NOTICE TO THE PUBLIC
WILLIAMSON COUNTY COMMISSIONER'S COURT
FEBRUARY 20TH, 2018
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 – 20)

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	0100-0440-003030	Law Books < $5,000	700.00
To	0100-0440-004621	Copier Rental and Supplies	700.00

6. Discuss, consider and take appropriate action on a line item transfer for CSCD (Adult Probation).

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0572-003005	Furniture	1500.00
To	0100-0572-004509	Facility Enhancements	1500.00

7. Discuss, consider and take appropriate action on a line item transfer for Human Resources.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0402-004705	Pre-employment Screening	$9000.00
To	0100-0402-004100	Professional Services	$9000.00

8. Discuss, consider and take appropriate action on a line item transfer for the Parks Department.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100.0510.004620	Furniture and Equipment rental	$34,000
To	0100.0510.003001	Small Equip & Tools	$34,000

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

10. Discuss, consider and take appropriate action on authorizing the disposal of various county assets through auction including (3) Laptops and (1) Desktop pursuant to Tx. Local Gov't. Code 263.152.

11. Discuss, consider, and take appropriate action on approving the purchase of (2) 2018 Chevrolet Silverado 2500HD Double Cab Pickup Trucks with Service Body from Gunn Chevrolet Ltd., in the amount of $69,817.00, per BuyBoard Contract #521-16 to support the operations of the Williamson County Facilities Department.

12. Discuss, consider and take any appropriate action regarding approval or ratification of monthly Treasurer's Report on Williamson County Finances for January 2018 pursuant to Texas Local Government Code §114.026.

13. Discuss, consider and take appropriate action on accepting and approving a report on the Sheriff's Office Training Center Project; Change Order #41 in the amount of $494.00 for light block-out film added to exterior doors at training rooms, which was executed by Gary Wilson, Director of Williamson County Facilities, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded by the Construction Managers Contingency.

14. Discuss, consider and take appropriate action on accepting and approving a report on the Texas Avenue Remodel Project; Change Order # 13 in the amount of $13,788.75 for additional electrical, plumbing and fire sprinkler work which was necessary due to HVAC installation conflicts, which was executed by Bob Lubecker, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

15. Discuss, consider and take appropriate action on accepting and approving a report on the Texas Avenue Remodel Project; Change Order # 18 in the amount of $29,520.84 for additional mechanical work that is necessary due to unforeseen conflicts with structural members and other existing items, which was executed by Bob Lubecker, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

16. Discuss, consider and take appropriate action on accepting and approving a report on the Texas Avenue Remodel Project; Change Order # 19 in the amount of $7,548.26 for additional door hardware and associated work, which was executed by Bob Lubecker, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

17. Discuss, consider and take appropriate action on accepting and approving a report on the Texas Avenue Remodel Project; Change Order # 20 in the amount of $3,024.76 for AED cabinets and additional exterior wall and roof panel work, which was executed by Bob Lubecker, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

18. Discuss, consider and take appropriate action on accepting and approving a report on the Jail Kitchen and Plumbing Remodel Project; Change Order # 2 in the amount of $42,482.97 for additional structural concrete work associated with the demo and unforeseen conditions related to the walk-in coolers and freezer, which was executed by Dale Butler, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

19. Discuss, consider and take appropriate action on accepting and approving a report on the Georgetown Annex Project; Change Order # 2 in the amount of $19,110.50 to approve an additional french drain to re-route ground water away from the building foundation and to accept a credit for plumbing material changes, which was executed by Dale Butler, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded by the Owner's Contingency.

20. Discuss, consider, and take appropriate action on approval of the preliminary plat for the Liberty Hill 90 subdivision - Pct 2.

REGULAR AGENDA

21. Discuss, consider and take appropriate action on recognizing the Williamson County DWI/Drug Court for winning the 2018 "*Spotlight on Success Award for Outstanding DWI Court Team"* that was presented to Judge Laura Barker and the Project Team by the Texas Center for the Judiciary during the DWI Court Team Advanced Conference.

22. Discuss, consider and take appropriate action on approving the concept for the placement of a life size bronze statue of African-American Pro Rodeo Hall of Fame Cowboy "Bill Pickett" and his horse Spradley to be located in the arena area of the Williamson County Expo Center, Taylor, Texas.

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

24. Discuss, consider, and take appropriate action regarding a TCEQ Agent Authorization Form for the Edwards Aquifer Protection Program on the Inner Loop at Wilco Way (Animal Shelter Driveway) project.

25. Discuss, consider and take appropriate action on a real estate contract with TD-Tucker Ranch Holdings, LLC. for right of way needed on the CR 278 @ Bagdad Rd. project (Parcel 3). Funding Source: Road Bonds P438

26. Discuss, consider and take appropriate action on a real estate contract with Brian P. Schoenfeld for right of way needed on the CR 200 project. (Parcel 20) Funding Source: P285

27. Discuss, consider and take appropriate action on an Interlocal Agreement Regarding Improvement of County Road 174 with the City of Round Rock.

28. Discuss, consider, and take appropriate action on the issuance of a county-wide burn ban for a period not to exceed 90 days and to authorize the County Judge to lift the ban when conditions approve.

29. Discuss, consider and take action on approving the Investment Reports for the Quarter ending December 31, 2017 which was approved by the Investment Committee on January 29, 2018.

30. Discuss, consider and take action on approving revisions to the Williamson County Investment Policy, which were approved by the Investment Committee on October 24, 2017.

31. Discuss, consider, and take appropriate action on the use of unallocated funds on the law enforcement scale in the County Attorney's office in the amount of $3,167.82.

32. Discuss, consider and take appropriate action on the appointment of Mark Jaeger to the Emergency Services District (ESD) #10 Board of Directors for a two-year term beginning January 1, 2018 and ending on December 31, 2019.

33. Discuss, consider and take appropriate action on the appointment of Chad Richter to the Emergency Services District (ESD) #10 Board of Directors for a two-year term beginning January 1, 2018 and ending on December 31, 2019.

34. Discuss, consider and take any appropriate action regarding establishing the office of county fire marshal to be effective at the proposed date of April 1, 2018 or as determined by the Court pursuant to authority granted to commissioners court under Tex. Loc. Gov't Code. § 352.011.

35. Discuss, consider and take appropriate action regarding appointment of a county fire marshal to be effective upon office creation or as determined by the Court for a term of office not to exceed two years pursuant to authority granted to commissioners court under Tex. Loc. Gov't Code. §§ 352.011 & .012. Action may include requirement to post an official bond in an amount determined by the commissioners court as set forth in Tex. Loc. Gov't Code. § 352.012.

36. Discuss, consider and take appropriate action regarding policy determining which fires warrant investigation by the county fire marshal in the unincorporated areas within the county, including proposal to honor fire investigations requested by any member of the Williamson County Fire Chiefs Association, pursuant to authority granted to commissioners court under Tex. Loc. Gov't Code. § 352.013(b).

37. Discuss, consider and take appropriate action regarding authorizing a fee to be assessed against owners of commercial property subject to fire inspection, and against the owner of a single-family residence if the fire inspection is requested, pursuant to authority granted to commissioners court under Tex. Loc. Gov't Code. §§ 352.016(c) & (d).

38. Discuss, consider and take appropriate action on Interlocal Cooperation Agreement Between Williamson County and Cities Health District and Williamson County, Texas for Managed Technology Services and Support.

39. Discuss, consider and take appropriate action on an Interlocal Agreement between Williamson County Mobile Outreach Team and the City of Round Rock, Texas for the establishment of Mobile Outreach Team Services and Personnel at Round Rock Fire Stations.

40. Discuss, consider, and take appropriate action on authorizing the Purchasing Agent to advertise and receive competitive sealed proposals for Additional Facilities at Southwest Williamson County Regional Park under RFCSP #1802-215.

41. Discuss, consider, and take appropriate action on approving the Fuel System Management Extended Maintenance Agreement (FuelMaster) with Syn-Tech Systems, Inc. for software and hardware support, in the amount of $10,791, for the term of 3/23/18-3/22/19, and authorizing the execution of the agreement.

42. Discuss, consider, and take appropriate action on approving an Amendment to the Tyler Technologies Agreement to add Exhibit A pricing in the amount of $27,179 to the End User License Agreement and Professional Services Agreement for Jury Web Portal software and Project Management support, and authorizing the execution of the Amendment.

43. Discuss, consider, and take appropriate action on approving the agreement between Mtech and Williamson County for RTU Replacement at the Williamson County Juvenile Facility in the amount not to exceed $75,000.00 pursuant to TIPS contract #1032615.

44. Discuss, consider, and take appropriate action on authorizing the Purchasing Agent to advertise and receive sealed bids for Cast in Place Concrete Materials and Labor under IFB #1802-216.

