of demolition, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect.

1. Take 20 photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.

E. Periodic Construction Photographs: Take 20 photographs monthly, coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.

F. Final Completion Construction Photographs: Take 20 color photographs after date of Substantial Completion for submission as project record documents. Architect will inform photographer of desired vantage points.

1. Do not include date stamp.

END OF SECTION 013233

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Requirements:

1. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
2. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
3. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
4. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

B. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 ACTION SUBMITTALS

A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.

    a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.

4. Format: Arrange the following information in a tabular format:

    a. Scheduled date for first submittal.
    b. Specification Section number and title.
    c. Submittal category: Action; informational.
    d. Name of subcontractor.
    e. Description of the Work covered.
    f. Scheduled date for Architect's final release or approval.
    g. Scheduled date of fabrication.
    h. Scheduled dates for purchasing.
    i. Scheduled dates for installation.
    j. Activity or event number.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will [**not**] be provided by Architect for Contractor's use in preparing submittals.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.

4. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 15 days for review of each resubmittal.
4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.

D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

    a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software acceptable to Owner,containing the following information:

    a. Project name.
    b. Date.
    c. Name and address of Architect.
    d. Name of Contractor.
    e. Name of firm or entity that prepared submittal.
    f. Names of subcontractor, manufacturer, and supplier.
    g. Category and type of submittal.
    h. Submittal purpose and description.

i. Specification Section number and title.
j. Specification paragraph number or drawing designation and generic name for each of multiple items.
k. Drawing number and detail references, as appropriate.
l. Location(s) where product is to be installed, as appropriate.
m. Related physical samples submitted directly.
n. Indication of full or partial submittal.
o. Transmittal number, numbered consecutively.
p. Submittal and transmittal distribution record.
q. Other necessary identification.
r. Remarks.

5. Metadata: Include the following information as keywords in the electronic submittal file metadata:

a. Project name.
b. Number and title of appropriate Specification Section.
c. Manufacturer name.
d. Product name.

E. Options: Identify options requiring selection by Architect.

F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Submit electronic submittals via email as PDF electronic files.

a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.

a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
b. Provide a notarized statement on original paper copy certificates and certifications where indicated.

B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:

a. Manufacturer's catalog cuts.
b. Manufacturer's product specifications.
c. Standard color charts.

4. Submit Product Data before or concurrent with Samples.
5. Submit Product Data in the following format:

a. PDF electronic file.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

a. Identification of products.

b. Schedules.
c. Compliance with specified standards.
d. Notation of dimensions established by field measurement.
e. Relationship and attachment to adjoining construction clearly indicated.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches , but no larger than 30 by 42 inches .
3. Submit Shop Drawings in the following format:

a. PDF electronic file.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:

a. Generic description of Sample.
b. Product name and name of manufacturer.
c. Sample source.
d. Number and title of applicable Specification Section.
e. Specification paragraph number and generic name of each item.

3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.

5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.

a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples

include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record sample.

1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

E. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."

F. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."

G. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."

H. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."

I. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.

J. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.

K. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

L. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

M. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "Closeout Procedures."

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

B. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.

C. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

D. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 013300

SECTION 013516 - ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes special procedures for alteration work.

1.3 DEFINITIONS

A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.

B. Consolidate: To strengthen loose or deteriorated materials in place.

C. Design Reference Sample: A sample that represents the Architect's prebid selection of work to be matched; it may be existing work or work specially produced for the Project.

D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.

F. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.

H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.

I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.

J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.

K. Retain: To keep existing items that are not to be removed or dismantled.

L. Strip: To remove existing finish down to base material unless otherwise indicated.

1.4 MATERIALS OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered or uncovered during the Work, regardless of whether they were previously documented, remain Owner's property.

1. Carefully dismantle and salvage each item or object in a manner to prevent damage and protect it from damage, then promptly deliver it to Owner where directed at Project site.

1.5 INFORMATIONAL SUBMITTALS

A. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements that are to remain, including finish surfaces, that might be misconstrued as damage caused by Contractor's alteration work operations.

1.6 FIELD CONDITIONS

A. Survey of Existing Conditions: Record existing conditions that affect the Work by use of preconstruction photographs.

1. Comply with requirements specified in Section 013233 "Photographic Documentation."

B. Discrepancies: Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.

1. Use only proven protection methods, appropriate to each area and surface being protected.
2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
3. Erect temporary barriers to form and maintain fire-egress routes.

4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
5. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.
8. Provide supplemental sound-control treatment to isolate demolition work from other areas of the building.

B. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.

C. Utility and Communications Services:

1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.

3.2 GENERAL ALTERATION WORK

A. Have specialty work performed only by qualified specialists.

B. Ensure that supervisory personnel are present when work begins and during its progress.

C. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs. Comply with requirements in Section 013233 "Photographic Documentation."

D. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.

E. Notify Architect of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.

1. Do not proceed with the work in question until directed by Architect.

END OF SECTION 013516

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, Commissioning Authority, or authorities having jurisdiction are not limited by provisions of this Section.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not

Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

1. Laboratory Mockups: Full-size physical assemblies constructed at testing facility to verify performance characteristics.
2. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on Project site, consisting of multiple products, assemblies, and subassemblies.
3. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.

D. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.

E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

F. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.

G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).

J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of [**five**]<**Insert number**> previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of technical representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement that equipment complies with requirements.

3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
4. Statement whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.

F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to [**ASTM E 329**]<**Insert standard**>; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

G. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Integrated Exterior Mockups: Construct integrated exterior mockup according to approved Shop Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials.

1.7 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.

1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

    a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."

D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.

E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

F. Testing Agency Responsibilities: Cooperate with Architect, Commissioning Authority and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect, Commissioning Authority, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's, Commissioning Authority's, reference during normal working hours.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

C. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

D. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

E. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

F. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.

G. "Provide": Furnish and install, complete and ready for the intended use.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; www.aabc.com.
2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
7. ACI - American Concrete Institute; (Formerly: ACI International); www.concrete.org.
8. ACPA - American Concrete Pipe Association; www.concrete-pipe.org.
9. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
10. AF&PA - American Forest & Paper Association; www.afandpa.org.
11. AGA - American Gas Association; www.aga.org.
12. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
13. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
14. AI - Asphalt Institute; www.asphaltinstitute.org.
15. AIA - American Institute of Architects (The); www.aia.org.
16. AISC - American Institute of Steel Construction; www.aisc.org.
17. AISI - American Iron and Steel Institute; www.steel.org.
18. AITC - American Institute of Timber Construction; www.aitc-glulam.org.
19. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
20. ANSI - American National Standards Institute; www.ansi.org.
21. AOSA - Association of Official Seed Analysts, Inc.; www.aosaseed.com.
22. APA - APA - The Engineered Wood Association; www.apawood.org.
23. APA - Architectural Precast Association; www.archprecast.org.
24. API - American Petroleum Institute; www.api.org.
25. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
26. ARI - American Refrigeration Institute; (See AHRI).
27. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
28. ASCE - American Society of Civil Engineers; www.asce.org.
29. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
30. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
31. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
32. ASSE - American Society of Safety Engineers (The); www.asse.org.
33. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.

34. ASTM - ASTM International; (American Society for Testing and Materials International); www.astm.org.
35. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
36. AWEA - American Wind Energy Association; www.awea.org.
37. AWI - Architectural Woodwork Institute; www.awinet.org.
38. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
39. AWPA - American Wood Protection Association; (Formerly: American Wood-Preservers' Association); www.awpa.com.
40. AWS - American Welding Society; www.aws.org.
41. AWWA - American Water Works Association; www.awwa.org.
42. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
43. BIA - Brick Industry Association (The); www.gobrick.com.
44. BICSI - BICSI, Inc.; www.bicsi.org.
45. BIFMA - BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.com.
46. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
47. BOCA - BOCA; (Building Officials and Code Administrators International Inc.); (See ICC).
48. BWF - Badminton World Federation; (Formerly: International Badminton Federation); www.bwfbadminton.org.
49. CDA - Copper Development Association; www.copper.org.
50. CEA - Canadian Electricity Association; www.electricity.ca.
51. CEA - Consumer Electronics Association; www.ce.org.
52. CFFA - Chemical Fabrics & Film Association, Inc.; www.chemicalfabricsandfilm.com.
53. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
54. CGA - Compressed Gas Association; www.cganet.com.
55. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
56. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
57. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
58. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
59. CPA - Composite Panel Association; www.pbmdf.com.
60. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
61. CRRC - Cool Roof Rating Council; www.coolroofs.org.
62. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
63. CSA - Canadian Standards Association; www.csa.ca.
64. CSA - CSA International; (Formerly: IAS - International Approval Services); www.csa-international.org.
65. CSI - Construction Specifications Institute (The); www.csinet.org.
66. CSSB - Cedar Shake & Shingle Bureau; www.cedarbureau.org.
67. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.cti.org.
68. CWC - Composite Wood Council; (See CPA).
69. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
70. DHI - Door and Hardware Institute; www.dhi.org.
71. ECA - Electronic Components Association; www.ec-central.org.
72. ECAMA - Electronic Components Assemblies & Materials Association; (See ECA).

73. EIA - Electronic Industries Alliance; (See TIA).
74. EIMA - EIFS Industry Members Association; www.eima.com.
75. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
76. ESD - ESD Association; (Electrostatic Discharge Association); www.esda.org.
77. ESTA - Entertainment Services and Technology Association; (See PLASA).
78. EVO - Efficiency Valuation Organization; www.evo-world.org.
79. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
80. FIVB - Federation Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
81. FM Approvals - FM Approvals LLC; www.fmglobal.com.
82. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
83. FRSA - Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; www.floridaroof.com.
84. FSA - Fluid Sealing Association; www.fluidsealing.com.
85. FSC - Forest Stewardship Council U.S.; www.fscus.org.
86. GA - Gypsum Association; www.gypsum.org.
87. GANA - Glass Association of North America; www.glasswebsite.com.
88. GS - Green Seal; www.greenseal.org.
89. HI - Hydraulic Institute; www.pumps.org.
90. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
91. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
92. HPVA - Hardwood Plywood & Veneer Association; www.hpva.org.
93. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
94. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
95. IAS - International Approval Services; (See CSA).
96. ICBO - International Conference of Building Officials; (See ICC).
97. ICC - International Code Council; www.iccsafe.org.
98. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
99. ICPA - International Cast Polymer Alliance; www.icpa-hq.org.
100. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
101. IEC - International Electrotechnical Commission; www.iec.ch.
102. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
103. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
104. IESNA - Illuminating Engineering Society of North America; (See IES).
105. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
106. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.
107. IGSHPA - International Ground Source Heat Pump Association; www.igshpa.okstate.edu.
108. ILI - Indiana Limestone Institute of America, Inc.; www.iliai.com.
109. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
110. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
111. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
112. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
113. ISO - International Organization for Standardization; www.iso.org.

114. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
115. ITU - International Telecommunication Union; www.itu.int/home.
116. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.
117. LMA - Laminating Materials Association; (See CPA).
118. LPI - Lightning Protection Institute; www.lightning.org.
119. MBMA - Metal Building Manufacturers Association; www.mbma.com.
120. MCA - Metal Construction Association; www.metalconstruction.org.
121. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
122. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
123. MHIA - Material Handling Industry of America; www.mhia.org.
124. MIA - Marble Institute of America; www.marble-institute.com.
125. MMPA - Moulding & Millwork Producers Association; (Formerly: Wood Moulding & Millwork Producers Association); www.wmmpa.com.
126. MPI - Master Painters Institute; www.paintinfo.com.
127. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
128. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
129. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.
130. NADCA - National Air Duct Cleaners Association; www.nadca.com.
131. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
132. NBGQA - National Building Granite Quarries Association, Inc.; www.nbgqa.com.
133. NCAA - National Collegiate Athletic Association (The); www.ncaa.org.
134. NCMA - National Concrete Masonry Association; www.ncma.org.
135. NEBB - National Environmental Balancing Bureau; www.nebb.org.
136. NECA - National Electrical Contractors Association; www.necanet.org.
137. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
138. NEMA - National Electrical Manufacturers Association; www.nema.org.
139. NETA - InterNational Electrical Testing Association; www.netaworld.org.
140. NFHS - National Federation of State High School Associations; www.nfhs.org.
141. NFPA - NFPA; (National Fire Protection Association); www.nfpa.org.
142. NFPA - NFPA International; (See NFPA).
143. NFRC - National Fenestration Rating Council; www.nfrc.org.
144. NHLA - National Hardwood Lumber Association; www.nhla.com.
145. NLGA - National Lumber Grades Authority; www.nlga.org.
146. NOFMA - National Oak Flooring Manufacturers Association; (See NWFA).
147. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
148. NRCA - National Roofing Contractors Association; www.nrca.net.
149. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
150. NSF - NSF International; (National Sanitation Foundation International); www.nsf.org.
151. NSPE - National Society of Professional Engineers; www.nspe.org.
152. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
153. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
154. NWFA - National Wood Flooring Association; www.nwfa.org.
155. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
156. PDI - Plumbing & Drainage Institute; www.pdionline.org.

157. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); www.plasa.org.
158. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
159. RFCI - Resilient Floor Covering Institute; www.rfci.com.
160. RIS - Redwood Inspection Service; www.redwoodinspection.com.
161. SAE - SAE International; (Society of Automotive Engineers); www.sae.org.
162. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.
163. SDI - Steel Deck Institute; www.sdi.org.
164. SDI - Steel Door Institute; www.steeldoor.org.
165. SEFA - Scientific Equipment and Furniture Association; www.sefalabs.com.
166. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
167. SIA - Security Industry Association; www.siaonline.org.
168. SJI - Steel Joist Institute; www.steeljoist.org.
169. SMA - Screen Manufacturers Association; www.smainfo.org.
170. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
171. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.
172. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
173. SPIB - Southern Pine Inspection Bureau; www.spib.org.
174. SPRI - Single Ply Roofing Industry; www.spri.org.
175. SRCC - Solar Rating and Certification Corporation; www.solar-rating.org.
176. SSINA - Specialty Steel Industry of North America; www.ssina.com.
177. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
178. STI - Steel Tank Institute; www.steeltank.com.
179. SWI - Steel Window Institute; www.steelwindows.com.
180. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
181. TCA - Tilt-Up Concrete Association; www.tilt-up.org.
182. TCNA - Tile Council of North America, Inc.; (Formerly: Tile Council of America); www.tileusa.com.
183. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.tema.org.
184. TIA - Telecommunications Industry Association; (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.
185. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
186. TMS - The Masonry Society; www.masonrysociety.org.
187. TPI - Truss Plate Institute; www.tpinst.org.
188. TPI - Turfgrass Producers International; www.turfgrasssod.org.
189. TRI - Tile Roofing Institute; www.tileroofing.org.
190. UBC - Uniform Building Code; (See ICC).
191. UL - Underwriters Laboratories Inc.; www.ul.com.
192. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
193. USAV - USA Volleyball; www.usavolleyball.org.
194. USGBC - U.S. Green Building Council; www.usgbc.org.
195. USITT - United States Institute for Theatre Technology, Inc.; www.usitt.org.
196. WASTEC - Waste Equipment Technology Association; www.wastec.org.
197. WCLIB - West Coast Lumber Inspection Bureau; www.wclib.org.
198. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
199. WDMA - Window & Door Manufacturers Association; www.wdma.com.

200. WI - Woodwork Institute; (Formerly: WIC - Woodwork Institute of California); www.wicnet.org.
201. WMMPA - Wood Moulding & Millwork Producers Association; (See MMPA).
202. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.
203. WPA - Western Wood Products Association; www.wwpa.org.

B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

1. DIN - Deutsches Institut fur Normung e.V.; www.din.de.
2. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
3. ICC - International Code Council; www.iccsafe.org.
4. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.

C. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. CFR - Code of Federal Regulations; Available from Government Printing Office; www.gpo.gov/fdsys.
2. DOD - Department of Defense; Military Specifications and Standards; Available from Department of Defense Single Stock Point; http://dodssp.daps.dla.mil.
3. DSCC - Defense Supply Center Columbus; (See FS).
4. FED-STD - Federal Standard; (See FS).
5. FS - Federal Specification; Available from Department of Defense Single Stock Point; http://dodssp.daps.dla.mil.

    a. Available from Defense Standardization Program; www.dsp.dla.mil.
    b. Available from General Services Administration; www.gsa.gov.
    c. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org/ccb.

6. MILSPEC - Military Specification and Standards; (See DOD).
7. USAB - United States Access Board; www.access-board.gov.
8. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (See USAB).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction.

1.4 INFORMATIONAL SUBMITTALS

A. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

B. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:

1. Locations of dust-control partitions at each phase of work.
2. HVAC system isolation schematic drawing.
3. Location of proposed air-filtration system discharge.
4. Waste handling procedures.
5. Other dust-control measures.

1.5 QUALITY ASSURANCE

A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines.

1.6 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Dust-Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches .

B. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

2.2 TEMPORARY FACILITIES

A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:

1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot-square tack and marker boards.
3. Drinking water and private toilet.

4. Coffee machine and supplies.
5. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F .
6. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

a. Provide temporary, directional signs for construction personnel and visitors.

2. Maintain and touchup signs so they are legible at all times.

C. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.

3.3 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

1.3 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

a. Form of Approval: As specified in Section 013300 "Submittal Procedures."
b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:

1. Store materials in a manner that will not endanger Project structure.
2. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
3. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
4. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
5. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. See other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures:

1. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.

C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Installation of the Work.
2. Cutting and patching.
3. Progress cleaning.
4. Starting and adjusting.
5. Protection of installed construction.

B. Related Requirements:

1. Section 011000 "Summary" for limits on use of Project site.
2. Section 013300 "Submittal Procedures" for submitting surveys.
3. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.
4. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.

1.3 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.4 QUALITY ASSURANCE

A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operational elements include the following:

    a. Primary operational systems and equipment.
    b. Fire separation assemblies.
    c. Air or smoke barriers.
    d. Fire-suppression systems.
    e. Mechanical systems piping and ducts.
    f. Control systems.
    g. Communication systems.
    h. Fire-detection and -alarm systems.
    i. Conveying systems.
    j. Electrical wiring systems.
    k. Operating systems of special construction.

3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Other construction elements include but are not limited to the following:

    a. Water, moisture, or vapor barriers.
    b. Membranes and flashings.
    c. Exterior curtain-wall construction.
    d. Sprayed fire-resistive material.
    e. Equipment supports.
    f. Piping, ductwork, vessels, and equipment.
    g. Noise- and vibration-control elements and systems.

4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

B. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

1. Description of the Work.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

E.

3.3 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

I. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.

1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

C. Temporary Support: Provide temporary support of work to be cut.

D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 011000 "Summary."

F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to [**minimize**][**prevent**] interruption to occupied areas.

G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.

H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.

    a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    b. Restore damaged pipe covering to its original condition.

3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

    a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.5 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F .
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

    a. Use containers intended for holding waste materials of type to be stored.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.6 STARTING AND ADJUSTING

A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 019113 "General Commissioning Requirements."

B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

E. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

3.7 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

END OF SECTION 017300

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Disposing of nonhazardous demolition and construction waste.

B. Related Requirements:

1. Section 024119 "Selective Demolition" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements[**, and for disposition of hazardous waste**].
2. Section 044313.13 "Anchored Stone Masonry Veneer" for disposal requirements for excess stone and stone waste.
3. Section 311000 "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.

1.3 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.
5. Repair of the Work.

B. Related Requirements:

1. Section 013233 "Photographic Documentation" for submitting final completion construction photographic documentation.
2. Section 017300 "Execution" for progress cleaning of Project site.
3. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
4. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
5. Section 017900 "Demonstration and Training" for requirements for instructing Owner's personnel.

1.3 ACTION SUBMITTALS

A. Product Data: For cleaning agents.

B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.4 CLOSEOUT SUBMITTALS

A. Field Report: For pest control inspection.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.

1.7 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."

1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, starting with exterior areas first.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:

a. Project name.
b. Date.
c. Name of Architect.
d. Name of Contractor.
e. Page number.

1.9 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

D. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:

    a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

c. Remove tools, construction equipment, machinery, and surplus material from Project site.
d. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
e. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
f. Sweep concrete floors broom clean in unoccupied spaces.
g. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
h. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
i. Remove labels that are not permanent.
j. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
k. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
l. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
m. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.

    1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report on completion of cleaning.

n. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
o. Leave Project clean and ready for occupancy.

C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.

D. Construction Waste Disposal: Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be

repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that that already show evidence of repair or restoration.

    a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.

3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

END OF SECTION 017700

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory.
2. Operation manuals for systems, subsystems, and equipment.
3. Product maintenance manuals.
4. Systems and equipment maintenance manuals.

B. Related Requirements:

1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

1.3 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect will comment on whether content of operations and maintenance submittals are acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operations and maintenance manuals in the following format:

1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.

    a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
    b. Enable inserted reviewer Comments on draft submittals.

2. Three paper copies. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return two copies.

C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.

1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:

1. List of documents.
2. List of systems.
3. List of equipment.
4. Table of contents.

B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.

C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.

D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.
3. Manual contents.

B. Title Page: Include the following information:

1. Subject matter included in manual.
2. Name and address of Project.
3. Name and address of Owner.
4. Date of submittal.
5. Name and contact information for Contractor.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

2.3 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Operating standards.
3. Operating procedures.
4. Wiring diagrams.
5. Control diagrams.
6. Precautions against improper use.

B. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.4 PRODUCT MAINTENANCE MANUALS

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.5 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins.
2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.

3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.

B. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

C. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

D. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

E. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project record documents as part of operation and maintenance manuals.
2. Comply with requirements of newly prepared record Drawings in Section 017839 "Project Record Documents."

F. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 017900 - DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:

1. Demonstration of operation of systems, subsystems, and equipment.
2. Training in operation and maintenance of systems, subsystems, and equipment.

1.3 QUALITY ASSURANCE

A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.

B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.

1.4 COORDINATION

A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.

B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.

B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:

    a. System, subsystem, and equipment descriptions.
    b. Performance and design criteria if Contractor is delegated design responsibility.
    c. Operating standards.
    d. Regulatory requirements.
    e. Equipment function.
    f. Operating characteristics.
    g. Limiting conditions.
    h. Performance curves.

2. Emergencies: Include the following, as applicable:

    a. Instructions on meaning of warnings, trouble indications, and error messages.
    b. Instructions on stopping.
    c. Shutdown instructions for each type of emergency.
    d. Operating instructions for conditions outside of normal operating limits.
    e. Sequences for electric or electronic systems.
    f. Special operating instructions and procedures.

3. Operations: Include the following, as applicable:

    a. Startup procedures.
    b. Equipment or system break-in procedures.
    c. Routine and normal operating instructions.
    d. Regulation and control procedures.
    e. Control sequences.
    f. Safety procedures.
    g. Instructions on stopping.
    h. Normal shutdown instructions.
    i. Operating procedures for emergencies.
    j. Operating procedures for system, subsystem, or equipment failure.
    k. Seasonal and weekend operating instructions.
    l. Required sequences for electric or electronic systems.

m. Special operating instructions and procedures.

4. Adjustments: Include the following:

a. Alignments.
b. Checking adjustments.
c. Noise and vibration adjustments.
d. Economy and efficiency adjustments.

5. Maintenance: Include the following:

a. Inspection procedures.
b. Types of cleaning agents to be used and methods of cleaning.
c. List of cleaning agents and methods of cleaning detrimental to product.
d. Procedures for routine cleaning
e. Procedures for preventive maintenance.
f. Procedures for routine maintenance.
g. Instruction on use of special tools.

PART 3 - EXECUTION

3.1 PREPARATION

A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."

B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.

B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

1. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
2. Owner will furnish an instructor to describe Owner's operational philosophy.
3. Owner will furnish Contractor with names and positions of participants.

C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.

1. Schedule training with Owner, through Architect, with at least seven days' advance notice.

D. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

E. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

END OF SECTION 017900

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.

B. Related Requirements:

1. Section 011000 "Summary" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Section 017300 "Execution" for cutting and patching procedures.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.

C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.5 INFORMATIONAL SUBMITTALS

A. Predemolition Photographs or Video: Submit before Work begins.

1.6 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

1.7 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.

C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

E. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.

1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

F. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.

1. Comply with requirements specified in Section 013233 "Photographic Documentation."
2. Inventory and record the condition of items to be removed and salvaged. Provide photographs of conditions that might be misconstrued as damage caused by salvage operations.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.

a. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material.
b. Equipment to Be Removed: Disconnect and cap services and remove equipment.
c. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Comply with requirements for access and protection specified in Section 015000 "Temporary Facilities and Controls."

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furniture, furnishings, and equipment that have not been removed.
5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
5. Maintain adequate ventilation when using cutting torches.
6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.

8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
9. Dispose of demolished items and materials promptly.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.

B. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, then remove concrete between saw cuts.

C. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 044313.13 - ANCHORED STONE MASONRY VENEER

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Stone masonry anchored to cold-formed metal framing and sheathing.

B. Related Requirements:

1. Section 055000 "Metal Fabrications" for furnishing steel shelf angles for stone masonry.
2. Section 076200 "Sheet Metal Flashing and Trim" for exposed sheet metal flashing.

1.3 ACTION SUBMITTALS

A. Samples for Verification:

1. For each stone type indicated. Include at least two Samples in each set and show the full range of color and other visual characteristics in completed Work.
2. For each color of mortar required. Label Samples to indicate types and amounts of pigments used.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs experienced stonemasons and stone fitters.

B. Mockups: Build mockups to demonstrate aesthetic effects and to set quality standards for materials and execution.

1. Build mockup of typical wall area as shown on Drawings.
2. Build mockups for typical exterior wall in sizes approximately 48 inches long by 48 inches high by full thickness, including face and backup wythes and accessories.

a. Include stone coping at top of mockup.

b. Include through-wall flashing installed for a 24-inch length in corner of mockup approximately 16 inches down from top of mockup, with a 12-inch length of flashing left exposed to view (omit stone masonry above half of flashing).
c. Include metal studs, sheathing, veneer anchors, flashing, and weep holes in exterior masonry-veneer wall mockup.

3. Protect accepted mockups from the elements with weather-resistant membrane.
4. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
5. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

B. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

C. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, in a dry location, or in covered weatherproof dispensing silos.

D. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.6 FIELD CONDITIONS

A. Protection of Stone Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed stone masonry when construction is not in progress.

1. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.

B. Stain Prevention: Immediately remove mortar and soil to prevent them from staining stone masonry face.

1. Protect base of walls from rain-splashed mud and mortar splatter using coverings spread on the ground and over the wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
4. Turn scaffold boards near the wall on edge at end of each day to prevent rain from splashing mortar and dirt on completed stone masonry.

C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

1.7 COORDINATION

A. Advise installers of other work about specific requirements for placement of reinforcement, veneer anchors, flashing, and similar items to be built into stone masonry.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations for Stone: Obtain each variety of stone, regardless of finish, from single quarry, whether specified in this Section or in another Section of the Specifications, with resources to provide materials of consistent quality in appearance and physical properties.

B. Source Limitations for Mortar Materials: Obtain mortar ingredients of uniform quality for each cementitious component from single manufacturer and each aggregate from single source or producer.

C. Varieties and Sources: Subject to compliance with requirements, provide stone of varieties and from sources complying with Section 044200 "Exterior Stone Cladding."

2.2 LIMESTONE-

A. Material Standard: Comply with ASTM C 568.

1. Classification: II Medium Density.

2.3 MORTAR MATERIALS

A. Portland Cement: ASTM C 150, Type I or Type II, except Type III may be used for cold-weather construction; natural color or white cement may be used as required to produce mortar color indicated.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

D. Water: Potable.

2.4 VENEER ANCHORS

A. Materials:

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2.

B. Size: Sufficient to extend at least halfway, but not less than 1-1/2 inches , through stone masonry and with at least a 5/8-inch cover on exterior face.

C. Wire Veneer Anchors: Wire ties formed from W1.7 or 0.148-inch-diameter, hot-dip galvanized-steel wire.

1. Ties are bent in the form of loops with legs not less than 15 inches in length and with last 2 inches bent at 90 degrees.

D. Adjustable, Screw-Attached Veneer Anchors: Units consisting of a wire tie section and a metal anchor section that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to wood or metal studs, and as follows:

1. Structural Performance Characteristics: Capable of withstanding a 100-lbf load in both tension and compression without deforming or developing play in excess of 0.05 inch .
2. Anchor Section: Sheet metal plate, 1-1/4 inches wide by 9 inches long, with screw holes in top and bottom and with raised rib-stiffened strap, 5/8 inch wide by 5-1/2 inches long, stamped into center to provide a slot between strap and plate for inserting wire tie.
3. Fabricate sheet metal anchor sections and other sheet metal parts from 0.097-inch-thick, steel sheet, galvanized after fabrication.
4. Wire Ties: Triangular-, rectangular-, or T-shaped wire ties fabricated from 0.25-inch-diameter, hot-dip galvanized-steel wire.

2.5 STONE TRIM ANCHORS

A. Stone Trim Anchors: Units fabricated with tabs or dowels designed to engage kerfs or holes in stone trim units and holes for fasteners or postinstalled anchor bolts for fastening to substrates or framing as indicated.

B. Materials: Fabricate anchors from stainless steel, ASTM A 240/A 240M or ASTM A 666, Type 304. Fabricate dowels from stainless steel, ASTM A 276, Type 304.

C. Fasteners for Stone Trim Anchors: Annealed stainless-steel bolts, nuts, and washers; ASTM F 593 for bolts and ASTM F 594 for nuts, Alloy Group 1 .

D. Postinstalled Anchor Bolts for Fastening Stone Trim Anchors: torque-controlled expansion anchors made from stainless-steel components complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 for bolts and nuts; ASTM A 666 or ASTM A 276, Type 304 or Type 316, for anchors.

2.6 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing, where flashing is exposed or partly exposed and where indicated, complying with SMACNA's "Architectural Sheet Metal Manual " and as follows:

1. Fabricate through-wall flashing with drip edge unless otherwise indicated. Fabricate by extending flashing 1/2 inch out from wall, with outer edge bent down 30 degrees [**and hemmed**].
2. Fabricate through-wall flashing with sealant stop unless otherwise indicated. Fabricate by bending metal back on itself 3/4 inch at exterior wall face and down into joint 3/8 inch to form a stop for retaining sealant backer rod.
3. Fabricate metal drip edges and sealant stops for ribbed metal flashing from plain metal flashing of same metal as ribbed flashing and extending at least 3 inches into wall with hemmed inner edge to receive ribbed flashing and form a hooked seam. Form hem on upper surface of metal so that completed seam will shed water.

B. Application: Unless otherwise indicated, use the following:

1. Where flashing is indicated to receive counterflashing, use metal flashing.
2. Where flashing is indicated to be turned down at or beyond wall face, use metal flashing.
3. Where flashing is partly exposed and is indicated to terminate at wall face, use metal flashing with a drip edge.
4. Where flashing is fully concealed, use metal flashing.

2.7 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene.

B. Cementitious Dampproofing for Limestone: Cementitious formulation recommended by ILI and nonstaining to stone, compatible with joint sealants, and noncorrosive to veneer anchors and attachments.

C. Weep/Vent Products: Use the following unless otherwise indicated:

1. Round Plastic Tubing: Medium-density polyethylene, 3/8-inch OD by thickness of stone masonry.

2.8 FABRICATION

A. General: Fabricate stone units in sizes and shapes required to comply with requirements indicated.

1. For limestone, comply with recommendations in ILI's "Indiana Limestone Handbook."

B. Select stone to produce pieces of thickness, size, and shape indicated, including details on Drawings and pattern specified in "Setting Stone Masonry" Article.

1. Shape stone specified to be laid in three-course, random range ashlar pattern with split beds.

C. Dress joints (bed and vertical) straight and at right angle to face unless otherwise indicated. Shape beds to fit supports.

D. Cut and drill sinkages and holes in stone for anchors and supports.

E. Carefully inspect stone at quarry or fabrication plant for compliance with requirements for appearance, material, and fabrication. Replace defective units before shipment.

1. Clean sawed backs of stone to remove rust stains and iron particles.

F. Thickness of Stone: Provide thickness indicated, but not less than the following:

1. Thickness: 4 inches plus or minus 1/2 inch .

G. Finish exposed stone faces and edges to comply with requirements indicated for finish and to match approved samples and mockups.

1. Finish: As indicated.

2.9 MORTAR MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.

1. Do not use calcium chloride.
2. Use portland cement-lime mortar unless otherwise indicated.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in the form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Stone Masonry: Comply with ASTM C 270, Proportion Specification.

1. Mortar for Setting Stone: Type N.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces indicated to receive stone masonry, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of stone masonry.

B. Examine substrate to verify that dovetail slots, inserts, reinforcement, veneer anchors, flashing, and other items installed in substrates and required for or extending into stone masonry are correctly installed.

C. Examine wall framing, sheathing, and weather-resistant sheathing paper to verify that stud locations are suitable for spacing of veneer anchors and that installation will result in a weatherproof covering.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Accurately mark stud centerlines on face of weather-resistant sheathing paper before beginning stone installation.

B. Coat concrete and unit masonry backup with asphalt dampproofing.

C. Clean dirty or stained stone surfaces by removing soil, stains, and foreign materials before setting. Clean stone by thoroughly scrubbing with fiber brushes and then drenching with clear water. Use only mild cleaning compounds that contain no caustic or harsh materials or abrasives.

3.3 SETTING STONE MASONRY

A. Perform necessary field cutting and trimming as stone is set.

1. Use hammer and chisel to split stone that is fabricated with split surfaces. Make edges straight and true, matching similar surfaces that were shop or quarry fabricated.

B. Arrange stones in broken-range ashlar pattern with uniform course heights, random lengths, and uniform joint widths.

C. Set stone to comply with requirements indicated on Drawings. Install supports, fasteners, and other attachments indicated or necessary to secure stone masonry in place. Set stone accurately in locations indicated with edges and faces aligned according to established relationships and indicated tolerances.

D. Maintain uniform joint widths except for variations due to different stone sizes and where minor variations are required to maintain bond alignment if any. Lay walls with joints not less than 3/8 inch at narrowest points or more than 1/2 inch at widest points.

E. Provide sealant joints of widths and at locations indicated.

1. Keep sealant joints free of mortar and other rigid materials.
2. Sealing joints is specified in Section 079200 "Joint Sealants."

F. Install embedded flashing at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.

1. At stud-framed walls, extend flashing through stone masonry, up sheathing face at least 12 inches , and behind weather barrier.
2. Interlock end joints of ribbed sheet metal flashing by overlapping ribs not less than 1-1/2 inches or as recommended by flashing manufacturer, and seal lap with elastomeric sealant complying with requirements in Section 079200 "Joint Sealants" for application indicated.
3. Install metal drip edges with ribbed sheet metal flashing by interlocking hemmed edges to form hooked seam. Seal seam with elastomeric sealant complying with requirements in Section 079200 "Joint Sealants" for application indicated.
4. Extend sheet metal flashing 1/2 inch beyond masonry face at exterior, and turn flashing down to form a drip.

G. Coat limestone with cementitious dampproofing as follows:

1. Stone at Grade: Beds, joints, and back surfaces to at least 12 inches above finish-grade elevations.
2. Stone Extending below Grade: Beds, joints, back surfaces, and face surfaces below grade.
3. Allow cementitious dampproofing formulations to cure before setting dampproofed stone. Do not damage or remove dampproofing in the course of handling and setting stone.

3.4 CONSTRUCTION TOLERANCES

A. Variation from Plumb: For vertical lines and surfaces, do not exceed 1/4 inch in 10 feet , 3/8 inch in 20 feet , or 1/2 inch in 40 feet or more. For external corners, expansion joints, control joints, and other conspicuous lines, do not exceed 1/4 inch in 20 feet or 1/2 inch in 40 feet or more.

B. Variation from Level: For bed joints and lines of exposed lintels, sills, parapets, horizontal grooves, and other conspicuous lines, do not exceed 1/4 inch in 20 feet or 1/2 inch in 40 feet or more.

C. Variation of Linear Building Line: For position shown in plan, do not exceed 1/2 inch in 20 feet or 3/4 inch in 40 feet or more.

D. Measure variation from level, plumb, and position shown in plan as a variation of the average plane of each stone face from level, plumb, or dimensioned plane.

E. Variation in Mortar-Joint Thickness: Do not vary from joint size range indicated.

F. Variation in Plane between Adjacent Stones: Do not exceed one-half of tolerance specified for thickness of stone.

3.5 INSTALLATION OF ANCHORED STONE MASONRY

A. Anchor stone masonry to unit masonry with individual wire veneer anchors unless otherwise indicated. Embed anchors in unit masonry mortar joints or grouted cells at a distance of at least one-half of unit masonry thickness.

B. Anchor stone masonry to unit masonry with wire anchors unless otherwise indicated. Connect anchors to masonry joint reinforcement by inserting pintles into eyes of masonry joint reinforcement projecting from unit masonry.

C. Anchor stone masonry to unit masonry with wire anchors unless otherwise indicated. Connect anchors to masonry joint reinforcement with vertical rods inserted through anchors and through eyes of masonry joint reinforcement projecting from unit masonry.

D. Anchor stone masonry to stud framing with screw-attached veneer anchors unless otherwise indicated.

E. Anchor stone masonry to metal-stud framing with wire anchors unless otherwise indicated. Tie anchors to studs.

F. Embed veneer anchors in mortar joints of stone masonry at least halfway, but not less than 1-1/2 inches , through stone masonry and with at least a 5/8-inch cover on exterior face.

G. Space anchors to provide not less than one anchor per 2 sq. ft. of wall area. Install additional anchors within 12 inches of openings, sealant joints, and perimeter at intervals not exceeding 12 inches .

H. Space anchors not more than 16 inches o.c. vertically and 24 inches o.c. horizontally. Install additional anchors within 12 inches of openings, sealant joints, and perimeter at intervals not exceeding 12 inches .

I. Space anchors not more than 18 inches o.c. vertically and 32 inches o.c. horizontally, with not less than one anchor per 2.67 sq. ft. of wall area. Install additional anchors within 12 inches of openings, sealant joints, and perimeter at intervals not exceeding 12 inches .

J. Anchor stone trim with stone trim anchors where indicated. Install anchors by fastening to substrate and inserting tabs and dowels into kerfs and holes in stone units. Provide compressible filler in ends of dowel holes and bottoms of kerfs to prevent end bearing of dowels and anchor tabs on stone. Fill remainder of anchor holes and kerfs with mortar.

K. Set stone in full bed of mortar with full head joints unless otherwise indicated. Build anchors into mortar joints as stone is set.

L. Fill space between back of stone masonry and weather-resistant sheathing paper with mortar as stone is set.

M. Provide 1-inch cavity between stone masonry and backup construction unless otherwise indicated. Keep cavity free of mortar droppings and debris.

1. Slope beds toward cavity to minimize mortar protrusions into cavity.
2. Do not attempt to trowel or remove mortar fins protruding into cavity.

N. Rake out joints for pointing with mortar to depth of not less than 1/2 inch before setting mortar has hardened. Rake joints to uniform depths with square bottoms and clean sides.

3.6 POINTING

A. Prepare stone-joint surfaces for pointing with mortar by removing dust and mortar particles. Where setting mortar was removed to depths greater than surrounding areas, apply pointing mortar in layers not more than 3/8 inch deep until a uniform depth is formed.

B. Point stone joints by placing and compacting pointing mortar in layers of not more than 3/8 inch deep. Compact each layer thoroughly and allow to it become thumbprint hard before applying next layer.

C. Tool joints, when pointing mortar is thumbprint hard, with a smooth jointing tool to produce the following joint profile:

1. Joint Profile: Concave.

3.7 ADJUSTING AND CLEANING

A. Remove and replace stone masonry of the following description:

1. Broken, chipped, stained, or otherwise damaged stone. Stone may be repaired if methods and results are approved by Architect.
2. Defective joints.
3. Stone masonry not matching approved samples and mockups.
4. Stone masonry not complying with other requirements indicated.

B. Replace in a manner that results in stone masonry matching approved samples and mockups, complying with other requirements, and showing no evidence of replacement.

C. In-Progress Cleaning: Clean stone masonry as work progresses. Remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean stone masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on mockup; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before cleaning stone masonry.
3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
4. Clean stone masonry by bucket and brush hand-cleaning method described in BIA Technical Note No. 20, Revised II, using job-mixed detergent solution.

5. Clean limestone masonry to comply with recommendations in ILI's "Indiana Limestone Handbook."

3.8 EXCESS MATERIALS AND WASTE

A. Excess Stone: Stack excess stone where directed by Owner for Owner's use.

B. Disposal as Fill Material: Dispose of clean masonry waste, including mortar and excess or soil-contaminated sand, by crushing and mixing with fill material as fill is placed.

1. Crush masonry waste to less than 4 inches in greatest dimension.
2. Mix masonry waste with at least 2 parts of specified fill material for each part of masonry waste. Fill material is specified in Section 312000 "Earth Moving."
3. Do not dispose of masonry waste as fill within 18 inches of finished grade.

C. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other waste, and legally dispose of off Owner's property.

END OF SECTION 044313.13

SECTION 055000 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Shelf angles.
2. Metal bollards.

1.3 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

B. Coordinate installation of metal fabrications that are anchored to or that receive other work. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

1.4 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 METALS

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

C. Steel Pipe: ASTM A 53/A 53M, Standard Weight (Schedule 40) unless otherwise indicated.

2.2 MISCELLANEOUS MATERIALS

A. Shop Primers: Provide primers that comply with Section 099113 "Exterior Painting."

2.3 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D. Form exposed work with accurate angles and surfaces and straight edges.

E. Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing [**and contour of welded surface matches that of adjacent surface**].

F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.

G. Fabricate seams and other connections that are exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.

I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

J. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches , with a minimum 6-inch

embedment and 2-inch hook, not less than 8 inches from ends and corners of units and 24 inches o.c., unless otherwise indicated.

2.4 SHELF ANGLES

A. Fabricate shelf angles from steel angles of sizes indicated and for attachment to concrete framing. Provide horizontally slotted holes to receive 3/4-inch bolts, spaced not more than 6 inches from ends and 24 inches o.c., unless otherwise indicated.

1. Provide mitered and welded units at corners.
2. Provide open joints in shelf angles at expansion and control joints. Make open joint approximately 2 inches larger than expansion or control joint.

B. For cavity walls, provide vertical channel brackets to support angles from backup masonry and concrete.

C. Galvanize shelf angles located in exterior walls.

D. Furnish wedge-type concrete inserts, complete with fasteners, to attach shelf angles to cast-in-place concrete.

2.5 METAL BOLLARDS

A. Fabricate metal bollards from Schedule 40 steel pipe.

B. Prime bollards with zinc-rich primer.

2.6 DOWNSPOUT GUARDS

A. Fabricate downspout guards from 3/8-inch-thick by 12-inch-wide steel plate, bent to fit flat against the wall or column at both ends and to fit around pipe with 2-inch clearance between pipe and pipe guard. Drill each end for two 3/4-inch anchor bolts.

B. Galvanize downspout guards.

2.7 FINISHES, GENERAL

A. Finish metal fabrications after assembly.

B. Finish exposed surfaces to remove tool and die marks and stretch lines, and to blend into surrounding surface.

2.8 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.

B. Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.

1. Shop prime with primers specified in Section 099113 "Exterior Painting" unless

C. Preparation for Shop Priming: Prepare surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

1. Items Indicated to Receive Primers Specified in Section 099600 "High-Performance Coatings": SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
2. Other Items: SSPC-SP 3, "Power Tool Cleaning."

D. Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

1. Stripe paint corners, crevices, bolts, welds, and sharp edges.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.

E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

3.2 INSTALLING METAL BOLLARDS

A. Fill metal-capped bollards solidly with concrete and allow concrete to cure seven days before installing.

B. Anchor bollards in place with concrete footings. Center and align bollards in holes 3 inches above bottom of excavation. Place concrete and vibrate or tamp for consolidation. Support and brace bollards in position until concrete has cured.

C. Fill bollards solidly with concrete, mounding top surface to shed water.

3.3 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

B. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in [**Section 099113 "Exterior Painting."**][**Section 099123 "Interior Painting."**]

END OF SECTION 055000

SECTION 057500 - DECORATIVE FORMED METAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Filler panels between dissimilar construction.
2. Mullion cladding.
3. Exterior formed-metal-shaped panels.

1.3 COORDINATION

A. Coordinate installation of anchorages for decorative formed metal items. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver items to Project site in time for installation.

B. Coordinate installation of decorative formed metal with adjacent construction to ensure that wall assemblies, flashings, trim, and joint sealants, are protected against damage from the effects of weather, age, corrosion, and other causes of deterioration.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For [**mirrorlike stainless-steel finish**] [and] [**statuary conversion coating copper-alloy finish**] to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: A firm experienced in producing decorative formed metal similar to that indicated for this Project and with a record of successful in-service performance as well as sufficient production capacity to produce required units.

B. Organic-Coating Applicator Qualifications: A firm experienced in successfully applying organic coatings of type indicated to metals of types indicated and that employs

competent control personnel to conduct continuing, effective quality-control program to ensure compliance with requirements.

C. Anodic Finisher Qualifications: A firm experienced in successfully applying anodic finishes of type indicated and that employs competent control personnel to conduct continuing, effective quality-control program to ensure compliance with requirements.

D. Powder-Coating Applicator Qualifications: A firm experienced in successfully applying powder coatings of type indicated to metals of types indicated and that employs competent control personnel to conduct continuing, effective quality-control program to ensure compliance with requirements.

E. Installer Qualifications: Fabricator of products.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver decorative formed metal products wrapped in protective coverings and strapped together in suitable packs or in heavy-duty cartons. Remove protective coverings before they stain or bond to finished surfaces.

B. Store products on elevated platforms in a dry location.

1.7 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of walls, columns, beams, and other construction contiguous with decorative formed metal by field measurements before fabrication and indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance: Decorative formed metal items, including anchors and connections, shall withstand the effects of gravity loads and the following loads and stresses without exceeding the allowable design working stress of materials involved and without exhibiting permanent deformation in any components:

1. Wind Loads on Exterior Items: As indicated on Drawings.

B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F , ambient; 180 deg F , material surfaces.

2.2 SHEET METAL

A. General: Fabricate products from sheet metal without pitting, seam marks, roller marks, stains, discolorations, or other imperfections where exposed to view on finished units.

B. Aluminum Sheet: Flat sheet complying with ASTM B 209 , alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with strength and durability properties of not less than Alloy 5005-H32.

C. Galvanized-Steel Sheet: ASTM A 653/A 653M, G90 coating, either commercial steel or forming steel.

D. Steel Sheet: Uncoated, cold-rolled, ASTM A 1008/A 1008M, commercial steel, exposed.

E. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, [**Type 304**][**Type 316**], stretcher-leveled standard of flatness.

F. Bronze Sheet: ASTM B 36/B 36M, Alloy UNS C28000 (muntz metal, 60 percent copper) or Alloy UNS C23000 (red brass, 85 percent copper).

G. Brass Sheet: ASTM B 36/B 36M, Alloy UNS C26000 (cartridge brass, 70 percent copper).

H. Copper Sheet: ASTM B 370, cold-rolled copper sheet, H00 temper.

I. Titanium Sheet: ASTM B 265, Grade 1.

2.3 MISCELLANEOUS MATERIALS

A. Gaskets: As required to seal joints in decorative formed metal and remain weathertight; as recommended in writing by decorative formed metal manufacturer.

1. ASTM D 1056, Type 1, Class A, grade as recommended by gasket manufacturer to obtain seal for application indicated.
2. Closed-cell polyurethane foam, adhesive on two sides, release paper protected.

B. Sealants, Exterior: ASTM C 920; elastomeric silicone sealant; of type, grade, class, and use classifications required to seal joints in decorative formed metal and remain weathertight; and as recommended in writing by decorative formed metal manufacturer.

2.4 PAINTS AND COATINGS

A. Etching Cleaner for Galvanized Metal: Complying with MPI#25.

B. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

C. Lacquer for Copper Alloys: Clear, acrylic lacquer specially developed for coating copper-alloy products.

D. Shop Primers: Comply with Section 099113 "Exterior Painting."

E. Universal Shop Primer for Ferrous Metal: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

F. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.

G. Shop Primer for Galvanized Steel: [**Cementitious galvanized metal primer complying with MPI#26**][**Vinyl wash primer complying with MPI#80**][**Water-based galvanized metal primer complying with MPI#134**].

2.5 FABRICATION, GENERAL

A. Shop Assembly: Preassemble decorative formed metal items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

B. Coordinate dimensions and attachment methods of decorative formed metal items with those of adjoining construction to produce integrated assemblies with closely fitting joints and with edges and surfaces aligned unless otherwise indicated.

C. Form metal to profiles indicated, in maximum lengths to minimize joints. Produce flat, flush surfaces without cracking or grain separation at bends. Fold back exposed edges of unsupported sheet metal to form a 1/2-inch-wide hem on the concealed side, or ease edges to a radius of approximately 1/32 inch and support with concealed stiffeners.

D. Increase metal thickness or reinforce with concealed stiffeners, backing materials, or both, as needed to provide surface flatness equivalent to stretcher-leveled standard of flatness and sufficient strength for indicated use.

1. Support joints with concealed stiffeners as needed to hold exposed faces of adjoining sheets in flush alignment.

E. Build in straps, plates, and brackets as needed to support and anchor fabricated items to adjoining construction. Reinforce decorative formed metal items as needed to attach and support other construction.

F. Provide support framing, mounting and attachment clips, splice sleeves, fasteners, and accessories needed to install decorative formed metal items.

G. Where welding or brazing is indicated, weld or braze joints and seams continuously. Grind, fill, and dress to produce smooth, flush, exposed surfaces in which joints are not visible after finishing is completed.

1. Use welding and brazing procedures that will blend with and not cause discoloration of metal being joined.

2.6 FILLER PANELS

A. Form filler panels for closing ends of partition systems and for other applications indicated. Form from two sheets of metal of type and thickness indicated below, separated by channels formed from the same material, producing a panel of same thickness as partitions unless otherwise indicated. Incorporate reveals, trim, and concealed anchorages for attaching to adjacent surfaces.

1. Steel Sheet: 0.060 inch .

a. Finish: Factory primed.

2. Filler panels may be fabricated from prefinished metal sheet in lieu of finishing after fabrication provided unfinished edges are concealed from view.

B. Adhesively attach gaskets to filler panel edges where they abut mullions or glazing. Use 1-inch-square material, unless otherwise indicated, set approximately 1/4 inch into channeled edge of filler panel.

C. Attach gaskets to all edges of panels that abut adjacent surfaces to form a continuous seal. Use compressible gaskets or mastic sealing tape, applied to center of panel edges to be concealed from view, unless otherwise indicated.

D. Do not mechanically fasten filler panels to mullions.

2.7 MULLION CLADDING

A. Form mullion cladding from metal of type and thickness indicated below. Fabricate to fit tightly to adjoining construction.

1. Aluminum Sheet: 0.063 inch .

a. Finish: Clear anodic.

2.8 GENERAL FINISH REQUIREMENTS

A. Complete mechanical finishes of flat sheet metal surfaces before fabrication where possible. After fabrication, finish all joints, bends, abrasions, and other surface blemishes to match sheet finish.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Apply organic and anodic finishes to formed metal after fabrication unless otherwise indicated.

D. Finish items indicated on Drawings after assembly.

E. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.9 ALUMINUM FINISHES

A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

2.10 GALVANIZED-STEEL SHEET FINISHES

A. Preparing Galvanized Items for Factory Priming: Thoroughly clean galvanized decorative formed metal of grease, dirt, oil, flux, and other foreign matter, and treat with etching cleaner.

B. Preparing Galvanized Items for Factory Finishing: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it.

C. Repairing Galvanized Surfaces: Clean welds and abraded areas and repair galvanizing to comply with ASTM A 780/A 780M.

D. Factory Priming for Field-Painted Finish: Where field painting after installation is indicated, apply shop primer to prepared surfaces of items unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

E. Baked-Enamel Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-enamel finish consisting of prime coat and thermosetting topcoat, with a minimum dry film thickness of 1 mil for topcoat. Comply with paint manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of 2 mils .

1. Color and Gloss: [**As indicated by manufacturer's designations**][**Match Architect's sample**][**As selected by Architect from manufacturer's full range**]<**Insert color and gloss**>.

F. Powder-Coat Finish: Immediately after cleaning and pretreating, apply manufacturer's standard thermosetting polyester or acrylic urethane powder coating with cured-film thickness not less than 1.5 mils . Prepare, treat, and coat metal to comply with resin manufacturer's written instructions.

1. Color and Gloss: [**As indicated by manufacturer's designations**][**Match Architect's sample**][**As selected by Architect from manufacturer's full range**]<**Insert color and gloss**>.

G. Siliconized-Polyester Coating: Immediately after cleaning and pretreating, apply manufacturer's standard epoxy primer and silicone-modified, polyester-enamel topcoat; with a dry film thickness of not less than 0.2 mil for primer and 0.8 mil for topcoat.

1. Color and Gloss: [**As indicated by manufacturer's designations**][**Match Architect's sample**][**As selected by Architect from manufacturer's full range**]<**Insert color and gloss**>.

H. High-Performance Organic Finish: Two-coat fluoropolymer finish complying with [**AAMA 2604**][**AAMA 2605**] and containing not less than [**50**][**70**] percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

1. Color and Gloss: [**As indicated by manufacturer's designations**][**Match Architect's sample**][**As selected by Architect from manufacturer's full range**]<**Insert color and gloss**>.

I. High-Performance Organic Finish: [**Three**][**Four**]-coat fluoropolymer finish complying with AAMA 2605 and containing not less than [**50**][**70**] percent PVDF resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

1. Color and Gloss: [**As indicated by manufacturer's designations**][**Match Architect's sample**][**As selected by Architect from manufacturer's full range**]<**Insert color and gloss**>.

2.11 STEEL SHEET FINISHES

A. Surface Preparation: Clean surfaces to comply with SSPC-SP 1, "Solvent Cleaning," to remove dirt, oil, grease, or other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning," or with SSPC-SP 8, "Pickling."

B. Pretreatment: Immediately after cleaning, apply a conversion coating of type suited to organic coating.

C. Factory Priming for Field-Painted Finish: Where field painting after installation is indicated, apply shop primer to prepared surfaces of items unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

D. Baked-Enamel Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-enamel finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of 2 mils .

1. Color and Gloss: [**As indicated by manufacturer's designations**][**Match Architect's sample**][**As selected by Architect from manufacturer's full range**]<**Insert color and gloss**>.

E. Powder-Coat Finish: Immediately after cleaning and pretreating, apply manufacturer's standard thermosetting polyester or acrylic urethane powder coating with cured-film thickness not less than 1.5 mils . Prepare, treat, and coat metal to comply with resin manufacturer's written instructions.

1. Color and Gloss: [**As indicated by manufacturer's designations**][**Match Architect's sample**][**As selected by Architect from manufacturer's full range**]<**Insert color and gloss**>.

2.12 COPPER-ALLOY FINISHES

A. Buffed Finish, Lacquered: M21-O6x (Mechanical Finish: buffed, smooth specular; Coating: clear, organic, air dried, as specified below).

1. Clear, Organic Coating: Lacquer specified for copper alloys, applied by air spray in two coats per manufacturer's written instructions, with interim drying, to a total thickness of 1 mil .

B. Hand-Rubbed Finish, Lacquered: M31-M34-O6x (Mechanical Finish: directionally textured, fine satin; Mechanical Finish: directionally textured, hand rubbed; Coating: clear, organic, air dried, as specified below).

1. Clear, Organic Coating: Lacquer specified for copper alloys, applied by air spray in two coats per manufacturer's written instructions, with interim drying, to a total thickness of 1 mil .

C. Medium-Satin Finish, Lacquered: M32-O6x (Mechanical Finish: directionally textured, medium satin; Coating: clear, organic, air dried, as specified below).

1. Clear, Organic Coating: Lacquer specified for copper alloys, applied by air spray in two coats per manufacturer's written instructions, with interim drying, to a total thickness of 1 mil .

D. Fine-Matte Finish, Lacquered: M42-O6x (Mechanical Finish: nondirectional finish, fine matte; Coating: clear, organic, air dried, as specified below).

1. Clear, Organic Coating: Lacquer specified for copper alloys, applied by air spray in two coats per manufacturer's written instructions, with interim drying, to a total thickness of 1 mil .

E. Statuary Conversion Coating over Satin Finish: M31-C55 (Mechanical Finish: directionally textured, fine satin; Chemical Finish: conversion coating, sulfide)[**, with color matching Architect's sample**].

F. Statuary Conversion Coating over Satin Finish, Lacquered: M31-C55-O6x (Mechanical Finish: directionally textured, fine satin; Chemical Finish: conversion coating, sulfide; Coating: clear, organic, air dried, as specified below)[**, with color matching Architect's sample**]:

1. Clear, Organic Coating: Lacquer specified for copper alloys, applied by air spray in two coats per manufacturer's written instructions, with interim drying, to a total thickness of 1 mil .

2.13 TITANIUM FINISHES

A. General: Fabricate items from finished titanium sheet, taking care not to damage finish during fabrication. Protect finish as needed during fabrication by applying a strippable, temporary protective covering.

B. Dull Matte Finish: Pickled and annealed.

C. Bright Matte Finish: Vacuum annealed.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of decorative formed metal.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Locate and place decorative formed metal items level and plumb and in alignment with adjacent construction. Perform cutting, drilling, and fitting required to install decorative formed metal.

1. Do not cut or abrade finishes that cannot be completely restored in the field. Return items with such finishes to the shop for required alterations, followed by complete refinishing, or provide new units as required.

B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where needed to protect metal surfaces and to make a weathertight connection.

C. Form tight joints with exposed connections accurately fitted together. Provide reveals and openings for sealants and joint fillers as indicated.

D. Install concealed gaskets, joint fillers, insulation, sealants, and flashings, as the Work progresses, to make exterior decorative formed metal items weatherproof.

E. Install concealed gaskets, joint fillers, sealants, and insulation, as the Work progresses, to make interior decorative formed metal items soundproof or lightproof as applicable to type of fabrication indicated.

F. Corrosion Protection: Apply bituminous paint or other permanent separation materials on concealed surfaces where metals would otherwise be in direct contact with substrate materials that are incompatible or could result in corrosion or deterioration of either material or finish.

3.3 ADJUSTING AND CLEANING

A. Unless otherwise indicated, clean metals by washing thoroughly with water and soap, rinsing with clean water, and drying with soft cloths.

B. Clean copper alloys according to metal finisher's written instructions in a manner that leaves an undamaged and uniform finish matching approved Sample.

C. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."

D. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.

3.4 PROTECTION

A. Protect finishes of decorative formed metal items from damage during construction period. Remove temporary protective coverings at time of Substantial Completion.

END OF SECTION 057500

SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Rooftop equipment bases and support curbs.
2. Wood blocking, cants, and nailers.
3. Wood furring.
4. Plywood backing panels.

B. Related Requirements:

1. Section 061600 "Sheathing" for sheathing, subflooring, and underlayment.

1.3 DEFINITIONS

A. Boards or Strips: Lumber of less than 2 inches nominal size in least dimension.

B. Dimension Lumber: Lumber of 2 inches nominal or greater size but less than 5 inches nominal size in least dimension.

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.
3. Dress lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness unless otherwise indicated.

2.2 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Rooftop equipment bases and support curbs.
4. Cants.
5. Furring.
6. Grounds.

B. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

D. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.3 PLYWOOD BACKING PANELS

A. Equipment Backing Panels: Plywood, DOC PS 1, Exterior, A-C, in thickness indicated or, if not indicated, not less than 3/4-inch nominal thickness.

1. Plywood shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation

of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry accurately to other construction. Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.

C. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels.

D. Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.

E. Do not splice structural members between supports unless otherwise indicated.

F. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.

G. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:

1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal thickness.
3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. and to solidly fill space below partitions.
4. Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet o.c.

H. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

I. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

J. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.2 WOOD BLOCKING AND NAILER INSTALLATION

A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.

B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

C. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

3.3 WOOD FURRING INSTALLATION

A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.

B. Furring to Receive Gypsum Board: Install 1-by-2-inch nominal-size furring vertically at 16 inches o.c.

3.4 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect miscellaneous rough carpentry from weather. If, despite protection, miscellaneous rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061053

SECTION 061600 - SHEATHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Wall sheathing.
2. Roof sheathing.
3. Parapet sheathing.

B. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for plywood backing panels.
2. Section 072500 "Weather Barriers" for water-resistive barrier applied over wall sheathing.

1.3 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Stack panels flat with spacers beneath and between each bundle to provide air circulation. Protect sheathing from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS

A. Thickness: As needed to comply with requirements specified, but not less than thickness indicated.

B. Factory mark panels to indicate compliance with applicable standard.

2.2 WALL SHEATHING

A. Glass-Mat Gypsum Sheathing: ASTM C 1177/1177M.

1. Type and Thickness: [**Regular, 1/2 inch**][**Type X, 5/8 inch**] thick.
2. Size: [**48 by 96 inches**][**48 by 108 inches**][**48 by 120 inches**][**1200 by 2400 mm**][**1200 by 2750 mm**][**1200 by 3050 mm**] for vertical installation.

2.3 ROOF SHEATHING

A. Plywood Sheathing: [**DOC PS 1**][**Either DOC PS 1 or DOC PS 2**], [**Exterior, Structural I**][**Exterior**][**Exposure 1, Structural I**][**Exposure 1**] sheathing.

1. Span Rating: Not less than [**16/0**][**20/0**][**24/0**][**32/16**][**40/20**][**48/24**].
2. Nominal Thickness: Not less than [**15/32 inch**][**1/2 inch**].

2.4 PARAPET SHEATHING

A. Glass-Mat Gypsum Sheathing: ASTM C 1177/1177M.

1. Products: t to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

   a. CertainTeed Corporation
   b. Georgia-Pacific Company
   c. National Gypsum Company
   d. USG Corporation

2. Type and Thickness: Type X, 5/8 inch thick.
3. Size: 48 by 96 inches for vertical installation.

2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

1. For roof, parapet, and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Do not use materials with defects that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Arrange joints so that pieces do not span between fewer than three support members.

B. Cut panels at penetrations, edges, and other obstructions of work; fit tightly against abutting construction unless otherwise indicated.

C. Securely attach to substrate by fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in the ICC's International Building Code.
2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in the ICC's International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

D. Use common wire nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections. Install fasteners without splitting wood.

E. Coordinate wall, parapet, and roof sheathing installation with flashing and joint-sealant installation so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly.

F. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements.

G. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

3.2 WOOD STRUCTURAL PANEL INSTALLATION

A. General: Comply with applicable recommendations in APA Form No. E30, "Engineered Wood Construction Guide," for types of structural-use panels and applications indicated.

B. Fastening Methods: Fasten panels as indicated below:

1. Wall and Roof Sheathing:

a. Nail to wood framing.
b. Space panels 1/8 inch apart at edges and ends.

3.3 GYPSUM SHEATHING INSTALLATION

A. Comply with GA-253 and with manufacturer's written instructions.

1. Fasten gypsum sheathing to wood framing with nails or screws.
2. Install panels with a 3/8-inch gap where non-load-bearing construction abuts structural elements.
3. Install panels with a 1/4-inch gap where they abut masonry or similar materials that might retain moisture, to prevent wicking.

B. Apply fasteners so heads bear tightly against face of sheathing, but do not cut into facing.

C. Horizontal Installation: Install sheathing with V-grooved edge down and tongue edge up. Interlock tongue with groove to bring long edges in contact with edges of adjacent panels without forcing. Abut ends over centers of studs, and stagger end joints of adjacent panels not less than one stud spacing. Attach at perimeter and within field of panel to each stud.

1. Space fasteners approximately 8 inches o.c. and set back a minimum of 3/8 inch from edges and ends of panels.
2. For sheathing under stucco cladding, panels may be initially tacked in place with screws if overlying self-furring metal lath is screw-attached through sheathing to studs immediately after sheathing is installed.

D. Vertical Installation: Install vertical edges centered over studs. Abut ends and edges with those of adjacent panels. Attach at perimeter and within field of panel to each stud.

1. Space fasteners approximately 8 inches o.c. and set back a minimum of 3/8 inch from edges and ends of panels.
2. For sheathing under stucco cladding, panels may be initially tacked in place with screws if overlying self-furring metal lath is screw-attached through sheathing to studs immediately after sheathing is installed.

E. Seal sheathing joints according to sheathing manufacturer's written instructions.

1. Apply elastomeric sealant to joints and fasteners and trowel flat. Apply sufficient amount of sealant to completely cover joints and fasteners after troweling. Seal other penetrations and openings.
2. Apply glass-fiber sheathing tape to glass-mat gypsum sheathing joints and apply and trowel sealant to embed entire face of tape in sealant. Apply sealant to exposed fasteners with a trowel so fasteners are completely covered. Seal other penetrations and openings.

END OF SECTION 061600

SECTION 062023 - INTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior trim, including non-fire-rated interior door frames.

B. Related Requirements:

1. Section 099123 "Interior Painting" for priming and backpriming of interior finish carpentry.

1.3 DEFINITIONS

A. MDF: Medium-density fiberboard.

B. MDO: Plywood with a medium-density overlay on the face.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation. Protect materials from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

B. Deliver interior finish carpentry materials only when environmental conditions meet requirements specified for installation areas. If interior finish carpentry materials must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

1.5 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install interior finish carpentry materials until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.

1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Lumber: DOC PS 20 and the following grading rules:

1. NeLMA: Northeastern Lumber Manufacturers' Association, "Standard Grading Rules for Northeastern Lumber."
2. NHLA: National Hardwood Lumber Association, "Rules for the Measurement and Inspection of Hardwood & Cypress."
3. NLGA: National Lumber Grades Authority, "Standard Grading Rules for Canadian Lumber."
4. SPIB: The Southern Pine Inspection Bureau, "Standard Grading Rules for Southern Pine Lumber."
5. WCLIB: West Coast Lumber Inspection Bureau, Standard No. 17, "Grading Rules for West Coast Lumber."
6. WWPA: Western Wood Products Association, "Western Lumber Grading Rules."

B. Factory mark each piece of lumber with grade stamp of inspection agency indicating grade, species, moisture content at time of surfacing, and mill.

1. For exposed lumber, mark grade stamp on end or back of each piece.

2.2 INTERIOR TRIM

A. Lumber Trim for Opaque Finish (Painted Finish):

1. Species and Grade: Spruce-pine-fir, 2 Common; NeLMA, NLGA, WCLIB, or WWPA.
2. Maximum Moisture Content: 15 percent with at least 85 percent of shipment at 12 percent or less.
3. Maximum Moisture Content: 13 percent.
4. Finger Jointing: Allowed.
5. Face Surface: Surfaced (smooth).
6. Optional Material: Primed MDF of same actual dimensions as lumber indicated may be used in lieu of lumber.

2.3 MISCELLANEOUS MATERIALS

A. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.

B. Multipurpose Construction Adhesive: Formulation complying with ASTM D 3498 that is recommended for indicated use by adhesive manufacturer.

2.4 FABRICATION

A. Back out or kerf backs of the following members except those with ends exposed in finished work:

1. Interior standing and running trim except shoe and crown molds.

B. Ease edges of lumber less than 1 inch in nominal thickness to 1/16-inch radius and edges of lumber 1 inch or more in nominal thickness to 1/8-inch radius.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application.

B. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours unless longer conditioning is recommended by manufacturer.

3.3 INSTALLATION, GENERAL

A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, too small to fabricate with proper jointing arrangements, or with defective surfaces, sizes, or patterns.

B. Install interior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.

1. Scribe and cut interior finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.

2. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.
3. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining interior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
4. Coordinate interior finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.

3.4 STANDING AND RUNNING TRIM INSTALLATION

A. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches long, except where necessary. Stagger joints in adjacent and related standing and running trim. Miter at returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints. Plane backs of casings to provide uniform thickness across joints where necessary for alignment.

1. Match color and grain pattern of trim for transparent finish (stain or clear finish) across joints.
2. Install trim after gypsum-board joint finishing operations are completed.
3. Install without splitting; drill pilot holes before fastening where necessary to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed carpentry work and fill holes.

3.5 ADJUSTING

A. Replace interior finish carpentry that is damaged or does not comply with requirements. Interior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.6 CLEANING

A. Clean interior finish carpentry on exposed and semiexposed surfaces. Restore damaged or soiled areas and touch up factory-applied finishes, if any.

3.7 PROTECTION

A. Protect installed products from damage from weather and other causes during construction.

B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.

1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 062023

SECTION 064116 - PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Plastic-laminate-faced architectural cabinets.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing cabinets and concealed within other construction before cabinet installation.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product high-pressure decorative laminate.

1. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.

B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1. Show details full size.
2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
3. Show locations and sizes of cutouts and holes for and other items installed in architectural plastic-laminate cabinets.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

B. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver cabinets until painting and similar operations that could damage woodwork have been completed in installation areas. If cabinets must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install cabinets until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Environmental Limitations: Do not deliver or install cabinets until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during the remainder of the construction period.

C. Field Measurements: Where cabinets are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Locate concealed framing, blocking, and reinforcements that support cabinets by field measurements before being enclosed, and indicate measurements on Shop Drawings.

D. Established Dimensions: Where cabinets are indicated to fit to other construction, establish dimensions for areas where cabinets are to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.7 COORDINATION

A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that cabinets can be supported and installed as indicated.

B. Hardware Coordination: Distribute copies of approved hardware schedule specified in Section 087111 "Door Hardware (Descriptive Specification)" to fabricator of architectural woodwork; coordinate Shop Drawings and fabrication with hardware requirements.

PART 2 - PRODUCTS

2.1 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of architectural plastic-laminate cabinets indicated for construction, finishes, installation, and other requirements.

1. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with those selections and requirements in addition to the quality standard.

B. Grade: Premium.

C. Type of Construction: Frameless.

D. Cabinet, Door, and Drawer Front Interface Style: Flush overlay.

E. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or if not indicated, as required by woodwork quality standard.

1. Manufacturers ct to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. WilsonArt

F. Laminate Cladding for Exposed Surfaces:

1. Horizontal Surfaces: Grade HGS.
2. Vertical Surfaces: Grade VGS.
3. Edges: PVC edge banding, 0.12 inch thick, matching laminate in color, pattern, and finish.
4. Pattern Direction: Vertically for drawer fronts, doors, and fixed panels.

G. Materials for Semiexposed Surfaces:

1. Surfaces Other Than Drawer Bodies: High-pressure decorative laminate, NEMA LD 3, Grade VGS.

a. Edges of Plastic-Laminate Shelves: PVC edge banding, 0.12 inch thick, matching laminate in color, pattern, and finish.
b. For semiexposed backs of panels with exposed plastic-laminate surfaces, provide surface of high-pressure decorative laminate, NEMA LD 3, Grade VGS.

2. Drawer Sides and Backs: Thermoset decorative panels with PVC or polyester edge banding.

3. Drawer Bottoms: Thermoset decorative panels.

H. Drawer Construction: Fabricate with exposed fronts fastened to subfront with mounting screws from interior of body.

1. Join subfronts, backs, and sides with glued rabbeted joints supplemented by mechanical fasteners.

I. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:

1. As indicated by laminate manufacturer's designations.
2. Match Architect's sample.
3. As selected by Architect from laminate manufacturer's full range in the following categories:

a. Solid colors, matte finish.
b. Solid colors with core same color as surface, matte finish.
c. Wood grains, matte finish.
d. Patterns, matte finish.

2.2 WOOD MATERIALS

A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.

1. Wood Moisture Content: 5 to 10 percent.

B. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.

1. Medium-Density Fiberboard: ANSI A208.2, Grade 130.
2. Thermoset Decorative Panels: Particleboard or medium-density fiberboard finished with thermally fused, melamine-impregnated decorative paper and complying with requirements of NEMA LD 3, Grade VGL, for test methods 3.3, 3.4, 3.6, 3.8, and 3.10.

2.3 FIRE-RETARDANT-TREATED MATERIALS

A. Fire-Retardant-Treated Materials, General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

1. Use treated materials that comply with requirements of referenced woodworking standard. Do not use materials that are warped, discolored, or otherwise defective.
2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
3. Identify fire-retardant-treated materials with appropriate classification marking of qualified testing agency in the form of removable paper label or imprint on surfaces that will be concealed from view after installation.

2.4 CABINET HARDWARE AND ACCESSORIES

A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets except for items specified in Section 087111 "Door Hardware (Descriptive Specification)."

B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 170 degrees of opening.

C. Wire Pulls: Back mounted, solid metal, 4 inches long, 5/16 inch in diameter.

D. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.

E. Drawer Slides: BHMA A156.9.

1. Grade 1 and Grade 2: Side mounted; full-extension type; zinc-plated steel with polymer rollers.
2. Grade 1HD-100 and Grade 1HD-200: Side mounted; full-extension type; zinc-plated-steel ball-bearing slides.
3. For drawers not more than 3 inches high and not more than 24 inches wide, provide Grade 2.
4. For drawers more than 3 inches high but not more than 6 inches high and not more than 24 inches wide, provide Grade 1.
5. For drawers more than 6 inches high or more than 24 inches wide, provide Grade 1HD-200.
6. For computer keyboard shelves, provide [**Grade 1**][**Grade 1HD-100**].
7. For trash bins not more than 20 inches high and 16 inches wide, provide [**Grade 1HD-100**][**Grade 1HD-200**].

F. Door and Drawer Silencers: BHMA A156.16, L03011.

G. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.

1. Satin Stainless Steel: BHMA 630.

H. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.5 MISCELLANEOUS MATERIALS

A. Adhesive for Bonding Plastic Laminate: PVA.

1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

2.6 FABRICATION

A. Fabricate cabinets to dimensions, profiles, and details indicated.

B. Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

C. Shop-cut openings to maximum extent possible to receive hardware, appliances, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before installation, condition cabinets to average prevailing humidity conditions in installation areas.

B. Before installing cabinets, examine shop-fabricated work for completion and complete work as required.

3.2 INSTALLATION

A. Grade: Install cabinets to comply with same grade as item to be installed.

B. Assemble cabinets and complete fabrication at Project site to the extent that it was not completed in the shop.

C. Install cabinets level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches .

D. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

E. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails

[**or finishing screws**] for exposed fastening, countersunk and filled flush with woodwork.

1. Use filler matching finish of items being installed.

F. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.

3.3 ADJUSTING AND CLEANING

A. Repair damaged and defective cabinets, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.

B. Clean, lubricate, and adjust hardware.

C. Clean cabinets on exposed and semiexposed surfaces.

END OF SECTION 064116

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Glass-fiber blanket.

B. Related Requirements:

1. Section 061600 "Sheathing" for foam-plastic board sheathing installed directly over wood or steel framing.
2. Section 072119 "Foamed-in-Place Insulation" for spray-applied polyurethane foam insulation.
3. Section 075423 "Thermoplastic Polyolefin (TPO) Roofing" for insulation specified as part of roofing construction.
4. Section 092400 "Portland Cement Plastering" for sound attenuation blanket used as acoustic insulation.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

PART 2 - PRODUCTS

2.1 GLASS-FIBER BLANKET

A. Sustainability Requirements: Provide glass-fiber blanket insulation as follows:

1. Free of Formaldehyde: Insulation manufactured with 100 percent acrylic binders and no formaldehyde.
2. Low Emitting: Insulation tested according to ASTM D 5116 and shown to emit less than 0.05-ppm formaldehyde.

B. Glass-Fiber Blanket, Unfaced-: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Basis-of-Design Product: Subject to compliance with requirements, provide CertainTeed Corporation or comparable product by one of the following:

a. Johns Manville

PART 3 - EXECUTION

3.1 PREPARATION

A. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.

3.2 INSTALLATION, GENERAL

A. Comply with insulation manufacturer's written instructions applicable to products and applications.

B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.

C. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

D. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

3.3 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 072100

SECTION 072500 - WEATHER BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Building wrap.

B. Related Requirements:

1. Section 061600 "Sheathing" for sheathing joint and penetration treatment.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. For building wrap, include data on air and water-vapor permeance based on testing according to referenced standards.

PART 2 - PRODUCTS

2.1 WATER-RESISTIVE BARRIER

A. Building Paper: Water-vapor-permeable, asphalt-saturated kraft building paper that complies with ICC-ES AC38, Grade D.

B. Building Wrap: ASTM E 1677, Type I air barrier; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E 84; UV stabilized; and acceptable to authorities having jurisdiction.

1. Products ct to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

a. Dupont Tyvek Commercial Wrap

2. Water-Vapor Permeance: Not less than 23 perms per ASTM E 96/E 96M, Desiccant Method (Procedure A).
3. Allowable UV Exposure Time: Not less than three months.

4. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.

C. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.

2.2 MISCELLANEOUS MATERIALS

A. Nails and Staples: ASTM F 1667.

PART 3 - EXECUTION

3.1 WATER-RESISTIVE BARRIER INSTALLATION

A. Cover exposed exterior surface of sheathing with water-resistive barrier securely fastened to framing immediately after sheathing is installed.

B. Cover sheathing with water-resistive barrier as follows:

1. Cut back barrier 1/2 inch on each side of the break in supporting members at expansion- or control-joint locations.
2. Apply barrier to cover vertical flashing with a minimum 4-inch overlap unless otherwise indicated.

C. Building Wrap: Comply with manufacturer's written instructions.

1. Seal seams, edges, fasteners, and penetrations with tape.
2. Extend into jambs of openings and seal corners with tape.

END OF SECTION 072500

SECTION 075423 - THERMOPLASTIC POLYOLEFIN (TPO) ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Adhered thermoplastic polyolefin (TPO) roofing system.
2. Roof insulation.

B. Section includes the installation of insulation strips in ribs of roof deck. Insulation strips are furnished under Section 053100 "Steel Decking."

C. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking; and for wood-based, structural-use roof deck panels.
2. Section 061600 "Sheathing" for wood-based, structural-use roof deck panels.
3. Section 072100 "Thermal Insulation" for insulation beneath the roof deck.
4. Section 076200 "Sheet Metal Flashing and Trim" for metal roof flashings and counterflashings.
5. Section 079200 "Joint Sealants" for joint sealants, joint fillers, and joint preparation.

1.3 DEFINITIONS

A. Roofing Terminology: Definitions in ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" apply to work of this Section.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is UL listed for roofing system identical to that used for this Project.

B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.

B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.

1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

D. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

1.7 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain components including roof insulation for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. General Performance: Installed roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roofing and base flashings shall remain watertight.

1. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
2. Impact Resistance: Roofing system shall resist impact damage when tested according to ASTM D 3746 or ASTM D 4272.

B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.

C. Solar Reflectance Index: Not less than 29 when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.

D. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.

2.3 TPO ROOFING

A. Fabric-Reinforced TPO Sheet: ASTM D 6878, internally fabric- or scrim-reinforced, uniform, flexible TPO sheet.

1. Thickness: 60 mils , nominal.
2. Exposed Face Color: White.

2.4 AUXILIARY ROOFING MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.

B. Sheet Flashing: Manufacturer's standard unreinforced TPO sheet flashing, 55 mils thick, minimum, of same color as TPO sheet.

C. Bonding Adhesive: Manufacturer's standard.

D. Slip Sheet: Manufacturer's standard, of thickness required for application.

E. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.

F. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.5 SUBSTRATE BOARDS

A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/4 inch thick.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening substrate board to roof deck.

2.6 ROOF INSULATION

A. General: Preformed roof insulation boards manufactured or approved by TPO roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated.

B. Extruded-Polystyrene Board Insulation: ASTM C 578, Type X, 1.3-lb/cu. ft. minimum density, square edged.

C. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.7 INSULATION ACCESSORIES

A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with roofing.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening roof insulation [**and cover boards**] to substrate, and acceptable to roofing system manufacturer.

C. Cover Board: ASTM C 208, Type II, Grade 2, cellulosic-fiber insulation board, 1/2 inch thick.

2.8 ASPHALT MATERIALS

A. Roofing Asphalt: ASTM D 6152, SEBS modified.

2.9 WALKWAYS

A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads, approximately 3/16 inch thick and acceptable to roofing system manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work:

1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Steel Decking."
4. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
5. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
6. Verify that concrete-curing compounds that will impair adhesion of roofing components to roof deck have been removed.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

C. Install insulation strips according to acoustical roof deck manufacturer's written instructions.

3.3 ROOFING INSTALLATION, GENERAL

A. Install roofing system according to roofing system manufacturer's written instructions.

B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

C. Install roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition and to not void warranty for existing roofing system.

3.4 SUBSTRATE BOARD INSTALLATION

A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.

1. Fasten substrate board to top flanges of steel deck according to recommendations in FM Global's "RoofNav" and FM Global Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification.
2. Fasten substrate board to top flanges of steel deck to resist uplift pressure at corners, perimeter, and field of roof according to roofing system manufacturers' written instructions.

3.5 INSULATION INSTALLATION

A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.

B. Comply with roofing system and insulation manufacturer's written instructions for installing roof insulation.

C. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.

D. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.

E. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.

1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.

F. Mechanically Fastened and Adhered Insulation: Install each layer of insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.

1. Set each subsequent layer of insulation in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F of equiviscous temperature.

G. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction. Loosely butt cover boards together [**and fasten to roof deck**].

1. Fasten cover boards according to requirements in FM Global's "RoofNav" for specified Windstorm Resistance Classification.

H. Install slip sheet over cover board and immediately beneath roofing.

3.6 ADHERED ROOFING INSTALLATION

A. Adhere roofing over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing and allow to relax before retaining.

B. Start installation of roofing in presence of roofing system manufacturer's technical personnel.

C. Accurately align roofing, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

D. Bonding Adhesive: Apply to substrate and underside of roofing at rate required by manufacturer, and allow to partially dry before installing roofing. Do not apply to splice area of roofing.

E. In addition to adhering, mechanically fasten roofing securely at terminations, penetrations, and perimeter of roofing.

F. Apply roofing with side laps shingled with slope of roof deck where possible.

G. Seams: Clean seam areas, overlap roofing, and hot-air weld side and end laps of roofing and sheet flashings according to manufacturer's written instructions, to ensure a watertight seam installation.

1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet.
2. Verify field strength of seams a minimum of twice daily, and repair seam sample areas.
3. Repair tears, voids, and lapped seams in roofing that do not comply with requirements.

H. Spread sealant bed over deck-drain flange at roof drains, and securely seal roofing in place with clamping ring.

3.7 BASE FLASHING INSTALLATION

A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.

B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.

C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.

D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.

E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.8 WALKWAY INSTALLATION

A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

END OF SECTION 075423

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Manufactured through-wall flashing with counterflashing.

B. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for wood nailers, curbs, and blocking.

1.3 COORDINATION

A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.

B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.

B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

C. Sheet Metal Standard for Copper: Comply with CDA's "Copper in Architecture Handbook." Conform to dimensions and profiles shown unless more stringent requirements are indicated.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change: 120 deg F , ambient; 180 deg F , material surfaces.

2.2 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

B. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, dead soft, fully annealed; with embossed surface.

1. Finish: 2D (dull, cold rolled).

2.3 MISCELLANEOUS MATERIALS

A. General: Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.

B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.

a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC

sealing washers under heads of exposed fasteners bearing on weather side of metal.

b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.

c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

2. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.

C. Solder:

1. For Grade Sn50, 50 percent tin and 50 percent lead.
2. For Stainless Steel: ASTM B 32, Grade Sn60, with acid flux of type recommended by stainless-steel sheet manufacturer.

D. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.

E. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

F. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

G. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.

H. Bituminous Coating: Cold-applied asphalt emulsion according to ASTM D 1187.

I. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.4 MANUFACTURED SHEET METAL FLASHING AND TRIM

A. Through-Wall, Ribbed, Sheet Metal Flashing: Manufacture through-wall sheet metal flashing for embedment in masonry, with ribs at 3-inch intervals along length of flashing to provide integral mortar bond. Manufacture through-wall flashing with interlocking counterflashing on exterior face, of same metal as flashing.

1. Stainless Steel: 0.016 inch thick.

2.5 FABRICATION, GENERAL

A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions,

geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.

1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
2. Obtain field measurements for accurate fit before shop fabrication.
3. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
4. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.

B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

C. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified in MCA's "Guide Specification for Residential Metal Roofing."

D. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
2. Use lapped expansion joints only where indicated on Drawings.

E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

F. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.

G. Seams: Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.

H. Do not use graphite pencils to mark metal surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.

1. Verify compliance with requirements for installation tolerances of substrates.

2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners**[, solder**], protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.

1. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
3. Space cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
5. Torch cutting of sheet metal flashing and trim is not permitted.
6. Do not use graphite pencils to mark metal surfaces.

B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.

1. Coat concealed side of stainless-steel sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.

C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet with no joints within 24 inches of corner or intersection.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
2. Use lapped expansion joints only where indicated on Drawings.

D. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.

E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

F. Seal joints as required for watertight construction.

1. Use sealant-filled joints unless otherwise indicated. Embed hooked flanges of joint members not less than 1 inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is between 40 and 70 deg F , set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F .
2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

G. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets with solder to width of 1-1/2 inches ; however, reduce pre-tinning where pre-tinned surface would show in completed Work.

1. Do not use torches for soldering.
2. Heat surfaces to receive solder, and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
3. Stainless-Steel Soldering: Tin edges of uncoated sheets, using solder for stainless steel and acid flux. Promptly remove acid flux residue from metal after tinning and soldering. Comply with solder manufacturer's recommended methods for cleaning and neutralization.

3.3 WALL FLASHING INSTALLATION

A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.

B. Through-Wall Flashing: Installation of through-wall flashing is specified in Section 044200 "Exterior Stone Cladding."

C. Opening Flashings in Frame Construction: Install continuous head, sill, and similar flashings to extend 4 inches beyond wall openings.

3.4 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

B. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerances specified in MCA's "Guide Specification for Residential Metal Roofing."

3.5 CLEANING AND PROTECTION

A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.

B. Clean and neutralize flux materials. Clean off excess solder.

C. Clean off excess sealants.

D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended by sheet metal flashing and trim manufacturer. Maintain sheet metal flashing and trim in clean condition during construction.

E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 076200

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Nonstaining silicone joint sealants.

1.3 ACTION SUBMITTALS

A. Product Data: For each joint-sealant product.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

B. Product Testing: Test joint sealants using a qualified testing agency.

1. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.

1.5 FIELD CONDITIONS

A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F .
2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 NONSTAINING SILICONE JOINT SEALANTS

A. Nonstaining Joint Sealants: No staining of substrates when tested according to ASTM C 1248.

B. Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

2.3 JOINT-SEALANT BACKING

A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

    a. Masonry.