45. Discuss, consider, and take appropriate action on exempting Bluefin Payment Systems, LLC from the competitive bid/proposal requirements of the County Purchasing Act pursuant to the discretionary exemption as set forth under Tex. Loc. Gov't Code § 262.024(a)(7), as the exclusive provider for payment processing software, to Pethealth Services (USA), Inc., as per attached letter.

46. Discuss, consider, and take appropriate action on approving agreement between Bluefin Payment Systems, LLC and Williamson County for Payment Processing Services and the purchase of two (2) card swipers for $125/each, to support the operations of the Williamson County Regional Animal Shelter, and authorizing the execution of the agreement.

47. Discuss, consider, and take appropriate action on approving Advanced Productivity agreement between Pethealth and Williamson County for additional services, to support the operations of the Williamson County Regional Animal Shelter, in the amount of $2,500 annually and authorizing the execution of the agreement.

48. 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 Park Donations.

Fiscal Impact

From/To	Acct No.	Description	Amount
	0100.0000.367403	Park Donations	$1,382.00

49. 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 Park Donations.

Fiscal Impact

From/To	Acct No.	Description	Amount
	0100.0510.003670	Use of Donations	$1,382.00

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)."

50. 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 North Woods Road District.
c) Project Amazon
d) Wolf Lakes

51. 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 N. 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: CR 101
e) Discuss the acquisition of real property: CR 200
f) Discuss the acquisition of real property for CR 278 at Bagdad Rd.
g) Discuss the acquisition of real property for proposed CR 110 project. (All sections)
h) Discuss the acquisition of real property for County Facilities.
i) Discuss the acquisition of Easement interests for the Brushy Creek Trail Project.
j) Discuss the acquisition of real property and easements from San Gabriel River Ranch Subdivision.
k) Discuss the acquisition of real property for CR 278 @ Bagdad Rd.
l) Discuss the acquisition of real property for Seward Junction SE Loop.
m) Discuss the acquisition of real property for SH 29 @ DB Wood.
n) Discuss the acquisition of real property for Hairy Man Rd.
o) Discuss the acquisition of real property for SW Bypass.
p) Discuss Somerset Road Districts No. 3 & 4 reimbursements for acquisition & construction of Reagan Blvd.
q) Discuss Cedar Hollow low water crossings and Lost River.
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 wastewater easements in Berry Springs Park
c) Discuss sale of County property on Ronald Reagan Blvd.
d) Discuss possible sale of +/- 10 acres located on Chandler Road near the County Sheriff's Office Training Facility
e) Potential governmental uses for 8th Street downtown parking lot
C. Consider intervention in lawsuit regarding de-listing of Bone Cave harvestman.
D. Discuss the possible placement of agricultural-related monuments at the Williamson County

Exposition Center with the participation of third parties.

52. 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) Civil Action No. 1:15-cv-431; Herman Crisp v. Williamson County, et al; In the USDC-WD-Austin Division
h) 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
i) Appeal of IRS Proposed Worker Classification Changes and Proposed Tax Adjustments 2011 -2013; and Payment of Disputed Employment Taxes Pending Appeal
j) Discuss proposed acquisition of property for SW 183 and SH 29 Loop
k) Civil Action; American Stewards of Liberty, et al. v. Sally Jewell, et al., In the Western District Court, Western District of Texas, Austin Division
l) Berry Springs Park and Preserve pipeline
m) Case No. 1:17-cv-00290, Rodney A. Hurdsman v. Williamson County Sheriff Deputies Pokluda et al, In The Unites States District Court For The Western District of Texas – Austin Division.
n) Civil Action No. 1:17-cv-153-SS, Royce Belcher v. Williamson County, Texas, In The United States District Court for the Western District of Texas, Austin Division.
o) Tax Increment Financing Agreement between Williamson County and the City of Hutto with respect to a proposed tax increment reinvestment zone (TIRZ) in Hutto, Teaxas.
p) Williamson County Sheriff's Office Training Center construction issues.
q) Application to Obtain New Municipal Solid Waste Permit – Proposed Permit No. 2398 (Applicant - Lealco, Inc.)
r) LCRA TSC Leander-Round Rock 138-Kv Transmission Line Project within the Public Right-Of-Way (Row) of New Hope Road, Ronald Reagan Boulevard, and Hero Way
s) Employment law claims of Michelle Williams, Andrenia McGowen and/or Raphaela Johnson.
t) Civil Action No. 1:17-cv-01114-LY, Elizabeth Saucedo v. Jonathon Hodgkiss, In The United States District Court for the Western District of Texas, Austin Division.
u) Civil Action No. 1:17-cv-01113-LY, Tettus Davis v. Jonathon Hodgkiss, In The United States District Court for the Western District of Texas, Austin Division.
v) Farm and Grazing Lease with Mary Brett Covington dated effective March 29, 2016 on county land near County Road 131
w) Amendment to Interlocal Lease Agreement between Williamson County and City of Georgetown relating to Williamson County's property located near Martin Luther King Boulevard and 8th Streets in Georgetown, Texas
x) Civil Action No. 1:18-CV-49, Troy Mansfield v. Williamson County, In The United States District Court for the Western District of Texas, Austin Division.
y) Utility damage claim from Suddenlink Communications occurring on or about 03/27/2017 at CR 366 and SH 29.

53. 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).

54. 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)

55. Discuss and take appropriate action concerning economic development.

56. Discuss and take appropriate action concerning real estate.

57. 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) Civil Action No. 1:15-cv-431; Herman Crisp v. Williamson County, et al; In the USDC-WD-Austin Division
h) 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
i) 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
j) Discuss proposed acquisition of property for SW 183 and SH 29 Loop
k) Civil Action; American Stewards of Liberty, et al. v. Sally Jewell, et al., In the Western District Court, Western District of Texas, Austin Division
l) Berry Springs Park and Preserve pipeline
m) Case No. 1:17-cv-00290, Rodney A. Hurdsman v. Williamson County Sheriff Deputies Pokluda et al, In The Unites States District Court For The Western District of Texas – Austin Division.
n) Civil Action No. 1:17-cv-153-SS, Royce Belcher v. Williamson County, Texas, In The United States District Court for the Western District of Texas, Austin Division.
o) Tax Increment Financing Agreement between Williamson County and the City of Hutto with respect to a proposed tax increment reinvestment zone (TIRZ) in Hutto, Texas.
p) Williamson County Sheriff's Office Training Center construction issues.
q) Application to Obtain New Municipal Solid Waste Permit – Proposed Permit No. 2398 (Applicant - Lealco, Inc.)
r) LCRA TSC Leander-Round Rock 138-Kv Transmission Line Project within the Public Right-Of-Way (Row) of New Hope Road, Ronald Reagan Boulevard, and Hero Way
s) Employment law claims of Michelle Williams, Andrenia McGowen and/or Raphaela Johnson.
t) Civil Action No. 1:17-cv-01114-LY, Elizabeth Saucedo v. Jonathon Hodgkiss, In The United States District Court for the Western District of Texas, Austin Division.
u) Civil Action No. 1:17-cv-01113-LY, Tettus Davis v. Jonathon Hodgkiss, In The United States District Court for the Western District of Texas, Austin Division.
v) Farm and Grazing Lease with Mary Brett Covington dated effective March 29, 2016 on county land near County Road 131
w) Amendment to Interlocal Lease Agreement between Williamson County and City of Georgetown relating to Williamson County's property located near Martin Luther King Boulevard and 8th Streets in Georgetown, Texas
x) Civil Action No. 1:18-CV-49, Troy Mansfield v. Williamson County, In The United States District Court for the Western District of Texas, Austin Division.
y) Utility damage claim from Suddenlink Communications occurring on or about 03/27/2017 at CR 366

and SH 29.

58. 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.

59. Comments from Commissioners.

_____
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 _____, 2018 at _____ and remained posted for at least 72 continuous hours preceding the scheduled time of said meeting.

Commissioners Court - Regular Session **5.**

Meeting Date: 02/20/2018

Line Item Transfer

Submitted By: Ronnie Simek, District Attorney

Department: District Attorney

Agenda Category: Consent

Information

Agenda Item

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

Background

We are requesting a transfer of $700.00 into this line item to allow of office to lease a new copier for newly extended area of the District Attorney's Office. We had not previously budgeted for this machine and lack the funds in the Copier Rental & Supplies line item.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0440-003030	Law Books < $5,000	700.00
To	0100-0440-004621	Copier Rental and Supplies	700.00

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/13/2018 02:18 PM
Budget Office	Ashlie Koenig	02/13/2018 02:22 PM
Budget Office	Ashlie Koenig	02/13/2018 04:54 PM
Form Started By: Ronnie Simek		Started On: 02/13/2018 01:30 PM
Final Approval Date: 02/13/2018		

Commissioners Court - Regular Session **6.**

Meeting Date: 02/20/2018

Line Item transfer for Adult Probation

Submitted For: Melissa Ramos **Submitted By:** Melissa Ramos, Adult Probation

Department: Adult Probation

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on a line item transfer for CSCD (Adult Probation).

Background

Expand and enhance the Adult Probation Main Office meeting/training room.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0572-003005	Furniture	1500.00
To	0100-0572-004509	Facility Enhancements	1500.00

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 09:08 AM
Budget Office	Ashlie Koenig	02/14/2018 11:47 AM
Form Started By: Melissa Ramos		Started On: 02/13/2018 04:20 PM
Final Approval Date: 02/14/2018		

Commissioners Court - Regular Session **7.**

Meeting Date: 02/20/2018

Compensation Study Review Service

Submitted By: Tara Raymore, Human Resources

Department: Human Resources

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on a line item transfer for Human Resources.

Background

This transfer will cover the remaining cost of the compensation study review which will be performed by Korn Ferry HayGroup as the contract was approved on the 2/13/18 agenda.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100-0402-004705	Pre-employment Screening	$9000.00
To	0100-0402-004100	Professional Services	$9000.00

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM
Budget Office	Ashlie Koenig	02/14/2018 03:09 PM
Form Started By: Tara Raymore		Started On: 02/14/2018 09:21 AM
Final Approval Date: 02/14/2018		

Commissioners Court - Regular Session **8.**

Meeting Date: 02/20/2018

Line item transfer for Parks Department

Submitted For: Randy Bell **Submitted By:** Randy Bell, Parks

Department: Parks

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on a line item transfer for the Parks Department.

Background

Furniture and Equipment Rental Budget will be used to acquire additional portable horse stalls necessary to accommodate horse show events at the Expo Center. Five scheduled events for fiscal year 18 exceeds our stall capacity of 100.

Fiscal Impact

From/To	Acct No.	Description	Amount
From	0100.0510.004620	Furniture and Equipment rental	$34,000
To	0100.0510.003001	Small Equip & Tools	$34,000

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:59 AM
Budget Office	Ashlie Koenig	02/15/2018 10:58 AM
Form Started By: Randy Bell		Started On: 02/15/2018 09:09 AM
Final Approval Date: 02/15/2018		

Commissioners Court - Regular Session **9.**

Meeting Date: 02/20/2018

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

Merit details 02.20.18

Merit LIT 02.20.18

Form Review

Inbox	Reviewed By	Date
Human Resources (Originator)	Tara Raymore	02/15/2018 11:16 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 12:31 PM
Form Started By: Kristy Sutton		Started On: 02/15/2018 09:17 AM
Final Approval Date: 02/15/2018		

Department	PCN	EE ID	Budget Amount	*Requested Amount	Change Amount	% Change	Reason for Change	Earliest Oracle Effective Date
District Clerk	0751	N/A	$34,309.58	$33,109.58	-$1,200.00	-3.50%	Decrease position surplus salary	2/9/2018
District Clerk	1799	Vacant	$32,700.00	$33,900.00	$1,200.00	3.67%	Increase vacant position salary from PCN 0751 to accommodate hire	2/9/2018
Building Maintenance	0224	Vacant	$61,295.78	$60,247.00	-$1,048.78	-1.71%	Decrease position surplus salary	2/23/2018
Building Maintenance	0243	Vacant	$86,799.70	$87,848.48	$1,048.78	1.21%	Title change: Assistant Facilities Dir. III (B.34) to Project Manager V (B.34) // Increase vacant position salary from PCN 0224	2/23/2018
EMS	0881	12064	$62,113.74	$59,347.28	-$2,766.46	-4.45%	Decrease position surplus salary	2/28/2018
EMS	1653	Vacant	$62,452.94	$65,219.40	$2,766.46	4.43%	Increase vacant position salary from PCN 0881 to accommodate promotion	2/28/2018
Emergency Management	0776	N/A	$88,081.50	$86,013.42	-$2,068.08	-2.35%	Decrease position surplus salary	2/28/2018
Emergency Management	1793	Vacant	$23,798.67	$25,866.75	$2,068.08	8.69%	Increase vacant position salary from PCN 0776	5/1/2018

*Amount may vary slightly due to Oracle rounding

Department	Position	Emp ID Num	Current Annual Salary	Annual Merit Amt	Merit %	New Annual Salary	Pay Proposal Reason	Effective Date of Change
Juvenile Services	Juv Prob Ofcr 1.1156.001100.	12746	$44,662.13	$893.24	2.00	$45,555.37	MERIT	2/9/2018

				(TO)	(FROM)
entity	**fund**	**dept**	**object**	**dr**	**cr**
01	0100	0576	001100	893.24	
01	0100	0576	001130		893.24

Commissioners Court - Regular Session **10.**

Meeting Date: 02/20/2018

Asset Auction 2/20/2018

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 (3) Laptops and (1) Desktop pursuant to Tx. Local Gov't. Code 263.152.

Background

Please see attached document for detailed listing.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Asset Auction 1

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:35 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:53 AM
Form Started By: Jayme Jasso		Started On: 02/15/2018 09:25 AM
Final Approval Date: 02/15/2018		

Quantity	Description (year, make, model, etc.)	Manufacturer ID # (serial, service tag, or VIN)	County Tag#	Condition of Assets (working, non-working, unk)
1	BLACK UNCLE MIKE'S GUN CASE			NON-WORKING
1	NORTHWEST TRAILS SUITCASE			NON-WORKING
3	BLACK XTREME GEAR			NON-WORKING
1	ZYLUX ACOUSTIC SPEAKER CNOX73OC716321GT4955			NON-WORKING
1	SEAGATE	9QM6S2AW		NON-WORKING
1	SEAGATE	9QM6R8SK		NON-WORKING
1	JVC VHS RECORDER	168Q1371		NON-WORKING
1	BELL PHONE	R5654664		NON-WORKING
1	LUCENT PHONE	979T67000228		NON-WORKING
1	LUCENT PHONE	979T67000212		NON-WORKING
1	BLACK TOSHIBA DVD PLAYER	913A48904605		NON-WORKING
1	SILVER PANASONIC VHS/DVD PLAYER	LJ61K02178R		NON-WORKING
1	BLACK DELL DOCKING STATION	BICE5003		NON-WORKING
1	PHILIPS AED 15807	040259593	02152	NON-WORKING
1	BLUE/YELLOW CARDIAC SCIENCE AED		01312	NON-WORKING
1	CAMERA, CANON	0212736		NON-WORKING
3	OLYMPUS CAMERAS	W59A08908	02391	NON-WORKING
		W59A08962	02396	NON-WORKING
		W59A08983	02374	NON-WORKING
1	BLACK DELL LAPTOP 77329	5WQ7YY1	7262	NON-WORKING
		RECEIVED		

FEB 13 2018

AUDITOR'S OFFICE
WILLIAMSON COUNTY, TEXAS

ALL INSIGNIAS HAVE BEEN REMOVED - NOT SUITABLE FOR REISSUE

Quantity	Description (year, make, model, etc.)	A#	Manufacturer ID # (serial, service tag, or VIN)	County Tag#	Condition of Assets (working, non-working, unk)
1	BLUE/SILVER OHAUS SCALE		7124140486		NON-WORKING
1	BLACK/SILVER DELL LAPTOP	44237	7WH5ZC1	CO1459	NON-WORKING
1	DELL COMPUTER	40268	JH4V261	CO0364	NON-WORKING
1	SONY DIGITAL CAMERA	32619	75071		NON-WORKING
1	CANON CAMERA		3866915		NON-WORKING
1	CANON CAMERA		7935073		NON-WORKING
1	DELL LAPTOP	36637	8PD8811	C00005	NON-WORKING
14	STREAMLIGHT SL20 FLASHLIGHTS				NON-WORKING
3	STREAMLIGHT STINGER FLASHLIGHTS				NON-WORKING
1	CANON CAMERA		0212736		NON-WORKING
1	CANON CAMERA		642032005425	03581	NON-WORKING
1	BLACK VIVITAR CAMERA		E3253A01246775		NON-WORKING
1	RED NIKON CAMERA		30120478	03826	NON-WORKING
1	SILVER OLYMPUS CAMERA		W59A08983	02374	NON-WORKING
1	BLACK PENTAX CAMERA		4351443	02413	NON-WORKING
2	BLACK COBRA HANDHELD RADIO			00296	NON-WORKING
				00299	NON-WORKING
1	SILVER OLYMPUS CAMERA		W59A08907	02384	NON-WORKING

RECEIVED
FEB 13 2018
AUDITOR'S OFFICE
WILLIAMSON COUNTY, TEXAS

ALL INSIGNIAS HAVE BEEN REMOVED - NOT SUITABLE FOR REISSUE

Commissioners Court - Regular Session **11.**

Meeting Date: 02/20/2018

Approval of Vehicle Purchase Facilities

Submitted For: Randy Barker **Submitted By:** Thomas Skiles, Purchasing

Department: Purchasing

Agenda Category: Consent

Information

Agenda Item

Discuss, consider, and take appropriate action on approving the purchase of (2) 2018 Chevrolet Silverado 2500HD Double Cab Pickup Trucks with Service Body from Gunn Chevrolet Ltd., in the amount of $69,817.00, per BuyBoard Contract #521-16 to support the operations of the Williamson County Facilities Department.