3. Remove laitance and form-release agents from concrete.
4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:

    a. Glass.
    b. Porcelain enamel.
    c. Glazed surfaces of ceramic tile.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application, and replace them with dry materials.

D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.

3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile per Figure 8A in ASTM C 1193 unless otherwise indicated.
4. Provide flush joint profile at locations indicated on Drawings according to Figure 8B in ASTM C 1193.
5. Provide recessed joint configuration of recess depth and at locations indicated on Drawings according to Figure 8C in ASTM C 1193.

3.4 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces[-].

1. Joint Locations:

a. Joints in dimension stone cladding.
b. Perimeter joints between materials listed above and frames of doors and windows.
c. Control and expansion joints in and other.
d. Other joints as indicated on Drawings.

2. Joint Sealant: Silicone, nonstaining, S, NS, 50, NT.

3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION 079200

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes hollow-metal work.

B. Related Requirements:

1. Section 087100 "Door Hardware" for door hardware for hollow-metal doors.

1.3 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.4 COORDINATION

A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
4. Locations of reinforcement and preparations for hardware.
5. Details of each different wall opening condition.
6. Details of anchorages, joints, field splices, and connections.
7. Details of accessories.
8. Details of moldings, removable stops, and glazing.

9. Details of conduit and preparations for power, signal, and control systems.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow-metal work palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use nonvented plastic.

1. Provide additional protection to prevent damage to factory-finished units.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow-metal work vertically under cover at Project site with head up. Place on minimum 4-inch-high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Ceco Door

B. Source Limitations: Obtain hollow-metal work from single source from single manufacturer.

2.2 INTERIOR DOORS AND FRAMES

A. Construct interior doors and frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Hollow-Metal Doors and Frames: NAAMM-HMMA 860. At locations indicated in the Door and Frame Schedule.

1. Physical Performance: Level A according to SDI A250.4.
2. Doors:

a. Type: As indicated in the Door and Frame Schedule.
b. Thickness: 1-3/4 inches
c. Face: Uncoated, cold-rolled steel sheet, minimum thickness of 0.032 inch .
d. Edge Construction: Continuously welded with no visible seam.
e. Core: Steel stiffened.

3. Frames:

a. Materials: Uncoated steel sheet, minimum thickness of 0.053 inch for frames that receive hollow-metal doors; minimum thickness of 0.042 inch for frames that receive hollow-core wood doors.
b. Materials: Uncoated steel sheet, minimum thickness of
c. Construction: Full profile welded.

4. Exposed Finish: Prime.

2.3 EXTERIOR HOLLOW-METAL DOORS AND FRAMES

A. Construct exterior doors and frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Hollow-Metal Doors and Frames: NAAMM-HMMA 860. At locations indicated in the Door and Frame Schedule.

1. Physical Performance: Level A according to SDI A250.4.
2. Doors:

a. Type: As indicated in the Door and Frame Schedule.
b. Thickness: 1-3/4 inches
c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch , with minimum G60 A60 coating.
d. Edge Construction: Continuously welded with no visible seam.
e. Core: Steel stiffened.

1) Thermal-Rated Doors: Provide doors fabricated with thermal-resistance value (R-value) of not less than 2.1 deg F x h x sq. ft./Btu when tested according to ASTM C 1363.

3. Frames:

a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch , with minimum G60 A60 coating.
b. Construction: Full profile welded.

4. Exposed Finish: Prime.

2.4 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

D. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

F. Grout: ASTM C 476, except with a maximum slump of 4 inches , as measured according to ASTM C 143/C 143M.

G. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

H. Glazing: Comply with requirements in Section 088000 "Glazing."

I. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.5 FABRICATION

A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

B. Hollow-Metal Doors:

1. Steel-Stiffened Door Cores: Provide minimum thickness 0.026 inch , steel vertical stiffeners of same material as face sheets extending full-door height, with vertical webs spaced not more than 6 inches apart. Spot weld to face sheets no more than 5 inches o.c. Fill spaces between stiffeners with glass- or mineral-fiber insulation.
2. Vertical Edges for Single-Acting Doors: Provide beveled or square edges at manufacturer's discretion.
3. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets.
4. Bottom Edge Closures: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets.
5. Exterior Doors: Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.

C. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.

1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.

2. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.

    a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
    b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

D. Fabricate concealed stiffeners and edge channels from either cold- or hot-rolled steel sheet.

E. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.

1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.

F. Stops and Moldings: Provide stops and moldings around glazed lites and louvers where indicated. Form corners of stops and moldings with butted or mitered hairline joints.

1. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
2. Provide loose stops and moldings on inside of hollow-metal work.
3. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.

2.6 STEEL FINISHES

A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.

C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

A. General: Install hollow-metal work plumb, rigid, properly aligned, and securely fastened in place. Comply with Drawings and manufacturer's written instructions.

B. Hollow-Metal Frames: Install hollow-metal frames of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.

    a. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
    b. Install door silencers in frames before grouting.
    c. Remove temporary braces necessary for installation only after frames have been properly set and secured.
    d. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
    e. Field apply bituminous coating to backs of frames that will be filled with grout containing antifreezing agents.

2. Metal-Stud Partitions: Solidly pack mineral-fiber insulation inside frames.
3. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:

    a. Squareness: Plus or minus 1/16 inch , measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    b. Alignment: Plus or minus 1/16 inch , measured at jambs on a horizontal line parallel to plane of wall.
    c. Twist: Plus or minus 1/16 inch , measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
    d. Plumbness: Plus or minus 1/16 inch , measured at jambs at floor.

C. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Steel Doors:

a. Between Door and Frame Jambs and Head: 1/8 inch plus or minus 1/32 inch .
b. Between Edges of Pairs of Doors: 1/8 inch to 1/4 inch plus or minus 1/32 inch .
c. At Bottom of Door: 3/4 inch plus or minus 1/32 inch .
d. Between Door Face and Stop: 1/16 inch to 1/8 inch plus or minus 1/32 inch .

3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow-metal work immediately after installation.

C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

D. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION 081113

SECTION 081416 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Solid-core doors with wood-veneer faces.
2. Factory finishing flush wood doors.
3. Factory fitting flush wood doors to frames and factory machining for hardware.

B. Related Requirements:

1. Section 062023 "Interior Finish Carpentry " for wood door frames.
2. Section 064216 "Flush Wood Paneling" for requirements for veneers from the same flitches for both flush wood doors and flush wood paneling.
3. Section 083473.16 "Wood Sound Control Door Assemblies" for acoustic flush wood doors.
4. Section 088000 "Glazing" for glass view panels in flush wood doors.
5. Section 099113 "Exterior Painting" and Section 099123 "Interior Painting" for field finishing doors.
6. Section 134900 "Radiation Protection" for lead-lined flush wood doors.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of door. Include details of core and edge construction and trim for openings. Include factory-finishing specifications.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and the following:

1. Dimensions and locations of blocking.
2. Dimensions and locations of mortises and holes for hardware.
3. Dimensions and locations of cutouts.
4. Undercuts.
5. Requirements for veneer matching.
6. Doors to be factory finished and finish requirements.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is a certified participant in AWI's Quality Certification Program.

B. Vendor Qualifications: A vendor that is certified for chain of custody by an FSC-accredited certification body.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of referenced standard and manufacturer's written instructions.

B. Package doors individually in plastic bags or cardboard cartons.

C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during remainder of construction period.

B. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during remainder of construction period.

1.7 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

    a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.
    b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.

2. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.
3. Warranty Period for Solid-Core Exterior Doors: Five years from date of Substantial Completion.
4. Warranty Period for Solid-Core Interior Doors: Life of installation.
5. Warranty Period for Hollow-Core Interior Doors: Two year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 FLUSH WOOD DOORS, GENERAL

A. Quality Standard: In addition to requirements specified, comply with AWI's, AWMAC's, and WI's "Architectural Woodwork Standards."

1. Provide AWI Quality Certification Labels indicating that doors comply with requirements of grades specified.

B. Structural-Composite-Lumber-Core Doors:

1. Structural Composite Lumber: WDMA I.S.10.

a. Screw Withdrawal, Face: 700 lbf .
b. Screw Withdrawal, Edge: 400 lbf .

2.2 VENEER-FACED DOORS FOR TRANSPARENT FINISH

A. Interior Solid-Core Doors-:

1. Grade: Premium, with Grade A faces.
2. Species: Select white maple.
3. Match between Veneer Leaves: Pleasing match.
4. Pair and Set Match: Provide for doors hung in same opening.
5. Exposed Vertical and Top Edges: Same species as faces or a compatible species - edge Type A.
6. Core: Either glued or nonglued wood stave or structural composite lumber.
7. Construction: Five or seven plies. Stiles and rails are bonded to core, then entire unit is abrasive planed before veneering. Faces are bonded to core using a hot press.
8. Construction: Seven plies, either bonded or nonbonded construction.

2.3 FABRICATION

A. Transom and Side Panels: Fabricate matching panels with same construction, exposed surfaces, and finish as specified for associated doors. Finish bottom edges of transoms and top edges of rabbeted doors same as door stiles.

1. Fabricate door and transom panels with full-width, solid-lumber meeting rails. Provide factory-installed spring bolts for concealed attachment into jambs of metal door frames.

2.4 FACTORY FINISHING

A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.

1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on top and bottom edges, edges of cutouts, and mortises.

B. Factory finish doors.

C. Factory finish doors that are indicated to receive transparent finish.

D. Factory finish doors where indicated in schedules or on Drawings as factory finished.

E. Use only paints and coatings that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

F. Transparent Finish:

1. Grade: Premium.
2. Staining: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and installed door frames, with Installer present, before hanging doors.

1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
2. Reject doors with defects.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Hardware: For installation, see Section 087100 "Door Hardware."

B. Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.

C. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted for fire-rated doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises after fitting and machining.

1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8 inch from bottom of door to top of decorative floor finish or covering unless otherwise indicated. Where threshold is shown or scheduled, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.
2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.

D. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081416

SECTION 083113 - ACCESS DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Access doors and frames for walls and ceilings.

1.3 ALLOWANCES

A. Access doors and frames are part of an access door and frame allowance.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details materials, individual components and profiles, and finishes.

B. Shop Drawings:

1. Include plans, elevations, sections, details, and attachments to other work.
2. Detail fabrication and installation of access doors and frames for each type of substrate.

PART 2 - PRODUCTS

2.1 ACCESS DOORS AND FRAMES FOR WALLS AND CEILINGS

A. Source Limitations: Obtain each type of access door and frame from single source from single manufacturer.

B. Exterior Flush Access Doors-:

1. Assembly Description: Fabricate door to be weatherproof and fit flush to frame. Provide manufacturer's standard 2-inch-thick fiberglass insulation and extruded

door gaskets. Provide manufacturer's standard-width frame for surface mounting, proportional to door size.

2. Locations: Canopy Ceiling.
3. Door Size: 36" x 36".
4. Metallic-Coated Steel Sheet for Door: Nominal 0.064 inch , 16 gage.

    a. Finish: Factory finish.

5. Frame Material: Same material, thickness, and finish as door.
6. Hinges: Manufacturer's standard.
7. Hardware: Lock.

C. Hardware:

1. Latch: Cam latch operated by flush key with interior release.
2. Lock: Cylinder.

    a. Lock Preparation: Prepare door panel to accept cylinder specified in Section 087100 "Door Hardware."

2.2 MATERIALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 or A60 metallic coating.

C. Frame Anchors: Same type as door face.

D. Inserts, Bolts, and Anchor Fasteners: Hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329.

2.3 FABRICATION

A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.

B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

C. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of type required to secure access doors to types of supports indicated.

1. Provide mounting holes in frames for attachment of units to metal or wood framing.

2.4 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. Steel and Metallic-Coated-Steel Finishes:

1. Factory Prime: Apply manufacturer's standard, fast-curing, lead- and chromate-free, universal primer immediately after surface preparation and pretreatment.
2. Factory Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat, with a minimum dry-film thickness of 1 mil for topcoat.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with manufacturer's written instructions for installing access doors and frames.

B. Install doors flush with adjacent finish surfaces or recessed to receive finish material.

3.3 ADJUSTING

A. Adjust doors and hardware, after installation, for proper operation.

B. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

END OF SECTION 083113

SECTION 085113 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes aluminum windows for exterior locations.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, glazing and fabrication methods, dimensions of individual components and profiles, hardware, and finishes for aluminum windows.

B. Shop Drawings: Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A manufacturer capable of fabricating aluminum windows that meet or exceed performance requirements indicated and of documenting this performance by test reports, and calculations.

B. Installer Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Basis-of-Design Product: Subject to compliance with requirements, provide Kawneer Trifab 601T or comparable product by one of the following:

1. Arcadia

C. Source Limitations: Obtain aluminum windows from single source from single manufacturer.

2.2 WINDOW PERFORMANCE REQUIREMENTS

A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.

1. Window Certification: AMMA certified with label attached to each window.

2.3 ALUMINUM WINDOWS

A. Operating Types: Provide the following operating types in locations indicated on Drawings:

1. Fixed.

B. Frames and Sashes: Aluminum extrusions complying with AAMA/WDMA/CSA 101/I.S.2/A440.

1. Thermally Improved Construction: Fabricate frames, sashes, and muntins with an integral, concealed, low-conductance thermal barrier located between exterior materials and window members exposed on interior side in a manner that eliminates direct metal-to-metal contact.

C. Insulating-Glass Units: ASTM E 2190.

1. Glass: ASTM C 1036, Type 1, Class 1, q3.

a. Tint: Gray.

2. Lites: Two.
3. Filling: Fill space between glass lites with air.
4. Low-E Coating: Pyrolytic on second surface.

D. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.

E. Hardware, General: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with adjacent materials; designed to smoothly operate, tightly close, and securely lock windows, and sized to accommodate sash weight and dimensions.

1. Exposed Hardware Color and Finish: to match existing.

F. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.

1. Exposed Fasteners: Do not use exposed fasteners to the greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

2.4 FABRICATION

A. Fabricate aluminum windows in sizes indicated. Include a complete system for assembling components and anchoring windows.

B. Glaze aluminum windows in the factory.

C. Weather strip each operable sash to provide weathertight installation.

D. Weep Holes: Provide weep holes and internal passages to conduct infiltrating water to exterior.

E. Provide water-shed members above side-hinged sashes and similar lines of natural water penetration.

F. Mullions: Provide mullions and cover plates, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections, as indicated. Provide mullions and cover plates capable of withstanding design wind loads of window units.

G. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation.

2.5 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM's "Metal Finishes Manual" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.6 ALUMINUM FINISHES

A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.

B. Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Verify rough opening dimensions, levelness of sill plate, and operational clearances.

C. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure weathertight window installation.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E 2112.

B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.

C. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.

D. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.3 ADJUSTING, CLEANING, AND PROTECTION

A. Clean exposed surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.

1. Keep protective films and coverings in place until final cleaning.

B. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

C. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written instructions.

END OF SECTION 085113

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. Mechanical door hardware for the following:

a. Swinging doors.

2. Cylinders for door hardware specified in other Sections.
3. Electrified door hardware.

B. Related Sections:

1. Section 081113 "Hollow Metal Doors and Frames" for door silencers provided as part of hollow-metal frames.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Details of electrified door hardware, indicating the following:

1. Wiring Diagrams: For power, signal, and control wiring and including the following:

a. Details of interface of electrified door hardware and building safety and security systems.
b. Schematic diagram of systems that interface with electrified door hardware.
c. Point-to-point wiring.
d. Risers.
e. Elevations doors controlled by electrified door hardware.

2. Operation Narrative: Describe the operation of doors controlled by electrified door hardware.

C. Other Action Submittals:

1. Door Hardware Schedule: Prepared by or under the supervision of Installer, detailing fabrication and assembly of door hardware, as well as installation procedures and diagrams. Coordinate final door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

a. Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate the fabrication of other work that is critical in Project construction schedule.
b. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule." Double space entries, and number and date each page.
c. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.
d. Content: Include the following information:

1) Identification number, location, hand, fire rating, size, and material of each door and frame.
2) Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
3) Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
4) Description of electrified door hardware sequences of operation and interfaces with other building control systems.
5) Fastenings and other pertinent information.
6) Explanation of abbreviations, symbols, and codes contained in schedule.
7) Mounting locations for door hardware.
8) List of related door devices specified in other Sections for each door and frame.

1.4 INFORMATIONAL SUBMITTALS

A. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and an Architectural Hardware Consultant who is available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.

1. Warehousing Facilities: In Project's vicinity.
2. Scheduling Responsibility: Preparation of door hardware and keying schedules.

3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

B. Source Limitations: Obtain each type of door hardware from a single manufacturer.

1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.

C. Fire-Rated Door Assemblies: Where fire-rated door assemblies are indicated, provide door hardware rated for use in assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C, unless otherwise indicated.

D. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meet requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.

1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. at the tested pressure differential of 0.3-inch wg of water.

E. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

F. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

G. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines.

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf .
2. Comply with the following maximum opening-force requirements:

a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
b. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
4. Adjust door closer sweep periods so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.

H. Keying Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." In addition to Owner

Contractor, and Architect, conference participants shall also include Installer's Architectural Hardware Consultant and Owner's security consultant. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:

1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
2. Preliminary key system schematic diagram.
3. Requirements for key control system.
4. Requirements for access control.
5. Address for delivery of keys.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification coordinated with the final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

C. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

1.7 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

E. Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

    a. Structural failures including excessive deflection, cracking, or breakage.
    b. Faulty operation of doors and door hardware.
    c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.

2. Warranty Period: Three years from date of Substantial Completion, unless otherwise indicated.

    a. Electromagnetic Locks: Five years from date of Substantial Completion.
    b. Exit Devices: Two years from date of Substantial Completion.
    c. Manual Closers: 10 years from date of Substantial Completion.
    d. Concealed Floor Closers: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. Provide door hardware for each door as scheduled in Part 3 "Door Hardware Schedule" Article to comply with requirements in this Section.

1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and products equivalent in function and comparable in quality to named products.
2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Schedule" Article. Products are identified by using door hardware designations, as follows:

1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Schedule" Article.
2. References to BHMA Designations: Provide products complying with these designations and requirements for description, quality, and function.

2.2 HINGES

A. Hinges: BHMA A156.1.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.3 MECHANICAL LOCKS AND LATCHES

A. Lock Functions: As indicated in door hardware schedule.

B. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:

1. Bored Locks: Minimum 1/2-inch latchbolt throw.
2. Deadbolts: Minimum 1-inch bolt throw.

C. Lock Backset: 2-3/4 inches , unless otherwise indicated.

D. Lock Trim:

1. Levers: Cast.
2. Knobs: Wrought.
3. Escutcheons (Roses): Wrought.
4. Dummy Trim: Match lever lock trim and escutcheons.
5. Operating Device: Lever with escutcheons (roses).

E. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Manufacturer's special strike box fabricated for aluminum framing.
4. Rabbet Front and Strike: Provide on locksets for rabbeted meeting stiles.

F. Bored Locks: BHMA A156.2; Grade 1; Series 4000.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on schedule or comparable product by one of the following:

2.4 ELECTRIC STRIKES

A. Electric Strikes: BHMA A156.31; Grade 1; with faceplate to suit lock and frame.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.5 ELECTROMAGNETIC LOCKS

A. Electromagnetic Locks: BHMA A156.23; electrically powered; with electromagnet attached to frame and armature plate attached to door; full-exterior or full-interior type, as required by application indicated.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.6 EXIT DEVICES AND AUXILIARY ITEMS

A. Exit Devices and Auxiliary Items: BHMA A156.3.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.7 LOCK CYLINDERS

A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.

1. Manufacturer: Same manufacturer as for locking devices.

B. Standard Lock Cylinders: BHMA A156.5; Grade 1; permanent cores that are interchangeable; face finished to match lockset.

2.8 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference.

1. Existing System:

a. Master key or grand master key locks to Owner's existing system.
b. Re-key Owner's existing master key system into new keying system.

2. Keyed Alike: Key all cylinders to same change key.

B. Keys: Brass.

1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

a. Notation: Information to be furnished by Owner.

2.9 SURFACE CLOSERS

A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written recommendations for size of door closers

depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.10 MECHANICAL STOPS AND HOLDERS

A. Wall- and Floor-Mounted Stops: BHMA A156.16; polished cast brass, bronze, or aluminum base metal.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.11 DOOR GASKETING

A. Door Gasketing: BHMA A156.22; air leakage not to exceed 0.50 cfm per foot of crack length for gasketing other than for smoke control, as tested according to ASTM E 283; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.12 THRESHOLDS

A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2.13 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Architect.

1. Manufacturer's identification is permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.

C. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with

commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
2. Fire-Rated Applications:

    a. Wood or Machine Screws: For the following:

        1) Hinges mortised to doors or frames; use threaded-to-the-head wood screws for wood doors and frames.
        2) Strike plates to frames.
        3) Closers to doors and frames.

    b. Steel Through Bolts: For the following unless door blocking is provided:

        1) Surface hinges to doors.
        2) Closers to doors and frames.
        3) Surface-mounted exit devices.

3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
4. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."
5. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.14 FINISHES

A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

B. Wood Doors: Comply with DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."

3.3 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights indicated on Drawings unless otherwise indicated or required to comply with governing regulations.

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

C. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.

D. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches of door height greater than 90 inches .

E. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Replace construction cores with permanent cores as directed by Owner.
2. Furnish permanent cores to Owner for installation.

F. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.

G. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings. Verify location with Architect.

1. Configuration: Provide least number of power supplies required to adequately serve doors with electrified door hardware.

H. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."

I. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.

J. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

K. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

L. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.4 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
2. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.5 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.6 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Section 017900 "Demonstration and Training."

3.7 DOOR HARDWARE SCHEDULE

END OF SECTION 087100

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Non-load-bearing steel framing systems for interior gypsum board assemblies.

B. Related Requirements:

1. Section 054000 "Cold-Formed Metal Framing" for exterior and interior load-bearing and exterior non-load-bearing wall studs; floor joists; roof rafters and ceiling joists; and roof trusses.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 FRAMING SYSTEMS

A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.

2. Protective Coating: Coating with equivalent corrosion resistance of ASTM A 653/A 653M, G40 , hot-dip galvanized unless otherwise indicated.

B. Studs and Runners: ASTM C 645. Use either steel studs and runners or dimpled steel studs and runners.

1. Steel Studs and Runners:

a. Minimum Base-Metal Thickness: 0.018 inch .
b. Depth: As indicated on Drawings.

2. Dimpled Steel Studs and Runners:

a. Minimum Base-Metal Thickness: 0.015 inch .
b. Depth: As indicated on Drawings.

C. Slip-Type Head Joints: Where indicated, provide the following:

1. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.

D. Resilient Furring Channels: 1/2-inch-deep, steel sheet members designed to reduce sound transmission.

1. Configuration: Asymmetrical or hat shaped.

2.3 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards.

1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

B. Isolation Strip at Exterior Walls: Provide the following:

1. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength.

1. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

B. Coordination with Sprayed Fire-Resistive Materials:

1. Before sprayed fire-resistive materials are applied, attach offset anchor plates or ceiling runners (tracks) to surfaces indicated to receive sprayed fire-resistive materials. Where offset anchor plates are required, provide continuous plates fastened to building structure not more than 24 inches o.c.
2. After sprayed fire-resistive materials are applied, remove them only to extent necessary for installation of non-load-bearing steel framing. Do not reduce thickness of fire-resistive materials below that required for fire-resistance ratings indicated. Protect adjacent fire-resistive materials from damage.

3.3 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754.

1. Gypsum Plaster Assemblies: Also comply with requirements in ASTM C 841 that apply to framing installation.
2. Portland Cement Plaster Assemblies: Also comply with requirements in ASTM C 1063 that apply to framing installation.
3. Gypsum Veneer Plaster Assemblies: Also comply with requirements in ASTM C 844 that apply to framing installation.
4. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.

B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

C. Install bracing at terminations in assemblies.

D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.4 INSTALLING FRAMED ASSEMBLIES

A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

1. Multilayer Application: 16 inches o.c. unless otherwise indicated.
2. Tile Backing Panels: 16 inches o.c. unless otherwise indicated.

B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

C. Install studs so flanges within framing system point in same direction.

D. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.

1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.

    a. Install two studs at each jamb unless otherwise indicated.

3. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
4. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.

E. Direct Furring:

1. Screw to wood framing.
2. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.

F. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

END OF SECTION 092216

SECTION 092400 - CEMENT PLASTERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Exterior vertical plasterwork (stucco).

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store materials inside under cover, and keep them dry and protected against damage from weather, moisture, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

1.5 FIELD CONDITIONS

A. Comply with ASTM C 926 requirements.

B. Exterior Plasterwork:

1. Apply and cure plaster to prevent plaster drying out during curing period. Use procedures required by climatic conditions, including moist curing, providing coverings, and providing barriers to deflect sunlight and wind.
2. Apply plaster when ambient temperature is greater than 40 deg F .
3. Protect plaster coats from freezing for not less than 48 hours after set of plaster coat has occurred.

PART 2 - PRODUCTS

2.1 METAL LATH

A. Expanded-Metal Lath: ASTM C 847, cold-rolled carbon-steel sheet with ASTM A 653/A 653M, G60 , hot-dip galvanized-zinc coating.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Basis-of-Design Product: Subject to compliance with requirements, provide ClarkDietrich or comparable product by one of the following:

    a. Cemco

3. Diamond-Mesh Lath: Flat, 3.4 lb/sq. yd. .

2.2 ACCESSORIES

A. General: Comply with ASTM C 1063, and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.

B. Metal Accessories:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Basis-of-Design Product: Subject to compliance with requirements, provide ClarkDeitrich or comparable product by one of the following:

    a. Cemco

3. Cornerbeads: Fabricated from zinc or zinc-coated (galvanized) steel.

    a. Smallnose cornerbead with expanded flanges; use unless otherwise indicated.
    b. Smallnose cornerbead with perforated flanges; use on curved corners.
    c. Smallnose cornerbead with expanded flanges reinforced by perforated stiffening rib; use on columns and for finishing unit masonry corners.
    d. Bullnose cornerbead, radius 3/4 inch minimum, with expanded flanges; use at locations indicated on Drawings.

4. Casing Beads: Fabricated from zinc or zinc-coated (galvanized) steel; square-edged style; with expanded flanges.
5. Control Joints: Fabricated from zinc or zinc-coated (galvanized) steel; one-piece-type, folded pair of unperforated screeds in M-shaped configuration; with perforated flanges and removable protective tape on plaster face of control joint.

2.3 MISCELLANEOUS MATERIALS

A. Water for Mixing and Finishing Plaster: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.

B. Fasteners for Attaching Metal Lath to Substrates: ASTM C 1063.

C. Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, not less than 0.0475-inch diameter unless otherwise indicated.

2.4 PLASTER MATERIALS

A. Portland Cement: ASTM C 150/C 150M, [**Type I**][**Type II**].

1. Color for Finish Coats: Gray.

B. Masonry Cement: ASTM C 91, Type N.

1. Color for Finish Coats: Gray.

C. Colorants for Job-Mixed Finish Coats: Colorfast mineral pigments that produce finish plaster color to match Architect's sample.

D. Sand Aggregate: ASTM C 897.

1. Color for Job-Mixed Finish Coats: In color matching Architect's sample.

2.5 PLASTER MIXES

A. General: Comply with ASTM C 926 for applications indicated.

B. Base-Coat Mixes for Use over Metal Lath: Scratch and brown coats for three-coat plasterwork as follows:

1. Portland and Masonry Cement Mixes:

a. Scratch Coat: For cementitious material, mix 1 part portland cement and 1 part masonry cement. Use 2-1/2 to 4 parts aggregate per part of cementitious material.
b. Brown Coat: For cementitious material, mix 1 part portland cement and 1 part masonry cement. Use 3 to 5 parts aggregate per part of cementitious material, but not less than volume of aggregate used in scratch coat.

C. Job-Mixed Finish-Coat Mixes:

1. Portland and Masonry Cement Mix: For cementitious materials, mix 1 part portland cement and 1 part masonry cement. Use 1-1/2 to 3 parts aggregate per part of cementitious material.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.

B. Prepare smooth, solid substrates for plaster according to ASTM C 926.

3.3 INSTALLATION, GENERAL

A. Fire-Resistance-Rated Assemblies: Install components according to requirements for design designations from listing organization and publication indicated on Drawings.

B. Sound-Attenuation Blankets: Where required, install blankets before installing lath unless blankets are readily installed after lath has been installed on one side.

3.4 INSTALLING METAL LATH

A. Metal Lath: Install according to ASTM C 1063.

1. Partition Framing and Vertical Furring: Install flat-diamond-mesh lath.

3.5 INSTALLING ACCESSORIES

A. Install according to ASTM C 1063 and at locations indicated on Drawings.

B. Reinforcement for External (Outside) Corners:

1. Install cornerbead at exterior locations.
2. Install cornerbead at interior locations.

C. Control Joints: Locate as approved by Architect for visual effect and as follows:

1. As required to delineate plasterwork into areas (panels) of the following maximum sizes:

   a. Vertical Surfaces: 144 sq. ft. .
   b. Horizontal and Other Nonvertical Surfaces: 100 sq. ft. .

2. At distances between control joints of not greater than 18 feet o.c.
3. As required to delineate plasterwork into areas (panels) with length-to-width ratios of not greater than 2-1/2:1.
4. Where control joints occur in surface of construction directly behind plaster.
5. Where plasterwork areas change dimensions, to delineate rectangular-shaped areas (panels) and to relieve the stress that occurs at the corner formed by the dimension change.

3.6 PLASTER APPLICATION

A. General: Comply with ASTM C 926.

1. Do not deviate more than plus or minus 1/4 inch in 10 feet from a true plane in finished plaster surfaces when measured by a 10-foot straightedge placed on surface.
2. Finish plaster flush with metal frames and other built-in metal items or accessories that act as a plaster ground unless otherwise indicated. Where casing bead does not terminate plaster at metal frame, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.
3. Provide plaster surfaces that are ready to receive field-applied finishes indicated.

B. Walls; Base-Coat Mixes for Use over Metal Lath: For scratch and brown coats, for three-coat plasterwork with 3/4-inch total thickness, as follows:

1. Portland and masonry cement mixes.

C. Plaster Finish Coats: Apply to provide skip trowel-textured finish to match Architect's sample.

D. Concealed Exterior Plasterwork: Where plaster application is used as a base for adhered finishes, omit finish coat.

3.7 PLASTER REPAIRS

A. Repair or replace work to eliminate cracks, dents, blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

3.8 CLEANING AND PROTECTION

A. Remove temporary protection and enclosure of other work after plastering is complete. Promptly remove plaster from door frames, windows, and other surfaces not indicated to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

END OF SECTION 092400

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Exterior gypsum board for ceilings and soffits.
3. Tile backing panels.

B. Related Requirements:

1. Section 061600 "Sheathing" for gypsum sheathing for exterior walls.
2. Section 092216 "Non-Structural Metal Framing" for non-structural framing and suspension systems that support gypsum board panels.
3. Section 093013 "Ceramic Tiling" for cementitious backer units installed as substrates for ceramic tile.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 DELIVERY, STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.5 FIELD CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 INTERIOR GYPSUM BOARD

A. Gypsum Board, Type X: ASTM C 1396/C 1396M.

1. Thickness: 5/8 inch .
2. Long Edges: Tapered.

B. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces.

1. Core: 5/8 inch , Type X.
2. Long Edges: Tapered.
3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.4 EXTERIOR GYPSUM BOARD FOR CEILINGS AND SOFFITS

A. Glass-Mat Gypsum Sheathing Board: ASTM C 1177/C 1177M, with fiberglass mat laminated to both sides and with manufacturer's standard edges.

1. Core: 5/8 inch , Type X.

2.5 TILE BACKING PANELS

A. Cementitious Backer Units: ANSI A118.9 and ASTM C 1288 or 1325, with manufacturer's standard edges.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

    a. Certainteed
    b. National Gypsum
    c. USG Corporation

2. Thickness: 5/8 inch .
3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.6 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized steel sheet.
2. Shapes:

    a. Cornerbead.
    b. Expansion (control) joint.

B. Exterior Trim: ASTM C 1047.

1. Material: Hot-dip galvanized steel sheet, plastic, or rolled zinc.
2. Shapes:

    a. Cornerbead.

2.7 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.
2. Exterior Gypsum Soffit Board: Paper.
3. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.
4. Tile Backing Panels: As recommended by panel manufacturer.

C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints and damaged surface areas, use setting-type taping compound.

2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.

    a. Use setting-type compound for installing paper-faced metal trim accessories.

3. Fill Coat: For second coat, use drying-type, all-purpose compound.
4. Finish Coat: For third coat, use drying-type, all-purpose compound.
5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound.

D. Joint Compound for Exterior Applications:

1. Exterior Gypsum Soffit Board: Use setting-type taping compound and setting-type, sandable topping compound.
2. Glass-Mat Gypsum Sheathing Board: As recommended by sheathing board manufacturer.

E. Joint Compound for Tile Backing Panels:

1. Glass-Mat, Water-Resistant Backing Panel: As recommended by backing panel manufacturer.
2. Cementitious Backer Units: As recommended by backer unit manufacturer.

2.8 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Form control and expansion joints with space between edges of adjoining gypsum panels.

F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.

1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
2. Fit gypsum panels around ducts, pipes, and conduits.
3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch-wide joints to install sealant.

G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch-wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

I. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members or provide control joints to counteract wood shrinkage.

J. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

3.3 APPLYING INTERIOR GYPSUM BOARD

A. Install interior gypsum board in the following locations:

1. Wallboard Type: As indicated on Drawings.
2. Type X: Vertical surfaces unless otherwise indicated.
3. Moisture- and Mold-Resistant Type: As indicated on Drawings.

B. Single-Layer Application:

1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
2. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.

    a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
    b. At stairwells and other high walls, install panels horizontally unless otherwise indicated or required by fire-resistance-rated assembly.

3. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

C. Multilayer Application:

1. On ceilings, apply gypsum board indicated for base layers before applying base layers on walls/partitions; apply face layers in same sequence. Apply base layers at right angles to framing members and offset face-layer joints one framing member, 16 inches minimum, from parallel base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly.
2. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
3. On Z-furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
4. Fastening Methods: Fasten base layers and face layers separately to supports with screws.

3.4 APPLYING EXTERIOR GYPSUM PANELS FOR CEILINGS AND SOFFITS

A. Apply panels perpendicular to supports, with end joints staggered and located over supports.

1. Install with 1/4-inch open space where panels abut other construction or structural penetrations.
2. Fasten with corrosion-resistant screws.

3.5 APPLYING TILE BACKING PANELS

A. Cementitious Backer Units: ANSI A108.11, at showers, tubs, and where indicated.

B. Where tile backing panels abut other types of panels in same plane, shim surfaces to produce a uniform plane across panel surfaces.

3.6 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners unless otherwise indicated.

C. Exterior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners.

3.7 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints and damaged surface areas.

C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile.
3. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.

    a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."

E. Glass-Mat Gypsum Sheathing Board: Finish according to manufacturer's written instructions for use as exposed soffit board.

F. Glass-Mat Faced Panels: Finish according to manufacturer's written instructions.

G. Cementitious Backer Units: Finish according to manufacturer's written instructions.

3.8 PROTECTION

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

C. Remove and replace panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 093013 - CERAMIC TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Porcelain tile.

B. Related Requirements:

1. Section 079200 "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.
2. Section 092400 "Cement Plastering" for scratch coat for thickset mortar setting-bed installations.
3. Section 092900 "Gypsum Board" for cementitious backer units.

1.3 DEFINITIONS

A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.

B. ANSI A108 Series: ANSI A108.01, ANSI A108.02, ANSI A108.1A, ANSI A108.1B, ANSI A108.1C, ANSI A108.4, ANSI A108.5, ANSI A108.6, ANSI A108.8, ANSI A108.9, ANSI A108.10, ANSI A108.11, ANSI A108.12, ANSI A108.13, ANSI A108.14, ANSI A108.15, ANSI A108.16, and ANSI A108.17, which are contained in its "Specifications for Installation of Ceramic Tile."

C. Module Size: Actual tile size plus joint width indicated.

D. Face Size: Actual tile size, excluding spacer lugs.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Initial Selection: For tile, grout, and accessories involving color selection.

1.5 INFORMATIONAL SUBMITTALS

A. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.

C. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

D. Store liquid materials in unopened containers and protected from freezing.

1.7 FIELD CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard grade requirements unless otherwise indicated.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.

C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

D. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.

1. Where tile is indicated for installation [**in swimming pools**], [**on exteriors**], [or] [**in wet areas**], do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance.

2.2 TILE PRODUCTS

A. Ceramic Tile Type [**CT-CT-1**]: Glazed porcelain tile.

1. Certification: Tile certified by the Porcelain Tile Certification Agency.
2. Face Size: 18 by 18 inches.
3. Face Size Variation: Rectified.
4. Face: As indicated.
5. Dynamic Coefficient of Friction: Not less than 0.42.
6. Tile Color, Glaze, and Pattern: As indicated by manufacturer's designations.
7. Grout Color: As selected by Architect from manufacturer's full range.
8. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:

    a. Base Cap: Surface bullnose, module size same as adjoining flat tile.
    b. Wainscot Cap: Surface bullnose, module size same as adjoining flat tile.
    c. Wainscot Cap for Flush Conditions: Regular flat tile for conditions where tile wainscot is shown flush with wall surface above it, same size as adjoining flat tile.
    d. External Corners: Surface bullnose, module size same as adjoining flat tile.
    e. Internal Corners: Field-butted square corners.
    f. Tapered Transition Tile: Shape designed to effect transition between thickness of tile floor and adjoining floor finishes of different thickness, tapered to provide reduction in thickness from 1/2 to 1/4 inch across nominal 4-inch dimension.

2.3 SETTING MATERIALS

A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.

1. Cleavage Membrane: Asphalt felt, ASTM D 226/D 226M, Type I (No. 15); or polyethylene sheeting, ASTM D 4397, 4.0 mils thick.

B. Dry-Set Portland Cement Mortar (Thinset): ANSI A118.1.

1. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to the other requirements in ANSI A118.1.

C. Medium-Bed, Latex-Portland Cement Mortar: Comply with requirements in ANSI A118.4. Provide product that is approved by manufacturer for application thickness of 5/8 inch .

1. Provide prepackaged, dry-mortar mix containing dry, redispersible, vinyl acetate or acrylic additive to which only water must be added at Project site.

2. Provide prepackaged, dry-mortar mix combined with acrylic resin or styrene-butadiene-rubber liquid-latex additive at Project site.

D. Water-Cleanable, Tile-Setting Epoxy: ANSI A118.3.

1. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 and 212 deg F , respectively, and certified by manufacturer for intended use.

2.4 GROUT MATERIALS

A. Standard Cement Grout: ANSI A118.6.

B. Grout for Pregrouted Tile Sheets: Same product used in factory to pregrout tile sheets.

2.5 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

B. Vapor-Retarder Membrane: Polyethylene sheeting, ASTM D 4397, 4.0 mils thick.

C. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.

D. Grout Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.

2.6 MIXING MORTARS AND GROUT

A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.

B. Add materials, water, and additives in accurate proportions.

C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other

substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.

2. Verify that concrete substrates for tile floors installed with adhesives, bonded mortar bed, or thinset mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.

    a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
    b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.

3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with adhesives or thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.

B. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 CERAMIC TILE INSTALLATION

A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

1. For the following installations, follow procedures in the ANSI A108 series of tile installation standards for providing 95 percent mortar coverage:

    a. Exterior tile floors.
    b. Tile floors in wet areas.
    c. Tile swimming pool decks.
    d. Tile floors in laundries.
    e. Tile floors consisting of tiles 8 by 8 inches or larger.
    f. Tile floors consisting of rib-backed tiles.

B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.

E. Where accent tile differs in thickness from field tile, vary setting-bed thickness so that tiles are flush.

F. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.

1. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
2. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.

G. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:

1. Porcelain Tile: 1/4 inch .

H. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.

I. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.

1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.

J. Grout Sealer: Apply grout sealer to cementitious grout joints in tile floors according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

3.4 ADJUSTING AND CLEANING

A. Remove and replace tile that is damaged or that does not match adjoining tile. Provide new matching units, installed as specified and in a manner to eliminate evidence of replacement.

B. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

1. Remove grout residue from tile as soon as possible.
2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

3.5 PROTECTION

A. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.

B. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.

C. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

3.6 INTERIOR CERAMIC TILE INSTALLATION SCHEDULE

A. Interior Floor Installations, Concrete Subfloor:

1. Ceramic Tile Installation CT-1: TCNA F113; thinset mortar.

   a. Ceramic Tile Type: CT-1.
   b. Thinset Mortar: Medium-bed, latex-portland cement mortar.
   c. Grout: Standard sanded cement grout.

2. Ceramic Tile Installation CT-1: TCNA F116;

   a. Ceramic Tile Type: CT-1.
   b. Grout: Standard sanded cement grout.

3. Ceramic Tile Installation CT-1: TCNA F132; water-cleanable, tile-setting epoxy on cured cement mortar bed

   a. Ceramic Tile Type: CT-1.

B. Interior Wall Installations, Wood or Metal Studs or Furring:

1. Ceramic Tile Installation CT-1: TCNA W221 and ANSI A108.1C; cement mortar bed (thickset)

   a. Ceramic Tile Type: CT-1.
   b. Bond Coat for Wet-Set Method: Dry-set portland cement mortar.

c. Bond Coat for Cured-Bed Method: Dry-set portland cement mortar.
d. Grout: Standard sanded cement grout.

2. Ceramic Tile Installation CT-1: TCNA W222 and ANSI A108.1C; one-coat cement mortar bed (thickset)

   a. Ceramic Tile Type: CT-1.
   b. Bond Coat for Wet-Set Method: Dry-set portland cement mortar.
   c. Bond Coat for Cured-Bed Method: Dry-set portland cement mortar.
   d. Grout: Standard sanded cement grout.

3. Ceramic Tile Installation CT-1: TCNA W231/W241 and ANSI A108.1C; cement mortar bed (thickset).

   a. Ceramic Tile Type: CT-1.
   b. Bond Coat for Wet-Set Method: Dry-set portland cement mortar.
   c. Bond Coat for Cured-Bed Method: Dry-set portland cement mortar.
   d. Grout: Standard sanded cement grout.

4. Ceramic Tile Installation CT-1: TCNA W244C or TCNA W244F; thinset mortar on cementitious backer units or fiber-cement backer board over vapor-retarder membrane.

   a. Ceramic Tile Type: CT-1.
   b. Grout: Standard sanded cement grout.

END OF SECTION 093013

SECTION 095123 - ACOUSTICAL TILE CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Acoustical tiles for ceilings.
2. Concealed suspension systems.

B. Products furnished, but not installed under this Section, include anchors, clips, and other ceiling attachment devices to be cast in concrete.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Verification: For each component indicated and for each exposed finish required, prepared on Samples of size indicated below.

1. Acoustical Tile: Set of full-size Samples of each type, color, pattern, and texture.
2. Concealed Suspension-System Members: 6-inch-long Sample of each type.

1.4 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each acoustical tile ceiling, for tests performed by a qualified testing agency.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to the National Voluntary Laboratory Accreditation Program (NVLAP) for testing indicated.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical tiles, suspension-system components, and accessories to Project site in original, unopened packages and store them in a fully enclosed, conditioned space where they will be protected against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical tiles, permit them to reach room temperature and a stabilized moisture content.

C. Handle acoustical tiles carefully to avoid chipping edges or damaging units in any way.

1.7 FIELD CONDITIONS

A. Environmental Limitations: Do not install acoustical tile ceilings until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, work above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1. Pressurized Plenums: Operate ventilation system for not less than 48 hours before beginning acoustical tile ceiling installation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: Comply with ASTM E 1264 for Class A materials.
2. Smoke-Developed Index: 50 or less.

2.2 ACOUSTICAL TILES, GENERAL

A. Source Limitations:

1. Acoustical Ceiling Tile: Obtain each type from single source from single manufacturer.
2. Suspension System: Obtain each type from single source from single manufacturer.

B. Source Limitations: Obtain each type of acoustical ceiling tile and supporting suspension system from single source from single manufacturer.

C. Acoustical Tile Standard: Provide manufacturer's standard tiles of configuration indicated that comply with ASTM E 1264 classifications as designated by types, patterns, acoustical ratings, and light reflectances unless otherwise indicated.

1. Mounting Method for Measuring NRC: Type E-400; plenum mounting in which face of test specimen is 15-3/4 inches away from test surface according to ASTM E 795.

D. Acoustical Tile Colors and Patterns: Match appearance characteristics indicated for each product type.

1. Where appearance characteristics of acoustical tiles are indicated by referencing pattern designations in ASTM E 1264 and not manufacturers' proprietary product designations, provide products selected by Architect from each manufacturer's full range that comply with requirements indicated for type, pattern, color, light reflectance, acoustical performance, edge detail, and size.

2.3 ACOUSTICAL TILES ACT-1

A. Classification: Provide tiles complying with ASTM E 1264 for type, form, and pattern as follows:

1. Type and Form: Type III, mineral base with painted finish; Form 2, water felted.
2. Pattern: E (lightly textured).

B. Color: White.

C. LR: Not less than 0.80.

D. NRC: Not less than 0.80.

E. CAC: Not less than 35.

F. AC: Not less than 170.

G. Edge/Joint Detail: Beveled, kerfed and rabbeted, or tongue and grooved, or butt.

H. Thickness: 15/16 inch.

I. Modular Size: 24 by 24 inches.

J. Broad Spectrum Antimicrobial Fungicide and Bactericide Treatment: Provide acoustical tiles treated with manufacturer's standard antimicrobial formulation that inhibits fungus, mold, mildew, and gram-positive and gram-negative bacteria and showing no mold, mildew, or bacterial growth when tested according to ASTM D 3273 and evaluated according to ASTM D 3274 or ASTM G 21.

2.4 METAL SUSPENSION SYSTEMS, GENERAL

A. Metal Suspension-System Standard: Provide manufacturer's standard metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable requirements in ASTM C 635/C 635M.

B. Attachment Devices: Size for five times the design load indicated in ASTM C 635/C 635M, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.

1. Anchors in Concrete: Anchors of type and material indicated below, with holes or loops for attaching hangers of type indicated and with capability to sustain, without failure, a load equal to five times that imposed by ceiling construction, as determined by testing according to ASTM E 488 or ASTM E 1512 as applicable, conducted by a qualified testing and inspecting agency.

a. Corrosion Protection: Carbon-steel components zinc plated to comply with ASTM B 633, Class Fe/Zn 5 for Class SC 1 service condition.
b. Corrosion Protection: Stainless-steel components complying with ASTM F 593 and ASTM F 594, Group 1 Alloy 304 or 316 for bolts; Alloy 304 or 316 for anchors.

C. Wire Hangers, Braces, and Ties: Provide wires complying with the following requirements:

1. Zinc-Coated, Carbon-Steel Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
2. Size: Select wire diameter so its stress at three times hanger design load (ASTM C 635/C 635M, Table 1, "Direct Hung") will be less than yield stress of wire, but provide not less than 0.106-inch- diameter wire.

2.5 METAL SUSPENSION SYSTEM-

A. Direct-Hung, Double-Web Suspension System: Main and cross runners roll formed from and capped with cold-rolled steel sheet, prepainted, electrolytically zinc coated, or hot-dip galvanized according to ASTM A 653/A 653M, G30 coating designation.

1. Structural Classification: Intermediate-duty system.
2. Access: Upward and end pivoted or side pivoted, with initial access openings of size indicated below and located throughout ceiling within each module formed by main and cross runners, with additional access available by progressively removing remaining acoustical tiles.

a. Initial Access Opening: In each module, 24 by 24 inches .

2.6 ACOUSTICAL SEALANT

A. Acoustical Sealant: Manufacturer's standard sealant complying with ASTM C 834 and effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

2.7 MISCELLANEOUS MATERIALS

A. Acoustical Tile Adhesive: Type recommended by acoustical tile manufacturer, bearing UL label for Class 0-25 flame spread.

B. Staples: 5/16-inch-long, divergent-point staples.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, including structural framing and substrates to which acoustical tile ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine acoustical tiles before installation. Reject acoustical tiles that are wet, moisture damaged, or mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Testing Substrates: Before installing adhesively applied tiles on wet-placed substrates such as cast-in-place concrete or plaster, test and verify that moisture level is below tile manufacturer's recommended limits.

B. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders, and comply with layout shown on reflected ceiling plans.

3.3 INSTALLATION OF SUSPENDED ACOUSTICAL TILE CEILINGS

A. General: Install acoustical panel ceilings to comply with ASTM C 636/C 636M and seismic design requirements indicated, according to manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."

B. Suspend ceiling hangers from building's structural members and as follows:

1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structure or of ceiling suspension system.
2. Splay hangers only where required to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
3. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers at spacings required to support standard suspension-system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices.
4. Secure wire hangers to ceiling suspension members and to supports above with a minimum of three tight turns. Connect hangers directly either to structures or to inserts, eye screws, or other devices that are secure and appropriate for substrate and that will not deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
5. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices that are

secure and appropriate for both the structure to which hangers are attached and the type of hanger involved. Install hangers in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.

6. Do not support ceilings directly from permanent metal forms or floor deck. Fasten hangers to cast-in-place hanger inserts, postinstalled mechanical or adhesive anchors, or power-actuated fasteners that extend through forms into concrete.
7. When steel framing does not permit installation of hanger wires at spacing required, install carrying channels or other supplemental support for attachment of hanger wires.
8. Do not attach hangers to steel deck tabs.
9. Space hangers not more than 48 inches o.c. along each member supported directly from hangers unless otherwise indicated; provide hangers not more than 8 inches from ends of each member.
10. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards and publications.

C. Secure bracing wires to ceiling suspension members and to supports with a minimum of four tight turns. Suspend bracing from building's structural members as required for hangers without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or postinstalled anchors.

D. Install suspension-system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

E. Arrange directionally patterned acoustical tiles as follows:

1. As indicated on reflected ceiling plans.
2. Install tiles with pattern running in one direction parallel to short axis of space.
3. Install tiles in a basket-weave pattern.

F. Install acoustical tiles in coordination with suspension system and exposed moldings and trim. Place splines or suspension-system flanges into kerfed edges so tile-to-tile joints are closed by double lap of material.

1. Fit adjoining tile to form flush, tight joints. Scribe and cut tile for accurate fit at borders and around penetrations through tile.
2. Hold tile field in compression by inserting leaf-type, spring-steel spacers between tile and moldings, spaced 12 inches o.c.
3. Protect lighting fixtures and air ducts to comply with requirements indicated for fire-resistance-rated assembly.

3.4 CLEANING

A. Clean exposed surfaces of acoustical tile ceilings, including trim and edge moldings. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace tiles and other ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 095123

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Resilient base.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified, not less than 12 inches long.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Furnish not less than 10 linear feet for every 500 linear feet or fraction thereof, of each type, color, pattern, and size of resilient product installed.

1.5 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Coordinate mockups in this Section with mockups specified in other Sections.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F .

1.7 FIELD CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F , in spaces to receive resilient products during the following time periods:

1. 48 hours before installation.
2. During installation.
3. 48 hours after installation.

B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F .

C. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 THERMOSET-RUBBER BASE RB-1

A. Product Standard: ASTM F 1861, Type TS (rubber, vulcanized thermoset), Group I (solid, homogeneous).

1. Style and Location:

a. Style B, Cove: As indicated on drawings.

B. Thickness: 0.125 inch .

C. Height: 4 inches .

D. Lengths: Coils in manufacturer's standard length.

E. Outside Corners: Job formed or preformed.

F. Inside Corners: Job formed or preformed.

G. Colors: As indicated by manufacturer's designations.

2.2 INSTALLATION MATERIALS

A. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

1. Installation of resilient products indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Do not install resilient products until they are the same temperature as the space where they are to be installed.

1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.

C. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

3.3 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.

G. Preformed Corners: Install preformed corners before installing straight pieces.

H. Job-Formed Corners:

1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.

    a. Form without producing discoloration (whitening) at bends.

2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.

    a. Miter or cope corners to minimize open joints.

3.4 RESILIENT ACCESSORY INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient accessories.

3.5 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

B. Perform the following operations immediately after completing resilient-product installation:

    1. Remove adhesive and other blemishes from exposed surfaces.

C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Cover resilient products subject to wear and foot traffic until Substantial Completion.

END OF SECTION 096513

SECTION 096519 - RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Vinyl composition floor tile.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: Full-size units of each color and pattern of floor tile required.

1. For heat-welding bead, manufacturer's standard-size Samples, but not less than 9 inches long, of each color required.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.

1. Engage an installer who employs workers for this Project who are trained or certified by floor tile manufacturer for installation techniques required.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F . Store floor tiles on flat surfaces.

1.6 FIELD CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F , in spaces to receive floor tile during the following time periods:

1. 48 hours before installation.

2. During installation.
3. 48 hours after installation.

B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F .

C. Close spaces to traffic during floor tile installation.

D. Close spaces to traffic for 48 hours after floor tile installation.

E. Install floor tile after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

2.2 VINYL COMPOSITION FLOOR TILE VCT-1

A. Tile Standard: ASTM F 1066, Class 2, through-pattern tile.

B. Thickness: 0.125 inch .

C. Size: 12 by 12 inches .

D. Colors and Patterns: As indicated by manufacturer's designations.

2.3 INSTALLATION MATERIALS

A. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.

B. Concrete Substrates: Prepare according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
3. Moisture Testing: Proceed with installation only after substrates pass testing according to floor tile manufacturer's written recommendations, but not less stringent than the following:

    a. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
    b. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level.

C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

D. Do not install floor tiles until they are the same temperature as the space where they are to be installed.

1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.

E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

3.3 FLOOR TILE INSTALLATION

A. Comply with manufacturer's written instructions for installing floor tile.

B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.

1. Lay tiles square with room axis.

C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.

1. Lay tiles with grain running in one direction.

D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.

E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.

F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.

G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in finished floor areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.

H. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.4 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.

B. Perform the following operations immediately after completing floor tile installation:

1. Remove adhesive and other blemishes from exposed surfaces.
2. Sweep and vacuum surfaces thoroughly.
3. Damp-mop surfaces to remove marks and soil.

C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Joint Sealant: Apply sealant to resilient terrazzo floor tile perimeter and around columns, at door frames, and at other joints and penetrations.

E. Cover floor tile until Substantial Completion.

END OF SECTION 096519

SECTION 096813 - TILE CARPETING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes modular, tufted carpet tile.

B. Related Requirements:

1. Section 024119 "Selective Demolition" for removing existing floor coverings.
2. Section 096513 "Resilient Base and Accessories" for resilient wall base and accessories installed with carpet tile.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include manufacturer's written data on physical characteristics, durability, and fade resistance.
2. Include installation recommendations for each type of substrate.

B. Samples: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.

1. Carpet Tile: Full-size Sample.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Carpet Tile: Full-size units equal to 5 percent of amount installed for each type indicated, but not less than 10 sq. yd. .

1.5 DELIVERY, STORAGE, AND HANDLING

A. Comply with CRI 104.

1.6 FIELD CONDITIONS

A. Comply with CRI 104 for temperature, humidity, and ventilation limitations.

B. Environmental Limitations: Do not deliver or install carpet tiles until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at occupancy levels during the remainder of the construction period.

C. Do not install carpet tiles over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet tile manufacturer.

D. Where demountable partitions or other items are indicated for installation on top of carpet tiles, install carpet tiles before installing these items.

1.7 WARRANTY

A. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.

1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.
2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CARPET TILE CPT-1

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings-

B. Color: Match Architect's samples.

C. Pattern: Match Architect's samples.

2.2 INSTALLATION ACCESSORIES

A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.

B. Metal Edge/Transition Strips: Extruded aluminum with mill finish of profile and width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet tile performance. Examine carpet tile for type, color, pattern, and potential defects.

B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:

1. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by carpet tile manufacturer.
2. Subfloor finishes comply with requirements specified in Section 033000 "Cast-in-Place Concrete" for slabs receiving carpet tile.
3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. General: Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile installation.

B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider and protrusions more than 1/32 inch unless more stringent requirements are required by manufacturer's written instructions.

C. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by carpet tile manufacturer.

D. Clean metal substrates of grease, oil, soil and rust, and prime if directed by adhesive manufacturer. Rough sand painted metal surfaces and remove loose paint. Sand aluminum surfaces, to remove metal oxides, immediately before applying adhesive.

E. Broom and vacuum clean substrates to be covered immediately before installing carpet tile.

3.3 INSTALLATION

A. General: Comply with CRI 104, Section 14, "Carpet Modules," and with carpet tile manufacturer's written installation instructions.

B. Installation Method: As recommended in writing by carpet tile manufacturer.

C. Maintain dye lot integrity. Do not mix dye lots in same area.

D. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.

E. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.

F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, nonstaining marking device.

G. Install pattern parallel to walls and borders.

3.4 CLEANING AND PROTECTION

A. Perform the following operations immediately after installing carpet tile:

1. Remove yarns that protrude from carpet tile surface.
2. Vacuum carpet tile using commercial machine with face-beater element.

B. Protect installed carpet tile to comply with CRI 104, Section 16, "Protecting Indoor Installations."

C. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

END OF SECTION 096813

SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Related Requirements:

1. Section 055000 "Metal Fabrications" for shop priming metal fabrications.

1.3 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

D. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

E. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

F. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
2. Indicate VOC content.

B. Samples for Verification: For each type of paint system and each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches square.
2. Step coats on Samples to show each coat required for system.

3. Label each coat of each Sample.
4. Label each Sample for location and application area.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F .

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.6 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F .

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 PAINT, GENERAL

A. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

B. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction.

C. Colors: As selected by Architect from manufacturer's full range.

2.2 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.

3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Fiber-Cement Board: 12 percent.
3. Masonry (Clay and CMUs): 12 percent.
4. Wood: 15 percent.
5. Portland Cement Plaster: 12 percent.
6. Gypsum Board: 12 percent.

C. Portland Cement Plaster Substrates: Verify that plaster is fully cured.

D. Exterior Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

E. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

F. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.

F. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:

1. SSPC-SP 2.
2. SSPC-SP 3.
3. SSPC-SP 7/NACE No. 4.
4. SSPC-SP 11.

G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

I. Aluminum Substrates: Remove loose surface oxidation.

J. Wood Substrates:

1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
2. Sand surfaces that will be exposed to view, and dust off.
3. Prime edges, ends, faces, undersides, and backsides of wood.
4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

K. Plastic Trim Fabrication Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
3. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
4. Paint entire exposed surface of window frames and sashes.
5. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
6. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

B. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint the following work where exposed to view:

a. Equipment, including panelboards and switch gear.
b. Uninsulated metal piping.
c. Uninsulated plastic piping.
d. Pipe hangers and supports.
e. Metal conduit.
f. Plastic conduit.
g. Tanks that do not have factory-applied final finishes.

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

A. Concrete Substrates, Traffic Surfaces:

1. Alkyd Floor Enamel System:

a. Prime Coat: Floor enamel, matching topcoat.
b. Intermediate Coat: Floor enamel, matching topcoat.
c. Topcoat: Floor enamel, alkyd, gloss (MPI Gloss Level 6).
d. Additive: Manufacturer's standard additive to increase skid resistance of painted surface.

END OF SECTION 099113

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Related Requirements:

1. Section 055000 "Metal Fabrications" for shop priming metal fabrications.

1.3 DEFINITIONS

A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

D. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

E. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

F. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

G. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
2. Indicate VOC content.

B. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches square.
2. Step coats on Samples to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F .

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.6 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F .

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide product listed in the Interior Painting Schedule for the paint category indicated.

2.2 PAINT, GENERAL

A. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

B. Colors: As selected by Architect from manufacturer's full range.

2.3 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when

samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.

2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Gypsum Board: 12 percent.

C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

D. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

E. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

A. Gypsum Board Substrates:

1. Latex over Latex Sealer System:

a. Prime Coat: Primer sealer, latex, interior.
b. Prime Coat: Latex, interior, matching topcoat.
c. Intermediate Coat: Latex, interior, matching topcoat.
d. Topcoat: Latex, interior (MPI Gloss Level 4).

END OF SECTION 099123

SECTION 101423 - PANEL SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Room-identification signs.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for temporary Project identification signs and for temporary information and directional signs.

1.3 COORDINATION

A. Furnish templates for placement of sign-anchorage devices embedded in permanent construction by other installers.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For panel signs.

1. Include fabrication and installation details and attachments to other work.
2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
3. Show message list, typestyles, graphic elements, including raised characters and Braille, and layout for each sign at least half size.

C. Samples for Initial Selection: For each type of sign assembly, exposed component, and exposed finish.

1. Include representative Samples of available typestyles and graphic symbols.

D. Sign Schedule: Use same designations specified or indicated on Drawings or in a sign schedule.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer of products.

1.6 FIELD CONDITIONS

A. Field Measurements: Verify locations of anchorage devices embedded in permanent construction by other installers by field measurements before fabrication, and indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Thermal Movements: For exterior signs, allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F , ambient; 180 deg F , material surfaces.

2.2 SIGNS

A. Room-Identification Sign-: Sign with smooth, uniform surfaces; with message and characters having uniform faces, sharp corners, and precisely formed lines and profiles; and as follows:

1. Laminated-Sheet Sign: Photopolymer face sheet with raised graphics laminated over subsurface graphics to acrylic backing sheet to produce composite sheet.

a. Composite-Sheet Thickness: Manufacturer's standard for size of sign.
b. Subsurface Graphics: Reverse halftone or dot-screen image.
c. Color(s): As selected by Architect from manufacturer's full range.

2. Sign-Panel Perimeter: Finish edges smooth.

a. Edge Condition: Beveled.
b. Corner Condition in Elevation: Square.

3. Mounting: Manufacturer's standard method for substrates indicated with
4. Text and Typeface: Accessible raised characters and Braille, typeface as indicated by manufacturer's designation, typeface as selected by Architect from manufacturer's full range, and variable content as scheduled. Finish raised characters to contrast with background color, and finish Braille to match background color.

2.3 PANEL-SIGN MATERIALS

A. Acrylic Sheet: ASTM D 4802, category as standard with manufacturer for each sign, Type UVF (UV filtering).

2.4 ACCESSORIES

A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signage, noncorrosive and compatible with each material joined, and complying with the following:

1. Use concealed fasteners and anchors unless indicated to be exposed.
2. Inserts: Furnish inserts to be set by other trades into concrete or masonry work.

2.5 FABRICATION

A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.

1. Preassemble signs and assemblies in the shop to greatest extent possible. Disassemble signs and assemblies only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation; apply markings in locations concealed from view after final assembly.
2. Mill joints to a tight, hairline fit. Form assemblies and joints exposed to weather to resist water penetration and retention.
3. Comply with AWS for recommended practices in welding and brazing. Provide welds and brazes behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded and brazed connections of flux, and dress exposed and contact surfaces.
4. Conceal connections if possible; otherwise, locate connections where they are inconspicuous.
5. Internally brace signs for stability and for securing fasteners.
6. Provide rebates, lugs, and brackets necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.

B. Subsurface-Applied Graphics: Apply graphics to back face of clear face-sheet material to produce precisely formed image. Image shall be free of rough edges.

C. Subsurface-Engraved Graphics: Reverse engrave back face of clear face-sheet material. Fill resulting copy with manufacturer's standard enamel. Apply opaque manufacturer's standard background color coating over enamel-filled copy.

D. Shop- and Subsurface-Applied Vinyl: Align vinyl film in final position and apply to surface. Firmly press film from the middle outward to obtain good bond without blisters or fishmouths.

2.6 GENERAL FINISH REQUIREMENTS

A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

C. Directional Finishes: Run grain with long dimension of each piece and perpendicular to long dimension of finished trim or border surface unless otherwise indicated.

D. Organic, Anodic, and Chemically Produced Finishes: Apply to formed metal after fabrication but before applying contrasting polished finishes on raised features unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of signage work.

B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.

C. Verify that anchor inserts are correctly sized and located to accommodate signs.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.

1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
2. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.

B. Room-Identification Signs: Install in locations on walls according to accessibility standard.

3.3 ADJUSTING AND CLEANING

A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.

B. Remove temporary protective coverings and strippable films as signs are installed.

C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION 101423

SECTION 102600 - WALL AND DOOR PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Corner guards.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, impact strength, dimensions of individual components and profiles, and finishes.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store wall and door protection in original undamaged packages and containers inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.

1. Maintain room temperature within storage area at not less than 70 deg F during the period plastic materials are stored.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain wall- and door-protection products from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Surface Burning Characteristics: Comply with ASTM E 84 or UL 723; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: 25 or less.
2. Smoke-Developed Index: 450 or less.

B. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1.

2.3 CORNER GUARDS

A. Surface-Mounted, Metal Corner Guards-: Fabricated as one piece from formed or extruded metal with formed edges; with 90- or 135-degree turn to match wall condition.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
2. Basis-of-Design Product ct to compliance with requirements, provide Construction Specialties or comparable product by one of the following:

    a. Babcock Davis
    b. Balco

3. Material: Stainless-steel sheet, Type 304.

    a. Thickness: Minimum 16 gauge.
    b. Finish: Directional satin, No. 4.

4. Wing Size: Nominal 3-1/2 by 3-1/2 inches .
5. Corner Radius: 3/4 inch .
6. Mounting: Adhesive.

2.4 MATERIALS

A. Fasteners: Aluminum, nonmagnetic stainless-steel, or other noncorrosive metal screws, bolts, and other fasteners compatible with items being fastened. Use security-type fasteners where exposed to view.

B. Adhesive: As recommended by protection-product manufacturer and with a VOC content of 70 g/L or less.

C. Adhesive: As recommended by protection-product manufacturer and that complies with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

2.5 FABRICATION

A. Fabricate wall and door protection according to requirements indicated for design, performance, dimensions, and member sizes, including thicknesses of components.

B. Curved Panels: Preform curved semirigid, abuse-resistant sheet wall covering in factory for radius and sheet thickness as follows:

1. Sheet Thickness of 0.040 Inch : 24-inch radius.
2. Sheet Thickness of 0.060 Inch : 36-inch radius.

C. Factory Assembly: Assemble components in factory to greatest extent possible to minimize field assembly. Disassemble only as necessary for shipping and handling.

D. Quality: Fabricate components with uniformly tight seams and joints and with exposed edges rolled. Provide surfaces free of wrinkles, chips, dents, uneven coloration, and other imperfections. Fabricate members and fittings to produce flush, smooth, and rigid hairline joints.

E. Wood Handrails: Miter corners and ends of wood handrails for returns.

2.6 FINISHES

A. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and wall areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine walls to which wall and door protection will be attached for blocking, grounds, and other solid backing that have been installed in the locations required for secure attachment of support fasteners.

1. For wall and door protection attached with adhesive, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Complete finishing operations, including painting, before installing wall and door protection.

B. Before installation, clean substrate to remove dust, debris, and loose particles.

3.3 INSTALLATION

A. Installation Quality: Install wall and door protection according to manufacturer's written instructions, level, plumb, and true to line without distortions. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.

B. Accessories: Provide splices, mounting hardware, anchors, trim, joint moldings, and other accessories required for a complete installation.

1. Provide anchoring devices and suitable locations to withstand imposed loads.
2. Where splices occur in horizontal runs of more than 20 feet , splice aluminum retainers and plastic covers at different locations along the run, but no closer than 12 inches apart.
3. Adjust end and top caps as required to ensure tight seams.

C. Abuse-Resistant Wall Covering: Install top and edge moldings, corners, and divider bars as required for a complete installation.

D. Door-Frame Protectors: Install on both door jams.

3.4 CLEANING

A. Immediately after completion of installation, clean plastic covers and accessories using a standard ammonia-based household cleaning agent.

B. Remove excess adhesive using methods and materials recommended in writing by manufacturer.

END OF SECTION 102600

SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Public-use washroom accessories.

B. Related Sections:

1. Section 093013 "Ceramic Tiling" for ceramic toilet and bath accessories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include the following:

1. Construction details and dimensions.
2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
3. Material and finish descriptions.
4. Features that will be included for Project.
5. Manufacturer's warranty.

1.4 QUALITY ASSURANCE

A. Source Limitations: For products listed together in the same Part 2 articles, obtain products from single source from single manufacturer.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.5 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.6 WARRANTY

A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch minimum nominal thickness unless otherwise indicated.

B. Brass: ASTM B 19, flat products; ASTM B 16/B 16M, rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.

C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch minimum nominal thickness.

D. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 hot-dip zinc coating.

E. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.

F. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

G. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).

H. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

I. ABS Plastic: Acrylonitrile-butadiene-styrene resin formulation.

2.2 PUBLIC-USE WASHROOM ACCESSORIES

A. Toilet Tissue (Roll) Dispenser TA-1:

1. Basis-of-Design Product: Bobrick B-265.

B. Combination Towel (Folded) Dispenser/Waste Receptacle TA-5:

1. Basis-of-Design Product: Bobrick B-3974.

C. Grab Bar TA-3, TA-4:

1. Basis-of-Design Product: Bobrick B-5806.

D. Mirror Unit TA-2:

1. Basis-of-Design Product: Bobrick B-165.

2.3 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

B. Grab Bars: Install to withstand a downward load of at least 250 lbf , when tested according to ASTM F 446.

3.2 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

B. Remove temporary labels and protective coatings.

C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION 102800

SECTION 104413 - FIRE PROTECTION CABINETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Fire-protection cabinets for the following:

a. Portable fire extinguishers.

B. Related Requirements:

1. Section 104416 "Fire Extinguishers."

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product. Show door hardware, cabinet type, trim style, and panel style. Include roughing-in dimensions and details showing recessed-, semirecessed-, or surface-mounting method and relationships of box and trim to surrounding construction.

1.4 COORDINATION

A. Coordinate size of fire-protection cabinets to ensure that type and capacity of fire extinguishers indicated are accommodated.

B. Coordinate sizes and locations of fire-protection cabinets with wall depths.

1.5 SEQUENCING

A. Apply vinyl lettering on field-painted fire-protection cabinets after painting is complete.

PART 2 - PRODUCTS

2.1 FIRE-PROTECTION CABINET FEC

A. Cabinet Type: Suitable for fire extinguisher.

B. Cabinet Construction: Nonrated.

C. Cabinet Material: Cold-rolled steel sheet.

D. Semirecessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge (backbend).

1. Rolled-Edge Trim: 2-1/2-inch backbend depth.

E. Cabinet Trim Material: Steel sheet.

F. Door Material: Steel sheet.

G. Door Style: Fully glazed panel with frame.

H. Door Glazing: Tempered float glass (clear).

I. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.

1. Provide projecting lever handle with cam-action latch.
2. Provide manufacturer's standard hinge permitting door to open 180 degrees.

J. Accessories:

1. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as directed by Architect.

a. Identify fire extinguisher in fire-protection cabinet with the words " FIRE EXTINGUISHER."

1) Location: Applied to cabinet glazing.
2) Application Process: Pressure-sensitive vinyl letters.
3) Lettering Color: Red.
4) Orientation: Vertical.

K. Materials:

1. Cold-Rolled Steel: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B.

a. Finish: Baked enamel or powder coat.
b. Color: As selected by Architect from full range of industry colors and color densities.

2. Tempered Float Glass: ASTM C 1048, Kind FT, Condition A, Type I, Quality q3, 3 mm thick, Class 1 (clear).

2.2 FABRICATION

A. Fire-Protection Cabinets: Provide manufacturer's standard box (tub) with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated.

1. Weld joints and grind smooth.
2. Provide factory-drilled mounting holes.
3. Prepare doors and frames to receive locks.
4. Install door locks at factory.

B. Cabinet Doors: Fabricate doors according to manufacturer's standards, from materials indicated and coordinated with cabinet types and trim styles.

1. Fabricate door frames with tubular stiles and rails and hollow-metal design, minimum 1/2 inch thick.
2. Fabricate door frames of one-piece construction with edges flanged.
3. Miter and weld perimeter door frames.

C. Cabinet Trim: Fabricate cabinet trim in one piece with corners mitered, welded, and ground smooth.

2.3 GENERAL FINISH REQUIREMENTS

A. Comply with NAAMM's AMP 500, "Metal Finishes Manual for Architectural and Metal Products," for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces of fire-protection cabinets from damage by applying a strippable, temporary protective covering before shipping.

C. Finish fire-protection cabinets after assembly.

D. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine walls and partitions for suitable framing depth and blocking where semirecessed cabinets will be installed.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare recesses for semirecessed fire-protection cabinets as required by type and size of cabinet and trim style.

3.3 INSTALLATION

A. General: Install fire-protection cabinets in locations and at mounting heights indicated or, if not indicated, at heights acceptable to authorities having jurisdiction.

1. Fire-Protection Cabinets: 54 inches above finished floor to top of cabinet.

B. Fire-Protection Cabinets: Fasten cabinets to structure, square and plumb.

1. Unless otherwise indicated, provide recessed fire-protection cabinets. If wall thickness is inadequate for recessed cabinets, provide semirecessed fire-protection cabinets.
2. Provide inside latch and lock for break-glass panels.
3. Fasten mounting brackets to inside surface of fire-protection cabinets, square and plumb.

C. Identification: Apply vinyl lettering at locations indicated.

3.4 ADJUSTING AND CLEANING

A. Remove temporary protective coverings and strippable films, if any, as fire-protection cabinets are installed unless otherwise indicated in manufacturer's written installation instructions.

B. Adjust fire-protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly.

C. On completion of fire-protection cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.

D. Touch up marred finishes, or replace fire-protection cabinets that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by fire-protection cabinet and mounting bracket manufacturers.

E. Replace fire-protection cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 104413

SECTION 104416 - FIRE EXTINGUISHERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes portable, hand-carried fire extinguishers.

B. Related Requirements:

1. Section 104413 "Fire Protection Cabinets."

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product. Include rating and classification, material descriptions, dimensions of individual components and profiles, and finishes for fire extinguisher.

1.4 COORDINATION

A. Coordinate type and capacity of fire extinguishers with fire-protection cabinets to ensure fit and function.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."

B. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.

1. Provide fire extinguishers approved, listed, and labeled by FM Global.

2.2 PORTABLE, HAND-CARRIED FIRE EXTINGUISHERS

A. Fire Extinguishers: Type, size, and capacity for each fire-protection cabinet indicated.

B. Regular Dry-Chemical Type-: UL-rated- nominal capacity, with sodium bicarbonate-based dry chemical in manufacturer's standard enameled container.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine fire extinguishers for proper charging and tagging.

1. Remove and replace damaged, defective, or undercharged fire extinguishers.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install fire extinguishers in locations indicated and in compliance with requirements of authorities having jurisdiction.

END OF SECTION 104416

SECTION 122413 - ROLLER WINDOW SHADES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Manually operated roller shades with single rollers.

B. Related Requirements:

1. Section 061053 "Miscellaneous Rough Carpentry" for wood blocking and grounds for mounting roller shades and accessories.
2. Section 079200 "Joint Sealants" for sealing the perimeters of installation accessories for light-blocking shades with a sealant.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions for roller shades.

B. Shop Drawings: Show fabrication and installation details for roller shades, including shadeband materials, their orientation to rollers, and their seam and batten locations.

C. Samples for Initial Selection: For each type and color of shadeband material.

1. Include Samples of accessories involving color selection.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver roller shades in factory packages, marked with manufacturer, product name, and location of installation using same designations indicated on Drawings.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not install roller shades until construction and finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operating hardware of operable glazed units through entire operating range. Notify Architect of installation conditions that vary from Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 MANUALLY OPERATED SHADES WITH SINGLE ROLLERS

A. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch that stops shade movement when bead chain is released; permanently adjusted and lubricated.

1. Bead Chains: Manufacturer's standard.

a. Loop Length: Full length of roller shade.
b. Limit Stops: Provide upper and lower ball stops.
c. Chain-Retainer Type: Clip, jamb mount.

2. Spring Lift-Assist Mechanisms: Manufacturer's standard for balancing roller-shade weight and lifting heavy roller shades.

a. Provide for shadebands that weigh more than 10 lb or for shades as recommended by manufacturer, whichever criteria are more stringent.

B. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate operating mechanisms and weights and widths of shadebands indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of shadebands for service.

1. Roller Drive-End Location: Right side of inside face of shade.
2. Direction of Shadeband Roll: Regular, from back of roller.
3. Shadeband-to-Roller Attachment: Manufacturer's standard method.

C. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.

D. Roller-Coupling Assemblies: Coordinated with operating mechanism and designed to join up to three inline rollers into a multiband shade that is operated by one roller drive-end assembly.

E. Shadebands:

1. Shadeband Material: Light-filtering fabric.
2. Shadeband Bottom (Hem) Bar: Steel or extruded aluminum.

a. Type: Enclosed in sealed pocket of shadeband material.
b. Color and Finish: As selected by Architect from manufacturer's full range.

F. Installation Accessories:

1. Front Fascia: Aluminum extrusion that conceals front and underside of roller and operating mechanism and attaches to roller endcaps without exposed fasteners.

a. Shape: L-shaped.
b. Height: Manufacturer's standard height required to conceal roller and shadeband when shade is fully open, but not less than 4 inches .

2. Endcap Covers: To cover exposed endcaps.
3. Installation Accessories Color and Finish: As selected from manufacturer's full range.

2.2 SHADEBAND MATERIALS

A. Shadeband Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

B. Light-Filtering Fabric: Woven fabric, stain and fade resistant.

1. Source: Roller-shade manufacturer.
2. Type: PVC-coated fiberglass.
3. Weave: Mesh.
4. Thickness:.020 inches.
5. Weight: 8.8 oz/sq. yd.
6. Roll Width: 96 inches.
7. Orientation on Shadeband: Up the bolt.
8. Openness Factor: 22 percent.
9. Color: As selected by Architect from manufacturer's full range.

2.3 ROLLER-SHADE FABRICATION

A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1, including requirements for flexible, chain-loop devices; lead content of components; and warning labels.

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F :

1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which shade is installed less 1/4 inch per side or 1/2-inch total, plus or

minus 1/8 inch . Length equal to head-to-sill or -floor dimension of opening in which shade is installed less 1/4 inch , plus or minus 1/8 inch .

2. Outside of Jamb Installation: Width and length as indicated, with terminations between shades of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.

C. Shadeband Fabrication: Fabricate shadebands without battens or seams to extent possible except as follows:

1. Vertical Shades: Where width-to-length ratio of shadeband is equal to or greater than 1:4, provide battens and seams at uniform spacings along shadeband length to ensure shadeband tracking and alignment through its full range of movement without distortion of the material.
2. Skylight Shades: Provide battens and seams at uniform spacings along shadeband as required to ensure shadeband tracking and alignment through its full range of movement without distortion or sag of material.
3. Railroaded Materials: Railroad material where material roll width is less than the required width of shadeband and where indicated. Provide battens and seams as required by railroaded material to produce shadebands with full roll-width panel(s) plus, if required, one partial roll-width panel located at top of shadeband.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ROLLER-SHADE INSTALLATION

A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer's written instructions.

1. Opaque Shadebands: Located so shadeband is not closer than 2 inches to interior face of glass. Allow clearances for window operation hardware.

3.3 ADJUSTING

A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.4 CLEANING AND PROTECTION

A. Clean roller-shade surfaces after installation, according to manufacturer's written instructions.

B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of Substantial Completion.

C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

END OF SECTION 122413

SECTION 123661 - SIMULATED STONE COUNTERTOPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Solid-surface-material countertops and backsplashes.

1.3 ACTION SUBMITTALS

A. Product Data: For countertop materials.

B. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.

1.4 PROJECT CONDITIONS

A. Field Measurements: Verify dimensions of countertops by field measurements before countertop fabrication is complete.

1.5 COORDINATION

A. Coordinate locations of utilities that will penetrate countertops or backsplashes.

PART 2 - PRODUCTS

2.1 SOLID-SURFACE-MATERIAL COUNTERTOPS

A. Configuration: Provide countertops with the following front and backsplash style:

1. Front: Straight, slightly eased at top.
2. Backsplash: Straight, slightly eased at corner.
3. Endsplash: None.

B. Countertops: 3/4-inch- thick, solid surface material with front edge built up with same material.

C. Backsplashes: 3/4-inch- thick, solid surface material.

D. Fabrication: Fabricate tops in one piece with shop-applied edges and backsplashes unless otherwise indicated. Comply with solid-surface-material manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.

1. Fabricate with loose backsplashes for field assembly.
2. Install integral sink bowls in countertops in the shop.

2.2 COUNTERTOP MATERIALS

A. Solid Surface Material: Homogeneous solid sheets of filled plastic resin complying with ANSI SS1.

1. Type: Provide Standard Type unless Special Purpose Type is indicated.
2. Integral Sink Bowls: Comply with ISSFA-2 and ANSI Z124.3, Type 5 or Type 6, without a precoated finish.
3. Colors and Patterns: Match Architect's samples.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install countertops level to a tolerance of 1/8 inch in 8 feet .

B. Fasten countertops by screwing through corner blocks of base units into underside of countertop. Pre-drill holes for screws as recommended by manufacturer. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

1. Install backsplashes to comply with manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.

END OF SECTION 123661

SECTION 145800 - Pneumatic Tube System

PART 1 - GENERAL

1.1 SUMMARY

A. Pneumatic Tube System contractor shall design and provide two complete vacuum/pressure pneumatic tube systems ACC Model #800, where shown on Drawing, as specified herein, and as needed for a complete and proper installation. Such point-to-point systems shall be made up of One (1) "Master" station and One (1) "Sub" station. The system shall provide air-cushioned soft handling/soft delivery between a Master station and its slave station. Provide system controls, stations, blowers, carriers, control wiring, and all associated equipment necessary for a complete system.

B. One complete 4" OD and 8" OD Pneumatic Tube System cabinet location shall be coordinated with the General Contractor, Millwork Contractor, Architect and Owner for placement of Countertop Mount.

C. Customer kiosk shall be installed at the drive thru island as indicated on Drawings.

D. Two independent 120 volt blowers shall be provided in equipment room as indicated on Drawings.

1.2 QUALITY ASSURANCE

A. Pneumatic Tube System manufacturer must show proof of having at least 5 years experience in design and installation of 8" OD pneumatic tube system to transport vehicle license plates for other similar County Tax Office locations and must be submitted to the Owner for approval.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Air Communications Co, Inc. Contact: H.C. Weaver. Telephone 800-352-1333, email: aircom@sbcglobal.net

2.2 OPERATION

A. System shall be an on-demand operating system and blowers shall time out after each transaction.

2.3 SYSTEM DESIGN

A. The system shall be designed to transport legal documents and vehicle license plates from Tax Office to Customer Drive Thru locations. The 8" OD system shall be manufactured to include a captive carrier to eliminate the customer having to remove or replace transport carrier from system to retrieve vehicle license plates.

B. System will include automatic motor drive open/close doors.

C. Soft delivery of transport carriers.

2.4 OTHER EQUIPMENT

A. Electronically operated pass-thru drawer in Lane One

B. Lighted night depository with a 30" chest

C. Open/Close signs for drive thru lanes.

D. One Master Audio System with "sub" stations for all lanes.

PART 3 - EXECUTION

3.1 INSTRUCTIONS

A. Thoroughly and adequately instruct the Owner's operation and maintenance personnel in proper use, case and servicing of the work of this Section.

3.2 ELECTRICAL REQUIREMENTS

A. One 120 volt, 20 amp for blower #1 (4" OD system)

B. One 120 volt, 30 amp for blower #2 (8" OD system)

C. One 120 volt, 20 amp for pass thru drawer.

D. One 120 volt, 20 amp for night depository

E. One 120 volt, 20 amp for audio system

F. Two 3/4" conduits from under glass window counter to customer kiosk. One conduit to include a 120 volt 20 amp receptacle, One conduit to include pull string for pneumatic tube low voltage lines.

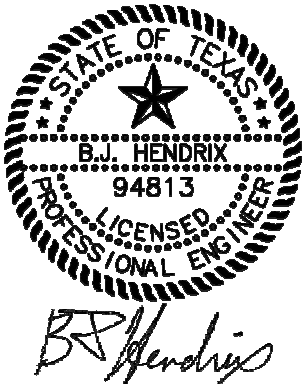
G. Two 3/4" conduits from pneumatic tube counter mounted system to blower location with pull string for low voltage lines.

H. 120 volt to open/close lane signs.

END OF SECTION 145800

WILLIAMSON COUNTY CEDAR PARK TAX OFFICE

Mechanical/Electrical Specifications



03/10/17

MEP/ENERGY CONSULTANTS

HCE HENDRIX CONSULTING ENGINEERS

COMMISSIONING • FIELD INVESTIGATIONS

115 E. MAIN
ROUND ROCK, TX 78664
F-4095

DIVISION 26
WILLIAMSON COUNTY
CEDAR PARK TAX OFFICE
ELECTRICAL SPECIFICATIONS

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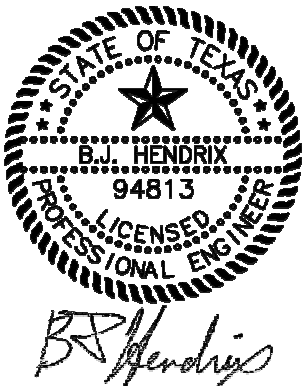

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DIVISION 20, 22 & 23
WILLIAMSON COUNTY
CEDAR PARK TAX OFFICE
MECHANICAL SPECIFICATIONS

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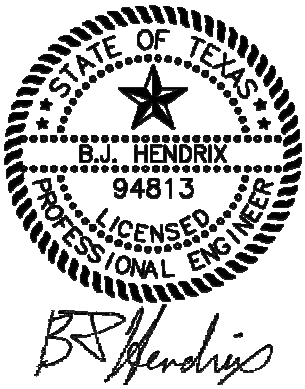

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SECTION 20 00 00 - GENERAL PROVISIONS

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. The work of Division 20-24 consists of providing labor, materials, products, and all operations required for the complete operating installation of all mechanical systems as shown and specified, in strict compliance with applicable drawings, specification, terms and conditions of the contract and all applicable codes and ordinances governing the installation of the various mechanical systems. Contractor shall provide all equipment and materials necessary and usually furnished in connection with such work and systems whether or not specifically mentioned in the specifications or on the drawings. All work shall be fully correlated with the work of other crafts. This section of Division 20-24 is a part of all other sections of Division 20-24.

B. Each Contractor shall study the Contract Documents included under this contract to determine exactly the extent of work provided under this contract, as well as to ascertain the difficulty to be encountered in performing the work on the drawings and outline hereinafter and in making new connections to existing utilities, installing new equipment and systems and coordinating the work with the other Trades.