Background

This purchase is for Facilities. Please see attached quote for details. Funding from General Fund 01.0100.0509.005700. These vehicles were part of the FY18 budget.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Quote

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:13 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Thomas Skiles		Started On: 02/12/2018 08:29 AM
Final Approval Date: 02/15/2018		

Prepared For:
Kevin Teller
Williamson County -2500 Double Cab Service Body
TX 78613
Phone: (512) 948-3368
Email: kevin.teller@wilco.o
rg
Primary FAN: 000945321
Requested Quantity: 2

Prepared By:
Danny Mireles
Gunn Chevrolet Ltd
16550 IH 35 N
Selma, TX 78154
Phone: (210) 599-5000
Fax: (210) 599-4251
Email: dmireles@gunnauto.com

2018 Fleet/Non-Retail Chevrolet Silverado 2500HD 2WD Double Cab 158.1"

WINDOW STICKER BUY BOARD CONTRACT 521-16

Advert/Adjustments	$0.00
Destination Charge	$1,295.00
TOTAL PRICE	**$38,195.00**

Est City: mpg
Est Highway: mpg
Est Highway Cruising Range: mi

ORDER UNIT BUY BOARD SALE PRICE 27173.00
INSPECTION 7.00
27180.00
COMPLETE WINDOW TINT 299.00
(SEE UTEC QUOTE #2004) SERVICE BODY W/ WEEKENDER LADDER RACK 6823.00
*$34302.00

*PLUS BUY BOARD FEE $400 (PER PO)

Report content is based on current data version referenced. Any performance-related calculations are offered solely as guidelines. Actual unit performance will depend on your operating conditions.

GM AutoBook, Data Version: 528.0, Data updated 1/30/2018
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Customer File:

LAST ORDER DATE 2/22/18 (FOR 2018 DOUBLE CABS)

Prepared For:
Kevin Teller
Williamson County -2500 Double Cab Service Body
TX 78613
Phone: (512) 948-3368
Email: kevin.teller@wilco.o
rg
Primary FAN: 000945321
Requested Quantity: 2

Prepared By:
Danny Mireles
Gunn Chevrolet Ltd
16550 IH 35 N
Selma, TX 78154
Phone: (210) 599-5000
Fax: (210) 599-4251
Email: dmireles@gunnauto.com

2018 Fleet/Non-Retail Chevrolet Silverado 2500HD 2WD Double Cab 158.1"

WINDOW STICKER

2018 Chevrolet Silverado 2500HD 2WD Double Cab 158.1" Work Truc	Interior: - Dark Ash with Jet Black Interior Acc
6.0L/366 CID Gas/Ethanol V8	Exterior 1: - Summit White
6-Speed Automatic	Exterior 2: - No color has been selected.

CODE	MODEL	MSRP
CC25953	2018 Chevrolet Silverado 2500HD 2WD Double Cab 158.1" Work Truck	$36,600.00
	OPTIONS	
E63	PICKUP BOX	$0.00
FE9	EMISSIONS, FEDERAL REQUIREMENTS	$0.00
L96	ENGINE, VORTEC 6.0L VARIABLE VALVE TIMING V8 SFI, E85-COMPATIBLE, F	$0.00
MYD	TRANSMISSION, 6-SPEED AUTOMATIC, HEAVY-DUTY, ELECTRONICALLY CO	$0.00
GEH	GVWR, 9500 LBS. (4309 KG)	$0.00
GT5	REAR AXLE, 4.10 RATIO	$0.00
1WT	WORK TRUCK PREFERRED EQUIPMENT GROUP	$0.00
PYN	WHEELS, 17" (43.2 CM) STEEL	$0.00
QHQ	TIRES, LT245/75R17E ALL-SEASON, BLACKWALL	$0.00
ZY1	PAINT, SOLID	$0.00
GAZ	SUMMIT WHITE	$0.00
AE7	SEATS, FRONT 40/20/40 SPLIT-BENCH, 3-PASSENGER, DRIVER AND FRONT	$0.00
H2Q	DARK ASH WITH JET BLACK INTERIOR ACCENTS, VINYL SEAT TRIM	$0.00
IOB	AUDIO SYSTEM, CHEVROLET MYLINK RADIO WITH 7" DIAGONAL COLOR TO	$0.00
Z82	TRAILERING EQUIPMENT	$300.00
NZ4	WHEELS, 17" X 7.5" (43.2 CM X 19.1 CM) FULL-SIZE, STEEL SPARE.	$0.00
	SUBTOTAL	**$36,900.00**

Report content is based on current data version referenced. Any performance-related calculations are offered solely as guidelines. Actual unit performance will depend on your operating conditions.

GM AutoBook, Data Version: 528.0, Data updated 1/30/2018
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Customer File:

UTEC

5860 Pfeil Road
Schertz, TX 78154

Quote

Date	Quote #
2/2/2018	2004

Name / Address
GUNN CHEVROLET ATTN: ACCTS/PAYABLE 12602 IH 35 NORTH SAN ANTONIO, TEXAS 78233

Rep	Project
AR	

Description	Qty	U/M	Total
INSTALL KNAPHEIDE MODEL 696 STANDARD SERVICE BODY FOR 56" CA SINGLE REAR WHEEL TRUCK 40" COMPARTMENT HEIGHT AND 96" BODY LENGTH COMPLETE WITH LIGHTS , BUMPER AND PAINT SERVICE BODY ONE SOLID COLOR	1	ea	5,583.00
INSTALL GAGE GRILL GUARD MODEL 1128P ON CHEVROLET 3/4 TON TRUCK	1	ea	590.00
INSTALL WEEKENDER MODEL 1426W LADDER RACK SERVICE BODY SERIES	1	ea	650.00
CONTACT : DANNY MIRELES END USER : WILLIAMSON COUNTY (SERVICE BODY IN STOCK 2-3 DAYS OUT ON PARTS WILL TAKE 4-5 DAYS TO COMPLETE INSTALLATION)			

Thank you for your business.

Total $6,823.00

Phone #
210-566-2704

Prepared For:
Kevin Teller
Williamson County -2500 Double Cab Service Body
TX 78613
Phone: (512) 948-3368
Email: kevin.teller@wilco.o
rg
Primary FAN: 000945321
Requested Quantity: 2

Prepared By:
Danny Mireles
Gunn Chevrolet Ltd
16550 IH 35 N
Selma, TX 78154
Phone: (210) 599-5000
Fax: (210) 599-4251
Email: dmireles@gunnauto.com

BUY BOARD CONTRACT 521-16

2018 Fleet/Non-Retail Chevrolet Silverado 2500HD 2WD Double Cab 158.1"

WINDOW STICKER ORDER UNIT

Advert/Adjustments	$0.00
Destination Charge	$1,295.00
TOTAL PRICE	**$38,195.00**

Est City: mpg
Est Highway: mpg
Est Highway Cruising Range: mi

ORDER UNIT BUY BOARD SALE PRICE $27,173.00

INSPECTION 7.00

$27,180.00

COMPLETE WINDOW TINT. 299.00

7636.00

(SEE UTEC QUOTE 2003) SERVICE BODY W/FULL LADDER RACK $35,115.00

PLUS BUY BOARD FEE $400 (PER P.O.)

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Customer File:

2018 LAST ORDER DATE 2/22/18 (FOR 2018 DOUBLE CABS)

Prepared For:
Kevin Teller
Williamson County -2500 Double Cab Service Body
TX 78613
Phone: (512) 948-3368
Email: kevin.teller@wilco.o
rg
Primary FAN: 000945321
Requested Quantity: 2

Prepared By:
Danny Mireles
Gunn Chevrolet Ltd
16550 IH 35 N
Selma, TX 78154
Phone: (210) 599-5000
Fax: (210) 599-4251
Email: dmireles@gunnauto.com

2018 Fleet/Non-Retail Chevrolet Silverado 2500HD 2WD Double Cab 158.1"

WINDOW STICKER

2018 Chevrolet Silverado 2500HD 2WD Double Cab 158.1" Work Truc	Interior: - Dark Ash with Jet Black Interior Acc
6.0L/366 CID Gas/Ethanol V8	Exterior 1: - Summit White
* 6-Speed Automatic	Exterior 2: - No color has been selected.

CODE	MODEL	MSRP
CC25953	2018 Chevrolet Silverado 2500HD 2WD Double Cab 158.1" Work Truck	$36,600.00
	OPTIONS	
E63	PICKUP BOX	$0.00
FE9	EMISSIONS, FEDERAL REQUIREMENTS	$0.00
L96	ENGINE, VORTEC 6.0L VARIABLE VALVE TIMING V8 SFI, E85-COMPATIBLE, F	$0.00
MYD	TRANSMISSION, 6-SPEED AUTOMATIC, HEAVY-DUTY, ELECTRONICALLY CO	$0.00
GEH	GVWR, 9500 LBS. (4309 KG)	$0.00
GT5	REAR AXLE, 4.10 RATIO	$0.00
1WT	WORK TRUCK PREFERRED EQUIPMENT GROUP	$0.00
PYN	WHEELS, 17" (43.2 CM) STEEL	$0.00
QHQ	TIRES, LT245/75R17E ALL-SEASON, BLACKWALL	$0.00
ZY1	PAINT, SOLID	$0.00
GAZ	SUMMIT WHITE	$0.00
AE7	SEATS, FRONT 40/20/40 SPLIT-BENCH, 3-PASSENGER, DRIVER AND FRONT	$0.00
H2Q	DARK ASH WITH JET BLACK INTERIOR ACCENTS, VINYL SEAT TRIM	$0.00
IOB	AUDIO SYSTEM, CHEVROLET MYLINK RADIO WITH 7" DIAGONAL COLOR TO	$0.00
Z82	TRAILERING EQUIPMENT	$300.00
NZ4	WHEELS, 17" X 7.5" (43.2 CM X 19.1 CM) FULL-SIZE, STEEL SPARE.	$0.00
	SUBTOTAL	**$36,900.00**

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Customer File:

UTEC

5860 Pfeil Road
Schertz, TX 78154

Quote

Date	Quote #
2/2/2018	2003

Name / Address
GUNN CHEVROLET ATTN: ACCTS/PAYABLE 12602 IH 35 NORTH SAN ANTONIO, TEXAS 78233

Rep	Project
AR	

Description	Qty	U/M	Total
INSTALL KNAPHEIDE MODEL 696 STANDARD SERVICE BODY FOR 56" CA SINGLE REAR WHEEL TRUCK 40" COMPARTMENT HEIGHT AND 96" BODY LENGTH COMPLETE WITH LIGHTS , BUMPER AND PAINT SERVICE BODY ONE SOLID COLOR	1	ea	5,583.00
INSTALL GAGE GRILL GUARD MODEL 1128P ON CHEVROLET 3/4 TON TRUCK	1	ea	590.00
INSTALL KARGO MASTER MODEL 04000 / 01000 LADDER RACK SERVICE BODY SERIES	1	ea	1,463.00
CONTACT : DANNY MIRELES END USER : WILLIAMSON COUNTY (SERVICE BODY IN STOCK 2-3 DAYS OUT ON PARTS WILL TAKE 4-5 DAYS TO COMPLETE INSTALLATION)			

Thank you for your business.

Total $7,636.00

Phone #
210-566-2704

Prepared For:
Kevin Teller
Williamson County -2500 Double Cab Service Body
TX 78613
Phone: (512) 948-3368
Email: kevin.teller@wilco.o
rg
Primary FAN: 000945321
Requested Quantity: 2

Prepared By:
Danny Mireles
Gunn Chevrolet Ltd
16550 IH 35 N
Selma, TX 78154
Phone: (210) 599-5000
Fax: (210) 599-4251
Email: dmireles@gunnauto.com

2018 Fleet/Non-Retail Chevrolet Silverado 2500HD 2WD Double Cab 158.1"

STANDARD EQUIPMENT

STANDARD EQUIPMENT - 2018 Fleet/Non-Retail CC25953 2WD Double Cab 158.1" Work Truck

ENTERTAINMENT

- Audio system, Chevrolet MyLink Radio with 7" diagonal color touch-screen, AM/FM stereo with seek-and-scan and digital clock, includes Bluetooth streaming audio for music and select phones
- XM Satellite Radio, delete
- 6-speaker audio system
- Bluetooth for phone, personal cell phone connectivity to vehicle audio system

EXTERIOR

- Wheels, 17" (43.2 cm) steel includes 17" x 7.5" (43.2 cm x 19.1 cm) steel spare wheel. Spare not included with (ZW9) pickup box delete unless a spare tire is ordered
- Tires, LT245/75R17E all-season, blackwall
- Tire carrier lock keyed cylinder lock that utilizes same key as ignition and door (Not included when (ZW9) pickup box delete or (9J4) rear bumper delete is ordered.)
- Bumper, front chrome
- CornerStep, rear bumper (Requires (E63) pickup box.)
- Bumper, rear chrome with bumper CornerSteps (Requires (E63) pickup box.)
- Grille surround, chrome
- Headlamps, halogen projector-beam
- Lamps, cargo area, cab mounted with switch on center switch bank
- Mirrors, outside manual, Black
- Glass, solar absorbing, tinted
- Door handles, Black
- Tailgate and bed rail protection caps, top
- Tailgate, locking, utilizes same key as ignition and door (Not available with (AQQ) Remote Keyless Entry.)

Report content is based on current data version referenced. Any performance-related calculations are offered solely as guidelines. Actual unit performance will depend on your operating conditions.

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Customer File:

Prepared For:
Kevin Teller
Williamson County -2500 Double Cab Service Body
TX 78613
Phone: (512) 948-3368
Email: kevin.teller@wilco.o
rg
Primary FAN: 000945321
Requested Quantity: 2

Prepared By:
Danny Mireles
Gunn Chevrolet Ltd
16550 IH 35 N
Selma, TX 78154
Phone: (210) 599-5000
Fax: (210) 599-4251
Email: dmireles@gunnauto.com

2018 Fleet/Non-Retail Chevrolet Silverado 2500HD 2WD Double Cab 158.1"

STANDARD EQUIPMENT

STANDARD EQUIPMENT - 2018 Fleet/Non-Retail CC25953 2WD Double Cab 158.1" Work Truck

INTERIOR

- Seats, front 40/20/40 split-bench, 3-passenger, driver and front passenger recline with outboard head restraints and center fold-down armrest with storage. Vinyl has fixed lumbar and cloth has manually adjustable driver lumbar. (Upgradeable to (AZ3) front 40/20/40 split-bench seat.)
- Seat trim, Vinyl
- Seat, rear full-width folding bench, 3-passenger (includes child seat top tether anchor) (Requires Double Cab models.)
- Floor covering, Graphite-colored rubberized-vinyl
- Steering column, manual Tilt-Wheel
- Steering wheel
- Instrumentation, 6-gauge cluster featuring speedometer, fuel level, engine temperature, tachometer, voltage and oil pressure
- Driver Information Center, 3.5-inch diagonal monochromatic display provides warning messages and basic vehicle information
- Windows, power with driver express up and down and express down on all other windows (Standard on Crew Cab and Double Cab. On Regular Cab, Included and only available with (PCM) WT Convenience Package.) (Standard on Crew Cab and Double Cab. On Regular Cab, Included and only available with (PCR) WT Fleet Convenience Package.)
- Door locks, power
- Cruise control, steering wheel-mounted
- Air conditioning, single-zone
- Assist handle, front passenger and driver on A-pillars

Report content is based on current data version referenced. Any performance-related calculations are offered solely as guidelines. Actual unit performance will depend on your operating conditions.

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Prepared For:
Kevin Teller
Williamson County -2500 Double Cab Service Body
TX 78613
Phone: (512) 948-3368
Email: kevin.teller@wilco.o
rg
Primary FAN: 000945321
Requested Quantity: 2

Prepared By:
Danny Mireles
Gunn Chevrolet Ltd
16550 IH 35 N
Selma, TX 78154
Phone: (210) 599-5000
Fax: (210) 599-4251
Email: dmireles@gunnauto.com

2018 Fleet/Non-Retail Chevrolet Silverado 2500HD 2WD Double Cab 158.1"

STANDARD EQUIPMENT

STANDARD EQUIPMENT - 2018 Fleet/Non-Retail CC25953 2WD Double Cab 158.1" Work Truck

MECHANICAL

- Engine, Vortec 6.0L Variable Valve Timing V8 SFI, E85-compatible, FlexFuel capable of running on unleaded or up to 85% ethanol (360 hp [268.4 kW] @ 5400 rpm, 380 lb-ft of torque [515.0 N-m] @ 4200 rpm) (Does not include E85 capability with (ZW9) pickup box delete.)
- Transmission, 6-speed automatic, heavy-duty, electronically controlled with overdrive and tow/haul mode. Includes Cruise Grade Braking and Powertrain Grade Braking (Requires (L96) Vortec 6.0L V8 SFI engine.)
- Rear axle, 4.10 ratio (Requires (L96) Vortec 6.0L V8 SFI engine.)
- Suspension Package, Standard includes 51mm twin tube shock absorbers and 33mm front stabilizer bar
- Pickup box
- GVWR, 9500 lbs. (4309 kg) (Requires (L96) Vortec 6.0L V8 SFI engine. Not available with CK25943 or CC25903 model.)
- Air cleaner, high-capacity
- Differential, heavy-duty locking rear
- Rear wheel drive
- Cooling, external engine oil cooler
- Cooling, auxiliary external transmission oil cooler
- Battery, heavy-duty 720 cold-cranking amps/80 Amp-hr, maintenance-free with rundown protection and retained accessory power
- Alternator, 150 amps
- Frame, fully-boxed, hydroformed front section
- Recovery hooks, front, frame-mounted, black
- Steering, Recirculating Ball with smart flow power steering system
- Brakes, 4-wheel antilock, 4-wheel disc with DuraLife brake rotors
- Capless Fuel Fill (Gas engine only. Not available with (ZW9) pickup box delete.)
- Exhaust, aluminized stainless-steel muffler and tailpipe

Report content is based on current data version referenced. Any performance-related calculations are offered solely as guidelines. Actual unit performance will depend on your operating conditions.