C. Notwithstanding any approvals or instructions which must be obtained by the Contractor from the Architect in connection with use of premises, the responsibility for the safe working conditions at the site shall remain that of the Contractor's, and the Architect or Owner shall not be deemed to have any responsibility or liability in connection therewith.

D. The Agreement Forms, Uniform General Conditions, Supplementary Conditions, Division 00 and Division 01 of the specifications shall apply to the work specified in Division 20-24.

E. Additional Site Visit Costs: Contractor shall be charged with any cost resulting from uncompleted items that require additional site trips by the Architect/Engineer.

F. The Contractor shall obtain and pay for all permits and fees associated with his work.

G. REMODEL WORK: COORDINATE ALL CONNECTIONS OF NEW EQUIPMENT WITH EXISTING SERVICE. CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT, MATERIALS, AND INCIDENTAL ITEMS REQUIRED TO MAKE SYSTEM COMPLETE AND OPERABLE.

H. **NO TOXIC OR HAZARDOUS MATERIALS, INCLUDING BUT NOT LIMITED TO PRODUCTS OR MATERIALS CONTAINING ASBESTOS, PCB AND LEAD SHALL BE PROVIDED OR INSTALLED. ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113. ALL PAINTS MUST MEET VOC LIMIT OF GREEN SEAL ENVIRONMENTAL STANDARD GS-11. ALL INSULATION IS TO BE FREE OF UREA-FORMALDEHYDE AND/OR BE GREENGUARD CERTIFIED.**

I. An extra copy of all Field Reports shall be kept in a separate notebook set up in the Construction Manager's Trailer. Contractors shall use these reports to check off that each individual item noted has been completed. Each item shall be initialed and noted when completed. Use this notebook to keep record of all test and results (i.e. wastewater test, water line tests, etc.

J. **Drawings:**
Architectural Background Files – Architectural Revit Models and CAD files to be used for background files, MEP drawings are not background files. Architectural Revit Models and CAD files are used for shop drawings backgrounds. They must be obtained from the architect and cannot be given from the engineer. Reference Architect for cost of Architectural Files.

MEP Drawings – These drawings cannot be used for shop drawings, as they are diagrammatic in nature only. Actual shop drawings prepared by sub-contractors must be used for coordination between all trades. If MEP floorplan files are requested they may be obtained with a signed confidentiality release form, only as outlined below. These files may be used in conjunction with this project only. There are no guarantees of compatibility or accuracy; all technical support will be billed hourly at current Engineer's Rates. Engineer does not charge for actual file, but does charge for time required to prepare the files in format as requested by the Contractor. Fees will be based on Engineer's current hourly rates. Deposit of $500 must be paid prior to beginning file preparation and balance must be paid prior to release of any files. Total fee based on actual time required by Contractor's request. See submittal and shop drawing section for additional information.

MEP CAD Files that will be released.
- If no Architectural RCP is available for light locations. Lighting Floorplans will be released.
- Mechanical Floorplan will be released to Mechanical Contractor for aid in production of his own shop drawings. HCE mechanical drawings may not be submitted as shop drawings.
- Fire Alarm/Fire Sprinkler/Intercom etc… Contractors must use Architectural Backgrounds and Architectural RCP's (when available or lighting floorplan) and **Mechanical Contractor Shop Drawings** for coordination purposes. Do not request MEP floorplans, this will be cut and paste into an email for you to read.

1.02 PRE CONSTRUCTION MEETING

A. DDC Contractor, Mechanical Contractor, Test and Balance Representative and representatives for each type of HVAC gear that requires interface beyond 'on/off' control will meet in the office of HCE prior to initial control submittal.

B. The purpose of this meeting is to introduce all representatives who will need to coordinate with each other to insure a working project.

C. Each representative is to come prepared with sequences of operation, schematics and written instructions as to which points require what type of signal for each function and how tie-ins and integrations are to occur. If pulsed signals are required to keep a device on, bring it to the attention of the team and provide specific information. Do not assume others understand the inner workings of your gear or controls. Discuss exactly what type signals are acceptable to gear and how to set it up to receive and act on that signal.

D. Newer multistage air volume split systems, RTU's, etc. have different sequences and control tie-ins than older conventional units. Exact requirements for a given type and brand of equipment must be coordinated by the equipment supplier with the Controls Contractor and with the Test and Balance Contractor.

E. Test and Balance Contractor must verify air flow and delta T's at every stage of unit capacity to insure that unit is providing the correct CFM based on the capacity stage it is on so that the unit does not end up with low stage cooling and high stage blower which will not dehumidify. Equipment supplier is to provide Test and Balance Contractor with a quick start up guide to show where and how to set up fan speed selections and outside air dampers so that only minor balancing occurs at dampers serving grilles.

1.03 SITE INSPECTION

A. Prior to bidding the Contractor shall visit and examine the site verifying all existing items and familiarize himself with existing work conditions and understand the conditions which affect performance of the work of this Division before submitting bids for this work. The submission of bids shall be deemed as evidence of such visits and examinations.

B. All bids shall take the existing conditions into consideration and the lack of specific information on the drawings shall not relieve the Contractor of any responsibility. No subsequent allowance for time or money will be allowed for work or change related to failure to examine site conditions.

1.04 RELATED WORK SPECIFIED ELSEWHERE

A. All work covered by this section of these specifications shall be accomplished in accordance with the respective drawings, information or instructions to bidders, and general provisions of these specifications. Any supplementary conditions, special conditions, addenda, or directives which may be issued by the Owner's representative herewith or otherwise shall be complied with in every respect.

1. Electrical Specifications: Division 26-28.

2. Mechanical, Electrical, Plumbing Drawings

B. Unless otherwise indicated on the Electrical Drawings or in Mechanical Specifications, provide all mechanical equipment motors, motor starters, disconnect switches, thermal overload switches, control relays, time clocks, thermostats, motor valves, damper motors, electric switches, electric components, wiring, and any other miscellaneous Division 20-24 controls.

C. Carefully coordinate all work with the electrical work shown and specified elsewhere in these documents.

D. Motors: Furnish electric motors designed for the specific application and duty applied, and to deliver rated horsepower without exceeding temperature ratings when operated on power systems with a combined variation in voltage and frequency not more than plus or minus 10 percent of rated voltage.

E. Verify from the drawings and specifications the available electrical supply characteristics and furnish equipment that will perform satisfactorily under the conditions shown and specified.

F. Size motors for 1.15 service factor, not to exceed 40 degrees temp. Rise above ambient.

G. Provide self-resetting thermal overload switch for fractional horsepower motors.

H. Electrical Contractor to provide conduit and junction boxes for all sensors and exterior conduit for controls to mechanical equipment. Conduit for space sensor to extend from junction box to above accessible ceiling. Conduit for exterior equipment to extend from equipment through wall or roof to above an accessible ceiling. Any control wiring in exposed ceiling areas to be in conduit by Controls Contractor for protection. Controls Contractor to coordinate on all conduit requirements. Coordinate locations with Electrical Contractor.

I. When Mechanical Contractor furnishes motor starter, provide each three phase motor 25 HP and larger with phase failure and phase reversal monitoring relay in all three phases. Relay shall open motor starter contacts at 10% voltage unbalance and shall automatically reset when voltage returns to normal. Provide adjustable time delay set at .2 second on drop-out to prevent nuisance tripping on momentary voltage dips.

J. Duct smoke detector in supply and return air to be provided by Fire Alarm Contractor, installed by Mechanical Contractor, tied into HVAC control circuit by Mechanical Contractor and to fire alarm panel by Fire Alarm Contractor.

K. The electrical design and electrical drawings are based on the equipment and/or electric motors of the type, size and electrical characteristics shown and specified on the mechanical drawings and any change in equipment and/or motor size or type brought on directly or indirectly by a substitution of mechanical equipment having characteristics requiring a change, shall be the responsibility of the Mechanical Contractor and the entire cost of such change, including conduit, wiring, motor starting equipment, etc., shall be paid for by the Mechanical Contractor at no additional charge, unless the substitution was initiated by the Owner. Submittals must clearly show any deviations. Mechanical Contractor is responsible for coordinating any required changes with the Electrical Contractor, prior to Electrical Contractors ordering of panels and associated equipment.

L. Mechanical contractor assumes requirements of Controls Contractor when there is no separate Controls Sub-Contractor.

1.05 WORK NOT INCLUDED

A. Certain labor, materials, or equipment may be provided under other sections of these specifications, by utility companies, or by the Owner. When such is the case, the extent, source and description of these items will be as indicated on the Drawings or described in the specifications, but the Contractor is responsible for verifying with all parties involved as to the extent of his requirements of work.

1.06 SPECIFICATION TERMINOLOGY (Definitions)

A. Streamlining: In many instances, the products, reference standards, and other itemized specifications have been listed without verbiage. In these cases, it is implied that the Contractor shall provide the products and perform in accordance with the references listed.

B. "Furnish" means to purchase and deliver material as shown and specified, including mark-ups, and cart the material to an approved location at the site or elsewhere, as noted or agreed.

C. "Provide/Install", as used in these specifications, means furnish all material, labor, sub-contracts, and appurtenances, including mark-up required for a complete, operating, finished system.

D. "Rough-in and Connect Only" means provide an appropriate system connection, such as supplies with stops, continuous wastes with traps, shut-off valves required, and all piping connections, testing, etc., for proper operation, and to install equipment furnished. Equipment furnished is received, uncrated, assembled and set in place by supporting crafts unless they make prior arrangements to hire the mechanical installer for this work.

E. "Accessible" means arranged so that an appropriately dressed maintenance man may approach the area in question with tools and products necessary for the work intended, and may then position himself to properly perform the task to be accomplished, without disassembly or damage to the surrounding installation. It shall also be no more than four feet (4') above a ceiling.

F. "Serviceable" means arranged so that the component or product in question may be properly removed, and replaced without disassembly, destruction, or damage to the surrounding installation.

G. "Product" is a generic term which includes materials, equipment, fixtures, and any physical item used on the project.

H. Wherever the term "shown on drawings" is used in the specifications, it shall mean "noted", "indicated", "scheduled", "detailed", or any other diagrammatic or written reference made on the drawings.

I. "Conduit" includes, in addition to conduit, all fittings, hangers and other accessories relative to such conduit. "Piping" includes, in addition to piping, all fittings, valves, hangers and other accessories relative to such piping.

J. "Concealed" means hidden from sight in chases, furred spaces, shafts, hung ceilings, embedded in construction, crawl spaces, etc.

1.07 DIAGRAMMATIC DRAWINGS

A. Drawings and specifications encompass a system that will integrate with the structural, electrical, and Architectural design of the building.

1. Drawings and specifications are complementary, each to the other; what is shown on one is as binding as if called for in both.

2. Where drawing details, plans, and/or specification requirements are in conflict, and where conduit, duct and piping sizes of the same run are shown to be different between plans and specifications or details, the most stringent requirement will be included in the Contract. Systems and equipment called for in the specification and/or shown on the drawings shall be provided under the contract of each Trade as if it were required by both the drawings and the specifications. However, prior to ordering or installation of any portion of work which appears to be in conflict, such work shall be brought to the Architect's attention for direction as to what is to be provided.

B. The drawings are partly diagrammatic in character and do not show exact locations, all offsets or give exact elevation in piping, fittings, duct, conduits, etc. Also, the drawings do not necessarily show in minute detail all features of the installation. Contractor shall physically arrange the systems to fit in the space available and shall carefully investigate structural and finish conditions, arrange work accordingly and provide a complete and satisfactorily working installation. Provide all work shown on the drawings and specified, unless otherwise stated. No subsequent allowance will be made due to failure to coordinate work prior to installation.

C. The Architectural, Structural, Civil and Electrical plans and Specifications and other pertinent documents issued by the Architect are a part of these Specifications and the accompanying Mechanical Drawings and shall be complied and coordinated with in every respect. All drawings and specifications mentioned above shall be examined by all bidders. Failure to examine all drawings for coordination and quantities shall not relieve the Contractor of responsibility and no subsequent allowance for time or money will be allowed.

1.08 MATERIAL AND EQUIPMENT SUBMITTALS

A. Submittals: Provide submittals for all products and systems described in Division 20-24 and shown on the drawings to demonstrate compliance with the requirements of the project. Furnish equipment submittals in the manner described elsewhere in these specifications.

B. Submit to the Engineer, after the award of the contract or as dictated by project schedule, a type written list of those items of equipment and appurtenances which will be furnished. Include the name or description of the item, name of manufacturer, model or type, catalog number and manufacturer's printed information. The information submitted shall include overall dimensions, weights, voltage rating, phase, wiring diagrams, etc., and nameplate data. Assemble cut sheets into separate submittals as defined in this section or by Specification Section. Submit priority items and long lead time first. Then follow with remaining items. This will allow for faster review and response to accommodate project schedule. **Any submittal with all sections under one (1) cover will be returned and required to be broken into separate submittals.** The Engineer's check will be general and does not relieve the Contractor of final responsibility to comply with the Contract Documents in all respects.

C. Submittal review is for general design and arrangement only and does not relieve the Contractor from any of the requirements of the Contract Documents. Submittals will not be checked for quantity, dimension, fit or proper technical design of manufactured equipment. Where deviations of substitute product or system performance have not been specifically noted in the submittal by the Contractor, provision of a complete and satisfactory working installation is the sole responsibility of the Contractor. **Warranties cannot be reduced through the submittal process.**

D. Contractor shall indicate items being used on cut sheets by highlighting or arrowing to actual part number. Submittals may be returned without checking if submittals not appropriately marked.

E. **'Individual submittals' means separate submittals with unique submittal numbers for each specification section. Separate PDFs for each Submittal number.**

F. HARDCOPY SUBMITTAL REQUIREMENT: Hardcopy submittals will not be required by Engineer.

G. PDF SUBMITTAL REQUIREMENT:
For submittal sections listed below as allowed pdf's the following requirements must be met or the submittal will not get through email security and will be auto-deleted and not checked. Each specifications section must be a separate pdf file, **one giant pdf for all sections will be rejected**.

PDF FILE: MUST BE NAMED AS FOLLOWS:
JOB NAME – SUBMITTAL No. XX – SUBMITTAL DESCRIPTION

EMAIL TITLE/SUBJECT: FOR SUBMITTALS MUST BE AS FOLLOWS:
JOB NAME – SUBMITTAL No. XX – SUBMITTAL DESCRIPTION

Failure to follow these instructions will result in the submittal never reaching the engineer and not being checked. Delays cause by not following these procedures are the sole responsibility of the contractor. Emailed submittals must come from the Architect and must not be emailed directly from the contractor. Do not Carbon Copy the Engineer on Emailed submittals.

H. **Multiple re-reviews required due to Contractor not following instructions, specifications, etc. will be billed to Contractor at Engineer's current hourly rates. This shall be paid prior to submittal approval.**

I. **SUBMITTALS WILL BE RETURNED IN ORDER OF CONSTRUCTION OF THE PROJECT, NOT NECESSARILY IN ORDER SUBMITTED**. If all sections are submitted under one binder and transmittal, each section will be returned at the appropriate time for construction phasing. Mechanical Equipment will not be reviewed until "Mechanical/Electrical Coordination Sheet" has been submitted. Mechanical Equipment, Mechanical Controls and Plumbing Fixtures may required extended review time. **IF SUBMITTALS ARE SUBMITTED EARLY RELATIVE TO CONSTRUCTION PHASING, SUBMITTALS MAY BE HELD, REVIEWED AND RETURNED AT THE APPROPRIATE TIME FOR CONSTRUCTION PHASING, NOT NECESSARILY 2 WEEKS.**

J. **DO NOT SUBMIT THE FOLLOWING SECTIONS UNLESS DEVIATING FROM THE SCHEDULES/SPECIFICATIONS. Provide directly to General Contractor/CMR for inclusion into O & M Manuals. If deviating from the specifications submittal will be required. (Highlight items that are different to allow for proper review.):**

Isolators	Fire Smoke Dampers / Details
Relief Valves	Valves
Insulation	Gauges
Spin-in Fittings	Flexible Duct
Fire Dampers Installation Detail	Volume Damper
Fire Damper	Air Extractors
Valve Tag / Markers	Access Panels
Flexible Connector	Pipe Identification / Labels
Grease Traps	Duct Tape

K. **PDF Submittals Allowed** for Product Cut-Sheets for are limited to the following items: **Separate PDF for each Submittal number is required.**

Fire Sprinkler Product Data	Chillers
Air Handlers	Condensers
Internal Lining	Metal Jacket & Fittings
Exhaust Fans	Exhaust/Relief Caps
Supply Fans	Grilles/Registers/Diffusers
Unit Heaters	Controls
Pumps	Boilers
Water Heaters	Plumbing Fixtures and Trim
Cleanouts	Floor Drains
Condensing Units/Heat Pumps	Lint Trap
Acid Dilution Basin	Roof Opening Shop Drawings
Fire Proofing/Fire Caulk	Rooftop HVAC Units
Make up Air Units	Water Hammer Arrestors
Piping	Mechanical/Electrical Coordination Sheet

L. **Data Required for Review: Mark submittal literature and shop drawings clearly by individual sections, and include all equipment and material shown on drawings and specified. ANY DATA NOT CLEARLY MARKED OR NOT APPROPRIATELY SUBMITTED WILL BE RETURNED WITHOUT CHECKING. Indicate the following:**

1. Specification reference and/or drawing reference for which literature is submitted for review with an index, following specification format, and item by item identification.

2. Manufacturer's name and address, and supplier's name, address, and phone number.

3. Catalog designation or model number.

4. Rough-in data and dimensions.

5. Performance curves and rated capacities with performance data marked.

6. Motor characteristics and wiring diagrams.

7. Operation characteristics.

8. Complete customized listing of equipment, characteristics, accessories, etc., specified. Indicate whether item is "As specified." Mark out all non-applicable items. The terminology "As specified" used without this customized listing is not acceptable.

9. Wiring diagrams for the specific system operation. Complete wiring with diagrams showing all connections to each type of actual equipment being installed on project, complete with part numbers of controls for each type of equipment.

10. **Submit written sequence of operation for all modes of operation for each piece of mechanical equipment. Give narrative explaining exactly what control signals are required to activate <u>each</u> mode of a particular unit's operation. Include information about which signals override others internally (when applicable). Submit this information with equipment submittal and provide a copy to the Controls Contractor so it can be integrated into the control scheme and control submittals. Indicate whether 24 VAC, 4-20 MA, 0-10VDC or line voltage is required for controls.**

11. **Provide HVAC equipment with a controls interface that is suitable for connection to a standard conventional thermostat and/or non-proprietary DDC control systems.**

12. **Ductwork Shop Drawings: Engineer requires 1 (one) HARDCOPY, full-size at 1/8" scale, sheets size to match project for engineer review and engineer records. Additional copies per Architect and Owner requirements. PDF's will be required for owner and architect records.**

13. **<u>BREAKOUT SUBMITTALS INTO PRIORITY ITEMS.</u>**

M. **Contractor to submit "Mechanical/Electrical Equipment Coordination Sheet" with equipment submittal for all HETD's, RTU's, GU's, AHU's, CU's, HP's and MAU's. Reference chart at end of section.**

N. When requested, present samples of all materials proposed for use to the Engineer for his approval.

O. Certify Shop Drawings have been checked for compliance with Contract Documents. Certify that the materials submitted can be delivered and installed according to the construction schedule.

P. Select all other materials, not specifically described on the Drawings or in these specifications but required for a complete and operable facility, and submit to the Engineer for approval.

Q. **Substitutions:** ("Substitution Request" form must be submitted)

1. Equipment listed as equal is indicated to be equal in quality to equipment designed around. It does not mean equal in dimension or fit. It is the Contractor's responsibility to confirm dimensional differences and space requirements.

2. Request for proposed substitution of materials, methods, or processes shall be made to the Architect and if found acceptable, will be confirmed by an addendum to the Construction Documents. Where proposed substitutions are not incorporated into the Construction Documents by addendum **PRIOR** to time of the General Contract bid opening, all bids shall be held to have been made on the basis of the materials, methods and processes required by the Construction Documents.

3. Equal Materials: It is not the intent of the Specifications to limit materials to the product of any particular manufacturer. Where definite materials, equipment and/or fixtures have been specified by name, manufacturer or catalog number, it has been done so as to set a definite standard and a reference for comparison as to quality, application, physical conformity, and other characteristics.

4. Acceptance of substitution by the Engineer does not relieve the Contractor of responsibility for proper operation of the systems, compliance with specifications, necessary changes due to dimensional differences or space requirements, and of work on schedule.

5. Where equipment of the acceptable manufacturers requires different arrangement or connections from those shown, it shall be the responsibility of the Contractor to install the equipment to operate properly and in harmony with the original intent of the drawings and specifications. When directed by the Architect, the Contractor proposing substitutions shall submit drawings showing the proposed installation. If the proposed installation is approved, the Contractor shall make all necessary changes in all affected related work provided under other Sections, including location of rough-in connections by other Trades, conduit supports, insulation, etc. All changes shall be made at no increase in the Contract amount or additional cost to the other Trades and/or Owner.

6. **Submit fully completed "Substitution Request" form located at end of this section. If this form is not submitted, all substitution request will be automatically rejected.**

8. For substitutions that require substantial review by engineer to ensure equality, the contractor requesting substitutions shall reimburse the engineer at current hourly rates for all review time. This shall be paid prior to submittal approval. This applies to all equipment not previously approved on construction documents.

a. Mechanical Equipment

b. Contractor Cost Savings Packages Requiring Substantial Review Time

1.09 SHOP DRAWINGS REQUIRED

A. Prepare and submit working construction drawings as requested, specified, and otherwise necessary to demonstrate proper planning for installation and arrangement of all work. Layout drawings to scale and show dimensions where accuracy of location is necessary for coordination or communication purposes. Show work of all

trades, including Architectural, Structural, Mechanical, and Electrical items which may be pertinent to proper and accurate coordination. Provide shop drawings for all products, ductwork, systems, system components and special supports which are not standard catalog products and which may be fabricated for the Contractor or by the Contractor. Show top and bottom elevation of ductwork and equipment as it will be installed. Show offsets required to miss structural and other items of interference. Identify all shop drawings as to which section and paragraph of the specifications and/or drawing number the item is covered under. Ductwork layout/shop drawings to be done at a minimum 1/8" = 1'-0" scale. AHU's, CU's, HP's, RTU's, etc. are to be shown actual scaled size and configuration of the actual equipment being used.

B. Architectural Revit Models and CAD files to be used for backgrounds in preparation of ductwork and sprinkler shop drawings and shall be obtained from the Architect. Confirm requirements and stipulations for obtaining floor plan backgrounds with Architect and with other sections of specification. Engineer's drawings and CAD files **may not** be used for Shop Drawings. Reference 1.01-L.

C. ALL SHOP DRAWINGS OF MECHANICAL ROOMS/MEZZANINES SHALL SHOW ALL FLOOR DRAINS, HVAC, PLUMBING, AND ELECTRICAL EQUIPMENT, INCLUDING ELECTRIC PANELS, TRANSFORMERS AND DISCONNECT SWITCH LOCATIONS. COORDINATE WITH ELECTRICAL AND PLUMBING CONTRACTOR.

D. Provide roof shop drawing indicating dimensioned locations and sizes for all roof mounted equipment, supports, openings and plumbing vents in ample time for proper coordination of all trades.

E. Submission of copies of the Engineer's drawings does not constitute shop drawings and is not acceptable.

F. Submittal of complete engineering submittal data for products and equipment shall be made in sufficient copies to provide one (1) hardcopy of all data to be retained by the Engineer, additional copies as required by the Contractor, Architect and Owner. Provide an electronic copy in PDF format and CAD if available for record keeping purposes for Engineer, Architect, and Owner with close out documents described elsewhere in specifications.

G. General Contractor shall transmit a CAD copy of ductwork shop drawings to sprinkler contractor prior to submission of sprinkler shop drawings.

H. Ductwork shop drawings shall be submitted and reviewed prior to any ductwork being installed.

I. MECHANICAL CONTRACTOR MUST SUBMIT "MECHANICAL/ELECTRICAL COORDINATION SHEET" WITH MECHANICAL EQUIPMENT SUBMITTAL FOR PROPER COORDINATION PURPOSES WITH ELECTRICAL CONTRACTOR FOR ACTUAL EQUIPMENT BEING INSTALLED OR SUBMITTAL WILL BE REJECTED.

1.10 RECORD DRAWINGS

A. Reference requirements stated elsewhere in the Specifications.

B. THE CONTRACTOR SHALL TAPE ALL ADDENDA'S ISSUED DURING BIDDING TO HIS CONSTRUCTION AND RECORD DRAWING SET PRIOR TO COMMENCING CONSTRUCTION. PAY REQUESTS WILL NOT BE PROCESSED UNTIL THE CONTRACTOR HAS COMPLIED WITH THIS REQUIREMENT.

C. In addition to other requirements, a master Record Drawing print set (separate from field sets) shall be kept in the General's site trailer and marked up weekly as the work progresses, to show exact dimensioned location and routing of all mechanical work which will be permanently concealed. Show routing and location of items cast in concrete or buried underground. Work located in spaces with access, or above suspended ceilings, is not considered permanently concealed. Show complete routing and sizing of any significant revisions to the systems shown. Show the location of all valves and their appropriate tag identification. Indicate locations of all existing active and inactive piping uncovered during construction. **Keep marked up set at site for review at site meetings.**

D. The marked-up and colored-up prints will be used as a guide for determining the progress of the work installed for draw requests. They shall be inspected periodically by the Architect and Owner's Representatives, and they shall be corrected immediately if found either inaccurate or incomplete. **This procedure is mandatory.**

E. The Contractor shall be responsible for updating and/or marking all items, including but not limited to floor plan changes, system changes, addendums, change orders, etc. on the prints to “As-Built” conditions. At the completion of the job, marked up As-Built Drawings shall be submitted to the Architect for final review and comment. These corrected prints together with corrected prints indicating all the revisions, additions and deletions of work, shall form the basis for preparing a set of record drawings.

F. Using the “Record Drawing Set”, the Contractor shall print two (2) complete sets of prints one for submission to the Owner and one rolled in a 4” PVC pipe in main electric room mounted to wall and labeled. Tape all edges. The contactor shall provide pdf copies/scans for owner record purposes.

G. The Contractor shall bear all the costs of producing the “Record Drawing Set”.

H. All equipments **model and serial numbers** must be included on start up forms turned in to the owner. For split systems, this includes all model and serial numbers for all indoor sections or components as well as outdoor units. These are required for owner inventory and for processing of any utility rebate forms. Utility rebates require the model and serial numbers associated with a given unit number to match in case the job is spot checked prior to issuing a rebate

1.11 CODES, REGULATIONS AND ORDINANCES

A. All work shall comply with the current applicable local, state and federal codes and ordinances. Follow recommended practices as set down by ASME, SMACNA, ASHRAE, NFPA, applicable Building Code, applicable Mechanical Code, applicable Plumbing Code, National Electrical Code (NEC), AGA, ADA AND OSHA, as they apply to this project, except in cases where local statutes govern. The contractor shall verify with the latest adopted local codes, ordinances and amendments that apply to this project with the authority having jurisdiction. **PROVIDE LOCKING REFRIGERATION ACCESS PORT CAPS FOR ALL EQUIPMENT WITH REFRIGERANT LOCATED OUTDOORS ON GROUND OR ON ROOF.**

B. In cases of difference between Building Codes, State Laws, Local Ordinances and Industry Standards and the Contract Documents, each Subcontractor shall promptly notify the Architect in writing of any such difference, as applicable to his work.

C. In case of conflict between the Contract Documents and the requirements of any Code or Authorities having jurisdiction, the most stringent requirements of the aforementioned shall govern.

D. Should the Contractor perform any work that does not comply with the requirements of the applicable Building codes, State laws, Local Ordinances and Industry Standards, he shall bear all costs arising in correcting the deficiencies, as approved by the Architect.

1.12 DELIVERY AND STORAGE OF EQUIPMENT AND MATERIAL

A. All equipment and materials shall be protected from physical, moisture absorption, metallic corrosion and weather damage from the time of delivery until completion of the project. This includes erection of temporary shelters and covering items in the building with protective covering. Store items subject to moisture damage such as controls in dry, heated space. Failure to comply with the above to the satisfaction of the Owner/Architect will be sufficient cause for the rejection of the equipment or material in question. Upon such rejection, the damaged equipment or material will be completely replaced with new by the Contractor at no charge to the Owner.

B. Provide covers on all ends and openings of pipes, conduits, ducts, etc. to keep out insects, dirt, dust and debris during entire construction process. This includes properly covering unassembled ductwork, etc. stored on jobsite prior to installation.

C. The Manufacturer's directions are to be followed from delivery, storage, protection and installation of equipment and materials. Notify the Architect in writing of conflicts between requirements of Contract Documents and manufacturer's direction.

D. Large pieces of equipment which are too large to permit access through doors, stairways or access opening shall be placed in the space before enclosing the structure. After equipment is placed, it shall be thoroughly protected from damage.

1.13 CLEAN-UP

A. Remove debris and waste materials from within the construction areas and transport off-site, daily.

B. Keep the construction area clean, free from hazard, and orderly arranged.

C. Pay all costs of waste removal and disposal. Reference General Conditions for further information.

D. Dispose of waste materials in accordance with all regulations which govern.

E. Take all precautions to protect persons who enter the construction area from hazardous conditions, hazardous waste, toxic waste, or other unsafe conditions.

F. Upon completion of construction, remove all debris, waste materials, unused materials, temporary constructions, vehicles, tools, fencing, etc. to Owner’s satisfaction.

G. All equipment and materials shall be protected from physical moisture absorption, metallic corrosion and weather damage from time of delivery to completion of project. Replace any damaged materials.

PART 2 – PRODUCTS

2.01 EQUIPMENT AND MATERIALS

A. Unless otherwise indicated, provide only new equipment and materials.

B. On all major equipment components, provide manufacturer's name, address, model number, and serial number permanently attached in a conspicuous location.

C. All materials furnished under these specifications shall be the standard product of manufacturer's regularly engaged in the production of such equipment and shall be the manufacturer's latest approved standard design.

D. GUARANTEE

1. The Contractor and Manufacturers shall provide a ONE (1) YEAR guarantee for all work under the Electrical, HVAC, Plumbing and Fire Protection Trade. However, such guarantees shall be in addition to and not in lieu of all other liabilities which the manufacturer and Contractor may have by law or by other provisions of the Contract Documents. **In any case, such guarantees and warranties shall commence when the Owner accepts the mechanical/electrical system, as determined by the Architect, and shall remain in effect for a period of TEN (10) YEARS thereafter.**

2. All materials, items of equipment and workmanship furnished under each Section shall carry a ONE (1) YEAR warranty against all defects in material and workmanship. Any fault under any Contract, due to defective or improper material, equipment, workmanship or design which may develop shall be made good, forthwith, by and at the expense of the Contractor for the work under his Contract, including all other damage done to areas, materials and other system resulting from this failure.

3. The Contractor shall guarantee that all elements of the system, which are to be provided under his Contract, are of sufficient capacity to meet the specified performance requirements as set forth herein or as indicated.

4. Upon receipt of notice from the Owner of failure of any part of any systems or equipment during the guarantee period, the affected part or parts shall be replaced by the Contractor for his respective work, as applicable.

5. Additional extended guarantee's required for work on this project. The additions and/or extensions to the standard one year guarantee previously described are to be provided in writing, by the manufacturer or an approved insurance underwriter. The guarantee is to cover all parts and/or labor as specified below.

PART 3 - EXECUTION

3.01 CUTTING AND PATCHING

A. The Contractor shall notify the General Contractor and other Subcontractors in ample time of the location of all chases, sleeves and openings required in the construction for the proper installation of his work. The Contractor shall do all core drilling of individual holes and all cutting for his work except square or rectangular openings in the structural slabs which shall be cut by the Contractor at locations shown on the drawings. In no case, however, shall a beam or column be cut without the approval of the Project Structural Engineer.

B. On completion of this work or as work progresses the Contractor shall make all repairs and do all patching required as a result of the work under this contract. All patching shall be performed in a manner that will restore the surrounding work to its original conditions and to the satisfaction of the Owner.

C. Any cutting and patching necessary as a result of the Contractor's failure to notify the General Contractor of all the required openings shall be at the expense of the Contractor.

3.02 OBLIGATIONS/RESPONSIBILITIES

A. The Contractor binds himself, his partners, successors, assigns and legal representatives to the Owner in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract or sublet it as a whole without the written consent of the Architect/Owner, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the Owner/Architect.

B. The Contractor shall supervise and direct the Work using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, safety, sequences and procedures, and for coordinating all portions of the work under his Contract.

C. The Contractor shall provide, without extra charge, all incidental items required as a part of the work, even though not particularly specified or indicated, and if he has good reason for objecting to the use of a material, appliance, or type of construction shown or specified, he shall register his objections with the Architect/Engineer, in writing; otherwise, he shall proceed with the work under the stipulation that a satisfactory job is required.

3.03 TESTS AND INSPECTIONS

A. Schedule, obtain, and pay for all fees and/or services required by local authorities and by these specifications, to test the mechanical systems as specified in these specifications.

B. Request for Tests: Notify the Architect a minimum of 24 hours in advance of tests. In the event the Architect does not witness the test, certify in writing that all specified tests have been made in accordance with the specifications.

C. Deficiencies: Immediately correct all deficiencies which are evidenced during the test and repeat test until system is approved. Do not cover or conceal piping, equipment or other portions of the mechanical installations until satisfactory tests are made and approved.

D. Operating Tests: Upon request from the Architect, place the entire mechanical installation and/or any portion thereof, in operation to demonstrate satisfactory operation.

E. Log of Tests: The Contractor shall set up a testing log form to be kept at the job site with the record drawings. All tests shall have pertinent data logged at the time of testing. Pertinent data is to include: date, time, description, personnel, system tested (and extent), test conditions, test results, etc.

F. Completion: Upon completion of the mechanical installation, demonstrate to the Architect's satisfaction that the systems have been installed in a satisfactory manner in accordance with the plans, specifications, and applicable codes. Demonstrate dynamic operation of all systems. Show that all controls are operable and are properly adjusted in accordance with the requirements of the final systems balance, that all systems are properly balanced, that all equipment operates properly, that filters and strainers are clean, and that all components of all systems are installed and adjusted for proper operation.

1. Prior to final inspection, all work under this Division to be completed, insure all equipment is operational and final testing and balance reports have been submitted and approved.

3.04 OPERATING INSTRUCTIONS

A. Prior to final acceptance, instruct an authorized representative of the Owner on the proper operation and maintenance of all mechanical systems, equipment, and controls under this contract. Make available a qualified technician for each component of the installation for this instruction. Give these operation instructions after the operation and maintenance manuals have been furnished to the Owner. Submit written certification, signed by the Contractor, and an authorized representative of the Owner, that this has been completed.

3.05 COORDINATION OF WORK

A. Each Contractor shall compare his Drawings and Specifications with those of other Trades and report any discrepancies between them to the Architect and obtain from the Architect written instructions to make the necessary changes in any of the affected work. All work shall be installed in cooperation with other Trades installing interrelated work. Before installation, all trades shall make proper provisions to avoid interferences in a manner approved by the Architect.

B. Each Contractor shall coordinate the location of his systems so that all outside air intakes are located in such a way as to prevent cross-contamination from plumbing vents, flue pipes, exhaust fans, etc. Such a distance shall be not less than 10 feet.

C. Locations of conduit, ducts, piping, sprinkler heads and equipment shall be adjusted to accommodate the work with interferences anticipated and encountered. Exact routing and location of system shall be determined prior to fabrication or installation. Coordinate routing of major electrical conduits with Electrical Contractor prior to fabrication of ductwork and piping.

D. Offsets and changes of direction in all conduit, ducts and piping systems shall be made as required to maintain proper headroom and pitch of sloping lines whether or not indicated on the drawings.

E. Where discrepancies in scope of work as to what Trade provides items, such as starters, disconnects, flow switches and the like exist, such conflicts shall be reported to the Architect prior to signing of the Contract. If such action is not taken, the various Trades shall furnish such items as part of their work for complete and operable systems and equipment, as determined by the Architect.

F. The HVAC, Plumbing and Fire Protection Subcontractors shall verify with Electrical Subcontractor the available electrical characteristics for all motors and equipment before ordering and submitting of respective gear. Verify actual connection points prior to installation and roughing-in. Mechanical and Electrical Contractor are responsible for coordination of electrical requirements and final fuse sizes of all A/C equipment. When Mechanical Contractor substitutes equipment that requires additions or upgrades to electrical system, he shall bear all costs arising from such substitutions. Reference "Mechanical/Electrical Coordination Sheet" in specifications.

G. The Contractors are to avoid routing conduit through fire rated assemblies where practical. Each trade is responsible for proper coordination of required sleeves or block-outs with rated assembly installers. Each trade is responsible for providing sleeves, as required, for his work. Each trade shall verify acceptable tolerances around penetrating item in fire assembly before beginning fire sealing.

H. Mechanical Contractor and Controls Contractor shall coordinate all requirements of equipment and controls to insure a fully operational system.

I. Coordinate all plumbing rough-in through floor(s) with structural concrete TEE's/structural steel. Do not pass through stem of TEE's.

3.06 OPERATION AND MAINTENANCE MANUALS

A. Provide one (1) Operation and Maintenance manual for training of Owner's personnel in operation and maintenance of systems and related equipment in the manner described elsewhere in these specifications. In addition, organize manuals and include data and narrative as noted below (bind each manual in a hard-backed loose-leaf binder. Use 8-1/2" x 11" white paper). Provide PDF copy of O&M for owner records

B. Operating Sequence and Procedures:

1. Contents: In each chapter, describe the procedures necessary for personnel to operate the system and equipment covered in that chapter. Also, include a copy of System Balancing Report.

2. Typewritten Operating procedures: Write procedures for start-up, operation, and shutdown.

a. Start-up: Give complete step-by-step instructions for energizing equipment, making initial setting and adjustments whenever applicable.

b. Shutdown Procedure: Include instructions for stopping and securing the equipment after operation. If a particular sequence is required, give step-by-step instruction in that order.

C. Maintenance Instructions:

1. Provide a schedule of preventive maintenance for each product. Recommend frequency of performance for each preventive maintenance task: i.e., cleaning, inspection, etc.

D. Manufacturer's Brochures: Include manufacturers' descriptive literature covering all appurtenances used in each system, together with illustrations, exploded views and renewal parts lists. Provide nearest manufacturers' representatives name, address and phone number.

E. Shop Drawings: Provide a copy of all corrected, approved submittals and shop drawings covering equipment for the project either with the manufacturers' brochures or properly identified in a separate subsection.

F. Spare Parts Lists: Include a list of all equipment furnished for project, with a tabulation of descriptive data of all the spare parts proposed for each type of equipment or system. Properly identify each part by part number and manufacturer.

G. All major Owner training sessions to be videotaped in non-pixelated video in Windows file format,

3.07 OPERATION PRIOR TO COMPLETION

A. When any piece of mechanical or electrical equipment is operable and it is the advantage of the Contractor to operate the equipment, he may do so providing that he properly supervises the operation. **All HVAC equipment shall be shut down when painting, sanding and**

similar construction operations detrimental to the equipment are being done. The warranty period shall, however, not commence until such time as the equipment is operated solely for the benefit of the Owner at his request or as listed in 'C'. Contractor shall clean any ductwork and equipment that is dirty due to equipment operation or improper protection.

B. Any units that are operated during construction shall have filter media (Fiberbond Dual-Ply DustLok Media) placed over the exterior of return air grilles. Media shall be changed as frequently as required to keep ductwork clean.

C. Regardless of whether or not the equipment has been operated, the Contractor shall properly clean the equipment, install clean filter media, properly adjust the equipment and complete all punch list items before final acceptance by the Owner. The day following final acceptance by the Owner will be the start date of the warranty period.

3.08 RECORD FOR OWNER

A. Each Contractor shall accumulate and bind in an "Operating and Maintenance" manual the following data to be presented to the Owner at the completion of the Project.

1. All warranties and guarantees and manufacturer's instruction on equipment and material covered by the contract.

2. Approved equipment brochures, wiring diagrams and control diagrams.

3. Copies of approved shop diagrams.

4. Operating instructions for heating and cooling and other mechanical systems. Operating instructions shall also include recommended maintenance and seasonal changeover procedures.

5. Repair parts lists of all major items and equipment including name, address and telephone number of local supplier or agent.

6. Valve tag charts and diagrams herein before specified.

7. HVAC balance and test results.

8. HVAC equipment start-up forms that include model and serial numbers of each piece of mechanical equipment installed, by unit mark number. For split units provide this information for all components.

9. "As-Built" Drawings as specified under "Construction Drawings" (these are not to be bound in the O&M Manual).

B. Provide reduced set of record drawing (11 x 17) indicating location and mark number of all mechanical equipment.

3.09 SITE OBSERVATION

A. Periodically, the Engineer will visit the site and review the construction progress. Field Reports will be issued noting any discrepancies or items that do not meet the intent of the contract documents found during said site visit. The contractor must answer each item listed on each field report, item by item.

B. It shall be the duty of the Contractor to personally make a careful inspection trip of the entire project, assuring himself that the work on the project is ready for final acceptance before calling upon the Owner, Architect or Engineer to make final acceptance of the work. Subsequent trips required because of Contractor's failure to do so, will be made at Contractor's expense.

C. The final acceptance of the work will be made jointly by the Architect and the Owner.

3.10 MECHANICAL/ELECTRICAL

A. **Contractor to submit Mechanical/Electrical equipment coordination sheet with equipment submittal for actual equipment (HETD's, RTU's, AHU's, CU's, HP's, Airhawks, AFU's, MAU's, etc) being installed. Reference chart at end of section. This is for Contractor coordination purposes.**

CEDAR PARK TAX OFFICE **SECTION 20 00 00**
WILLIAMSON COUNTY **GENERAL PROVISIONS**

MEP/ENERGY CONSULTANTS
HENDRIX CONSULTING ENGINEERS
COMMISSIONING • FIELD INVESTIGATIONS
115 East Main Street Round Rock, Texas 78664
PH: (512) 218-0060 FIRM F-4095 FAX: (512) 218-0077

PRE-CONSTRUCTION INSTRUCTION SHEET

Submittal/RFI Requirements

A. 'Individual submittals' means separate submittals with unique submittal numbers. One single giant PDF will be rejected.

B. 3 Submittal CATEGORIES (Reference Specifications)

a. Not required unless deviating from specification

b. PDF allowed.

PDF SUBMITTAL/RFI FILE TITLE REQUIREMENT:
For submittal sections listed below as allowed pdf's the following requirements must be met or the submittal will not get through email security and will be auto-deleted and not checked. Each pdf submittal must be a separate pdf file.

PDF FILE: MUST BE NAMED AS FOLLOWS:
JOB NAME – SUBMITTAL No. XX – SUBMITTAL DESCRIPTION
JOB NAME – RFI No. XX – RFI DESCRIPTION

Example: Texas ISD ES No. 2 – Submittal 8 – Plumbing Fixtures
Example: Texas ISD ES No. 2 – RFI 3 – Library Light Fixture Mounting Height

EMAIL TITLE/SUBJECT REQUIREMENTS:
Emails without Job Name and proper format will not get through email security and will be auto-deleted and not checked.

JOB NAME – SUBMITTAL No. XX – SUBMITTAL DESCRIPTION
JOB NAME – RFI No. XX – RFI DESCRIPTION

C. If submittals are submitted early relative to construction phasing, submittals may be held, reviewed and returned at the appropriate time for construction phasing, not necessarily 2 weeks. In some cases, if submittals are received vastly out of order of construction, submittal may be rejected.

D. Time Critical Submittal Coordination Items

Mechanical to provide to General Contractor for Structural Roof Coordination

a. Mechanical to provide roof opening shop drawing as early as possible for structural coordination. Per specifications.

Mechanical to provide to General and Electrical Contractors for Gear Coordination

b. Mechanical to complete "MECHANICAL/ELECTRICAL COORDINATION SHEET" prior to electrical gear submittals for coordination with electrical contractor. Per specifications.

E. **Do not submit non pre-approved substitutions during submittal time. These submittals will be automatically REJECTED. Substitution Pre-approval was at bid time.**

F. **Review time for multiple resubmittals of non-approved equipment will result in Contractor being billed for review time that is not part of Engineer's Scope. Engineer will bill Contractor at Engineer's Current hourly rates.**

G. **Email of all Submittals/RFI's must go directly to Architect. Do not Copy Engineer.**

H. **Engineer is not the Contractors plan reference resource. Do not submit an RFI until drawings and specifications have been reviewed first. If the answer is clearly on the drawings the response will be "The answer is clearly on the drawings, Engineer is not the Contractors plan reference resource."**

I. **Call before submitting a written RFI.**

J. **All formal Job emails must come from Architect.**

K. **Do not email send recurring jobsite meeting requests to Engineer. Engineer does not attend all weekly meetings. Architect will coordinate when Engineer is to be required at job site for specific meetings.**

Shop Drawings and Cad Files

A. Contractor Shop Drawings must use Architectural Backgrounds and Architectural RCP's (when available or lighting floorplan) and **Mechanical Contractor Shop Drawings** for coordination purposes. Do not request MEP floorplans, this will be cut and paste into an email for you to read. Engineer cannot send architectural backgrounds.

B. If no Architectural RCP is available for light locations. Lighting Floorplans will be released.

C. Mechanical Floorplan will be released to Mechanical Contractor for aid in production of his own shop drawings. HCE mechanical drawings may not be submitted as shop drawings.

D. Fire Alarm, Sprinkler, Intercom etc. all to use Architectural Backgrounds, must be obtained from Architect.

E. Schedule and Details sheets will not be released.

CEDAR PARK TAX OFFICE **SECTION 20 00 00**
WILLIAMSON COUNTY **GENERAL PROVISIONS**

MEP/ENERGY CONSULTANTS
HCE HENDRIX CONSULTING ENGINEERS
COMMISSIONING • FIELD INVESTIGATIONS

MECH / ELEC EQUIPMENT COORDINATION SHEET

MARK #	UNIT TYPE	MANUFACTURER'S RECOMMENDED MOCP	VOLTAGE	PHASE	MARK #	UNIT TYPE	MANUFACTURER'S RECOMMENDED MOCP	VOLTAGE	PHASE

END OF SECTION

SECTION 20 01 00 - BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.01 DESCRIPTION

A. This section describes specific requirements, products, and methods of execution which are typical throughout the mechanical work of this project. Additional requirements for the specific systems will be found in the sections specifying those systems, and supersede these requirements.

B. SPECIAL NOTE: All provisions and divisions of these specifications are a part of this section of these specifications. The Contractor shall consult these divisions and provisions in detail for instructions and include all items pertaining to this work. The Contractor shall consult all other divisions of these specifications, determine the extent of impact on the work required to complete the work required by this section of the specifications or portion thereof and related work shown on the drawings.

1.02 JOB CONDITIONS

A. Obtain approval from Architect prior to cutting any structural elements or furring members.

B. Structural Interferences: Should structural members prevent the installation of piping, ducting or equipment, notify the Architect before proceeding.

C. Consider minor changes in position of equipment, piping, or ducting, as part of the contract at no additional cost to the Owner.

D. Coordinate with Structural and Architectural work to determine acceptable locations for sleeves and supports which are required but may not be specifically shown on the plans. SCHEDULE INSTALLATION OF SLEEVES AND SPECIAL SUPPORTS IN MANNER TIMELY TO THE WORK OF OTHER CRAFT. Anticipate minor offsets necessary for proper coordination with other work, and reroute systems appropriately.

E. It is the Contractor's responsibility to properly use all information found on the Architectural, Structural, Civil and Electrical Drawings where such drawings affect his work.

1.03 DIMENSION AND FIT

A. Cut materials accurately from measurements taken on the JOB SITE.

B. Do not spring or bend pipe to fit conditions or make up joints.

1.04 INTERFERENCES

A. Interferences between piping and other trades shall be handled by giving precedence to pipe lines requiring grade for proper operation. Where space requirements conflict, the following order of precedence shall generally be observed.

1. Building Lines

2. Structural Members

3. Soil and Drain Piping

4. Vent Piping
5. Refrigerant Piping
6. Supply, Return, O/A Ductwork
7. Exhaust Ductwork
8. Chilled and Hot Water Piping
9. Domestic Hot and Cold Water Piping
10. Natural Gas Piping
11. Electrical Conduit
12. Fire Protection Piping

1.05 SERVICEABILITY OF PRODUCTS

A. Furnish all products to provide the proper orientation of serviceable components to access space provided.

B. Coordinate installation of piping, ductwork, equipment, coils, system components, and other products to allow proper service of all items requiring periodic maintenance or replacement.

C. **Replace or relocate all products incorrectly ordered or installed to provide proper serviceability.**

1.06 ACCESSIBILITY OF PRODUCTS

A. Arrange all work to provide permanent, convenient, and safe access to all serviceable and/or operable products. Layout work to optimize net usable access space within confines of space available. Advise Architect, in a timely manner, of areas where proper access cannot be maintained. Furnish layout drawings to verify this claim, if requested.

B. Provide access doors in ceilings, walls, floors, etc., for access to traps, valves, dampers, automatic devices, and all serviceable or operable equipment in concealed spaces. Location of panels shall be submitted for approval in sufficient time to be installed in the normal course of work.

1.07 ROUTING

A. Route all pipelines and ductwork parallel with building lines, and as high as possible, except where under ground or shown otherwise on the plan.

B. Route piping and ducts to clear all doors, windows, and other openings and to avoid all other pipes and ducts, light fixtures, and similar products.

C. Conceal all pipes and ducts where routed through finished areas, unless authorized by Architect or otherwise indicated on plans.

PART 2 - PRODUCTS

2.01 MATERIAL PRODUCTS

A. Provide all products new, unused, and undamaged, of standard manufacture, and of latest design and best quality. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113. ALL PAINTS MUST MEET VOC LIMIT OF GREEN SEAL ENVIRONMENTAL STANDARD GS-11. ALL INSULATION IS TO BE FREE OF UREA-FORMALDEHYDE AND/OR BE GREENGUARD CERTIFIED.**

B. When a manufacturer's name appears in these specifications or schedule, it is not to be construed that the manufacturer's material does not have to meet the full requirements of the specifications or that his standard catalogue item will be acceptable.

C. All equipment installed on this project shall have local representation, local factory authorized service and local stock of repair parts.

D. All materials exposed within a plenum shall be noncombustible or shall have a flame spread index of not more than 25 and a smoke developed index of not more than 50 when tested in accordance with ASTM E 84.

2.02 Where more than one type of material (i.e., cast iron or PVC) is specified, the Contractor may choose one type; however, he must state which type of material he proposes to use in his submittal. ONLY ONE TYPE OF MATERIAL MAY BE USED IN A SPECIFIC PIPING SYSTEM, UNLESS SPECIFICALLY NOTED OTHERWISE. (I.E. WHEN DIFFERENT SIZES OF THE SAME TYPE SYSTEM REQUIRE DIFFERENT MATERIALS PER SPECIFICATIONS.)

2.03 PIPE AND FITTINGS

A. Steel Pipe: **All steel piping and fittings are to be domestically manufactured (USA).**

1. PROVIDE DOCUMENTATION IN SUBMITTAL STATING LOCATION OF MANUFACTURING.

2. Threaded: Schedule 40, ASTM A53 grade B or ASTM A120, American Standard pipe thread. Pipe 2" and under to be made up with threaded fittings.

3. Welded: Schedule 40 black, ASTM A53 grade B or ASTM A120, ANSI B16 butt weld fittings of type and wall thickness to suit pipe. Weld-O-Lets and Thread-O-Lets may be used on pipe 2-1/2" and larger where branch is a minimum of two pipe sizes smaller than main. Pipe 2-1/2" and over to be made up with welded fittings. Pipe 2” and under to be made up with threaded fittings.

4. Grooved Pipe: Schedule 40 ASTM A120 or ASTM A53 grade. Standard cut or rolled groove to coupling manufacturer's specifications. Do not use in systems exceeding 200^{O} F. operating temperature.

a. Couplings: Standard weight with gasket selected by manufacturer for service intended.

b. Fittings: Full flow malleable iron, ductile iron or steel.

c. Submit calculations of expansion allowance of joints and obtain approval prior to eliminating any special expansion compensators, swing joints, flexible connections, or vibration isolators.

d. Manufacturers: Victaulic or Gruvlok.

B. Copper pipe:

1. Type "K" or "L" hard drawn copper with wrought copper fittings with openings machined to accurate capillary fit for the pipe. Pipe to conform to Standard Specifications for copper water tube. Type 'M' may only be used for A/C condensate drain lines.

2. Use "lead free" (0.00% lead content) solder for all domestic water piping. Submittal on the product to be used must include this information. Lead free solder to conform to ASTM B 32 and flux to conform to ASTM B 813. Soldered joints must be done in accordance with ASTM B 828. Lead free shall mean a chemical composition equal to or less than 0.2 percent lead.

3. Solder joints using 50/50 lead tin solder for systems operating below 180^{O} F.

4. Solder joints using 430 silver solder for systems operating at 180^{O} F. or above.

C. Domestic Copper Pipe (2" and larger): (Contractor Option)

1. Copper tubing systems from two inches (2") through six inches (6") shall be installed using mechanical pipe couplings of a bolted type with a central cavity design pressure-responsive gasket along with grooved end copper fittings.

2. All copper tubing shall be prepared in accordance with the manufacturer's published specifications.

3. Couplings - Coupling for copper shall consist of cast ductile iron housing, a synthetic rubber gasket of a central cavity pressure-responsive design, with nuts and bolts to secure unit together.

a. Housings - Shall be cast of ductile iron conforming to ASTM A-536 (Grade 65-45-12) with a copper alkyd enamel paint coating.

b. Gasket - Gaskets shall be molded of synthetic rubber in a central cavity, pressure-responsive configuration conforming to the copper tube size (CTS) outside diameter and coupling housing, of elastomers having properties as designated in ASTM D-2000.

c. Water Service - Gaskets supplied for water services from -30^{O} F to $+230^{O}$ F shall be a Grade "E" EPDM compound, with copper color code, molded of materials conforming to ASTM D-2000, designation 2CA615A15B44F17Z, recommended for hot water service within the specified temperature range.

4. Flanged Connections: Shall be, engaging directly into roll grooved copper tube and fittings and bolting directly to ANSI Class 125 cast iron and Class 150 steel flanged components; installer to supply standard flange bolts. Flange casting shall be as in 3, a. above with a corresponding gasket as in 3, b.

5. Fittings - Fittings shall be full flow copper fittings with grooves designed to accept grooved end couplings.

   a. Standard fittings shall be two inch (2") through four inch (4") copper per ASTM B-75 alloy C12200; five inch (5") through six inch (6") bronze sand castings per ASTM B-584-87 copper alloy CDA 844 (81-3-7-9).

6. Butterfly Valves – Lug style, grooved end butterfly valves are to be rated for bi-directional dead end service to the full working pressure of the valve with the down stream flange removed.

   a. 2 ½-6" valves shall have either lever lock handles or gear operators. Valves in 2 ½" or 3" sizes may have two-position handle as per service requirements and manufacturer's recommendations.

      1) Valve housing shall be bronze per CDA-836 (85-5-5-5).

      2) Disc shall be aluminum bronze or ductile iron.

      3) Operator bracket shall be steel-black enamel coated.

      4) Operator - Two (2) position detent or manual lever lock shall be steel-black enamel coated.

      5) Seat to be molded to the body of the valve for bi-directional dead end service

7. Tube Preparation: Copper tube shall be to ASTM B-88 (drawn tubing) and prepared in accordance with the latest published manufacturer's specifications, as applicable. Pressure ratings and end loads for roll grooved copper tubing are based upon test on copper tube prepared in accordance with manufacturer's specifications using manufacturer's approved rolled grooving tool for grooving copper tube.

8. Assembly: Couplings, fittings, adapters and tubing shall be assembled in accordance with the latest published instructions from the manufacturer for the particular product installed.

9. Reference hanger spacing in specification. In addition, use the following recommendations for support installation:

   a. Copper tubing joined with grooved type couplings requires support to carry the weight of tubing and equipment. The support or hanging method must be such as to eliminate undue stresses on joints, tubing and other components.

   b. The support system for mechanical grooved type tubing couplings must consider some of the special requirements of these couplings.

D. Compressed Air Piping:

1. Piping to be Schedule 40 black steel pipe. All piping 2" and smaller may be TYPE "K" hard drawn copper pipe, at contractors' option.

2. Use capped tees at each joint facing up to allow for future connections. All connections to be made with tees facing up.

3. Slope all piping to drain. Provide drain leg at each low point with ball valve at bottom of drain leg for draining system. Drain leg to be approximately 7'-6" A.F.F. (verify in field).

4. Install Metal-Flex flexible connector near compressor outlet equal to Amber/Booth type SS-PM.

2.04 VALVES

A. Select valves of the best quality and type suited for the specific service and piping system used. Minimum working pressure rating 125 psig steam or 150 psig W.O.G. All valves on insulated lines to have extended handles to allow operation without disturbing insulation seal.

B. Manufacturer: Nibco, KITZ, Jenkins, Milwaukee, Stockham, other recognized manufacturer of equal reliability.

C. Gate Valves, 2½" and Larger: Iron body, bronze trim, rising stem, flanged.

D. Globe Valve 2" and Smaller: Teflon disc, bronze body, bronze trim.

E. Ball Valves 3" and Smaller: Brass or bronze body, virgin TFE seat rings, blow-out proof stem, reinforced thrust washer, ¼ turn full open/full close, FULL PORT, CSA-ULFM approval.

F. Globe Valve 2½" and Larger: Iron body, bronze trim, Buna-N disc, flanged, bronze disc hot water, Buna-N disc cold water.

G. Swing Check Valves 2" and Smaller: Bronze body, horizontal swing, Y-pattern, renewable disc.

H. Swing Check Valves 2½" and Larger: Iron body, horizontal swing, bolted bonnet, renewable seat and disc, flanged, non-slam type.

I. **Butterfly Valves: Reference Section 2.03, C. above.**

J. Drain Valves: Hose end gate valve or gate valves with hose connection. Do not use sillcocks in lieu of drain valves.

K. Valves Specified Elsewhere: Provide special valves such as motor operated valves, relief valves, temperature regulating valves, etc., as specified under the individual system or as indicated on the drawings.

L. USE FULL PORT BALL VALVES RATED FOR SERVICE INTENDED FOR ALL ISOLATION VALVES THREE INCHES (3") AND SMALLER.

2.05 BALANCING VALVES

A. Provide balancing valves for all cooling and heating flows and at all pump discharge lines. Provide balancing valves for all potable hot/tempered water recirculation systems and at TMW's as required by manufacturers written instructions.

B. Valves sized for maximum 1 pound pressure drop at design flow with valve wide open. Submit schedule of balancing valves indicating sizes, flow ranges and pressure drop curves.

C. Valves, rated at not less than 150 psi, furnished with three self-lubricating bronze or teflon-coated stainless steel bushings with shaft seals at each bushing; seals to be hard back resilient type and shall be field replaceable; discs shall be bronze, aluminum-bronze, or semi-steel with welded nickel edge.

D. Valves 4" and smaller insulated with removable foam polyurethane Dry Cap. Series 400.

E. Valve 2½" through 6" shall be lever operated. Butterfly valves, lug body indicating locking type with adjustable memory stop, may be used at Contractors option at each location where gate valves or globe valve is indicated on water line 2½" and larger.

F. On valves 2" and smaller, use Flow Set balancing valves system consisting of: 300 lb. rate flow measuring bronze body ball valve with integral venturi and temperature and pressure taps; flow setting 300 lb. butterfly valve assembly with stainless steel disc and Viton seats dual-core temperature/pressure test port and external lockable memory stop. Furnish valves with insulation sleeve for ease of access to temperature/pressure ports and to allow adjustments of valve handles without removing insulation. Manufacturer: FlowSet by Olympic Valve, Inc. At the Contractor's option, use Presso B-Plus balancing valves with extension handle and extension P/T plugs.

G. Manufacturers: DeZurik, Olympic Valve, Inc., Jenkins, Nibco, B & G, Hammond, Presso or approved equal.

2.06 UNIONS

A. Provide unions adjacent to all tanks and equipment and where required for disconnect and maintenance of equipment.

B. Union for Steel Pipe: Ground joint malleable iron.

C. Union for Copper Pipe: All brass.

D. Union Between Dissimilar Metals: Dielectric Union designed and advertised to be unaffected by heat, cold or fluid in pipe. EPCO or approved equal.

2.07 MISCELLANEOUS

A. Escutcheons: Nickel or chrome plate with screws or springs for holding plate in position.

B. Automatic Air Vents: Hoffman #79, Marsh or equal.

C. Gaskets: Gaskets 1/16 inch thick for all pipe sizes 10 inches and smaller and 1/8 inch thick for all pipe sizes 12 inches and larger. Gaskets to be ring type between raised face flanges and full face type between flat face flanges with punched bolt holes and pipe opening. Gasket material shall be suitable for the service intended and shall be installed as recommended by the manufacturer. Manufacturer: Crane, John-Manville, or equal.

D. Strainers: Cast iron or bronze body basket or wye type strainers provided with ½" valved drain and a ¼" air vent cock, unless the strainer design is devoid of air pockets. Strainers shall have removable cylindrical or conical screens of nickel, copper, or brass and suitable flanges or tappings to connect with the piping they serve. Strainers 2½" and larger shall be provided with flanged covers. The free area of each screen shall not be less than three (3) times the area of the strainer inlet and shall be suitable for the service intended. Manufacturers: Crane, McAlear, Sarco or Armstrong.

2.08 MECHANICAL SUPPORTING DEVICES

A. General:

1. Securely fasten all mechanical work to the structure to prevent hazard to human life and limb, and to prevent damage to products of construction under all conditions of operation.

B. Pipe Supports:

1. Single Pipes:

a. Support all horizontal runs of steel, copper pipe under 2" and all cast-iron soil pipe on suitable hangers spaced not more than 5 feet on centers. Support all steel, and copper piping 2" and larger not more than 10 feet on centers. Support all PVC piping not more than 4 feet on center. Support piping in a manner to prevent binding, undue swing, and the transmission of vibration to the structure.

b. Support single pipes from clevis hangers equal to Anvil fig. 260. Install hangers for insulated piping outside the insulation using high density section of insulation and sheet metal shield or saddle. Provide copper plated hangers in contact with copper pipe.

2. Trapeze Hangers: Where pipes are clustered, parallel, and in same plane, they may be supported by trapeze hangers. Provide rods and angle-irons sized to suit load imposed. Minimum channel length to be six inches (6"), maximum rod spacing to be twenty-four inches (24") on center. Piping to be securely attached to trapeze hangers. Provide sheetmetal shield or saddle for all insulated piping running horizontally.

3. Piping on Walls: Secure with hook-plates, clips or fabricated steel brackets.

4. Supports from Steel Beams and Similar Construction: Use appropriate beam clamps.

5. Provide inserts for poured concrete and expansion bolts for pre-cast slabs.

6. Guide and anchor piping where necessary to control expansion and contraction. Provide supports and hangers with non-corrosive and rust-resistant finish. Galvanize or plate hanger rods after threading. Hangers other than those specified not permitted. **USE ONLY GALVANIZED HANGERS AND HANGER RODS FOR ALL PIPING IN CRAWL SPACE.**

7. Provide inserts for poured concrete and expansion bolts for pre-cast slabs. Use HiltiDrop-in Anchor or Kwik Bolt II Stud Anchor System. Verify allowable place of anchors with Structural Engineer.

8. Provide pipe supports according to the following schedule:

PIPE SIZE - INCHES	ROD SIZE - INCHES
½" through 2"	3/8"
2½" through 3"	1/2"
4" through 6"	5/8"
8" through 12"	3/4"

9. Manufacturers: Anvil International, C&P, Fee and Mason, Elcen or SuperStrut.

C. Support all piping on roof with pipe stands/roller equal to MIRO Industries Model 4-RAH-PC or Portable Pipe Hangers, Inc., Type PP10 with roller for piping 2-1/2" and smaller. For piping over 2-1/2", up to and including 8" use MIRO Industries Model 6-RAH-PC or Portable Pipe Hangers, Inc. (PPH) Type PS-1-2. All pipe stands to sit on walk board (coordinate type and methods of support with Roofing Contractor). Walk board to be a minimum of 3" larger on each side than support. Provide minimum pipe height above roof deck as required by jurisdiction having authority (at least 6"). Provide supports for piping under 2" at six feet on center. Provide supports for piping 2" and over at eight feet on center. **PIPE PROP will not be acceptable.**

D. Ductwork Support: Refer to Section 23 30 00-Air Distribution.

E. Inserts: Provide all inserts required for installation of horizontal piping. In poured concrete provide wrought steel or malleable iron and adjustable type. Where expansion bolts are necessary to secure piping or equipment, use malleable iron type with expansion case, to be inserted by drilling concrete. Power driven inserts not permitted for supporting piping to ceiling.

F. Miscellaneous Iron and Steel:

1. Provide all steel supports and hangers to support all equipment or materials unless noted otherwise.

2. All work shall be cut, assembled, welded and finished by skilled mechanics. Welds shall be ground smooth. Stands, brackets and framework shall be properly sized and rigidly constructed in a manner to withstand anticipated loads.

3. Measurements shall be taken on the job and worked out to suit adjoining and connecting work. All work shall be performed by experienced metal-working mechanics. Members shall be straight and true and accurately fitted.

4. Welded joints shall be ground smooth where exposed. Drilling, cutting and fitting shall be done as required to properly install the work and accommodate the work of other Trades.

5. Members shall be generally welded except that bolting may be used for field assembly where welding would be impractical. Welders shall be skilled and certified.

6. All shop fabricated iron and steel work shall be cleaned and dried and given two (2) coats of weatherproof primer paint on all surfaces and in all openings and crevices.

2.09 ACCESS DOORS

A. Doors shall be Karp, Inland Steel Products, Milcor, Miami or Walsh-Hannon, constructed of steel with primer coat of rust inhibitive paint, and continuous piano hinge. Doors shall be key operated with flush operated cylinders, keyed alike. Key lock system shall be coordinated with the Owner and shall be approved by the Architect. Provide six (6) keys of type used for access panels for Owner's use. Obtain receipt of key delivery and submit to Architect for record.

1. Suspended Lath and Plaster Ceilings - Style: "M" with 16 gauge frame, 14 gauge panel.

2. Masonry Non-Rated Walls - Style: "M" with 16 gauge frame, 14 gauge panel.

3. Masonry Fire Rated Walls - Fire rated with UL, ½ hour "B" rating, 16 gauge frame, 20 gauge sandwich type insulated panel.

4. For access doors larger than 16" in either direction, provide two (2) locksets.

2.10 CHIMNEY SYSTEMS

A. Type B Vent:

1. Factory-built; labeled and tested for use with building heating equipment.

2. Double wall pipe; galvanized steel outer pipe, heavy gauge aluminum inner pipe.

3. Supply with support pieces, adapters, fittings, ventilating thimble and Type MC wind cap.

4. Provide vent and cap for all gas consuming equipment. Verify all sizes with actual equipment purchased. In no case shall the pipe be smaller than the equipment connection size.

B. Type “B” Vent Pipe Manufacturers: Metalfab, Metalabestos or equal.

C. PVC/CPVC Vent/inlet:

1. Provide minimum schedule 40 solid core PVC/CPVC combustion air intake and/or flue exhaust vent as required for all condensing type water heater(s)/furnace(s) installed and sized as required by manufacturers written instructions. Wrap all piping exposed to plenum spaces with products to meet 25/50 smoke/flame requirements. Terminate with products per manufacturers written instructions.

PART 3 - EXECUTION

3.01 EQUIPMENT MOUNTING

A. Provide equipment concrete pads, treated support runners, roof curb supports, mounting accessories, supports, hanger expansion joints, adapters and any other appurtenances to adapt fixtures and equipment supplied to the conditions of use.

B. Provide vibration eliminators as specified (if not specified elsewhere use vibration eliminators recommended by equipment manufacturer) at all pieces of equipment subject to vibration. (Exception; curb mounted equipment does not require vibration isolator rails except when specifically scheduled).

C. Independently support piping and ductwork at equipment so that no weight is supported by the equipment.

D. Securely fasten fixtures and equipment to the building structure in accordance with manufacturer's recommendation.

E. Provide steel base plates for floor mounted fixtures and equipment to distribute the weight so that the floor load is not more than 100 lbs. psf, unless special structural reinforcement is submitted for approval.

F. At wall attached fixtures and equipment weighing less than 50 pounds, provide backing plates of at least 1/8 x 10 inch sheet metal or 2 x 10 inch fire retardant treated wood securely built into the structural walls. Submit attachment details of heavier equipment for approval.

G. Electrical conduit shall not be hung from equipment or plumbing piping.

3.02 SLEEVES

A. Provide sleeves as required where pipes pass through walls, floors, or ceilings. Make sleeves as follows:

1. In non-fire rated bearing walls, foundations, masonry or concrete walls and floors, use schedule 40 black steel pipe.

2. In non-rated construction, use minimum 20 gauge galvanized sheetmetal.

3. In fire rated walls, floors and assemblies, install sleeves as required by UL System Number.

B. In non fire rated areas install sleeves flush with surfaces. In mechanical rooms or any wet floor where seepage may occur, install sleeve 1 inch above floor and caulk. Caulk both sides of penetration using UL listed one part firestop synthetic elastomer sealant, flexible at normal working temperatures, having smoke developed 50, fuel contributed 50, and flame spread 25 rating. Install thickness per manufacturer's recommendation. Manufacturer: Dow Corning FireStop 2000 Sealant, Flame Stop V, 3M: CP-25.

C. Waterproof all piping and sleeves through building exterior skin, including walls, roofs and interior floor penetrations to prevent leakage. Coordinate with the Architect on caulk material to use at exterior.

D. Size sleeves for cold piping to allow for continuous insulation through sleeve.

3.03 SEALING AND FIREPROOFING

A. SEALING OF PENETRATIONS THROUGH RATED WALLS, FLOORS, CEILING AND ROOF ASSEMBLIES SHALL BE INSTALLED PER UL "FIRE RESISTANCE DIRECTORY." UL SYSTEM NUMBERS INDICATED ARE FOR A PARTICULAR LISTED INSTALLATION AND ARE FOR GENERAL INFORMATION AND INTENT. OTHER LISTED UL SYSTEM DESIGNS MAY BE USED. IN ALL CASES, SUBMIT MATERIALS, UL SYSTEM DESIGN NUMBERS AND UL DETAILS TO BE USED THROUGHOUT THE

PROJECT AND IDENTIFY WHICH DETAIL IS TO BE USED FOR EACH SPECIFIC CONDITION. POST REVIEWED DETAIL AT JOB SITE FOR REFERENCE.

1. Only materials tested in the specific UL System Number may be used.

    a. Wrap Strip (UL System No. WL 5001): Nominal 1/4" thick by 2" wide intumescent elastomeric material. Manufacturer: 3M Type FS-195.

        1) Use one (1) wrap strip for up to one inch (1") thickness insulation.

        2) Use two (2) wrap strips for 1-1/2" inch and larger thickness insulation.

    b. Caulk Manufacturer:

        1) 3M Type CP-25 WB+ for all assemblies requiring 3M caulk.

        2) For WL3045 and 3046 use Hilti FS611A Sealant.

    c. Steel Sleeve (Stud Wall) (UL System 1003): Cylindrical sleeve shall be fabricated from minimum 0.019" thick (no. 28 gauge) galvanized sheet steel and having a minimum 2" lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall plus 1" such that, when installed, the ends of the sleeve will project approximately ½" beyond the surface of the wall on both sides of the wall assembly. The diameter of the openings cut on each side of the wall assembly (concentric with pipe) to be 2 to 2-1/2" larger than the outside diameter of pipe such that, when the steel sleeve is installed, a 1 to 1-1/4" annular space will be present between the steel sleeve and the pipe around the entire circumference of the pipe. Install sleeve by coiling the sheet steel to a diameter smaller than the through opening, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers.

    d. Steel Sleeve (Concrete or Block Wall): For cables, provide sleeve cast in floor/wall or mortared into CMU wall; optional sleeve for UL System No. CAJ1175.

    e. Forming Material: Minimum one inch (1") thickness mineral-wool batt insulation material. Tightly pack into sleeve with minimum 1/2" recess on ends. Manufacturer: Thermafiber Safing Insulation.

2. Wire/Cables:

    a. For Gypsum Frame Wall (Single Cable): Fireproof per UL System No. WL3001. Opening for cable to be hole-sawed through gypsum wall board layers. Diameter of opening to be 3/8" to 5/8" inch larger than outside diameter of cable. Cable to be rigidly supported on both sides of wall assembly. Caulk to fill annular space throughout thickness of gypsum wall board layers and apply 1/4" bead of caulk to perimeter of cable at its egress from wall (both sides).

    b. For Gypsum Frame Wall (Multiple Cables): Use UL System No. WL3021, WL3045, WL3046 or equivalent to maintain rating of wall.

c. For Concrete Walls/Floors or CMU Walls (Single or Multiple Cables): Fireproof per UL System No. CAJ3030. Cables to be a minimum ten percent (10%), maximum thirty-three percent (33%) of cross-sectional area of opening. Recess minimum one inch (1") thickness of mineral wool material into opening around cables. Caulk openings around cable to minimum depth of one inch (1"). Optional sleeve may be used per UL detail requirements.

3. Firestop system shall be installed at top surface of floor and symmetrically on both sides of wall assemblies.

4. Materials used in firestop systems shall be installed in accordance with the manufacturer's instructions, provided with materials for specific UL System Number.

5. Reference Architectural for the exact location of all rated walls, floors, ceilings and ceiling/roof assemblies.

B. Manufacturers: 3M, Metacaulk, Hilti, BioFireshield, STI or equal.

C. In non-rated walls identified for sound insulation, provide 1/2" space between pipe and sleeve packed with multiple layers of forming material. Allow 5/8" minimum space on each side and caulk with acoustical sealant.

D. **Final condition to prevent passage of fire, smoke, noxious gas and water.**

E. For non-rated mechanical/electrical room walls: Seal all piping and ductwork passing through walls, floors and ceilings with 3M caulk, Type CP-25+.

F. Submit UL numbers and details for type of penetrations and materials to be used. All penetrations in fire rated walls, floors and ceilings must be installed per a UL listed detail specified for the application.

G. **Seal both sides of all floor penetrations into crawl space on both sides to prevent air and water migration.**

3.04 WATERPROOFING AND COUNTERFLASHING

A. Provide and install all counterflashing of all conduit, pipe or duct and equipment which penetrates roofs, walls and other weather barrier surfaces. Metal Roofing Contractor shall provide and install all curbs and counter flashing for all metal roof penetrations. Verify detail with Architect before installation.

B. All work shall be performed in a workmanlike manner to assure weatherproof installation. Any leaks developed shall be repaired at contractor’s expense, to Architect's satisfaction.

C. Conduits, pipes or ducts passing through slabs shall have the sleeve extended above floors to retain any water and the space between the conduit, pipe or duct and sleeve caulked with lead wool. The top shall be sealed with lead and the bottom shall be sealed with monolastic caulking compound.

D. All waterproofing, flashing and counterflashing shall be provided and installed by the Roofing Contractor and shall be compatible with roofing system so as not to void any roof warranties. Confirm installation with Architect.

E. Slope all ducts to wall louvers to drain toward louvers. Provide continuous sleeve thru wall and seal all joints.

F. All piping and conduit penetrations through exterior walls shall be sealed on both side of drain plane and at exterior finished wall surface to prevent moisture intrusion.

3.05 LABELING AND TAGGING

A. Tag all valves with minimum 1/16" thick heat resistant laminated dark plastic labels engraved with readily legible white lettering 1/4" high indicating fluid in pipe and a “V” (valve) number (e.g. V-22). Securely fasten to the valve stem or bonnet with beaded chain. Provide an aluminum valve chart and frame with glass cover for typewritten valve chart. Install where directed. Coordinate valve numbers with mechanical contractor to avoid duplication. Refer to Section 20 00 00, and Manuals.

B. Label all equipment with minimum 1/16" thick heat resistant laminated plastic labels having engraved lettering 1/2" high and fastened in place with rivets, screws or adhesive backing. Example "WH-1, AHU-1, etc." If items are not specifically listed on the schedules, consult the Architect concerning designation to use. Refer to Section 20 00 00. Label all equipment served by emergency electrical panels with red labels.

C. Label all thermostats/sensors with minimum 1/16" thick heat resistant laminated plastic labels having engraved lettering 1/4" high and fastened in place with rivets, screws or adhesive backing. Label is to correspond to rooftop and/or air-handling units.

D. Provide access panel markers (minimum 1/16" thick laminated plastic type with engraved lettering) to indicate ceiling tile to be used for access for all A/C equipment, terminal units and plumbing shut-off valves. Use light green for plumbing and light blue for A/C equipment. Label to be attached to ceiling grid with rivets, screws or adhesive backing. Example, “AHU-3A” access.

E. Manufacturer: Seton Pipe Marking Products, MSI (Marketing Services, Inc.) or equal.

3.06 TYPICAL PIPING

A. Provide insulating couplings or unions to prevent electrolysis between dissimilar metals when use of dissimilar metals cannot be avoided in one system.

B. Close all openings in pipes with appropriate caps, plugs, or covers during storage and progress of the work to preclude introduction of contaminants.

C. Arrange systems and locate valves so that either entire system or separate sections thereof may be drained for service. All service valves located no more than 24 inches above the ceiling and normally accessible from an 8 foot ladder.

D. Provide valves and unions adjacent to all tanks, batteries of plumbing fixtures and equipment, for disconnect purposes. Install all valves with stems vertical wherever possible, and in no case with stems below the horizontal.

E. Ream ends of all pipe to full diameter.

F. Provide pipe anchors, swing joints, and expansion compensators as required to control the expansion of pipelines.

G. Reduce pipe sizes using reducing tees or reducing fittings. Bushings not permitted except on tanks and similar equipment.

H. Provide escutcheons on all pipes passing through walls, floors, and ceilings in finished areas where piping is in counters, closets or cabinets, and subject to view when doors are open. Cover the pipe sleeve and secure plate in position.

I. Install hangers at each change in direction and within 2 feet at each elbow or tee. This requirement is mandatory.

J. Pipe hooks, wire, chains or perforated metal shall not be used for pipe supports.

K. Insulate hangers for copper pipe from piping with at least two layers of 12 mil Polyken 826 corrosion control tape.

L. Install piping not to interfere with removal of equipment, ducts, and devices or block access to door or access openings.

M. Piping serving plumbing fixtures and equipment shall be securely supported near the point where pipes penetrate the finished wall.

N. Test all piping in accordance with accepted trade standards if not specified elsewhere.

3.07 THREADED PIPE

A. Cut all threads true and of depth to make up properly without leaks.

B. Make connections to show at least two threads and not more than four threads when tight.

C. Make up joints with Teflon tape only as recommended by tape manufacturer, or as specified in specific piping sections.

3.08 AUTOMATIC (MANUAL) AIR VENTS

A. Install at highest point of chilled and hot water system, at chilled and hot water coils and at points necessary to relieve air in piping. Provide shut-off valve to facilitate maintenance of air vent.

B. Route 1/4" copper line from discharge of air vent to floor drain in mechanical room. Slope to drain.

3.09 PAINTING AND CODING

A. Ductwork and Piping: Prime and paint all exposed angle braces, hanger rods or straps, damper rods, and quadrants with one coat aluminum paint after removing scale and rust. Prime and paint ductwork and piping exposed in finished rooms to match room finish. Prime and paint all black iron piping located outdoors or otherwise exposed to weather. Coordinate painting and color with Architectural paint specified elsewhere. All painting done by persons regularly employed at and skilled in that trade.

B. Grilles, Registers, Etc.: Furnish all grilles, registers, etc., other than extruded aluminum or plastic with prime coat paint by manufacturer. Furnish all ceiling grilles, registers and diffusers with factory applied baked enamel to match ceiling tile. Paint all ductwork and/or conduit visible through registers, grilles and other openings with one coat of flat black paint to a point four feet (4') from opening on straight duct or around bend, whichever applies.

C. Pipe Coding:

1. Identify piping with pressure-sensitive coded pipe marker at piping adjacent to equipment, at intervals along all piping not to exceed 20' and at points where piping disappears into or emerges from floors, walls or ceiling. Secure both ends of marker with pressure sensitive tape with flow arrow on roll to indicate flow direction. Color code pipe markers and arrows indicating the liquid and/or use of the pipe.

2. Code piping to the following schedule: (SUBMIT ALTERNATE CODING)

Cold Water	CW
Hot Water	HW
Hot Water Circulating	HWC
Chilled Water Supply	CHS
Chilled Water Return	CWR
Hot Water Supply	HWS
Hot Water Return	HWR
Gas	FUEL GAS
Sprinkler	SPKR

3. Manufacturers: Seton Pipe Marking Products, MSI or equal.

END OF SECTION

SECTION 20 07 00 - INSULATION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Description:

1. This section describes specific requirements, products and methods of execution which relate to the insulation of ducts, pipes and other surfaces of the mechanical installation.

2. Insulation is provided for the following purposes:

a. Energy conservation

b. Control of condensation

c. Safety of operating personnel

B. SPECIAL NOTE: All provisions and divisions of these specifications are a part of this section of these specifications. The Contractor shall consult these divisions and provisions in detail for instructions and include all items pertaining to this work. The Contractor shall consult all other divisions of these specifications, determine the extent of impact on the work required to complete the work required by this section of the specifications or portion thereof and related work shown on the drawings.

C. Acoustical Lining Insulation Summary

1. The work covered by this specification consists of furnishing all labor, equipment, materials and accessories, and performing all operations required, for correct fabrication and installation of air duct systems of sheet metal lined with fibrous glass duct liner, in accordance with applicable project drawings and specifications, subject to terms and conditions of the contract:

2. All air duct systems operating at internal air velocities not exceeding rated duct liner limitations as listed below and internal air temperature not exceeding 250°F (121°C).

3. Duct liner products shall conform to the requirements of ASTM C1071. **ALL INSULATION IS TO BE FREE OF UREA-FORMALDEHYDE AND/OR BE GREENGUARD CERTIFIED.**

4. The manufacturer’s product identification shall appear on the air stream surface.

5. Duct liner adhesive shall conform to the requirements of ASTM C 916. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

6. The finished duct system shall meet the requirements of NFPA 90A and 90B.

7. Duct dimensions shown on the plans are finished inside dimensions.

8. Fabrication and installation shall conform to the requirements of the latest edition of the North American Insulation Manufacturers Association's *Fibrous Glass Duct Liner Standard* (hereinafter referred to as NAIMA FGDLS) or the Sheet Metal and Air Conditioning Contractors National Association *HVAC Duct Construction Standards - Metal and Flexible* (hereinafter referred to as SMACNA HVAC DCS) or the manufacturer's recommendations.

D. References

1. American Society of Testing and Materials(ASTM)
    a. ASTM C1071
    b. ASTM C916
    c. ASTM G21
    d. ASTM G22
    e. ASTM C423
    f. ASTM C518
2. National Fire Protection Association (NFPA)
    a. NFPA 90A
    b. NFPA 90B
    c. NFPA 259
3. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA)
    a. HVAC Duct Construction Standards Metal and Flexible (HVAC DCS)
4. North American Insulation Manufacturers Association (NAIMA)
    a. Fibrous Glass Duct Liner Standard (FGDLS)
5. International Nonwovens & Disposables Association (INDA)
    a. IST 80.6

E. Delivery, Storage and Handling

1. Deliver all materials and/or fabricated, insulated duct sections and fittings to the job site and store in a safe, dry place.
2. Protect materials from dust, dirt, moisture, and physical abuse before and during installation, startup and commissioning. Wet or contaminated duct liner shall be replaced.

PART 2 - PRODUCTS

2.01 FIRE RATING OF MATERIALS

A. Provide all insulation products used above ground in buildings with burning characteristics not to exceed the following ratings according to NFPA 255-1972 “Method of Test of Surface Burning Characteristics of Building Materials”: Flame Spread 25, Fuel Contributed 50, Smoke Developed 50.

B. Insulation specified for use underground and above ground away from the building, might have other burning characteristics. Use such products only where specifically required.

2.02 INSULATION

A. TYPE "A": Pre-molded Fiberglass Piping Insulation:

1. Jacket Type:

a. Thermal conductivity K = 0.24 at 100^{O} F. mean temperature.

b. Factory applied kraft-reinforced vapor barrier flame retardant all service jacket and tape, with permeability rating - 0.02 perms.

c. Provide insulation sections with self-sealing pressure sensitive adhesive on both overlap seam and mating jacket surface.

d. Fitting insulated with pre-cut insulation inserts covered with PVC fitting cover.

e. Manufacturer: Owens-Corning Fiberglass, Certainteed, Knauf, Schuller/Manville AP-TPLUS.

2. PVC Jacketed Insulation (Mechanical Room Piping Only):

a. Shall be used in all mechanical/boiler rooms for all insulated piping to within two inches (2") of interior wall surface of mechanical/boiler rooms. This includes all satellite mechanical rooms containing air handlers.

b. Thermal conductivity K = .24 at 100^{O} F. mean temperature.

c. One (1) piece “hinged” construction.

d. **Entire piping system in mechanical rooms to be covered with high-impact, UV-resistant polyvinyl chloride jacketing with gloss white finish.**

e. Fitting insulated with pre-cut insulation inserts covered with PVC fitting cover.

B. TYPE "B": Cellular Piping Insulation:

1. Thermal conductivity K = .27 @ 75^{O} F. mean temperature.

2. Elastomeric thermal insulation with permeability rating of .17 perms.

3. Temperature range from -40^{O} F to 220^{O} F.

4. Insulation to meet 25/50 requirements for use in return air plenums

5. Wall thickness as listed in Part 3 of this Section for size and use of piping.

6. Install without slit when possible. All slits in insulation to be smooth. Insulation installed with jagged edges will be removed and replaced at no cost to Owner.

7. **ALL INSULATION IS TO BE FREE OF UREA-FORMALDEHYDE AND/OR BE GREENGUARD CERTIFIED.**

8. Manufacturers: Armacell Armaflex Type AP Pipe Insulation, Rubatex, Halstead, IMCOA.

C. TYPE “C”: Blanket Type Duct Wrap Fiberglass Insulation:

1. **The Contractor may use a 3/4, 1 or 1-1/2 pound density product with a minimum installed R-value of 6.0 if ductwork is within building insulation envelope or minimum R-value of 8.0 if installed outside of building insulation envelope.** Density, thickness and installed R-value to be clearly indicated on submittal.