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Prepared For:
Kevin Teller
Williamson County -2500 Double Cab Service Body
TX 78613
Phone: (512) 948-3368
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rg
Primary FAN: 000945321
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Selma, TX 78154
Phone: (210) 599-5000
Fax: (210) 599-4251
Email: dmireles@gunnauto.com

2018 Fleet/Non-Retail Chevrolet Silverado 2500HD 2WD Double Cab 158.1"

STANDARD EQUIPMENT

STANDARD EQUIPMENT - 2018 Fleet/Non-Retail CC25953 2WD Double Cab 158.1" Work Truck

SAFETY

- StabiliTrak, stability control system with Proactive Roll Avoidance and traction control includes electronic trailer sway control and hill start assist
- Daytime Running Lamps with automatic exterior lamp control
- Air bags Double and Regular Cab: Frontal Airbags- Driver single stage and Front Passenger dual-stage; Thorax side-impact, seat mounted, both driver and front passenger; Head-curtain front and rear outboard seating positions; Passenger Sensing System - Infant only suppression for passenger and passenger seat belt reminder status displayed on overhead console (With (ZW9) pickup box delete on Double and Regular Cab you will get single-stage frontal and thorax side-impact, driver and front passenger, and head curtain side-impact, front and rear outboard seating positions. Always use safety belts and child restraints. Children are safer when properly secured in a rear seat in the appropriate child restraint. See the Owner's Manual for more information.)
- OnStar, delete also deletes driver information center compass.
- Rear Vision Camera (Removed when (ZW9) pickup box delete is ordered.)
- Teen Driver mode a configurable feature that lets you activate customizable vehicle settings associated with a key fob, to encourage safe driving behavior. It can limit certain vehicle features, and it prevents certain safety systems from being turned off. An in-vehicle report gives you information on your teen's driving habits and helps you to continue to coach your new driver
- Tire Pressure Monitoring System with Tire Fill Alert (does not apply to spare tire)

Report content is based on current data version referenced. Any performance-related calculations are offered solely as guidelines. Actual unit performance will depend on your operating conditions.

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2018 MODEL YEAR VEHICLE BUILD-OUT
FINAL CONSENSUS / DOSP / ORDER FLOW TIMING

V2 1/18/2018

				RETAIL				FLEET		
DIVISION	MODEL	ALLOCATION GROUP	2018 MY BUILD-OUT DATE	FINAL CONSENSUS MONTH / CYCLE	FINAL DOSP CYCLE	UNALLOCATED SOLD ORDER CUT-OFF	IN-SYSTEM RETURN CUT-OFF	SPECIAL PAINT ORDER CUT-OFF	SEO ORDER CUT-OFF	NON-SEO ORDER CUT-OFF
Buick	Cascada	CASCDA	4/27/18	Feb / 2	3/1/18	1/26/18	1/19/18			1/25/18
	Regal Sportback / TourX	REGAL / RGLWGN	7/6/18	Apr / 2	5/3/18	3/23/18	3/16/18			3/22/18
	LaCrosse	LACROS	6/1/18	Apr / 1	4/12/18	3/23/18	3/16/18			3/22/18
	Encore	ENCORE	5/31/18	Apr / 1	4/12/18	3/23/18	3/16/18			3/22/18
	Envision	ENVISN	3/2/18	Oct / 1	10/19/17	9/29/17	9/22/17			9/28/17
	Enclave	ENCLAV	6/15/18	Apr / 2	5/3/18	3/23/18	3/16/18			3/22/18
Cadillac	ATS	ATS	6/28/18	May / 1	5/17/18	4/27/18	4/20/18			4/26/18
	CTS	CTS	6/28/18	May / 1	5/17/18	4/27/18	4/20/18			4/26/18
	XTS	XTS	6/1/18	Apr / 1	4/19/18	3/23/18	3/16/18			3/22/18
	CT6	CT6	9/13/18	Jul / 2	8/2/18	6/29/18	6/22/18			6/28/18
	XT5	XT5	6/8/18	Apr / 2	4/26/18	3/23/18	3/16/18			3/22/18
	Escalade	ESC	6/29/18	May / 1	5/24/18	4/27/18	4/20/18	4/12/18	4/12/18	4/26/18
	Escalade ESV	ESCESV	6/29/18	May / 1	5/24/18	4/27/18	4/20/18	4/12/18	4/12/18	4/26/18
Chevrolet Car	Spark	SPARK	5/31/18	Apr / 1	4/12/18	3/23/18	3/16/18			3/22/18
	Bolt EV	BOLTEV	6/29/18	May / 1	5/17/18	4/27/18	4/20/18			4/26/18
	Sonic	SONIC	6/29/18	May / 1	5/24/18	4/27/18	4/20/18			4/26/18
	Volt	VOLT	8/7/18	Jun / 2	7/5/18	5/25/18	5/18/18			5/24/18
	Cruze Sedan	CRUZE	8/3/18	Jun / 1	6/21/18	5/25/18	5/18/18			5/24/18
	Cruze Hatchback	CRZHBK	8/17/18	Jun / 2	7/12/18	5/25/18	5/18/18			5/24/18
	Malibu	MALIBU	9/21/18	Aug / 1	8/16/18	7/27/18	7/20/18			7/26/18
	Impala	IMPALA	6/15/18	Apr / 2	5/3/18	3/23/18	3/16/18			3/22/18
	Camaro Coupe / Convertible	CAM / CAMCON	8/16/18	Jun / 2	7/5/18	5/25/18	5/18/18			5/24/18
	Corvette Stingray / Z06	VET / Z06	1/26/18	Nov / 1	11/16/17	10/27/17	10/20/17			10/26/17
Chevrolet Truck / Crossover	Trax	TRAX	6/29/18	May / 1	5/17/18	4/27/18	4/20/18			4/26/18
	Equinox	EQUINX	6/8/18	Apr / 1	4/12/18	3/23/18	3/16/18			3/22/18
	Traverse	TRAVRS	6/15/18	Apr / 2	5/3/18	3/23/18	3/16/18			3/22/18
	Colorado	COLRDO	7/14/18	May / 2	5/31/18	4/27/18	4/20/18	4/26/18	4/26/18	4/26/18
	City Express	CITYXP	2/24/18	Sep / 2	9/28/17	8/25/17	8/18/17			8/24/17
	Express Van	EXPVAN	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
	Silverado LD Regular Cab	CREGLD	6/22/18	Apr / 1	4/19/18	3/23/18	3/16/18	3/22/18	3/22/18	3/22/18
	Silverado LD Double Cab	CDBLLD	6/22/18	Apr / 1	4/19/18	3/23/18	3/16/18	3/22/18	3/22/18	3/22/18
	Silverado LD Crew Cab	CCRULD	11/10/18	Aug / 2	8/30/18	7/27/18	7/20/18	TBD	TBD	7/26/18
	Silverado HD Regular Cab	CREGHD	5/19/18	Mar / 1	3/15/18	2/23/18	2/16/18	2/22/18	2/22/18	2/22/18
	Silverado HD Double Cab	CDBLHD	5/19/18	Mar / 1	3/15/18	2/23/18	2/16/18	2/22/18	2/22/18	2/22/18
	Silverado HD Crew Cab	CCRUHD	6/8/18	Apr / 1	4/19/18	3/23/18	3/16/18	3/22/18	3/22/18	3/22/18
	Tahoe	TAHOE	6/29/18	May / 1	5/24/18	4/27/18	4/20/18	4/12/18	4/12/18	4/26/18
	Tahoe Police (PPV / 5W4; Fleet Only)	TAHOE	6/29/18				4/6/18			4/12/18
	Suburban	SUBURB	6/29/18	May / 1	5/24/18	4/27/18	4/20/18	4/12/18	4/12/18	4/26/18
	LCF 4500 HD/XD & 5500 HD/XD Diesel	LCFDSL	December 2017							9/15/17
	LCF 6500 XD Gas	LCF GAS	December 2017							9/15/17
	LCF 3500 HD Diesel	LCFDSL	TBD							TBD
	LCF 3500 & 4500 Gas	LCFGAS	October 2018							6/30/18
GMC	Terrain	TERAIN	6/15/18	Apr / 1	4/12/18	3/23/18	3/16/18			3/22/18
	Acadia	ACADIA	6/8/18	Apr / 2	4/26/18	3/23/18	3/16/18			3/22/18
	Canyon	CANYON	7/14/18	May / 2	5/31/18	4/27/18	4/20/18	4/26/18	4/26/18	4/26/18
	Savana Van	SAVVAN	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
	Sierra LD Regular Cab	GREGLD	6/22/18	Apr / 1	4/19/18	3/23/18	3/16/18	3/22/18	3/22/18	3/22/18
	Sierra LD Double Cab	GDBLLD	6/22/18	Apr / 1	4/19/18	3/23/18	3/16/18	3/22/18	3/22/18	3/22/18
	Sierra LD Crew Cab	GCRULD	11/10/18	Aug / 2	8/30/18	7/27/18	7/20/18	TBD	TBD	7/26/18
	Sierra HD Regular Cab	GREGHD	5/19/18	Mar / 1	3/15/18	2/23/18	2/16/18	2/22/18	2/22/18	2/22/18
	Sierra HD Double Cab	GDBLHD	5/19/18	Mar / 1	3/15/18	2/23/18	2/16/18	2/22/18	2/22/18	2/22/18
	Sierra HD Crew Cab	GCRUHD	6/8/18	Apr / 1	4/19/18	3/23/18	3/16/18	3/22/18	3/22/18	3/22/18
	Yukon	YKN	6/29/18	May / 1	5/24/18	4/27/18	4/20/18	4/12/18	4/12/18	4/26/18
	Yukon XL	YKNXL	6/29/18	May / 1	5/24/18	4/27/18	4/20/18	4/12/18	4/12/18	4/26/18

2019 MODEL YEAR VEHICLE START-UP
INITIAL CONSENSUS / DOSP / ORDER FLOW TIMING

V2 1/18/2018

				RETAIL		FLEET
DIVISION	MODEL	ALLOCATION GROUP	2019 MY START-UP DATE	INITIAL CONSENSUS MONTH / CYCLE	INITIAL DOSP CYCLE	ORDER ENTRY AVAILABILITY
Buick	Cascada	CASCDA	5/2/18	Mar / 1	3/15/18	2/15/18
	Regal Sportback / TourX	REGAL / RGLWGN	7/30/18	May / 1	5/17/18	4/26/18
	LaCrosse	LACROS	6/4/18	Apr / 2	4/26/18	3/29/18
	Encore	ENCORE	6/4/18	Apr / 2	4/26/18	3/29/18
	Envision	ENVISN	3/5/18	Dec	12/14/17	11/23/17
	Enclave	ENCLAV	6/18/18	May / 1	5/17/18	4/26/18
Cadillac	ATS	ATS	7/16/18	May / 2	5/31/18	5/10/18
	CTS	CTS	7/16/18	May / 2	5/31/18	5/10/18
	XTS	XTS	6/4/18	Apr / 2	4/26/18	3/29/18
	CT6	CT6	9/17/18	Aug / 1	8/16/18	7/19/18
	XT5	XT5	6/18/18	May / 1	5/17/18	4/26/18
	Escalade	ESC	7/9/18	May / 2	5/31/18	5/10/18
	Escalade ESV	ESCESV	7/9/18	May / 2	5/31/18	5/10/18
Chevrolet Car	Spark	SPARK	6/4/18	Apr / 2	4/26/18	3/29/18
	Bolt EV	BOLTEV	7/16/18	May / 2	5/31/18	5/10/18
	Sonic	SONIC	7/16/18	May / 2	5/31/18	5/10/18
	Volt	VOLT	8/20/18	Jul / 1	7/19/18	6/21/18
	Cruze Sedan	CRUZE	8/6/18	Jun / 2	7/5/18	6/21/18
	Cruze Hatchback	CRZHBK	8/20/18	Jul / 1	7/19/18	6/21/18
	Malibu	MALIBU	9/24/18	Aug / 2	8/30/18	8/2/18
	Impala	IMPALA	6/18/18	May / 1	5/17/18	4/26/18
	Camaro Coupe / Convertible	CAM / CAMCON	8/20/18	Jul / 1	7/19/18	6/21/18
	Corvette Stingray / Z06	VET / Z06	1/29/18	Nov / 2	11/30/17	11/23/17
Chevrolet Truck / Crossover	Trax	TRAX	7/2/18	May / 2	5/31/18	5/10/18
	Equinox	EQUINX	6/11/18	Apr / 2	5/3/18	4/12/18
	Traverse	TRAVRS	6/18/18	May / 1	5/17/18	4/26/18
	Colorado	COLRDO	7/16/18	Jun / 1	6/14/18	5/24/18
	City Express	CITYXP	TBD	TBD	TBD	TBD
	Express	EXPVAN	TBD	TBD	TBD	TBD
	Silverado LD Regular Cab	TBD	TBD	TBD	TBD	TBD
	Silverado LD Double Cab	TBD	TBD	TBD	TBD	TBD
	Silverado LD Crew Cab	TBD	TBD	TBD	TBD	TBD
	Silverado HD Regular Cab	CREGHD	6/9/18	Apr / 2	4/26/18	3/29/18
	Silverado HD Double Cab	CDBLHD	7/23/18	May / 2	5/31/18	3/29/18
	Silverado HD Crew Cab	CCRUHD	6/9/18	Apr / 2	4/26/18	3/29/18
	Tahoe	TAHOE	7/9/18	May / 2	5/31/18	5/10/18
	Tahoe Police (9C1 / 5W4; Fleet Only)	TAHOE	7/9/18			5/10/18
	Suburban	SUBURB	7/9/18	May / 2	5/31/18	5/10/18
	LCF 4500 HD/XD & 5500 HD/XD Diesel	LCFDSL	January			9/14/17
	LCF 6500 XD Gas	LCF GAS	January			9/14/17
	LCF 3500 HD Diesel	LCFDSL	TBD			TBD
	LCF 3500 & 4500 Gas	LCFGAS	July			6/21/18
GMC	Terrain	TERAIN	6/11/18	Apr / 2	5/3/18	4/12/18
	Acadia	ACADIA	6/18/18	May / 1	5/17/18	4/26/18
	Canyon	CANYON	7/16/18	Jun / 1	6/14/18	5/24/18
	Savana	SAVVAN	TBD	TBD	TBD	TBD
	Sierra LD Regular Cab	TBD	TBD	TBD	TBD	TBD
	Sierra LD Double Cab	TBD	TBD	TBD	TBD	TBD
	Sierra LD Crew Cab	TBD	TBD	TBD	TBD	TBD
	Sierra HD Regular Cab	GREGHD	6/9/18	Apr / 2	4/26/18	3/29/18
	Sierra HD Double Cab	GDBLHD	7/23/18	May / 2	5/31/18	3/29/18
	Sierra HD Crew Cab	GCRUHD	6/9/18	Apr / 2	4/26/18	3/29/18
	Yukon	YKN	7/9/18	May / 2	5/31/18	5/10/18
	Yukon XL	YKNXL	7/9/18	May / 2	5/31/18	5/10/18

Commissioners Court - Regular Session **12.**

Meeting Date: 02/20/2018

January 2018 Treasurer's Report

Submitted For: David Heselmeyer **Submitted By:** David Heselmeyer, County Treasurer

Department: County Treasurer

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take any appropriate action regarding approval or ratification of monthly Treasurer's Report on Williamson County Finances for January 2018 pursuant to Texas Local Government Code §114.026.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

TR Report 01-2018

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM
Form Started By: David Heselmeyer		Started On: 02/14/2018 10:51 AM
Final Approval Date: 02/14/2018		

TREASURER'S REPORT ON THE WILLIAMSON COUNTY FINANCES

IN THE MATTER OF COUNTY FINANCES
IN THE HANDS OF D. SCOTT HESELMEYER
TREASURER OF WILLIAMSON COUNTY, TEXAS

COMMISSIONERS' COURT
WILLIAMSON COUNTY, TEXAS
IN REGULAR SESSION
FEBRUARY TERM 2018

IN ACCORDANCE with Section 114.026, Local Government Code, we the undersigned, constituting the entire Commissioners Court of said County, certify that on the ____ day of February, 2018, at the Regular term of Court, we compared and examined the monthly report of D. SCOTT HESELMEYER, Treasurer of Williamson County, Texas, for **January 2018**, and finding the same correct, entered an order in the Minutes approving said Report, which states total cash and other assets on hand as $635,558,126.45.

_____
Dan A. Gattis, County Judge

_____
Terry Cook, Commissioner Pct. 1

_____
Cynthia Long, Commissioner Pct. 2

_____
Valerie Covey, Commissioner Pct. 3

_____
Larry Madsen, Commissioner Pct. 4

SWORN TO AND SUBSCRIBED BEFORE ME, by Dan A. Gattis, County Judge, and County Commissioners of said Williamson County, each respectively, on this the _____day _____, A.D., 2018.