2. Fiberglass duct wrap insulation is to have a factory FSK or FRK facing which acts as the vapor barrier. Maximum permeability rating is 0.02 perms.

3. Use only labeled Type UL181AP Aluminum Foil Tape a minimum of 3" wide and 7.4 mils thick “Venture Tape #1525CW” or “Shurtape #AF-982”). Maintain a complete vapor barrier throughout all ductwork insulation applications. Use spreader to completely seal tape to all joints or tears in vapor barrier, surface must be clean prior to installation.

4. Certainteed SoftTouch Duct Wrap with FSK facing or equal. **ALL INSULATION IS TO BE FREE OF UREA-FORMALDEHYDE AND/OR BE GREENGUARD CERTIFIED.**

5. Manufacturers: Knauf, Schuller/Manville, Certainteed or Owens-Corning.

D. TYPE “D”: Rigid Fiberglass Board Insulation (DUCTBOARD SYSTEM)

1. 1-1/2" thick, Type 475 with a minimum R-value of 6.0 when inside building insulation envelope.

2. 2” thick, Type 800 with a minimum R-value of 8.0 when outside building insulation envelope.

3. Rigid board composed of resin bonded glass fibers faced with reinforced foil vapor barrier with permeability rating of .02 perms.

4. Meet UL181 test and classified as Class I Air Duct. **ALL INSULATION IS TO BE FREE OF UREA-FORMALDEHYDE AND/OR BE GREENGUARD CERTIFIED.**

5. Maximum operating temperature of 250^{O} F.

6. Tape joints using heavy duty foil tape, UL181A labeled, 7.5 mils thick, 3 inches wide, FSK Facing Tape Venture or equal.

7. Manufacturers: Certainteed, Knauf, Schuller/Manville, Owens-Corning.

E. TYPE “E”: Semi-rigid Fiberglass Insulation Board.

1. Semi-rigid glass fiber bonded insulation not affected by moisture, resistant to fungi and bacteria. **ALL INSULATION IS TO BE FREE OF UREA-FORMALDEHYDE AND/OR BE GREENGUARD CERTIFIED.**

2. Permit expansion and contraction of metal without cracking or shrinking.

3. Maximum operation temperatures of 850^{O} F.

4. Manufacturers: Certainteed 850 Fiberglass Insulation, Knauf, Schuller/Manville, Owens-Corning.

F. TYPE "F": FIRE RESISTIVE DUCT WRAP

1. Work of this section includes labor, material and equipment to provide 2 hour fire resistive rated grease or air duct enclosure as a shaft alternative and a method for providing zero inch clearances around commercial kitchen grease duct exhaust systems to combustible materials.

2. Lightweight flexible refractory ceramic fiber blanket encapsulated with aluminum foil scrim. Nominal 1 ½" thick, 9 PCF.

3. UL Classified, single layer, fireproof, flexible, 2 hr. rated enclosed assembly.

4. Zero clearance to combustibles.

5. Use in combination with 3M Fire Barrier, 2000+ silicone sealant.

6. 3M, UL system V-17. Install as listed.

7. Manufacturer: 3M FireMaster Fast Wrap.

G. TYPE "G": Cellular Elastomeric Foam Duct Liner:

1. Thermal conductivity K = .27 @ 75^{O} F. mean temperature.

2. Elastomeric thermal insulation with permeability rating of .17 perms.

3. Temperature range from -40^{O} F to 220^{O} F.

4. Insulation to meet 25/50 requirements for use in return air plenums

5. Minimum R-value of 6.0 for one and one-half (1-1/2") thickness. Installed R-value to be a minimum of 6.0 inside building envelope. Minimum R-8 for ducts located outside the building insulation envelope.

6. **ALL INSULATION IS TO BE FREE OF UREA-FORMALDEHYDE AND/OR BE GREENGUARD CERTIFIED.**

7. Manufacturers: Armacell Armaflex AP or Armacell Coilflex elastomeric foam duct liner with Microban.

2.03 SOUND CONTROL

A. Lined Duct:

1. Provide acoustically lined duct to attenuate and control the transfer of airborne sound and as duct insulation only when specifically indicated.

2. Lining: Flexible fiberglass blanket type mat faced insulation with durable surface coating, bonded with thermosetting resin. Maximum flame spread index; 25. Maximum smoke developed index; 50. **Lining to have anti-microbial coating.** Minimum R-value of 6.0 for one and one-half (1-1/2") thickness. Installed R-value to be a minimum of 6.0. **1.5" thick, R-6 lining equal to CertainTeed ToughGard R-EP or ToughGard2 Textile Duct Liner.** R-8 for ducts located outside the building insulation envelope. **ALL INSULATION IS TO BE FREE OF UREA-FORMALDEHYDE AND/OR BE GREENGUARD CERTIFIED.**

3. Air Friction Correction Factor 1.12 at 500 fpm or less.

4. Minimum sound absorption co-efficients as follows:

Thickness	Frequency					
	125	250	500	1000	2000	4000
1-1/2"	.17	.53	.87	.99	1.00	.95

5. All duct dimensions shown on drawings are net clear inside dimensions with duct liner. Install liner in compliance with requirements of NFPA 90A.

6. Manufacturers: Shuller, CertainTeed, Knauf or Owens-Corning.

7. All duct liner to be provided with tough abrasion resistant interior air side finish and antimicrobial coating.

2.04 INSULATED FITTING COVERS AND JACKETING

A. High-impact, UV-resistant polyvinyl chloride jacketing with gloss white finish.

B. Pre-cut curled jacketing, 30 mil. thickness. Sized to snugly fit pipe diameter with thickness of insulation specified.

C. Joints and seams sealed with Perma-Weld Adhesive to form a complete vapor barrier for chilled water and domestic cold water systems. Use tack and tape for heating water and domestic hot water systems. Installation of adhesives, tacks and tape shall be per manufacturer's recommendations. Submit installation instructions with submittal of materials.

D. Fitting Covers: Covers shall be pre-formed for fitting shape.

E. Manufacturer: Schuller/Manville Zeston 2000, Owens-Corning Fiberglass, Certainteed, Knauf or Proto.

2.05 CANVAS JACKETING

A. Insulating Lagging Canvas: 8oz./sq. ft. minimum, 28 threads per inch minimum, Osnaberg or equal.

B. Lagging Adhesive: Plastic synthetic resin emulsion adhesive; watertight, mildew resistant, fire retardant; Miracle LA69, Borden Aerosol or equal. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

2.06 METAL OR VINALUM JACKETING

A. Material shall be minimum .016" thick aluminum jacket or vinalum .020" thick aluminum faced PVC jacket with integral factory applied vapor barrier.

B. Elbows, fitting and valves shall be metal preformed fitting covers (no gores acceptable). Valves made from .020 metal. All valves ends and where insulation reduces shall have Pittsburgh seams.

1. All straight line metal to be Z-locked jacket held in place with 3/4" wide aluminum bands at nine inches (9") on center with wing seals.

C. All joints and seams shall be watertight with Childers CP-76 OR Foster 95-44.

D. Manufacturer: "Strap-On" Childer Cawed Systems or equal.

2.07 COATINGS

A. All coating to bear the UL label. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

B. On cold or dual service lines, use vapor barrier type coatings.

2.08 METAL SHIELDS (SADDLES)

A. Metal Shields curved to fit up to midpoint of the insulated pipe.

B. Metal shields shall be 16 gauge, twelve inches (12") long for pipes up to two inches (2") and 14 gauge, sixteen inches (16") long for piping 2-1/2" and larger.

PART 3 - EXECUTION

3.01 SURFACE PREPARATION AND WORKING CONDITIONS

A. Apply all insulation, fitting covers, mastics and sealants per manufacturer's recommendations.

B. Do not apply insulation materials until all surfaces to be covered are clean and dry and all foreign materials such as rust, dirt, etc., are removed.

C. Keep insulation clean and dry during installation and during the application of any finish.

D. Do not install the insulation on pipe fittings, and pipe joints until the piping is tested and approved.

E. Do not apply under conditions of excessive humidity or at temperatures below 50^{O} F or above 100^{O} F.

3.02 TECHNIQUE FOR APPLICATION TO PIPES

A. Close longitudinal joints of pipe insulation firmly and butt insulation sections firmly together.

B. Neatly and smoothly adhere all laps and butt strips. Adhere three inch (3") wide self-sealing butt joint strips over end joints.

C. Replace all insulation having loose joints or laps. Sloppy work will not be acceptable and such work shall be removed and re-applied.

D. Provide ½" over the thickness of insulation specified at all insulated piping in outside walls.

E. Where insulation with a vapor barrier terminates, it shall be sealed with “Ductmate Protack”. Ends shall not be left raw.

F. On water piping use sheet metal shields outside the insulation at hanger locations. In addition, provide:

1. A molded vegetable cork or foam glass insert not less than twelve inches (12") long of same thickness and contour as insulation between support shield and piping and under the finish jacket.

2. Heavy density insulation minimum six (6) pounds per cubic foot under entire length of metal shield.

G. Where piping and fittings are installed out of doors, provide [two-layer glass cloth and four-layer weatherproof vapor barrier adhesive coating, in addition to jacket specified] vapor barrier jacket, cover with metal or vinalum jacket with seams located on bottom side of horizontal piping.

3.03 TECHNIQUE FOR APPLICATION TO PIPE FITTINGS, UNIONS AND VALVES

A. On insulated piping with vapor barrier, insulate fittings, unions, valves and flanges including Victaulic and Gustin-Bacon to the same thickness as the pipe insulation.

B. Any of the following methods of insulation is acceptable:

1. PVC Snap Form Fitting Covers: Wrap all valves and fittings with precut fiberglass insulation wraparound inserts. Brush vapor barrier mastic on adjoining section of pipe insulation and on overlapping edges of jacket and throat seam before applying preformed fitting. Secure cover with stainless steel tacks. Tape joints with pressure sensitive vapor barrier tape.

3.04 TECHNIQUE FOR APPLICATION TO DUCTWORK

A. Impaling Over Pins: Install all insulation with edges tightly butted. Impale insulation on pins welded to the duct and secure with speed clips. Trim off pins close to speed clip. Space pins as required to hold insulation firmly against duct surface, but not less than one pin per square foot. Seal all joints and speed clips with glass fabric set in adhesive. Provide metal angle at corners to protect edges of insulation.

B. Other Method of Securement: If the welded pin method is impossible, secure the insulation to the duct with “Ductmate Protack” or Childers CP-127 or Foster 85-60 adhesive. Cover the entire surface of the metal with adhesive when applying to the underside of horizontal ducts. Application to top and sides may be in strips with a minimum of 50% coverage. Additionally, secure insulation with No. 16 galvanized wire on not more than twelve inch (12") centers. Provide metal angle at corners to protect edges of insulation. Seal joints as above. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

C. Where external insulations terminate, seal insulation to ductwork with Childers CP-35 or Foster 30-65 with 3" glass fiber reinforcing mesh.

D. Impale rigid insulation board over pins. Provide two layers of glass cloth and four layers of weatherproof vapor barrier adhesive coating. Install .040 thick lock-formable aluminum jacket over sealed insulation. All joints are to be 1” standing seams. The top of the aluminum jacket is to slope a minimum of 1” in 12” to sides to prevent collection of water. Install tapered insulation under sloped top for support of aluminum jacket. Provide a minimum of 1” flange out at connection point to mechanical equipment and building to ensure that water does not get under jacket. Provide counterflashing that is appropriate for building material type. Coordinate with Architect to ensure a watertight connection to building.

3.05 EXAMINATION (LINED DUCTWORK)

A. Verify that the duct liner products is installed in accordance with project drawings, duct liner operating performance parameters and limitations, and provisions of NAIMA FGDLS or SMACNA HVAC DCS or manufactures recommendations.

3.06 INSTALLATION (LINED DUCTWORK)

A. All portions of duct designated to receive duct liner shall be completely covered with duct liner. All joints shall be neatly butted and there shall be no interruptions or gaps. Duct liner shall be installed with the Printed air stream surface treatment exposed to the air stream.

B. Duct liner shall be adhered to the sheet metal with 90% (minimum) coverage of adhesive complying with the requirements of ASTM C 916. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

C. All transverse edges that are not to receive sheet metal nosing shall be coated. Longitudinal joints shall occur at the corners of ducts. If duct size and standard duct liner product dimensions make exposed longitudinal joints necessary, such joints shall be coated with adhesive designated for duct liner application and which meets the requirements of ASTM C 916. Such joints shall be additionally secured with mechanical fasteners in accordance with NAIMA FGDLS, or SMACNA HVAC DCS as if they were transverse joints.

D. Duct liner shall be additionally secured with mechanical fasteners complying with the requirements NAIMA FGDLS or SMACNA HVAC DCS and of the correct type for the duct liner being installed. Fasteners may be either weld-secured or impact-driven, and shall be installed perpendicular to the duct surface. Mechanical fasteners shall not compress the insulation more than 1/8" (3 mm) based on nominal insulation thickness. Fastener spacing with respect to interior duct dimensions shall be in accordance with NAIMA FGDLS or

SMACNA HVAC DCS. Fastener heads or washers shall have a minimum area of 0.75 in^2 (484 mm^2), with beveled or cupped edges to prevent their cutting into the duct liner.

E. Where air velocities exceed 4000 fpm (20.3 m/sec), metal nosing (either channel or "zee" profile) shall be installed on upstream edges of liner duct sections.

F. Metal nosing shall be securely installed over transverse liner edges facing the airstream at fan discharge and at any point where lined duct is preceded by unlined duct.

G. Duct liner in roll form shall be folded and compressed in the corners of rectangular duct sections, or shall be cut and fit to assure a lapped, compressed corner joint

H. Duct liner in sheet form shall be cut and fit to assure tight, over-lapped corner joints. Top pieces of liner shall be supported at the edges by the side pieces

I. Any damage to the air stream surface must be repaired by coating the damaged area with adhesive or coating designed for duct liner application. Adhesive or coating shall meet requirements of ASTMC916.

3.07 FIELD QUALITY CONTROL (LINED DUCTWORK)

A. Upon completion of installation of lined duct and before HVAC system start-up, visually inspect the ductwork and verify that duct liner has been correctly installed. Confirm that the duct system is free from construction debris.

B. After the lined duct system is completely installed and ready for service, conduct a final inspection of the entire system. This inspection should include, at minimum, the following steps:

1. Check all registers, grilles, and diffusers to ensure that they are clean and free from construction debris.

2. Check all filters in accordance with their manufacturer's instructions. Use specified grade of filters at all times that system is operating.

3. Cover supply openings with filter media prior to system start-up to catch any loose material that may remain inside the ductwork.

4. Turn the HVAC system on and allow it to run until steady state operation is reached.

5. Remove the temporary filter media from supply openings and, along with it, any loose material blown downstream and caught by the filter media.

6. Check to ensure that air delivery performance meets all requirements and complies with SMACNA leakage specifications.

3.08 PROTECTION (LINED DUCTWORK)

A. Contractor’s employees shall be properly protected during installation of all insulation. Protection shall include proper attire when handling and applying insulation materials, and shall include (but not be limited to) disposable dust respirators, gloves, hard hats and eye protection.

B. The contractor shall conduct all job site operations in compliance with applicable provisions of the Occupational Safety and Health Act, as well as with all state and/or local safety and health codes and regulations that may apply to the work.

3.09 COLD PIPING INSULATION

A. Insulate piping for domestic cold water, using one inch (1") Type "A" or Type “B” Insulation.

B. Provide a complete vapor barrier throughout the entire system. Use only vapor barrier adhesives and coatings. Stapling of jacket not permitted. Penetrations in vapor barrier jacket, joints, and seams sealed vapor proof with Childers CP-35 or Foster 30-65 (white) mastic. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

C. Cover ends of insulation sections with an adhesive coating at intervals of not more than twenty feet (20'). Insulate accessories, valves, flanges, etc.

D. Cover insulation on fittings with spiral-wrapped glass mesh tape. Finish with a vapor barrier coating applied approximately 1/16" thick.

E. Insulate all horizontal runs at primary and overflow roof drain rain leader piping from bottom of roof deck to include roof drain body, to one foot (1') past turn down fitting in vertical direction. Vertical rain leaders need not be insulated when concealed, routed inside wall cavity.

F. Insulate all cold water piping above ceiling to point where piping turns down into chase. When piping turns down into exterior walls, piping in exterior walls must be insulated.

3.10 HOT & TEMPERED PIPING INSULATION

A. Insulate domestic hot and tempered water and circulating lines using one inch (1") Type "A" insulation one inch (1") thickness for ½" to one inch (1") piping, 1-1/2" thickness for 1-1/4" to two inch (2") piping and two inch (2") thickness for 2-1/2" to six inch (6") piping. Domestic hot water lines may be insulated with one inch (1”) Type “B” insulation.

B. Staples may be used to seal jacket.

C. Insulate unions, valves and flanges in boiler room only for piping over 140^{O} F. Insulate with same method used for cold pipe fittings, except vapor barrier mastic is not required.

D. Do not insulate valves, flanges, and unions for domestic hot water piping systems below 140^{O} F., but bevel and seal ends of insulation at such locations.

E. Insulate hot water expansion tank and air separators with one inch (1") sheet type “B” insulation.

3.11 SPECIAL PIPING INSULATION REQUIREMENTS

A. Insulate buried domestic hot and cold water lines under building with one inch (1”) Type "B" Insulation. Bond joints using an adhesive; apply surface treatment as recommended by insulation manufacturer, taping not permitted. Set in sand bed and cover with minimum five inches (5") sand. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

B. **Insulate all refrigerant piping for heat pump systems and suction lines only for all other systems with Type "B" Insulation:** ½" thickness for piping up to 1" and 3/4" thickness for piping larger than one inch (1"), apply per manufacturer's recommendations. Glue all joints and seams with Armaflex 520 Adhesive BLV LOW VOC. Protect all insulation on piping outside with two (2) coats of "WH" Armaflex Finish Coating for weather protection. No tape is allowed. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

C. Insulate all exposed p-traps and water connections for handicapped lavatories with White "Truebro Handi Lav-Guard" Insulation Kit Model #102W (Use Model #105W when 5" offset strainer is used). (Phone: 203-875-2868), or equal products as manufactured by Brocar Products Inc., (Phone: 512-847-1524).

D. Insulate p-trap of all floor drains above the first floor and deep seal traps that receive condensate. Insulate with 3/4" thick Type "B" Insulation.

3.12 DUCT INSULATION REQUIREMENTS

A. Insulate Ducts as Follows:

1. Thickness and Type:

a. Exhaust Air and Outside Air Exhaust Ducts: Externally wrap with Type "C" Insulation; insulate from roof deck/wall exterior back three feet (3') into space. (R-6)

b. Rooftop Units: Internally line rooftop unit supply and return air drops past first ninety degree elbow, reference Specification Section 20 07 00, 2.03, Sound Control for Liner. Provide access door in duct risers for access and cleaning. Minimum size 18 x 18. (Exception: Rooftop unit serving kitchen is to have the supply air drop internally lined and the return air drop externally wrapped with Type "C" Insulation.). R-8 for ductwork located outside or in attic spaces and R-6 for all other ducts inside the building insulation envelope.

c. Supply Air: Externally wrapped with Type "C" Insulation, unless specifically noted otherwise. R-8 for ductwork located outside or in attic spaces and R-6 for all other ducts inside the building insulation envelope.

d. Return Air: Externally wrapped with Type "C" Insulation, unless specifically noted otherwise. R-8 for ductwork located outside or in attic spaces and R-6 for all other ducts inside the building envelope.

e. Outside Air: Supply ducts externally wrapped with Type "C" Insulation. R-8 for ductwork located outside or in attic spaces and R-6 for all other ducts inside the building insulation envelope.

f. Relief Air: Externally wrap with Type "C" insulation when run through unconditioned spaced, unless specifically noted otherwise. R-8 for ductwork located outside or in attic spaces and R-6 for all other ducts inside the building insulation envelope.

g. Air Devices: Externally wrap backs of all supply, return and exhaust air devices including square to round adapters and boots with Type “C” Insulation. Properly seal all edges. Use R-8 insulation for air devices with backs outside of building insulation envelope and R-6 insulation when backs of air devices are located inside building insulation envelope.

h. Exterior Ductwork: R-8 Type “E” and/or duct liner insulation.

i. Special circumstance as noted: R-6 or R-8 Type “G” duct liner insulation.

3.13 CONDENSATE PIPING INSULATION

A. Condensate piping to be insulated with Type “B” Insulation 1/2" thick. Entire condensate system to be insulated when copper pipe is used.

1. Apply per manufacturer's recommendations. Glue all joints and seams with Armaflex 520 BLV LOW VOC Adhesive. No tape will be allowed. Auxiliary condensate not required to be insulated. Protect all insulation on piping outside with two (2) coats of “WH” Armaflex Finish Coating for weather protection. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

3.14 CHILLED WATER PIPING INSULATION

A. Insulate chilled water piping using Type “A” Insulation. One inch (1") thickness up to two inch (2") piping and 1-1/2" insulation from 2-1/2" to ten inch (10") piping.

B. Chilled Water Piping Outdoors:

1. Piping to be pre-insulated type with two inch (2") foam-in-place polyurethane. Reference Section 2.07.

2. Install per manufacturer's recommendations.

C. All hangers to be installed on the outside of the insulation and shall not be in contact with the pipe. Use metal shields between the insulation jacket and the hanger. Provide heavy density insulation or cork inserts at shields.

D. Insulate all fittings with one (1) piece pre-molded PVC insulation fittings with insulation inserts to same thickness as adjoining pipe insulation.

E. Maintain complete vapor barrier throughout system. Seal all jacket penetrations, seams, edges and joints with vapor proof mastic. **ALL ADHESIVES, SEALANTS AND COATINGS MUST MEET OR EXCEED GREEN BUILDING PROGRAM SCAQMD RULE 1168 AND 1113.**

END OF SECTION

SECTION 22 11 16 - WATER DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.01 DESCRIPTION

A. This section describes specific requirements, products and methods of execution relating to the domestic water distribution system for the project.

B. The work of this section includes: All water distribution work inside the structure, and all outside distribution work up to and including connection to the water source, including provision of the outside water source, or water using apparatus, although the work of this section does include the interface connections at all of these related items.

C. SPECIAL NOTE: All provisions and divisions of these specifications are a part of this section of these specifications. The Contractor shall consult these divisions and provisions in detail for instructions and include all items pertaining to this work. The Contractor shall consult all other divisions of these specifications, determine the extent of impact on the work required to complete the work required by this section of the specifications or portion thereof and related work shown on the drawings.

1.02 CONNECTION TO UTILITY WATER SYSTEM

A. Coordinate with site utilities to properly locate and interface with the water supply. Stub water 5'-0" outside the building and make connection to water supply. See Civil Drawing for site utility locations.

PART 2 - PRODUCTS

2.01 PIPE AND FITTINGS ABOVE GROUND (INSIDE STRUCTURE)

A. Type "K" or "L" hard drawn copper tubing, wrought solder type fittings, lead free (0.00% lead content) solder.

2.02 PIPING AND FITTINGS BELOW GROUND

A. 2" and Smaller:

1. Type “K” soft copper, wrought bronze solder type fittings, lead free (0.00% lead content) solder.

2. Use heavy duty Water-Tite-Sleeve as manufactured by IPS Corporation for all piping underslab. Sleeves for 1" and under shall be 32 mil., blue for cold water and red for hot water. Sleeves for 1 1/4" to 2" shall be 32 mil., black in color.

B. 2-1/2" and Larger:

1. Type “K” hard drawn copper, wrought bronze solder type fittings, lead free (0.00% lead content) solder.

C. No joint to be installed under building slab.

2.03 WATER METER

Reference Civil Drawings

PART 3 - EXECUTION

3.01 GENERAL METHODS

A. Make all joints in accordance with manufacturer's recommendations. The tools used shall be the tools adapted to that specific purpose.

B. At all fixtures, install and connect hot water on left and cold water on right, as viewed when facing the fixture.

C. Where required for connections to fixtures, equipment items, etc., employ lengths of red brass pipe with threaded ends of copper to IPS adapters, brass couplings, etc., to the end that there shall be no ferrous pipe in any water piping system.

D. Provide valves on each branch line at the point of connection into the supply and circulating mains serving all batteries of plumbing fixtures. Provide stop valves in each water supply for every plumbing fixture. Each hose bibb is to have an individual shut off valve, separate from valves that would shut down a battery of fixtures. Valves for piping two inches (2") and smaller shall be ball valves.

E. Provide water hammer arrestors with accessible isolation valve equal to Wade Shok-stops, JR Smith Hydrotrol 5000 Series, or Zurn Shocktrols A-1700 Series on cold water and hot water supplies to plumbing fixtures. Provide access door for all concealed arrestors. Shok-stops shall not be installed in the pendant position. **O-ring type arrestors are not considered equivalent. Arrestors are to be installed in locations and sized per Manufacturer's installation instructions.**

F. Install vacuum breakers on all plumbing lines where contamination of domestic water may occur and on boiler make-up lines and hose bibbs.

G. Insulate all exposed water connections for handicapped lavatories and sinks with "Handi Lav-Guard" Insulation Kit (Phone: 203-875-2868).

3.02 TESTING

A. Test all water piping hydrostatically at 150 psig or 150% of working pressure, whichever is greater, for a period of 24 hours. Observe piping during this period and repair all leaks. Test for lead, certify that lead residual in piping system does not exceed local code requirements.

3.03 STERILIZATION OF DOMESTIC WATER SYSTEMS

A. Sterilize each unit of completed supply line and distribution system with chlorine solution before acceptance for domestic operation.

B. Accomplish sterilization as described below or by the system prescribed by the American Water Works Association Standard C-601. Apply the amount of chlorine to provide a dosage of not less than 50 parts per million. Provide chlorine manufactured in conformance to the following standards:

1. Liquid Chlorine: Federal Specification BB-C-120.

2. Hypochlorite: Federal Specification 0-C-114a, Type 11, Grade B or Federal Specification 0-X-602.

C. Introduce the chlorinating material to the water lines and distribution system after piping system has been thoroughly flushed. After a contract period of not less than 24 hours, flush the system with clean water until the residual chlorine content is not greater than .2 parts per million.

D. Open and close all valves in the lines being sterilized several times during above chlorination.

E. The sterilization process shall be done by persons whose major business is water treatment and sterilization. The Plumbing Contractor shall pay all costs and charges associated to this test and certification.

F. Certify in writing that sterilization has been completed in accordance with these requirements.

END OF SECTION

SECTION 22 13 16 - LIQUID WASTE TRANSFER

PART 1 - GENERAL

1.01 DESCRIPTION

A. Description:

1. This section describes specific requirements, products, and methods of execution relating to the transfer of liquid waste for the project. The work of this section includes providing the following:

a. All liquid waste piping and fittings:

1) Soil

2) Rain leaders

3) Building sewer

b. All plumbing vents, including their termination.

c. All connections at points of collection of handling:

1) At plumbing fixtures and trims

2) At equipment by others.

B. SPECIAL NOTE: All provisions and divisions of these specifications are a part of this section of these specifications. The Contractor shall consult these divisions and provisions in detail for instructions and include all items pertaining to this work. The Contractor shall consult all other divisions of these specifications, determine the extent of impact on the work required to complete the work required by this section of the specifications or portion thereof and related work shown on the drawings.

C. All materials exposed within a plenum shall be noncombustible or shall have a flame spread index of not more than 25 and a smoke developed index of not more than 50 when tested in accordance with ASTM E 84.

IF PVC OR CPVC IS USED IN PLENUM SPACES IN LIEU OF CAST IRON, THEN PIPING MUST BE WRAPPED WITH CODE APPROVED INSULATION TO PROTECT PIPING AND MEET 25/50 REQUIREMENTS.

D. All waste, vent, sewer and storm lines shall be of cast iron soil pipe and fittings shall be marked with the collective trademark of the Cast Iron Soil Pipe Institute (CISPI) and be listed by NSF International as well as conform to the requirements of CISPI Standard 301, ASTM A-888 or ASTM A-74 for all pipe and fittings, and be manufactured by Charlotte, Tyler, or AB&I .

E. All pipe and fittings shall be manufactured in the United States.

1.02 CONNECTION TO UTILITY SEWER AND STORM DRAIN SYSTEMS (storm drain piping is considered to be piping beyond 5'-0" outside the building)

A. Final wastewater connection point to extend approximately five feet (5') outside the building, as indicated on the drawings. Coordinate with Civil Drawings for wastewater service point to within five feet (5') of the building. Coordinate with site utilities to insure proper inverts for all lines and connection point prior to installation. Contact Architect immediately if any conflict is discovered. Make final connection to service line. Obtain all permits, pay fees and provide all services incidental to this work.

PART 2 – PRODUCTS

2.01 SEWER PIPE UNDERGROUND INSIDE STRUCTURE (INCLUDES TO FIVE FEET FROM BUILDING PERIMETER)

A. Service weight cast iron soil pipe with Tyseal neoprene gaskets.

B. Schedule 40 PVC (SOLID WALL DWV pipe and fittings) as allowed by code. Material Data: Type 1, Grade 1 PVC 12454-B, ASTM D-1784.

C. Pipe 1-1/2" and Smaller: Schedule 40 galvanized steel pipe with cast iron drainage fittings.

D. Waste line serving commercial dishwasher in kitchen and associated main to be service weight cast iron soil pipe with Tyseal neoprene gaskets to a point twenty feet (20') downstream of dishwasher. Remainder of grease system in kitchen may be PVC as listed in 2 above.

2.02 RAINLEADERS BELOW SLAB AND ABOVE GROUND INSIDE STRUCTURE

A. Cast iron soil pipe with heavy weight no-hub fittings.

B. Underground RAINLEADER piping: Use stainless steel couplings (28-gauge, Type 304SS) with neoprene gasket meeting ASTM Standard C-564 meeting FM 1680, Class 1. Husky SD 4000, Clamp-All 80 lb. or equal.

2.03 SEWER ABOVE GROUND INSIDE STRUCTURE

A. Service weight cast iron soil pipe with tyseal neoprene gaskets or cast iron soil pipe with no-hub fittings. Reference 2.06 below.

B. Pipe 1-1/2" and Smaller: Schedule 40 galvanized steel pipe with cast iron drainage fittings.

2.04 VENTS

A. All vent piping above slab to be cast iron soil pipe with tyseal neoprene gaskets or no-hub fittings.

B. All vent piping under slab to be heavy weight no-hub fittings.

C. Vents 1-1/2" and Smaller: Schedule 40 galvanized steel pipe with cast iron fittings.

D. DWV copper with wrought or cast solder fittings.

2.05 CAST IRON PIPE/FITTINGS

A. Tyseal Gaskets or MG Couplings.

B. Hubless couplings shall be composed of a stainless steel shield, clamp assembly and an elastromeric sealing sleeve conforming to the most current edition of CISPI 310, listed by NSF International, manufactured in the United States of America, and manufactured by Anaco, Mission, Tyler or Ideal.

2.06 CONDENSATE PIPING

A. Type L or M: Hard drawn copper.

PART 3 – EXECUTION

3.01 INSTALLATION OF UNDERGROUND PIPING

A. Install pipe and fittings to required grade with hubs and bottom half section in undisturbed soil. Follow manufacturer’s installation requirements.

3.02 INSTALLATION OF ABOVE GROUND PIPING

A. Refer to Section 20 01 00.

3.03 GRADING

A. Grade all horizontal runs of pipe in building and under floor slab at 1/4" per foot downward in direction of flow. If it is absolutely impossible to maintain a grade of 1/4" per foot, piping four (4) inches in diameter and larger may slope to a minimum grade of not less than 1/8" per foot.

3.04 SUPPORTING

A. Support all horizontal runs of pipe in building at intervals not to exceed 5'-0" and at each change of direction. Provide a support at the base of vertical risers with intermediate supports as required. Brace all adequately to prevent motion, per manufacturer's recommendation. Reference Section 20 01 00, 2.08, B., Mechanical Support Devices and Pipe Supports for further requirements.

3.05 CLEANOUTS

A. Provide cleanouts as shown on plans and in an accessible location at base of all risers in soil, waste and drain piping and at each change in direction in horizontal runs of pipe. In long straight runs, provide a cleanout at every 75 feet (minimum) for piping four inches (4") and larger and at a minimum of every 50 feet for piping less than four inches (4").

B. Cleanouts shall be located no closer than 24” to a wall.

3.06 VENTING

A. Provide a vent for each trap or as shown on the drawings.

B. Extend each vent vertically to a point not less than six inches (6") above the extreme overflow level of the fixture served before offsetting horizontally. Whenever two or more vent pipes converge, extend each such pipe at least six inches (6") in height above the flood rim level of the plumbing fixture it serves before being connected to any other vent and utilize only approved drainage fittings and materials to connect piping.

C. Provide a building main relief vent for waste piping not provided venting by fixture branch connections. Vent size shall be per code requirement, based upon fixture unit loading in the pipe vented.

3.07 VENTS THROUGH ROOF

A. Extend vents through the roof a minimum distance of 6" and terminate at least 15 ft. horizontally from operable windows, doors, or air intakes, and at least 3 feet above such opening. Do not terminate vents through roof at edge or valley of roof.

B. Flash and counterflash vents through roof. Provide flashings not less than 18" square, with prefabricated 4-pound lead counterflashing. Extend vertical portion of flashing up entire length of pipe and turn down inside the pipe at least 1 inch with turned edge hammered against pipe. Coordinate with type roof and Architectural details and flash them into roof according to the roofing products manufacturer's recommendations.

C. Protect the roof from tools and equipment. Remove all scraps on roof to prevent damage to roof.

3.08 GENERAL

A. No piping shall be permanently concealed before the examination is completed by the authorities having jurisdiction.

B. All fixtures used in conjunction with the conveying of waste substance shall be connected by means of a trap.

C. All connections for floor mounted water closets and waste piping shall be made with appropriate closet flange and wax gaskets.

D. Insulate all exposed p-traps for handicapped lavatories and handicap sinks with "Handi Lav-Guard" Insulation Kit (Phone: 203-875-2868) as required.

E. Provide specialty shielded transition coupling as required at connections between PVC and cast iron fitting.

3.09 TESTING

A. Test all piping in accordance with the requirements of the local codes.

B. Repair leaks and retest system, repeating this process until piping system is free of leaks.

C. Test shall be conducted and completed before any joints are concealed or made inaccessible.

D. Maintain a log of tests indicating date, time, result of test and person doing test.

E. Under floor.

1. Test pipe under floors before connecting to sewers.

2. Maintain not less than 15 feet of hydrostatic head.

3. Repair all leaks and repeat until system holds for 2-hours without a drop in water level.

3.10 CONDENSATE PIPING

A. Route insulated copper condensate drain line from each unit to nearest floor drain, deep seal traps, sink p-traps, janitor sink, dry well (exterior units), or roof drain if piped to storm sewer (cannot use roof drain if day lites at surface) code approved or disposal point unless otherwise noted. Condensate shall not drain on to roof. Mechanical Contractor and Plumbing Contractor to coordinate locations. Slope all piping to drain at minimum 1/8" per foot. Drains shall be sized in accordance with equipment capacities as follows:

EQUIPMENT CAPACITY	*MINIMUM PIPE SIZE
Up to 3 tons of refrigeration	3/4"
3 to 20 tons of refrigeration	1"
21 to 90 tons of refrigeration	1-1/4"
91 to 125 tons of refrigeration	1-1/2"
126 to 250 tons of refrigeration	2"

*Minimum size of drain shall not be smaller than drain outlet size for unit.

B. Coordinate mounting heights of units to allow adequate slope for condensate piping to disposal point.

C. Provide cleanout plug at end of each main run.

D. Drywell (French Drain): The drywell shall consist of a pit not less than 24" in diameter (or 24" x 24") and 24" in depth. The pit shall be filled to within 3" of the finished grade with course gravel. Top 3 inches to be filled with topsoil and sodded. Gravel to be wrapped completely (top, sides and bottom) with heavy duty weed block fabric. Install a 3" perforated PVC drain pipe (centered in drywell) with cap at bottom extending to bottom of pit. 3" perforated pipe to extend 3" - 5" above finished grade. Provide appropriately sized bushing or fittings to rigidly tie to condensate drain line from unit. Perforated pipe above grade will act as air break connection. Twenty-four inch (24") diameter or 24" x 24" x 24" deep can be used for up to 5 ton capacity. Thirty-six inch (36") diameter or 36" x 36" x 24" deep can be used for up to 13 ton capacity. Forty-eight (48") inch diameter or 48" x 48" x 24" deep can be used for up to 30 ton capacity. Confirm final requirements with code authority having jurisdiction.

END OF SECTION

SECTION 22 30 00 - PLUMBING FIXTURES AND TRIM

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. This section describes certain components of domestic plumbing systems, including related specific requirements, products and methods of execution. Plumbing water, waste, vent piping and other primary distribution components of the plumbing system are included with related work specified elsewhere.

B. SPECIAL NOTE: All provisions and divisions of these specifications are a part of this section of these specifications. The Contractor shall consult these divisions and provisions in detail for instructions and include all items pertaining to this work. The Contractor shall consult all other divisions of these specifications, determine the extent of impact on the work required to complete the work required by this section of the specifications or portion thereof and related work shown on the drawings.

PART 2 - PRODUCTS

2.01 FLOOR DRAINS

A. All floor drains, including floor sinks, are to be the same size as the waste line size indicated on plans. If size is not indicated, drain size shall be 3". Floor drains that tie in to acid waste piping are to have acid resistant coating or be stainless steel. Floor Drains and Floor Sinks in kitchen areas are to have Acid Resistant Enamel coating or be constructed from stainless steel.

B. **PROVIDE TRAP PRIMING APPARATUS FOR EACH FLOOR DRAIN AND FLOOR SINK UNLESS NOTED OTHERWISE.** Whenever possible, use an inverted tee connection from sink tailpiece or device similar to Jay R Smith Prime-EZE for trap priming with gray water. Second choice is to use flush valve trap primer connection. As last resort, provide mechanical trap primer (Manufacturer: Precision Plumbing Products, “Oregon #1 or equal as required) connected to supply lines as small as possible, but never over 1-1/2” diameter. Provide minimum 12 x 12 access door or larger as required. When local jurisdiction (such as the City of Pflugerville, Tx.) does not approve the use of a standard mechanical trap primer (similar to Oregon #1) that activates from pressure differential and other methods are not practical, provide an electronic trap primer as last resort. Coordinate electrical requirements with electrical contractor. Proset “TRAP GUARD” device may be used in lieu of trap primers when allowed by local code authority having jurisdiction and building Owner. Before using Proset “TRAP GUARD” contractor must obtain written approval from local code authority having jurisdiction and provide copies to Architect and Engineer.

C. Trap primers must conform to ASSE 1018 or ASSE 1044.

D. Trap Primer Manufacturers: MIFAB, Precision Plumbing Products, Jay R Smith, Sloan, Zurn, Wade or Watts.

E. Floor Drain/Floor Sink Manufacturers: StainlessDrains, Kessel, MIFAB, Josam, Wade, Zurn or Jay.R. Smith, Watts.

2.02 ROOF DRAINS

A. Provide 30" square four pound lead flashing for all roof drains, centered around drain. Coordinate with type roof and Architectural Roof Plan and Architectural details. Roof drains to be installed in low point of roof. Verify low point in roof before installation. Roof drains to be moved at no additional cost to owner if not coordinated and installed in low point of roof to allow for proper drainage.

B. Where horizontal offset is not possible directly below drain connection, install an expansion joint directly under the drain. MIFAB R1900 Series.

C. All roof drains shall be same size as the rainleader piping size serving roof drain as indicated on the drawings.

D. Roof Drains:

RD-1 Primary roof drain, cast iron body, flashing collar, gravel stop, ductile iron dome, under deck clamp, extension and sump receiver. MIFAB R1200-M-E-U Series.

RD-2 Overflow roof drain same as RD-1, set inlet 2 inches higher than inlet of RD-1. MIFAB R1200-M-E-U-W. Coordinate and confirm final location with roofing consultant prior to rough-in.

E. Manufacturers: StainlessDrains ,MIFAB, J.R. Smith, Zurn, Josam, Wade, Watts or approved equal.

2.03 CLEANOUTS

A. Cleanouts shall be same nominal size of pipe lines up to four inches (4") and not less than four inches (4") for larger lines.

B. Floor Cleanouts: Gas and watertight seal, internal taper ABS cleanout plug, stainless steel or nickel bronze finish scoriated round top with countersunk screw for installation flush with finish floor. MIFAB C1100R-3 Series. If floor has a waterproof membrane then add C clamp ring flange.

C. Wall Cleanouts: MIFAB C1400-RD Series. Countersunk plugs, with smooth round access cover and polished stainless steel or nickel bronze finish.

D. Manufacturers: StainlessDrains, MIFAB, Josam, Zurn, Wade, Watts or approved equal.

E. Cleanouts that tie in to acid waste piping to be acid resistant.

2.04 FIXTURES

A. Manufacturers:

1. The fixtures are chosen from standard manufacturers.

2. Provide all similar fixtures and trim from one (1) manufacturer, except where specified otherwise.

3. Equality: The following manufacturers are considered equal, specified item(s) sets minimum standard for acceptability.

   a. **Fixtures:** American Standard, Crane, Eljer, Kohler, Elkay, Fiat, Sloan, Toto, Zurn, Caroma.

      1) All water closet bowls shall have fully glazed trap.

      2) All water closet bowls must meet MAP Testing (Maxim Performance Testing) at 1000 grams.

   b. **Faucets:** American Standard, Bradley, Elkay, Chicago, Sloan, Zurn, T & S Brass, Moen Commercial.

   c. **Stainless Steel Sinks:** Elkay, Bradley, Moen or Just.

   d. **Carriers:** MIFAB, J.R. Smith, Josam, Watts or Zurn.

   e. **Flush Valves:** Sloan Royal or equal by Zurn

   f. **Point of Use ASSE 1070 Lead Free Mixing Valves:** Watts, Powers, Bradley, Leonard, Lawler, Symmons or Moen.

   g. **Drinking Fountains/Electric Water Coolers:** Elkay, Acorn Aqua Surf, Oasis or Halsey Taylor, must meet NSF Section 9 in its entirety and meet TCEQ Certification Requirements. Provide letter with submittal data.

   h. **Wash Fountains**: Bradley, Wiloughby or Sloan Stone.

   i. **Wall Pipe Supports**: HoldRite or Equal

   j. **Acrylic Showers**: Crane, Lasco, Aquabath

   k. **Circulating Pumps**: TACO, Grundfos, Armstrong, Wilo

   l. Stainless Steel Skullery Sinks: Elkay, Bradley, Just, Advance Tabco, Griffin.

   m. Provide wall carriers for ALL wall-mounted fixtures, including wash fountains.

B. Traps, Stops and Supplies:

1. Provide traps, stops and supplies for all fixtures.

2. P-Traps: 17 gauge chrome-plated cast brass.

3. Supplies: Flexible, chrome-plated, 7538 Series.

4. Stops: Removable key type, 2302 Series.

5. Supplies and stops are to meet current requirements of NSF61.

6. Manufacturers: American Standard, Brass Craft, McGuire or equal.

C. Fixtures Specified Elsewhere, or Otherwise Furnished. Provide appropriate strainer, tailpiece, trap, waste and supplies. Rough-in and connect only.

D. Faucets:

1. All faucets except commercial kitchen and bar sinks are to meet ANSI/NSF Standard 61 and be listed by NSF as residential drinking water faucets.

2. All faucets not NSF 61 listed, (as described in paragraph 1) must have tin lined waterways or other such material so water flowing through the faucet is not in contact with any material that could allow “Leaching” of lead into the waterway.

3. Commercial kitchen and bar sinks are to meet ANSI/NSF Standard 61 and be listed as commercial faucets. Faucets meeting the stricter residential standards can be used at contractor’s option.

4. Faucets are not allowed to have more than the maximum total lead content as listed by NSF, TCEQ (Health and Safety Code) and EPA.

5. Any faucets which exceed lead concentration “Leaching” into water stream after a minimum of 45 days usage and proper flushing prior to testing shall be replaced by the manufacturer with an acceptable product. All costs of change out incurred will be sole responsibility of the manufacturer.

6. Lavatory faucets to have .5 GPM vandal resistant aerator.

E. Waterways and tanks for all drinking fountains and water coolers shall be constructed of 3. lead-free (0.00% lead) materials. All waterways to be totally free of lead. No lead solder is permitted. All drinking fountains and water coolers to meet latest criteria of TCEQ, EPA and be listed by NSF.

F. All water line, fittings and fixtures in contact with potable water to be “lead free” AB1953 compliant. (.25% or less average lead content). All submittals to state items comply in submittal package.

2.05 FIXTURE FLOW RATES

A. The maximum flow rates for plumbing fixtures are to be no greater than quantities listed below:

1. Toilets – 1.28 gallons per flush GPF) on all projects .

2. Urinals – 0.125 gallons per flush (GPF) on all projects

3. Lavatory (hand sink) – 0.5 gallons per minute (GPM) on all projects

4. Shower – 2.0 gallons per minute (GPM) on all projects

PART 3 - EXECUTION

3.01 Store all fixtures and trim above ground in a covered location not subject to accidental damage by traffic or other construction activities. Handle fixtures and trim carefully to avoid chipping, denting, scratching, or other damage. Replace damaged items with same item in new condition.

3.02 Provide permanent metal and wire positioners, supports and fixture carriers to secure fixtures and piping rigidly in proper alignment without sway or side play.

3.03 Anchor all fixtures securely to withstand applied vertical load of not less than 250 pounds on the front of the fixture, without noticeable movement.

3.04 Install all fixtures plumb, level and flush to the finished Architectural surface, so that the maximum gap between the fixture and the surface does not exceed 3/16 inch. **Grout** under water closets to level fixtures. Caulk the edge of the joint between fixture and surface with silicone or butyl type waterproof caulking compound.

3.05 Adjust all functional components for proper operation in accordance with manufacturer's recommendations, or as otherwise directed.

3.06 Clean all fixtures and trim thoroughly to spotlessly clean condition. Obtain a written certification from the Architect that this has been accomplished.

3.07 Where floor drains or janitor sinks are located over any room, provide waterproof installation.

3.08 Ensure final location of cleanouts have access and ample clearance at cleanout for rodding of drainage system. Check locations before installation. Contact Architect for alternate location if maintenance clearance is a problem. Cleanouts to be moved at no additional cost to Owner for failure to coordinate locations.

3.09 Coordinate slope of floors to floor drains with Architect. Adjust height of floor drain for proper drainage.

3.10 Provide all adapters, flanges, gaskets, etc. as required for proper installation of fixtures. Coordinate fixture placement before core drilling of floor or sleeve installation.

3.11 Insulate all exposed p-traps and water connections for handicapped lavatories with White “Truebro Handi Lav-Guard” Insulation Kit Model #102W (Use Model #105W when 5" offset strainer is used). (Phone: 203-875-2868), or equal products as manufactured by Brocar Products Inc., (Phone: 512-847-1524).

3.12 **No offset flanges will be allowed for installation of water closets.**

3.13 Install all trap priming devices per manufacturer’s installation instructions. Provide shut-off valves at each mechanical or electronic trap primer for service. Install minimum 12” x 12” access doors as required for service of trap priming devices.

3.14 Provide a floor sink with trap priming device in each sprinkler riser room.

3.15 Cleanout locations:

A. On each horizontal drain line 5 feet or greater in length.

B. No more than 50 feet on center.

C. At changes in director of 90 degrees or more (line size).

D. At the end of each continuous waste line.

E. At the end of each battery of fixtures.

F. At each sink and urinal.

G. Additional areas required for service and by code.

END OF SECTION

SECTION 23 05 93 – TEST AND BALANCE

PART 1 - GENERAL

1.01 DESCRIPTION

A. The section describes general requirements and methods of execution relating to the testing and balancing of the mechanical systems provided on this project.

B. Scope:

1. Furnish the services of a qualified and approved Testing and Balancing Agency to perform the work of this specification.

2. The work of this section includes, but is not necessarily limited to:

a. Testing and balancing all fans, all air handling systems, all energy recovery ventilators and makeup air systems.

b. Providing a final report. Final report to be submitted for review only after all deficiencies have been corrected and design CFM's are achieved.

C. SPECIAL NOTE: All provisions and divisions of these specifications are a part of this section of these specifications. The Contractor shall consult these divisions and provisions in detail for instructions and include all items pertaining to this work. The Contractor shall consult all other divisions of these specifications, determine the extent of impact on the work required to complete the work required by this section of the specifications or portion thereof and related work shown on the drawings.

1.02 APPLICABLE STANDARDS

A. SMACNA Manual for the Balancing and Adjustment of Air Distribution Systems.

B. AMCA Publication 203, Field Performance Measurements.

C. AMCA Standard 300-67, Test Code for Sound Rating.

D. National Environmental Balancing Bureau (NEBB) Recommended Procedures.

1.03 PRE-QUALIFIED AGENCY

A. Subcontractor Minimum Qualifications Include:

1. Maintain a complete service organization that has operated within a one hundred (100) mile radius of the project for at least three years prior to bid date of this project.

2. Demonstrate satisfactory completion of three projects of similar size and scope. Provide references if requested.

3. Bids by suppliers, Contractors or any firm not listed in #5 below are not acceptable.

4. Independent, NEBB certified agency with no affiliation to mechanical contractor.

5. Pre-qualified T & B Agencies are as follows:

a. Air Technologies (512)280-3398.

b. PHI (512)339-4757.

1.04 TIMING OF WORK

A. Do not begin testing and balancing until the systems are completed and in full working order.

B. Schedule the testing and balancing work in cooperation with other trades.

C. Complete the testing and balancing before the date of final project completion.

1.05 MECHANICAL CONTRACTOR RESPONSIBILITY TO BALANCING AGENCY

A. Award the test and balance contract to the approved agency upon receipt of contract to allow the Balance and Testing Agency to schedule this work in cooperation with other trades involved and comply with completion date.

B. Put all heating, ventilating, and air conditioning systems, equipment and controls into full operation for the Balancing Agency and continue the operation of same during each working day of testing and balancing.

C. Provide scaffolding, ladders and access to each system for proper testing and balancing.

D. Provide and change pulleys, belts and dampers, add any dampers and correct any installation errors in a timely matter as required for correct balance as recommended by the Balance and Testing Agency or as directed by the Architect after review of Balancing Report, at no additional cost to the Owner.

PART 2 - PRODUCTS

THIS PART NOT USED.

PART 3 - EXECUTION

3.01 INSTRUMENTS

A. Maintain all instruments accurately calibrated and in good working order. Use instruments with the following minimum performance characteristics.

B. Air Velocity Instruments: Direct reading in feet per minute, 2% accuracy.

C. Static Pressure Instruments: Direct reading in inches water gauge, 2% accuracy.

D. RPM Instruments: Direct reading in revolutions per minute, 1/2% accuracy; or revolution counter accurate within 2 counts per 1000.

E. Temperature Readout: Direct reading in degrees F., plus minus 0.1 degrees F.

3.02 GENERAL PROCEDURES FOR ALL SYSTEMS

A. In cooperation with the Contractor's representative, coordinate adjustments of automatically operated dampers and valves, including the controlling thermostats, to operate as specified, indicated, and/or noted.

B. Use manufacturer's ratings on all equipment to make required calculations.

C. MAKE FINAL ADJUSTMENTS FOR EACH SPACE PER HEATING OR COOLING COMFORT REQUIREMENT. State reason for variance from design cfm, i.e., “too noisy”, “too drafty”, etc.

D. Balancing to occur with clean filters when applicable and wet coils when applicable.

3.03 REQUIREMENTS FOR ALL AIR HANDLING SYSTEMS

A. Identify each diffuser, grille, and register as to specific location and area.

B. Identify and list size, type and manufacturer of diffusers, grilles, registers and all equipment tested.

C. In readings and tests of diffusers, grilles and registers, include required fpm velocity and required cfm and test cfm after adjustments. If test apparatus is designed to read cfm directly, velocity readings may be omitted. Identify test apparatus used. Identify wide open (W.O.) runs.

D. Adjust all diffusers, grilles and registers to minimize drafts and excess noise in all areas.

3.04 BALANCING LOW VELOCITY CONSTANT VOLUME DUCTWORK

A. Adjust the branch dampers so that each stale air exhaust inlet or outside air supply outlet in the system is a minimum of design airflow on all makeup air units and energy recovery ventilators.

B. All other HVAC systems on the project are to be adjusted as per ‘A’ above except to + or - 10% of design airflow. **However, comfort cooling units are to be balanced to never exceed 410 cfm/ton or be less than 300 cfm/ton. Notify engineer if plans deviate from this CFM range. 5 ton units must be balanced to provide under 2000 CFM.**

C. Adjust the fan for design airflow.

D. Read and record the airflow at each return or exhaust inlet and each supply outlet. Balance as required.

E. Secure each branch damper and mark the balanced position of the damper quadrant.

3.05 FAN ADJUSTMENT

A. Balance ductwork before making final fan adjustment.

B. Verify that system is free of debris, that inlets and discharges are not obstructed, and that filters are clean.

C. Make pitot traverse of main ductwork to determine total airflow and record.

D. Adjust fan rpm to obtain design airflow.

E. Test and record motor amperage and voltage on each phase leg. Reduce fan rpm if necessary, so that motor running amperage does not exceed motor nameplate amperage. Record final amperage and voltage.

F. Record fan rpm.

G. Test and record system (suction) return and (discharge) supply static pressures.

H. Record airflow.

I. Test and adjust system for minimum design cfm outside air (intake and exhaust), as shown, where applicable.

J. Test and record entering air temperatures across coils and fans.

K. Test and record leaving air temperatures (heating and cooling) across coils

L. Test and record static pressure drop across each filter and coil bank.

M. Provide test data for each AHU, FCU, RTU, MAU, ERV, EF, SF, ETC., used on project:

1. Test and document operation of each MAU, RTU, AHU, CU, HP and FAN to insure that all pieces of HVAC equipment are functioning properly and are properly connected to the control system. Check in cooling, heating and emergency heating modes, if unit is so equipped.

3.06 BALANCING REPORT

A. Compile the test data and submit 8 copies of the complete test data for forwarding to the Architect for acceptance and/or analysis and recommendations. Report must be complete and all deficiencies corrected prior to submittal to architect.

B. Include a complete list of all test equipment used, including apparatus manufacturer's name, model number, serial number and date last calibrated.

C. Include complete identification of all elements. Identify by unit number, room name and number, air outlet symbol, etc., to clearly and positively identify the location of each element.

D. Include all test data specified in addition to test data recommended in the applicable standards referenced in Part 1. Tabulate all nameplate data at all balanced equipment and at the associated motors.

E. Tabulate data separately for each system. Describe balancing method used for each system.

F. Include at the front of the report a summary of problems encountered, deviations from design, resolution of problems, recommendations and comments.

END OF SECTION

SECTION 23 30 00 - AIR DISTRIBUTION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Description: This section describes specific requirements, products and methods of execution relating to the project air distribution systems.

B. Provide all air distribution systems as shown and specified, complete in every detail and in perfect operating order.

C. All equipment warranties to be per Specification Section 20 00 00, 1.17.

D. SPECIAL NOTE: All provisions and divisions of these specifications are a part of this section of these specifications. The Contractor shall consult these divisions and provisions in detail for instructions and include all items pertaining to this work. The Contractor shall consult all other divisions of these specifications, determine the extent of impact on the work required to complete the work required by this section of the specifications or portion thereof and related work shown on the drawings.

1.02 Provide all air distribution work in accordance with the minimum provisions of the latest approved editions of the following codes and standards.

A. NFPA 90 A - Air Conditioning and Ventilating Systems.

B. NFPA 90 B - Warm Air Heating and Air Conditioning.

C. SMACNA - Low Velocity Duct Construction Standards.

D. TIMA - Fibrous Glass Duct Construction Standards.

E. SMACNA - Duct Liner Application Standard.

F. SMACNA - Ducted Electric Heat Guide.

G. AMCA Standard 210-74 Laboratory Methods of Testing Fans for Rating Purposes.

H. AMCA Pub. 261 Directory or Products Licensed to Bear the AMCA Certified Rating Seal.

I. AMCA Standard 300-67 Test Code for Sound Rating.

J. AMCA Standard 301-65 Method of Publishing Sound Ratings for Air Moving Devices.

K. AMCA Publication 511-75 Certified Ratings Program for Louvers, Dampers and Shutters.

L. ASHRAE Standard 52-76 Method of Testing Air Cleaning Devices Used in General Ventilation for Removing Particulate Matter.

M. ASHRAE Standard 70-72 Method of Testing for Rating the Air Flow Performance of Outlets and Inlets.

1.03 Where any references to “sheetmetal work” or “ductwork” appears in this section of these specifications or on the drawings, it shall be construed to include outside air ducts, supply air ducts, return air ducts, exhaust ducts, relief ducts, plenums, duct taps, grille taps, diffuser connections and all other related pieces and parts of the air conveying systems.

1.04 Before starting shop drawings or fabrication of any duct work, the Contractor must have an approved reflected ceiling plan with which he can coordinate location of air outlets, lights, grille patterns, etc.

PART 2 - PRODUCTS

2.01 FANS

A. General Requirements for All Fans:

1. All fans constructed to AMCA Standards, AMCA listed and labeled.

2. Bearings:

a. At factory assembled package units 1HP and larger, provide 200,000 hour bearings (AFBMA L-50) selected at maximum fan rpm.

b. At packaged equipment 3/4HP and smaller, provide manufacturer's standard bearings.

c. Arrange equipment for easy access to lubrication fittings. Provide extended grease lines whenever easy access is not possible.

3. Balance fans statically and dynamically at factory.

4. Factory paint fan housing, fan wheel (except aluminum), frame and support brackets with prime coat and enamel finish coat at factory, after properly preparing surfaces.

5. Arrange fans to be cleanable and so that wheel, bearings, shaft, and drive are removable. Provide plug type cleanout doors or split fan housing. Gasket joints and bolt airtight.

6. Provide vibration isolation for all fans per manufacturer's recommendations.

7. Assemble fans at factory and test with permanent motor for proper operation, alignment and balance.

8. **All fans are to be of similar size and operational characteristics as fans scheduled. Smaller fans run at higher speeds will not be accepted.**

B. Belt Drives (All Belt Driven Fans):

1. Provide V-belt drive with sufficient belts to prevent slipping at start-up. Select drive for 1.5 service factor.

2. On each fan 10HP and smaller, provide variable pitch drive sheave with infinitely adjustable pitch diameter. Select drive sheave and fan pulley combination to provide fan rpm with drive adjusted to near mid-span.

3. On each fan 10HP and larger, provide a fixed speed drive sheave. Change fan and drive sheave in field to attain specified air delivery at completion of balancing.

4. Provide belt guard with hinged tachometer cap.

C. Roof Mounted Exhaust Fans:

1. Direct drive or have adjustable pitch v-belt AS SCHEDULED.

2. Wheels shall be backward curved and housing shall be removable or hinged aluminum.

3. Isolate motor with vibration dampeners.

4. Provide with motorized backdraft dampers unless gravity backdraft dampers are specifically listed on schedule. Damper actuator voltage to match fan voltage. Electrical Contractor to tie damper in to fan power.

5. Insulated, pre-fabricated metal roof curb shall be for flat or sloped roof as required for fan to be set level on roof.

6. Provide with galvanized bee screen.

7. Maximum motor rpm is not to exceed scheduled rpm by more than 50 rpm.

8. Provide with 12” high roof curb to match roof slope. Curb to minimum of 12” above finished roof.

9. Manufacturers: Greenheck, Acme, ILG, Penn, Briedert, Carnes and Twin City.

D. Ceiling Exhaust Fans:

1. Centrifugal wheel with inlet perpendicular to, or remote from, inlet grille. Acoustically insulated housing.

2. 85% free open area grille.

3. Electrical junction box on fan housing with cord, plug, and receptacle inside housing.

4. Fan, motor and wheel assembly removable through grille without disturbing housing.

5. Motor mounted on rubber-in-sheer isolators, grounded, maximum rpm shall not exceed scheduled rpm by more than 50 rpm.

6. Unit supplied with grille when indicated by model number scheduled.

7. Provide and install roof cap or wall cap as shown.

8. Unit UL labeled.

9. Integral backdraft damper, shatterproof, with no metal to metal contact.

10. Manufacturers: Greenheck, Acme, ILG, Penn, Briedert, Carnes and Twin City.

2.02 FAN ACCESSORIES

A. Flexible Fan Connectors:

1. Provide at inlet and discharge of each fan, ERV, MAU, air handling unit, etc.

a. For Standard Application:

1) Material suitable to withstand the pressure encountered. Constructed from coated heavy glass fabric, flameproof and ozone resistant. Joints to be sealed airtight. Minimum of 3" flex connection to be used.

2) Manufacturer: Duro-dyne Corporation "EXCELON" or equal.

b. For Outdoor Installations and Where Duct is Exposed to Toxic Fumes:

1) Material suitable to withstand the pressure encountered. Constructed from heavy glass fabric, double coated with "Neoprene", non-combustible and fire retardant. Fabric to be waterproof and airtight. Minimum of 4" flex connection to be used.

2) Manufacturer: Duro-dyne Corporation Duralon or equal.

2. Insulate over flex connection at inlet and discharge of all air handling units and rooftop units with minimum two inch (2") Type "C" insulation with minimum installed "R" value of 6.0. Seal termination of external insulation to ductwork with Childers CP-11 mastic with 3" glass fiber reinforcing mesh. Do not seal over any access panels.

2.03 DUCTWORK

A. Low Velocity Ductwork Systems:

1. Definition: Ductwork systems where duct pressures do not exceed 2" W.G. maximum static pressure and duct velocity does not exceed 2000 FPM. **Minimum duct gauge to be 26 gauge.**

2. All ductwork connected to louvers is to be sloped back to louver to insure that any water entering the duct drains back to the exterior of the building.

3. Ductwork Construction:

a. Ductwork, unless otherwise specified herein, shall be constructed of new, prime grade, continuous hot dip mill galvanized, lock forming quality steel sheets and shall have a galvanized coating of 1-1/4 ounces total for both sides per square foot. The gauges of metal to be used and the methods of duct construction shall conform to the requirements for the class of work involved as set forth in the latest edition of "Standard Practice in Mechanical Sheet Metal" as published by SMACNA. Each sheet shall be stenciled with the gauge and manufacturer's name. If coil steel is used, coils shall be stenciled throughout on ten foot (10') centers with the gauge and manufacturer's name. Insulate per Specification Section 20 07 00.

b. All dimensions are inside clear dimensions. Sheet metal size shall be increased to allow for duct liner where applicable.

c. Seal all transverse joints, seams and fitting connections with "Ductmate Proseal", Childers CP-146 or Foster 32-19, UL listed Mastic to prevent air leakage. Oil base caulking and glazing compounds are not acceptable. Duct sealant must meet VOC units per South Coast Air Quality Management District (SCAQMD) Rule #1168.

4. Rectangular Ducts:

   a. Where special rigidity or stiffness is required, construct ducts of metal two gauge numbers heavier.

   b. Ducts larger than 96” require special field study for gauging and supporting and supporting methods. (Furnish shop drawings for supporting and construction requirements.)

   c. Rectangular low pressure ducts shall be constructed, braced and reinforced in accordance with Sheet Metal and Air Conditioning Contractors National Association (SMACNA).

5. Round Ducts:

   a. Construct round ducts from steel sheets, U.S. Gauge thickness, per SMACNA standards.

   b. All exposed round ducts shall be double wall spiral duct per SMACNA standards with segmented fittings regardless of size.

   c. Supply, return and exhaust duct runouts to/from air device shall be gauges as follows:

      1) up to 12” diameter 30 gauge,

      2) 14” to 18” diameter 28 gauge, and

      3) 20” to 22” diameter 26 gauge.

      Provide minimum 26 gauge, 1” wide strap on heal and throat of adjustable fitting to provide additional rigidity.

6. Transitions:

   a. Provide tapered transitions at changes in duct size and at connections to fans and other equipment.

   b. Offset not more than 20^{o}, on diverging flow and 30^{o} on contracting flow, unless called for otherwise on drawing.

7. Elbows and Turning Vanes:

   a. Use long radius, 45^{o} and 90^{o} fittings for all elbows and at tees, unless otherwise shown or space restrictions dictate use of square elbows.

      1) Construct fittings with centerline radius equal to 1-1/2 times the duct width at the turn.

      2) Where square vaned elbows are used, provide access doors as detailed below.

   b. Turning Vanes: In all 90^{o} turns in supply air ducts where 1-1/2 radius elbows cannot be used, install double radius turning vanes in square elbows.

1) Ducts 19" and Smaller: Use small double vanes with an inner radius of two inches (2") and an outer radius of one inch (1") mounted on 3/4" center.

2) Duct 19" and Larger: Use large double vanes with an inner radius of four inches (4") and an outer radius of two inches (2"), mounted on three (3) 1/4" centers. Provide sound reduction type turning vanes: "Airsan" Acoustiturn, by Air Filter Corporation, "Sone-Turn" by Sound Control Products Company, per SMACNA Plat 22, or equal.

3) Provide 12" x 12" insulated access door into duct on both sides of each vaned fitting to facilitate duct cleaning.

8. Flexible Duct:

a. Do not use flexible duct except where specifically called for on the plans.

b. At diffuser connections:

1) Provide duct listed as UL-181 Class I air duct, and constructed in compliance with NFPA 90A.

2) Minimum length 4 feet, maximum length 5 feet for supply ducts. Minimum length 4 feet, maximum length 5 feet for return air ducts. Install with not more than one (1) 90 full radius degree bend. Minimum and maximum lengths are to be closely followed since the flex duct acts as the main source of sound attenuation in the air system. Install with some slack in runout.

3) Make joints with Nashua brand UL181A-P Duct Tape (Venture #1599B or Shurtape #PC857) and two (2) 1/2" wide positive locking straps, one on inner core and one on outer jacket. Use Panduit straps.

4) Minimum sound net insertion loss for duct as follows:

BAND, HZ	125	250	500	1000	2000
Loss dB/ft.	2.1	3.0	2.7	3.0	2.7

5) Submit sound and construction data for proposed alternates.

6) Tough vapor barrier reinforced metalized polyester jacket, tear and puncture resistant.

7) Airtight inner core with no fiberglass erosion into airstream.

8) **R-Value: 6.0 @ 75°F. mean temperature if within building insulation envelope, or R-value of 8.0 if outside building insulation envelope.**

c. Do not use flex duct on exhaust systems.

d. Manufacturers: **Atco 36 Series**, Certainteed, Thermoflex, Wiremold, Genflex, approved equal.

B. Entire interior of ducts shall be thoroughly cleaned of all oil residue and dust prior to installing.

2.04 DUCT ACCESSORIES

A. Air Volume Controls:

1. Provide air volume dampers, or other control devices, at each low pressure duct main and branch for a balancer to adjust the system to produce the air quantities shown.

a. Provide opposed blade damper for balancing in each zone duct for HETD. Locate downstream of first elbow in accessible location and indicate location on record drawings.

2. Volume Dampers:

a. Flat sheet, single leaf damper with a continuous rod; damper leaf two (2) gauges (minimum 16 gauge) heavier than the duct where installed. Provide locking quadrants with indicators located accessible without demolition.

1) Use for supply, return and exhaust ductwork 14” round or 14” x 14”.

b. The locking-type quadrant operators for dampers, when installed on ducts to be thermally insulated, shall be provided with **stand-off mounting brackets, bases or adapters to provide clearance, between the duct surface and the operator, not less than the thickness of the insulation.** Stand-off mounting items shall be integral with the operator or a standard accessory of the damper manufacturer. All volume dampers indicated shall be provided with stand-off mounting brackets as required.

c. All operators accessible and lockable. Do not insulate over top of volume damper operator handle.

d. Locate dampers a minimum of 4 feet from diffusers.

3. Extractors:

a. Combination air straightening vanes and volume control with locking quadrant on outside or accessible through face of register.

b. Manufacturer: Titus AG-45 or approved equal.

c. Provide extractors at supply grilles attached directly to any main or branch duct serving more than one (1) grille.

4. Splitter Dampers:

a. Construct damper using sheetmetal blade hinge mounted inside duct.

b. Dampers or splitters shall be constructed from the same gauge metal as the ducts which they serve with a minimum of 22 gauge. Splitter length shall be 1-1/2 times the duct width up to 24" in size and above 24" in size shall be 1-1/4 times the duct width.

c. Attach Duro-dyne SRP-40 series splitter damper bracket to blade.

d. Connect 1/4" steel rod to damper bracket and extend through Duro-dyne SRP-14 ball joint damper casting mounting on outside of duct. Use 3/8" steel rod for splitter in ducts above 24" in size.

e. Install assembly for full swing of damper blade. Lock damper in proper position.

5. Opposed Blade Dampers:

a. Provide opposed blade balancing dampers with multiple blades equal to Greenheck VCD-15, 20 gauge frame and 16 gauge blade construction with synthetic axle bearings and 1/2" diameter operator, complete with 1" stand-off and manual locking quadrant as follows:

1) Use for outside air ductwork. Minimum damper size is actual duct size or 10" x 10" whichever is larger. Provide transitions as required.

2) Use for supply, return and exhaust ductwork - 14" round or 14" x 14" and larger.

b. Damper material is to match ductwork material. (i.e., galvanized aluminum, stainless steel, etc.)

B. Gravity Backdraft Dampers:

1. Provide backdraft dampers counter balanced to desired static pressure setting. Wide open static pressure drop not to exceed 0.15" W.G.

2. Damper blades aluminum with felt applied to tops of blades. Where dampers are exposed to outside temperature, provide neoprene edged blades.

3. Damper frames extruded aluminum; nylon bearings.

4. Assembly designed for operation at 20^{o}F.

C. Access Panels and Doors:

1. Low Velocity System Access Panels:

a. Sheetmetal doors reinforced, cross-bracketed or otherwise stiffened to prevent rattle or vibration.

b. Seal doors airtight with felt edged gaskets.

c. Secure with hinges and sash locks.

d. Panels and doors for insulated duct systems are to be insulated.

2.05 GRILLES, REGISTERS AND DIFFUSERS

A. Provide grilles, registers, and diffusers of the types and sizes called for on plans and in schedule on drawings.

B. Finish with factory applied finish for extruded aluminum items, and with a prime coat for steel items. (Provide an additional factory baked enamel finish to match ceiling grid.) (Submit color sample for approval.)

C. Equip diffusers with panels of the proper size to match the suspended ceiling layout or with the proper frame for surface mounting. Fully correlate diffuser and grille style, dimension and fit with ceiling.

D. Manufacturers: Price, MetalAire, Titus, Tuttle & Bailey, Krueger, Anemostat, Carnes

E. All air devices located in damp areas are to be constructed from all aluminum components.

F. Provide minimum 12” deep externally insulated boot for sidewall type supply air devices.

G. Provide square to round transitions as required.

H. Provide minimum 12” deep (top duct tap) or 24” deep (side duct tap) externally insulated boot for return air and transfer air devices.

I. Provide minimum 12” deep boot for all exhaust devices.

2.06 LOUVERS AND HOODS

A. Provide air exhausts through building skin, as shown.

B. Louvers:

1. Size as shown; air pressure drop not to exceed 0.15” W.G. when handling 1150 FPM per square foot of free area.

2. Water penetration not to exceed .02 oz. per sq. ft. when handling 1150 FPM per square foot of free area.

3. 4” deep drainable louver constructed of .125” thick 6063-T52 extruded aluminum alloy with channel frame.

4. Provide with 1/8” X 1/8” galvanized hardware cloth bee screen.

5. Finish to be factory primed for field painting or applied .7 mil thick anodized dark bronze as directed by Architect.

6. Manufacturers: Greenheck ESD-403, Arrow, Carnes, Greenheck, Ruskin, Empco, Pottorff, or approved equal.

7. Any plenum or ductwork attached to louver is to slope to drain back through louver to exterior of building.

C. Hoods:

1. Construction of heavy duty aluminum sheets with rolled interlocking seams with galvanized hood support members, similar to Greenheck Fabrahood or equal.

2. Provide with bee screen on outside air intake hoods and 1/4" x 1/4" galvanized bird screen on relief hoods.

3. **Curbs are to be a minimum of fourteen inches (14") high above finished roof surface and match slope of roof.**

4. Manufacturers: Greenheck, Acme, Penn, Cook, Briedert and Carnes.

5. Provide 120 volt motorized damper.

2.07 AIR FILTERS

A. General:

1. All air filters to be listed as Class 2 by Underwriters Laboratory, Inc., Building Materials Directory.

2. All arrestance, efficiency (dust spot efficiency on atmospheric air) and dust holding capacities specified are to be in accordance with ASHRAE Standard 52-76.

3. Performance characteristics are to be verified by certified data published in manufacturer's literature or by copies of current test data from an independent authorized test laboratory. Test data, where required, shall be an integral component of the manufacturer's submittal data.

4. Provide and install one (1) clean set of filters in all air moving units that require filtration at completion of project.

B. Disposable Panel Filters (for return air filter grilles and/or unit filter racks):

1. Media: Non-woven, lofted cotton bonded to 96% free area welded wire support grid. Not less than 2.45 square feet media area per square foot of filter face area. Arranged in radially pleated configuration and bonded continuously to inside perimeter of high wet-strength beverage board cell sides.

2. Cell Design: Two inches (2") deep with beverage board diagonal supports at entering air and leaving air faces of each cell.

3. Air Cleaning Performance: Minimum 25-30% efficiency 90-92% arrestance, MERV-7.

4. Initial Resistance: 0.2" W.G. at 500 fpm face velocity.

5. Dust Holding Capacity: Not less than 200 grams when operated at 500 fpm face velocity to a final resistance of .9 W.G.

6. Manufacturers: Cam-Farr Company Aeropleat II; AAF or approved equal.

C. Temporary Filters:

1. Reference 20 00 00, 1.18 for temporary filter requirements.

2.08 FIRE DAMPERS

A. Provide and install all fire dampers in all ductwork which passes a fire wall or fire rated ceiling as required by local building and fire safety codes.

B. All dampers folding blade type with no part of blade in the air stream.

C. All fire dampers UL approved and of type required by NFPA 90A.

D. Install all fire dampers per manufacturer's instructions. Installation detail must be submitted with damper submittal. **Post detail at job site in area of building permit.**

E. Provide UL rated sleeves and manufacturer supplied wall angles with damper.

F. Provide four additional fire dampers to be sized and installed as directed by Architect.

G. Manufacturers: Ruskin, Air Balance, Arrow, Greenheck, Nailor or approved equal.

2.09 FIRE/SMOKE DAMPERS

A. Provide and install all fire/smoke dampers in all ductwork which passes through a smoke wall and/or any rated egress pathways, as required by local building and fire safety codes and as indicated on the drawings.

B. All dampers shall have qualified electric operators.

C. All dampers UL approved and of type required by NFPA 90A.

D. Install all dampers per manufacturer's instructions. Installation detail must be submitted with damper submittal. **Post detail at job site in area of building permit.**

E. All dampers shall have a UL555S leakage classification of II.

F. Provide UL rated sleeves and manufacturer supplied wall angles with damper.

G. Provide four additional fire/smoke dampers to be sized and installed as directed by Architect.

H. Manufacturers: Ruskin, Air Balance, Arrow, Nailor, Greenheck or approved equal.

2.10 CORRIDOR CEILING FIRE SMOKE DAMPER

A. Provide and install appropriate corridor ceiling fire smoke dampers in all air devices located in ceiling portion of fire rated floor/ceiling and/or roof ceiling assemblies.

B. Damper must be classified as a **Corridor Ceiling Fire Smoke Damper**.

C. All dampers must be UL approved and of the type required by NFPA 90A.

D. Provide two (2) additional corridor ceiling fire smoke dampers to be located and sized as directed by the Architect.

E. Install per manufacturer's recommendation, submit detail. **Post detail at job site in area of building permit.**

F. Manufacturers: Ruskin, Air Balance, Arrow, Nailor, Greenheck or approved equal.

2.11 CEILING FIRE DAMPER

A. Provide and install appropriate ceiling fire dampers in all air devices located in ceiling portion of fire rated floor/ceiling and/or roof ceiling assemblies.

B. Damper must be classified as a **Ceiling Fire Damper**.

C. All dampers must be UL approved and of the type required by NFPA 90A.

D. Provide ten (10) additional fire dampers to be located and sized as directed by the Architect.

E. Install per manufacturer's recommendation, submit detail. **Post detail at job site in area of building permit.**

F. Manufacturers: Ruskin, Air Balance, Arrow, Nailor, Greenheck or approved equal.

PART 3 - EXECUTION

3.01 LOW VELOCITY DUCTWORK

A. Provide ductwork in accordance with SMACNA low velocity standards.

B. Provide backdraft dampers for all exhaust fans if motor operated dampers are not called for. Provide one inch (1") mesh bird screen at all exhaust discharges.

C. Seal all transverse joints, seams and fitting connections with KINGCO 11-376 "Super Seal" or "Ductmate Proseal", U.L. listed.

D. Where ducts, exposed to view, pass through walls, floors or ceilings, furnish and install sheetmetal collars to cover the voids around the duct.

E. This work shall be guaranteed for a period of one (1) year from and after the date of acceptance of the job against noise, chatter, whistling or vibration and free from pulsation under all conditions of operation. After the system is in operation, should these defects occur, they shall either be removed and replaced or reinforced as directed by the Owner.

F. Duct shall be erected in the general locations shown on the drawings, but must conform to all structural and final conditions of the building. Before fabricating any ductwork, the Contractor shall check the physical conditions at the job site, and shall make all necessary changes in cross sections, transitions, offsets, etc., whether they are specifically indicated or not at no additional charge to the Owner.

G. Reinforce all ducts to prevent buckling, breathing, vibration or unnecessary noise, such reinforcing to be as recommended in the SMACNA manual plus any additional reinforcing as may be required to meet job conditions.

H. Provide manually operated volume control dampers (with stand-off mounting brackets for externally insulated ductwork) in all branches, splits and taps for proper balancing of air distribution, whether shown on drawings or not, dampers to be either single blade or multi blade as shown in the SMACNA manual as required. They shall incorporate an indication device with lock to hold damper in position for proper setting.

I. Damper operators in all unfinished areas shall be Young Series 400 of the exact style, type and size required. All other operators shall be Young #315 and/or #896 opposite end from the operator. Where dampers are installed in ducts located above accessible type ceilings, damper operators shall not be extended through the finished ceiling.

J. All square elbows shall have turning vanes per the SMACNA manual requirements.

K. Where ducts connect to fans, including roof exhausters, flexible connections shall be made using “Ventglas” fabric that is fire-resistant, waterproof, mildew-resistant and practically air tight, and shall weigh approximately thirty ounces per square yard. There shall be a minimum of two and one-half inches (2-1/2”) distance between the edges of the ducts. There shall be a minimum of one inch (1”) of slack for each full inch of static pressure on the fan system.

L. Furnish and install screens on all ducts, fans, etc. furnished by the Contractor which lead to, or are outdoors. Screens shall be 16 gauge, three-eighths inch (3/8”) mesh in removable galvanized steel frames.

M. All holes in ducts for damper rods and other necessary devices shall be either drilled or machine punches (not pin punches), and shall not be larger than necessary. All duct openings shall be provided with sheetmetal caps if the openings are to be left unconnected for any length of time. All panels of ducts twelve inches (12”) and larger shall be cross broken.

N. Furnish and install a minimum 16 x 16 x 2 internally insulated (foil facing to airstream) filter rack with a hinged type access door with cam or spring lock and filter in all unfiltered raw outside air ducts that connect directly to return air plenums.

O. **All ductwork that is connected to any exterior louver or wall cap, etc. shall be sloped to drain outside.**

3.02 DUCTWORK SUPPORTS

A. Support all ductwork to prevent sag, undue play, and swing. All horizontal ducts shall have a support within 2’ of each elbow and within 4’ of each branch intersection. Provide a hanger within twelve inches (12”) from unit supply and return. Return air plenums on back of air handling units must have a minimum of four (4) support straps.

B. Low Pressure Ductwork:

1. Duct 40” and Less: Provide with 1” x 18 gauge straps fastened to ductwork, and to building construction. Space not more than eight feet (8’) on center. Hanger straps shall lap under duct a minimum of one inch (1”) and have a minimum of one (1) fastening screw on the bottom and two (2) on the side.

2. Ducts Over 40”: Provide mild steel threaded rods fastened to angle iron supports under duct with nuts and to building construction with appropriate inserts, flanges or clamps. Space not more than four feet (4’) on center with rods and angle supports as follows:

Angle Length	Angle	Rod Dia.
4'-0"	1-1/2" x 1-1/2" x 1/8"	1/4"
6'-0"	2" x 2" x 1/8"	1/4"
8'-0"	2" x 2" x 1/8"	3/8"
10'-0"	3" x 3" x 1/8"	3/8"

C. Vertical ducts supported where they pass through the floor lines with 1-1/2" x 1-1/2" x 1/4" angles.

D. Recommend methods of fastening bracing to ductwork, including riveting, bolting and tack welding.

E. All flex duct runouts must be properly supported. Use minimum twelve (12) gauge wire with 8" long saddle that fits up to mid point of duct for support of flex duct. **Web Type fabric duct support is strictly prohibited**. Maximum permissible sag is 1/2" per foot of spacing between supports.

F. Provide 1" x 20 gauge straps, minimum 8' - 0" o.c. for all round sheetmetal runouts that are 18" in diameter or less (except Spiral Ducts).

G. Spiral ductwork is to be supported with 2" x 18 gauge strap bands around duct with a 3/8" bolt and nut connection at top. Connect to structure with minimum 3/8" all thread rods, minimum 8'-0" o.c.

3.03 ACCESS

A. Furnish all fans with consideration of location of motor and drive.

B. Furnish and install in the ductwork, hinged access doors to provide access to all manual and automatic dampers, fusible links, cleaning operations, etc. Where the ducts are insulated, the access doors shall be double skin doors with one inch (1") of insulation in the door. In rectangular ducts larger than twenty inches (20") in their smallest dimension, install access doors every twenty feet (20'). Where the size of the duct permits, the doors shall be eighteen inches (18") by sixteen inches (16"). Factory fabricated doors as manufactured by Milcor meeting these specifications will be acceptable. Access doors shall be submitted for approval.

C. Each fire damper door shall have a label with letters not less than 1/2" in height reading **"Fire Damper"**, **"Corridor Ceiling Fire Smoke Damper"** or "**Fire/Smoke Damper"** (as applicable).

D. Cycle damper after installation to insure free movement. Seal opening around fire damper with non-combustible material to maintain integrity of one (1) hour fire wall.

E. Provide access door in supply air and return air drops from rooftop units, Access door to be in accessible location directly above first elbow. Access doors to be 18" X 18" minimum where duct size allows. Access doors shall be shown on ductwork shop drawings.

F. Provide access doors for maintenance inspection and cleaning in each zone duct for HETD. Locate downstream of first elbow in accessible location and indicate location on record drawings.

3.04 Fully coordinate and work directly with the Balancing and Testing Agency to provide all systems in perfect operating order. Make corrections and adjustments as required by the Balancing and Testing Agency in a timely manner.

3.05 For Each Dryer: Provide 4” diameter or 5” x 3” rectangular flue pipe up through the wall and ceiling cavity and terminate into Briedert Cap. Provide transitions as required. Provide 4” diameter tie in point for residential type dryer or stacked washer dryer as required.

3.06 **CAP OPEN ENDS OF ALL DUCTS (INCLUDING SPIN-INS) AND EQUIPMENT WITH MINIMUM FOUR (4) MIL. PLASTIC TO PREVENT CONSTRUCTION DEBRIS AND DUST FROM ENTERING OPENINGS AT ALL TIMES DURING CONSTRUCTION.**

END OF SECTION

SECTION 26 05 00 - GENERAL

PART 1 - GENERAL

1.01 SCOPE OF WORK

Unless otherwise specified, provide all labor, equipment, supplies, materials, superintendence and testing necessary for the installation of complete electrical systems as required by these specifications and as shown on the Drawings, subject to the terms and conditions of the contract. Complete such details of electrical work not mentioned or shown which are necessary for the successful operation of all electrical systems described on the Drawings. Include empty conduits as required for all special systems and power for condensate pumps and HVAC control panels as required by the Mechanical Contractor. Field coordinate exact locations.

A. Submit a bid on the basis of a complete installation, including all labor, material, cartage, insurance, permits, associated fees and taxes.

B. Include temporary electrical power and lighting that will be required for the interior of the buildings. Provide lighting to satisfy OSHA requirements and the NEC.

C. All Agreement Forms, General Conditions, Supplementary Conditions, and Division 1 of the specifications shall apply to the work specified in Division 26-28.

D. Additional Site Visit Costs: The Contractor shall be charged with any cost resulting from uncompleted items that require additional site trips by the Architect/Engineer.

E. No attempt has been made to show complete design details of building construction on the Electrical plans. Refer to Architectural, Structural and Mechanical plans for additional details which will affect electrical work. No extra cost will be allowed for offsets in conduit and wiring to avoid other work or when minor changes are necessary to facilitate installation or maintenance.

F. Electrical Contractor is to provide all parts and labor to make final connections to all equipment shown in contract documents. Power may be shown in general location, it is expected that Electrical Contractor coordinate final locations for rough-in and connection requirements with exact equipment being installed. These items include but not limited to book security, exhaust fans, kilns, hand dryers, sensor operating plumbing devices, overhead doors, powered curtain, fire alarm door hold opens, etc.

G. NO TOXIC NOR HAZARDOUS MATERIALS, INCLUDING BUT NOT LIMITED TO PRODUCTS OR MATERIALS CONTAINING ASBESTOS, PCB AND LEAD SHALL BE PROVIDED OR INSTALLED.

H. REMODEL WORK: COORDINATE ALL CONNECTIONS OF NEW EQUIPMENT WITH EXISTING SERVICES. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT, MATERIALS AND INCIDENTAL ITEMS REQUIRED TO MAKE SYSTEM COMPLETE AND OPERABLE.

I. AN EXTRA COPY OF ALL FIELD REPORTS SHALL BE KEPT IN A SEPARATE NOTEBOOK. CONTRACTOR TO SET UP IN THE CONSTRUCTION MANAGER'S TRAILER. THESE REPORTS SHALL BE USED FOR CONTRACTOR TO CHECK THAT EACH INDIVIDUAL ITEM NOTED HAS BEEN COMPLETED. ALSO KEEP LOG OF WHERE EXTRA RECEPTACLES AND OUTLET BOXES CALLED OUT IN 26 27 26, 3.01 AND 26 05 80, 2.01. ARE INSTALLED.

J. Electrical Contractor shall use Fire Alarm Contractor's Shop Drawings and Rough-In details on drawings for rough-in of all fire alarm devices. Any devices not roughed-in according to Fire Alarm Shop Drawings and drawing details shall be relocated at no cost to Owner.

K. Sensor Operated Plumbing Devices: Plumbing Contractor to provide transformers from manufacture. Electrical Contractor to provide all other electrical materials and labor to provide complete and workable device. This includes but is not limited to receptacles for plug in transformers, line voltage wire/conduit for direct connect low voltage transformers, all low voltage plenum rated 16 gauge wire.

L. **Cad Drawings:**
Architectural Background Files – **Architectural Files are background files, MEP drawings are not background files.** To insure the most current Architectural files are used for shop drawings backgrounds, they must be obtained from the architect and cannot be given from the engineer. Reference Architect for cost of Architectural Files.

MEP Drawings – These drawings cannot be used for shop drawings, as they are diagrammatic in nature only. Actual shop drawings prepared by sub-contractors must be used for coordination between all trades. If MEP floorplan files are requested they may be obtained with a signed confidentiality release form, only as outlined below. These files may be used in conjunction with this project only. There are no guarantees of compatibility or accuracy; all technical support will be billed hourly at current Engineer's Rates. Engineer does not charge for actual file, but does charge for time required to prepare the files in format as requested by the Contractor. Fees will be based on Engineer's current hourly rates. Deposit of $500 must be paid prior to beginning file preparation and balance must be paid prior to release of any files. Total fee based on actual time required by Contractor's request. See submittal and shop drawing section for additional information.

MEP CAD Files that will be released.
- If no Architectural RCP is available for light locations. Lighting Floorplans will be released.
- Mechanical Floorplan will be released to Mechanical Contractor for aid in production of his own shop drawings. HCE mechanical drawings may not be submitted as shop drawings.
- Fire Alarm/Fire Sprinkler/Intercom etc… Contractors must use Architectural Revit Models and CAD files for backgrounds and Architectural RCP's (when available or lighting floorplan) and **Mechanical Contractor Shop Drawings** for coordination purposes. This must be obtained from Architect. Engineer may not release architectural drawings.

M. The Contractor binds himself, his partners, successors, assigns and legal representatives to the Owner hereto in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract or sublet it as a whole without the written consent of the Architect/Owner, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the Owner/Architect.

N. The Contractor shall supervise and direct the Work using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, safety, sequences and procedures and for coordinating all portions of the Work under his Contract.

O. The Contractor shall provide, without extra charge, all incidental items required as a part of the Work, even though not particularly specified or indicated, and if he has good reason for objecting to the use of a material, appliance, or type of construction shown or specified, he shall register his objections with the Architect/Engineer, in writing; otherwise, he shall proceed with the work under the stipulation that a satisfactory job is required.

P. Provide a completed Schedule of Values, see Specification Section 26 05 10. Preliminary schedule of values shall be submitted to Architect/Engineer for review.

1.02 SITE INSPECTION

A. Prior to Bidding, the Contractor shall visit and examine the site verifying all existing items and familiarize himself with existing work conditions and understand the conditions which affect performance of the work of this Division before submitting bids for this work. The submission of bids shall be deemed as evidence of such visits and examinations.

B. All bids shall take the existing conditions into consideration and the lack of specific information on the drawings shall not relieve the Contractor of any responsibility. No subsequent allowance for time or money will be allowed for work or change related to failure to examine site conditions.

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. All work covered by this section of these specifications shall be accomplished in accordance with the respective drawings, information or instructions to bidders, and general provisions of these specifications. Any supplementary conditions, special conditions, addenda, or directives which may be issued by the Owner's representative herewith or otherwise shall be complied with in every respect.

B. Provide electrical connections and service to items described in all other sections of these specifications.

C. The Electrical Contractor shall provide all wiring and connections required to fire/smoke dampers. Coordinate exact locations of dampers with Mechanical Contractor and relay requirements with Fire Alarm Contractor.

D. The Electrical Contractor shall provide all wiring and connections required to backdraft dampers at exhaust fans. Coordinate exact locations of dampers with Mechanical Contractor.

E. Electrical Contractor to provide conduit and junction boxes for all sensors and exterior conduit for controls to mechanical equipment. Conduit for space sensor to extend from junction box to above accessible ceiling. Conduit for exterior equipment to extend from equipment through wall or roof to above an accessible ceiling. Any control wiring in exposed ceiling areas to be in conduit by Controls Contractor for protection. Controls Contractor to coordinate on all conduit requirements. Coordinate locations with Electrical Contractor.

1.04 WORK NOT INCLUDED

A. Certain labor, materials, or equipment may be provided under other sections of these specifications, by utility companies, or by the Owner. When such is the case, the extent, source and description of these items will be as indicated on the Drawings or described in the specifications, but the Contractor is responsible for verifying with all parties involved as to the extent of his requirements of work.

B. Unless otherwise indicated, motors shall be furnished by others, but connected by the Electrical Contractor as indicated on the Drawings.

C. Unless otherwise specified, Mechanical equipment control low voltage wiring (less than 50 VAC) shall be provided and installed by the Mechanical Contractor.

1.05 SPECIFICATION TERMINOLOGY (Definitions)

A. "Provide": Includes all material, installation, labor subcontracts, appurtenances and mark-up required for a complete operable system as shown and specified, set in place, connected and ready to use.

B. "Furnish": Purchase and deliver to job site, material as shown and specified.

C. "Install": Includes all installation, labor subcontracts, appurtenances and mark-up required for complete installation of equipment furnished by others.

D. "Record Drawings": Drawings that reflect the electrical systems as actually constructed by the Contractor including conduit routing.

E. "Accessible" means arranged so that an appropriately dressed maintenance man may approach the area in question with tools and products necessary for the work intended, and may then position himself to properly perform the task to be accomplished, without disassembly or damage to the surrounding installation. All clearances per NEC.

F. Wherever the term "shown on drawings" is used in the specifications, it shall mean "noted", "indicated", "scheduled", "detailed", or any other diagrammatic or written reference made on the drawings.

G. "Conduit" includes, in addition to conduit, all fittings, hangers and other accessories relative to such conduit system.

H. "Concealed" means hidden from sight in chases, furred spaces, shafts, hung ceilings, imbedded in construction, crawl spaces, etc.

1.06 DIAGRAMMATIC DRAWINGS:

A. The drawings are in general diagrammatic, and the location of outlets, switches, motors, etc., on the drawings does not necessarily mean that such units shall be placed at that exact spot, as scaled on the drawings, but shall be located to function best. Use the drawings, and these specifications for guidance and secure the Engineer's approval of all changes in location. Coordinate all dimensions for floor boxes with Architect. Contractor shall not scale from drawings.

B. Verify all measurements at the site. No extra compensation will be allowed because of differences between locations shown on the drawings and measurements at the building.

C. The Contractor is to draw electrical rooms and service to scale **(1/4" minimum)** with actual equipment to be used and submit to the Engineer prior to installation. The Contractor must insure that all minimum NEC working clearances are maintained. Coordinate with equipment of other trades.

D. Where lighting fixtures and other electrical items are shown in conflict with structural members and mechanical or other equipment, provide all required supports and wiring to clear the encroachment.

E. The branch circuits and arrangement of home runs have been designed to compensate for voltage drop and other considerations to accomplish maximum economy. Re-circuiting will not be permitted without specific approval. **Circuit numbers may change to achieve balanced loads on panels.**

F. In the event of discrepancy, immediately notify the Engineer. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

G. Drawings and specifications are complimentary each to the other. What is called for by one shall be as binding as if called for by both.

H. Should the drawings disagree in themselves, or with the specifications, the better quality or greater quantity of work or materials shall be used.

I. Outlets and switches obviously placed in a location not suitable to the finished room or area shall be removed and relocated when so directed by the Architect at no cost to the Owner. The Architect shall have the right to make any reasonable change in outlet locations before rough-in without additional cost to the Owner. The contractor shall contact engineer when switches are inadvertently shown on hinge side of door prior to rough-in.

J. Location of light fixtures shall be coordinated with reflected ceiling plans and/or room finish schedules.

1.07 MATERIAL AND EQUIPMENT SUBMITTALS

A. Submittals: Provide submittals for all products and systems described in Division 26-28 and shown on the drawings to demonstrate compliance with the requirements of the project. Furnish equipment submittals in the manner described elsewhere in these specifications.

B. Submit to the Engineer, after the award of the contract or as dictated by project schedule, a type written list of those items of equipment and appurtenances which will be furnished. Include the name or description of the item, name of manufacturer, model or type, catalog number and manufacturer's printed information. The information submitted shall include overall dimensions, weights, voltage rating, phase, wiring diagrams, etc., and nameplate data. Assemble cut sheets into separate submittals as defined in this section or by Specification Section. Submit priority items and long lead time first. Then follow with remaining items. This will allow for faster review and response to accommodate project schedule. **Any submittal with all sections under one (1) submittal number will be returned and required to be broken into unique separate submittal numbers.** The Engineer's check will be general and does not relieve the Contractor of final responsibility to comply with the Contract Documents in all respects.

C. Submittal review is for general design and arrangement only and does not relieve the Contractor from any of the requirements of the Contract Documents. Submittals will not be checked for quantity, dimension, fit or proper technical design of manufactured equipment. Where deviations of substitute product or system performance have not been specifically noted in the submittal by the Contractor, provision of a complete and satisfactory working installation is the sole responsibility of the Contractor. **Warranties cannot be reduced through the submittal process.**

D. Contractor shall indicate items being used on cut sheets by highlighting or arrowing to actual part number. Submittals may be returned without checking if submittals not appropriately marked.

E. **'Individual submittals' means separate submittals with <u>unique submittal numbers for each specification section</u>. Separate PDFs for each Submittal number.**

F. <u>HARDCOPY SUBMITTAL REQUIREMENT</u>: Hardcopy submittals will not be required by Engineer.

G. **PDF SUBMITTAL REQUIREMENT:**
For submittal sections listed below as allowed pdf's the following requirements must be met or the submittal will not get through email security and will be auto-deleted and not checked. Each specifications section must be a separate pdf file, **one giant pdf for all sections will be rejected**.

PDF FILE: MUST BE NAMED AS FOLLOWS:
JOB NAME – SUBMITTAL No. XX – SUBMITTAL DESCRIPTION

EMAIL TITLE/SUBJECT: FOR SUBMITTALS MUST BE AS FOLLOWS:
JOB NAME – SUBMITTAL No. XX – SUBMITTAL DESCRIPTION

Failure to follow these instructions will result in the submittal never reaching the engineer and not being checked. Delays cause by not following these procedures are the sole responsibility of the contractor. Emailed submittals must come from the Architect and must not be emailed directly from the contractor. Do not Carbon Copy the Engineer on Emailed submittals.

H. **Multiple re-reviews required due to Contractor not following instructions, specifications, etc will be billed to Contractor at Engineer's current hourly rates. This shall be paid prior to submittal approval.**

I. **Submittals will be returned in order of construction of the project, not necessarily in order submitted.** If all sections are submitted under one binder/at one time and transmittal, each section will be returned at the appropriate time for construction phasing. Electrical Gear will not be reviewed until "Mechanical/Electrical Coordination Sheet" has been submitted. Electrical Gear and Light Fixtures may require extended review time**. If submittals are submitted early relative to construction phasing, submittals may be held, reviewed and returned at the appropriate time for construction phasing, not necessarily 2 weeks. In some cases, if submittals are received vastly out of order of construction, submittal may be rejected.**

J. **DO NOT SUBMIT THE FOLLOWING SECTIONS UNLESS DEVIATING FROM THE SCHEDULES/SPECIFICATIONS. Provide directly to General Contractor/CMR for inclusion into O & M Manuals. If deviating from the specifications submittal will be required. (Highlight items that are different to allow for proper review.):**

1. Devices
2. Safety Disconnect Switches
3. Wire and Cable
4. All Motor Starters
5. Contactors
6. Lamps
7. Photocells
8. Time Clocks/Lighting Contactors
9. Fuses

10. Cable Tray
11. Emergency Power (Inverter) System
12. Cabinets and Enclosures
13. Distribution and Fuse Blocks
14. Fire Rated Product Penetration Details.
15. Gear Coordination Study (include in O&M manual)

K. **PDF Submittals Allowed** for Product Cut-Sheets for are limited to the following items: **Separate PDF file for each Submittal number is required. Follow file format above.**

1. Fire Alarm System (Product Data and Shop Drawings)
2. Interior Lighting Fixtures
3. Exterior Lighting Fixtures
4. Transformers
5. Intercom and Sound System (Product Data and Shop Drawings)
6. Dimming Systems
7. Clock Systems
8. Motor Control Center
9. Bus Duct
10. Power Conditions
11. Surge Arrestors
12. Generator Set
13. Transfer Switch
14. Emergency Power (Inverter) System
15. Electric rooms (coordinate with mechanical). Also, indicate other equipment and/or systems on plan.
16. Switchboards
17. Panelboards

L. When requested, present samples of all materials proposed for use to the Engineer for his approval.

M. Certify Shop Drawings have been checked for compliance with Contract Documents. Certify that the materials submitted can be delivered and installed according to the construction schedule.

N. Select all other materials, not specifically described on the Drawings or in these specifications but required for a complete and operable facility, and submit to the Engineer for approval.

O. **Substitutions:** ("Substitution Request" form must be submitted)

1. Substitutions must be made and accepted PRIOR to Bid.

2. Unless otherwise indicated, base bid on the equipment shown on the Drawings and hereinafter specified.

3. Request for approval to substitute materials, methods, or processes shall be made to Architect and if found acceptable, will be confirmed by an addendum to the Construction Documents. Where proposed substitutions are not incorporated into the Construction Documents by addendum **PRIOR** to time of the General Contract bid opening, all bids shall be held to have been made on the basis of the materials, methods and processes required by the Construction Documents.

4. All substitutions shall be of equal or better quality to the equipment specified.

5. Acceptance of the substitution by the Engineer does not relieve the Contractor of responsibility for proper operation of the systems, compliance with specifications, necessary changes due to dimensional differences or space requirements, and completion of work on schedule.

6. It is not the intent of the Specifications to limit materials to the product of any particular manufacturer. Where definite materials, equipment and/or fixtures have been specified by name, manufacturer or catalog number, it has been done so as to set a definite standard and a reference for comparison as to quality, application, physical conformity and other characteristics unless no substitutions are noted.

7. **Submit fully completed "Substitution Request" form located at end of this section. If this form is not submitted, all substitution request will be automatically rejected.**

8. **For substitutions that require substantial review by engineer to ensure equality, the contractor requesting substitutions shall reimburse the engineer at current hourly rates for all review time. This shall be paid prior to submittal approval. This applies to all equipment not previously approved on construction documents.**

a. Light Fixtures Packages

b. Alternate Transformers

c. Alternate Surge Protective Devices

d. Alternate Equipment/Gear Packages

e. Contractor Cost Savings Packages Requiring Substantial Review Time

1.08 SHOP DRAWINGS REQUIRED

A. Prepare and submit working construction drawings as requested, specified, and otherwise necessary to demonstrate proper planning for installation and arrangement of all work. Layout drawings to scale and show dimensions where accuracy of location is necessary for coordination or communication purposes. Show work of all trades, including Architectural, Structural, Mechanical, and Electrical items which may be pertinent to proper and accurate coordination.

B. Architectural drawings must be used for backgrounds in preparation of shop drawings and shall be obtained from the Architect. Confirm requirements and stipulations for obtaining floor plan backgrounds with Architect and with other sections of specification. Engineer's drawings and CAD files **may not** be used for Shop Drawings. Reference 1.01-L.

C. Reference other specification for additional requirements.

1. Fire Alarm

2. PA System

3. Electrical Rooms

1.09 RECORD DRAWINGS

A. Reference requirements stated elsewhere in the specifications.

B. THE CONTRACTOR SHALL TAPE ALL ADDENDAS ISSUED DURING BIDDING TO HIS CONSTRUCTION AND RECORD DRAWING SET PRIOR TO COMMENCING CONSTRUCTION. PAY REQUESTS WILL NOT BE PROCESSED UNTIL THIS REQUIREMENT IS MET.

C. In addition to other requirements, a master Record Drawing print set (separate from field sets) shall be kept in the site construction office as the work progresses. Show routing and location of items cast in concrete or buried underground. Work located in spaces with access, or above suspended ceilings, is not considered permanently concealed. Show complete routing and sizing of any significant revisions to the systems shown. Indicate locations of all existing active and inactive conduit uncovered during construction**. Keep marked up set at site for review at site meetings**.

D. **Contractor to indicate conduit routing locations for all major runs and branch circuits under slab along with major junction locations.**

E. The Contractor shall be responsible for updating all items, including but not limited to floor plan changes, system changes, addendums, change orders, etc. on the prints to "As-Built" conditions. At the completion of the job the marked up As-Built Drawings shall be submitted to the Architect for final review and comment. These corrected prints together with all the revisions, additions and deletions of work, shall form the basis for preparing a set of record drawings.

F. Using the "Record Drawing Set", the Contractor shall print two (2) complete sets of prints one for submission to the Owner and one rolled in a 4" PVC pipe in main electric room mounted to wall and labeled. Tape all edges. The contactor shall provide pdf copies/scans for owner record purposes. Remove Engineer's seal from record drawings.

G. The Contractor shall bear all the costs of producing the "Record Drawing Set".

H. Electrical riser diagrams shall be laminated and mounted in the main electrical room or as directed by the Engineer.

1.10 CODES, REGULATIONS AND ORDINANCES

A. Comply with the requirements of the National Electrical Code, National Electrical Safety Code, Occupational Safety and Health Act (OSHA) and all other applicable Federal, State and local codes and ordinances. All codes and standards shall be per the latest adopted edition with all supplements and official interpretations included. Provide disconnecting means for all equipment per NEC. The Drawings and specifications take precedence when they are more stringent than codes, standards, ordinances, and statutes take precedence when they are more stringent or conflict with the Drawings and specifications.

B. Should the Contractor perform any work that does not comply with the requirements of the applicable Building Codes, State Laws, Local Ordinances and Industry Standards, he shall bear all costs arising in correcting the deficiencies, as approved by the Architect.

C. All work shall also satisfy applicable local codes, ordinances, and regulations of the governing bodies, and all authorities having jurisdiction over the work. Where alterations to, or deviations from, the drawings and specifications are required by the authority having jurisdiction, report the same in writing to the Owner's representative and secure his approval before proceeding.

1.11 DELIVERY AND STORAGE OF EQUIPMENT AND MATERIAL

A. Investigate each space in the building through which equipment must pass to reach its final location. If necessary, the manufacturer shall be required to ship his material in sections sized to permit passing through such restricted areas in the building.

B. Retain all portable and detachable parts or portions of installation such as fuses, key locks, adapters, blocking clips, and inserts until final completion of work. Deliver parts to the Owner or his authorized representative and attach an itemized receipt to obtain request for final payment.

C. Product Handling:

1. Use all means necessary to protect the work and materials of this section before, during, and after installation and to protect the work and materials of all other trades.

2. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the Owner.

3. Store and protect materials and equipment in accordance with the manufacturer's recommendations.

4. Provide suitable box or crate electrical equipment and cover with waterproof covers to protect against dirt, moisture or accidental damage during shipment or outdoors at the job site.

5. Store all conduits on skids.

1.12 SERVICEABILITY OF PRODUCTS

A. Furnish all products to provide the proper orientation of serviceable components to access space provided.

B. Coordinate installation of piping, ductwork, equipment, conduits, junction boxes, panels and other products to allow proper service of all items requiring periodic maintenance or replacement.

C. Replace or relocate all products incorrectly ordered or installed to provide proper serviceability.

1.13 ACCESSIBILITY OF PRODUCTS

A. Arrange all work to provide permanent, convenient and safe access to all serviceable and/or operable products. Layout work to optimize net usable access space within confines of space available. Advise Architect, in a timely manner, of areas where proper access cannot be maintained. Furnish layout drawings to verify this claim, if requested.

B. Provide access doors in ceilings, walls, floors, etc. for access to automatic devices and all serviceable or operable equipment in concealed spaces. Location of panels shall be submitted for approval in sufficient time to be installed in the normal course of work.

1.14 UTILITY COSTS

A. Provide complete utility service connections. The locations and elevations of the various utilities included within the scope of this work have been obtained from city and/or other substantially reliable sources as a general guide only, without guarantee as to accuracy. Verify the locations, elevations, and availability of all utilities and services required, and be adequately informed as to their relation to the work.

B. Include all service charges required by the electric utility or telephone/data/cable utility. Reference General Conditions for further information. Keep all utility company charges as a separate line item in bid. If cost is not available from utility company, indicate utility contact person, telephone number and **date of contact**.

1.15 CLEAN-UP

A. Remove debris and waste materials from within the construction areas and transport off-site, daily.

B. Keep the construction area clean, free from hazard, and orderly arranged.

C. Pay all costs of waste removal and disposal. Reference General Conditions for further information.

D. Dispose of waste materials in accordance with all regulations which govern.

E. Take all precautions to protect persons who enter the construction area from hazardous conditions, hazardous waste, toxic waste, or other unsafe conditions.

F. Upon completion of construction, remove all debris, waste materials, unused materials, temporary constructions, vehicles, tools, fencing, etc. to Owner’s satisfaction.

G. All equipment and materials shall be protected from physical moisture absorption, metallic corrosion and weather damage from time of delivery to completion of project. Replace any damaged materials.

PART 2 - PRODUCTS

2.01 EQUIPMENT AND MATERIALS

A. Unless otherwise indicated, provide only new equipment and materials.

B. On all major equipment components, provide manufacturer's name, address, model number, and serial number permanently attached in a conspicuous location.

C. All materials furnished under these specifications shall be the standard product of manufacturer's regularly engaged in the production of such equipment and shall be the manufacturer's latest approved standard design.

D. Guarantees:

1. The Contractor and Manufacturers shall provide a ONE (1) YEAR guarantee for all work under the Electrical Trade. However, such guarantees shall be in addition to and not in lieu of all other liabilities which the manufacturer and the Contractor may have by law or by other provisions of the Contract Documents. In any case, such guarantees and warranties shall commence when the Owner accepts the mechanical/electrical system, as determined by the Architect and shall remain in effect for a period of ONE (1) YEAR thereafter.

2. All materials, items of equipment, all lighting, and workmanship furnished under each section shall carry a ONE (1) YEAR warranty against all defects in material and workmanship. Any fault under any contract, due to defective or improper material, equipment, workmanship or design which may develop shall be made good, forthwith, by and at the expense of the Contractor for the work under his Contract, including all other damage done to areas, materials and other systems resulting from this failure.

3. The Contractor shall guarantee that all elements of the system, which are to be provided under his Contract, are of sufficient capacity to meet the specified performance requirements as set forth herein or as indicated.

4. Upon receipt of notice from the Owner of failure of any part of any systems or equipment during the guarantee period, the affected part or parts shall be replaced by the Contractor for his respective work, as applicable.

5. Furnish, before the final payment is made, a written guarantee covering the above requirements.

6. Reference other guarantee information elsewhere in these specifications.

2.02 STANDARDS

A. Where the Underwriters' Laboratories (UL) have established standards and issued labels for a particular group, class or type of material, apparatus, appliance or device, provide the UL label on all such items in that category incorporated into the work.

B. Where such items are not covered by UL standards, they shall meet or exceed the requirements of the current National Electrical Code (NEC), or if not covered there, by the applicable, published, recognized standard of the American National Standards Institute (ANSI), or of the industry and of the related engineering society. Example: National Electrical Manufacturers Association (NEMA) and Institute of Electrical and Electronics Engineers (IEEE).

C. Contractor is to follow the most current version adopted for all codes and standards.

PART 3 - EXECUTION

3.01 CUTTING AND PATCHING

A. Carefully lay out all work in advance so as to minimize cutting, channeling, chasing, or drilling of floors, walls, partitions, ceilings, etc. Perform all cutting, channeling, drilling, etc., as required for the proper support, concealment, installation, or anchorage of raceways, outlets, or electrical equipment in a careful manner. Any damage to the building, structure, piping, ducts, equipment, or defaced finish, tile, plaster, woodwork, or metal work shall be repaired by skilled mechanics of the trades involved at the Contractor's expense and to the satisfaction of the Engineer. All cutting, channeling, chasing, or drilling of unfinished masonry, tile, etc., or cutting, drilling, anchoring to or welding of structural members shall be performed in a manner having the Engineer's prior approval. All openings made in fire rated or smoke rated walls, floors, and ceilings shall be patched and made tight in a manner to conform to the fire rating or smoke rating for the enclosure.

B. Where conduits pass through exterior walls, thoroughly caulk with sealant the annular space around the conduit to provide a watertight closure at the interior wall cavity and exterior wall surface. Provide ¼" maximum annular space around the conduit. Provide and install all counterflashing of all conduit, pipe and supports which pierces roofs and other weather barrier surfaces. Verify detail with Architect before installation. All work shall be performed in a workmanlike manner to assure weatherproof installation. Any leaks developed shall be repaired at his expense, to Architect's satisfaction. All waterproofing, flashing and counterflashing shall be compatible with roofing system so as not to void any roof warranties. Confirm installation with Architect and Roofing Contractor.

3.02 SEALING AND FIREPROOFING

A. **SEALING OF PENETRATIONS THROUGH RATED WALLS, FLOORS, CEILING AND ROOF ASSEMBLIES SHALL BE INSTALLED PER UL "FIRE RESISTANCE DIRECTORY." UL SYSTEM NUMBERS INDICATED ARE FOR A PARTICULAR LISTED INSTALLATION AND ARE FOR GENERAL INFORMATION AND INTENT. OTHER LISTED UL SYSTEM DESIGNS MAY BE USED. IN ALL CASES, SUBMIT MATERIALS, UL SYSTEM DESIGN NUMBERS AND UL DETAILS TO BE USED THROUGHOUT THE PROJECT AND IDENTIFY WHICH DETAIL IS TO BE USED FOR EACH SPECIFIC CONDITION. POST REVIEWED DETAIL AT JOB SITE FOR REFERENCE.**

1. Only materials tested in the specific UL System No. may be used.

a. Caulk Manufacturer:

1) 3M Type CP-25 W/B + for all assemblies requiring 3M caulk.

2) For WL3045 and WL3046 use Hilti FS611A sealant.

b. Steel Sleeve (stud wall) (UL System No. WL1003): Cylindrical sleeve shall be fabricated from minimum 0.019" thick (no. 28 gauge) galvanized sheet steel and having a minimum two inch (2") lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall plus one inch (1") such that, when installed, the ends of the sleeve will project approximately 1/2" beyond the surface of the wall on both sides of the wall assembly. The diameter of the openings cut on each side of the wall assembly (concentric

with conduit) to be 2 to 2-1/2" larger than the outside diameter of conduit such that, when the steel sleeve is installed, a 1 to 1-1/4" annular space will be present between the steel sleeve and the conduit around the entire circumference of the conduit. Install sleeve by coiling the sheet steel to a diameter smaller than the through opening, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers.

c. Optional Steel Sleeve (concrete or block wall): Except for single insulated cables, provide sleeve cast in floor/wall or mortared into CMU wall; Schedule 40 or heavier, length to extend a maximum one inch (1") from top surface of floor or a maximum of one inch (1") from both sides of wall.

d. Forming Material: Minimum one inch (1") thickness mineral-wool batt insulation material. Tightly pack into sleeve with minimum 1/2" recess on ends. Manufacturer: Thermafiber Safing Insulation.

2. Firestop system shall be installed at top surface of floor and symmetrically on both sides of wall assemblies and one (1) side of floor.

3. Alternate floor penetration system (with firestop mortar): UL System No. CAJ1032.

4. Wires and Cables:

a. For gypsum frame wall, single cable: Fireproof per UL System No. WL3001. Opening for cables to be hole-sawed through gypsum wall board layers. Diameter of opening to be 3/8" to 5/8" larger than outside diameter of cable. Cable to be rigidly supported on both sides of wall assembly. Caulk to fill annular space throughout thickness of gypsum wall board layers and apply 1/4" bead of caulk to perimeter of cable at its egress from wall (both sides).

b. For gypsum frame wall, multiple cables: Use UL system No. WL3021, WL3045, WL3046 or equivalent to maintain rating of wall.

c. For concrete walls/floors or CMU walls, single or multiple cables: Fireproof per UL System No. CAJ3030. Install sleeve in assembly flush with both sides. Cables to be a minimum of ten percent (10%) and a maximum of thirty-three percent (33%) of cross-sectional area of opening. Recess minimum one inch (1") thickness of mineral wool material into opening around cables. Caulk openings around cable to minimum depth of one inch (1"). Optional sleeve may be used per UL detail requirements.

5. Reference Architectural for the exact location of all rated walls, floors, ceilings and ceiling/roof assemblies.

6. Materials used in firestop systems shall be installed in accordance with the manufacturer's written instructions (shall be posted at job site, in General Contractors trailer), provided with materials for specific UL System No.

7. Manufacturers: 3M, Metacaulk, Hilti, BioFireshield or equal.

B. In non-rated walls identified for sound insulation, provide 1/2" space between conduit and sleeve packed with multiple layers of forming material. Allow 5/8" minimum space on each side and caulk with acoustical sealant.

C. **Final condition to prevent passage of fire, smoke, noxious gas and water.**

D. For non-rated electrical/mechanical rooms: Seal all conduit passing through room walls, floors and ceilings with 3M caulk, Type CP-25 WB+.

3.03 WORKMANSHIP AND COMPLETION OF INSTALLATION

A. For the actual fabrication, installation and testing, use only thoroughly trained and experienced workmen completely familiar with the items required and with the manufacturer's recommended methods of installation. In acceptance or rejection of the installed work, no allowance will be made for lack of skill on the part of workmen.

B. Install all specialties as detailed on plans. Where details or specific installation specifications are not included herein, follow approved manufacturer's recommendations.

C. Install complete, thoroughly check, correctly adjust, clean, and leave ready for operation all equipment and material connected with this project.

D. Ballasts, contactors, starters, transformers and like equipment which are found to be noticeably noisier than other similar equipment on the project will be deemed defective and shall be replaced.

E. Electrical service stub locations, sizes and quantities for equipment are approximate only. The Contractor must verify all service locations, sizes and quantities with the equipment supplier before rough-in.

F. The Electrical Contractor shall make all final connections to all electrical equipment furnished and set in place by others, including millwork with outlets. The Electrical Contractor shall provide and install all disconnect switches as required.

G. The Electrical Contractor shall provide/install all circuit breakers, power wiring, conduit systems and final connections required for operation of heating cable systems.

H. Provide and install all adjustable mounting brackets, steel bar hangers, T-bar mounting clips, support channels and universal support bridges as required for installation of recessed light fixtures, speakers, alarm devices and other ceiling mounted devices. Ceiling tile shall not be used to support ceiling mounted devices in lay-in ceilings.

I. Provide wood trim for any semi-recessed panels installed. Verify finishes with the Owner/Architect.

J. Provide Hoffman enclosure (#A-244208WFLP) wall mounted at location shown on plans. Provided in enclosure shall be spare fuses, three (3) of each amperage used in project up to 100 amp size and spare smoke detectors (see Section 28 31 00.)

K. Equipment and materials shall be listed by an organization that evaluates products and states that the equipment or material, either meets appropriate designated standards or has been tested and found suitable for a specified purpose or shall be labeled by the manufacturer to indicate compliance with appropriate standards or performance in the specified manner to be used.

1. Listed or labeled equipment and materials shall be applied, installed, connected, erected, used, cleaned, adjusted, and conditioned in accordance with any instructions included in the listing or labeling.

L. The installation shall be performed by licensed, competent workmen to provide a thorough and complete installation.

M. All work shall be accomplished in conjunction with other trades in a manner which will allow each trade adequate time at the proper stage of construction to fulfill his work.

N. Exact locations shall be determined by reference to the general plans and measurements at the building and shall be subject to reasonable change by the Owner's representative without additional cost.

O. Prior to and during construction, provide adequate storage facilities and properly protect items subject to any damage. Failure to comply with this provision will be sufficient cause for the rejection of the particular apparatus involved.

P. At completion, the installation shall be thoroughly cleaned. All tools, equipment, obstructions, temporary power, temporary lighting and debris shall be removed from the premises.

3.04 BALANCING SYSTEM

A. Balance the electrical system between the respective phases of the system. Balance individual circuits in each panel of the system. Where phase assignments or circuit numbers are indicated on the drawing, do not deviate without the Engineer's approval. All deviations shall be noted on panelboard submittals and on Record Drawings and schedules

3.05 COOPERATION WITH OTHER CONTRACTORS

A. Cooperate with other Contractors so that the installation of the electrical materials and equipment may be properly coordinated. Where a conflict occurs with piping, duct work, etc., it shall be resolved as directed by the Engineer.

B. Interferences between conduit and other trades shall be handled by giving precedence to pipe lines requiring grade for proper operation. Where space requirements conflict, the following order of precedence shall generally be observed:

1. Building Lines
2. Structural Members
3. Drainage Waste and Vent Piping
4. Refrigerant Piping
5. Ductwork
6. Water and Gas Piping
7. Electrical Conduit
8. Fire Protection Piping

3.06 COORDINATION OF WORK

A. Each Contractor shall compare his drawings and specifications with those of other Trades and report any discrepancies between them to the Architect and obtain from the Architect written instructions to make the necessary changes in any of the affected work. All work shall be installed in cooperation with other Trades installing inter-related work. Before installation,

all Trades shall make proper provisions to avoid interferences in a manner approved by the Architect.

B. Locations of conduit and equipment shall be adjusted to accommodate the work with interferences anticipated and encountered. Exact routing and location of systems shall be determined prior to fabrication or installation.

C. Offsets and changes of direction in all conduit systems shall be made as required to maintain proper headroom and pitch of sloping lines whether or not indicated on the drawings.

D. Where discrepancies in scope of work as to what Trade provides items such as starters, disconnects, flow switches and the like exist, such conflicts shall be reported to the Architect prior to signing of the Contract. If such action is not taken, the various Trades shall furnish such items as part of their work for complete and operable systems.

E. Verify voltage, phases, termination points, termination requirements and required disconnects for all equipment provided as part of this contract or equipment furnished by Owner prior to rough-in. Report any discrepancies to Architect/Engineer.

F. The Contractors are to avoid routing conduit through fire rated assemblies where practical. Each trade is responsible for proper coordination of required sleeves or block-outs with rated assembly installers. Each trade is responsible for providing sleeves, as required, for his work. Each trade shall verify acceptable tolerances around penetrating item in fire assembly before beginning fire sealing.

G. The Electrical Subcontractor shall verify with HVAC, Plumbing and Fire Protection Subcontractors the required electrical characteristics for all motors and equipment before ordering and submitting of electrical gear. Verify actual connection points prior to installation and roughing-in. Mechanical and Electrical Contractor are responsible for coordination of electrical requirements and final fuse sizes of all A/C equipment. When Mechanical Contractor substitutes equipment that requires additions or upgrades to electrical system, he shall bear all costs arising from such substitutions. Reference "Mechanical/Electrical Coordination Sheet" in specifications.

3.07 SAFETY PRECAUTIONS AND PROGRAMS

A. It shall be the duty and responsibility of the Contractor and all of its subcontractors to be familiar and comply with all requirements of Public Law 91-696, 29 U.S.C. Secs. 651 et. seq., the Occupational Safety and Health Act of 1970, (OSHA) and all amendments thereto, and to enforce and comply with all of the provisions of this Act. IN ADDITION, ON PROJECTS IN WHICH TRENCH EXCAVATION WILL EXCEED A DEPTH OF FIVE FEET, THE CONTRACTOR AND ALL OF ITS SUBCONTRACTORS SHALL COMPLY WITH ALL REQUIREMENTS OF 29 C.F.R. SECS. 1926.652 AND 1926.653, OSHA SAFETY AND HEALTH STANDARDS.

3.08 OPERATING AND MAINTENANCE MANUALS

A. Provide one (1) Operation and Maintenance manuals for training of Owner's personnel in operation and maintenance of systems and related equipment in the manner described elsewhere in these specifications. In addition, organize manuals and include data and narrative as noted below (bind each manual in a hard-backed loose-leaf binder. Use 8-1/2" x 11" white paper). Provide PDF copy of O&M for owner records

B. Operating Sequence and Procedures:

1. Contents: In each chapter, describe the procedures necessary for personnel to

operate the system and equipment covered in that chapter.

2. Typewritten Operating Procedures: Write procedures for start-up, operation and shutdown.

   a. Start-up: Give complete step-by-step instructions for energizing equipment, making initial setting and adjustments whenever applicable.

3. Shutdown Procedures: Include instructions for stopping and securing the equipment after operation. If a particular sequence is required, give step-by-step instructions in that order.

C. Maintenance Instructions:

1. Provide a schedule of preventive maintenance for each product. Recommend frequency of performance for each preventive maintenance task: i.e., cleaning, inspection, etc.

D. Manufacturer's Brochures: Include manufacturers' descriptive literature covering all appurtenances used in each system, together with illustrations, exploded views and renewal parts lists. Provide the nearest manufacturer's representatives name, address and phone number.

E. Shop Drawings: Provide two copies of all corrected, approved submittals and shop drawings covering equipment for the project either with the manufacturer's brochures or properly identified in a separate subsection.

F. Spare Parts Lists: Include a list of all equipment furnished for the project, with a tabulation of descriptive data of all the spare parts proposed for each type of equipment or systems. Properly identify each part by part number and manufacturer.

3.09 IDENTIFICATION

A. Equip the following items with nameplates:

1. Motor Starters
2. Main Switchboard and Overcurrent Devices and Spares
3. Panelboards and Branch Circuits
4. Safety Disconnect Switches
5. Contactors
6. Control/Power Equipment in Separate Enclosures Including Relays
7. Bypass Switches and Transfer Switches
8. Emergency Generator Sets
9. UPS System and Battery Racks
10. Motor Control Centers
11. Transformers

B. No dymo (stick on indented plastic) type label will be permitted.

C. Identify equipment listed above. COORDINATE EQUIPMENT NUMBERS WITH MECHANICAL AND/OR KITCHEN PLANS. Each piece of equipment shall be numbered consistently throughout.

D. Fabricate nameplates as follows:

1. Provide three (3) ply, 1/16" laminated plastic nameplate material with white core for lettering and black background. All nameplates, for equipment powered from emergency circuits, shall have white core for lettering and red background.

2. Use capital letters.

3. Unless otherwise indicated, provide minimum 3/4" high x 2" long nameplates with 1/4" letters.

4. All labels shall be permanently affixed to the front of all required equipment using two (2) round head self tapping screws. Self-adhesive labels are not acceptable. Align labels with equipment.

E. All junction boxes shall have the panel/circuit number(s) identified on the blank coverplate, handwritten with a permanent black marker. Disconnects, combination motor starter/disconnects and manual motor starter shall have the panel/circuit number(s) identified on the inside of the front cover, hand written with a permanent black marker.

F. Provide engraved coverplates for all switches and control devices which are not otherwise clearly related to the equipment they serve.

G. Label all receptacles and light switches with circuit number using electronic labeler (black on clear). Install label level on front of face plate for receptacles and back side of face plate for light switches.

H. Spray paint J-Boxes red for Fire Alarm System. All other special systems J-Boxes to be painted white.

I. Color code all 600 volt insulated conductors by installing conductors with factory colored insulation for conductors No. 10 AWG and smaller.

J. Install colored tape on all 600 volt conductors No. 8 AWG and larger. Apply tape 6 inches from terminal points. Do not cover factory applied cable identification markings with taping; tape locations may be adjusted slightly to prevent the covering of factory markings. Tape shall be Scotch No. 35 or approved equal, 7-mil thick by 3/4" wide vinyl adhesive tape.

K. Install engraved plastic laminate nameplates as listed below.

EQUIPMENT	LETTERING SIZE	INFORMATION
Switchboards, Panelboards, MCCs and other distribution system overcurrent devices	1/4" / 1/8"	Switchboard name designation, ampere rating of the supply conductors, voltage characteristics, power source and room number(s). EX: MDP, 1900A, 480Y/277V, Served from Utility EX: HVA, 175A, 480Y/277V, source DP-1,3,5. in Room 100.
Transformers	1/4" / 1/8"	Transformer name designation, load served, power source and room number(s). EX: Trans. TR-1, serves PANEL LV-1, source DP-7,9.11 in Room 203.
Remotely mounted Safety Switches and Starters	1/8"	Load served, power source and room number(s). EX: HWP-1, HVA 37,39,4 1 in Room 203. EX: PANEL LV-2 in Room 303, source TR-2.
Contactors	1/8"	Load served, power source and room nember(s). EX: Room 502, Science Lab, LVA 31,33 35, 37,39,4 1. EX: Building security lights, HVA 2, 4. EX: Parking lot lights, HVA 6, 8, 10.

L. Prepare a neatly typed panelboard circuit directory. Identify all circuits by the equipment served and by the room number, room numbers may be different from those shown on drawings. Verify room numbers prior to typing directories. Indicate spares and spaces with light, erasable pencil marking.

3.10 TESTING

A. Test and record results for all power feeders for Megger Readings, including phase to phase and phase to ground as recommended by the cable manufacturer.

B. Measure and record service ground resistance.

C. For equipment having ground-fault protection the ground-fault protection system shall be performance tested when first installed on site. The test shall be conducted in accordance with instructions which shall be provided with the equipment. A written record of this test shall be made and shall be submitted to the Engineer and a copy put in the Operation and Maintenance Manuals.

3.11 CERTIFICATE OF COMPLETION

A. Submit, at time of request for final inspection, a completed letter in the following format:

I, (Name) , of (Firm) , certify that the electrical work is complete in accordance with Contract Plans and Specifications, and authorized change orders (copies attached) and will be ready for final inspection as of (Date). I further certify that the following specification requirements have been fulfilled:

3.12 SITE OBSERVATION

A. Periodically, the Engineer will visit the site and review the construction progress. Field Reports will be issued noting any discrepancies or items that do not meet the intent of the contract documents found during said site visit. The contractor must answer each item listed on each field report, item by item.

B. It shall be the duty of the Contractor to personally make a careful inspection trip of the entire project, assuring himself that the work on the project is ready for final acceptance before calling upon the Owner, Architect or Engineer to make final acceptance of the work. Subsequent trips required because of Contractor's failure to do so, will be made at Contractor's expense, billed at current Engineer's hourly rates.

C. The final acceptance of the work will be made jointly by the Architect and the Owner.

D. Time spent for Investigation/Site Trips due to Contractor lack of installation capabilities/skills or knowledge is not part of Engineer's scope. Therefore time spent assisting contractor in these matters or problems that arise due to these matters will be billed to Contractor. Engineer will bill the contractor at the current hourly rates of the Engineer. These fees will be paid in full prior to release of contingency.

3.13 DURING FINAL INSPECTION

A. Demonstrate installation to operate satisfactorily in accordance with requirements of Contract Documents.

B. Should any portion of installation fail to meet requirements of Contract Documents, repair or replace items failing to meet requirements until items can be demonstrated to comply.

3.14 CLOSE-OUT DOCUMENTS:

A. Furnish three signed letters of guarantee.

1. Clearly and individually, document all material, equipment and service guarantees beyond a single year.

B. Furnish one original and two copies, of a statement from the inspecting authority stating that the installation has been accepted and approved.

C. Furnish one reproducible, two copies and an electronic "AutoCad" version, of complete, full-size sets of drawings showing conduit locations by accurate dimensions from permanent structures.

1. **"Record** Drawings" are to include:

a. A sheet legend shall be present on the 1st sheet of the required set which identifies each sheet making-up the set.

b. Site plan(s) with primary and secondary electric power and communication lines to the property line (may be a civil sheet).

c. Site plan(s) with all underground conduits to other buildings, structures, fixtures and equipment.

d. Marked-up electrical plans and schedules.

D. Furnish three complete sets of overload settings and motor data records.

E. Furnish three complete sets of the electrical testing results.

F. Furnish three complete sets of the power system study final report.

G. Furnish all manufacturer's software if required for start-up or modifying products furnished.

H. Furnish two complete sets of the AC Drive's comprehensive manual that includes operation, programming, diagnostics, applications, wiring diagrams, layout diagrams, and outline dimensions.

1. Identify each AC Drive's model number on a cover sheet.

I. All major Owner training sessions to be videotaped in non-pixelated video in Windows file format.

CEDAR PARK TAX OFFICE **SECTION 26 05 00**
WILLIAMSON COUNTY **GENERAL**

MEP/ENERGY CONSULTANTS
HCE HENDRIX CONSULTING ENGINEERS
COMMISSIONING • FIELD INVESTIGATIONS
115 East Main Street Round Rock, Texas 78664
PH: (512) 218-0060 FIRM F-4095 FAX: (512) 218-0077

PRE-CONSTRUCTION INSTRUCTION SHEET

Submittal/RFI Requirements

A. **'Individual submittals' means separate submittals with unique submittal numbers. One single giant PDF will be rejected.**

B. **3 Submittal CATEGORIES (Reference Specifications)**

a. **Not required unless deviating from specification**

b. **PDF allowed.**

PDF SUBMITTAL/RFI FILE TITLE REQUIREMENT:
For submittal sections listed below as allowed pdf's the following requirements must be met or the submittal will not get through email security and will be auto-deleted and not checked. Each pdf submittal must be a separate pdf file.

PDF FILE: MUST BE NAMED AS FOLLOWS:
JOB NAME – SUBMITTAL No. XX – SUBMITTAL DESCRIPTION
JOB NAME – RFI No. XX – RFI DESCRIPTION

Example: Texas ISD ES No. 2 – Submittal 8 – Plumbing Fixtures
Example: Texas ISD ES No. 2 – RFI 3 – Library Light Fixture Mounting Height

EMAIL TITLE/SUBJECT REQUIREMENTS:
Emails without Job Name and proper format will not get through email security and will be auto-deleted and not checked.

JOB NAME – SUBMITTAL No. XX – SUBMITTAL DESCRIPTION
JOB NAME – RFI No. XX – RFI DESCRIPTION

C. **If submittals are submitted early relative to construction phasing, submittals may be held, reviewed and returned at the appropriate time for construction phasing, not necessarily 2 weeks. In some cases, if submittals are received vastly out of order of construction, submittal may be rejected.**

D. Time Critical Submittal Coordination Items

Mechanical to provide to General Contractor for Structural Roof Coordination

a. Mechanical to provide roof opening shop drawing as early as possible for structural coordination. Per specifications.

Mechanical to provide to General and Electrical Contractors for Gear Coordination

b. Mechanical to complete "MECHANICAL/ELECTRICAL COORDINATION SHEET" prior to electrical gear submittals for coordination with electrical contractor. Per specifications.

E. **Do not submit non pre-approved substitutions during submittal time. These submittals will be automatically REJECTED. Substitution Pre-approval was at bid time.**

F. **Review time for multiple resubmittals of non-approved equipment will result in Contractor being billed for review time that is not part of Engineer's Scope. Engineer will bill Contractor at Engineer's Current hourly rates.**

G. **Email of all Submittals/RFI's must go directly to Architect. Do not Copy Engineer.**

H. **Engineer is not the Contractors plan reference resource. Do not submit an RFI until drawings and specifications have been reviewed first. If the answer is clearly on the drawings the response will be "The answer is clearly on the drawings, Engineer is not the Contractors plan reference resource."**

I. **Call before submitting a written RFI.**

J. **All formal Job emails must come from Architect.**

K. **Do not email send recurring jobsite meeting requests to Engineer. Engineer does not attend all weekly meetings. Architect will coordinate when Engineer is to be required at job site for specific meetings.**

Shop Drawings and Cad Files

A. Contractor Shop Drawings must use Architectural Backgrounds and Architectural RCP's (when available or lighting floorplan) and **Mechanical Contractor Shop Drawings** for coordination purposes. Do not request MEP floorplans, this will be cut and paste into an email for you to read. Engineer cannot send architectural backgrounds.

B. If no Architectural RCP is available for light locations. Lighting Floorplans will be released.

C. Mechanical Floorplan will be released to Mechanical Contractor for aid in production of his own shop drawings. HCE mechanical drawings may not be submitted as shop drawings.

D. Fire Alarm, Sprinkler, Intercom etc. all to use Architectural Backgrounds, must be obtained from Architect.

E. Schedule and Details sheets will not be released.

CEDAR PARK TAX OFFICE **SECTION 26 05 00**
WILLIAMSON COUNTY **GENERAL**

MEP/ENERGY CONSULTANTS
HCE HENDRIX CONSULTING ENGINEERS
COMMISSIONING • FIELD INVESTIGATIONS

SUBSTITUTION REQUEST

FROM: _____ DATE: _____

PROJECT: _____

RE: _____

The following has been submitted for consideration on the aforementioned project:

Specification Title, Section, Page and Article/Paragraph:
Drawings and Details Affected:
Proposed Substitution/Description:
Installer's Name:
Manufacturer's name:
☐ Point by Point Comparative Data attached - REQUIRED BY A/E (_____# of pages including cover)

Why is Substitution Being Submitted?

☐Pre-Bid Substitution (Prior Appoval): Include detailed analysis comparing proposed substitution against specified product, including redlined Specifications showing differences or deviations.
☐Specified product is not available. Explain in detail as attachment.
☐Cost Savings to Owner. Indicate comparative cost analysis as attachment.
☐Other. Explain.

Effects of Proposed Substitution?

(Attach complete explanations and technical data, including laboratory test, if applicable.) Include complete information changes to Drawings and/or Specification that proposed substitution would require for its proper installation. Fill in blanks below:

A. Does substitution affect dimensions shown on drawings? ☐No ☐Yes
B. Will undersigned pay for changes to building design, including engineering and detailing costs caused by requested substitution? ☐No ☐Yes
C. What affect does substitution have on other trades?

_____

D. Differences between proposed substitution and specified item?

_____

E. Indicate how proposed substitution meets LEED requirements. (if applicable)
F. Manufacturer's guarantees of proposed and specified items are:
☐Same ☐Different (explain on attachment)

The Contractor and Subcontractor certifies:
- Proposed substitution has been fully investigated and determined to be equal or superior in all respectes to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Similar maintenance service and source of replacement parts, as applicable is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted By: (name, address, telephone and contact person of manufacturer and installer of proposed substitution)

_____
_____
_____
_____
_____

For A/E Use: SR# _____

☐Accepted ☐Accepted as Noted
☐Not Accepted ☐Received Too Late
☐Incomplete Information
☐No Substitutions Accepted
Reviewed by/date: _____
Comments: _____

Subcontractor's signature and date: _____

Contractor's signature and date: _____

COPY TO:
☐FILE ☐OWNER ☐CONTRACTOR
☐ENGINEER ☐_____

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COMMISSIONING • FIELD INVESTIGATIONS

MECH / ELEC EQUIPMENT COORDINATION SHEET

MARK #	UNIT TYPE	MANUFACTURER'S RECOMMENDED MOCP	VOLTAGE	PHASE	MARK #	UNIT TYPE	MANUFACTURER'S RECOMMENDED MOCP	VOLTAGE	PHASE

END OF SECTION

SECTION 26 05 10 - SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 DESCRIPTION

A. The Contractor shall breakdown the final Schedule of Values to be used for pay application into the following minimum categories.

B. ALL CATEGORIES SHALL HAVE APPROPRIATE MATERIAL AND LABOR BREAKDOWN.

C. Definitions:

1. Service: Conduit for utility company and conduit and wire from utility transformer to main switchboard.

2. Feeders: Include all conduit and wire serving transformers and panelboards.

3. Branch Circuit: Any circuit from a panelboard to a utilization device.

4. Gear: Main switchboard, panelboards, transformers, disconnects, etc.

5. Site conduit voice/data.

1.02 SCHEDULE OF VALUES

A. Mobilization

B. Gear

C. Interior Lighting Fixtures

D. Branch Circuit - Wiring and Conduit

E. Feeders - Wiring and Conduit

F. Devices (switches and receptacles)

G. Fire Alarm System

H. Testing/Labeling of Equipment

I. Record Drawings and O&M Manuals ($1500 minimum)

END OF SECTION

SECTION 26 05 19 - WIRE AND CABLE

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Provide a complete system of conductors in raceway systems as shown on the drawings and hereinafter specified. Route all wire through an approved raceway unless otherwise indicated, regardless of voltage application.

B. Provide 200% neutral conductors to all panels with 200% neutral specified. Reference Panel Schedules.

C. Provide individual neutrals for each circuit, no shared neutrals allowed.

D. **No de-rating of neutrals allowed.**

1.02 STANDARDS

Provide conductors in accordance with the applicable sections of UL and IPCEA Standards.

1.03 SUBMITTALS

A. Furnish Engineer shop submittals for each type of wire and cable.

B. Provide shop submittals which includes the following information:

1. Insulation type.

2. Insulation temperature rating.

3. Manufacturer

PART 2 - PRODUCTS

2.01 MATERIALS

A. Wire and Cables: (600 Volts)

1. Provide copper wire and copper ground conductors **only**. Conductors shown on plans are thusly sized. **No aluminum conductors** will be allowed unless specifically noted.

a. Minimum wire size for branch circuits shall be #12, however, #14 may be used for motor control circuits where specified on the drawings.

b. All conductors #12 and smaller shall be solid and #10 and larger shall be stranded.

2. Provide copper conductors of annealed, 98 percent conductivity soft drawn copper. Provide stranded conductors for control circuits.

B. Metal clad cable shall not be acceptable except from junction box to light fixture, maximum 6 feet in length.

C. Flexible metal conduit or metal-clad cable for receptacles and branch circuits with the following limitations:

1. Dry interior locations;

2. Feeds one outlet only or first outlet.

3. 20 amp maximum;

4. Both segment ends are located within the same room.

a. One segment end at the outlet box and the other segment end at a ceiling junction box located, within 10 feet of the entrance into the wall cavity, vertically above the outlet served.

5. Where installed in an insulated wall, the cable must be on the conditioned side of the insulation and;

6. Each cable or conduit shall be supplied by only one (1) branch circuit breaker (one, two or three poles).

7. No MC to be horizontal in wall. All horizontal runs must be pipe and wire only.

D. Insulation: (600 Volts)

1. Provide all conductor insulation types rated for wet and dry locations and approved by the National Electrical Code for the particular application. Provide all wire and cable with the following (or better) insulation classes:

a. All feeders and branch circuits are to be dual-rated Type THHN/THWN **copper** conductors.

b. Insulation rated for operation at 600 volts.

c. In areas where the temperature will exceed 167^{O}F, provide wire rated 105^{O}C. minimum and a type approved by the local code. Include any wiring within three feet (3') horizontally or ten feet (10') above any heating appliance.

2. Color code in accordance with the wiring diagrams furnished with equipment. All wiring for control systems to be installed in conjunction with mechanical and/or miscellaneous equipment. Color code by line or phase all branch circuit wiring including circuits to motors and feeders as follows: Wire No. 10 and smaller shall be factory color coded. Wire No. 8 and larger may be color coded by color taping within six inches (6") of exposed ends. **Color coding for each nominal voltage shall be consistent throughout building from point of origination to the termination point including tap conductors to luminaire. Mixing of colors between voltages will not be allowed.**

120/208 Volt	120/240 Volts	277/480 Volts
Phase A - Black	Phase A - Red	Phase A - Brown
Phase B - Red	Phase B – Black	Phase B - Yellow
Phase C - Blue	Phase C - Orange	Phase C - Purple
Neutral - White	Neutral - White	Neutral - Gray
Ground - Green	Ground - Green (Orange is High Leg)	Ground - Green

E. Wire and Cable: (50 volts or less)

1. Provide copper wire, minimum size #18 AWG for controls, #18 AWG minimum for fire alarm and #20 AWG minimum for communications. All wire and cable shall be solid. Stranded conductors are not acceptable.

2. All conductors shall be routed in conduit or shall have an insulation approved for plenum installation, unless otherwise noted.

F. ROMEX not allowed.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Unless otherwise indicated wiring size noted on the drawings extend for the entire length of a circuit. Install wire in raceways in strict conformance with the manufacturer's recommendations. Use a UL approved wire-pulling lubricant. Strip insulation so as to avoid nicking of wire.

B. Wire Connections and Devices:

1. Provide all terminating fittings, connectors, etc., of a type suitable for the specific cable. Make all fittings up tight. Make up all terminations in strict conformance with manufacturer's recommendations using special washers, nuts, etc., as required.

2. Connect No. 8 and larger wire to panels and apparatus with properly sized, solderless, or compression lugs or connectors.

3. Join No. 10 and smaller wire by twisting tight and applying UL listed twist-on connectors.

4. Leave at least an eight inch (8") loop of wire for ends at each outlet box for the installation of fixtures or devices.

C. Flashover or insulation value of joints shall equal that of the conductor. Provide connectors rated at 600 volts for general use and 1000 volts for use within fixtures.

D. Grouping shall be 3 Hots and 3 Nuetrals or 6 Hots max. Derating shall be based on the 90 degree chart of NEC 310-16 and table 310.15 (B)(2)(2).

E. Where the distance between the supplying panel and the first branch circuit receptacle, light fixture or equipment is more than 100 feet, upsize wire to allow for maximum of 3% voltage drop for actual routing of conduit to device.

F. Wiring for emergency systems shall be kept entirely independent of all other wiring and equipment as required by Article 700 of the NEC.

G. Mechanically protect conductors by installing in raceways. Do not install the conductors until raceway system is complete and properly cleaned. Use an approved wire-pulling compound when pulling conductors. Wiring pulling compound shall be listed and as recommended by the conductor manufacturer. Do not bend any conductor either permanently or temporarily during installation to radii less than four times the outer diameter of the insulated conductors. Do not exceed manufacturer's recommended values for maximum pulling tension.

H. Pull conductors simultaneously where more than one conductor is being installed in the same raceway.

I. Use pulling means including fish tape, cable, rope and basket weave wire/cable grips which will not damage cables or raceway.

J. Tighten electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Standard 486A.

K. Neatly and securely bundle all conductors in enclosures using nylon straps with a locking hub.

L. At least 6 inches (measured from the finished surface) of each conductor shall extend outside a box's opening.

3.02 SPLICES AND TERMINATIONS

A. Splices shall be kept to a minimum.

B. Splices shall be made in junction and/or pull boxes.

1. Splices in conduit fittings (i.e., conduit bodies), and in panelboards are not acceptable.

C. All materials shall prevent corrosion or electrolysis between dissimilar metals.

D. Use terminal blocks within a junction box for all splices of No. 6 and larger conductors.

E. Use mechanical, crimp or compression type connectors for terminations of stranded conductors.

3.03 CONDUCTOR SIZING

A. Install conductor size required by the more stringent requirements of the drawings or specifications.

B. Install No. 10 AWG conductors the entire length of the circuit for single-phase, 120-volt, 20-ampere branch circuits for which the distance from panelboard to the first outlet is more than 100 feet.

C. Install No. 10 AWG conductors the entire length of the circuit for single-phase 277 volt, 20-ampere branch circuits for which the distance from panelboard to the first outlet is more than 200 feet.

D. General use circuit numbers may be changed. Equipment circuits have numbering to balance loads. This contractor is responsible for maintaining a balanced load and recording the actual circuit numbers.

E. Comply with ampacity adjustment factors as required by the NEC Article 310-16.

3.04 TESTING

A. Prior to energizing feeders, perform insulation resistance tests at 500 Volts D.C. for 30 seconds on each cable with respect to ground and adjacent cables. Maintain the following log for feeder tests:

FEEDER DESCRIPTION:_____

TESTER'S NAME:_____

TEST INSTRUMENT SERIAL #:_____

TEST DATE:_____

RESISTANCE:

A-B	A-C	A-G	B-C	B-G	C-G

B. Test all circuits for proper neutral connections.

C. Upon completion of all testing, prepare a detailed report of all voltage and insulation resistance measurements. Deliver report to Engineer with request for final inspection.

END OF SECTION

SECTION 26 05 26 – GROUNDING AND BONDING

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Provide a complete grounding system in strict accordance with Article 250 of the National Electrical Code and as hereinafter specified and shown on the Drawings.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide copper clad 5/8” x 8 ft. - 0” long ground rods, appurtenances, bonding plates, clamps, connectors and grounding conductors as required. Furnish rods to which the copper cladding is permanently and inseparably bonded to a high strength steel core.

2.02 CONNECTORS

A. Provide exothermic weld type ground connections for concealed, underground, and concrete encased ground connections.

B. Exposed connections may be made with copper or bronze bolted or compression lugs.

2.03 INTER-SYSTEM GROUNDING BUS-BAR (communications)

A. Provide surface mounted terminal blocks sufficient to except 20 individual conductors of sizes 14 AWG thru 4 AWG.

2.04 CONDUCTORS

A. Furnish copper conductors.

B. Furnish 600-volt, insulated conductors for equipment grounding.

C. Size the system grounding electrode conductors to comply with NEC section and table 250-66, unless shown larger.

D. Size the main and separately derived system bonding jumpers to comply with NEC section 250-28 (D).

E. Size equipment grounding conductors to comply with NEC section and table 250-122, unless shown larger.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Properly ground all service equipment conduit systems, supports, cabinets, equipment, motor frames, fixtures, etc., and the grounded circuit conductor in accordance with the latest issue of the National Electrical Code. Provide all bonding jumpers and wire, grounding bushings, clamps, etc., as required for complete grounding. Route ground conductors to provide the

shortest and most direct path to the ground electrode system. Bond conduit if made of current conducting material. All ground connections shall have clean contact surfaces. Bond the service equipment to a grounding electrode as shown on the Drawings.

B. Provide a grounding type bushing for all feeder and branch circuit conduits which do not have a grounding conductor and individually bond this raceway to the enclosure's ground bus or lug.

C. Provide a grounding type bushing on the end of each isolated section of metal conduit and bond the conduit to the equipment grounding conductor, or using a conductor of the same size, bond directly to the equipment ground buss of the equipment at the end of the run.

D. Make single or dual connections to ground rods, plates, and other buried connections by the exothermic process (Cadweld) or Burndy Hyground TM Compression Systems and "hammer tested" to insure that a good bond has been made. Alternatively, all below grade compression grounding systems must meet all UL467, CSA, IEEE837 test requirements and conform to the National Electrical Code Standards. The material at the connectors shall be pure wrought copper extrusions, rod and seamless tubing and be identical material to the conductor. Connectors must be of heavy duty design and be of range taking design to accept conductor ranges of #6 solid to 500 Kcmil plus 5/8" ground rods. Compression connectors need to be compressed with system engineered tooling which makes a circumferential or round crimp. Hex crimp is not acceptable due to sharp flashes and spurs that may occur. Each connector must be clearly marked with catalog number, conductor size and installation die information. Inspection ports must be provided on lug terminations and splices. The system must emboss all the appropriate die index numbers on all connectors after completion of the crimp. Connectors must be prefilled with penetrox copper type oxidation inhibitor and be individually sealed in clear polyethylene sheet to keep out dirt and contamination.

E. Drive grounding electrodes as required. Where rock is encountered, grounding plates of copper, 1/4-in. x 24-in. x 24-in may be used in lieu of grounding rods. Plates must be installed at 36" minimum below finished grade.

F. Connect grounding electrode conductor to building steel and metallic waterline per NEC 250-81. Allow a minimum of 25 feet of grounding conductor in foundation footing and make 3 connections to Rebar. Connections shall utilize an acceptable compression method with connectors listed for contact with respective metal types.

G. Provide a grounding terminal pad in all panelboards, switchboards, and other electrical equipment.

H. Directly ground to the work piece welding machines used in construction. The use of the building or equipment steel or conduits of any kind as a common ground point is not allowed under any conditions. Contractor is responsible for any electrical pieces of equipment damaged by not using the welder grounding method described above.

I. Provide a green insulated grounding conductor in all conduit serving receptacles and/or equipment. Refer to panelboard schedules for sizing.

J. Ground all receptacles to outlet box with a conductor.

K. Flexible conduit will not be allowed as a grounding means.

L. Install metallic fittings on clean contact surfaces to ensure electrical conductivity.

M. Tighten connectors, terminals, screws and bolts, in accordance with manufacturer's published torque tightening values or comply with torque tightening values specified in UL 486A to assure permanent and effective grounding.

N. Apply a corrosion-resistant finish to places where factory applied protective coatings have been damaged.

O. Protect all exposed, grounding electrode conductors with Schedule 40 PVC nonmetallic conduit.

1. Grounding electrode conductors shall not be protected with metallic materials.

3.02 GROUNDING ELECTRODE SYSTEM

A. At each building's service or disconnecting means install a grounding electrode system which includes;

1. A concrete encased electrode connected to the concrete reinforcing bars and;

2. The building structural steel and;

3. The building's metal underground (10 ft.) water pipe.

a. This connection must be within the first 5 ft. of the water pipe's entrance into the building. Water piping cannot be the sole ground and must be supplemented.

4. Other electrodes such as a rod, plate or ring may be used to supplement but cannot be used as a substitute.

B. At each grounded separately derived system install a grounding electrode conductor to connect the grounded (XO-neutral) conductor to;

1. The nearest one of the following electrodes:

a. An effectively grounded structural steel member or;

b. An effectively grounded metal underground (10 ft.) water pipe.

1) This connection must be within the first 5 ft. of the water pipe's entrance into the building.

2. If neither of these is available, install a 3/0, copper, common grounding electrode conductor from the building's service or disconnecting means. Connect taps from this common grounding electrode conductor to the separately derived system's grounded (XO-neutral) conductor.

3.03 SYSTEM BONDING

A. SERVICES

1. Install a main bonding conductor between the service ground bus and the grounded (neutral) bus-bar.

B. SEPARATELY DERIVED SYSTEMS

1. Install a bonding jumper between the equipment ground bus and the separately derived electrical system's (transformer, UPS, central battery/inverter or generator) grounded (XO-neutral) bus.

3.04 ADDITIONAL BONDING

A. Install 3/0 AWG bonding jumpers around all structural metal expansion joints.

B. Each building's interior metal water piping system which does not qualify to be used as a grounding electrode shall be bonded to the building's service or disconnecting means.

C. Bond the grounded (XO-neutral) conductor of each separately derived system to the nearest available point of the interior metal water piping system(s).

1. When the structural steel is being used as the grounding electrode for the separately derived system the interior metal water piping system(s) may be bonded to the structural steel.

D. Install bonding jumpers around raceway expansion joints.

E. Install bonding jumpers around insulated water pipe joints.

F. Install a bonding jumper between all grounding electrodes used for communications, radio and television or antenna systems and the building's grounding electrode system.

3.05 COMMUNICATION GROUNDING

A. Provide a surface mounted, inter-system grounding bus-bar at the service equipment or a separate building's disconnecting equipment and in each communications room.

B. At the service or separate building's disconnecting means, provide an insulated 6 AWG, stranded conductor to connect the inter-system grounding bus-bar to the equipment ground bus.

C. At communications rooms, provide an insulated 6 AWG, stranded conductor to connect the inter-system grounding bus-bar to the building's structural steel.

3.06 EQUIPMENT GROUND

A. Raceways shall not be used as the sole equipment ground.

B. Bond the equipment grounding conductors to all boxes and enclosures.

C. Each receptacle shall be bonded to its respective device box. The connection shall be made by means of a bonding jumper between the device and the box. Where the receptacle mounting yoke is designed and listed for the purpose of grounding; the bonding jumper may be omitted. This does not substitute for the need of grounding the outlet box.

D. Each isolated ground receptacle shall have an isolated ground conductor installed complete from receptacle to the isolated ground bus in the panelboard. No other grounding connections shall be made to these receptacles, specifically connections to the device box or raceway system.

3.07 TESTING

A. Following completion of installation, test system ground for continuity and test resistance to ground by “fall of potential” method and all feeders or sub-feeders with appropriate meggers, or other approved instruments and methods, to determine ground and insulation resistance values.

B. Submit logs of values obtained, nameplate data of instruments used and instrument calibration data prior to final inspection. Instruments used are subject to acceptance.

END OF SECTION

SECTION 26 05 29 – HANGER & SUPPORTING DEVICES

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Provide all required supporting devices, including but not limited to channels hangers, brackets, fittings, clamps, hardware, anchor bolts, rods, electrical accessories, etc., for conduit and equipment.

1.02 STANDARDS

A. Conform with the latest requirements of the NEMA and The National Electric Code.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Support Channel: Hot-dipped galvanized steel, sized for load, minimum size 12 gauge, 1-5/8 wide by 13/16 deep. Furnish fasteners sufficiently sized to carry load imposed.

B. Hardware: Corrosion Resistant (Hot-dipped galvanized all steel components)

C. Support Wires (16 Ga. Minimum) and Tie Wires (22 Ga. Minimum) or as required by UL listed assemblies: Galvanized Steel

D. Coatings: All steel components shall be hot-dipped galvanized.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Perforated iron straps are not permitted for supporting conduits. Conduits run between the webs of bar joists may use galvanized tie wire for securing the conduits. Cut excess wire and bend ends to prevent sharp ends.

B. Support horizontal and vertical conduit runs by one-hole straps, clamp-backs or other acceptable devices and suitable bolts. All conduits shall be secured to structure with supporting devices dedicated for the electrical system and/or conduits for systems furnished under the Electrical Contractor responsibilities. When two (2) or more conduits are run parallel, they may be supported on trapeze hangers, equal to the Modern Co. Other hangers shall be constructed with rods and hanger adjusters of adequate size to carry the loads imposed.

C. All conduits shall be supported a maximum of ten feet (10') on center. Also, support conduits within twelve inches (12") of any bends, outlet boxes, wall penetrations or joints in pipe. All conduits shall be secured to structure. Lighting fixture whips may not be secured to ceiling tie wires. Vertical risers shall be supported by approved riser clamps or supports installed at the respective floor lines

D. Conduits routed below bar joists shall utilize acceptable clamps.

E. Fasten hanger rods, conduit clamps and outlet and junction boxes to building structure using precast insert system, expansion anchors, preset inserts, or beam clamps. Do not use spring steel clips and clamps. Submit method of attachment for review prior to commencing work.

F. Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchor on concrete surfaces; sheetmetal screws in sheetmetal studs; and wood screws in wood construction.

G. Do not fasten support wires to piping, ductwork, mechanical equipment or conduit.

H. Do not fasten conduit or junction boxes to ceiling grid wire. All conduit must be independently supported.

I. Support recessed fluorescent light fixtures with support wire at all four corners as required by roof/ceiling assembly. If roof/ceiling assembly does not require supports at each corner, support fixtures with minimum of two support wires at diagonally opposite corners. Spray paint ends of fixture support wires orange.

J. Conduits, except as approved by NEC, shall not be used to support low voltage cables.

K. Support all piping on roof with pipe stands/roller equal to MIRO Industries Model 4-RAH-PC or Portable Pipe Hangers, Inc., Type PP10 with roller for conduit 2-1/2" and smaller. For conduit over 2-1/2", up to and including 4" use MIRO Industries Model 6-RAH-PC or Portable Pipe Hangers, Inc. (PPH) Type PS-1-2. All conduit stands to sit on walk board (coordinate type and methods of support with Roofing Contractor). Provide minimum pipe height above roof deck as required by jurisdiction having authority (at least 3-1/2"). Provide supports for piping under 2" at six feet on center. Provide supports for conduit 2" and over at eight feet on center.

L. Provide all angles, unistrut supports and threaded rods under any structural elements or mechanical equipment where required for proper placement and support of light fixtures and/or conduits.

M. Supports and hangers shall be installed to permit free expansion and contraction in the raceway systems. Where necessary to control expansion and contraction, the raceways shall be guided and firmly anchored. Anchors shall be approved by the Engineer and shall be designed for equal effectiveness for both longitudinal and transverse thrust. No conduit shall be self-supporting, nor shall it be supported from equipment connections. Transmission of vibrations, noise, etc., shall be considered and any special suspension with vibration dampers to minimize transmission shall be used where necessary.

N. Where ducts interfere with the proper location of hangers, furnish and install trapeze hangers. Trapeze hangers may be used to support groups of conduit run in parallel.

O. Install metal framing to support wall mounted equipment and wall or ceiling mounted raceways.

P. Install expansion bolts to attach framing to concrete. Space bolts a maximum of 24 inches on center, with not less than two bolts per piece of framing.

Q. Touch up all scratches or cuts on steel components with an approved zinc chromate or a 90 percent zinc paint.

END OF SECTION

SECTION 26 05 33 - RACEWAYS

PART 1 - GENERAL

1.01 SCOPE OF WORK

Provide a complete conduit system as shown on the drawings and as hereinafter specified.

1.02 STANDARDS

Conform with the latest requirements of the NEMA, the National Electrical Code, and be UL listed.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Rigid Metal Conduit (RMC): Hot-dip galvanized, threadable steel raceway, galvanized after fabrication. Fittings shall be malleable iron, either cadmium plated or hot-dip galvanized.

B. Intermediate Metal Conduit (IMC): Conduit shall be similar to rigid steel conduit except thinner wall. Fittings shall be malleable iron, either cadmium plated or hot-dip galvanized.

C. Electrical Metallic Tubing (EMT): EMT shall be made of hot-dip galvanized strip steel. Fittings shall be die cast compression or set screw type.

D. PVC - Schedule 40 and Schedule 80 polyvinyl chloride conduit (PVC Duct) shall be UL rated. Conduit fittings and cement shall be produced by the same manufacturer and approved for such use.

E. Flexible Metal Conduit (FMC): Spirally wound continuously interlocked zinc coated strip steel. Fittings shall be die cast zinc, either screw-in or squeeze type.

F. Flexible Conduit (LFMC): Liquid-tight (vibration and/or wet areas) fabricate from continuous lengths of spirally wound galvanized steel strip interlocked with a gray polyvinyl chloride cover extruded over the core to make the conduit liquid tight, oil proof and bendable to a small radius. Fittings shall be compression type, die cast zinc, with insulated throat.

G. Metal-Clad Cable (MC): Galvanized interlocking steel armor. 600 volt, type THHN/THWN, integrally colored insulation. Size #12 AWG or #10 AWG, copper conductors. Fittings shall be listed for MC usage and include anti-short bushings. Reference Section 3.03 for acceptable uses.

H. Metal Wire-ways.

1. Furnish with wire retainers on not less than 12 inch centers. All screws installed towards the inside shall be protected to prevent possible wire insulation damage.

2. The finish shall be the manufacturers' standard color and shall consist of not less than two coats of enamel over a rust-inhibiting prime coat.

I. Surface Metal Raceway (2000 series).

1. Surface metal raceway shall consist of a single compartment base, blank cover, and appropriate fittings to complete the installation per the electrical drawings.

2. The base and cover shall be manufactured of steel and finished with an white color.

3. Approximately ¾" deep, 1 ¼" high and 5' sections.

J. Non-Metallic Multi-outlet Assemblies (5400 series).

1. Surface raceway system shall consist of a dual compartment raceway base, twin cover, appropriate fittings, outlets and device mounting plates necessary for a complete installation.

2. Duplex receptacles and data outlets ("activate connectivity inserts") mounted at 24" centers or as noted on plans. Connect adjacent receptacles on alternate circuits.

3. Approximately 1 ¾" deep, 5 ¼" high and 8' sections with equal compartments.

4. The finish shall be white color and shall consist of not less than one coat of enamel over a prime coat.

PART 3 - EXECUTION

3.01 GENERAL INSTALLATION REQUIREMENTS

A. Raceway and cable usage and installation shall conform to the appropriate article of the National Electrical Code (NEC), as a minimum.

B. Do not install conduit that is crushed or deformed in any way.

C. Provide a nonmetallic (nylon, polypropylene, or approved equal) drag line of suitable strength in spare conduits and telephone conduits. Tightly plug spare conduits at both ends.

D. Do not pull wire into conduit system until the conduit system is complete in all details; in the case of concealed work, until all rough plastering or masonry has been completed.

E. No wiring systems of any type shall be installed in ducts used to transport dust, loose stock, or flammable vapors.

F. No wiring system of any type shall be installed in any shaft containing ducts used for vapor removal or for ventilation of commercial-type cooking equipment.

G. Fasten and support the wiring method employed to the permanent structure using listed straps with corrosion resistant hangers and fasteners.

H. Ceiling system wires or lay-in type ceiling grid components shall not be used as a means of support.

1. Independent support wires and associated fittings which are installed in addition to the ceiling system support wires, shall be permitted: (300.11.A)

2. Independent wires within the cavity of a fire-rated floor–ceiling or roof–ceiling assembly shall be distinguishable by color. (300.11.A.1)

3. Independent support wires that provide support for device boxes shall be secured at both ends. (300.11.A).

I. Bends shall be made with factory elbows or field bent. Field bends shall be made using equipment designed for the particular raceway material and size. Bends shall be free from dents or flattening.

J. Conduit bodies may be used in lieu of conduit elbows where covers will be accessible and ease of installation and appearance warrants their use.

K. Install expansion-deflection fittings where raceways cross structural expansion joints or where required to compensate for thermal expansion and contraction. Install bonding jumpers across expansion-deflection fittings in metal raceway systems.

L. Openings through fire-resistant-rated or sound-resistant-rated walls, partitions, floors or ceilings shall be fire-stopped by installing raceways or cables through sleeves set through the walls, partitions, floors or ceilings and fire-sealing all openings and voids around the sleeves, raceways and cables.

M. Do not drill or pierce structural steel members under any circumstances without the Engineer's specific approval.

N. Minimize roof penetrations by routing conduit through the equipment roof opening. If roof penetration is necessary, coordinate with the Architectural Specifications and penetrate as directly below the equipment disconnect or wiring connection point as possible. Do not use flexible conduit in a pitch pan.

O. Arrange all conduits to drain away from the building.

P. Perform all necessary excavation and backfilling. Tamp backfill in six inch (6") layers to original grade, moistening as required for proper compaction. All backfilling shall be free from harmful materials. Provide shoring, bracing, and de-watering as necessary. Remove all excess and materials not suitable for backfill from the site. Provide barricades to prevent endangering the public. Provide warning beacon lighting at night to adequately mark all excavations.

Q. A #10 AWG tracer wire shall be installed in all trenches which do not contain conductive conductors within them. This will include future use raceways, optical fiber, etc.

R. Raceway systems shall be complete before installing conductors.

S. The interior of all raceways shall be cleaned before installing conductors.

T. Terminate future use raceways with a capped coupling within an accessible area.

U. Workmanlike manner: Type MC cable shall be installed in a neat and workmanlike manner. Cable shall not cross other cable or have excess slack. Cable that is installed vertically, must be plumb with the vertical framing of the structure.

V. Bundling of cable is limited to three cables for each support ring.

W. Type MC cable may be only supported by fasteners or clamps that are approved and UL tested for cable support.

3.02 INSTALLATION BELOW GRADE

A. Minimum size raceway is 3/4 inch.

B. Provide rigid galvanized steel conduit or PVC where conduits are installed in concrete floor slab ¾" maximum. Maintain proper concrete coverage as directed by structural engineer. PVC conduit shall not penetrate slab above finished grade.

C. Provide rigid galvanized steel or PVC conduit where conduits are installed below grade.

D. Swab clean all conduits before cable installation. Waterproof all conduit joints after cable installation.

E. Provide conduit wall sleeves for all conduits penetrating walls, grade beams, etc. and other locations shown on the Drawings.

F. Where required to bend PVC ducts to satisfy indicated routing, preform ducts to allow ends of duct sections to be in a straight alignment. Accomplish preforming of ducts by utilizing proper duct heater units.

G. Perform all necessary excavation and backfilling for proper installation of work. Take precautions not to excavate below depth required. Backfill trenches with sand, 3" below conduits and 3" above. Tamp remainder of backfill in six inch (6") layers to original grade, moistening as required for proper compaction. All backfilling shall be free from harmful materials. In areas to be paved, compact to density to receive pavement. Where pavement is broken for the installation of conduit, repair to original condition. Provide shoring, bracing, and de-watering if necessary for installation of work. Remove from site all materials encountered which are not suitable for backfill.

H. When and if damage is caused to underground utility lines or structures, above ground utility lines or structures, or other purposeful surface conditions, either on or off the right-of-way, make immediate temporary repairs. At the first opportunity, make permanent repairs which are acceptable to the Owner. All such repairs shall be made at the Contractor's expense.

I. Where necessary, provide barricades around open excavations to prevent endangering the public. Provide warning beacon lighting at night to adequately mark all excavations.

J. Where conduits embedded in concrete floor or roof deck cross expansion joints, they shall be joined together using O.Z. Gedney type DX expansion fittings and bonding jumpers. Straight runs of conduit over 150' long shall have O.Z. Gedney Type AX expansion fittings installed to minimize movement. Fittings shall be installed at a maximum of 150' on center.

K. Where horizontal runs of conduit transition to vertical and continue above finished grade or finished floor; the transition shall be made with a 90 degree long radius sweep. The sweep may be PVC (2" and smaller) and shall be RGS (2-1/2" and larger). No PVC conduit will be allowed above finished grade or finished floor.

L. CONDUITS RUN BELOW FINISHED FLOOR SHALL NOT PENETRATE GRADE BEAMS. UNLESS APPROVED BY STRUCTURAL ENGINEER.

3.03 PERMITTED RACEWAY USAGE:

A. Raceway transitions at all locations;

1. Rigid nonmetallic conduit runs from below grade level shall transition to galvanized rigid steel or intermediate steel conduit, wrapped with corrosion protection tape, prior to exiting at grade level and continue thereafter in accordance with their usage requirements.

a. Caulk concrete-to-conduit joints with a silicone rubber compound.

2. Continue the more protective conduit type into an area where a less protective conduit type is permitted for a distance of not less than 1 foot.

B. Electrical metallic tubing at;

1. Interior locations when;

a. Concealed within walls and ceilings or; **do not use in the mortar filled cells of concrete masonry units.**

b. Exposed and more than 8 feet above finished floor or;

c. Exposed and more than 3 feet above finished floor in electrical or mechanical rooms or;

d. Exposed and more than 1 foot above a finished attic or mezzanine floor.

e. Do not use where exposed to standing water or other continuously damp or wet areas.

2. Exterior locations when;

a. More than 10 feet above the finished ground surface or;

b. More than 1 foot above the finished ground surface within a lockable equipment yard or;

c. In the crawl space below a building with the 1st level elevated.

C. Rigid or intermediate metal conduit at;

1. Interior locations when;

a. Exposed, in other than electrical or mechanical rooms, and installed less than 8 feet above finished floor or;

b. Exposed in electrical or mechanical rooms and installed less than 3 feet above finished floor or;

c. Exposed and less than 1 foot above a finished attic floor or mezzanine floor.

2. Exterior locations when;

a. Less than 10 feet above the finished ground surface or;

b. Less than 1 foot above the finished ground surface within a lockable equipment yard.

1) Malleable iron straps will be required at these locations.

D. Rigid metal and intermediate metal conduit wrapped with corrosion protection tape or rigid nonmetallic conduit at;

1. Underground locations with a ¾" minimum size when;

a. Located outside of the building line or;

b. Located below a concrete slab on grade or;

c. Located below a beam of a slab on grade or.

d. Located within a concrete slab on grade where the outside diameter is equal to or less than 20 percent of the slab thickness.

1) Seal conduit ends at each building entry.

2. Below grade;

a. The minimum size shall be 3/4 inch.

b. Seal conduit ends at each building entry.

c. Coordinate covering with Structural Engineer.

E. Rigid nonmetallic conduit for;

1. An exposed grounding electrode or bonding conductor below 10 ft. to guard from physical damage.

F. Flexible metal conduit in;

1. Dry interior locations with a minimum length of 2 feet and maximum length of 6 feet to;

a. The final connection of transformers, motors and vibrating equipment.

G. Flexible metal conduit or metal-clad cable for light fixtures or ceiling mounted devices.

1. Dry or damp interior locations with a maximum length of 6 feet to;

a. The final connection of light fixtures; or

b. The final connection of ceiling mounted outlet boxes or.

H. Flexible metal conduit is not allowed for any technology rough-in, must be EMT.

I. Flexible metal conduit or metal-clad cable with the following limitations for receptacles and branch circuit.

1. Dry interior locations;

2. Feeds one outlet only;

3. 20 amp maximum;

4. Both segment ends are located within the same room.

   a. One segment end at the outlet box and the other segment end at a ceiling junction box located, within 10 feet of the entrance into the wall cavity, vertically above the outlet served.

5. Where installed in an insulated wall, the cable must be on the conditioned side of the insulation and;

6. Each cable or conduit shall be supplied by only one (1) branch circuit breaker (one, two or three poles).

7. No MC to be horizontal in wall. All horizontal runs must be pipe and wire only.

J. Liquid-tight flexible metal conduit in;

1. All locations with a minimum length of 2 feet and maximum length of 6 feet for;

   a. The final connection of all liquid pump motors and associated control connections or;

2. Damp or wet interior and all exterior locations with a minimum length of 2 feet and maximum length of 6 feet to;

   a. The final connection of transformers, motors, and vibrating equipment.

END OF SECTION

SECTION 26 05 34 - OUTLET BOXES, PULL BOXES AND JUNCTION BOXES

PART 1 - GENERAL

1.01 SCOPE OF WORK

Provide outlet boxes in accordance with the National Electrical Code at locations shown on the Drawings and hereinafter specified.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide standard hot-dipped galvanized pressed steel boxes, minimum 4"x4" by 1-1/2" deep. Use 4 11/16" by 2 1/8" deep box when using 1" conduit.

B. Cabinets with screw covers or as specifically noted for junction or pull boxes larger than 150 cubic inches.

C. All junction, pull and splice boxes to conform to NEC Article 370.

D. All metallic boxes are to have an internal means of grounding.

E. Flush mounted wall and finished ceiling boxes.

1. Within framed, drywall, plastered or tile covered walls, with ¾" max. raceway, furnish galvanized steel, 4" square, minimum 1 1/2 inch deep boxes with a raised tile cover and a far-side support.

2. Within drywall or plaster covered or suspended ceilings, with ¾" max. raceway, furnish galvanized steel, 4" square, minimum 1 1/2 inch deep boxes with a raised tile cover.

3. Within masonry walls, with ¾" max. raceway, furnish galvanized steel boxes, minimum 2-1/2-inch deep.

F. Surface mounted boxes.

1. Mounted at or below 10' above the finished surface, ¾" max. raceway size, furnish cast aluminum boxes with a surface mounted cover.

G. Junction and pullboxes.

1. Furnish, minimum 4" square, 1 – ½" deep, galvanized steel junction and pullboxes where installation conditions warrants their use. Boxes shall be furnished with screw-on covers or hinged covers. Covers shall be such that it can easily be handled by one person. All hardware and fasteners shall be galvanized steel.

H. Flush mounted floor boxes.

1. Furnish adjustable, concrete tight, corrosion resistant, duplex type. Compartmental type for combination receptacle and communication. The coverplate shall be brass with hinged flap and carpet flanges. The minimum below ground/slab conduit size shall be ¾".

I. Underground boxes.

1. U. L. listed.

2. Pre-cast, polymer concrete.

3. Minimum size of 10” W X 10” L X 10” H.

4. Bolt down cover.

5. Stainless steel hex-bolts and replaceable nuts.

6. Minimum load rating of 5,000 lbs. (select by location)

PART 3 - EXECUTION

3.01 INSTALLATION

A. Through wall boxes and boxes mounted back-to-back are not permitted. Provide 8 inch minimum separation in order to minimize sound transmission.

B. Set flush with wall or ceiling finish in accordance with N.E.C., Article 370. Extension sleeves are not permitted for boxes improperly set.

C. Verify location of outlets prior to rough-in. When necessary, relocate outlets to avoid interference with other work or equipment. Where fixtures are mounted on or in an accessible type ceiling, provide a junction box and extend flexible conduit to each fixture. Fit outlet boxes in finished ceilings or walls with appropriate covers.

D. Where more than one (1) switch or device is located at one (1) point, unless otherwise indicated, provide gang boxes and covers. When the voltage between switches exceeds 300 volts, provide barrier partitions between adjacent switches located in the same box. Sectional switch boxes or utility boxes not permitted.

E. Provide pressed steel boxes for all interior work. Provide square boxes with plaster rings. Provide appropriate size multi gang box for group devices. Single gang boxes screwed together is not acceptable.

F. Where boxes are installed in masonry walls, use only approved masonry type boxes for single gang and multi-ganged applications. Standard 4” square boxes with plaster rings are not allowed. Caulk around joint between receptacle box and masonry. Verify color with architect.

G. Do not drill and pierce structural concrete members and structural steel without prior approval of the Engineer.

H. Mount all boxes plumb.

I. Mount boxes completely rigid without conduit or finished wall support.

J. Where outlets are installed in steel stud type systems, provide additional cross bracing, bridging, and/or straps as required to make the outlet completely rigid. Support boxes with “caddy screw gun brackets”, “caddy box mounting bracket”, “caddy quick mount box brackets” or acceptable alternates.

K. **Dimensions are from finished floor to centerline of outlets.** Adjust heights of outlets in masonry walls from that indicated so that receptacles are not lower than 16” A.F.F. and switches are not higher than 48” A.F.F. Outlet height so adjusted shall be consistent. Unless otherwise indicated, mount outlets at the following heights:

Wall switches/Wall Phone	4 ft. - 0 in.
General Duplex receptacles	1 ft. - 6 in.
Receptacles at Millwork	verify with millwork
Receptacle for Refrigerators	2’ – 6”
Weatherproof duplex receptacles	1 ft. - 6 in.
Telephone/Data outlets/Teacher Station	1 ft. - 6 in.
Telephone/Data at millwork	verify with millwork
Garages/Apparatus Bay receptacles	2 ft. - 0 in.
Clocks	8 ft – 0 in
Access Point Data Drops (wall mounted)	10 ft – 0 in

L. For boxes installed above ceilings, label the box cover with the circuit numbers installed. Labeling shall be with a permanent, black maker with broad tip.

M. Boxes installed in rated walls shall have a minimum horizontal separation of 24”. Maximum surface area of boxes shall not exceed 16 square inches.

N. Completely envelope floor boxes in concrete except at the top. Increase slab thickness at boxes if required for bottom covering. Adjust covers flush with finished floor.

O. Where outlets are indicated adjacent to each other, mount these outlets in a symmetrical pattern with all tops at the same elevation. Where outlets are indicated adjacent, but with different mounting heights, line up outlets to form a symmetrical vertical pattern on the wall.

P. Install recessed boxes flush to the finished wall or ceiling line by the use of manufactured tile rings to extend the box forward.

Q. Boxes to which light fixtures or pendants are mounted shall NOT contain any conductors foreign to the operation of such light or pendant application. Removal of lights, pendants and cord drops to access other branch circuits is NOT acceptable.

R. Where fixtures are mounted on or in an accessible type ceiling, provide a junction box and extend flexible conduit to each fixture.

S. Install knockout closures to cap all unused openings.

T. All boxes shall be installed with coverplates.

U. Install boxes as required to facilitate conductor installation in raceway systems. Junction and pull boxes shall be sized to accommodate conductors, splices, devices and fittings.

V. Raceways are NOT allowed to terminate to extension rings.

W. Install boxes so that covers are accessible and easily removable after completion of the installation. The minimum clear space in the direction of the box opening shall be 36”.

X. Include suitable access doors, with the proper fire rating, for boxes above inaccessible ceilings. Boxes shall be located within reach of the access.

Y. Install underground boxes with cover slightly above finished grade.

Z. Spray paint J-Boxes red for Fire Alarm Systems. All other special system J-Boxes to be painted white.

END OF SECTION

SECTION 26 05 80 - EMPTY RACEWAY ROUGH-IN

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. The Contractor shall furnish and install all equipment, accessories and material required for the rough-in of empty raceway systems in accordance with the specifications and drawings.

B. Rough-in raceway sections for indicated devices and outlets in all walls, floors and underground sufficient to facilitate installation of the following systems without cutting or otherwise damaging walls, ceilings or floors installed in this contract:

1. Communications
2. Fire Alarm
3. Television
4. Data
5. Security
6. Controls

C. **ALL** CONDUITS SHALL HAVE A PULL CORD INSTALLED. INSTALL BLANK COVERS ON ALL UNUSED JUNCTION BOXES.

D. 3/4” CONDUIT MINIMUM.

E. Electrical Contractor shall provide all conduit, junction boxes and outlet boxes for HVAC controls as specified in Section 26 05 00, 1.03, D. Coordinate locations and requirements with Mechanical Contractor and Controls Contractor prior to rough-in. Provide outlet box for sensor and conduit to above accessible ceiling. Provide conduit for all wiring in areas with no ceiling. Provide conduit from outdoor units to above accessible ceilings. Provide conduit between make-up air units and associated condensing units.

F. REFERENCE TECHNOLOGY DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS CONCERNING CONDUIT ROUGH-IN FOR VOICE/DATA SYSTEMS.

G. Floor mounted devices: Provide pathway to nearest accessible ceiling for all floor mounted devices called for in this specification.

1.02 QUALITY ASSURANCE

A. Construct each item of equipment, including parts and accessories, in a workmanlike manner, using new materials or the best quality obtainable for the purpose intended. Design and build materials in accordance with the best practices of the electrical industry.

B. Comply with all requirements of serving utility.

PART 2 - EXECUTION

2.01 INSTALLATION

A. Interior conduit systems shall have runs less than 100 feet from point to point.

B. Provide accessible pull boxes when necessary. Provide blank covers for all outlet boxes, unless otherwise noted.

C. All bends for telephone and cable television service shall be 36 inch radius, minimum.

D. Provide outlet box in wall at 18” A.F.F. (UON) and conduit with string to above accessible ceiling location. Provide insulated bushing on end of conduits.

E. Provide one (1) additional outlet boxes and conduit with pull cord to above the ceiling. Final location shall be as directed by the Architect. Outlets can be added at any phase of construction with the exception of finished CMU walls.

END OF SECTION

SECTION 26 15 00 - ELECTRICAL DEMOLITION FOR REMODELING

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Electrical demolition.

PART 2 - EXECUTION

2.01 EXAMINATION

A. Demolition Drawings are based on field observations and existing Record Documents. Report discrepancies to Architect/Engineer before disturbing existing installations.

B. Verify field measurements and circuitry arrangements prior to starting demolition.

C. Verify that wiring and equipment to be abandoned serve only abandoned facilities.

D. Beginning of demolition means the Contractor accepts existing conditions.

2.02 PREPARATION

A. Disconnect electrical systems in walls, floors, ceilings, etc. scheduled for removal. Reference Architectural drawings and specifications for limits of demolition.

B. Coordinate utility service outage with Utility company and the Owner, prior to starting demolition.

C. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.

2.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

A. Remove abandoned wiring, conduit and appurtenances to source of power (panelboard) or previous device, including conduits, wiring and appurtenances above accessible ceilings.

B. Remove, relocate and extend existing installations to accommodate new construction.

C. Cut conduit flush with walls and floors, and patch surfaces. Reference Architectural Specifications for repairing and painting requirements.

D. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.

E. Maintain access to existing electrical installations which remain active. Modify installation or provide access panels, as required.

F. Extend existing installations, as required, using materials and methods as specified or that is compatible with existing electrical installation.

2.04 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment which are to be reused.

1. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuitry arrangements.

2. Luminaires: Remove designated existing luminaires for cleaning. Use mild detergent to clean all exterior and interior surfaces; rinse with clean water and wipe dry. Replace all ballasts, lamps and broken electrical parts and/or lenses, as required.

END OF SECTION

SECTION 26 24 16 - BRANCH CIRCUIT PANELBOARDS

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Provide branch circuit panelboards as shown on the Drawings and as herein specified.

B. Panelboard feeders are sized from the “Panelboard Connection Schedule”. When a panel is fed from a transformer use the “Transformer Connection Schedule” for feeder size. When there is a conflict between the sizes, use the largest of the two.

C. This section specifies the furnishing and installation of molded case, thermal-magnetic circuit breakers. Electronic, solid-state trip circuit breakers are NOT allowed.

D. Maximum circuits per panelboard section shall be 42 circuits.

1.02 STANDARDS

A. Provide U.L. label.

B. Comply with applicable standards of NEMA and the NEC.

1.03 ACCEPTABLE MANUFACTURERS

A. Square D/Schneider Electric

B. ITE Siemens

C. Cutler Hammer/Westinghouse/Eaton

D. General Electric

1.04 SUBMITTALS

A. Furnish Engineer shop submittal for each branch circuit panelboard.

B. Submit shop drawings for each panelboard which include outline and support points, dimensions, voltage, main bus ampacity, short circuit ampere interrupting rating, circuit breaker arrangement, sizes and number of poles. Shop drawing shall list all spaces and circuit breakers to be installed in each panelboard.

C. Provide shop submittal which includes the following:

1. Cabinet:

a. Housing

b. Trim

c. Outline dimensions

d. Available spaces

e. Panelboard mounting

2. Circuit breakers:

a. Frame size

b. Trip setting

c. Class

d. Interrupting rating in RMS Symmetrical amperes

e. Mounting

f. Voltage rating

3. Busing:

a. Ampere rating

b. Material

c. Incoming cable lug size

d. Bus bracing

4. Manufacturer's catalog numbers.

5. Other descriptive data as may be required.

D. Circuit breaker arrangement must be identical to the schedules or one line diagram unless there is a technical reason for deviation. All reasons for deviation must be stated on the shop drawings.

E. Unless specifically noted, only Max 42 circuits per section will be allowed.

PART 2 - PRODUCTS

2.01 GENERAL.

A. All new panelboards and switchboards on this project shall be by the same manufacture. The manufacture shall be the same as the manufacturer of the circuit breakers.

B. Interior trim shall be of dead-front construction to shield user from energized parts. Dead-front trims shall have pre-formed covers for unused mounting space.

C. Interior leveling provisions shall be provided for flush mounted applications.

D. Panelboards shall be designed such that switching and protective devices can be replaced without disturbing adjacent units and without removing the main bus connectors.

F. Furnish suitable lugs for each conductor requiring a connection.

2.02 BUS CONSTRUCTION

A. Fabricate all buses of 98 percent IACS conductivity, copper. Size buses to limit their temperature rise within the panelboard to 65°C based on a 40°C ambient temperature.

B. Provide one continuous, un-reduced in size, bus bar per phase with “distributed phase” or “phase sequence” type connections to the branch circuit breakers. Extend the buses the height of the panelboard.

C. Provide circuit breaker connections to the bus by means of a bolt. Square D “I-Line” may be provided.

D. Insulate each individual phase bus to withstand 2000 volts a-c for 1 minute.

E. Support the bus systems using non-carbonizing, non-tracking insulators.

F. Furnish fully equipped spaces, include all appropriate connectors or mounting hardware.

G. Furnish an insulated neutral bus which is the same size as the phase buses. Larger sizes may be required by the schedules or one line diagram.

H. Furnish a solidly bonded equipment ground bus. Include terminals for feeder and branch circuit grounding conductors.

I. Furnish an isolated ground bus, with terminals, where scheduled or noted on the drawings.

J. Provide full size or larger insulated neutral bus bar. Where specified on the panel schedule, provide 200% rated neutral bus bar. Coordinate with plans.

2.03 RATINGS

A. Panelboards and circuit breakers shall be rated for 60 hertz and have a voltage and current rating as indicated on the drawings or schedules.

B. The finished panelboard assembly shall be fully rated to withstand mechanical forces exerted during short-circuit conditions when connected directly to a power source having available fault currents indicated on the drawings or schedules. The minimum rating for a 240 volt a-c panelboard shall be rated 10,000 AIC RMS symmetrical and a 480 volt a-c panelboard shall be rated 14,000 AIC RMS symmetrical minimum. Series ratings are not permitted.

C. Final AIC ratings for all panels shall be determined and provided by the gear manufacturer to meet minimum allowable fault current from utility company transformer. Provide coordination study and fault current analysis as required for justification of sizes. Make all changes required by coordination study and include in bid price. Coordination study must be completed prior to submitting gear.

2.04 ENCLOSURES

A. Enclosures shall be at least 20 inches wide and made from galvanized steel with welded interior mounting studs. Provide gutter space in accordance with the National Electrical Code. Where conductors are carried through a box, the box shall be sized to include the additional space. Enclosures shall be fully enclosed.

B. **ALL MULTI-SECTION PANEL ENCLOSURES SHALL BE THE SAME HEIGHT.**

2.05 HINGED FRONT COVER

A. Mounting shall be flush or surface as indicated on associated schedules or drawings. Surface trims shall be the same height and width as the box. Flush trims shall overlap the box by 3/4 of an inch on all sides.

B. Fronts shall be of the concealed hinged type. Front shall not be removable with the door closed.

C. Doors on front shall have rounded corners; edges shall be free of burrs. Doors shall have a flat latch type lock with a catch and spring loaded stainless steel door pull. All lock assemblies shall be keyed alike. One key shall be provided with each lock.

D. Furnish a nameplate, circuit directory frame, card and a clear plastic covering on the inside of the door. All loads shall be identified as specified in Section 16075.

2.06 FINISH

A. Surfaces of the trim assembly shall be properly cleaned, primed, and a finish coat of gray paint applied.

B. Nema 3R enclosures shall be properly cleaned, primed, and a finish coat of gray paint applied.

C. Supply one quart of finish paint for each project. Touch-up after installation.

2.07 MOLDED CASE THERMAL-MAGNETIC CIRCUIT BREAKERS

A. Furnish molded case, thermal-magnetic circuit breakers in lighting / appliance and power distribution panelboards for the specified service with the number of poles and ampere ratings indicated on the schedule or drawings. Incorporate inverse time characteristic by bi-metallic overload elements and an instantaneous characteristic by magnetic trip.

B. Current carrying components shall be completely isolated from the handle and the accessory mounting area.

C. Circuit breakers shall have a trip free, toggle operating mechanism which will provide quick-make, quick-break contact action. The circuit breaker shall have common tripping of all poles.

D. The circuit breaker handle shall reside in a tripped position between ON and OFF to provide local trip indication. Circuit breakers shall be clearly marked ON and OFF.

E. Circuit breakers shall be factory sealed.

F. All circuit breakers shall be suitable for mounting in any position.

G. Circuit breakers shall be equipped with factory installed mechanical lugs.

H. Circuit breakers shall have a permanent trip unit containing individual thermal and magnetic trip elements in each pole.

I. Thermal trip elements shall be factory preset and sealed. Circuit breakers shall be true rms sensing and thermally responsive to protect circuit conductor(s) in a 40° C ambient temperature.

J. For 2-pole and 3-pole breakers, use the common-trip type so that an overload or fault on one pole will trip all poles simultaneously. Handle ties are not acceptable except where multiple single breakers are used to serve modular furniture.

K. Where indicated, provide ground fault (GFCB) or shunt trip breakers.

2.08 LISTING

A. The completed panelboard shall be UL listed.

B. Certification standards, with applicable voltage systems and corresponding interrupting ratings, shall be clearly marked on the face of each circuit breaker.

C. Circuit breakers shall be equipped with listed electrical accessories as noted on the schedules or drawing.

D. When required, circuit breakers shall be listed as HACR type.

E. When required, circuit breakers shall be listed as Switch Duty type.

F. When required or indicated on the drawings or schedules, equipment shall be listed for the environment in which it is installed.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install box, trim and interior rigid and plumb. Center interior with opening.

B. Install panelboards in accordance with the instructions of the manufacturer and as shown on the Drawing. Install complete with all required electrical connections.

C. Unless otherwise noted, install panelboards with the top of the trim 6 ft. 0 in. above finished floor.

D. Field check panelboard loading and reconnect circuits as required to provide balanced phase and line loads.

E. Neatly bundle, route and support cables installed in wiring gutters of panelboards. Minimum bending radii as recommended by the wire and cable manufacturer.

F. Install five (5) 3/4” conduits from top of flush mounted panelboards to accessible void above ceiling. Cap end of conduits above ceiling.

G. All recessed panels are to be installed in 6” minimum wall thickness. Coordinate clear dimensions with Architect and General Contractor prior to rough-in.

H. Provide wood trim for any semi-recessed panels, including panelboards. Coordinate with General Contractor and verify finishes with the Owner/Architect.

I. Install filler blanks for any unused breaker space.

J. All panel interior to be free of debris and dirt prior to installing panel covers.

K. Check bolted and circuit breaker connections using a torque wrench.

L. The faces of all circuit breakers shall be flush with each other.

M. Affix permanent and individual circuit numbers to each circuit breaker in a uniform position.

END OF SECTION

SECTION 26 27 26 - DEVICES

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Provide switches and receptacles as shown on the drawings and as hereinafter specified.

1.02 STANDARDS

A. Provide all receptacles which conform with NEMA standards for amperage and voltage classification.

B. Provide devices U.L. listed for the application and for the type of wire used.

1.03 ACCEPTABLE MANUFACTURERS

A. Leviton, or approved equal

1.04 SUBMITTALS

A. Furnish Engineer shop submittal for each device.

B. Provide shop submittals which include the following information:

1. Manufacturer and catalog number.

2. NEMA configuration.

3. Voltage and amperage ratings.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Straight Blade Receptacles: Furnish Leviton receptacles or approved equal, color shall be White. (Devices and coverplates connected to emergency circuits shall be red).

1. Single receptacle, 20 amp, 125-volt, 2-pole, 3-wire, grounding, NEMA 5-20R.

2. Single receptacle, 20 amp, 250-volt, 2-pole, 3-wire, grounding, NEMA 6-20R.

3. Duplex receptacle, 20 amp, 125-volt, 2-pole, 3-wire, grounding, NEMA 5-20R.

4. Tamper resistant, duplex receptacle, 20 amp, 125-volt, 2-pole, 3-wire, grounding, NEMA 5-20R.

B. Toggle Switches: Furnish Leviton switches or approved equal, color shall be White. (Devices and coverplates connected to emergency circuits shall be red).

1. Single pole, single throw, 20 amp, 120/277 volt.

2. Single pole, double throw, momentary, 20 amp, 120/277 volt.

3. Single pole, double throw, maintained, 20 amp, 120/277 volt.

4. Double pole, single throw, 20 amp, 120/277 volt.

5. Three way, single throw, 20 amp, 120/277 volt.

6. Four way, single throw, 20 amp, 120/277 volt.

C. Locking Switches: Furnish Leviton switches with #55500 key, color shall be White. (Devices and coverplates connected to emergency circuits shall be red).

1. Single pole, single throw, 20 amp, 120/277 volt.

2. Single pole, double throw, momentary, 20 amp, 120/277 volt.

3. Single pole, double throw, maintained, 20 amp, 120/277 volt.

4. Double pole, single throw, 20 amp, 120/277 volt.

5. Three way, single throw, 20 amp, 120/277 volt.

6. Four way, single throw, 20 amp, 120/277 volt.

D. Dimmer Switches: Furnish Lutron NT series, or equivalent, continuously adjustable slide dimmer with preset on/off switch. Dimmer shall be solid-state type for use with 120-volt incandescent lamps and shall have electromagnetic filters to eliminate noise, RF and TV interference. Dimmer wattage is indicated on the drawings or 1000 watt minimum.

E. Ground Fault Devices: Color shall be White. (Devices and coverplates connected to emergency circuits shall be red).

1. Ground fault circuit interrupter (GFCI), 20 amp, 125-volt, 2-pole, 3-wire, grounding, NEMA 5-20R.

2. Ground fault feed through switch, 20 amp, 125-volt.

F. Device Plates:

1. Unless otherwise indicated, provide smooth metal device plates of Type 430 stainless steel for all indoor devices. Verify color with architect prior to ordering. Cover plates for devices served by emergency circuits shall be red.

2. Provide telephone and data outlets with blank metal type 430 stainless steel covers.

3. Provide properly gasketed vertical single lift device plate of aluminum die cast for weatherproof receptacles and/or switches.

G. Floor Outlets:

1. Provide where shown on the drawings, PVC rectangular floor boxes. Coordinate all dimensions for floor boxes with Architect. Contractor shall not scale from drawings.

2. Receptacle floor outlets specified as duplex shall have duplex screw cap coverplates. Telephone and/or data floor outlet boxes to have combination screw cap coverplate.

3. Provide brass carpet flanges for each floor box installed in carpeted areas.

4. Multiple device locations shall incorporate two (2) or three (3) gang outlet box.

H. Provide GFI receptacles within 6 feet of any sink, lavatory, wet area and outdoors. All GFI resets to be located in the same room protected.

I. Provide GFI protection for all receptacles in areas where power hand tools or portable lights are used (shop areas, garages, etc.).

J. Provide GFI protection for all circuits used for heat tracing.

K. Provide a receptacle in all mechanical/electrical rooms.

L. Surge Arresting Receptacles: Where surge arresting receptacles are indicated, provide receptacles meeting Federal Specification WC-596F which are UL listed (UL 1449 and UL 498) with integral surge suppression. Provide with audible surge protection failure alarm and replaceable surge arrester module. Eagle Electric “Super Spec SurgeBloc” or acceptable equal.

M. All 120volt/20amp receptacles in kitchen area to be GFCI protected.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install wiring devices of the type as indicated on drawings. Make up all connections tight and set device plumb. Use care in installing device in order to prevent damage to the device and the wire in the outlet box.

B. Device Plates: Provide a device plate for each outlet to suit the device installed and install blank plates or covers for junction boxes and empty outlets, including telephone, computer, etc.

C. Mount duplex receptacles vertically with grounding opening **up** unless otherwise noted.

D. Prior to installation of outlets other than 20A, 120 Volts, verify receptacle type with Owner through Architect. Receptacles not verified shall be changed at Electrical Contractor’s expense if necessary to operate equipment.

E. Install all switches that are required to be handicap accessible at proper height per latest ADA Standards.

F. Install wall switches vertically in an outlet box on the strike side of the door as finally hung.

G. Install single throw switches so up is the ON position.

H. Locking switches shall be furnished in corridors, common areas and any area with HID lighting. Contractor shall confirm exact location of all locking switches with the Architect/Engineer prior to rough-in.

I. Provide “Caddy Screw Gun Bracket” between wall studs, as required to install switches, thermostats, intercom devices, etc. Verify exact location of devices prior to rough-in. Device boxes shall be aligned on center line of each box.

J. Receptacles installed for electric water coolers shall be mounted at a height so as not to be visible after installation of EWC. Coordinate with equipment being provided.

K Provide one (1) duplex GFI/weatherproof receptacle within 25 feet of all mechanical equipment, located on the roof, on mezzanines, or on the ground. Connect receptacles to nearest available circuit with not more than 6 receptacles or home run to the nearest available panelboard and provide breaker as required.

L. Engrave coverplates, designated for engraving, with 1/8 inch-high contrasting lettering.

M. Engrave the coverplates of wall switches that control equipment which is not in sight of the switch with the designation of the equipment being controlled. Lettering shall be 1/8 inch high and of a contrasting color.

N. All receptacles located above counter tops with sinks and receptacles in kitchens shall be GFI Type.

O. Provide one (1) additional receptacles in base bid including wire, conduit, breakers and appurtenances. Each receptacle represents a dedicated circuit. Estimate length of circuit is 150 feet. Final location as directed by Architect.

END OF SECTION

SECTION 26 51 00 - INTERIOR LIGHTING SYSTEM

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. Provide all lighting fixtures and equipment as specified in the fixture schedule. Include all necessary accessories and appurtenances required for a complete and operating system whether or not specifically shown.

1.02 STANDARD

A. Provide all materials and accessories, whether specifically described or not, of the best grade of the commercial manufacturer. Provide first class workmanship in every respect.

B. Provide all lighting fixtures with Underwriters' label and manufacturer's label. Attachment of U.L. labels after delivery of fixtures is not acceptable.

C. Manufacture all lighting fixtures in accordance with the National Electrical Code.

D. Ballasts:

1. Provide ballasts for fluorescent lamps which meet U.L. specifications for Class P listing, applicable ANSI Standard Ballast Specifications, and certified by C.B.M. **Maximum - 2 lamps per ballast.**

2. Provide ballasts for HID lamps which comply with the UL Standard for High-Intensity Discharge Lamp Ballasts.

E. Provide lamps manufactured by North American Phillips or Sylvania. Unless otherwise indicated, lamp designations shown on the fixture schedule are Sylvania. (3500K)

1.03 ACCEPTABLE LIGHTING PACKAGES:

A. Lithonia

B. Thomas Daybrite

C. Hubbell

D. Others Fixtures as Scheduled or Noted

1.04 SUBMITTALS

A. Furnish Engineer shop drawings for each fixture.

B. Provide shop drawing which includes the following information:

1. Fixture type per the fixture schedule.

2. Manufacturer of the fixture.

3. Physical dimensions of the fixture.

4. Manufacturer's standard finish.

5. Fixture output distribution curves with utilization parameters.

6. Ballast temperature rating, voltage, wattage, and manufacturer.

7. Material type and thickness of lens.

8. Accessories for installation such as swivel hangers.

9. Number and type of lamps.

C. Submit point-by-point lighting calculations for areas as required by the specifications or noted on the drawings. The calculations shall include lamp lumen depreciation, luminaire dirt depreciation, ballast factor, lamp tilt factors, and initial lamp lumens. The calculations shall indicate maintained horizontal footcandle levels at a height of thirty inches above the floor. In interior spaces the maximum point spacing shall be five feet on center; for outdoor applications the maximum point spacing shall be 30 feet on center unless otherwise noted on the drawings.

D. Lighting Control Submittal
- Shop Drawing Floorplan drawings at 1/8" scale showing
    - motion sensor layout as directed on plans
    - daylight sensor layout as directed on plans
    - identify enabled fixtures
    - identify power packs
    - identify power pack location for open ceiling areas (above panel in electrical room)
- symbol legend identifying symbols
- control sequences
- riser diagrams showing low voltage cabling requirements
- cutsheets all parts

1.05 PRODUCTS STORAGE AND HANDLING

Protect fixtures delivered to the job site from the entrance of water and dust at all times. Replace fixtures damaged by improper handling or storage.

1.06 COORDINATION

A. Catalog numbers shown on the light fixture schedule may not include or adequately represent all the options and accessories required herein, this contractor shall conform to these specifications in there entirety.

B. The various ceiling types are indicated on the architectural plans and in the room finish schedules. All lighting fixtures shall be coordinated with the architectural requirements to insure that the proper trim kit, and/or mounting accessory is provided with each fixture for the intended application. All trim kits and accessories shall be provided by Contractor whether or not they are specifically indicated by the manufacturer's catalog numbers on the lighting fixture schedule.

C. The locations of all lighting fixtures are approximate. Locations are subject to modifications at the time of installation in order to meet field conditions. Make such changes without extra charge; however, obtain approval from Engineer before any work is started which involves such modifications.

PART 2 - PRODUCTS

2.01 GENERAL

A. Provide all fixtures as called for in the schedules complete with lamps.

B. Provide manufacturer's standard finish unless otherwise noted.

C. Design all recessed or semi-recessed fixtures compatible with ceilings as installed. Provide frames where required for proper installation.

D. Furnish complete, all fixtures requiring end caps, mounting spacers or other necessary items whether the catalog number shown includes such items or not.

E. Conceal all fixture parts within the fixture construction.

F. Self locking lenses/latches are not acceptable.

G. Lighting fixture construction shall effectively eliminate light leaks between the frame, lens, housing and the interior finish surface. Furnish one lens hold-down clip at two foot centers.

H. Linear fluorescent lampholders shall be turn type, medium base, bi-pin, 660 watt, 600 volt.

I. Conceal all fixture parts, including emergency components, within the fixture construction.

J. Fixture construction shall allow parts and lens to be replaced without special tooling.

K. Fixture shall be provided with disconnecting means per NEC 2008.

2.02 FLUORESCENT LIGHTING FIXTURES

A. Grid troffers (lay-ins) must conform to the following:

1. Steel housing with T-bar clips.

2. Flush steel door frame with metal rotary action latches. Door latches or hinges from either side.

3. Diffusers (lens) shall be flat, UV stabilized, acrylic, # 12 pattern a with minimum thickness of 0.095 inches.

B. Wet location troffers must conform to the following:

1. Steel housing.

2. Flush aluminum door frame with metal rotary action latches.

a. Door latches or hinges from either side.

b. Neoprene gasketing between the lens, doorframe, housing and mounting surface.

3. Diffusers (lens) shall be flat, UV stabilized, acrylic, # 12 pattern with internal prisms and a minimum thickness of 0.125 inches.

C. Surface or stem mounted fixtures with a lens must conform to the following:

1. Steel housing.

2. Flush steel door frame with metal rotary action latches.

3. Diffusers (lens) shall be flat, UV stabilized, acrylic, # 12 pattern with a minimum thickness of 0.095 inches.

D. Strip lights must conform to the following:

1. Steel, heavy duty construction.

2. 4 foot lamp lengths. Tandem, double length units are acceptable.

3. Lampholder are secured by a screwed-on end plate.

4. 4 foot wireguards. Tandem units require 2.

2.03 COMPACT FLUORESCENT LIGHTING FIXTURES

A. Compact fluorescent downlights must conform to the following:

1. Galvanized steel frame with adjustable hangers.

2. Outdoor and wet area fixtures shall be lensed, gasketed and listed for wet locations. Only lenses which are flat shall be provided.

3. Electronic ballast if available.

2.04 FLUORESCENT BALLAST

A. Ballast which are located outdoors and in un-heated indoor areas shall be rated for reliable starting to 0 degree F.

B. All fluorescent ballasts must conform to the following:

1. Thermally protected Class P with auto restart circuitry.

2. Class “A” sound rating.

3. Power factor equal to or greater than 90.

4. Contain no PCBs or asbestos.

5. Certification Ballast Manufacturers (CBM) approved.

6. Provide Quick Disconnect (QD) option for quick disconnecting of all ballasts.

C. Linear fluorescent ballast must conform to the following:

1. Fixtures with three or more lamps shall have two ballast to accommodate dual level switching. Provide 1 or 2 lamp ballasts. Do not use 3 and 4 lamp ballasts. All ballast are to be installed within the fixture of the lamps served.

2. Electronic, instant-start and parallel-connected.

3. Enclosed in a metal enclosure.

4. Provided with integral, color coded leads.

5. Operate at a frequency of 20kHZ or greater with less than 3 % visible lamp flicker.

6. Input current total harmonic distortion (THD) shall not exceed 10%.

7. Lamp current crest factor (ratio of peak to RMS current) shall be 1.7 or less.

8. Operate from a 60 Hz input source of 120 or 277 volts and sustain variations of ± 10% (Voltage & Frequency) with no damage to the ballasts.

9. Provide transient immunity.

10. Allow remaining lamp(s) to maintain full light output if one or more lamps fail.

11. Tolerate sustained open circuit and short circuit output conditions without damage.

12. Tolerate operation of up to 65 deg. C. case temperature without damage.

13. Comply with the Federal Communication Commission Rules and Regulations for electromagnetic/radio frequency interference (EMI/RFI), for non-consumer equipment (class A).

D. Compact fluorescent ballast must conform to the following:

1. Operate at a frequency of 20kHZ or greater with less than 3 % visible lamp flicker.

2. Input current total harmonic distortion (THD) shall not exceed 20%.

3. Lamp current crest factor (ratio of peak to RMS current) shall be 1.7 or less.

4. Operate from a 60 Hz input source of 120 or 277 volts and sustain variations of ± 10% (Voltage & Frequency) with no damage to the ballasts.

5. Provide transient immunity.

6. Tolerate sustained open circuit and short circuit output conditions without damage.

7. Comply with the Federal Communication Commission Rules and Regulations for electromagnetic/radio frequency interference (EMI/RFI), for non-consumer equipment (class A).

2.05 FLUORESCENT POWER PACKS

A. Where indicated, furnish a system consisting of a sealed rechargeable maintenance-free nickel cadmium battery, battery charger, solid state inverter, test switch, and pilot light.

B. Fluorescent power packs must conform to the following:

1. Suitable for use in both normal and emergency operational modes.

2. Compatible with magnetic and electronic, instant start, 4 foot T8 lamps.

3. Produce 1000 to 1400 lumens initial emergency light output.

4. Operate one lamp in each fixture for a minimum of 90 minutes.

5. Steel housing, approx. 9 3/8” long, mounted concealed within the ballast channel.

6. Test switch and pilot light mounted on the ballast channel cover.

C. Label emergency lighting power packs, using a black marking pen, with the identity of the un-switched circuit.

2.06 EMERGENCY EXIT LIGHTS

A. Exit lights must conform to the following:

1. Furnish a system consisting of a sealed rechargeable maintenance-free nickel cadmium battery, battery charger, solid state inverter, test switch, and pilot light.

2. Meet or exceed the current NFPA requirements.

3. Light emitting diode (LED) type.

4. Die-cast aluminum.

5. Concealed and removable directional chevron knock-outs.

6. Stencil face.

7. Red letter color.

B. Label power packs, using a black marking pen, with the identity of the un-switched circuit.

2.07 METAL HALIDE FIXTURES

A. Metal halide downlights must conform to the following:

1. Galvanized steel frame with adjustable hangers.

2. Outdoor and wet area fixtures shall have flat tempered glass lens with gaskets.

3. Porcelain lamp socket of copper alloy with nickel plated screws, shell and center contact.

B. High and low bay light fixtures must conform to the following:

1. Die-cast aluminum housing.

2. Pendant splice box which allows the fixture housing to slide on.

3. Enclosed glass reflector for high bay

4. Enclosed acrylic reflector for low bay.

5. Porcelain, mogul lamp socket of copper alloy with nickel plated screws, shell and center contact.

6. Full wire-guard, 2 piece, to protect the lens and the reflector.

7. Safety chain.

8. Outdoor and wet area fixtures shall have gaskets.

C. Recessed squares (2 X 2, T-bar and non-T-bar mounted) must conform to the following:

1. Steel housing.

2. Earthquake clips.

3. Flush steel door frame with metal rotary action latches.

4. Flat tempered prismatic glass lens.

5. Porcelain lamp socket of copper alloy with nickel plated screws, shell and center contact.

2.08 HIGH INTENSITY DISCHARGE BALLAST

A. All metal halide ballasts must conform to the following:

1. Field replaceable without the need of special tools.

2. Core and coil, lag type, high reactance, autotransformer, high power factor ballasts for 50-150 watt ballast.

3. Core and coil, constant wattage, autotransformer, high power factor ballasts for 175-1500 watt ballast.

4. All ballast must conform with ‘ Energy Independence and Security Act 2007’.

B. Library ballast shall achieve an “A” sound rating.

2.09 LAMPS

A. Incandescent lamps shall be rated at 130 volt and have medium, screw, brass bases.

B. Linear and compact fluorescent lamps shall have a color rendering index (CRI) of 80 or greater and a color temperature of 3500 Kelvins.

C. Mogul base HID lamps are preferred over medium bases.

2.09 LED LIGHT FIXTURE

A. Power supplies must use Constant Current Reduction (CCR) for dimming.

B. LED lamps shall have a color rendering index (CRI) of 80 or greater and a color temperature of 3500 Kelvins for interior fixtures and 4100 Kelvins for exterior fixtures or as specified on drawings.

C. Lamp life of minimum of 60,000 hours or as specified.

D. Fixtures must be supplied with multiple power supplies for multi-level switching when specified.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Set luminaries true, free of light leaks, warps, dents or other irregularities. Provide the length of stems as required to hang all luminaries level and in the same plane. **VERIFY THE TYPE OF ALL CEILINGS BEFORE ORDERING FIXTURES, AND PROVIDE FIXTURES AND MOUNTINGS TO SUIT.** Mount all fixtures at a position and height to clear equipment, ductwork, piping, etc., in mechanical rooms, storage rooms, etc. Provide appurtenances for all light fixtures, which include stud supports, stems, mounting brackets, frames and plaster rings.

B. Support luminaries only from structural elements which are capable of carrying the total weight. Mount all lighting fixtures rigid with no rocking action. Provide 13/16” channels as needed.

C. The locations of all lighting fixtures as shown are approximate. It is understood that they are subject to such modifications as may be found necessary or desirable at the time of installation in order to meet field conditions. Make such changes without extra charge; however, obtain approval from Engineer before any work is started which involves such modifications.

D. Install ballasts and fixtures in accordance with the NEC and ANSI Standards.

E. Adjust all floodlights and spotlights to the satisfaction of the Engineer.

F. Connect all exit lighting fixtures to the nearest unswitched circuit or the nearest emergency circuit. Connect all emergency lighting fixtures to same circuit as normal area lighting in same area per NEC Article 700

G. Provide and install necessary hardware and accessories to maintain 1.5 inches clearance from combustible material on all light fixtures with ballast.

H. Provide all exit signs with required directional arrows, to indicate direction of egress travel.

I. Fixtures shall NOT be daisy chained together.

J. Troffer (lay-in) lighting fixtures shall be supported from the building structure by a minimum 12 gage galvanized carbon steel soft temper hanger wires. Install two hangers at diagonally opposite corners of each lay-in light fixture 2’x4’ or smaller and one hanger at each corner of each lay-in light fixture larger than 2’x4’. Supporting of light fixtures from ceiling system is not acceptable.

K. Each recessed lighting fixture shall be separately connected to a junction box with a flexible wiring method (i.e. daisy chaining from fixture to fixture is not allowed). The flexible conduit from the junction box to the fixture shall not lay on the ceiling as finally installed and shall not exceed 6 feet in length.

L. Boxes to which light fixtures or pendants are mounted shall NOT contain any conductors foreign to the operation of such light or pendant application. Removal of lights, pendants and cord drops to access other branch circuits is NOT acceptable.

M. Pendant mounted light fixtures shall be provided with ¾", threaded, rigid metal conduit, painted to match the fixture color.

N. Install flush mounted fixtures properly to eliminate light leakage between fixture frame and finished surface, provide gaskets as needed.

O. Install high or low bay light fixtures between the joist with the bottom of the reflector flush with the bottom cord of the joist. Engineer will direct if obstructions such as ducts, beams, etc. are permanently installed below the joist.

P. Locate mechanical, electrical, equipment, etc. room light fixtures to provide the best coverage and clear all obstructions such as ducts, piping, bracing and supports.

Q. Fluorescent High Bay are to be rigidly mounted with all thread, ¾" threaded rigid metal conduit and unistrut as required.

3.02 CLEAN UP

A. Leave all fixtures in clean condition, free of dirt and defects.

END OF SECTION

Williamson County – Request for Proposal (RFP)

SECTION 1 - DEFINITIONS

Addendum/Addenda – means any written or graphic instruments issued by the County prior to the consideration of Proposals which modify or interpret the Proposal Documents by additions, deletions, clarifications, or corrections.

Agreement/Ensuing Agreement(s) – means the Successful Respondent may be required by the County to sign an additional Agreement containing terms necessary to ensure compliance with the RFP and the Respondent's Proposal. Such Ensuing Agreement(s) shall contain the Proposal specifications, terms and conditions that are derived from the RFP.

Contract – means this RFP and the Proposal of the Successful Respondent shall become a Contract between the Successful Respondent and the County once the Successful Respondent's Proposal is properly accepted by the Williamson County Commissioners Court (sometimes referred to herein as the Commissioner's Court").

Commissioner's Court – means the Williamson County Commissioners Court.

County – means Williamson County, a political subdivision of the State of Texas.

Executive Summary – means the document submitted by Respondent that represents a concise summary of the contents of the Proposal. It does not include any information concerning costs.

Proposal Documents – means the Legal Notice, RFP including attachments, and any Addenda issued by the County prior to the consideration of any Proposals.

Proposal – means the complete, properly signed document, and ALL required forms and documentation listed in the proposal package which have been submitted in accordance with this RFP package. A Proposal submitted in accordance with this RFP is irrevocable during the specified time period for evaluation and acceptance of Proposals, unless a waiver is obtained from the Williamson County Purchasing Agent.

Respondent – means a person or entity who submits a Proposal in response to this RFP.

Request for Proposals (RFP) – means this document, together with the attachments thereto and any future Addenda issued by the County.

Successful Respondent– means the responsible Respondent who, in the County's sole opinion, submits the Proposal which is in the best interest of the County, taking into account factors identified

herein, and to whom the County intends to award the Contract.

SECTION 2 - RESPONSE FORMAT AND SUBMISSION

2.1 INTRODUCTION

Each Proposal submitted in response to this RFP should clearly reference the numbered sections of this RFP that require a response. Failure to arrange the Proposal as requested may result in the disqualification of the Proposal.

Though there is not a page limit for Proposals, to save natural resources including paper, and to allow the County staff to efficiently evaluate all submitted Proposals, the County requests that Proposals be orderly, concise, but comprehensive in providing the requested information. Conciseness and clarity of content are emphasized and encouraged. If mailed or delivered in person, please limit additional, non requested information.

Please provide your Proposal response using:

A. 8 ½" x 11" pages, inclusive of any cover letter or supporting materials.

B. The least amount of plastic/laminate or other non-recyclable binding materials.

C. Single-sided printing.

Vague and general Proposals will be considered non-responsive, and may, at the County's sole discretion, result in disqualification. Proposals must be legible and complete. Failure to provide the required information may result in the disqualification of the Proposal. All pages of the Proposal should be numbered and the Proposal should contain an organized, paginated table of contents corresponding to the sections and pages of the Proposal.

2.2 ORGANIZATION OF PROPOSAL CONTENTS AND TABLE OF CONTENTS

Each Proposal should be submitted with a table of contents that clearly identifies and denotes the location of all enclosures of the Proposal. The table of contents should follow the RFP's structure as much as is practical.

Each Proposal should be organized in the manner described below:

A. Transmittal Letter. Please see Section 2.3, Transmittal Letter, for more information.

B. Table of Contents.

C. Executive Summary. Please see Section 2.4, Executive Summary.

D. Proposal Response to Criteria. (Please see the sections in this RFP package that list the Specifications & Cost Proposal, Experience and Qualifications, References, and Implementation Strategy to respond to our criteria in a clear and concise manner)

E. Price Sheet.

F. References: Identification of three (3) references within the last four (4) years, for which the Respondent is providing, or has provided, the goods and/or services (public sector) of the type requested in this RFP. Include the name, position/title, and telephone number of a contact person at each entity.

G. Conflict of Interest Questionnaire.

H. Proposal Affidavit (Signature Page).

I. Attach your entities sample Contract, if applicable, for the County's review and consideration. This should include any additional terms or conditions. The County is not required to use the sample Contract submitted.

2.3 TRANSMITTAL LETTER

The Respondent should submit a Transmittal Letter that provides the following information:

A. Name and address of individual or business entity submitting the Proposal.

B. Respondent's type of business entity (i.e., Corporation, General Partnership, Limited Partnership, LLC, etc.). See Section 3.5, Signature of Respondent, for more information.

C. Place of incorporation or organization, if applicable.

D. Name and location of major offices and other facilities that relate to the Respondent performance under the terms of this RFP.

E. Name, physical address, email address, business and fax number of the Respondent's principal contact person regarding all contractual matters relating to this RFP.

F. The Respondent's Federal Employer Identification Number.

G. A commitment by the Respondent to provide the services required by the County;

H. A statement that the Proposal is valid for the time specified on page three (3), under the section named *Prices Good for*, of this Proposal packet. Any Proposal containing a term of less than the required amount, may at the County's sole discretion, be rejected as non-responsive.

I. If the Proposal being submitted will have an effect on air quality for the County (as it relates to any state, federal, or voluntary air quality standard), then the Respondent is encouraged to provide information in narrative indicating the anticipated air quality impact. See Section 4.40, Air Quality for more information.

The Transmittal Letter should be signed by a person legally authorized to bind the Respondent to the representations in the Transmittal Letter and the Proposal. In the case of a joint Proposal, each party must sign the Transmittal Letter.

2.4 EXECUTIVE SUMMARY

The Respondent should provide an Executive Summary of its Proposal that asserts that the Respondent is providing in its response all of the requirements of this RFP. The Executive Summary should not include any information concerning the cost of the Proposal, but instead must represent a full and concise summary of the contents of the Proposal. It is recommended the Executive Summary include the following information:

A. Identify any goods and/or services that are provided beyond those specifically requested. If the Respondent is providing services and/or goods that do not meet the specific requirements of this RFP, but in the opinion of the Respondent are equivalent or superior to those specifically requested, any such differences should be noted in the Executive Summary. However, the Respondent must realize that failure to provide the goods and/or services specifically required, at the County's sole discretion, may result in disqualification of the Proposal.

B. Indicate why the Respondent believes that it is the most qualified Respondent to provide the services described in this RFP. The Successful Respondent must demonstrate extensive experience and understanding of the intent of this project. The Respondent should describe in detail the current and historical experience the Respondent and its subcontractors have that would be relevant to completing the project. References must contain the name of key personnel and telephone numbers for each contact, as described in Section 3.14, References.

C. Briefly state why the Respondent believes its proposed goods and/or services best meet the County's needs and RFP requirements, and the Respondent also should concisely describe any additional features, aspects, or advantages of its goods and/or services in any relevant area not covered elsewhere in its Proposal.

2.5 CONFLICT OF INTEREST

No public official shall have interest in a contract, in accordance with Vernon's Texas Codes Annotated, Local Government Code, Title 5, Subtitle C, Chapter 171, as amended.

As of January 1, 2006, all Respondents are responsible for complying with Local Government Code, Title 5, Subtitle C, Chapter 176. Additional information may be obtained from the County's website at the following link:

http://www.wilco.org/CountyDepartments/Purchasing/ConflictofInterestDisclosure/tabid/689/language/en-US/Default.aspx

Each Respondent must disclose any existing or potential conflict of interest relative to the performance of the requirements of this RFP. **Examples of potential conflicts of interest may include an existing business or personal relationship between the Respondent, its principal, or any affiliate or subcontractor with the County or any other entity or person involved in any way with the project that is subject to this RFP**. Similarly, any personal or business relationship between the Respondent, the principals, or any affiliate or subcontractor with any employee, or official of the County or its suppliers must be disclosed. Any such relationship that might be perceived or represented as a conflict must be disclosed. Failure to disclose any such relationship or reveal personal relationships with the County employees or officials may be cause for termination.

The County will decide if an actual or perceived conflict should result in Proposal disqualification.

By submitting a Proposal in response to this RFP, all Respondents affirm they have not given, nor intend to give, at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a the County public servant or any employee, official or representative of same, in connection with this procurement.

Each Respondent must provide a Conflict of Interest Statement with their Proposal Package. Package may be deemed incomplete without this form.

2.6 CERTIFICATE OF INTERESTED PARTIES – FORM 1295

As of January 1, 2016, all Respondents are responsible for complying with the Texas Government Code, Section 2252.908. The law states that the County may not enter into certain contracts with a Respondent unless the Respondent submits a disclosure of interested parties to the County at the time the Respondent submits the signed contract. The law applies only to a contract of the County on or after January 1, 2016 that either:

A. Requires an action or vote by the Commissioners Court before the contract may be signed (all contracts that fall under the jurisdiction of the Commissioners Court approval, such as contracts resulting from an Initiation for Bid (IFB), RFP, Request for Qualifications (RFQ), etc., excluding,

but not limited to, certain Juvenile Service contracts, contracts funded with Sheriff's seized fun monies, etc.); or

B. Has a value of at least $1,000,000.

By January 1, 2016, the Texas Ethics Commission will make available on its website, a new filing application that must be used to file Form 1295. Information regarding how to use the filing application is available on the Texas Ethics Commission website at the following link:

https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

A Respondent must:

A. Use the online application to process the required information on Form 1295.

B. Print a copy of the form which will contain a unique certification number.

C. An authorized agent of the Respondent must sign the printed copy of the form.

D. Have the form notarized.

E. File the completed Form 1295 and certification of filing (scanning and emailing form is sufficient) with Williamson County Purchasing Agent at the time the signed Contract is submitted for approval.

After the Commissioners Court award of the contract, the County shall notify the Texas Ethics Commission, using the Texas Ethics Commission's filing application, of the receipt of the filed Form 1295 and certification of filing not later than the 30th day after the date the contract binds all parties to the contract. The Texas Ethics Commission will post the completed Form 1295 to its website within seven business days after receiving notice from the County.

2.7 PROPOSAL SUBMITTAL DEADLINE

The Proposal is due no later than the submittal date and time set forth in the Public Announcement and General Information listed in this RFP package. Contents of each Proposal shall be submitted in accordance with this RFP.

2.8 ETHICS

The Respondent shall not accept or offer gifts or anything of value, nor enter into any business arrangement with any employee, official or agent of the County.

2.9 DELIVERY OF PROPOSALS

The County uses BidSync to distribute and receive bids and Proposals. It is preferred that Proposals be submitted electronically through BidSync; however, Respondents can submit a hard copy.

Refer to www.bidsync.com for further information on how to submit electronically.

If mailed or delivered in person, Proposal and Proposal Addenda are to be delivered in sealed envelope on or before the submittal deadline, as noted in the Public Announcement and General Information listed in this RFP package, to:

Williamson County Purchasing Department

Attn: **Proposal Name and Number**
901 South Austin Avenue
Georgetown, Texas 78626

Also, all Respondents should list their Name and Address, and the Date of the Proposal opening on the outside of the box or envelope and note "Sealed Proposal Enclosed." Williamson County will not accept any Proposals after the submittal deadline, and shall return such Proposals unopened to the Respondent. The County will not accept any responsibility for Proposals being delivered by third party carriers.

Proposals will be opened publicly; however, in a manner to avoid public disclosure of contents, only names of Respondents will be read aloud: no pricing will be announced at the opening.

SECTION 3 - INSTRUCTIONS AND GENERAL REQUIREMENTS

3.1 INSTRUCTIONS

Read this document carefully, and follow all instructions and requirements. All Respondents are responsible for fulfilling all requirements and specifications. Be sure to have a clear understanding of this RFP.

General requirements apply to all advertised RFPs; however, these may be superseded, in whole or in part, by the proposal specifications, Addenda and modifications issued as a part of this RFP. Be sure your Proposal package is complete.

3.2 AMBIGUITY, CONFLICT, OR OTHER ERRORS IN THIS RFP

If a Respondent discovers any ambiguity, conflict, discrepancy, omission or other error in this RFP, the Respondent shall immediately notify the County Purchasing Department of such error in writing and request modification or clarification of the document.

Modifications will be made by issuing Addenda. If the Respondent fails to notify the County prior to the date and time fixed for submission of Proposals of an error or ambiguity in the RFP known to the Respondent, or an error or ambiguity that reasonably should have been known to the Respondent, then the Respondent shall be deemed to have waived the error or ambiguity or its later resolution.

The County may also modify the RFP, no later than forty-eight (48) hours prior to the date and time fixed for submission of Proposals, by issuance of an Addendum. All Addenda will be numbered consecutively, beginning with one (1).

3.3 NOTIFICATION OF MOST CURRENT ADDRESS

All Respondents in receipt of this RFP shall notify the Williamson County Purchasing Department of any address changes, contact person changes, and/or telephone number changes no later than forty-eight (48) hours prior to the date and time fixed for submission of Proposals.

3.4 SIGNATURE OF RESPONDENT

A Transmittal Letter, which shall be considered an integral part of the Proposal as stated in Section 2.3, Transmittal Letter, shall be signed by an individual who is authorized to bind the Respondent contractually.

A. If the Respondent is a Corporation or Limited Liability Company, the legal name of the Corporation or Limited Liability Company shall be provided together with the signature of the officer or officers authorized to sign on behalf of such entity.

B. If the Respondent is a General Partnership, the true name of the firm shall be provided with the signature of each partner authorized to sign.

C. If the Respondent is a Limited Partnership, the name of the Limited Partner's General Partner shall be provided with the signature of the officer authorized to sign on behalf of the General Partner.

D. If the Respondent is a Sole Proprietor(s) (individual), each Sole Proprietor(s) shall sign.

E. If signature is by an agent, other than the Sole Proprietor(s) or an officer of a Corporation, Limited

Liability Company, General Partner or a member of a General Partnership, a power of attorney equivalent document must be submitted to the Williamson County Purchasing Department.

3.5 ASSUMED BUSINESS NAME

If the Respondent operates business under an Assumed Business Name, the Respondent must have file with the Williamson County Clerk a current Assumed Name Certificate and provide a file marked copy of same prior to contract award.

3.6 ECONOMY OF PRESENTATION

Proposals should not contain promotional or display materials, except as they may directly answer in whole or in part questions contained in the RFP. Such exhibits shall be clearly marked with the applicable reference number of the question in the RFP. Proposals must address the technical requirements as specified in the RFP. All questions posed by the RFP must be answered concisely and clearly. Proposals that do not address each criterion may be, at the sole discretion of the County, rejected and not considered.

3.7 PROPOSAL OBLIGATION

The contents of the RFP, Proposal, and any clarification thereof submitted by the Successful Respondent shall become part of the contractual obligation and incorporated by reference into the Contract and any Ensuing Agreement(s).

3.8 COMPLIANCE WITH RFP SPECIFICATIONS

It is intended that this RFP describe the requirements and the Proposal format in sufficient detail to secure comparable Proposal. Failure to comply with all provisions of the RFP may, at the sole discretion of the County, result in disqualification.

3.9 EVALUATION

The County reserves the right to use all pertinent information (also learned from sources other than disclosed in the RFP process) that might affect the County's judgment as to the appropriateness of award to the best evaluated Respondent. This information may be appended to the Proposal evaluation process results. Information on a Respondent from reliable sources, and not within the Respondent Proposal, may also be noted and made part of the evaluation file. The County shall have sole discretion for determining the reliability of the source. The County reserves the right to conduct written and/or oral discussions/interviews after the Proposal opening. The purpose of such discussions/interviews is to provide clarification and/or additional information to make an award that is in the best interest of the County.

3.10 WITHDRAWAL OF PROPOSAL

The Respondent may withdraw its Proposal by submitting a written request with the company letterhead and the signature of an authorized individual, as described in Section 3.4, Signature of Respondent, to the Williamson County Purchasing Department any time prior to the submission deadline.

The Respondent may submit a new Proposal prior to the deadline. Alterations of the Proposal in any manner will not be considered if submitted after the deadline. Withdrawal of a Proposal after the deadline will be subject to written approval of the Williamson County Purchasing Agent.

3.11 RESPONSIBILITY

It is expected that a Respondent will be able to affirmatively demonstrate responsibility. A prospective Respondent should be able to meet the following requirements:

A. Have adequate financial resources, or the ability to obtain such resources as required;
B. Be able to comply with the required or proposed delivery schedule;
C. Have a satisfactory record of performance that can be determined thru references provided; and
D. Be otherwise qualified and eligible to receive an award.

The County may request representation and other information sufficient to determine the Respondent ability to meet these minimum standards listed above.

3.12 PURCHASE ORDERS

If required by the Williamson County Purchasing Department, a purchase order(s) may be generated to the Successful Respondent for goods and/or services. If a purchase order is issued, the purchase order number must appear on all itemized invoices and/or requests for payment.

3.13 SILENCE OF SPECIFICATIONS

The apparent silence of any RFP specifications as to any detail or to the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best practices are to prevail. All interpretations of these specifications shall be made on the basis of this statement.

3.14 REFERENCES

Respondents shall furnish a list of contracts where similar responsibilities and goods and/or services have been required and/or performed for the past five (5) years, to include names, titles, phone numbers and email addresses of reference contacts, contract numbers and dates of performance.

Also, Respondents shall include a list of any contracts that have been cancelled or terminated within the last five (5) years, along with an explanation of the cancellation and the names, email address and phone number of a reference person with that institution.

The County may contact some or all of the references in order to determine the Respondent performance record on work similar to that described in this RFP. The County reserves the right to contact references other than those provided in the response and to use the information gained from them in the evaluation process.

References should be provided in accordance with this RFP. Proposal may not be deemed complete without the inclusion of requested references.

SECTION 4 - TERMS AND CONDITIONS

4.1 VENUE AND GOVERNING LAW

The Respondent hereby agrees and acknowledges that venue and jurisdiction of any suit, right, or cause of action arising out of or in connection with this RFP, the Contract and any Ensuing Agreement(s), shall lie exclusively in either Williamson County, Texas or in the Austin Division of the Western Federal District of Texas, and the parties hereto expressly consent and submit to such jurisdiction. Furthermore, except to the extent that this RFP, the Contract and any Ensuing Agreement(s) is governed by the laws of the United States, this RFP, the Contract and any Ensuing Agreement(s) shall be governed by and construed in accordance with the laws of the State of Texas, excluding, however, its choice of law rules.

4.2 INCORPORATION BY REFERENCE AND PRECEDENCE

A. The Contract shall be derived from the RFP and its Addenda (if applicable), and the Respondent Proposal. In the event of a dispute under the Contract, applicable documents will be referred to for the purpose of clarification or for additional detail in the following order of precedence:

   1. The RFP and its Addenda (if applicable); and

   2. The Respondent's Proposal.

B. In the event the County requires that an Ensuing Agreement be executed following award and a dispute arises between the terms and conditions of the Ensuing Agreement, the RFP and its Addenda (if applicable), and the Respondent's Proposal, applicable documents will be referred to for the purpose of clarification or for additional detail in the following order of precedence:

   1. The terms and conditions of the Ensuing Agreement;

   2. The RFP and its Addenda; and

   3. The Respondent's Proposal.

4.3 OWNERSHIP OF PROPOSAL

Each Proposal shall become the property of the County upon submittal and will not be returned to Respondents unless received after the submittal deadline.

4.4 DISQUALIFICATION OF RESPONDENT

Upon signing and submittal of the Proposal, a Respondent offering to sell supplies, materials, services, or equipment to the County, certifies that the Respondent has not violated the antitrust laws of the State of Texas codified in Business & Commerce Code, Section 15.01, or the Federal Antitrust Laws, and has not communicated directly or indirectly the offer made to any competitor or any other person engaged such line of business. Any or all Proposals may be rejected if the County believes that collusion exists among the Respondents.

4.5 FUNDING

The County intends to budget and make sufficient funds available and authorize funds for expenditure to finance the costs of the Contract. All Respondents understand and agree that the County's payment of

amounts under the Contract shall be contingent on the County receiving appropriations or other expenditure authority sufficient to allow the County, in the exercise of reasonable administrative discretion, to make payments under this Contract.

4.6 ASSIGNMENT, SUCCESSORS AND ASSIGNS

The Successful Respondent may not assign, sell, or otherwise transfer the Contract or any other rights or interests obtained under the Contract without written permission of the Williamson County the Commissioners Court. The Contract and any Ensuing Agreement(s) shall be binding upon and inure to the benefit of the contracting parties hereto and their respective successors and permitted assigns.

4.7 IMPLIED REQUIREMENTS

Products or services not specifically described or required in the RFP, but are necessary to provide the functional capabilities described by the Respondent, shall be implied and deemed to be included in the Proposal.

4.8 TERMINATION

A. **Termination for Cause:** The County reserves the right to terminate the Contract and/or any Ensuing Agreement(s) for default if the Successful Respondent breaches any of the Proposal specifications, terms and conditions, including warranties of the Respondent, if any, or if the Successful Respondent becomes insolvent or commits acts of bankruptcy. Such right of termination is in addition to and not in lieu of any other remedies the County may have at law or equity or as may otherwise be provided hereunder. Default may be construed as, but not limited to, failure to deliver the proper goods and/or services within the proper amount of time, and/or to properly perform any and all other requirements to the County's satisfaction, and/or to meet all other obligations and requirements.

B. **Termination for Convenience:** The County may terminate the Contract and/or any Ensuing Agreement(s) for convenience and without cause or further liability, upon no less than thirty (30) calendar days written notice to the Successful Respondent. The County reserves the right to extend this period if it is in the best interest of the County. In the event the County exercises its right to terminate without cause, it is understood and agreed that only the amounts due to the Successful Respondent for goods, commodities and/or services provided and expenses incurred to and including the date of termination, will be due and payable. No penalty will be assessed for the County's termination for convenience.

4.9 NON-PERFORMANCE

It is the objective of the County to obtain complete and satisfactory performance of the requirements set forth herein. In addition to any other remedies available at law, in equity or that may be set out herein, failure to perform may result in a deduction of payment equal to the amount of the goods and/or services that were not provided and/or performed to the County's satisfaction.

In the event of such non-performance, the County shall have the right, but shall not be obligated, to complete the services itself or by others and/or purchase the goods from other sources. If the County elects to acquire the goods or perform the services itself or by others, pursuant to the foregoing, the Successful Respondent shall reimburse the County, within ten (10) calendar days of demand, for all costs incurred by the County (including, without limitation, applicable, general, and administrative expenses, and field overhead, and the cost of necessary equipment, materials, and field labor) in correcting the nonperformance which the Successful Respondent fails to meet pursuant to the requirements set out herein. In the event the Successful Respondent refuses to reimburse the County as set out in this provision, the County shall have the right to deduct such reimbursement amounts from any amounts that may be then owing or that may become owing in the future to the Successful Respondent.

4.10 PROPRIETARY INFORMATION AND THE TEXAS PUBLIC INFORMATION ACT

All material submitted to the County shall become public property and subject to the Texas Public Information Act upon receipt. If a Respondent does not desire proprietary information in the Proposal to be disclosed, each page must be clearly identified and marked proprietary at time of submittal or, more preferably, all proprietary information may be placed in a folder or appendix and be clearly identified and marked as being proprietary. Failure to clearly identify and mark information as being proprietary as set forth under this provision will result in all unmarked information being deemed non-proprietary and available to the public. For all information that has not been clearly identified and marked as proprietary by the Respondent, the County may choose to place such information on the County's website and/or a similar public database without obtaining any type of prior consent from the Respondent.

The County will, to the extent allowed by law, endeavor to protect from public disclosure the information that has been identified and marked as proprietary. The final decision as to what information must be disclosed, however, lies with the Texas Attorney General.

To the extent, if any, that any provision in this RFP or in the Respondent's Proposal is in conflict with Texas Government Code, Chapter 552, as amended (the "Public Information Act"), the same shall be of no force or effect. Furthermore, it is expressly understood, and agreed, that the County, and its officers and employees, may request advice, decisions and opinions of the Attorney General of the State of Texas in regard to the application of the Public Information Act to any items or data furnished to the County as to whether or not the same are available to the public. It is further understood that that the County, and its officers and employees, shall have the right to rely on the advice, decisions and opinions of the Attorney General, and that the County, its officers and employees shall have no liability or obligation to any party hereto for the disclosure to the public, or to any person or persons, of any items or data furnished to the County by a party hereto, in reliance of any advice, decision or opinion of the Attorney General of the State of Texas.

4.11 RIGHT TO AUDIT

The Successful Respondent agrees that the County or its duly authorized representatives shall, until the expiration of three (3) years after termination or expiration of the services to be performed, have access to and the right to examine and photocopy any and all books, documents, papers and records of the Successful Respondent, which are directly pertinent to the services to be performed or goods to delivered for the purposes of making audits, examinations, excerpts and transcriptions. The Successful Respondent agrees that the County shall have access during normal working hours to all necessary facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. The County shall give the Successful Respondent reasonable advance notice of intended audits.

4.12 TESTING AND INSPECTIONS

The County reserves the right to inspect and test equipment, supplies, materials and goods for quality and compliance with this RFP, and ability to meet the needs of the user. Demonstration units must be available for review. Should the goods or services fail to meet requirements and/or be unavailable for evaluation, the County can deem the Respondent to be in breach and terminate the Contract and/or any Ensuing Agreement(s).

4.13 PROPOSAL PREPARATION COSTS

The cost of developing Proposals is the sole responsibility of the Respondents and shall not be charged to the County. There is no expressed or implied obligation for the County to reimburse the Respondents for any expense incurred in preparing a Proposal in response to this RFP and the County will not reimburse the Respondents for such expenses.

4.14 INDEMNIFICATION

The Successful Respondent shall indemnify, defend and save harmless, the County, its officials, employees, agents and agent's employees from, and against, all claims, liability, and expenses including reasonable attorneys' fees, arising from activities of the Respondent, its agents, servants or employees, performed hereunder that result from the negligent act, error, or omission of the Respondent or any of the Respondent's agents, servants or employees, as well as all claims of loss or damage to the Respondent's and the County's property, equipment, and/or supplies.

Furthermore, the County, its officials, employees, agents and agents' employees shall not be liable for damages to the Successful Respondent arising from any act of any third party, including, but not limited to, theft. The Successful Respondent further agrees to indemnify, defend and save harmless, the County from its officials, employee, agents and agents' employees against all claims of whatever nature arising from any accident, injury, or damage whatsoever, caused to any person, or the property of any person, occurring in relation to the Successful Respondent's performance of any services requested hereunder during the term of the Contract and/or any Ensuing Agreement(s).

The Successful Respondent shall timely report all claims, demands, suits, actions, proceedings, liens or judgements to the County and shall, upon the receipt of any claim, demand, suit, action, proceeding, lien or judgement, not later than the fifteenth (15^{th}) day of each month; provide the County with a written report on each such matter, setting forth the status of each matter, the schedule or planned proceedings with respect to each matter and the cooperation or assistance, if any, of the County required by the Successful Respondent in the defense of each matter. The Successful Respondent's duty to defend, indemnify and hold the County harmless shall be absolute. It shall not abate or end by reason of the expiration or termination of the Contract and/or any Ensuing Agreement(s), unless otherwise agreed by the County in writing. The provisions of this section shall survive the termination of the Contract and shall remain in full force and effect with respect to all such matters no matter when they arise.

In the event of any dispute between the parties, as to whether a claim, demand, suit, action, proceeding, lien or judgement, that appears to have been caused by or appears to have arisen out of or in connection with acts or omissions of the County, the Respondent shall nevertheless fully defend such claim, demand, suit or action, proceeding, lien or judgement, until and unless there is a determination by a court of competent jurisdiction that the acts and omissions of the Respondent are not an issue in the matter.

The Successful Respondent's indemnification shall cover, and the Successful Respondent agrees to, indemnify the County, in the event the County is found to have been negligent for having selected the Successful Respondent to perform the work described in this request. The provision by the Successful Respondent of insurance shall not limit the liability of the Successful Respondent under the Contract and/or any Ensuing Agreement(s).

4.15 WAIVER OF SUBROGATION

The Successful Respondent and the Successful Respondent's insurance carrier waive any and all rights whatsoever with regard to subrogation against the County as an indirect party to any suit arising out of personal or property damages resulting from the Respondent's performance under this Contract and any Ensuing Agreement(s).

4.16 RELATIONSHIP OF THE PARTIES

The Successful Respondent shall be an independent contractor and shall assume all of the rights, obligations, liabilities, applicable to it as such independent contractor hereunder and any provisions herein which may appear to give the County the right to direct the Successful Respondent as to details of doing work herein covered, or to exercise a measure of control over the work, shall be deemed to mean that the Successful Respondent shall follow the desires of the County in the results of the work only. The County shall not retain or have the right to control the Successful Respondent's means, methods or

details pertaining to the Successful Respondent's performance of the work. The County and the Successful Respondent hereby agree and declare that the Successful Respondent is an independent contractor and as such meets the qualifications of an "Independent Contractor" under Texas Workers Compensation Act, Texas Labor Code, Section 406.141, that the Successful Respondent is not an employee of the County, and that the Successful Respondent and its employees, agents and subcontractors shall not be entitled to workers compensation coverage or any other type of insurance coverage held by the County.

4.17 SOLE PROVIDER

The Successful Respondent agrees and acknowledges that it shall not be considered a sole provider of the goods and/or services described herein and that the County may contract with other providers of such goods and/or services if the County deems, at its sole discretion, that multiple providers of the same goods and/or services will serve the best interest of the County.

4.18 FORCE MAJEURE

If the party obligated to perform is prevented from performance by an act of war, order of legal authority, act of God, or other unavoidable cause not attributable to the fault or negligence of said party, the other party shall grant such party relief from the performance. The burden of proof for the need of such relief shall rest upon the party obligated to perform. To obtain release based on force majeure, the party obligated to perform shall file a written request with the other party.

4.19 SEVERABILITY

If any provision of this RFP, the Contract or any Ensuing Agreement(s) shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision thereof, but rather the entire RFP, Contract or any Ensuing Agreement (s) will be construed as if not containing the particular invalid or unenforceable provision or provisions, and the rights and obligation of the parties shall be construed and enforced in accordance therewith. The parties acknowledge that if any provision of this RFP, the Contract or any Ensuing Agreement(s) is determined to be invalid or unenforceable, it is the desire and intention of each that such provision be reformed and construed in such a manner that it will, to the maximum extent practicable, give effect to the intent of this RFP, the Contract or any Ensuing Agreement(s) and be deemed to be validated and enforceable.

4.20 EQUAL OPPORTUNITY

Neither party shall discriminate against any employee or applicant for employment because of race, color, sex, religion or national origin.

4.21 NOTICE

Any notice to be given shall be in writing and may be distributed by personal delivery, or by registered or certified mail, return receipt requested, addressed to the proper party, at the following address:

The County: Williamson County Purchasing Department
Attn: Purchasing Agent
901 South Austin Avenue
Georgetown, Texas 78626

The Respondent: Address set out in Respondent's Transmittal Letter

Notices given in accordance with this provision shall be effective upon (1) receipt by the party to which notice is given, or (2) on the third (3rd) calendar day following mailing, whichever occurs first.

4.22 SALES AND USE TAX EXEMPTION

The County is a body, corporate and politic, under the laws of the State of Texas and claims exemption from sales and use taxes under Texas Tax Code, Section 151.309, as amended, and the services and/or goods subject hereof are being secured for use by the County.

4.23 COMPLIANCE WITH LAWS

The County and the Successful Respondent shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of the Contract and any Ensuing Agreement(s), including, without limitation, Workers' Compensation laws, salary and wage statutes and regulations, licensing laws and regulations. When required, the Successful Respondent shall furnish the County with certification of compliance with said laws, statues, ordinances, rules, regulations, orders, and decrees above specified.

4.24 INCORPORATION OF EXHIBITS, APPENDICES AND ATTACHMENTS

All of the Exhibits, Appendices and Attachments referred to herein are incorporated by reference as if set forth verbatim herein. Any conflicting terms in the Contract documents will be resolved at the sole discretion of the Commissioners Court.

4.25 NO WAIVER OF IMMUNITIES

Nothing herein shall be deemed to waive, modify or amend any legal defense available at law or in equity to the County, its past or present officers, employees, or agents, nor to create any legal rights or claim on behalf of any third party. The County does not waive, modify, or alter to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.

4.26 NO WAIVER

The failure or delay of any party to enforce at any time or any period of time any of the provisions of this RFP, the Contract or any Ensuing Agreement(s) shall not constitute a present or future waiver of such provisions nor the right of either party to enforce each and every provision. Furthermore, no term or provision hereof shall be deemed waived and no breach excused unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented. Any consent by any party to, or waiver of, a breach by the other, whether expressed or implied, shall not constitute a consent to, waiver of or excuse for any other, different or subsequent breach.

4.27 CURRENT REVENUES

The obligations of the parties under the Contract and any Ensuing Agreement(s) do not constitute a general obligation or indebtedness of the County for which the County is obligated to levy, pledge, or collect any of taxation. It is understood and agreed that the County shall have the right to terminate the Contract and any Ensuing Agreement(s) at the end of any the County fiscal year if the governing body of the County does not appropriate sufficient funds as determined by the County's budget for the fiscal year in question. The County may effect such termination by giving written notice of termination to t Successful Respondent at the end of its then-current fiscal year.

4.28 BINDING EFFECT

This Contract and any Ensuing Agreement(s) shall be binding upon and inure to the benefit of the parties and their respective permitted assigns and successors.

4.29 ASSIGNMENT

The Successful Respondent's interest and duties hereunder may not be assigned or delegated to a third party without the express written consent of the County.

4.30 SAFETY

The Successful Respondent is responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with any services to be provided hereunder. The safety program shall comply with all applicable requirements of the current federal Occupational Safety and Health Act and all other applicable federal, state and local laws and regulations.

4.31 GENERAL OBLIGATIONS AND RELIANCE

The Successful Respondent shall perform all services and/or provide all goods, as well as those reasonably inferable and necessary for completion and provision of services and/or goods required hereunder. The Successful Respondent shall keep the County informed of the progress and quality the services. The Successful Respondent agrees and acknowledges that the County is relying on the Successful Respondent's represented expertise and ability to provide the goods and/or services described herein. The Successful Respondent agrees to use its best efforts, skill, judgment, and abilities to perform its obligations in accordance with the highest standards used in the profession and to further the interests of the County in accordance with the County's requirements and procedures. The Successful Respondent's duties, as set forth herein, shall at no time be in any way diminished by reason of any approval by the County, nor shall the Successful Respondent be released from any liability reason of such approval by the County, it being understood that the County at all times is ultimately relying upon the Successful Respondent's skill and knowledge in performing the services and providing any goods required hereunder.

4.32 CONTRACTUAL DEVELOPMENT

The Commissioners Court may award the Contract on the basis of the initial Proposals received, without any further or additional discussions. Therefore, each initial Proposal should contain the Respondent best terms and offer. The contents of the RFP and the selected Proposal will become an integral part of the Contract, but may be modified, at Williamson County's sole discretion, by provisions of an Ensuing Agreement. Therefore, the Respondent must agree to inclusion in an Ensuing Agreement of t Proposal specifications, terms and conditions of this RFP. Williamson County may, at its discretion, opt to conduct further discussions with responsible offerors and request the highest ranked firm's Best and Final Offer (BAFO).

4.33 ENTIRE AGREEMENT

The Contract and any Ensuing Agreement(s) shall supersede all prior Agreements, written or oral between the Successful Respondent and the County and shall constitute the entire Agreement and understanding between the parties with respect to the services and/or goods to be provided. Each of the provisions herein shall be binding upon the parties and may not be waived, modified, amended or altered, except by writing signed by the Successful Respondent and the County.

4.34 SURVIVABILITY

All applicable agreements that were entered into between the Successful Respondent and the County, under the terms and conditions of the Contract and/or any Ensuing Agreement(s), shall survive the expiration or termination thereof for ninety (90) days unless a new contract has been awarded.

The County may exercise, by written notice to the Successful Respondent no later than ten (10) calendar days of the Contract expiration, this clause for emergency cases only.

4.35 PAYMENT

The County's payment for goods and services shall be governed by the Texas Government Code, Chapter 2251. An invoice shall be deemed overdue the thirty-first (31st) day after the later of the following:

A. The date the County receives the goods under the Contract;
B. The date the performance of the service under the Contract is completed; or
C. The date the Williamson County Auditor receives an invoice for the goods or services.

Interest charges for any overdue payments shall be paid by the County in accordance with Texas Government Code, Section 2251.025. More specifically, the rate of interest that shall accrue on a late payment is the rate in effect on September 1 of the County's fiscal year in which the payment becomes due. The said rate in effect on September 1 shall be equal to the sum of one (1) percent and the prime rate published in the Wall Street Journal on the first (1st) day of July of the preceding fiscal year that does not fall on a Saturday or Sunday.

In the event that an error appears in an invoice submitted by the Successful Respondent, the County shall notify the Successful Respondent of the error not later than the twenty-first (21st) day after the date the County receives the invoice. If the error is resolved in favor of the Successful Respondent, the Successful Respondent shall be entitled to receive interest on the unpaid balance of the invoice submitted by the Successful Respondent beginning on the date that the payment for the invoice became overdue. If the error is resolved in favor of the County, the Successful Respondent shall submit a corrected invoice that must be paid in accordance within the time set forth above. The unpaid balance accrues interest as provided by the Texas Government Code, Chapter 2251, if the corrected invoice is not paid by the appropriate date.

As a minimum, invoices shall include:

A. Name, address, and telephone number of the Successful Respondent and similar information in the event the payment is to be made to a different address.

B. The County Contract, Purchase Order.

C. Identification of items or service as outlined in the Contract.

D. Quantity or quantities, applicable unit prices, total prices and total amount.

E. Any additional payment information which may be called for by the Contract.

Payment inquiries should be directed to the following address:

Williamson County Auditor's Office, Accounts Payable Department
Email: accountspayable@wilco.org
Phone: 512-943-1500

4.36 CONTRACTUAL FORMATION AND ENSUING AGREEMENT

The RFP and the Respondent's Proposal, when properly accepted by the Commissioners Court, shall constitute a Contract equally binding between the Successful Respondent and the County. The Successful Respondent may be required by Williamson County to sign an additional Agreement containing terms necessary to ensure compliance with the RFP and Respondent's Proposal.

4.37 LEGAL LIABILITY INFORMATION

The Successful Respondent shall disclose all legal liability information by listing any pending litigation anticipated litigation that your firm is involved in including, but not limited to, potential or actual legal matters with private parties and any local, state, federal or international governmental entities. The County reserves the right to consider legal liability information in the recommendation of any proposed contract to the Commissioners Court.

4.38 CONFIDENTIALITY

Respondent expressly agrees that it will not use any direct or incidental confidential information that may be obtained while working in a governmental setting for its own benefit, and agrees that it will not access unauthorized areas or confidential information and it will not disclose any information to unauthorized third parties, and will take care to guard the security of the information at all times.

4.39 INCLEMENT WEATHER

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a Proposal submission deadline, the Proposal closing will automatically be postponed until the next business day the County is open. If inclement weather conditions or any other unforeseen event causes delays in carrier service operations, the County may issue an Addendum to all known Respondents interested in the project to extend the deadline. It will be the responsibility of the Respondent to notify the County of their interest in the project if these conditions are impacting their ability to turn in a submission within the stated deadline. The County reserves the right to make the final judgement call to extend any deadline.

4.40 AIR QUALITY

In determining the overall best Proposal, the County may, to the extent applicable, exercise the option granted to local governments under the Texas Local Government Code, Section 271.907.

This option allows the County to evaluate Proposals and give preference to goods and/or services of Respondent that demonstrates that the Respondent meets or exceeds any and all state or federal environmental standards, including voluntary standards, relating to air quality. If the Proposal being submitted will have an effect on air quality for the County (as it relates to any state, federal, or voluntary air quality standard), then the Respondent is encouraged to provide information in narrative indicating the anticipated air quality impact. All Respondents are expected to meet all mandated state and federal air quality standards.

4.41 COOPERATIVE PURCHASING PROGRAM

During the term of the Contract resulting from this RFP, the County would like to afford the same prices, terms and conditions to other political subdivisions or public entities. Another entity's participation in the Contract resulting from this RFP is subject to a properly authorized Purchasing Cooperative Inter-local Agreement (ILA) with the County. Any liability created by purchase orders issued against the Contract shall be the sole responsibility of the governmental agency placing the order.

4.42 PREVAILING WAGE RATES

To the extent this procurement is for the construction of a public work, including a building, highway, road, excavation, and repair work or other project development or improvement, paid for in whole or in part from public funds, without regard to whether the work is done under public supervision or direction, Texas Government Code, Chapter 2258, shall apply and the contractor shall pay not less than the wage scale of the various classes of labor as shown on the "Prevailing Wage Schedule" provided by the County. Pursuant to Texas Government Code, Section 2258.022(a)(2), the County has determined the general prevailing rate of the "Prevailing Wage Schedule" in the locality in which the public work is to be performed for each craft or type of worker needed to execute the contract and the prevailing rate for legal holiday and overtime work by using the prevailing wage rate as determined by the United States

Department of Labor in accordance with the United States Code, Section 276a (Davis-Bacon Act).

The specified wage rates are minimum rates only, and are not representations that qualified labor adequate to perform the work is available locally at the prevailing wage rates. The County is not bound to pay—and will not consider—any claims for additional compensation made by any contractor because the contractor pays wages in excess of the applicable minimum rate contained in the Contract Documents. The "Prevailing Wage Schedule" is not a representation that quantities of qualified labor adequate to perform the work may be found locally at the specified wage rates.

For classifications not shown, workers shall not be paid less than the wage indicated for laborers. The contractor shall notify each worker commencing work on the project the worker's job classification and the established minimum wage rate required to be paid, as well as the actual amount being paid. The notice must be delivered to and signed in acknowledgement of receipt by the employee and must list both the monetary wages and fringe benefits to be paid or furnished for each classification in which the worker is assigned duties. When requested by the County, competent evidence of compliance with the Texas Prevailing Wage Law shall be furnished by contractor. A copy of each worker wage rate notification shall be submitted to the County with the Application for Payment for the period during which the worker began on-site activities.

Should the contractor at any time become aware that a particular skill or trade not reflected on the County's "Prevailing Wage Schedule" will be or is being employed in the work, whether by the contractor or by a subcontractor, the contractor shall promptly inform the County and shall specify a wage rate for that skill or trade, which shall bind the contractor.

The contractor and any subcontractor shall pay to the County a penalty of sixty dollars ($60.00) for each worker employed for each calendar day, or portion thereof, that the worker is paid less than the wage rates stipulated in the "Prevailing Wage Schedule" or any supplement thereto. The contractor and each subcontractor shall keep, or cause to be kept, an accurate record showing the names and occupations of all workers employed in connection with the work, and showing the actual per diem wages paid to each worker, which records shall be open at all reasonable hours for the inspection by the County.

Within thirty-one (31) days of receipt of information concerning a violation of the Texas Government Code Chapter 2258, the County shall make an initial determination as to whether good cause exists to believe a violation occurred. The County's decision on the initial determination shall be reduced to writing and sent to the contractor or subcontractor against whom the violation was alleged, and to the affected worker. When a good cause finding is made, the County shall retain the full amounts claimed by the claimant or claimants as the difference between wages paid and wages due under the "Prevailing Wage Schedule" and any supplements thereto, together with the applicable penalties, such amounts being subtracted from successive progress payments pending a final decision on the violation.

After the County makes its initial determination, the affected contractor or subcontractor and worker have fourteen (14) calendar days in which to resolve the issue of whether a violation occurred, including the amount that should be retained by the County or paid to the affected worker. If the contractor or subcontractor and affected worker reach an agreement concerning the worker's claim, the contractor shall promptly notify the County in a written document signed by the worker. It the contractor or Subcontractor and affected worker do not agree before the fifteenth (15th) calendar day after the County determination, the contractor or subcontractor and affected worker must participate in binding arbitration in accordance with the Texas General Arbitration Act, Chapter 171, (Texas Civil Practice and Remedies Code). The parties to the arbitration have ten (10) calendar days after the expiration of the fifteen (15) calendar days referred to above, to agree on an arbitrator; if by the eleventh (11th) calendar day there is no agreement to an arbitrator, a district court shall appoint an arbitrator on the petition of any of the parties to the arbitration.

If an arbitrator determines that a violation has occurred, the arbitrator shall assess and award against the contractor or subcontractor the amount of penalty as provided above and the amount owed the worker. The County may use any amounts retained hereunder to pay the worker the amount as designated in the

arbitration award. If the County has not retained enough from the contractor or subcontractor to pay the worker in accordance with the arbitration award, the worker has a right of action against the contractor and subcontractor as appropriate, and the surety of either to receive the amount owed, attorneys' fees and court costs. The contractor shall promptly furnish a copy of the arbitration award to the County.

Money retained pursuant to the provisions above shall be used to pay the claimant or claimants the difference between the amount the worker received in wages for labor on the project at the rate paid by the contractor or subcontractor and the amount the worker would have received at the general prevailing wage rate as provided by the agreement of the claimant and the contractor or subcontractor affected, or in the arbitrator's award. The full statutory penalty of sixty dollars ($60.00) per calendar day of violation per worker shall be retained by Williamson County to offset its administrative costs, pursuant to Texas Government Code, Section, 2258.023. Any retained funds in excess of these amounts shall be paid to the contractor on the earlier of the next progress payment or final payment. Provided, however, that the County shall have no duty to release any funds to either the claimant or the contractor until it has received the notices of agreement or the arbitration award as provided under the provision herein-above.

4.43 CONFIDENTALITY

The Respondent expressly agrees that it will not use any direct or incidental confidential information that may be obtained while working in a governmental setting for its own benefit, and agrees that it will not access unauthorized areas or confidential information and it will not disclose any information to unauthorized third parties, and will take care to guard the security of the information at all times.

Evaluation Criteria

RFP 1703-149

Cedar Park Tax Office Renovations

1. The price (40 points)

Price will be based upon overall costs provided, and a determination if the costs appear to adequately have addressed all specifications provided.

2. The Proposer's personnel designated for the project (15 points)

Please provide a single page, per criterial personnel, that will work on this project to include at least the Company Owner, Project Manager, and Superintendent(s). Each person's information should include at least person's qualifications in relationship to this project, a description of similar projects worked on by that person, and their role on that project.

3. Respondent's experience (15 points max)

Respondent to provide a comprehensive list of at 3 separate project completed by the respondent's company, that are similar (or larger) projects performed in Texas. For each project include project name, owner/company and contact information, project description, size/square footage and contracted dollar amount. Also, include time for completion, and if you completed the project on time.

4. Respondent's office location as it relates to distance from the project site (15 point max)

Provide verifiable physical address of Respondent's closest permanent location to project and length of time at that location.

Maximum score points on evaluation is 85

AGREEMENT
BETWEEN OWNER AND CONTRACTOR

The **Owner**: Williamson County
710 Main Street, Ste. 101
Georgetown, Texas 78626

and **Contractor** _____
_____
_____ _____

for the **Project**: Cedar Park Tax Office
350 Discovery Boulevard
Suite 101
Cedar Park, Texas 78613

Architect: MODE Design Company
1102 S. Austin Avenue
Suite 103
Georgetown, Texas 78626

AGREEMENT, this Agreement Between Owner and Contractor (hereinafter called "Agreement") is entered into effective as of the date indicated herein below and all attachments (the "Effective Date"), by and between Williamson County a political subdivision of the State of Texas (hereinafter called the "Owner") and _____ (hereinafter called "Contractor").

WHEREAS, the Owner desires to retain a Contractor for the remodel and reconstruction of the Cedar Park Tax Office (hereinafter called the "Project"),

WHEREAS, the Owner desires a Contractor who will render, diligently and competently in accordance with the highest standards used in the profession, all Contractor services which shall be necessary or advisable for the expeditious, economical and satisfactory completion of the Project, and

NOW, THEREFORE, in consideration of the mutual undertakings herein contained, the parties hereto agree as follows:

ARTICLE 1 SCOPE OF WORK

The Contractor has overall responsibility for and shall provide complete construction services and furnish all materials, equipment, tools and labor as necessary or reasonably inferable to complete the Work, or any phase of the Work, in accordance with the Specifications and Drawings for the Project and the Owner's requirements. The Specifications and Drawings were prepared for Williamson County by the Architect. The Contractor shall do everything required by the Contract Documents.

ARTICLE 2 CONTRACT DOCUMENTS

2.1 The Contract Documents consist of the following, which are incorporated by reference for all purposes:

a. This Agreement and all exhibits and attachments listed, contained or referenced in this Agreement;
b. The Uniform General Conditions for Williamson County ("General Conditions");
c. The Supplementary Conditions, if any;
d. All Addenda issued prior to the Effective Date of this Agreement;
e. The Bid/Proposal Documents as defined by the Invitation for Bidders/Request for Proposals;
f. All Change Orders issued after the Effective Date of this Agreement;
g. Minimum Insurance Coverages and Minimum Coverage Amounts, which is attached here to as **Exhibit 1**;
h. Williamson County Vendor Reimbursement Policy, which is attached here to as **Exhibit 2**; and
i. The Drawings, Specifications, details and other documents developed by Architect to describe the Project and accepted by Owner, which are attached hereto **Exhibit 3**.

2.2 The Contract Documents form the entire and integrated Contract and Agreement between Owner and Contractor and supersede all prior negotiations, representations or agreements, written or oral. Contractor acknowledges receipt of all Contract Documents as of the date of its execution hereof.

2.3 The term "Contractor" shall be interchangeable with the terms "Proposer," "Bidder," Respondent" and "General Contractor" or other similar terms as appropriate in the Contract Documents.

ARTICLE 3 CONTRACT TIME

The Owner shall provide a Notice to Proceed in which a date for commencement of the

work shall be started. The Contractor shall achieve Substantial Completion of the Work **on or before December 1, 2017**, as such completion date may be extended by approved Change Orders. Unless otherwise specified in writing, Contractor shall achieve Final Completion **on or before January 1, 2018**. The time set forth for completion of the work is an essential element of the Contract.

ARTICLE 4 CONTRACTOR REPRESENTATIONS

4.1 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bid/Proposal Documents.

B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

D. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

E. Based on the information and observations referred to in Paragraph 4.1.D above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

F. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

G. Contractor has given Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Architect is acceptable to Contractor.

H. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 5 THE CONTRACT PRICE

5.1 Contract Price. **Contract Price.** Owner shall pay Contractor for satisfactory completion of the Work the sum of **_____($_____)**.

5.2 Contract Payments. Method and terms of payment of the Contract Price shall be in accordance with the Contract Documents.

5.3 Owner's Construction Contingency. The following lump sum amount shall serve as the Owner's Construction Contingency from which changes in the Work are to be paid in accordance with the General Conditions:

$_____

The Owner's Construction Contingency is controlled solely by the Owner. Expenditures from the Owner's Construction Contingency must be made by Change Order issued by the Architect and approved by the Owner in accordance with the General Conditions. Contractor shall not be entitled to any compensation from the any unused amounts of the Owner's Construction Contingency.

ARTICLE 6 TIME

6.1 TIME LIMITS STATED IN THE CONTRACT DOCUMENTS ARE OF THE ESSENCE OF THIS AGREEMENT.

6.2 Unless otherwise approved in writing, the Owner and the Contractor shall perform their respective obligations under the Contract Documents as expeditiously as is consistent with reasonable skill and care and the orderly progress of the Work.

6.3 Liquidated Damages. Contractor and Owner recognize that time is of the essence and that Owner will suffer financial loss if the Work is not completed within the times specified in Article 3 above, plus any extensions thereof allowed in accordance with the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual loss suffered by Owner if the Work is

not completed on time. Accordingly, instead of requiring any such proof, for each consecutive calendar day after the date of Substantial Completion that the Work is not substantially completed, the Owner may deduct the amount of:

Five Hundred Dollars per calendar day ($500.00/calendar day)

from any money due or that becomes due the Contractor, not as a penalty but as liquidated damages representing the parties' estimate at the time of contract execution of the damages that the Owner will sustain for late completion. The parties stipulate and agree that calculating Owner's actual damages for late completion of the Project would be impractical, unduly burdensome, and cause unnecessary delay and that the amounts of daily liquidated damages set forth are reasonable. Contractor expressly agrees that the amounts of daily liquidated damages are a reasonable forecast of the actual damages Owner will incur due to any such delay.

ARTICLE 7 NOTICES

Notices of claims, disputes or other legal notices shall be in writing and shall be deemed to have been given when delivered in person to the representative of the Contractor or Owner for whom it is intended, as set out below or sent by U. S. Mail to the representative of the Contractor or Owner for whom it is intended, as set out below. Mail notices are deemed effective upon receipt or on the third business day after the date of mailing, whichever is sooner.

If to Owner:
Williamson County Judge
710 Main Street, Ste. 101
Georgetown, Texas 78626

with copy to:
Hal C. Hawes
General Counsel to the
Williamson County Commissioners Court
710 Main Street, Suite 102
Georgetown, Texas 78626

If to Contractor:
_____
_____
_____ _____

The parties may make reasonable changes in the person or place designated for receipt of notices upon advance written notice to the other party.

ARTICLE 8 PARTY REPRESENTATIVES

The Owner's Designated Representative (sometimes referred to as the "ODR") authorized to act in the Owner's behalf with respect to the Project is:

Bob Lubecker
Project Manager
Williamson County Facilities
3101 SE Inner Loop
Georgetown, TX 78626
Phone: 512-943-1625

The Contractor's designated representative authorized to act on the Contractor's behalf and bind the Contractor with respect to the Project is:

_____
_____
_____ _____
Phone (512) _____
Fax (512) _____

The parties may make reasonable changes in their designated representatives upon advance written notice to the other party.

ARTICLE 9 ENTIRE AGREEMENT

This Agreement supersedes all prior agreements, written or oral, between Contractor and Owner and shall constitute the entire agreement and understanding between the parties with respect to the Project. This Agreement and the terms of the Contact Documents shall be binding upon the parties and may not be waived, modified, amended or altered except by a writing signed by Contractor and Owner.

BY SIGNING BELOW, the Parties have executed and bound themselves to this Agreement to be effective as of the date of the last party's execution below (the "Effective Date").

WILLIAMSON COUNTY Williamson County, Texas,	_____, a _____,
By: _____	By: _____
Printed Name: _____	Printed Name: _____
Title: _____	Title: _____
Date: _____ ____, 20_____	Date: _____ ____, 20_____

EXHIBIT 1

Minimum Insurance Coverages and Minimum Coverage Amounts

A. All policies of insurance provided by the Contractor must comply with the requirements of this Exhibit, the Contract Documents and the laws of the State of Texas.

B. The Contractor shall provide and maintain, until the Work covered in the Agreement Between Owner and Contractor is completed and accepted by the Owner, the minimum insurance coverages in the minimum amounts as described below. Coverage shall be written on an occurrence basis by companies authorized and admitted to do business in the State of Texas and rated A- or better by A.M. Best Company, or otherwise acceptable to Owner.

	Type of Coverage	Limits of Liability
1.	Worker's Compensation	Statutory
2.	Employer's Liability	
	Bodily Injury by Accident	$500,000 Ea. Accident
	Bodily Injury by Disease	$500,000 Ea. Employee
	Bodily Injury by Disease	$500,000 Policy Limit

3. Comprehensive general liability including completed operations and contractual liability insurance for bodily injury, death, or property damages in the following amounts:

COVERAGE	PER OCCURRENCE
Comprehensive General Liability (including premises, completed operations and contractual)	$1,000,000
Aggregate policy limits:	$2,000,000

4. Comprehensive automobile and auto liability insurance (covering owned, hired, leased and non-owned vehicles):

COVERAGE	PER PERSON	PER OCCURRENCE
Bodily injury (including death)	$1,000,000	$1,000,000

Property damage	$1,000,000	$1,000,000
Aggregate policy limits	No aggregate limit	

5. Builder's Risk Insurance (all risks)
An all risk policy, in the amount equal at all times to 100% of the Contract Price or Contract Sum. The policy shall include coverage for loss or damage caused by certified acts of terrorism as defined in the Terrorism Risk Insurance Act. The policy shall be issued in the name of the Contractor and shall name its Subcontractors as additional insureds. The Owner shall be named as a loss payee on the policy. The builders risk policy shall have endorsements as follow:

   a. This insurance shall be specific as to coverage and not considered as contributing insurance with any permanent insurance maintained on the present premises. If off-site storage is permitted, coverage shall include transit and storage in an amount sufficient to protect property being transported or stored.

   b. For renovation projects and or portions of work contained within an existing structure, the Owner waives subrogation for damage by fire to existing building structure(s), if the Builder's Risk Policy has been endorsed to include coverage for existing building structure(s) in the amount described in the Special Conditions. However, Contractor shall not be required to obtain such an endorsement unless specifically required by the Special Conditions in the Contract Documents. The aforementioned waiver of subrogation shall not be effective unless such endorsement is obtained.

6. Flood insurance when specified in Supplementary General Conditions or Special Conditions.

7. Umbrella coverage in the amount of not less than $5,000,000.

C. Workers' Compensation Insurance Coverage:

   a. Definitions:

      (1) Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the Texas Workers' Compensation Commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the Project.

(2) Duration of the Project - includes the time from the beginning of the work on the Project until the Contractor's/person's work on the Project has been completed and accepted by the Owner.
(3) Coverage – Workers' compensation insurance meeting the statutory requirements of the Texas Labor Code, §401.011(44).
(4) Persons providing services on the Project ("subcontractor") - includes all persons or entities performing all or part of the services the Contractor has undertaken to perform on the Project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the Project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the Project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

b. The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, §401.011(44) for all employees of the Contractor providing services on the Project, for the duration of the Project.
c. The Contractor must provide a certificate of coverage prior to execution of the Agreement Between Owner and Contractor, and in no event later than ten (10) days from Notice of Award. Failure to provide the insurance in a timely fashion may result in loss of Contractor's bid bond.
d. If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the Project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the Owner showing that coverage has been extended.
e. The Contractor shall obtain from each person providing services on a project, and provide to the Owner:

(1) a certificate of coverage, prior to that person beginning work on the Project, so the Owner will have on file certificates of coverage showing coverage for all persons providing services on the Project; and
(2) no later than seven days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project.

f. The Contractor shall retain all required certificates of coverage for the duration of the Project and for one year thereafter.

g. The Contractor shall notify the Owner in writing by certified mail or personal delivery, within 10 days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project.
h. The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the Project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

i. The Contractor shall contractually require each person with who it contracts to provide services on a project, to:

(1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas labor Code, Section 401.011(44) for all of its employees providing services on the Project, for the duration of the Project;
(2) provide to the Contractor, prior to that person beginning work on the Project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the Project, for the duration of the Project;
(3) provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;
(4) obtain from each other person with whom it contracts, and provide to the Contractor:

a. a certificate of coverage, prior to the other person beginning work on the Project; and
b. a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;

(5) retain all required certificate of coverage on file for the duration of the Project and for one year thereafter;
(6) notify the Owner in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project; and
(7) contractually require each person with whom it contracts, to perform as required by paragraphs (1)-(7), with the certificates of coverage to be provided to the person for whom they are providing services.

j. By signing the Agreement Between Owner and Contractor or providing or causing to be provided a certificate of coverage, the Contractor is representing to the Owner that all employees of the Contractor who will provide services on the Project will be covered by workers' compensation coverage for the duration of the Project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

k. The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the Owner to declare the Agreement Between Owner and Contractor void if the Contractor does not remedy the breach within ten days after receipt of notice of breach from the Owner.

D. If insurance policies are not written for the amounts specified in this Exhibit, Contractor shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of primary coverage.

E. The furnishing of the above listed insurance coverage, as may be modified by the Contract Documents, must be tendered prior to execution of the Agreement Between Owner and Contractor, and in no event later than ten (10) days from Notice of Award. Failure to provide the insurance in a timely fashion may result in loss of Contractor’s bid bond.

F. Owner shall be entitled, upon request and without expense, to receive copies of the policies and all endorsements as they apply to the limits set out in this Exhibit.

G. Contractor shall be responsible for payment of premiums for all of the insurance coverages required under this Exhibit. Contractor further agrees that for each claim, suit or action made against insurance provided hereunder, with respect to all matters for which the Contractor is responsible hereunder, Contractor shall be solely responsible for all deductibles and self-insured retentions. Any deductibles or self-insured retentions over **$75,000** in the Contractor’s insurance must be declared and approved in writing by Owner in advance.

Exhibit 2

Williamson County
Vendor Reimbursement Policy

The purpose of this Williamson County Vendor Reimbursement Policy ("Policy") is to provide clear guidelines to vendors on Williamson County's expectations and requirements regarding allowable reimbursable expenditures and required backup. The Policy will also minimize conflicts related to invoice payments and define non-reimbursable items. This Policy is considered a guideline and is not a contract.

This Policy may be altered, deleted or amended, at any time and without prior notice to vendors, by action of the Williamson County Commissioners Court. Unenforceable provisions of this Policy, as imposed by applicable law, regulations, or judicial decisions, shall be deemed to be deleted. Any revisions to this Policy will be distributed to all current vendors doing business with the County.

1. Invoices and Affidavits

1.1 Invoices must adequately describe the goods or services provided to County and include all required backup (i.e. reimbursable expenses, mileage log, timesheets, receipts detailing expenses incurred etc.) that is in a form acceptable to the Williamson County Auditor. Invoices that do not adequately describe the goods or services provided to County or contain backup that is satisfactory to the Williamson County Auditor will be returned to vendor for revisions and the provision above relating to invoice errors resolved in favor of the County shall control as to the required actions of vendor and when such invoice must be paid by the County.

1.2 In the event an invoice includes charges based upon hourly billing rates for services or any other rates based upon the amount of time worked by an individual or individuals in performing services, whether the charges are being billed directly to the County or whether they are the basis of invoices from subcontractors for which the vendor seeks reimbursement from the County, the charges shall be accompanied by an affidavit signed by an officer or principal of the vendor certifying that the work was performed, it was authorized by the County and that all information contained in the invoice that is being submitted is true and correct.

1.3 Upon County's request, vendor must submit all bills paid affidavits wherein vendor must swear and affirm that vendor has paid each of its subcontractors, laborers, suppliers and material in full for all labor and materials provided to vendor for or in connection with services and work performed for County and, further, vendor must swear and affirm that vendor is not aware of any unpaid bills, claims, demands, or causes of action by any of its subcontractors, laborers, suppliers, or material for or

in connection with the furnishing of labor or materials, or both, for services and work performed for County.

2. Travel Reimbursement

2.1 The County will only cover costs associated with travel on vendors outside a 50 mile radius from Williamson County, Texas.

2.2 The County will only cover costs associated with travel as documented work for County. If a vendor is also doing business for another client, the travel costs must be split in proportion to the amount of work actually performed for County and the other client. The only allowable travel expense will be for the specific days worked for Williamson County.

2.3 No advance payments will be made to vendor for travel expenditures. The travel expenditure may only be reimbursed after the expenditure/trip has already occurred and vendor has provided the Williamson County Auditor with all necessary and required backup.

2.4 Vendors must submit all travel reimbursement requests on each employee in full. Specifically, a travel reimbursement request must include all related travel reimbursement expenses relating to a particular trip for which vendor seeks reimbursement. Partial travel reimbursement requests will not be accepted (i.e. vendor should not submit hotel and mileage one month then the next month submit rental car and airfare). If the travel reimbursement appears incomplete, the invoice will be sent back to the vendor to be submitted when all information is ready to submit in full.

2.5 Reimbursement for transportation costs will be at the most reasonable means of transportation (i.e.: airline costs will be reimbursed for coach rate, rental car costs will only be reimbursed if rental car travel was most reasonable means of travel as compared to travel by air).

2.6 The County will not be responsible for, nor will the County reimburse additional charges due to personal preference or personal convenience of individual traveling.

2.7 The County will not reimburse airfare costs if airfare costs were higher than costs of mileage reimbursement.

2.8 Additional expenses associated with travel that is extended to save costs (i.e. Saturday night stay) may be reimbursed if costs of airfare would be less than the cost of additional expenses (lodging, meals, car rental, mileage) if the trip had not been extended. Documentation satisfactory to the Williamson County Auditor will be required to justify expenditure.

2.9 County will only reimburse travel expense to necessary personnel of the vendor (i.e. no spouse, friends or family members).

2.10 Except as otherwise set forth herein, a vendor must provide a paid receipt for all expenses. If a receipt cannot be obtained, a written sworn statement of the expense from the vendor may be substituted for the receipt.

2.11 Sales tax for meals and hotel stays are the only sales taxes that will be reimbursed. Sales tax on goods purchased will not be reimbursed. A

sales tax exemption form is available from the Williamson County Auditor's Office upon request.

2.12 The County will not pay for any late charges on reimbursable items. It is the responsibility of the vendor to pay the invoice first and seek reimbursement from the County.

3. Meals

3.1 Meal reimbursements are limited to a maximum of $50.00 per day on overnight travel. On day travel (travel that does not require an overnight stay), meal reimbursements are limited to a maximum of $20.00 per day. The travel must be outside the Williamson County, Texas line by a 50 mile radius.

3.2 Receipts are required on meal reimbursement amounts up to the maximum per day amount stated for overnight or day travel. If receipts are not presented, the vendor can request per diem (per diem limits refer to 3.2). However, a vendor cannot combine per diem and meal receipts. Only one method shall be allowed.

3.3 Meals are reimbursable only for vendors who do not have the necessary personnel located within a 50 mile radius of Williamson County, Texas that are capable of carrying the vendor's obligations to County. Meals will not be reimbursed to vendors who are located within a 50 mile radius of Williamson County, Texas.

3.4 County will not reimburse for alcoholic beverages.

3.5 Tips are reimbursable but must be reasonable to limitation of meal allowance

3.6 No meals purchased for entertainment purposes will be allowed.

3.7 Meal reimbursement must be substantiated with a hotel receipt.

4. Lodging

4.1 Hotel accommodations require an itemized hotel folio as a receipt. The lodging receipt should include name of the motel/hotel, number of occupant(s), goods or services for each individual charge (room rental, food, tax, etc.) and the name of the occupant(s). Credit card receipts or any other form of receipt are not acceptable.

4.2 Vendors will be reimbursed for a single room rate charge plus any applicable tax. If a single room is not available, the vendor must provide documentation to prove that a single room was not available in order to justify the expense over and above the single room rate. A vendor may also be required to provide additional documentation if a particular room rate appears to be excessive.

4.3 Personal telephone charges, whether local or long distance, will not be reimbursed.

5. Airfare

5.1 The County will only reimburse up to a coach price fare for air travel.

5.2 The County will exclude any additional charges due to personal preference or personal convenience of the individual traveling (i.e. early bird check in, seat preference charges, airline upgrades, etc. will not be an allowable reimbursement)

5.3 Air travel expenses must be supported with receipt copy of an airline ticket or an itinerary with actual ticket price paid. If tickets are purchased through a website, vendor must submit a copy of the webpage showing the ticket price if no paper ticket was issued.

5.4 Cancellation and/or change flight fees may be reimbursed by the County but vendor must provide the Williamson County Auditor with documentation in writing from a County department head providing authorization for the change.

5.5 The County will not reimburse vendor for tickets purchased with frequent flyer miles.

6. Car Rental

6.1 Vendors that must travel may rent a car at their destination when it is less expensive than other transportation such as taxis, airport shuttles or public transportation such as buses or subways.

6.2 Cars rented must be economy or mid-size. Luxury vehicle rentals will not be reimbursed. Any rental costs over and above the cost of a mid-size rental will be adjusted.

6.3 Vendors will be reimbursed for rental cars if the rental car cost would have been less than the mileage reimbursement cost (based on the distance from vendor's point of origin to Williamson County, Texas) had the vendor driven vendor's car.

6.4 Vendors must return a car rental with appropriate fuel levels as required by rental agreement to avoid the car rental company from adding fuel charges.

6.5 Rental agreement and credit card receipt must be provided to County as back up for the request for reimbursement.

6.6 Insurance purchased when renting vehicle may also be reimbursed.

6.7 Car Rental optional extras such as GPS, roadside assistance, and administrative fees on Tolls will not be reimbursed.

7. Personal Car Usage

7.1 Personal vehicle usage will be reimbursed in an amount equal to the standard mileage rate allowed by the IRS.

7.2 Per code of Federal Regulations, Title 26, Subtitle A, Chapter 1, Subchapter B, Part IX, Section 274(d), all expense reimbursement requests must include the following:

7.2.1.1 Date

7.2.1.2 Destination

7.2.1.3 Purpose
7.2.1.4 Name of traveler(s)
7.2.1.5 Correspondence that verifies business purpose of the expense

7.3 The mileage for a personal vehicle must document the date, location of travel to/from, number of miles traveled and purpose of trip.
7.4 Mileage will be reimbursed on the basis of the most commonly used route.
7.5 Reimbursement for mileage shall not exceed the cost of a round trip coach airfare.
7.6 Reimbursement for mileage shall be prohibited between place of residence and usual place of work.
7.7 Mileage should be calculated from employee's regular place of work or their residence, whichever is the shorter distance when traveling to a meeting or traveling to Williamson County, Texas for vendors who are located outside of Williamson County, Texas by at least a 50 mile radius.
7.8 When more than one person travels in same vehicle, only one person may claim mileage reimbursement.
7.9 Tolls, if reasonable, are reimbursable. Receipts are required for reimbursement. If a receipt is not obtainable, then written documentation of expense must be submitted for reimbursement (administrative fees on Tolls will not be reimbursed).
7.10 Parking fees, if reasonable are reimbursable for meetings and hotel stays. For vendors who contract with a third party for visitor parking at vendor's place of business, Williamson County will not reimburse a vendor based on a percentage of its contracted visitor parking fees. Rather, Williamson County will reimburse Vendor for visitor parking on an individual basis for each time a visitor uses Vendor's visitor parking. Receipts are required for reimbursement. If a receipt is not obtainable, then written documentation of expense must be submitted for reimbursement.
7.11 Operating and maintenance expenses as well as other personal expenses, such as parking tickets, traffic violations, and car repairs and collision damage are not reimbursable.

8. Other Expenses

8.1 Taxi fare, bus tickets, conference registrations, parking, etc. must have a proper original receipt.

9. Repayment of Nonreimbursable Expense.

Vendors must, upon demand, immediately repay County for all inappropriately reimbursed expenses whenever an audit or subsequent review of any expense reimbursement documentation finds that such expense was reimbursed contrary to these guidelines and this Policy. Williamson County reserves the right to retain any amounts that are due or that become due to a vendor in order to collect any inappropriately reimbursed expenses that a vendor was paid.

10. Non-Reimbursable Expenses

In addition to the non-reimbursable items set forth above in this Policy, the following is a non-exhaustive list of expenses that will not be reimbursed by Williamson County:

10.1 Alcoholic beverages/tobacco products
10.2 Personal phone calls
10.3 Laundry service
10.4 Valet service (excludes hotel valet)
10.5 Movie rentals
10.6 Damage to personal items
10.7 Flowers/plants
10.8 Greeting cards
10.9 Fines and/or penalties
10.10 Entertainment, personal clothing, personal sundries and services
10.11 Transportation/mileage to places of entertainment or similar personal activities
10.12 Upgrades to airfare, hotel and/or car rental
10.13 Airport parking above the most affordable rate available
10.14 Excessive weight baggage fees or cost associated with more than two airline bags
10.15 Auto repairs
10.16 Babysitter fees, kennel costs, pet or house-sitting fees
10.17 Saunas, massages or exercise facilities
10.18 Credit card delinquency fees or service fees
10.19 Doctor bills, prescription and other medical services
10.20 Hand tools
10.21 Safety Equipment (hard hats, safety vests, etc.)
10.22 Office Supplies
10.23 Lifetime memberships to any association
10.24 Donations to other entities
10.25 Any items that could be construed as campaigning
10.26 Community outreach items exceeding $2 per item
10.27 Sales tax on goods purchased
10.28 Any other expenses which Williamson County deems, in its sole discretion, to be inappropriate or unnecessary expenditures.

EXHIBIT 3

PLANS, DRAWINGS AND SPECIFICATIONS

FOR

CEDAR PARK TAX OFFICE

MODE DESIGN COMPANY

Project Number: 16121-00
Date Issued: March 11, 2017

UNIFORM GENERAL CONDITIONS
FOR WILLIAMSON COUNTY

TABLE OF ARTICLES

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2 OWNER
3 CONTRACTOR
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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract as revised, Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Owner or the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor.

§ 1.1.3 THE WORK
The term “Work” means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor’s obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 THE PROJECT
The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS
The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS
The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 INSTRUMENTS OF SERVICE
Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect’s consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 KNOWLEDGE: The terms "knowledge," "recognize," and "discover," their respective derivatives, and similar terms in the Contract Documents, as used in reference to the Contractor, shall be interpreted to mean that which the Contractor knows (or should know), recognizes (or should recognize), and discovers (or should discover) in exercising the care, skill, and diligence required by the Contract Documents. Analogously, the expression "reasonably inferable" and similar terms in the Contract Documents shall be interpreted to mean reasonably inferable by a contractor familiar with the Project and exercising the care, skill, and diligence required of the Contractor by the Contract Documents.§1.1.10 PRODUCT: Materials, systems, and equipment incorporated or to be incorporated in the Work.

§1.1.9 PROVIDE: Furnish and install and shall include, without limitation, labor, materials, equipment, transportation, services and other items required to complete the referenced tasks.

§1.1.02 FURNISH: Pay for, deliver (or receive), unload, inspect, and store products, materials, equipment, and accessories as specified while retaining care, custody and control until received for installation based on a signed receipt.

§ 1.1.11 INSTALL: Receive, unload, inspect, and store as specified while retaining care, custody and control; set or place in position, make required connections; and adjust and test as specified in the Contract Documents for satisfactory performance and operation.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS
§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results. In the event of inconsistencies within or between parts of the Contract Documents, or between the Contract Documents and applicable standards, codes, and ordinances, the Contractor shall (i) provide the better quality or greater quantity of Work or (ii) comply with the more stringent requirement; either or both in accordance with the Owner or the Architect’s

interpretation. The terms and conditions of this Section 1.2.1, however, shall not relieve the Contractor of any of the obligations set forth in the Contract Documents.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.3.1 Whenever a product is specified in accordance with a Federal Specification, an ASTM Standard, an American National Standards Institute Specification, or other Association Standard, the Contractor, if required by the Specifications or if requested by the Owner, shall present evidence from the manufacture, certifying the product complies with the particular Standard or Specification. When required by the Contract Documents, supporting data shall be submitted to substantiate compliance.

§ 1.2.3.2 Whenever a product is specified or shown by describing proprietary items, model numbers, catalog numbers, manufacturer, trade names, or similar reference, no substitutions may be made unless accepted in strict accordance with the Substitution requirements stated in the Specifications or, if no Substitution requirements are stated in the Specifications, in accordance with the requirements stated elsewhere in the Contract Documents. Where two or more products are shown or specified, the Contractor has the option to use either of those shown or specified.

§ 1.3 CAPITALIZATION
Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION
In the interest of brevity the Contract Documents frequently omit modifying words such as “all” and “any” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 USE OF DRAWINGS AND OTHER INSTRUMENTS OF SERVICE
§ 1.5.1 The Architect and the Architect’s consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights, except as provided in the Owner-Architect Agreement. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect’s or Architect’s consultants’ reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect’s consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM
If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall establish the necessary protocols governing such transmissions in writing, unless otherwise already provided in the Agreement or the Contract Documents.

ARTICLE 2 OWNER

§ 2.1 GENERAL

The Owner means Williamson County acting through any duly authorized representative as provided in the Agreement, and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization ("Owner's Designated Representative"). The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.2 OWNER

§ 2.2.1 Appropriation of Funds by Owner. Owner believes it has sufficient funds currently available and authorized for expenditure to finance the costs of the Agreement between Owner and Contractor. Contractor understands and agrees that the Owner's payment of amounts under the Agreement between Owner and Contractor is contingent on the Owner receiving appropriations or other expenditure authority sufficient to allow the Owner, in the exercise of reasonable administrative discretion, to continue to make payments under the Agreement.

§ 2.2.2 Unless specifically stated otherwise in the Contract Documents, Contractor shall secure and pay for necessary permits, approvals, assessments, and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. Except for surveys or grade information, the Contractor shall compare the information furnished by the Owner, including, but not limited to, soil tests, with visibly observable physical conditions and the Contract Documents and, on the basis of such review, promptly report to the Owner and the Architect any known conflicts, errors or omissions. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

§2.5 EXTENT OF OWNER RIGHTS

§ 2.5.1 The rights stated in this Article 2 and elsewhere in the Contract Documents are cumulative and not in limitation of any rights of the Owner (i) granted in the Contract Documents, (ii) at law, or (iii) in equity.

§ 2.5.2 In no event shall the Owner have control over, charge of, or any responsibility for construction means, methods, techniques, sequences, or procedures or for safety precautions and programs in connection with the Work, notwithstanding any of the rights and authority granted the Owner in the Contract Documents.

§ 2.6 OWNER'S RIGHT TO RECORDS

§ 2.6.1 The Contractor's records, which shall include but not be limited to accounting records, written policies and procedures, subcontractor files (including proposals of successful bidders), original estimates, estimating work sheets, correspondence, schedules, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to this contract (all foregoing hereinafter referred to as "records") and shall be open to inspection and subject to audit and/or reproduction, during normal working hours, by Owner's agent or its authorized representative to the extent necessary to adequately permit evaluation and verification of any invoices, payments or claims submitted by the Contractor or any of his payees. Such records subject to examination shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with this Contract.

§ 2.6.2 For the purpose of such audits, inspections, examinations and evaluations, the Owner's agent, or authorized representatives shall have access to said records from the effective date of this Contract for the duration of Work and until three (3) years (or longer if required by law) after the date of final payment by Owner to Contractor.

§ 2.6.3 Owner's agent or its authorized representative shall have access during normal business hours to the Contractor's facilities, shall have access to all necessary records and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this Article 2.6. Owner's agent or authorized representative shall give auditees reasonable advance notice of intended audits.

§ 2.6.4 Contractor shall require all subcontractors, insurance agents, and material suppliers (payees) with cost plus contracts, if permitted, and not fixed price contracts to comply with the provisions of this Article by insertion of the requirements hereof in a written contract agreement between Contractor and payee. Failure to obtain such written contracts which include such provisions shall be reason to exclude some or all of the related payee's costs from amounts payable to the Contractor pursuant to this contract.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative, and if these General Conditions are used in conjunction with the Agreement between Owner and Construction Manager-At-Risk, the term "Contractor" shall mean the Construction Manager.

§ 3.1.2 The Contractor shall perform the Work in strict accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents. Prior to execution of the Agreement, the Contractor and each Subcontractor shall have evaluated and satisfied themselves as to the observable conditions and limitations under which the Work is to be performed, including, without limitation, (i) the location, condition, layout, and nature of the Project site and surrounding areas, (ii) generally prevailing climatic conditions, (iii) anticipated labor supply and costs, (iv) availability and cost of materials, tools, and equipment, and (v) other similar issues. The Owner assumes no responsibility or liability for the physical condition or safety of the Project site or any improvements located on the Project site. Except as set forth in Section 10.3, the Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in either the Contract Sum or the Contract Time in connection with any failure by the Contractor or any Subcontractor to have complied with the requirements of this Section 3.2.1.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Owner and Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner. The Contractor shall verify the accuracy of elevations, dimensions, locations, and field measurements. In all cases of the interconnection of its Work with existing or other Work, the Contractor shall verify at the site all dimensions relating to such existing or other Work.

.1 All of Contractor's work shall conform to the Contract Documents. Contractor shall be responsible for the details of the Work necessary to carry out the intent of the drawings and specifications, or which are customarily performed. When more detailed information is required for performance of the Work or when an interpretation of the Contract Documents is requested, the Contractor shall submit a written request for information to the Architect or Owner (as required), and the Owner or Architect shall furnish such information or interpretation. Where only part of the Work is indicated, similar parts shall be considered repetitive. Where any detail is shown and components thereof are fully described, similar details not fully described shall be considered to incorporate the fully described details and components.

.2 The Contractor has had an opportunity to examine, and has carefully examined, all of the Contract Documents and Project site, and has fully acquainted itself with the scope of work, design, availability of materials, existing facilities, access, general topography, soil structure, subsurface conditions, obstructions, and all other conditions pertaining to the Work, the site of the Work, and its surrounding; that it has made necessary investigations to a full understanding of the difficulties which may be encountered in performing the Work; and that anything in any Contract Documents, or in any representations, statements, or information made or furnished by Owner or its representatives notwithstanding, Contractor will complete the Work for the compensation stated in the Agreement. In addition thereto, Contractor represents that it is fully qualified to do the Work in accordance with the terms of this Agreement in the time specified.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Owner and the Architect any nonconformity discovered by or made known to the Contractor as a request for information.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.3.4 Inspection of the progress, quantity, or quality of the Work done by the Owner, any Owner's representative, any governmental agency, or the Architect, or any inspector, shall not relieve the Contractor of any responsibility for the compliance of the Work with the Contract Documents. The Owner or its approved representative (heretofore referred to as Owner's representative) shall have access to the worksite and all Work. No supervision or inspection by the Owner's representative, nor the authority to act nor any other actions taken by the Owner's representative shall relieve the Contractor of any of its obligations under the Contract Documents nor give rise to any duty on the part of the Owner.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.1.1 Duty to Pay Prevailing Wage Rates. The Contractor shall pay not less than the wage scale of the various classes of labor as shown on the "Prevailing Wage Schedule" provided by the Owner. The specified wage rates are minimum rates only, and are not representations that qualified labor adequate to perform the Work is available locally at the prevailing wage rates. The Owner is not bound to pay—and will not consider—any claims for additional compensation made by any Contractor because the Contractor pays wages in excess of the applicable minimum rate contained in the Contract Documents. The "Prevailing Wage Schedule" is not a representation that quantities of qualified labor adequate to perform the Work may be found locally at the specified wage rates.

.1 For classifications not shown, workers shall not be paid less than the wage indicated for Laborers. The Contractor shall notify each worker commencing work on the Project the worker's job classification and the established minimum wage rate required to be paid, as well as the actual amount being paid. The notice must be delivered to and signed in acknowledgement of receipt by the employee and must list both the monetary wages and fringe benefits to be paid or furnished for each classification in which the worker is assigned duties. When requested by Owner, competent evidence of compliance with the Texas Prevailing Wage Law shall be furnished by Contractor.

.2 A copy of each worker wage rate notification shall be submitted to the Owner with the Application for Payment for the period during which the worker began on-site activities.

§ 3.4.1.2 Prevailing Wage Schedule. The "Prevailing Wage Schedule" shall be determined by the Owner in compliance with Chapter 2258, Texas Government Code. Should the Contractor at any time become aware that a particular skill or trade not reflected on the Owner's Prevailing Wage Schedule will be or is being employed in the Work, whether by the Contractor or by a subcontractor, the Contractor shall promptly inform the Owner and shall specify a wage rate for that skill or trade, which shall bind the Contractor.

§ 3.4.1.3 Penalty for Violation. The Contractor and any Subcontractor shall pay to the Owner a penalty of sixty dollars ($60.00) for each worker employed for each calendar day, or portion thereof, that the worker is paid less than the wage rates stipulated in the Prevailing Wage Schedule or any supplement thereto pursuant to §3.4.1.2. The Contractor and each Subcontractor shall keep, or cause to be kept, an accurate record showing the names and occupations of all workers employed in connection with the Work, and showing the actual per diem wages paid to each worker, which records shall be open at all reasonable hours for the inspection by the Owner.

§ 3.4.1.4 Complaints of Violations of Prevailing Wage Rates. Within 31 days of receipt of information concerning a violation of Chapter 2258 of the Texas Government Code, the Owner shall make an initial determination as to whether good cause exists to believe a violation occurred. The Owner's decision on the initial determination shall be reduced to writing and sent to the Contractor or Subcontractor against whom the violation was alleged, and to the affected worker. When a good cause finding is made, the Owner shall retain the full amounts claimed by the claimant or claimants as the difference between wages paid and wages due under the Prevailing Wage Schedule and any supplements thereto, together with the applicable penalties, such amounts being subtracted from successive progress payments pending a final decision on the violation.

§ 3.4.1.5 Arbitration Required if Violation not Resolved. After the Owner makes its initial determination, the affected Contractor or Subcontractor and worker have 14 days in which to resolve the issue of whether a violation occurred, including the amount that should be retained by Owner or paid to the affected worker. If the Contractor or Subcontractor and affected worker reach an agreement concerning the worker's claim, the Contractor shall promptly notify the Owner in a written document signed by the worker. It the Contractor or Subcontractor and affected worker do not agree before the 15th day after the Owner's determination, the Contractor or Subcontractor and affected worker must participate in binding arbitration in accordance with the Texas General Arbitration Act, Chapter 171, Tex. Civ. Prac. & Rem. Code. The parties to the arbitration have 10 days after the expiration of the 15 days referred to above, to agree on an arbitrator; if by the 11th day there is no agreement to an arbitrator, a district court shall appoint an arbitrator on the petition of any of the parties to the arbitration.

§ 3.4.1.6 Arbitration Award. If an arbitrator determines that a violation has occurred, the arbitrator shall assess and award against the Contractor or Subcontractor the amount of penalty as provided in this Article 3.4 and the amount owed the worker. The Owner may use any amounts retained hereunder to pay the worker the amount as designated in the arbitration award. If the Owner has not retained enough from the Contractor or Subcontractor to pay the worker in accordance with the arbitration award, the worker has a right of action against the Contractor and Subcontractor as appropriate, and the surety of

either to receive the amount owed, attorneys' fees and court costs. The Contractor shall promptly furnish a copy of the arbitration award to the Owner.

§ 3.4.1.7 Prevailing Wage Retainage. Money retained pursuant to this Article 3.4 shall be used to pay the claimant or claimants the difference between the amount the worker received in wages for labor on the Project at the rate paid by the Contractor or Subcontractor and the amount the worker would have received at the general prevailing wage rate as provided by the agreement of the claimant and the Contractor or Subcontractor affected, or in the arbitrator's award. The full statutory penalty of $60.00 per day of violation per worker shall be retained by the Owner to offset its administrative costs, pursuant to Texas Government Code §2258.023. Any retained funds in excess of these amounts shall be paid to the Contractor on the earlier of the next progress payment or final payment. Provided, however, that the Owner shall have no duty to release any funds to either the claimant or the Contractor until it has received the notices of agreement or the arbitration award as provided under §§3.4.2 and 3.4.3.

§ 3.4.1.8 No Extension of Time. If the Owner determines that good cause exists to believe a violation has occurred, the Contractor shall not be entitled to an extension of time for any delay arising directly or indirectly from of the procedures set forth in this Article 3.4.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Owner or Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive. If the Contractor desires to submit an alternate product or method in lieu of what has been specified or shown in the Contract Documents, the Contractor shall comply with the Substitution requirements listed in the Specifications, or if there are no Substitution requirements listed in the Specifications, then the following provisions apply:

§ 3.4.2.1 The Contractor must submit to the Architect and the Owner (i) a full explanation of the proposed substitution and submittal of all supporting data, including technical information, catalog cuts, warranties, test results, installation instructions, operating procedures, and other like information necessary for a complete evaluation of the substitution; (ii) the adjustment, if any, in the Contract Sum, in the event the substitution is acceptable; (iii) the adjustment, if any, in the time of completion of the Contract and the construction schedule in the event the substitution is acceptable; and (v) a statement indicating Contractor accepts the warranty and correction obligations in connection with the proposed substitution as if originally specified by the Architect. Proposals for substitutions shall be to the Architect in sufficient time to allow the Architect no less than ten (10) working days for review. No substitutions will be considered or allowed without the Contractor's submittal of complete substantiating data and information as stated hereinbefore.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.4.4 The Contractor shall only employ or use labor in connection with the Work capable of working harmoniously with all trades, crafts, and any other individuals associated with the Project.

§ 3.4.5. In case the progress of the Work is affected by any undue delay in furnishing or installing any items or materials or equipment required under the Contract Documents because of such conflict involving any such labor agreement or regulation, the Owner may require that other material or equipment of equal kind and quality be provided pursuant to a Change Order or Construction Change Directive.

§ 3.5 WARRANTY

§ 3.5.1 The Contractor warrants to the Owner: (1) that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise; (2) that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit; (3) that the Work will be done strictly in accordance with the Contract Documents; (4) that all products are installed

per the manufacturer's instructions, and in such a way that the manufacturer's warranties are preserved, including the use of a manufacturer-certified installer, if required by the manufacturer; (5) and that the Work, when finally completed, will provide a complete Project that meets the intent of the Contract Documents. The Contractor represents and warrants to the Owner that its materials and workmanship, including without limitation, construction means, methods, procedures and techniques necessary to perform the Work, use of materials, selection of equipment and requirements of product manufacturers are and shall be consistent with: (1) good and sound practices within the construction industry; (2) generally prevailing and accepted industry standards applicable to the Work; (3) requirements of any warranties applicable to the Work subject to Paragraph 3.2.3. Work, materials, or equipment not conforming to these requirements shall be considered defective, and promptly after written notification of non-conformance shall be repaired or replaced by Contractor with Work conforming to this warranty. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Owner or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.1.1 Contractor further warrants that all materials or equipment of a category or classification will be a product of the same manufacturer and such materials or equipment shall be of the same lot, batch or type and that such materials and equipment will be as specified.

§ 3.5.2 The Contractor agrees to assign to the Owner at the time of final completion of the Work any and all manufacturer's warranties relating to materials and labor used in the Work and further agrees to perform the Work in such manner so as to preserve any and all such manufacturer's warranties.

§ 3.6 TAXES

State Sales and Use Taxes. Sales, use or similar taxes imposed by a governmental authority that are related to the Work and for which the Contractor is liable; provided, however, Owner is a body corporate and politic under the laws of the State of Texas and claims exemption from sales and use taxes under Texas Tax Code Ann. § 151.309, as amended, and the services and materials subject of the Agreement are being secured for use by Owner. Exemption certificates will be provided to Contractor upon request. As a precondition to the Owner reimbursing Contractor for allowable sales and use taxes, Contractor must, on its own, first attempt to use such tax exemption certificates in order to assert the exemption. In the event Contractor's efforts to use the tax exemption certificate is unsuccessful and provided that under the laws of the State of Texas an exemption from sales and use taxes is allowed, Owner will reimburse Contractor for such sales and use taxes upon Contractor providing sufficient and satisfactory documentation to the Williamson County Auditor.

§ 3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided, the Contractor shall secure, pay for, and, as soon as practicable, furnish the Owner with copies or certificates of all permits and fees, licenses, and inspections necessary for the proper execution and completion of the Work, including, without limitation, all building permits. All connection charges, assessments, or inspection fees as may be imposed by any municipal agency or utility company are included in the Contract Sum and shall be the Contractor's responsibility.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction and damages resulting therefrom.

§ 3.7.4 Concealed or Unknown Conditions. If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from

those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Owner will promptly investigate such conditions and, if the Owner determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will authorize an equitable adjustment in the Contract Sum or Contract Time, or both. If the Owner determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Owner shall promptly notify the Contractor in writing, stating the reasons. If the Contractor disputes the Owner's determination, the Contractor party may assert a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

.1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

.2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and

.3 whenever costs are more than or less than allowances, the Contractor shall, prior to purchasing any such materials, notify the Owner in writing of the cost and whether such cost will exceed the amount of the allowance. If Owner authorizes Contractor to proceed, after receiving the Contractor's estimate of the total cost, then the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent or Contractor's project manager shall be as binding as if given to the Contractor. Important oral communications shall be immediately confirmed in writing.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Owner or Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Owner and Architect require additional time to review. Failure of the Owner or Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, as provided in the Agreement, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.10.4 The construction schedule shall be a detailed precedence-style critical path management ("CPM") schedule in a format satisfactory to the Owner that shall (i) provide a graphic representation of all activities and events that will occur during performance of the Work; (ii) identify each phase of construction and occupancy; and (iii) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as the "Milestone Date"). Upon review and acceptance by the Owner of the Milestone Dates, the construction schedule shall be deemed part of the Contract Documents. If not accepted, the construction schedule shall be promptly revised by the Contractor in accordance with the recommendations of the Owner and resubmitted for acceptance. The Contractor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner of any delays or potential delays. The accepted construction schedule shall be updated to reflect actual conditions as set forth in section 3.10.1 or if requested by the Owner. In the event any progress report indicates any delays, the Contractor shall propose an affirmative plan to correct the delay, including overtime and/or additional labor, if necessary. In no event shall any progress report constitute an adjustment in the Contract Time, any Milestone date, or the Contract Sum unless any such adjustment is agreed to by the Owner and authorize pursuant to a Change Order.

§ 3.10.5 In the event the Owner determines that the performance of the Work, as of a Milestone Date, has not progressed or reach the level of completion required by the Contract Documents, the Owner shall have the right to order the Contractor to take corrective measures necessary to expedite the progress of construction, including without limitation, (i) working additional shifts or overtime, (ii) supplying additional manpower, equipment, and facilities, and (iii) other similar measures. Such measures so continue until the progress of the Work complies with the stage of completion required by the Contract Documents. The Owner's right to require such measures is solely for the purpose of ensuring the Contractors compliance with the construction schedule.

§ 3.11 DOCUMENTS AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or

equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly as required by the Contract Documents. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 ACCESS TO WORK

The Owner and Architect shall, at all times, have access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 INDEMNITY – OTHER THAN EMPLOYEE PERSONAL INJURY CLAIMS. TO THE FULLEST EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND, AND HOLD HARMLESS OWNER, ITS EMPLOYEES, AND ASSIGNS (THE "INDEMNIFIED PARTIES" OR "INDEMNITEES") FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR ALLEGED TO BE RESULTING FROM THE PERFORMANCE OF THIS AGREEMENT, TO THE EXTENT CAUSED BY THE NEGLIGENT OR WILLFUL ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, SUB-SUBCONTRACTORS, OR ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY THEM OR ANYONE FOR WHOSE ACTS THEY MAY BE LIABLE. CONTRACTOR SHALL NOT BE REQUIRED TO INDEMNIFY, HOLD HARMLESS OR DEFEND THE INDEMNIFIED PARTIES AGAINST A CLAIM CAUSED BY THE NEGLIGENCE OR FAULT, OR THE BREACH OR VIOLATION OF A STATUTE, ORDINANCE, GOVERNMENTAL REGULATION, STANDARD, OR RULE OF THE INDEMNITEE, OR OTHER PARTY OTHER THAN CONTRACTOR OR ITS AGENT, EMPLOYEE, OR SUBCONTRACTOR OF ANY TIER, EXCEPT THAT CONTRACTOR SHALL INDEMNIFY, HOLD HARMLESS AND DEFEND THE INDEMNIFIED PARTIES AGAINST ANY CLAIMS FOR THE BODILY INJURY OR DEATH OF AN EMPLOYEE OF CONTRACTOR, ITS AGENTS, OR IT SUBCONTRACTORS OF ANY TIER.

§3.18.2 INDEMNITY – EMPLOYEE <u>PERSONAL INJURY CLAIMS</u>. TO THE FULLEST EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY, DEFEND, AND HOLD HARMLESS THE INDEMNIFIED PARTIES AND SHALL ASSUME ENTIRE RESPONSIBILITY AND LIABILITY (OTHER THAN AS A RESULT OF AN INDEMNIFIED PARTY'S GROSS NEGLIGENCE) FOR ANY CLAIM OR ACTION BASED ON OR ARISING OUT OF THE PERSONAL INJURY, INCLUDING THE DEATH, OF ANY EMPLOYEE OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY SUB-SUBCONTRACTOR, OR OF ANY OTHER ENTITY FOR WHOSE ACTS THEY MAY BE LIABLE, WHICH OCCURRED OR WAS ALLEGED TO HAVE OCCURRED ON THE PROJECT SITE OR IN CONNECTION WITH THE PERFORMANCE OF THE WORK OF THIS AGREEMENT. CONTRACTOR HEREBY INDEMNIFIES THE INDEMNIFIED PARTIES EVEN TO THE EXTENT THAT SUCH PERSONAL INJURY WAS CAUSED OR ALLEGED TO HAVE BEEN CAUSED BY THE COMPARATIVE OR CONCURRENT NEGLIGENCE OF THE STRICT LIABILITY OF ANY INDEMNIFIED PARTY. THIS INDEMNIFICATION SHALL NOT BE LIMITED TO DAMAGES, COMPENSATION, OR BENEFITS PAYABLE UNDER INSURANCE POLICIES, WORKERS COMPENSATION ACTS, DISABILITY BENEFITS ACTS, OR OTHER EMPLOYEES BENEFIT ACTS.

§3.18.3 THE CONTRACTOR'S INDEMNITY OBLIGATIONS UNDER THIS SECTION 3.18 SHALL ALSO SPECIFICALLY INCLUDE, WITHOUT LIMITATION, ALL FINES, PENALTIES, DAMAGES, LIABILITY, COSTS, EXPENSES (INCLUDING, WITHOUT LIMITATION, REASONABLE ATTORNEYS' FEES) ARISING OUT OF, OR IN CONNECTION WITH, ANY (I) VIOLATION OF OR FAILURE TO COMPLY WITH ANY LAW, STATUTE, ORDINANCE, RULE, REGULATION, CODE OR REQUIREMENT OF A PUBLIC AUTHORITY THAT BEARS UPON THE PERFORMANCE OF THE WORK BY THE CONTRACTOR, A SUBCONTRACTOR, OR ANY PERSON OR ENTITY FOR WHOM EITHER IS RESPONSIBLE, (II) MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF EXECUTION OR PERFORMANCE OF THE WORK, AND (III) FAILURE TO SECURE AND PAY FOR PERMITS, FEES, APPROVALS, LICENSES, AND INSPECTIONS AS REQUIRED UNDER THE CONTRACT DOCUMENTS, OR ANY VIOLATION OF ANY PERMIT OR OTHER APPROVAL OF A PUBLIC AUTHORITY APPLICABLE TO THE WORK, BY THE CONTRACTOR, A SUBCONTRACTOR, OR ANY PERSON OR ENTITY FOR WHOM EITHER IS RESPONSIBLE.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.2 ADMINISTRATION OF THE CONTRACT
§ 4.2.1 The Architect will provide administration of the Contract as described in the Owner-Architect Agreement. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 COMMUNICATIONS AND CONTRACT ADMINISTRATION
Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to relate relevant communications between Owner and Architect to the Architect. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 If included in Architect's scope of work, the agreement between Owner and Architect, or if requested by the Owner, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts based on the Architect's evaluations of the Contractor's Applications for Payment.

§ 4.2.6 To the extent permitted by the agreement between Owner and Architect, the Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect, in consultation with the Owner, will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Owner to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 To the extent provided in the agreement between Owner and Architect, the Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Owner and Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the

purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 If requested by Owner, the Architect will prepare Change Orders and Construction Change Directives with the Owner's prior written consent, but the Architect may authorize minor changes in the Work as provided in the agreement between Owner and Architect, or in Section 7.4 of these General Conditions. If requested by Owner, the Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 If requested by Owner, the Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 If requested by Owner, the Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents, and if approved by Owner.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS

§ 5.2.1 For Construction Manager-At-Risk Agreements. The Construction Manager shall publicly advertise for bids or proposals and receive bids or proposals from trade contractors or Subcontractors for the performance of all major elements of the work other than the minor work that may be included in the general conditions. The Construction Manager may seek to perform portions of the work itself if:

(A) the Construction Manager submits its bid or proposal for those portions of the Work in the same manner as all other trade contractors or Subcontractors; and

(B) the Owner determines that the Construction Manager's bid or proposal provides the best value for the Owner.

§ 5.2.1.1 REVIEW OF BIDS OR PROPOSALS. Construction Manager shall review all trade contractor or Subcontractor bids or proposals in a manner that does not disclose the contents of the bid or proposal during the selection process to a person not employed by the Construction Manger, Architect, Engineer, or Owner. All bids or proposals shall be made available to the Owner on request and to the public after the later of the award of the contract or the seventh day after the date of final selection of bids or proposals. If the Construction Manager reviews, evaluates, and recommends to the Owner a bid or proposal from a trade contractor or subcontractor but the Owner requires another bid or proposal to be accepted, the Owner shall compensate the Construction Manager by a change in the Contract Sum, Contract Time, or Cost of the Work for any additional cost and risk that the Construction manager incurs because of the Owner's requirement that another bid or proposal be accepted.

§ 5.2.2 The Contractor shall not contract with a proposed Subcontractor, person, or entity to whom the Owner has made reasonable objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made a reasonable objection.

§ 5.2.3 If the Owner has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time may be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity previously selected if the Owner makes reasonable objection to such substitution.

§ 5.3 SUBCONTRACTUAL RELATIONS

§ 5.3.1 By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.3.2 All subcontracts shall be in writing and, if requested, Contractor shall provide Owner with copies of executed subcontracts.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS
§ 5.4.1 This Contract is for Owner's benefit, its successors and assigns who, as well as Contractor, may directly enforce all rights and warranties, express or implied herein, but Subcontractors shall have recourse only against Contractor and not against Owner. Owner may rely solely upon Contractor for enforcement of all Subcontracts. To effect such purpose, Contractor assigns to Owner all right to bring any actions against subcontractors and material vendors without waiver by Owner of his right against Contractor because of defaults, delays and effects for which a subcontractor or material vendor may also be liable, said assignment being effective only if:

.1 Contractor is in default under the Contract Documents; or

.2 Owner has terminated the Contract in accordance with the Contract Documents; and

.3 Only for those subcontract agreements which the Owner accepts by notifying the Subcontractor and Contractor in writing; and

.4 The assignment is subject to the prior rights of the surety, if any, obligated under any bond relating to the Contract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation may be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

§5.4.4 The Architect and the Owner shall have the right to request from any Subcontractor at any time during the course of construction, a notarized affidavit stating the amount of monies which have been paid to the Subcontractor as of any certain stipulated date.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS
§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.2 MUTUAL RESPONSIBILITY
§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall

connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect and the Owner apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner, separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP
If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK
§ 7.1 GENERAL
§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Owner or Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work. Except as permitted in Section 7.3 and Section 9.7.2, a change in the Contract Sum or the Contract Time shall be accomplished only by Change Order. Accordingly, no course of conduct or dealings between the parties, nor express or implied acceptance of alterations or additions to the Work, and no claim that Owner has been unjustly enriched by any alteration of or addition to the Work, whether or not there is, in fact, any unjust enrichment to the Work, shall be the basis of any Claim to an increase in any amounts due under the Contract Documents or a change in any time period provided for in the Contract Documents.

§ 7.2 CHANGE ORDERS
§ 7.2.1 A Change Order is a written instrument signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

.1 The change in the Work;
.2 The amount of the adjustment, if any, in the Contract Sum; and
.3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.2 Contractor's Change Order shall set forth in clear and precise detail breakdowns of labor and materials for all trades involved and the estimated impact on the dates of Substantial Completion. Contractor shall furnish supporting data as reasonably requested by Owner.

§ 7.2.3 Agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum and the construction schedule.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

.2 Unit prices stated in the Contract Documents or subsequently agreed upon;

.3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

.4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Owner shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Owner or Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

.1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;

.2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

.3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

.4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and

.5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Owner or the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Owner will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Owner determines to be reasonably justified. The Owner's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of Contractor to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

If permitted in the agreement between Owner and Architect, the Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract and are a material element of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect and Owner determines may justify delay, then the Contract Time shall be extended by Change Order to the extent such delay will prevent the Contractor from achieving Substantial Completion within the Contract Time and if the performance of the Work is not, was not, or would not have been delayed by any other cause for which the Contractor is not entitled to an extension in the Contract Time under the Contract Documents. The Contractor further acknowledges and agrees that adjustments in the Contract Time will be permitted for a delay only to the extent such delay (i) is not caused, or could not have been anticipated, by the Contractor, and (ii) could not be limited or avoided by the Contractor's timely notice to the Owner of the delay or reasonable likelihood that a delay will occur.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 Notwithstanding anything contained in the Contract Documents to the contrary, the Contractor's sole remedy for any (1) delay in the commencement, prosecution or completion of the Work, (2) hindrance or obstruction in the performance of the Work, (3) loss of productivity, or (4) other similar claims (collectively referred in this Subparagraph 8.3.3 as "Delay or Delays"), whether or not such Delays are foreseeable, shall be an extension of time in which to complete the Work. In no event shall the Contractor be entitled to any other compensation or recovery of any damages, costs, or attorneys' fees, caused by any Delays, unknown site conditions, errors, inconsistencies, or omissions in the Drawings and Specifications, or concealed or unknown conditions, including, without limitation, consequential damages, lost opportunity costs, impact damages or other similar damages; provided however that Contractor may be entitled to additional time as provided under Section 8.3.1.

§ 8.3.4 If the Contractor submits a progress report indicating, or otherwise expresses an intention to achieve, completion of the Work prior to any completion date required by the Contract Documents or expiration of the Contract Time, no liability of the Owner to the Contractor for any failure of the Contractor to so complete the Work shall be created or implied.

§ 8.3.5 Owner shall have the right to occupy, without prejudice to rights of either party, any completed or substantially completed portions of the Work, notwithstanding the fact that time for completion of entire Work, or portions thereof, may not be expired. Occupancy and use by Owner shall not constitute, in itself, acceptance of the Work.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Owner and Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Owner may require. This schedule, unless objected to by the Owner, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 As provided in the Agreement and in the Contract Documents, the Contractor shall submit to the Owner and Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2., for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the

Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Owner or the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.1.3 If requested by Owner or required elsewhere in the Contract Documents, Each Application for Payment shall be accompanied by the following, all in a form and substance satisfactory to the Owner:

(i) With each Application for Payment: a current Sworn Statement from the Contractor setting forth all Subcontractors and all material suppliers with whom the Contractor has subcontracted, the amount of each such subcontract, the amount requested for any Subcontractor or material supplier in the Application for Payment, and the amount to be paid to the Contractor from such progress payment;

(ii) With each Application for Payment: a duly executed Conditional Waiver and Release on Progress Payment from the Contractor and Subcontractors establishing receipt of payment or satisfaction of the payment requested by the Contractor in the current Application for Payment;

(iii) Commencing with the second Application for Payment submitted by the Contractor, a duly executed Unconditional Waiver and Release on Progress Payment from Contractor and all Subcontractors, material suppliers and, where appropriate, lower tier subcontractors that have billed more than $5,000 on a single application of payment, establishing receipt of payment or satisfaction of payment of all amounts requested on behalf of such entities and disbursed prior to submittal by the Contractor of the current Application for Payment;

(iv) With the Final Application for Payment: Contractor shall submit a Conditional Waiver and Release on Final Payment as required by Texas Property Code 53.284. Upon receipt of final payment, Contractor shall submit an Unconditional Waiver and Release on Final Payment as required by Texas Property Code 53.284; and

(v) Such other information, documentation, and materials as the Owner, or the title insurer may require in order to ensure that Owner's property is free of lien claims. Such other documents may include, without limitation, original copies of lien or bond claim releases suitable for filing with the County Clerk in Williamson County, Texas.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, bond claims, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.3.3.1 The Contractor further expressly undertakes to defend Owner, at the Contractor's sole expense, against any actions, lawsuits, or proceedings brought against Owner as a result of liens filed against the Work, the site of any of the Work, the Project site and any improvements thereon, or any portion of the property of any of Owner (referred to collectively as "liens" in this Section 9.3.3), provide the Owner has paid Contractor pursuant to the requirements of the Contract Documents. The Contractor hereby agrees to indemnify and hold Owner harmless against any such liens or claims of lien and agrees to pay any judgment or lien resulting from any such actions, lawsuits, or proceedings.

§ 9.3.3.2 The Owner shall release any payments withheld due to a lien or bond claims if the Contractor obtains security acceptable to the Owner, however, the Contractor shall not be relieved of any responsibilities or obligations under this Section 9.3.3, including, without limitation, the duty to defend and indemnify Owner.

§ 9.3.3.3 Retainage. The Owner shall withhold from each progress payment, as retainage, five percent (5%) of the total earned amount. Retainage so withheld shall be managed in conformance with Subchapter B, Chapter 2252 of the Texas Government Code. Any request for reduction or release of retainage shall be accompanied by written consent of the Contractor's Surety. No such request shall be made until the Contractor has earned at least sixty-five percent (65%) of the total Contract Price.

§ 9.3.3.4 For purposes of Texas Government Code § 2251.021 (a)(2), the date the performance of service is completed is the date when the Owner's representative approves the Application for Payment.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Owner or Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Owner or Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Owner or Architect is unable to certify payment in the amount of the Application, the Owner or Architect will notify the Contractor. If the Contractor and Architect, or Contractor and Owner, as the case may be, cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount that can be certified. The Owner or Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Owner or Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

.1 defective Work not remedied;
.2 third party claims filed or reasonable evidence indicating probable filing of such claims;
.3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
.5 damage to the Owner or a separate contractor;
.6 failure to maintain the scheduled progress, or reasonable evidence that the Work will not be completed within the Contract Time;
.7 failure to comply with the requirements of Texas Government Code Chapter 2258 (Prevailing Wage Law);
.8 failure to include sufficient documentation to support the amount of payment requested for the Project;
.9 failure to obtain, maintain, or renew insurance coverage for payment/performance bonds required by the Contract Documents; or
.10 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.6 PROGRESS PAYMENTS
§ 9.6.1 The Owner shall make payment in the manner and within the time provided in the Contract Documents and in accordance with Chapter 2251 of the Texas Government Code.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than 10 days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.4 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2.

§ 9.6.5 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.7 FAILURE OF PAYMENT
§ 9.7.1 If the Architect is required to issue Certificates for Payment and, through no fault of the Contractor, the Architect fails to timely issue Certificates for Payment in the time permitted in the Contract Documents, or if the Owner does not pay the Contractor by the date established in the Contract Documents, then the Contractor may, upon twenty-one days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received.

§ 9.7.2 If the Owner is entitled to reimbursement or payment from the Contractor under or pursuant to the Contract Documents, such payment shall be made promptly upon demand by the Owner. Notwithstanding anything contained in the Contract Documents to the contrary, if the Contractor fails to promptly make any payment due the Owner, or if the Owner incurs any costs and expenses to cure any default of the Contractor or to correct defective work, the Owner shall have an absolute right to offset such amount against the Contract Sum and may, in the Owner's sole discretion, elect either to (i) deduct

an amount equal to that which the Owner is entitled from any payment then or thereafter due the Contractor from the Owner, or (ii) issue a written notice to the Contractor reducing the Contract Sum by an amount equal to that which the Owner is entitled.

§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use; provided, however, that as a condition precedent to Substantial Completion, the Owner has received all certificates of occupancy and any other permits, approvals, licenses, and other documents from any governmental authority having jurisdiction thereof necessary for the beneficial occupancy of the Project.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Owner and Architect a comprehensive list of items to be completed or corrected prior to final payment (punch list). Failure to include an item on the punch list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's punch list, the Owner and Architect will examine the Work to determine whether the Work or designated portion thereof is substantially complete. If the Owner and/or Architect's examination discloses any item, whether or not included on the Contractor's punch list, that is not sufficiently complete in accordance with the Contract Documents, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Owner or Architect. In such case, the Contractor shall then submit a request for another examination by the Owner or Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect, if required by the Contract Documents, or Owner will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Unless otherwise provided, Contractor shall complete all items on the punch list within 30 days of Substantial Completion. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5, the surety, and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld.

§ 9.9.2 Immediately prior to partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Owner and Architect will make such inspection and, when the Owner and Architect find the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled. All warranties and guarantees required under or pursuant to the Contract Documents shall be assembled and delivered by the Contractor to the Architect as part of the final Application for Payment. The final Certificate for Payment will not be issued by the Architect until all warranties and guarantees have been received and accepted by the Owner.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner and Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work have been paid or otherwise satisfied, within the period of time required by Chapter 2251 of the Texas Government Code, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety to final payment and (5) other data establishing payment or satisfaction of obligations, such as receipts, unconditional full and final releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner.

§ 9.10.3 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

.1 Claims, security interests or encumbrances arising out of the Contract and unsettled;
.2 failure of the Work to comply with the requirements of the Contract Documents; or
.3 terms of warranties required by the Contract Documents.

§ 9.10.4 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

.1 employees on the Work and other persons who may be affected thereby;
.2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and

.3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss. Notwithstanding any language to the contrary, the Owner shall not have any responsibility for job site inspections or safety recommendations. Any inspections or observations by the Owner or the Architect are solely for the benefit of the Owner and shall not create any duties or obligations to anyone else.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY
If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.2.9 When all or a portion of the Work is suspended for any reason, the Contractor shall securely fasten down all covering and fully protect the Work, as necessary, from injury or damage by any cause.

§ 10.2.10 The Contractor shall promptly report in writing to the Owner and Architect all accidents arising out of or in connection with the Work that cause death, personal injury, or property damage.

§ 10.3 HAZARDOUS MATERIALS
§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the

Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written notice from the Owner.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are expressly required by the Contract Documents. The Owner shall be responsible for materials or substances expressly required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site or negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time, if any, claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

.1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;

.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;

.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;

.4 Claims for damages insured by usual personal injury liability coverage;

.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

.6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;

.7 Claims for bodily injury or property damage arising out of completed operations, which coverage shall be maintained for no less than four (4) years following final payment; and

.8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Agreement or the Contract Documents. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the

period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Unless otherwise provided, copies of the insurance policies, in form acceptable to the Owner, shall provided to Owner within 30 days of Owner's request. Except as otherwise provided, all of the policies provided shall name Owner as an additional insured, and such policies shall immediately deliver to Owner copies of all such insurance policies, together with certificates by the insurer evidencing Owner's coverage there under. Each policy of insurance obtained by Contractor pursuant to the Contract Documents shall provide, by endorsement or otherwise (i) that such policy shall not be canceled, endorsed, altered or reissued to effect a change in coverage for any reason or to any extent whatsoever unless the insurer shall have first given Owner and Lender at least thirty (30) days prior written notice thereof, and (ii) that Owner may, but shall not be obligated to, make premium payments to prevent the cancellation, endorsement, alteration or reissuance of such policy and such payments shall be accepted by the insurer to prevent the same. Such policies shall provide, by endorsement or otherwise, that Contractor shall be solely responsible for the payment of all premiums under the policies, and that Owner shall have no obligation for the payment thereof, notwithstanding that Owner is named as additional insured under the policy. Any insured loss or claim of loss shall be adjusted to the Owner, and any settlement payments shall be made payable to the Owner as a trustee for the insureds, as their interests may appear. Upon the occurrence of an insured loss or claim of loss, monies received will be held by Owner who shall make distribution in accordance with an agreement to be reached in such event between Owner and Contractor. If the parties are unable to agree between themselves on the settlement of the loss, such dispute shall be resolved in accordance with section 15, below, but the Work of the Project shall nevertheless progress during any such period of dispute without prejudice to the rights of any party to the dispute. The Contractor shall be responsible for any loss within the deductible area of the policy. If Owner is damaged by the failure of Contractor to purchase or maintain such insurance, then Contractor shall bear all costs properly attributable thereto. The Contractor shall affect and maintain similar property insurance on portions of the Work stored off the site or in transit when such portions of the Work are to be included. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until Final Completion of the Project.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.2 OWNER'S LIABILITY INSURANCE
The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 PROPERTY INSURANCE
§ 11.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake,

flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss as well as coverage for building materials while in transit or building materials suitably stored at a temporary location. Property insurance provided by the Contractor shall not cover any tools, apparatus, machinery, scaffolding, hoists, forms, staging, shoring, and other similar items commonly referred to as construction equipment that may be on the site and the capital value of which is not included in the Work. The Contractor shall make its own arrangements for any insurance it may require on such construction equipment. Any such policy obtained by the Contractor under this Section 11.3.1 shall include a waiver of subrogation in accordance with the requirements of Section 11.3.4.

§ 11.3.1.2 If the Contractor does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Contractor shall so inform the Owner in writing prior to commencement of the Work. If the Owner is damaged by the failure or neglect of the Contractor to purchase or maintain insurance as described above, without so notifying the Owner in writing, then the Contractor shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 Contractor shall be responsible for any deductibles to the extent that the loss arose out of or was cause by Contractor's negligence or breach of the Agreement.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.4 WAIVERS OF SUBROGATION
The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent of actual recovery of any insurance proceeds under any property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance. However, this waiver shall not apply to property insurance purchased by Owner after completion of the Work or Final Payment, whichever comes first. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.5 A loss insured under the property insurance shall be adjusted in good faith and made payable to the Owner in good faith for the insureds, as their interests may appear. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND
§ 11.4.1 The Contractor is required to tender to Owner, prior to commencing the Work, performance and payment bonds, as required by law. In the event Contractor fails to provide such bonds within the time

provided by the Agreement, Owner may immediately, upon notice of such failure, or within a reasonable time thereafter, at its sole option and discretion: (1) void this Agreement in its entirety; or (2) procure such bonds on behalf of the Contractor, deducting such amounts from the Contract Price. In the event Owner voids the Agreement under this section, Contractor may forfeit its bid bond.

§ 11.4.2 A Performance Bond is required if the Contract Price is in excess of $50,000. The performance bond is solely for the protection of the Owner, in the full amount of the Contract Price and conditioned on the faithful performance of the Work in accordance with the Contract Documents. The form of the bond shall be approved by the Owner.

§ 11.4.3 A Payment Bond is required if the Contract Price is in excess of $25,000. A payment bond is payable to the Owner, in the full amount of the Contract Price and solely for the protection and use of payment bond beneficiaries who have a direct contractual relationship with the Contractor or a supplier of required materials or labor. The form of bond shall be approved by the Owner.

§ 11.4.5 Corporate sureties authorized to issue bonds shall be qualified and comply with relevant provisions of the Texas Insurance Code.

§ 11.4.6 Each bond shall be executed by a corporate surety or sureties authorized to do business in the State of Texas and acceptable to the Owner. If any bond is for more than 10 percent of the surety's capital and surplus, the Owner may require certification that the company has reinsured the excess portion with one or more reinsurers authorized, accredited, or trusteed to do business in the State. A reinsurer may not reinsure for more than 10 percent of its capital and surplus. If a surety upon a bond loses its authority to do business in the State, the Contractor shall within thirty (30) days after such loss furnish a replacement bond at no added cost to the Owner.

§ 11.4.7 Each bond shall be accompanied by a valid Power-of-Attorney (issued by the surety company and attached, signed and sealed with the corporate embosses seal, to the bond) authorizing the attorney in fact who signs the bond to commit the company to the terms of the bond, and stating any limit in the amount for which the attorney can issue a single bond.

§ 11.4.8 The process of requiring and accepting bonds and making claims thereunder shall be conducted in compliance with Chapter 2253, Texas Government Code. If for any reason a statutory payment or performance bond is not honored by the surety, the Contractor shall fully indemnify and hold the Owner harmless of and from any costs, losses, obligations or liabilities it incurs as a result.

§ 11.4.9 Owner shall furnish certified copies of a payment bond and the related Agreement between Owner and Contractor to any qualified person seeking copies who complies with §2253.026, Texas Government Code.

§ 11.4.10 Claims on Payment Bonds. Claims on payment bonds must be sent directly to the Contractor and its surety in accordance with § 2253.041, Texas Government Code. All Payment Bond claimants are cautioned that no lien exists on the funds unpaid to the Contractor on such contract, and that reliance on notices sent to the Owner may result in loss of their rights against the Contractor and/or its surety. The Owner is not responsible in any manner to a claimant for collection of unpaid bills, and accepts no such responsibility because of any representation by any agent or employee.

§ 11.4.11 Payment Claims when Payment Bond not Required. When the value of the Agreement between Owner and the Contractor is less than $25,000.00, claimants and their rights are governed by Texas Property Code, §§ 53.231 – 53.239. These provisions set out the requirements for filing a valid lien on funds unpaid to the Contractor as of the time of filing the claim, actions necessary to release the lien and satisfaction of such claims.

§11.4.12 Sureties shall be listed on the Department of the Treasury's Listing of Approved Sureties stating companies holding Certificates of Authority as acceptable sureties on Federal Bonds and acceptable reinsuring companies (Department Circular 570).

§ 11.5 GENERAL REQUIREMENTS

§ 11.5.1 Unless otherwise provided in the Contract Documents, all insurance coverage procured by the Contractor shall be provided by insurance companies having policy holder ratings no lower than "A" and financial ratings not lower than "XII" in the Best's Insurance Guide, the latest edition in effect as of the date of the Contract, and subsequently in effect at the time of renewal of any policies required by the Contract Documents.

§ 11.5.2 If the Owner is damaged by failure of the Contractor to purchase or maintain insurance required under Article 11, then the Contractor shall bear all reasonable costs (including attorneys' fees and court and settlement expenses) properly attributable thereto.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Owner or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Owner or Architect, be uncovered for examination and be replaced at the Contractor's expense without change in the Contract Time. If prior to the date of Substantial Completion the Contractor, a Subcontractor, or anyone for whom either is responsible uses or damages any portion of the Work (other than start-up), including, without limitation, mechanical, electrical, plumbing, and other building systems, machinery, equipment, or other mechanical device, the Contractor shall cause such item to be restored to "like new" condition at no expense to the Owner.

§ 12.1.2 If a portion of the Work has been covered that the Owner or Architect has not specifically requested to examine prior to its being covered, the Owner or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 The Contractor shall promptly correct Work rejected by the Owner or Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so. The Owner shall give such notice promptly after discovery of the condition. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK
If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS
§ 13.1 GOVERNING LAW
The Contract shall be governed by the law of Williamson County, Texas.

§ 13.2 SUCCESSORS AND ASSIGNS
§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in the Contract Documents or by law, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.3 WRITTEN NOTICE
Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES
§ 13.4.1 Except as expressly provided in the Contract Documents, duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS
§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority. The Contractor shall give the Owner and Architect timely notice of when and where tests and inspections are to be made so that the Owner and Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Owner and Architect of when and where tests and inspections are to be made so that the Owner and Architect may be present for such procedures.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense. The Contractor also agrees the cost of testing services related to remedial operations performed to correct deficiencies in the Work, shall be borne by the Contractor.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner and Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST
The rate of interest that accrues on an overdue payment is the rate in effect on September 1 of the fiscal year in which the payment becomes overdue. The rate in effect on September 1 is equal to the sum of:
(1) one percent; and
(2) the prime rate as published in the Wall Street Journal on the first day of July of the preceding fiscal year that does not fall on a Saturday or Sunday pursuant to §2251.025 of the Texas Government Code.

§ 13.7 TIME LIMITS ON CLAIMS
The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the time limits provided by law. Nothing herein shall be construed as shortening the period of time Owner has for commencing claims to less than what is required by law.

§ 13.8 Application To Subcontracts
Any specific requirement in this Contract that the responsibilities or obligations of Contractor also apply to a Subcontractor is added for emphasis and are also hereby deemed to include a Subcontractor of any tier. The omission of a reference to a Subcontractor in connection with any of Contractor's responsibilities or obligations shall not be construed to diminish, abrogate or limit any responsibilities or obligations of a Subcontractor of any tier under the Contract Documents or the applicable subcontract.

§ 13.10 GENERAL PROVISIONS
§ 13.10.1 All personal pronouns used in this Contract, whether used in the masculine, feminine, or neuter gender, shall include all other genders; and the singular shall included the plural and vice versa. Titles of articles, sections, and subsections are for convenience only and neither limit nor amplify the provisions of this Contract. The use herein of the word "including," when following any general statement, term, or matter, shall not be construed to limit such statement, term, or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not non-limiting language (such words as "without limitation," or "but not limited to," or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement, term, or matter.

§ 13.10.2 Wherever possible, each provision of this Agreement shall be interpreted in a manner as to be effective and valid under applicable law. If, however, any provision of this Agreement, or portion thereof,

is prohibited by law or found invalid under any law, only such provision or portion thereof shall be ineffective, without in any manner invalidating or affecting the remaining provisions of this Agreement or valid portions of such provision, which are hereby deemed servable.

§ 13.11 NO ORAL WAIVER
The Provisions of the Contract Documents shall not be changed, amended, waived, or otherwise modified in any respect except by a writing signed by Owner. No person is authorized on behalf of Owner to orally change, amend, waive, or otherwise modify the terms of the Contract Documents or any of the Contractor's duties or obligations under or arising out of the Contract Documents. Any change, waiver, approval, or consent granted to the Contractor shall be limited to the specific matters stated in the writing signed by Owner, and shall not relieve Contractor of any other of the duties and obligations under the Contract Documents. No "constructive" changes shall be allowed.

§ 13.12 Texas Public Information Act. To the extent, if any, that any provision in the Contract Documents is in conflict with Tex. Gov't Code 552.001 et seq., as amended (the "Public Information Act"), the same shall be of no force or effect. Furthermore, it is expressly understood and agreed that Owner, its officers and employees may request advice, decisions and opinions of the Attorney General of the State of Texas in regard to the application of the Public Information Act to any information or data furnished to Owner whether or not the same are available to the public. It is further understood that Owner, its officers and employees shall have the right to rely on the advice, decisions and opinions of the Attorney General, and that Owner, its officers and employees shall have no liability or obligation to Contractor for the disclosure to the public, or to any person or persons, of any software or a part thereof, or other items or data furnished to Owner by Contractor in reliance of any advice, decision or opinion of the Attorney General of the State of Texas.

§ 13.13 Equal Opportunity in Employment. The Contractor agrees that during the performance of the Agreement it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Parties will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT
§ 14.1 TERMINATION BY THE CONTRACTOR
§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 90 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

.1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;

.2 An act of government, such as a declaration of national emergency that requires all Work to be stopped; or

.3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on an undisputed Certificate for Payment within the time stated in the Contract Documents.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon 30 days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor

.1 fails to commence the Work in accordance with the provisions of this Contract,

.2 fails to prosecute the Work to completion thereof in a diligent, efficient, timely, workmanlike, skillful and careful manner and in strict accordance with the provisions of the Contract,

.3 fails to use an adequate amount or quality of personnel or equipment to complete the Work without undue delay,

.4 fails to perform any of its obligations under the Contract,

.5 fails to make prompt payments when due to its Subcontractors and Suppliers, or as required by Texas Government Code 2251,

.6 files any petition or other pleading seeking any relief under any provisions of the Federal Bankruptcy Act, as amended, or any other federal or state statute or law providing for reorganization of debts or other relief from creditors, permits a receiver or other person to be appointed on account of its insolvency or financial condition, or becomes insolvent,

.7 creates any situation or state of facts which would authorize or permit an involuntary petition in bankruptcy to be filed against Contractor, or

.8 has not met or in Owner's opinion will not meet the dates of Substantial Completion set forth in the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, in its sole and absolute discretion, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, 30 days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

.1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

.2 Accept assignment of subcontracts pursuant to Section 5.4; and

.3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished. In the event that a final decision under section 15, below, is rendered that sufficient cause did not exist for termination under this section 14.2, then the termination shall be considered a termination for convenience, under section 14.4, below.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages and costs incurred by the Owner in finishing the Work and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

.1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
.2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE
§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall
.1 cease operations as directed by the Owner in the notice;
.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 Upon such termination, the Contractor shall recover the amounts provided in Section 10.1.3 of the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES
§ 15.1 CLAIMS
§ 15.1.1 DEFINITION
A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 15.1.2 NOTICE OF CLAIMS
Claims for events arising during the performance of the Work by Contractor must be initiated by written notice to the other party with a copy sent to the Architect; provided, however, that the claimant shall use its best efforts to furnish the other party, as expeditiously as possible, with notice of any Claim including, without limitation, those in connection with concealed or unknown conditions, once such claim is recognized, and shall take steps to mitigate the alleged or potential damages, delay, or other adverse consequences arising out of the condition that is the cause of such a Claim. Claims by Contractor must be initiated within 10 business days after occurrence of the event giving rise to such Claim or within 10 business days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims may also be reserved in writing within the time limits set forth in this Section 15.1.2. Any notice of Claim or reservation of Claim must clearly identify the alleged cause and the nature of the Claim and include data and information available to the claimant that will facilitate prompt verification and evaluation of the Claim.

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE
Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the Contract Documents.

§ 15.1.4 CLAIMS FOR ADDITIONAL COST
If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.3 MEDIATION
§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived shall be subject to mediation as a condition precedent to seeking redress in a court of competent jurisdiction.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation, which shall consist of a single mediator who is knowledgeable about the subject matter of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract.

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in Williamson County, Texas. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§15.3.4 All disputes not resolved through mediation shall be decided in litigation in Williamson County, Texas.

§ 15.3.5 No waiver of Immunity. Nothing in the Contract Documents shall be deemed to waive, modify or amend any legal defense available at law or in equity to Owner, its past or present officers, employees, or agents, nor to create any legal rights or claim on behalf of any third party. Owner does not waive, modify, or alter to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.

DEBARMENT AND LICENSING CERTIFICATION

STATE OF TEXAS §
§
COUNTY OF WILLIAMSON §

I, the undersigned, being duly sworn or under penalty of perjury under the laws of the United States and the State of Texas, certifies that Firm named herein below and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any federal department or agency:
(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
(c) Are not presently indicted for or otherwise criminally or civilly charged by a federal, state or local governmental entity with commission of any of the offenses enumerated in paragraph (1)(b) of this certification;
(d) Have not within a three-year period preceding this application/proposal had one or more public (federal, state or local) transactions terminated for cause or default;
(e) Are registered and licensed in the State of Texas to perform the professional services which are necessary for the project; and
(f) Have not been disciplined or issued a formal reprimand by any State agency for professional accreditation within the past three years.

Name of Firm

Signature of Certifying Official | Title of Certifying Official

Printed Name of Certifying Official | Date

Where the Firm is unable to certify to any of the statements in this certification, such Firm shall attach an explanation to this certification.

SUBSCRIBED and sworn to before me the undersigned authority by

on this the day of , 20 , on behalf of said Firm.

Notary Public in and for the State of Texas

My commission expires:

SIGNATURE AND NOTARY NOT REQUIRED IF COMPLETING IN BIDSYNC ELECTRONICALLY.

Proposal References

List the last three (3) companies or governmental agencies, where the same or similar goods and/or services as contained in this RFP package, were recently provided by Respondent.

Reference 1

Client Name: Location:

Contact Name: Title:

Phone: E-mail

Contract Date To: Contract Date From: Contract Value: $

Scope of Work:

Reference 2

Client Name: Location:

Contact Name: Title:

Phone: E-mail

Contract Date To: Contract Date From: Contract Value: $

Scope of Work:

Reference 3

Client Name:

Location:

Contact Name:

Title:

Phone:

E-mail

Contract Date To:

Contract Date From:

Contract Value: $

Scope of Work:

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor or other person doing business with local governmental entity

Form CIQ

This questionnaire is being filed in accordance with chapter 176 of the Local Government Code by a person doing business with the governmental entity.

By law this questionnaire must be filed with the records administrator of the local government not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of person doing business with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than September 1 of the year for which an activity described in Section 176.006(a), Local Government Code, is pending and not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 **Describe each affiliation or business relationship with an employee or contractor of the local governmental entity who makes recommendations to a local government officer of the local governmental entity with respect to expenditure of money.**

4 **Describe each affiliation or business relationship with a person who is a local government officer and who appoints or employs a local government officer of the local governmental entity that is the subject of this questionnaire.**

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor or other person doing business with local governmental entity

Form CIQ
Page 2

5 **Name of local government officer with whom filer has affiliation or business relationship.**
(Complete this section only if the answer to A, B, or C is YES.)

This section, item 5 including subparts A, B, C & D, must be completed for each officer with whom the filer has affiliation or other relationship. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income from the filer of the questionnaire?

☐ Yes ☐ No

B. Is the filer of the questionnaire receiving or likely to receive taxable income from or at the direction of the local government officer named in this section AND the taxable income is not from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire affiliated with a corporation or other business entity that the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐ Yes ☐ No

D. Describe each affiliation or business relationship.

6. Describe any other affiliation or business relationship that might cause conflict of interest:

7

Signature of person doing business with the governmental entity	Date

Signature not required if completing in BIDSYNC electronically.

Question and Answers for Bid #1703-149 - Cedar Park Tax Office Renovation Project

Overall Bid Questions
There are no questions associated with this bid.

Commissioners Court - Regular Session **30.**

Meeting Date: 04/04/2017

Request to award the contract with S&G Contracting for RFP1701-136 Justice Center Remodel

Submitted For: Randy Barker **Submitted By:** Teri Jeffries, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on awarding the contract, RFP 1701-136, for the renovations to the Justice Center, to the best proposer S&G Contracting.

Background

After a thorough evaluation of the three proposals submitted, the Evaluation Committee recommends S&G Contracting as the most overall qualified and highest scoring proposal received. S&G Contracting provided the best overall value for the County, provides qualified personnel to perform the work, has substantial experience and knowledge to complete the project, as well as a local proximity to the project site.
The evaluation and contract are attached for your review.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Evaluation RFP 1701-136

S&G CONTRACTING AGREEMENT

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/28/2017 08:22 AM
Form Started By: Teri Jeffries		Started On: 03/27/2017 01:33 PM
Final Approval Date: 03/28/2017		

Evaluation Criteria for Justice Center Remodel RFP 1701-136, completed on March 15, 2017

Buyer Teri Jeffries 512-943-1553

	Criteria	Maximum Points	Please select a Whole Number from the list provided for each question. (Decimal scoringnot permitted)	S&G Contracting	WhiteCo Construction Services	AGCM	Big State Electric
1.1	N/A	P/F	Must Pass to be qualified				Fail- subcontractor not in attendance
1.2	Proposal pricing- based upon all architectural plans, specifications and instructions per the RFP	40	Percentage will be determined as follows: Respondent with the lowest costs/ by each individual proposal. Percentage will be weighted against the lowest overall price and best value for the County. Points will be determined from calculations	40	36	27	n/a
1.3	Personnel for the project	15	15 = Significantly Exceeds Requirements 12 = Exceed Requirements 9 = Meets ALL Requirements 6 = Marginally Meets Requirements 1 = Does Not Meet Requirements	9	9	9	
1.4	Respondent's experience	15	15 = Significantly Exceeds Requirements 12 = Exceed Requirements 9 = Meets ALL Requirements 6 = Marginally Meets Requirements 1 = Does Not Meet Requirements	12	9	6	
1.5	Respondent's physical address	15	15 = Significantly Exceeds Requirements 12 = Exceed Requirements 9 = Meets ALL Requirements 6 = Marginally Meets Requirements 1 = Does Not Meet Requirements	12	12	6	
	Total Points	85	TOTAL	73	66	48	0

Voting Member

AGREEMENT
BETWEEN OWNER AND CONTRACTOR

The **Owner**:	Williamson County 710 Main Street, Ste. 101 Georgetown, Texas 78626
and **Contractor**	S&G Contracting, Inc Jimmy Gibson 8863 Anderson Mill Road Austin, Texas 78729
for the **Project**:	RFP 1701-136 Justice Center - CSCD Remodel 405 Martin Luther King Street Georgetown, Texas 78626
Architect:	BLGY, Inc. 2204 Forbes Drive, Suite 101 Austin Texas 78754

AGREEMENT, this Agreement Between Owner and Contractor (hereinafter called "Agreement") is entered into effective as of the date indicated herein below and all attachments (the "Effective Date"), by and between Williamson County a political subdivision of the State of Texas (hereinafter called the "Owner") and S&G Contracting, Inc. (hereinafter called "Contractor").

WHEREAS, the Owner desires to retain a Contractor for the Williamson County Justice Center – CSCD Remodel (hereinafter called the "Project"),

WHEREAS, the Owner desires a Contractor who will render, diligently and competently in accordance with the highest standards used in the profession, all Contractor services which shall be necessary or advisable for the expeditious, economical and satisfactory completion of the Project, and

NOW, THEREFORE, in consideration of the mutual undertakings herein contained, the parties hereto agree as follows:

ARTICLE 1 SCOPE OF WORK

The Contractor has overall responsibility for and shall provide complete construction services and furnish all materials, equipment, tools and labor as necessary or reasonably inferable to complete the Work, or any phase of the Work, in accordance with the Specifications and Drawings for the Project and the Owner's requirements. The Specifications and Drawings were prepared for Williamson County by the Architect. The Contractor shall do everything required by the Contract Documents.

ARTICLE 2 CONTRACT DOCUMENTS

2.1 The Contract Documents consist of the following, which are incorporated by reference for all purposes:

a. This Agreement and all exhibits and attachments listed, contained or referenced in this Agreement;
b. The Uniform General Conditions for Williamson County ("General Conditions");
c. The Supplementary or Special Conditions, if any;
d. All Addenda issued prior to the Effective Date of this Agreement;
e. The Bid/Proposal Documents as defined by the Invitation for Bidders/Request for Proposals;
f. All Change Orders issued after the Effective Date of this Agreement;
g. Minimum Insurance Coverages and Minimum Coverage Amounts, which is attached here to as **Exhibit 1**;
h. Williamson County Vendor Reimbursement Policy, which is attached here to as **Exhibit 2**; and
i. The Drawings, Specifications, details and other documents developed by Architect to describe the Project and accepted by Owner, which are attached hereto **Exhibit 3**.

2.2 The Contract Documents form the entire and integrated Contract and Agreement between Owner and Contractor and supersede all prior negotiations, representations or agreements, written or oral. Contractor acknowledges receipt of all Contract Documents as of the date of its execution hereof.

2.3 The term "Contractor" shall be interchangeable with the terms "Proposer," "Bidder," Respondent" and "General Contractor" or other similar terms as appropriate in the Contract Documents.

ARTICLE 3 CONTRACT TIME

The Owner shall provide a Notice to Proceed in which a date for commencement of the

work shall be started. The Contractor shall achieve Substantial Completion of the Work within **One Hundred Fifty (150) calendar days** after such commencement date, as such completion date may be extended by approved Change Orders. Unless otherwise specified in writing, Contractor shall achieve Final Completion within **Thirty (30) calendar days** of Substantial Completion. The time set forth for completion of the work is an essential element of the Contract.

ARTICLE 4 CONTRACTOR REPRESENTATIONS

4.1 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bid/Proposal Documents.

B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state, and local laws and regulations that may affect cost, progress, and performance of the Work.

D. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

E. Based on the information and observations referred to in Paragraph 4.1.D above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

F. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

G. Contractor has given Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Architect is acceptable to Contractor.

H. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 5 THE CONTRACT PRICE; OWNER'S CONSTRUCTION CONTINGENCY

5.1 Contract Price. Owner shall pay Contractor for the satisfactory completion of the Work, in accordance with the Contract Documents, the amount of **$321,000.000.**

5.2 Contract Payments. Method and terms of payment of the Contract Price shall be in accordance with the Contract Documents.

5.3 Owner's Construction Contingency. The following lump sum amount shall serve as the Owner's Construction Contingency from which changes in the Work are to be paid in accordance with the General Conditions: $60,000.00.

The Owner's Construction Contingency is controlled solely by the Owner. Expenditures from the Owner's Construction Contingency must be made by Change Order issued by the Architect and approved by the Owner in accordance with the General Conditions. Contractor shall not be entitled to any compensation from the any unused amounts of the Owner's Construction Contingency.

ARTICLE 6 TIME

6.1 TIME LIMITS STATED IN THE CONTRACT DOCUMENTS ARE OF THE ESSENCE OF THIS AGREEMENT. THE TIME FRAME FOR COMPLETION IS ONE HUNDRED AND EIGHTY DAYS (180).

6.2 Unless otherwise approved in writing, the Owner and the Contractor shall perform their respective obligations under the Contract Documents as expeditiously as is consistent with reasonable skill and care and the orderly progress of the Work.

6.3 Liquidated Damages. Contractor and Owner recognize that time is of the essence and that Owner will suffer financial loss if the Work is not completed within the times specified in Article 3 above, plus any extensions thereof allowed in accordance with the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal proceeding the actual loss suffered by Owner if

the Work is not completed on time. Accordingly, instead of requiring any such proof, for each consecutive calendar day after the date of Substantial Completion that the Work is not substantially completed, the Owner may deduct the amount of:

Five Hundred Dollars per calendar day ($500.00/calendar day)

from any money due or that becomes due the Contractor, not as a penalty but as liquidated damages representing the parties' estimate at the time of contract execution of the damages that the Owner will sustain for late completion. The parties stipulate and agree that calculating Owner's actual damages for late completion of the Project would be impractical, unduly burdensome, and cause unnecessary delay and that the amounts of daily liquidated damages set forth are reasonable. Contractor expressly agrees that the amounts of daily liquidated damages are a reasonable forecast of the actual damages Owner will incur due to any such delay.

ARTICLE 7 NOTICES

Notices of claims, disputes or other legal notices shall be in writing and shall be deemed to have been given when delivered in person to the representative of the Contractor or Owner for whom it is intended, as set out below or sent by U. S. Mail to the representative of the Contractor or Owner for whom it is intended, as set out below. Mail notices are deemed effective upon receipt or on the third business day after the date of mailing, whichever is sooner.

If to Owner:
Williamson County Judge
710 Main Street, Ste. 101
Georgetown, Texas 78626

with copy to:
Hal C. Hawes
General Counsel to the
Williamson County Commissioners Court
710 Main Street, Suite 102
Georgetown, Texas 78626

If to Contractor:
S&G Contracting, Inc
Jimmy Gibson
8863 Anderson Mill Road
Austin, Texas 78729

The parties may make reasonable changes in the person or place designated for receipt of notices upon advance written notice to the other party.

ARTICLE 8 PARTY REPRESENTATIVES

The Owner's Designated Representative (sometimes referred to as the "ODR") authorized to act in the Owner's behalf with respect to the Project is:

Bob Lubecker, Project Manager
Facilities Department
Phone (512) 943-1625
Email: rlubecker@wilco.org

The Contractor's designated representative authorized to act on the Contractor's behalf and bind the Contractor with respect to the Project is:

Jimmy Gibson
shane@sginc.biz
Phone (512) 331-8799
Fax (512) 331-8795

The parties may make reasonable changes in their designated representatives upon advance written notice to the other party.

ARTICLE 9 ENTIRE AGREEMENT

This Agreement supersedes all prior agreements, written or oral, between Contractor and Owner and shall constitute the entire agreement and understanding between the parties with respect to the Project. This Agreement and the terms of the Contact Documents shall be binding upon the parties and may not be waived, modified, amended or altered except by a writing signed by Contractor and Owner.

BY SIGNING BELOW, the Parties have executed and bound themselves to this Agreement to be effective as of the date of the last party's execution below (the "Effective Date").

WILLIAMSON COUNTY Williamson County, Texas,	S& G Contracting, Inc a Texas Corporation
By: _____	By: _____
Printed Name: _____	Printed Name: Jimmy S. Gibson
Title: _____	Title: Vice President

EXHIBIT 1

Minimum Insurance Coverages
and
Minimum Coverage Amounts

A. All policies of insurance provided by the Contractor must comply with the requirements of this Exhibit, the Contract Documents and the laws of the State of Texas.

B. The Contractor shall provide and maintain, until the Work covered in the Agreement Between Owner and Contractor is completed and accepted by the Owner, the minimum insurance coverages in the minimum amounts as described below. Coverage shall be written on an occurrence basis by companies authorized and admitted to do business in the State of Texas and rated A- or better by A.M. Best Company, or otherwise acceptable to Owner.

	Type of Coverage	Limits of Liability
1.	Worker's Compensation	Statutory
2.	Employer's Liability	
	Bodily Injury by Accident	$500,000 Ea. Accident
	Bodily Injury by Disease	$500,000 Ea. Employee
	Bodily Injury by Disease	$500,000 Policy Limit

3. Comprehensive general liability including completed operations and contractual liability insurance for bodily injury, death, or property damages in the following amounts:

COVERAGE	PER OCCURRENCE
Comprehensive General Liability (including premises, completed operations and contractual)	$1,000,000
Aggregate policy limits:	$2,000,000

4. Comprehensive automobile and auto liability insurance (covering owned, hired, leased and non-owned vehicles):

COVERAGE	PER PERSON	PER OCCURRENCE
Bodily injury		

(including death)	$1,000,000	$1,000,000
Property damage	$1,000,000	$1,000,000
Aggregate policy limits	No aggregate limit	

5. Builder's Risk Insurance (all risks)
An all risk policy, in the amount equal at all times to 100% of the Contract Price or Contract Sum. The policy shall include coverage for loss or damage caused by certified acts of terrorism as defined in the Terrorism Risk Insurance Act. The policy shall be issued in the name of the Contractor and shall name its Subcontractors as additional insureds. The Owner shall be named as a loss payee on the policy. The builders risk policy shall have endorsements as follow:

   a. This insurance shall be specific as to coverage and not considered as contributing insurance with any permanent insurance maintained on the present premises. If off-site storage is permitted, coverage shall include transit and storage in an amount sufficient to protect property being transported or stored.

   b. For renovation projects and or portions of work contained within an existing structure, the Owner waives subrogation for damage by fire to existing building structure(s), if the Builder's Risk Policy has been endorsed to include coverage for existing building structure(s) in the amount described in the Special Conditions. However, Contractor shall not be required to obtain such an endorsement unless specifically required by the Special Conditions in the Contract Documents. The aforementioned waiver of subrogation shall not be effective unless such endorsement is obtained.

6. Flood insurance when specified in Supplementary General Conditions or Special Conditions.

7. Umbrella coverage in the amount of not less than $5,000,000.

C. Workers' Compensation Insurance Coverage:

   a. Definitions:

      (1) Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the Texas Workers' Compensation Commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers'

compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the Project.

(2) Duration of the Project - includes the time from the beginning of the work on the Project until the Contractor's/person's work on the Project has been completed and accepted by the Owner.

(3) Coverage – Workers' compensation insurance meeting the statutory requirements of the Texas Labor Code, §401.011(44).

(4) Persons providing services on the Project ("subcontractor") - includes all persons or entities performing all or part of the services the Contractor has undertaken to perform on the Project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the Project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the Project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

b. The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, §401.011(44) for all employees of the Contractor providing services on the Project, for the duration of the Project.
c. The Contractor must provide a certificate of coverage prior to execution of the Agreement Between Owner and Contractor, and in no event later than ten (10) days from Notice of Award. Failure to provide the insurance in a timely fashion may result in loss of Contractor's bid bond.
d. If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the Project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the Owner showing that coverage has been extended.
e. The Contractor shall obtain from each person providing services on a project, and provide to the Owner:

(1) a certificate of coverage, prior to that person beginning work on the Project, so the Owner will have on file certificates of coverage showing coverage for all persons providing services on the Project; and

(2) no later than seven days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project.

f. The Contractor shall retain all required certificates of coverage for the duration of the Project and for one year thereafter.
g. The Contractor shall notify the Owner in writing by certified mail or personal delivery, within 10 days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project.
h. The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the Project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

i. The Contractor shall contractually require each person with who it contracts to provide services on a project, to:

(1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas labor Code, Section 401.011(44) for all of its employees providing services on the Project, for the duration of the Project;
(2) provide to the Contractor, prior to that person beginning work on the Project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the Project, for the duration of the Project;
(3) provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;
(4) obtain from each other person with whom it contracts, and provide to the Contractor:

a. a certificate of coverage, prior to the other person beginning work on the Project; and
b. a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;

(5) retain all required certificate of coverage on file for the duration of the Project and for one year thereafter;
(6) notify the Owner in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project; and
(7) contractually require each person with whom it contracts, to perform as required by paragraphs (1)-(7), with the certificates of

coverage to be provided to the person for whom they are providing services.

j. By signing the Agreement Between Owner and Contractor or providing or causing to be provided a certificate of coverage, the Contractor is representing to the Owner that all employees of the Contractor who will provide services on the Project will be covered by workers' compensation coverage for the duration of the Project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

k. The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the Owner to declare the Agreement Between Owner and Contractor void if the Contractor does not remedy the breach within ten days after receipt of notice of breach from the Owner.

D. If insurance policies are not written for the amounts specified in this Exhibit, Contractor shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of primary coverage.

E. The furnishing of the above listed insurance coverage, as may be modified by the Contract Documents, must be tendered prior to execution of the Agreement Between Owner and Contractor, and in no event later than ten (10) days from Notice of Award. Failure to provide the insurance in a timely fashion may result in loss of Contractor's bid bond.

F. Owner shall be entitled, upon request and without expense, to receive copies of the policies and all endorsements as they apply to the limits set out in this Exhibit.

G. Contractor shall be responsible for payment of premiums for all of the insurance coverages required under this Exhibit. Contractor further agrees that for each claim, suit or action made against insurance provided hereunder, with respect to all matters for which the Contractor is responsible hereunder, Contractor shall be solely responsible for all deductibles and self-insured retentions. Any deductibles or self-insured retentions over **$75,000** in the Contractor's insurance must be declared and approved in writing by Owner in advance.

Exhibit 2

Williamson County
Vendor Reimbursement Policy

The purpose of this Williamson County Vendor Reimbursement Policy ("Policy") is to provide clear guidelines to vendors on Williamson County's expectations and requirements regarding allowable reimbursable expenditures and required backup. The Policy will also minimize conflicts related to invoice payments and define non-reimbursable items. This Policy is considered a guideline and is not a contract.

This Policy may be altered, deleted or amended, at any time and without prior notice to vendors, by action of the Williamson County Commissioners Court. Unenforceable provisions of this Policy, as imposed by applicable law, regulations, or judicial decisions, shall be deemed to be deleted. Any revisions to this Policy will be distributed to all current vendors doing business with the County.

1. Invoices and Affidavits

1.1 Invoices must adequately describe the goods or services provided to County and include all required backup (i.e. reimbursable expenses, mileage log, timesheets, receipts detailing expenses incurred etc.) that is in a form acceptable to the Williamson County Auditor. Invoices that do not adequately describe the goods or services provided to County or contain backup that is satisfactory to the Williamson County Auditor will be returned to vendor for revisions and the provision above relating to invoice errors resolved in favor of the County shall control as to the required actions of vendor and when such invoice must be paid by the County.

1.2 In the event an invoice includes charges based upon hourly billing rates for services or any other rates based upon the amount of time worked by an individual or individuals in performing services, whether the charges are being billed directly to the County or whether they are the basis of invoices from subcontractors for which the vendor seeks reimbursement from the County, the charges shall be accompanied by an affidavit signed by an officer or principal of the vendor certifying that the work was performed, it was authorized by the County and that all information contained in the invoice that is being submitted is true and correct.

1.3 Upon County's request, vendor must submit all bills paid affidavits wherein vendor must swear and affirm that vendor has paid each of its subcontractors, laborers, suppliers and material in full for all labor and materials provided to vendor for or in connection with services and work performed for County and, further, vendor must swear and affirm that vendor is not aware of any unpaid bills, claims, demands, or causes of action by any of its subcontractors, laborers, suppliers, or material for or

in connection with the furnishing of labor or materials, or both, for services and work performed for County.

2. Travel Reimbursement

2.1 The County will only cover costs associated with travel on vendors outside a 50 mile radius from Williamson County, Texas.

2.2 The County will only cover costs associated with travel as documented work for County. If a vendor is also doing business for another client, the travel costs must be split in proportion to the amount of work actually performed for County and the other client. The only allowable travel expense will be for the specific days worked for Williamson County.

2.3 No advance payments will be made to vendor for travel expenditures. The travel expenditure may only be reimbursed after the expenditure/trip has already occurred and vendor has provided the Williamson County Auditor with all necessary and required backup.

2.4 Vendors must submit all travel reimbursement requests on each employee in full. Specifically, a travel reimbursement request must include all related travel reimbursement expenses relating to a particular trip for which vendor seeks reimbursement. Partial travel reimbursement requests will not be accepted (i.e. vendor should not submit hotel and mileage one month then the next month submit rental car and airfare). If the travel reimbursement appears incomplete, the invoice will be sent back to the vendor to be submitted when all information is ready to submit in full.

2.5 Reimbursement for transportation costs will be at the most reasonable means of transportation (i.e.: airline costs will be reimbursed for coach rate, rental car costs will only be reimbursed if rental car travel was most reasonable means of travel as compared to travel by air).

2.6 The County will not be responsible for, nor will the County reimburse additional charges due to personal preference or personal convenience of individual traveling.

2.7 The County will not reimburse airfare costs if airfare costs were higher than costs of mileage reimbursement.

2.8 Additional expenses associated with travel that is extended to save costs (i.e. Saturday night stay) may be reimbursed if costs of airfare would be less than the cost of additional expenses (lodging, meals, car rental, mileage) if the trip had not been extended. Documentation satisfactory to the Williamson County Auditor will be required to justify expenditure.

2.9 County will only reimburse travel expense to necessary personnel of the vendor (i.e. no spouse, friends or family members).

2.10 Except as otherwise set forth herein, a vendor must provide a paid receipt for all expenses. If a receipt cannot be obtained, a written sworn statement of the expense from the vendor may be substituted for the receipt.

2.11 Sales tax for meals and hotel stays are the only sales taxes that will be reimbursed. Sales tax on goods purchased will not be reimbursed. A sales tax exemption form is available from the Williamson County Auditor's Office upon request.

2.12 The County will not pay for any late charges on reimbursable items. It is the responsibility of the vendor to pay the invoice first and seek reimbursement from the County.

3. Meals

3.1 Meal reimbursements are limited to a maximum of $50.00 per day on overnight travel. On day travel (travel that does not require an overnight stay), meal reimbursements are limited to a maximum of $20.00 per day. The travel must be outside the Williamson County, Texas line by a 50 mile radius.

3.2 Receipts are required on meal reimbursement amounts up to the maximum per day amount stated for overnight or day travel. If receipts are not presented, the vendor can request per diem (per diem limits refer to 3.2). However, a vendor cannot combine per diem and meal receipts. Only one method shall be allowed.

3.3 Meals are reimbursable only for vendors who do not have the necessary personnel located within a 50 mile radius of Williamson County, Texas that are capable of carrying the vendor's obligations to County. Meals will not be reimbursed to vendors who are located within a 50 mile radius of Williamson County, Texas.

3.4 County will not reimburse for alcoholic beverages.

3.5 Tips are reimbursable but must be reasonable to limitation of meal allowance

3.6 No meals purchased for entertainment purposes will be allowed.

3.7 Meal reimbursement must be substantiated with a hotel receipt.

4. Lodging

4.1 Hotel accommodations require an itemized hotel folio as a receipt. The lodging receipt should include name of the motel/hotel, number of occupant(s), goods or services for each individual charge (room rental, food, tax, etc.) and the name of the occupant(s). Credit card receipts or any other form of receipt are not acceptable.

4.2 Vendors will be reimbursed for a single room rate charge plus any applicable tax. If a single room is not available, the vendor must provide documentation to prove that a single room was not available in order to justify the expense over and above the single room rate. A vendor may also be required to provide additional documentation if a particular room rate appears to be excessive.

4.3 Personal telephone charges, whether local or long distance, will not be reimbursed.

5. Airfare

5.1 The County will only reimburse up to a coach price fare for air travel.

5.2 The County will exclude any additional charges due to personal preference or personal convenience of the individual traveling (i.e. early bird check in, seat preference charges, airline upgrades, etc. will not be an allowable reimbursement)

5.3 Air travel expenses must be supported with receipt copy of an airline ticket or an itinerary with actual ticket price paid. If tickets are purchased through a website, vendor must submit a copy of the webpage showing the ticket price if no paper ticket was issued.

5.4 Cancellation and/or change flight fees may be reimbursed by the County but vendor must provide the Williamson County Auditor with documentation in writing from a County department head providing authorization for the change.

5.5 The County will not reimburse vendor for tickets purchased with frequent flyer miles.

6. Car Rental

6.1 Vendors that must travel may rent a car at their destination when it is less expensive than other transportation such as taxis, airport shuttles or public transportation such as buses or subways.

6.2 Cars rented must be economy or mid-size. Luxury vehicle rentals will not be reimbursed. Any rental costs over and above the cost of a mid-size rental will be adjusted.

6.3 Vendors will be reimbursed for rental cars if the rental car cost would have been less than the mileage reimbursement cost (based on the distance from vendor's point of origin to Williamson County, Texas) had the vendor driven vendor's car.

6.4 Vendors must return a car rental with appropriate fuel levels as required by rental agreement to avoid the car rental company from adding fuel charges.

6.5 Rental agreement and credit card receipt must be provided to County as back up for the request for reimbursement.

6.6 Insurance purchased when renting vehicle may also be reimbursed.

6.7 Car Rental optional extras such as GPS, roadside assistance, and administrative fees on Tolls will not be reimbursed.

7. Personal Car Usage

7.1 Personal vehicle usage will be reimbursed in an amount equal to the standard mileage rate allowed by the IRS.

7.2 Per code of Federal Regulations, Title 26, Subtitle A, Chapter 1, Subchapter B, Part IX, Section 274(d), all expense reimbursement requests must include the following:

7.2.1.1 Date
7.2.1.2 Destination
7.2.1.3 Purpose
7.2.1.4 Name of traveler(s)
7.2.1.5 Correspondence that verifies business purpose of the expense

7.3 The mileage for a personal vehicle must document the date, location of travel to/from, number of miles traveled and purpose of trip.

7.4 Mileage will be reimbursed on the basis of the most commonly used route.

7.5 Reimbursement for mileage shall not exceed the cost of a round trip coach airfare.

7.6 Reimbursement for mileage shall be prohibited between place of residence and usual place of work.

7.7 Mileage should be calculated from employee's regular place of work or their residence, whichever is the shorter distance when traveling to a meeting or traveling to Williamson County, Texas for vendors who are located outside of Williamson County, Texas by at least a 50 mile radius.

7.8 When more than one person travels in same vehicle, only one person may claim mileage reimbursement.

7.9 Tolls, if reasonable, are reimbursable. Receipts are required for reimbursement. If a receipt is not obtainable, then written documentation of expense must be submitted for reimbursement (administrative fees on Tolls will not be reimbursed).

7.10 Parking fees, if reasonable are reimbursable for meetings and hotel stays. For vendors who contract with a third party for visitor parking at vendor's place of business, Williamson County will not reimburse a vendor based on a percentage of its contracted visitor parking fees. Rather, Williamson County will reimburse Vendor for visitor parking on an individual basis for each time a visitor uses Vendor's visitor parking. Receipts are required for reimbursement. If a receipt is not obtainable, then written documentation of expense must be submitted for reimbursement.

7.11 Operating and maintenance expenses as well as other personal expenses, such as parking tickets, traffic violations, and car repairs and collision damage are not reimbursable.

8. Other Expenses

8.1 Taxi fare, bus tickets, conference registrations, parking, etc. must have a proper original receipt.

9. Repayment of Nonreimbursable Expense.

Vendors must, upon demand, immediately repay County for all inappropriately reimbursed expenses whenever an audit or subsequent review of any expense reimbursement documentation finds that such expense was reimbursed contrary

to these guidelines and this Policy. Williamson County reserves the right to retain any amounts that are due or that become due to a vendor in order to collect any inappropriately reimbursed expenses that a vendor was paid.

10. Non-Reimbursable Expenses

In addition to the non-reimbursable items set forth above in this Policy, the following is a non-exhaustive list of expenses that will not be reimbursed by Williamson County:

10.1 Alcoholic beverages/tobacco products
10.2 Personal phone calls
10.3 Laundry service
10.4 Valet service (excludes hotel valet)
10.5 Movie rentals
10.6 Damage to personal items
10.7 Flowers/plants
10.8 Greeting cards
10.9 Fines and/or penalties
10.10 Entertainment, personal clothing, personal sundries and services
10.11 Transportation/mileage to places of entertainment or similar personal activities
10.12 Upgrades to airfare, hotel and/or car rental
10.13 Airport parking above the most affordable rate available
10.14 Excessive weight baggage fees or cost associated with more than two airline bags
10.15 Auto repairs
10.16 Babysitter fees, kennel costs, pet or house-sitting fees
10.17 Saunas, massages or exercise facilities
10.18 Credit card delinquency fees or service fees
10.19 Doctor bills, prescription and other medical services
10.20 Hand tools
10.21 Safety Equipment (hard hats, safety vests, etc.)
10.22 Office Supplies
10.23 Lifetime memberships to any association
10.24 Donations to other entities
10.25 Any items that could be construed as campaigning
10.26 Community outreach items exceeding $2 per item
10.27 Sales tax on goods purchased
10.28 Any other expenses which Williamson County deems, in its sole discretion, to be inappropriate or unnecessary expenditures.

EXHIBIT 3

DRAWINGS, PLANS AND SPECIFICATIONS

FOR

JUSTICE CENTER - CSCD REMODEL
405 MARTIN LUTHER KING STREET
GEORGETOWN, TEXAS 78626

Architect: BLGY, Inc.

Incorporated by Reference herein.

Commissioners Court - Regular Session **31.**

Meeting Date: 04/04/2017

Request approval for Supplemental Agreement 7 BLGY North Campus Project

Submitted For: Randy Barker **Submitted By:** Teri Jeffries, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on authorizing Supplemental Agreement No. 7 with BLGY, North Campus Project, for additional plan revisions for inclusion of encasement pipe and realignment of waste water lines in the amount of $6,808.06 under 15RFQ102.

Background

Supplement Agreement No. 7 attached for your review.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

BLGY Supplemental Agreement No 7

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/29/2017 08:08 AM
Form Started By: Teri Jeffries		Started On: 03/28/2017 02:23 PM
Final Approval Date: 03/29/2017		

SUPPLEMENTAL AGREEMENT NO. 7 TO AGREEMENT FOR ARCHITECTURAL AND ENGINEERING SERVICES

WILLIAMSON COUNTY NORTH CAMPUS PROJECT ("Project")

This Supplemental Agreement No. 7 to Agreement for Architectural and Engineering Services ("Supplemental Agreement No. 7") is by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and BLGY, Inc. (the "A/E").

RECITALS

WHEREAS, the County and the A/E previously executed an Agreement for Architectural and Engineering Services (the "Agreement"), dated effective November 12, 2015, wherein A/E agreed to perform certain professional architectural and engineering services in connection with the Williamson County North Campus Project ("Project");

WHEREAS, following execution of the Agreement, County and the A/E executed Supplemental Agreement Nos. 1, 2, 3, 4, 5 & 6 to the Agreement for Architectural and Engineering Services in order to add Additional Services to the Agreement's Basic Services;

WHEREAS, County now must add Additional Services in the form of Plan Revisions for the Inclusion of Encasement Pipe and Realignment of a Wastewater Line for the Project;

WHEREAS, Section III of the Agreement requires the parties to execute a contract modification for the performance of Additional Services not specifically described as Basic Services in the Agreement;

WHEREAS, this Supplemental No. 7 sets forth the scope of the Additional Services and the Additional Services compensation for A/E's professional services; and

WHEREAS, it has become necessary to supplement, modify and amend the Agreement in accordance with the Agreement.

AGREEMENT

NOW, THEREFORE, premises considered, the County and the A/E agree that the Agreement is supplemented, amended and modified as follows:

I. Scope of Additional Services

A/E hereby agrees to provide the Additional Services set forth in Exhibit "A", Scope of Additional Services, which is attached hereto and incorporated herein by reference.

II. Additional Services Compensation

A/E will perform the Additional Services set out in Exhibit "A" for the not to exceed lump sum amount of **$6,808.06.**

III. Terms of Agreement Control and Extent of Supplemental Agreement No. 7

All Additional Services described herein will be performed in accordance with the terms and conditions of the Agreement. All other terms of the Agreement and any prior amendments or supplements thereto which have not been specifically amended herein shall remain the same and shall continue in full force and effect.

The County reserves the right and sole discretion to determine the controlling provisions where there is any conflict between the terms of the Agreement, this Supplemental Agreement No. 7 and/or the terms of any document attached hereto as exhibits.

IN WITNESS WHEREOF, the County and the A/E have executed this Supplemental Agreement No. 7, in duplicate, to be effective as of the date of the last party's execution below.

A/E:

BLGY, Inc.

By: _____

Printed Name: Mark Daniel Brown

Title: Vice-President, BLGY

Date: March 24 ____, 20 17

COUNTY:

Williamson County, Texas

By: _____

Printed Name: _____

Title: _____

Date: _____ ____, 20____

EXHIBIT "A"

A/E will provide the following Additional Services:

- Prepare plan revisions for the Inclusion of Encasement Pipe and Realignment of a Wastewater Line site development drawings.
- Conduct communications with HNTB and Architect regarding the inclusion of the wastewater encasement pipe into the scope of work and the realignment of the encasement pipe and wastewater line;
- Edit site plan sheet set and building sheet set with the revisions; and
- Communicate with city officials regarding site plan corrections due to revisions and resubmitting.

Commissioners Court - Regular Session **32.**

Meeting Date: 04/04/2017

Request approval for service Agreement with Intertech Flooring, for carpet installation at Juvenile Justice Center.

Submitted For: Randy Barker **Submitted By:** Teri Jeffries, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on authorizing the service agreement with Intertech Flooring, for carpet installations at the Juvenile Justice Center in the amount of $84,661.39, under TXMAS contract No. TXMAS-13-72020.

Background

Service agreement and quote attached for your review.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Intertech Service Agreement

Intertech Quote

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/29/2017 01:41 PM
Form Started By: Teri Jeffries		Started On: 03/28/2017 03:45 PM
Final Approval Date: 03/29/2017		

THE STATE OF TEXAS §

COUNTY OF WILLIAMSON §

SERVICES CONTRACT
FOR CARPET INSTALL
(Williamson County Juvenile)

THIS SERVICES CONTRACT (hereinafter "Contract") is made and entered into by and between **Williamson County, Texas** (hereinafter "The County"), a political subdivision of the State of Texas, acting herein by and through its governing body, and **W.E. Imhoff & Company, Inc. d/b/a "Intertech Flooring**, (hereinafter "Service Provider"). The County agrees to engage Service Provider as an independent contractor, to assist in providing certain operational services pursuant to the following terms, conditions, and restrictions:

I.

Services: Service Provider shall provide services *as an independent contractor* pursuant to terms and policies of the Williamson County Commissioners Court. Service Provider expressly acknowledges that he, she or it is not an employee of The County. The services include, but are not limited to the following items in order to complete the project:

A. As described in the attached Statement of Work/Quotation, dated February 24, 2017 and marked Exhibit "A," which is incorporated herein as if copied in full.

Should The County choose to add services in addition to those described in Exhibit "A", such additional services shall be described in a separate written amendment to this Contract wherein the additional services shall be described and the parties shall set forth the amount of compensation to be paid by The County for the additional services. Service Provider shall not begin any additional services and The County shall not be obligated to pay for any additional services unless a written amendment to this Contract has been signed by both parties.

II.

Effective Date and Term: This contract shall be in full force and effect when signed by all parties and shall continue for a reasonable time for the specific project and

shall terminate upon project completion or when terminated pursuant to paragraph X below.

III.

Consideration and Compensation: Service Provider will be compensated based on a fixed sum for the specific project herein. **The not-to-exceed amount under this agreement is $84,661.39, unless amended by a change order and approved by the Williamson County Commissioners Court.** Payment for goods and services shall be governed by Chapter 2251 of the Texas Government Code. An invoice shall be deemed overdue the 31st day after the later of (1) the date The County receives the goods under the contract; (2) the date the performance of the service under the contract is completed; or (3) the date the Williamson County Auditor receives an invoice for the goods or services. Interest charges for any overdue payments shall be paid by The County in accordance with Texas Government Code Section 2251.025. More specifically, the rate of interest that shall accrue on a late payment is the rate in effect on September 1 of The County's fiscal year in which the payment becomes due. The said rate in effect on September 1 shall be equal to the sum of one percent (1%); and (2) the prime rate published in the Wall Street Journal on the first day of July of the preceding fiscal year that does not fall on a Saturday or Sunday.

IV.

Insurance: Service Provider shall provide and maintain, until the services covered in this Contract is completed and accepted by The County, the minimum insurance coverage in the minimum amounts as described below. Coverage shall be written on an occurrence basis by companies authorized and admitted to do business in the State of Texas and rated A- or better by A.M. Best Company or otherwise acceptable to The County and name The County as an additional insured.

Type of Coverage	**Limits of Liability**
a. Worker's Compensation	Statutory
b. Employer's Liability	
Bodily Injury by Accident	$500,000 Ea. Accident
Bodily Injury by Disease	$500,000 Ea. Employee
Bodily Injury by Disease	$500,000 Policy Limit

c. Comprehensive general liability including completed operations and contractual liability insurance for bodily injury, death, or property damages in the following amounts:

COVERAGE	PER PERSON	PER OCCURRENCE
Comprehensive General Liability *(including premises, completed operations and contractual)*	$ 500,000	$ 500,000
Aggregate policy limits:		$1,000,000

Service Provider, as an independent contractor, meets the qualifications of an "Independent Contractor" under Texas Worker's Compensation Act, Texas Labor Code, Section 406.141, and must provide its employees, agents and sub-subcontractors worker's compensation coverage. Contactor shall not be entitled to worker's compensation coverage or any other type of insurance coverage held by The County.

Upon execution of this Contract, Service Provider shall provide The County with insurance certificates evidencing compliance with the insurance requirements of this Contract.

V.

Entire Contract & Incorporated Documents: This Contract constitutes the entire Contract between the parties and may not be modified or amended other than by a written instrument executed by both parties. Documents expressly incorporated (as if copied in full) into this Contract include the following:

A. As described in the attached Statement of Work/Quotation, dated February 24, 2017 and marked Exhibit "A," which is incorporated herein as if copied in full; and

B. Any required insurance certificates evidencing required coverages.

The County reserves the right and discretion (pursuant to public policy and Texas Constitutional principles) to determine applicable provisions where there is any conflict between this Contract and any of the above-referenced contract documents/exhibits or incorporated documents.

VI.

No Agency Relationship & Indemnification: It is understood and agreed that Service Provider shall not in any sense be considered a partner or joint venturer with The County, nor shall Service Provider hold himself out as an agent or official representative of The County unless expressly authorized to do so by a majority of the Williamson County Commissioners Court. Service Provider shall be considered an independent contractor for the purpose of this Contract and shall in no manner incur any expense or

liability on behalf of The County other than what may be expressly allowed under this Contract. The County will not be liable for any loss, cost, expense or damage, whether indirect, incidental, punitive, exemplary, consequential of any kind whatsoever for any acts by Service Provider or failure to act relating to the services being provided.

VII.

INDEMNIFICATION - EMPLOYEE PERSONAL INJURY CLAIMS: TO THE FULLEST EXTENT PERMITTED BY LAW, THE SERVICE PROVIDER SHALL INDEMNIFY, DEFEND (WITH COUNSEL OF THE COUNTY'S CHOOSING), AND HOLD HARMLESS THE COUNTY, AND THE COUNTY'S EMPLOYEES, AGENTS, REPRESENTATIVES, PARTNERS, OFFICERS, AND DIRECTORS (COLLECTIVELY, THE "INDEMNITEES") AND SHALL ASSUME ENTIRE RESPONSIBILITY AND LIABILITY (OTHER THAN AS A RESULT OF INDEMNITEES' GROSS NEGLIGENCE) FOR ANY CLAIM OR ACTION BASED ON OR ARISING OUT OF THE PERSONAL INJURY, OR DEATH, OF ANY EMPLOYEE OF THE SERVICE PROVIDER, OR OF ANY SUBCONTRACTOR, OR OF ANY OTHER ENTITY FOR WHOSE ACTS THEY MAY BE LIABLE, WHICH OCCURRED OR WAS ALLEGED TO HAVE OCCURRED ON THE WORK SITE OR IN CONNECTION WITH THE PERFORMANCE OF THE WORK. SERVICE PROVIDER HEREBY INDEMNIFIES THE INDEMNITEES EVEN TO THE EXTENT THAT SUCH PERSONAL INJURY WAS CAUSED OR ALLEGED TO HAVE BEEN CAUSED BY THE SOLE, COMPARATIVE OR CONCURRENT NEGLIGENCE OF THE STRICT LIABILITY OF ANY INDEMNIFIED PARTY. THIS INDEMNIFICATION SHALL NOT BE LIMITED TO DAMAGES, COMPENSATION, OR BENEFITS PAYABLE UNDER INSURANCE POLICIES, WORKERS COMPENSATION ACTS, DISABILITY BENEFITS ACTS, OR OTHER EMPLOYEES BENEFIT ACTS.

INDEMNIFICATION - OTHER THAN EMPLOYEE PERSONAL INJURY CLAIMS: TO THE FULLEST EXTENT PERMITTED BY LAW, SERVICE PROVIDER SHALL INDEMNIFY, DEFEND (WITH COUNSEL OF THE COUNTY'S CHOOSING), AND HOLD HARMLESS THE COUNTY, AND THE COUNTY'S EMPLOYEES, AGENTS, REPRESENTATIVES, PARTNERS, OFFICERS, AND DIRECTORS (COLLECTIVELY, THE "INDEMNITEES") FROM AND AGAINST CLAIMS, DAMAGES, LOSSES AND EXPENSES, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES, ARISING OUT OF OR ALLEGED TO BE RESULTING FROM THE PERFORMANCE OF THIS AGREEMENT OR THE WORK DESCRIBED HEREIN, TO THE EXTENT CAUSED BY THE NEGLIGENCE, ACTS, ERRORS, OR OMISSIONS OF SERVICE PROVIDER OR ITS SUBCONTRACTORS, ANYONE EMPLOYED BY THEM OR ANYONE FOR WHOSE ACTS THEY MAY BE LIABLE, REGARDLESS OF WHETHER OR NOT SUCH CLAIM, DAMAGE, LOSS OR EXPENSE IS CAUSED IN WHOLE OR IN PART BY A PARTY INDEMNIFIED HEREUNDER.

VIII.

No Waiver of Sovereign Immunity or Powers: Nothing in this Contract will be deemed to constitute a waiver of sovereign immunity or powers of The County, the Williamson County Commissioners Court, or the Williamson County Judge.

IX.

Compliance with All Laws: Service Provider agrees and will comply with any and all local, state or federal requirements with respect to the services rendered.

X.

Termination: This Contract may be terminated at any time at the option of either party, without future or prospective liability for performance upon giving seven (7) days written notice thereof.

XI.

Venue and Applicable Law: Venue of this Contract shall be Williamson County, Texas, and the laws of the State of Texas shall govern all terms and conditions.

XII.

Severability: In case any one or more of the provisions contained in this Contract shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision in this Contract and this Contract shall be construed as if such invalid, illegal, or unenforceable provision had never been contained in it.

XIII.

Right to Audit: Service Provider agrees that The County or its duly authorized representatives shall, until the expiration of three (3) years after final payment under this Contract, have access to and the right to examine and photocopy any and all books, documents, papers and records of Service Provider which are directly pertinent to the services to be performed under this Contract for the purposes of making audits, examinations, excerpts, and transcriptions. Service Provider agrees that The County shall have access during normal working hours to all necessary Service Provider facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. The County shall give Service Provider reasonable advance notice of intended audits.

XIV.

Confidentiality: Service Provider expressly agrees that he or she will not use any incidental confidential information that may be obtained while working in a governmental setting for his or her own benefit, and agrees that he or she will not enter any unauthorized areas or access confidential information and he or she will not disclose any information to unauthorized third parties, and will take care to guard the security of the

information at all times.

XV.

Good Faith Clause: Service Provider agrees to act in good faith in the performance of this Contract.

XVI.

No Assignment: Service Provider may not assign this Contract.

XVII.

Confidentiality: Service Provider expressly agrees that he or she will not use any incidental confidential information that may be obtained while working in a governmental setting for his or her own benefit, and agrees that he or she will not enter any unauthorized areas or access confidential information and he or she will not disclose any information to unauthorized third parties, and will take care to guard the security of the information at all times.

XVIII.

County Judge or Presiding Officer Authorized to Sign Contract: The presiding officer of The County's governing body who is authorized to execute this instrument by order duly recorded may execute this Contract on behalf of The County.

WITNESS that this Contract shall be effective as of the date of the last party's execution below.

WILLIAMSON COUNTY:

_____
Authorized Signature

_____
Printed Name

Date: _____, 2017

SERVICE PROVIDER:
W.E. Imhoff & Co., Inc. d/b/a INTERTECH FLOORING

Authorized Signature

W.E. Imhoff III President
Printed Name

Date: March 27, 2017

616 Duvall Road Mail Drop OWE
Dalton, GA 30722

Shaw INTEGRATED SOLUTIONS
Shaw Industries, Inc.

Phone: (770) 276-7504
Fax: (706) 428-3293

A Berkshire Hathaway Company

Proposal Submitted To	Attention	Phone	Fax	Date
Intertech Commercial Flooring	Billy Chrzan	(512) 771-1880	( ) -	02/15/17

Proposal Name	Job Name	Job #
Wilco Juvenile	Wilco Juvenile	70026

Street	Job Street	Proposal ID
1106 Smith Road Suite 100	1106 Smith Road Suite 100	79446

City, State and Zip	Architect	Date of Plans	Add #	Job City, State and Zip	Customer Job #	Customer PO
Austin, TX 78721	TXMAS			AUSTIN, TX 78721	None	None

We hereby submit specifications and estimates for:

Item Description	Color	Qty	UOM	Unit Price	Extended Price
Open Market - Vim Tile	00592/Power	3,013.32	SY	$13.10	$39,474.49
SIN#31-604 - Shaw 5100 Pressure Sensitive Adhesive (Tile)		25.00	4 Gal	$67.13	$1,678.25
SIN#31-604 - S127V Rubber Cove Base - 4"	TBS/To Be Selected	4,630.00	LF	$0.72	$3,314.66
SIN#31-604 - S133V Cove Base Adhesive -1 Gallon		19.00	Gal	$24.55	$466.36
SIN#31-604 - Carpet Tile Installation		3,013.32	SY	$6.53	$19,689.31
SIN#31-604 - Take up and Removal		3,013.32	SY	$2.56	$7,704.51
Open Market - Covebase Install		4,630.00	LF	$2.27	$10,522.73
Open Market - Metal Transition anchored		425.00	LF	$4.26	$1,811.08
				Base Bid Total:	**$84,661.39**

Proposal Inclusions and Exclusions:

1. TXMAS Contract#TXMAS-13-72020
   Effective 3/26/2013 - 3/14/2018
2. Local Contact: David Kennedy Installer: Intertech Commercial Flooring
3. Please fax your Purchase Order to Shaw Integrated Solutions at fax # 706-428-3293 to initiate the order process. A purchase order is required before materials can be shipped.
4. Material title and risk of loss passes to the purchaser at the time of material delivery to owner provided address.
5. Remit to Address: SHAW INTEGRATED SOLUTIONS, MAIL DROP 999, PO BOX 630862, CINCINNATTI, OHIO 45263-0862
6. SII License Numbers: AL 50787, AK 40319, AZ ROC300955/ROC300956, CA 1007317, ID RCE-39577/022829-AA-4, MT 216017, NV 0080544/0080545/0080546/0080547, NC 75663, NM 385848, ND 53106, NY 58-2240471C, OR 205839, RI 38919, TN 69109, UT 9531877-5501, VA 2705157974, WA SHAWIII853DO, WV WV054222

616 Duvall Road Mail Drop OWE
Dalton, GA 30722
Proposal ID: 79446

Shaw INTEGRATED SOLUTIONS
Shaw Industries, Inc.

Phone: (770) 276-7504
Fax: (706) 428-3293

A Berkshire Hathaway Company

We PROPOSE to perform the work complete in accordance with the specifications and as described above for the SUM of:

Signature: Lindsey Waters **Lindsey Waters** **$84,661.39**

Email: Lindsey.Waters@shawinc.com

Conditions of Proposal:

1. This proposal may be withdrawn if not accepted within 30 days of its issuance. Shaw will consider reasonable requests to engage in negotiations for revisions to this Proposal, including signing a subcontract that incorporates the terms of this Proposal.
2. This proposal is subject to credit review and approval. Payment terms are net 30. Past due invoices are subject to service charges of 1.5% per month (18% per annum). In the case of any default, Customer shall pay Shaw's reasonable attorney fees and costs, including those on any appeal, even if no suit or action is filed.
3. All work shall be performed in a workmanlike manner according to industry standards. Areas to receive flooring shall be free and clear of debris. Any changes to the work shall be performed only after execution of a written change order.
4. Prior to commencement of Shaw's work: (a) Customer shall test all concrete sub floors receiving flooring for vapor emission levels and alkalinity per manufacturers' recommendations utilizing ASTM F2170 and/or F1869 and provide written results to Spectra, including a list of any sealers applied to the concrete sub floor; (b) If Customer does not provide such reports at least 10 days prior to commencement of Shaw's work, then Customer shall provide Spectra with access to all concrete sub floors for appropriate testing and Customer shall be responsible for the costs of such testing; and (c) Any concrete sub floors not meeting manufacturers' requirements for installation will require correction or the execution of a separate waiver agreement.
5. All work is contingent upon strikes, accidents or delays beyond Shaw's control. Customer shall carry insurance for all hazards, including fire. Shaw's workers are fully covered by Worker's Compensation and Liability Insurance.
6. Customer represents and warrants that: (a) the project site contains no hazardous or other dangerous substances, either exposed or concealed; or (b) Customer has given written notice to Shaw of all such substances and their location(s). To the fullest extent permitted by law, Customer shall indemnify, defend and hold Shaw harmless from any damage, claim, loss, expense and attorney fees related to Shaw's liability, if any, including any federal or state statute related to hazardous or other dangerous substances.

ACCEPTANCE OF PROPOSAL: The above prices, specifications, and conditions are satisfactory and are hereby ACCEPTED. You are authorized to do the work as specified.

Customer: Intertech Commercial Flooring **Signed:** _____ **Date:** _____

Commissioners Court - Regular Session **33.**

Meeting Date: 04/04/2017

Sale of Ridgmar Landing Property

Submitted By: Kerstin Hancock, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on authorizing Purchasing Agent to advertise and receive sealed bids for the Sale of Real Property located between RM 2243, Ronald W. Reagan Boulevard, Ridgmar Road, and E. Windermere Street, in Leander, Texas under IFB 1703-151, pursuant to Tex. Loc. Gov't Code § 272.001 *et seq.*

Background

This property is described as a 8.654 acre tract of land situated in the E.D. Harmon Survey, Abstract No. 6, in Williamson County, Texas, being a portion of Lot 5 and Lot 6, Block 3, Ridgmar Landing, a subdivision recorded in Cabinet D, Slides 67-69, Plat Records of Williamson County, Texas, same being a portion of Tract 1 and a 8.654 acre tract of land situated in the E.D. Harmon Survey, Abstract No. 6, in Williamson County, Texas, being a portion of Lot 5 and Lot 6, Block 3, Ridgmar Landing, a subdivision recorded in Cabinet D, Slides 67-69, Plat Records of Williamson County, Texas, same being a portion of Tract 1 and a portion of Tract 2 conveyed to Williamson County, Texas as described in Document No. 2003006077 of the Official Public Records of Williamson County, Texas (the "Property").

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

bid packet

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 09:21 AM
Form Started By: Kerstin Hancock		Started On: 03/30/2017 08:36 AM
Final Approval Date: 03/30/2017		

PUBLIC ANNOUNCEMENT AND GENERAL INFORMATION

WILLIAMSON COUNTY PURCHASING DEPARTMENT
SOLICIATION 1703-151
Sale of Ridgmar Landing Property

BIDS MUST BE RECEIVED ON OR BEFORE:
Apr 25, 2017 2:00:00 PM CDT

BIDS WILL BE PUBLICLY OPENED:
Apr 25, 2017 2:00:00 PM CDT

Notice is hereby given that sealed Bids for the above-mentioned goods and/or services will be accepted by the Williamson County Purchasing Department. Williamson County uses BidSync to distribute and receive bids. Specifications for this IFB may be obtained by registering at www.bidsync.com.

Williamson County prefers and requests electronic submittal of this Bid.

All electronic bids must be submitted via: www.bidsync.com

Electronic bids are requested, however paper bids will currently still be received, until further notice and may be mailed or delivered to the address listed below.

Bidders are strongly encouraged to carefully read this entire IFB.

All interested Bidders are invited to submit a Bid in accordance with the Instructions and General Requirements, Bid Format, Bid Specifications, and Definitions, Terms and Conditions stated in this IFB.

Please note that a complete package must be submitted choosing one of the above two methods. Split packages submitted will be considered "unresponsive" and will not be accepted or evaluated.

Williamson County will not accept any Bids received after the submittal deadline, and shall return such Bids unopened to the Bidder.

General Information:

- If mailed or delivered in person, Bids and Bid addenda are to be delivered in sealed envelope on or before the submittal deadline, as noted in the Public Announcement and General Information listed above for this IFB, to:

  Williamson County Purchasing Department
  Attn: **BID NAME AND NUMBER**
  901 South Austin Avenue
  Georgetown, Texas 78626

  - Bidders should list the Bid Number, Bid Name, Name and Address of Bidder, and the Date of the Bid opening on the outside of the box or envelope and note "Sealed Bid Enclosed."
  - Bidder should submit one (1) original.
  - Williamson County will NOT be responsible for unmarked or improperly marked envelopes.
  - Williamson County will not accept any responsibility for Bids being delivered by third party carriers.
  - Facsimile transmittals will NOT be accepted.

- Bids will be opened publicly in a manner; however, to avoid public disclosure of contents only the names and of Bidders and prices will be read aloud.

- All submitted questions with their answers will be posted and updated on www.bidsync.com.

- It is the Bidder's responsibility to review all documents in BidSync, including any Addenda that may have been added after the document packet was originally released and posted.

  - Any Addenda and/or other information relevant to the IFB will be posted on www.bidsync.com.

  - The Williamson County Purchasing Department takes no responsibility to ensure any interested Bidder has obtained any outstanding addenda or additional information.

Bid 1703-151
Sale of Ridgmar Landing Property

Bid Number	1703-151
Bid Title	Sale of Ridgmar Landing Property
Bid Start Date	In Held
Bid End Date	Apr 25, 2017 2:00:00 PM CDT
Question & Answer End Date	Apr 19, 2017 2:00:00 PM CDT
Bid Contact	Kerstin N Hancock 512-**943**-1546 khancock@wilco.org
Contract Duration	**180 days**
Contract Renewal	Not Applicable
Prices Good for	**180 days**

Bid Comments

WILLIAMSON COUNTY, TEXAS NOTICE OF OFFER TO SELL REAL PROPERTY

Pursuant to § 272.001 of the Texas Local Government Code, WILLIAMSON COUNTY, TEXAS is offering to sell certain real property located between RM 2243, Ronald W. Reagan Boulevard, Ridgmar Road, and E. Windermere Street, in Leander, Texas, and described as a 8.654 acre tract of land situated in the E.D. Harmon Survey, Abstract No. 6, in Williamson County, Texas, being a portion of Lot 5 and Lot 6, Block 3, Ridgmar Landing, a subdivision recorded in Cabinet D, Slides 67-69, Plat Records of Williamson County, Texas, same being a portion of Tract 1 and a portion of Tract 2 conveyed to Williamson County, Texas as described in Document No. 2003006077 of the Official Public Records of Williamson County, Texas (the "Property").

Refer to attached documentation identified below:

Metes and Bounds Description provided by Diamond Surveying, Inc located at 116 Skyline Road, Georgetown, TX 78628 dated 13 August 2012.

Sketch to Accompany Metes and Bounds Description dated 13 August 2012

All bids will be evaluated on the basis of what is in the best interest of Williamson County. While the purchase price is important, the purchase price will not necessarily be the determining factor in the selection of the best bid. All bids will be considered at a regularly scheduled meeting of the Williamson County Commissioners Court in Georgetown, Texas. Williamson County may accept or reject any and all bids.

DELIVERY OF BIDS

The County uses BidSync to distribute and receive Bids and proposals. It is preferred that Bids submitted electronically through BidSync; however, Bidders can submit a hard copy.
Refer to www.bidsync.com for further information on how to submit electronically.
If mailed or delivered in person, Bids and Bid Addenda are to be delivered in sealed envelope on or before the submittal deadline, as noted in the Public Announcement and General Information listed in this IFB package, to:
Williamson County Purchasing Department
Attn: Bid Name and Number
901 South Austin Avenue
Georgetown, Texas 78626
Also, all Bidders should list their Name and Address, and the Date of the Bid opening on the outside the box or envelope and note "Sealed Bid Enclosed." The County will not accept any Bids received after the submittal deadline, and shall return such Bids unopened to the Bidder. The County will not accept any responsibility for Bids being delivered by third party carriers.
Bids will be opened publicly and the names of Bidders and pricing will be read aloud.

Item Response Form

Item	**1703-151--01-01 - Ridgemar Landing Bid. Please add all pricing and bid documents to this line item**
Quantity	**1 each**
Unit Price	
Delivery Location	**Williamson County, Texas** Williamson County Purchasing Department 901 S. Austin Avenue Georgetown TX 78626 **Qty** 1

Description
Please add all pricing and bid documents to this line item.

WILLIAMSON COUNTY, TEXAS
NOTICE OF OFFER TO SELL REAL PROPERTY

Pursuant to § 272.001 of the Texas Local Government Code, WILLIAMSON COUNTY, TEXAS is offering to sell certain real property located between RM 2243, Ronald W. Reagan Boulevard, Ridgmar Road, and E. Windermere Street, in Leander, Texas, and described as a 8.654 acre tract of land situated in the E.D. Harmon Survey, Abstract No. 6, in Williamson County, Texas, being a portion of Lot 5 and Lot 6, Block 3, Ridgmar Landing, a subdivision recorded in Cabinet D, Slides 67-69, Plat Records of Williamson County, Texas, same being a portion of Tract 1 and a portion of Tract 2 conveyed to Williamson County, Texas as described in Document No. 2003006077 of the Official Public Records of Williamson County, Texas (the "Property").

Sealed bids for the purchase of the Property shall be delivered on or before 2:00 p.m. (CDT) on April 25, 2017 to Williamson County Purchasing Department, Attn: Sale of Ridgmar Landing Property, 901 S. Austin Avenue, Georgetown, Texas 78626. All bids submitted shall have "Ridgmar Landing Bid" written in bold letters on the outside of the envelope. All bids will be considered at a regularly scheduled meeting of the Williamson County Commissioners Court in Georgetown, Texas.

Bids will be evaluated on the basis of what is in the best interest of Williamson County. While the purchase price is important, the purchase price will not necessarily be the determining factor in the selection of the best bid. All bids must be on the form provided by the County.

For a copy of the bid form, a more detailed description of the property, or any other information, contact Kerstin Hancock, Deputy Purchasing Agent, Williamson County Texas, at khancock@wilco.org.

Williamson County may accept or reject any and all bids.

346716

METES AND BOUNDS DESCRIPTION

FOR An 8.654 ACRE TRACT OF LAND SITUATED IN THE E.D. HARMON SURVEY, ABSTRACT NO. 6, IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF LOT 5 AND LOT 6, BLOCK 3, RIDGMAR LANDING, A SUBDIVISION RECORDED IN CABINET D, SLIDES 67 – 69, PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, SAME BEING A PORTION OF TRACT 1 AND A PORTION OF TRACT 2 CONVEYED TO WILLAMSON COUNTY, TEXAS, AS DESCRIBED IN DOCUMENT NO. 2003006077 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 8.654 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at 1/2" iron rod found on the northwest corner of said LOT 6, BLOCK 3, RIDGMAR LANDING, same being on the northwest corner of said WILLIAMSON COUNTY TRACT 2, same being on a point in the easterly boundary line of a called 12.88-acre tract of land conveyed to BEASLEY TRACT, LP, recorded in Document No. 2011035206, of the Official Public Records of Williamson County, Texas, same being on the southwest corner of a called 1.37-acre tract of land (Tract 4C) conveyed to BEASLEY TRACT, LP, recorded in Document No. 2011035210, of the Official Public Records Williamson County, Texas, monumenting the northwest corner and **POINT OF BEGINNING** hereof, from which a 1/2" iron rod found on an angle point in said easterly boundary line of the 12.88-acre BEASLEY TRACT, LP tract, bears N05°24’29”E a distance of 126.33 feet;

THENCE with the northerly boundary line of said LOT 6, BLOCK 3, RIDGMAR LANDING, same being the northerly boundary line of said WILLIAMSON COUNTY TRACT 2, same being the southerly boundary line of said 1.37-acre BEASLEY TRACT, **S83°01’00”E** for a distance of **220.63 feet** to a 1/2” iron rod set with cap marked “Diamond Surveying”, on a point of curvature in the northerly boundary line of said LOT 6, BLOCK 3, RIDGMAR LANDING, same being on a point of curvature in the northerly boundary line of said WILLIAMSON COUNTY TRACT 2, same being on a point of curvature in the southerly boundary line of said 1.37-acre BEASLEY TRACT, tract, same being on a point in the curving right-of-way line of RIDGLEA COURT (50’ right-of-way radius) monumenting a point of curvature hereof;

THENCE with said northerly boundary line of LOT 6, BLOCK 3, RIDGMAR LANDING, same being the northerly boundary line of said WILLIAMSON COUNTY TRACT 2, same being with the southerly right-of-way line of said RIDGLEA COURT, with the arc of a curve to the left having a **delta angle of 148°20’47”**, an **arc length of 129.46 feet**, a **radius of 50.00 feet**, and a **chord which bears S67°43’39”E**

for a distance of **96.21 feet** to a 1/2" iron rod set with cap marked "Diamond Surveying" on a point in the westerly right-of-way line of RONALD W. REAGAN BOULEVARD, as monumented on the ground (200' wide right-of-way), for the upper northeast corner hereof, from which a 1/2" iron rod found monumenting the northeast corner of said LOT 6, BLOCK 3, RIDGMAR LANDING, same being on the northwest corner of said LOT 5, BLOCK 3, RIDGMAR LANDING, same being on the northeast corner of said WILLIAMSON COUNTY TRACT 2, same being on the northwest corner of said WILLIAMSON COUNTY TRACT 1, bears with the arc of a curve to the left having a delta angle of 2°18'20", an arc length of 2.01 feet, a radius of 50.00 feet, and a chord which bears N36°56'47"E a distance of 2.01 feet;

THENCE with the westerly right-of-way line of RONALD W. REAGAN BOULEVARD as monumented on the ground, through the interior of said LOT 6, BLOCK 3, RIDGMAR LANDING, same being through the interior of said WILLIAMSON COUNTY TRACT 2, **S29°01'29"E** for a distance of **1.48 feet** to a 1/2" iron rod found with cap marked "Diamond Surveying" on a point in the common boundary line of said LOT 5 and LOT 6, BLOCK 3, RIDGMAR LANDING, same being on a point in the common boundary line of said WILLIAMSON COUNTY TRACT 1 and WILLIAMSON COUNTY TRACT 2, same being on an angle point in the westerly boundary line of the called 1.059 acre tract of land described in Exhibit "B" of "RIGHT OF ENTRY, POSSESSION AND CONSTRUCTION EASEMENT" recorded in Document No. 2002071222 of the Official Public Records of Williamson County, Texas;

THENCE through the interior of said LOT 5, BLOCK 3, RIDGMAR LANDING, same being through the interior of said WILLIAMSON COUNTY TRACT 1, same being with the westerly right-of-way line of RONALD W. REAGAN BOULEVARD as monumented on the ground, same being with said westerly boundary line of the said 1.059-acre tract described in Exhibit "B" of said Document No. 2002071222, the following three (3) courses and distances:

1) **S29°01'29"E** for a distance of **91.61 feet** to a 1/2" iron rod found with cap marked "Diamond Surveying", monumenting the beginning of curve hereof;

2) With arc of a **curve to the right** having a **delta angle of 8°24'37"**, an **arc length of 405.83 feet**, a **radius of 2764.79 feet**, and a **chord which bears S24°49'11"E** for a distance of **405.47 feet** to 1/2" iron rod found with cap marked "Diamond Surveying", monumenting the end of said curve;

3) **S20°36'52"E** for a distance of **29.61 feet** to a 1/2" iron rod found with cap marked "Diamond Surveying", on a

point in the common boundary line of LOT 4 and LOT 5, BLOCK 3, of said RIDGMAR LANDING, same being on a point in the easterly boundary line of said WILLIAMSON COUNTY TRACT 1, same being on the north corner of a called 0.38 acre tract of land (Tract 4D) conveyed to BEASLEY TRACT, LP, recorded in aforementioned Document No. 2011035210, same being on the south corner of said 1.059-acre tract described in Exhibit "B" of said Document No. 2002071222, same being on an angle point in the westerly boundary line of a called 2.983 acre tract of land described as Exhibit "C" in said Document No. 2002071222, monumenting an angle point hereof;

THENCE departing said westerly right-of-way line of RONALD W. REAGAN BOULEVARD, with the common boundary line of said LOT 4 and LOT 5, BLOCK 3, RIDGMAR LANDING, same being with the easterly boundary line of said WILLIAMSON COUNTY TRACT 1, same being with the westerly boundary line of said 0.38-acre BEASLEY TRACT, **S0°43'46"E**, at a distance of 11.76 feet passing a 1/2" iron rod found with cap marked "Diamond Surveying", continuing an additional 76.44 feet passing a 1/2" iron rod found with cap marked "Diamond Surveying", continuing an additional 195.48 feet, for a total distance of **283.68 feet** to a 1/2" iron rod set with cap marked "Diamond Surveying" on the southeast corner of said WILLIAMSON COUNTY TRACT 1, same being on the southwest corner of said called 0.38-acre BEASLEY TRACT, same being on a point in the northerly boundary line of a called 0.149 acre tract of land conveyed to DALE T. RAVENEY and KATHLEEN A. RAVENEY recorded in Document No. 9809504 of the Official Records of Williamson County, Texas, same being on a point in the approximate center of BRUSHY CREEK, monumenting the southeast corner hereof;

THENCE with the common boundary line of said WILLIAMSON COUNTY TRACT 1 and said 0.149-acre RAVENEY tract, same being with the approximate centerline of said BRUSHY CREEK, **N70°44'16"W**, for a distance of **132.27 feet** to a 1/2" iron rod set with cap marked "Diamond Surveying" on the northwest corner of said 0.149-acre RAVENEY tract, same being on a point in the easterly boundary line of a called 0.18 acre tract of land (Tract 3) conveyed to DALE T. RAVENEY and wife, KATHLEEN A. RAVENEY recorded in Document No. 9648091 of the Official Records of Williamson County, Texas, monumenting an angle point hereof, from which a 1/2" iron rod found on the southwest corner of said 0.149-acre RAVENEY tract, same being the southeast corner of said 0.18-acre (Tract 3) RAVENEY tract, same being on the northeast corner of LOT 3, BLOCK 2, of said RIDGMAR LANDING, same being on the northwest corner of LOT 4, BLOCK 2, of said RIDGMAR LANDING, bears S2°44'24"E a distance of 54.00 feet;

THENCE with the common boundary line of said WILLIAMSON COUNTY TRACT 1 and said 0.18-acre RAVENEY tract, with the approximate centerline of said BRUSHY CREEK the following two (2) courses and distances:

1) **N2°44′24″W** for a distance of **1.00 feet** to a 1/2" iron rod set with cap marked "Diamond Surveying", on the northeast corner of said 0.18-acre RAVENEY tract, monumenting an angle point hereof;

2) **S87°12′20″W** for a distance of **227.13 feet** to a point on the northwest corner of said 0.18-acre RAVENEY tract, same being on the northeast corner of a called 0.01 acre tract of land (Tract 2) described in said Document No. 9648091, same being on the calculated unmonumented southwest corner of said WILLIAMSON COUNTY TRACT 1, same being on the southeast corner of said WILLIAMSON COUNTY TRACT 2, for a point in the southerly boundary line hereof;

THENCE with the common boundary line of said WILLIAMSON COUNTY TRACT 2 and said 0.01-acre RAVENEY tract, and with the approximate centerline of BRUSHY CREEK, **S87°12′20″W** for a distance of **76.02 feet** to a 1/2" iron rod found on the westerly corner of said 0.01-acre RAVENEY tract, same being on the northwest corner of LOT 3, BLOCK 2, RIDGMAR LANDING, same being on the northeast corner of LOT 2, BLOCK 2, RIDGMAR LANDING, same being on a point in the southerly boundary line of said LOT 6, BLOCK 3, RIDGMAR LANDING, monumenting an angle point hereof;

THENCE with the southerly boundary line of said WILLIAMSON COUNTY TRACT 2, same being with the southerly boundary line of said LOT 6, BLOCK 3, same being with the northerly boundary line of said LOT 2, BLOCK 2, RIDGMAR LANDING, same being with the approximate centerline of BRUSHY CREEK, **N82°38′36″W** for a distance of **183.67 feet** to a calculated unmonumented point on the southwest corner of said LOT 6, BLOCK 3, same being on the southwest corner of said WILLIAMSON COUNTY TRACT 2, same being on the southeast corner of aforementioned 12.88-acre BEASLEY TRACT, for the southwest corner hereof;

THENCE departing the centerline of BRUSHY CREEK, with the westerly boundary line of said LOT 6, BLOCK 3, RIDGMAR LANDING, same being with the westerly boundary line of said WILLIAMSON COUNTY TRACT 2, same being the easterly boundary line of said 12.88-acre BEASLEY TRACT, **N5°22′12″E** passing at a distance of 10.01 feet a 3/4" iron rod found in concrete on the north low bank of said BRUSHY CREEK, at an additional 178.30 feet passing a 1/2" iron rod found in concrete, continuing an additional 585.79

feet, for a total distance of **774.10 feet** to the **POINT OF BEGINNING** hereof, and containing 8.654 acres of land more or less.

[BEARING BASIS: NAD-83(1993), TEXAS CENTRAL (4203), STATE PLANE SYSTEM for this description]

A sketch of survey has been prepared to accompany this metes and bounds description.

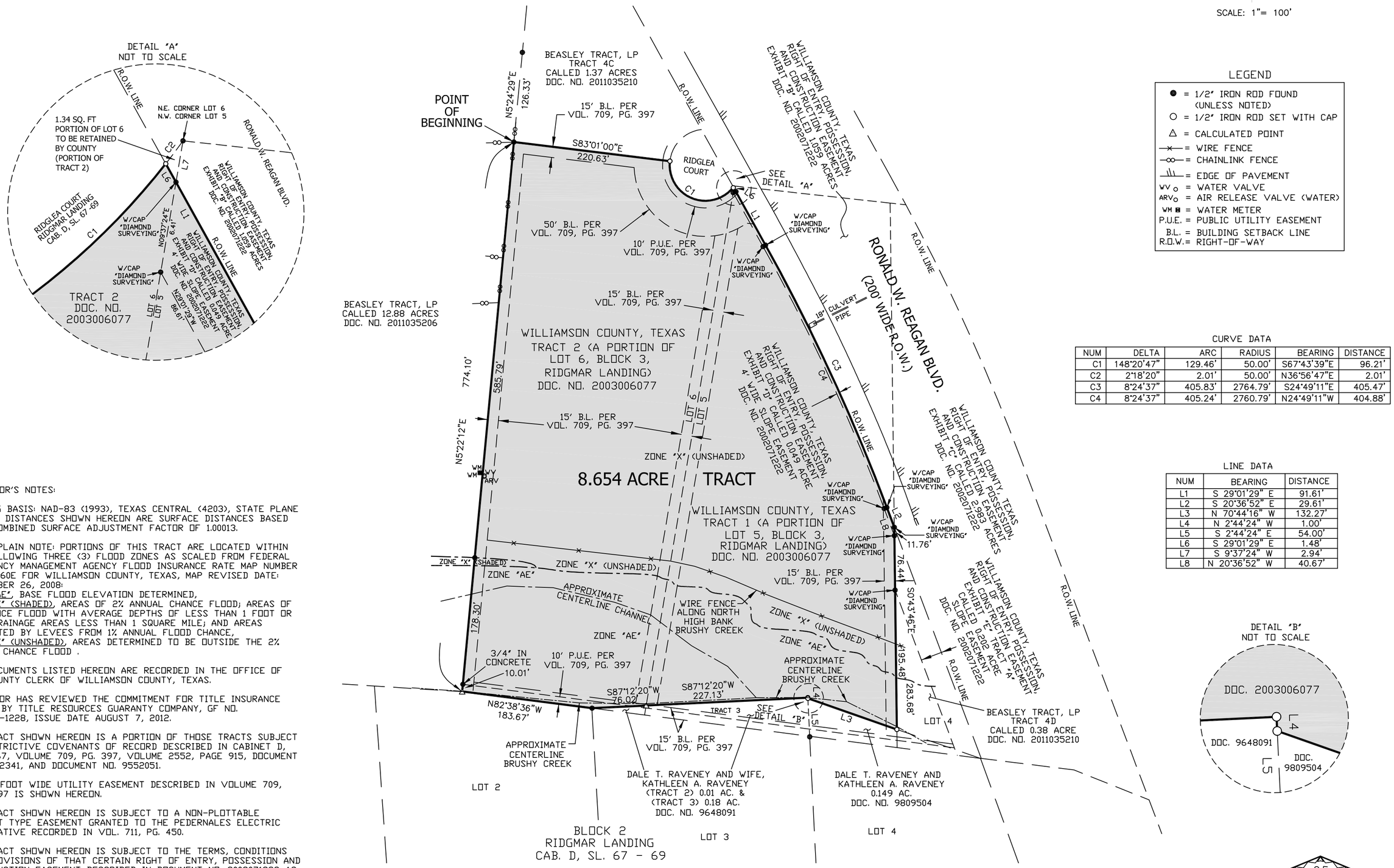
DIAMOND SURVEYING, INC.
116 SKYLINE ROAD, GEORGETOWN, TX 78628
(512) 931-3100

August 13, 2012

SHANE SHAFER, R.P.L.S. NO. 5281 DATE

SKETCH TO ACCOMPANY METES AND BOUNDS DESCRIPTION

FOR A 8.654 ACRE TRACT OF LAND SITUATED IN THE E.D. HARMON SURVEY, ABSTRACT NO. 6, IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF LOT 5 AND LOT 6, BLOCK 3, RIDGMAR LANDING, A SUBDIVISION RECORDED IN CABINET D, SLIDES 67 – 69, PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, SAME BEING A PORTION OF TRACT 1 AND A PORTION OF TRACT 2 CONVEYED TO WILLIAMSON COUNTY, TEXAS AS DESCRIBED IN DOCUMENT NO. 2003006077 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.



SCALE: 1"= 100'

LEGEND

●	= 1/2" IRON ROD FOUND (UNLESS NOTED)
○	= 1/2" IRON ROD SET WITH CAP
△	= CALCULATED POINT
—x—	= WIRE FENCE
—oo—	= CHAINLINK FENCE
	= EDGE OF PAVEMENT
WV	= WATER VALVE
ARV	= AIR RELEASE VALVE (WATER)
WM	= WATER METER
P.U.E.	= PUBLIC UTILITY EASEMENT
B.L.	= BUILDING SETBACK LINE
R.O.W.	= RIGHT-OF-WAY

CURVE DATA

NUM	DELTA	ARC	RADIUS	BEARING	DISTANCE
C1	148°20'47"	129.46'	50.00'	S67°43'39"E	96.21'
C2	2°18'20"	2.01'	50.00'	N36°56'47"E	2.01'
C3	8°24'37"	405.83'	2764.79'	S24°49'11"E	405.47'
C4	8°24'37"	405.24'	2760.79'	N24°49'11"W	404.88'

LINE DATA

NUM	BEARING	DISTANCE
L1	S 29°01'29" E	91.61'
L2	S 20°36'52" E	29.61'
L3	N 70°44'16" W	132.27'
L4	N 2°44'24" W	1.00'
L5	S 2°44'24" E	54.00'
L6	S 29°01'29" E	1.48'
L7	S 9°37'24" W	2.94'
L8	N 20°36'52" W	40.67'

SURVEYOR'S NOTES:

BEARING BASIS: NAD-83 (1993), TEXAS CENTRAL (4203), STATE PLANE SYSTEM. DISTANCES SHOWN HEREON ARE SURFACE DISTANCES BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.00013.

FLOOD PLAIN NOTE: PORTIONS OF THIS TRACT ARE LOCATED WITHIN THE FOLLOWING THREE (3) FLOOD ZONES AS SCALED FROM FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 4841C0460E FOR WILLIAMSON COUNTY, TEXAS, MAP REVISED DATE: SEPTEMBER 26, 2008:
ZONE "AE", BASE FLOOD ELEVATION DETERMINED,
ZONE "X" (SHADED), AREAS OF 2% ANNUAL CHANCE FLOOD; AREAS OF 1% CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL FLOOD CHANCE,
ZONE "X" (UNSHADED), AREAS DETERMINED TO BE OUTSIDE THE 2% ANNUAL CHANCE FLOOD .

ALL DOCUMENTS LISTED HEREON ARE RECORDED IN THE OFFICE OF THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

SURVEYOR HAS REVIEWED THE COMMITMENT FOR TITLE INSURANCE ISSUED BY TITLE RESOURCES GUARANTY COMPANY, GF NO. 9691-12-1228, ISSUE DATE AUGUST 7, 2012.

THE TRACT SHOWN HEREON IS A PORTION OF THOSE TRACTS SUBJECT TO RESTRICTIVE COVENANTS OF RECORD DESCRIBED IN CABINET D, SLIDE 67, VOLUME 709, PG. 397, VOLUME 2552, PAGE 915, DOCUMENT NO. 9532341, AND DOCUMENT NO. 9552051.

THE 10 FOOT WIDE UTILITY EASEMENT DESCRIBED IN VOLUME 709, PAGE 397 IS SHOWN HEREON.

THE TRACT SHOWN HEREON IS SUBJECT TO A NON-PLOTTABLE BLANKET TYPE EASEMENT GRANTED TO THE PEDERNALES ELECTRIC COOPERATIVE RECORDED IN VOL. 711, PG. 450.

THE TRACT SHOWN HEREON IS SUBJECT TO THE TERMS, CONDITIONS AND PROVISIONS OF THAT CERTAIN RIGHT OF ENTRY, POSSESSION AND CONSTRUCTION EASEMENT DESCRIBED IN DOCUMENT NO. 2002071222 AS SHOWN HEREON.

THE CITY OF LEANDER ORDINANCE NO. 10-012-00, DESCRIBED IN DOCUMENT NO. 2011003225, DOES NOT AFFECT THE SUBJECT TRACT.

CERTIFICATION TO: HEB GROCERY COMPANY, LP, WILLIAMSON COUNTY, TEXAS and TITLE RESOURCES GUARANTY COMPANY EXCLUSIVELY.

THE UNDERSIGNED CERTIFIES THAT THIS SURVEY WAS THIS DAY MADE BY ME OR UNDER MY SUPERVISION ON THE GROUND OF THE REAL PROPERTY SHOWN ON THE SURVEY, AND AFTER THE EXERCISE OF PROFESSIONAL DILIGENCE AND REASONABLE CARE THAT THIS SURVEY IS CORRECT TO THE BEST OF THE UNDERSIGNED'S KNOWLEDGE AND BELIEF; THAT THERE ARE NO VISIBLE DISCREPANCIES, CONFLICTS, SHORTAGES IN AREA, OR BOUNDARY CONFLICTS OR VISIBLE ENCROACHMENTS, PROTRUSIONS OR OVERLAPPING OF IMPROVEMENTS, EXCEPT AS SHOWN HEREON; AND THAT THE PROPERTY HAS ACCESS TO AND FROM A DEDICATED ROADWAY, EXCEPT AS SHOWN HEREON.

Shane Shafer — August 13, 2012

SHANE SHAFER, R.P.L.S. NO. 5281 — DATE

DIAMOND SURVEYING, INC.
116 SKYLINE ROAD, GEORGETOWN, TEXAS 78628
(512) 931-3100

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor or other person doing business with local governmental entity

Form CIQ

This questionnaire is being filed in accordance with chapter 176 of the Local Government Code by a person doing business with the governmental entity.

By law this questionnaire must be filed with the records administrator of the local government not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 **Name of person doing business with local governmental entity.**

2 ☐ **Check this box if you are filing an update to a previously filed questionnaire.**

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than September 1 of the year for which an activity described in Section 176.006(a), Local Government Code, is pending and not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 **Describe each affiliation or business relationship with an employee or contractor of the local governmental entity who makes recommendations to a local government officer of the local governmental entity with respect to expenditure of money.**

4 **Describe each affiliation or business relationship with a person who is a local government officer and who appoints or employs a local government officer of the local governmental entity that is the subject of this questionnaire.**

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor or other person doing business with local governmental entity

Form CIQ
Page 2

5 **Name of local government officer with whom filer has affiliation or business relationship.**
(Complete this section only if the answer to A, B, or C is YES.)

This section, item 5 including subparts A, B, C & D, must be completed for each officer with whom the filer has affiliation or other relationship. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income from the filer of the questionnaire?

☐ Yes ☐ No

B. Is the filer of the questionnaire receiving or likely to receive taxable income from or at the direction of the local government officer named in this section AND the taxable income is not from the local governmental entity?

☐ Yes ☐ No

C. Is the filer of this questionnaire affiliated with a corporation or other business entity that the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐ Yes ☐ No

D. Describe each affiliation or business relationship.

6. Describe any other affiliation or business relationship that might cause conflict of interest:

7

Signature of person doing business with the governmental entity	Date

Signature not required if completing in BIDSYNC electronically.

BID AFFIDAVIT

This form must be completed, signed, notarized and returned with Bid package

The undersigned certifies that the IFB and the Bidder's Bid have been carefully reviewed and are submitted as correct and final. Bidder further certifies and agrees to furnish any and/or all goods and/or services upon which prices are extended at the price Bid, and upon the conditions contained in the IFB.

I hereby certify that the foregoing Bid has not been prepared in collusion with any other Bidder or other person or persons engaged in the same line of business prior to the official opening of this Bid. Further, I certify that the Bidder is not now, nor has been for the past six (6) months, directly or indirectly concerned in any pool or agreement or combination, to control the price of services/commodities Bid on, or to influence any person or persons to submit a Bid or not to submit a Bid thereon."

Name of Bidder:	
Address of Bidder:	
Email:	
Telephone:	
Printed Name of Person Submitting Affidavit:	
Signature of Person Submitting Affidavit:	

Cooperative Purchasing Program

Check one of the following options below. A non-affirmative Bid will in no way have a negative impact on the County's evaluation of the Bid.

☐	I will offer the quoted prices to all authorized entities during the term of the County's Contract.
☐	I will not offer the quoted prices to all authorized entities.

If no box is checked, the Bidder agrees to make best efforts in good faith to offer the quoted prices to all authorized entities.

BEFORE ME, the undersigned authority, a Notary Public, personally appeared _____ (*Name of Signer*), who after being by me duly sworn, did depose and say: "I, _____, (*Name of Signer*) am a duly authorized officer of/agent for _____ (*Name of Bidder*) and have been duly authorized to execute the foregoing on behalf of the said _____ (*Name of Bidder*).

SUBSCRIBED AND SWORN to before me by the above-named _____

on this the _____ day of _____, 20_____.

_____

Notary Public in and for

The State of _____

The County of _____

SIGNATURE AND NOTARY NOT REQUIRED IF COMPLETING IN BIDSYNC ELECTRONICALLY.

Question and Answers for Bid #1703-151 - Sale of Ridgmar Landing Property

Overall Bid Questions
There are no questions associated with this bid.

Commissioners Court - Regular Session **34.**

Meeting Date: 04/04/2017

Information Technology Systems BA 04-04-2017

Submitted For: Melanie Denny **Submitted By:** Angela Schmidt, County Auditor

Department: County Auditor

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on an order declaring an emergency and a grave necessity due to unforeseeable circumstances and approve budget amendment to acknowledge additional revenues for Information Technology Systems.

Background

The county pays for all Wilco 365 licenses. CSCD, Health District and CAMPO reimburse the county for the licenses used by their respective organization. The budget amendment is to recognize the additional revenues and expenditures for the Wilco 365 costs associated with these organizations.

Fiscal Impact

From/To	Acct No.	Description	Amount
	0100.0000.333220	Payments From Other Entities	$40,105.60

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 11:03 AM
Form Started By: Angela Schmidt		Started On: 03/30/2017 08:32 AM
Final Approval Date: 03/30/2017		

Commissioners Court - Regular Session **35.**

Meeting Date: 04/04/2017

Information Technology Systems BA 04-04-2017

Submitted For: Melanie Denny **Submitted By:** Angela Schmidt, County Auditor

Department: County Auditor

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on an order declaring an emergency and a grave necessity due to unforeseeable circumstances and approve budget amendment to acknowledge additional expenditures for Information Technology Systems.

Background

The county pays for all Wilco 365 licenses. CSCD, Health District and CAMPO reimburse the county for the licenses used by their respective organization. The budget amendment is to recognize the additional revenues and expenditures for the Wilco 365 costs associated with these organizations.

Fiscal Impact

From/To	Acct No.	Description	Amount
	0100.0503.004208	Internet Cloud Solutions	$40,105.60

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 11:03 AM
Form Started By: Angela Schmidt		Started On: 03/30/2017 08:37 AM
Final Approval Date: 03/30/2017		

Commissioners Court - Regular Session **36.**

Meeting Date: 04/04/2017

Economic Development

Submitted For: Charlie Crossfield **Submitted By:** Charlie Crossfield, Road Bond

Department: Road Bond

Agenda Category: Executive Session

Information

Agenda Item

Discussion regarding economic development negotiations pursuant to Texas Government Code, Section 551.087:
a) Business prospect(s) that may locate or expand within Williamson County.
b) Discuss Pearson Road District.
c) Discuss North Woods Road District.
d) Project Columbus Balbo
e) Mega Site

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 10:21 AM
Form Started By: Charlie Crossfield		Started On: 03/30/2017 10:00 AM
Final Approval Date: 03/30/2017		

Commissioners Court - Regular Session **37.**

Meeting Date: 04/04/2017

Executive Session

Submitted For: Charlie Crossfield **Submitted By:** Charlie Crossfield, Road Bond

Department: Road Bond

Agenda Category: Executive Session

Information

Agenda Item

Discuss real estate matters (EXECUTIVE SESSION as per VTCA Govt. Code sec. 551.072 Deliberation Regarding Real Estate Property if deliberation in an open meeting would have a detrimental effect on the position of the governmental body in negotiations with third person.)

A. Real Estate Owned by Third Parties

1. Preliminary discussions relating to proposed or potential purchase or lease of property owned by third parties

a) Discuss the acquisition of real property for right-of-way for Mays St. Extension

b) Discuss the acquisition of real property for SW 183 and SH 29 Loop.

c) Discuss the acquisition of real property for CR 176 at RM 2243

d) Discuss the acquisition of real property with endangered species for mitigation purposes.

e) Discuss the acquisition of real property: CR 101

f) Discuss the acquisition of real property: CR 111

g) Discuss the acquisition of real property for CR 278 at Bagdad Rd.

h) Discuss the acquisition of real property for proposed CR 110 project. (All sections)

i) Discuss the acquisition of real property for County Facilities.

j) Discuss the acquisition of real property on CR 305.

k) Discuss the acquisition of Easement interests for the Brushy Creek Trail Project.

l) Discuss acquisition of property located at NEC of Toll 130 and Gattis School Rd.

m) Discuss the acquisition of a drainage easement for CR 108.

n) Discuss easement acquisitions from San Gabriel River Ranch Subdivision.

o) Discuss the acquisition of real property for CR 258.

p) Discuss the acquisition of real property for Lakeline Blvd.

q) Discuss the acquisition of real property for US 183.

r) Discuss the acquisition of real property for Hairy Man Rd.

s) Discuss the acquisition of real property for SW Bypass.

t) Discuss the acquisition of real property for Crossroad Acres.

B. Property or Real Estate owned by Williamson County

1). Preliminary discussions relating to proposed or potential sale or lease of property owned by the County

a) Discuss County owned real estate containing underground water rights and interests.

b) Discuss possible sale of 183 A excess right of way

c) Discuss proposed sale of real estate of Blue Springs Blvd

d) Discuss transfer of right of way for Westinghouse Rd. to the City of Georgetown.

e) Discuss wastewater easements in Berry Springs Park

f) Discuss Development Agreement with Ashby Capital Investments, LLC

g) Discuss sale of County property on Ronald Reagan Blvd.

h) Discuss abandonment of County property on CR 123.

C. Consider intervention in lawsuit regarding de-listing of Bone Cave harvestman.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/30/2017 10:21 AM
Form Started By: Charlie Crossfield		Started On: 03/30/2017 09:59 AM
Final Approval Date: 03/30/2017		

Commissioners Court - Regular Session **46.**

Meeting Date: 04/04/2017

Unallocated Workshop

Submitted By: Ashlie Koenig, Budget Office

Department: Budget Office

Agenda Category: Regular Agenda Items

Information

Agenda Item

1:00 Recess - Workshop to Discuss Unallocated

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	03/29/2017 01:41 PM
Form Started By: Ashlie Koenig		Started On: 03/29/2017 11:09 AM
Final Approval Date: 03/29/2017		