_____
Attest: Nancy E. Rister, County Clerk
Clerk of the Commissioners Court in and for
Williamson County, Texas

_____
By: Deputy

AGENDA DATE _____ AGENDA NUMBER _____

WILLIAMSON COUNTY
Statement of Cash Receipts & Disbursements - Summary
Current Period: JAN-18

Currency: USD
Entity=01 (Williamson County)

	Beginning Balance	Receipts	Disbursements	Ending Balance
General Operating				
Cash	3,891,726.52	290,879,559.98	296,482,096.57	(1,710,810.07)
Investments - TexPool	96,968,673.12	60,458,965.24	29,797,205.77	127,630,432.59
Investments	332,393,443.42	35,775,577.87	14,934,941.96	353,234,079.33
Investments - Logic	132,029,687.53	70,545,371.31	54,374,502.89	148,200,555.95
Total General Operating	565,283,530.59	457,659,474.40	395,588,747.19	627,354,257.80
Payroll Fund				
Cash	1,717,158.16	17,397,463.90	12,735,224.93	6,379,397.13
Total Payroll Fund	1,717,158.16	17,397,463.90	12,735,224.93	6,379,397.13
SO Commissary Fund				
Cash	307,959.49			307,959.49
Investments - Texpool	1,516,512.03			1,516,512.03
Total SO Commissary Fund	1,824,471.52			1,824,471.52
Grand Total	568,825,160.27	475,056,938.30	408,323,972.12	635,558,126.45

WILLIAMSON COUNTY
Statement of Cash Receipts & Disbursements
Current Period: JAN-18

Currency: USD
Entity=01 (Williamson County)

Object	Fund	Beginning Balance	Receipts	Disbursements	Ending Balance
101000	0100 GENERAL FUND	(11,855,088.17)	170,767,010.00	182,104,016.84	(23,192,095.01)
101000	0200 ROAD & BRIDGE GENERAL FUND	2,060,952.12	15,028,874.22	10,138,388.51	6,951,437.83
101000	0205 RD & BRIDGE SPECIAL PROJECTS	(8,175.30)			(8,175.30)
101000	0231 CAMPO PERSONNEL FUND	(323,522.14)	8,873.70	151,828.32	(466,476.76)
101000	0250 PASS THRU FUNDING PROGRAM	1,097,305.67		342.05	1,096,963.62
101000	0310 WM-FUTURE ENVIRONMENTAL LIAB		648,472.98	324,236.49	324,236.49
101000	0311 WM-MASTER SITE DEVELOPMENT		324,650.10	162,325.05	162,325.05
101000	0312 WM-COMMUNITY REC FACILITY		324,650.10	162,325.05	162,325.05
101000	0313 WM-CITY OF HUTTO & HUTTO ISD	58,256.17	648,472.98	486,354.73	220,374.42
101000	0340 TOBACCO FUND	1,218,234.73	2,153.10	563,833.37	656,554.46
101000	0350 LAW LIBRARY FUND	95,602.65	34,682.32	47,037.03	83,247.94
101000	0353 JP #3 TEEN COURT PROGRAM	1,990.98		303.10	1,687.88
101000	0355 COURT REPORTER SERVICE FUND	133,885.44	16,577.80	15,324.58	135,138.66
101000	0360 COURTHOUSE SECURITY FUND	145,568.09	32,814.87	27,387.97	150,994.99
101000	0361 JP SECURITY FUND	136,448.78	2,841.89	2,786.89	136,503.78
101000	0364 PRETRIAL PREVENTION PROGRAMS	13,680.00	21,960.00	10,440.00	25,200.00
101000	0365 CHILD SAFETY FUND	(217,512.09)	108,428.66	46,861.73	(155,945.16)
101000	0366 CHILD ABUSE PREVENTION FUND	426.65	44.60	22.30	448.95
101000	0367 JP #3 TRUANCY PROGRAM FD	107,684.08	7,762.56	8,953.18	106,493.46
101000	0368 JP #2 TRUANCY PROGRAM FD	76,094.94	508.84	163.59	76,440.19
101000	0369 JP #4 TRUANCY PROGRAM FD	103,754.86	4,190.62	4,359.39	103,586.09
101000	0370 ALTERNATE DISPUTE RESOLUTION FUND	92,349.38	4,035.50	4,677.30	91,707.58
101000	0371 JUV DELIQ PREV FD-GRAFFITI	8,169.67			8,169.67
101000	0372 JUSTICE COURT TECHNOLOGY FUND	(62,053.99)	7,725.93	14,522.72	(68,850.78)
101000	0373 JP #1 TRUANCY PROGRAM FD	30,646.05	527.29	189.79	30,983.55
101000	0374 CTY & DIST CT TECHNOLOGY FUND	82,907.50	1,618.23	795.78	83,729.95
101000	0375 ELECTION SRVS CONTRACT FD	32,352.85	160,992.24	101,834.16	91,510.93
101000	0376 SURPLUS ELECTIONS CONTRACT FUND	367,718.26		71.60	367,646.66
101000	0378 ELECTION HAVA - TITLE II	744,535.71			744,535.71
101000	0380 PROBATE COURT FUND	52,205.81	915.00	450.00	52,670.81
101000	0381 GUARDIANSHIP FUND	123,931.90	3,780.00	8,010.00	119,701.90
101000	0382 SPECIALITY COURTS FUND	144,403.13	11,060.53	4,338.07	151,125.59
101000	0384 RCDS ARCHIVE FUND - CO CLERK	501,123.99	92,300.00	70,074.90	523,349.09
101000	0385 RCDS MGMT/PRSRV FD-CO CLRK	935,504.37	192,835.95	148,072.00	980,268.32
101000	0386 RCDS MGMT/PRSRV FD-DIST CLRK	203,206.39	4,989.42	2,881.98	205,313.83
101000	0387 RCDS TECHNOLOGY FUND-DIST CLK	313,817.17	9,557.48	6,597.57	316,777.08
101000	0388 COURT RCDS PRESERVATION FUND	568,083.37	13,001.88	6,090.94	574,994.31
101000	0390 RCDS MGMT/PRSRV FD-CO WIDE	189,528.24	16,650.67	69,353.35	136,825.56
101000	0399 STATE AGENCY FUND	693,234.85	477,480.40	919,701.04	251,014.21
101000	0406 CO ATTY HOT CHECK FUND	1,980.23	1,605.54	802.77	2,783.00
101000	0407 D/A WELFARE FRAUD FUND	1,338.50			1,338.50
101000	0408 D/A ASSET FORFEITURES	170,990.87	65,173.20	35,166.49	200,997.58
101000	0410 CO SHRF ASSET FORFEITURES	546,306.36	294,819.50	241,930.95	599,194.91
101000	0490 EMPLOYEE FUND	62,694.48	429.61	537.12	62,586.97
101000	0503 OUT OF ST/ICE INMATE BILL FD		9,249,912.32	9,247,583.04	2,329.28
101000	0507 WC RADIO COMMUNICATION SYSTEM	535,394.27	484,690.17	293,297.76	726,786.68
101000	0508 WMSN CO CONSERVATION FUND	105,736.23	11,147.45	50,585.74	66,297.94
101000	0515 APPELLATE JUDICIAL SYS FD	2,571.80	5,655.92	5,222.26	3,005.46

Currency: USD
Entity=01 (Williamson County)

Object	Fund	Beginning Balance	Receipts	Disbursements	Ending Balance
101000	0516 UNCLAIMED JUVENILE RESTITUTION		16,205.32		16,205.32
101000	0545 REGIONAL ANIMAL SHELTER	(170,496.22)	155,144.70	257,891.58	(273,243.10)
101000	0546 REG ANIMAL SHELTER DONATION FUND	570,572.85	48,012.43	47,619.72	570,965.56
101000	0571 JJAEP TIER II FUNDING	344,149.27	139.86	25,293.23	318,995.90
101000	0600 DEBT SERVICE-COUNTY WIDE	2,760,171.25	56,115,683.40	54,292,539.03	4,583,315.62
101000	0636 WC HISTORICAL COMMISSION PROGRAM FUND	6,477.30			6,477.30
101000	0777 CAPITAL PROJECTS FUND	1,909,647.78	30,403,251.15	30,207,048.43	2,105,850.50
101000	0831 831 CAMPO OPERATING	(272,944.70)	236,090.37	482,738.55	(519,592.88)
101000	0852 AVERY RANCH FUND	55,265.91	584,506.41	627,344.34	12,427.98
101000	0854 PEARSON PLACE RD DIST DEBT SERVICE FUND	10,551.84	125,985.54	135,212.33	1,325.05
101000	0855 NORTHWOODS RD DIST OPERATING FUND		2,097.95	2,097.95	
101000	0856 NORTHWOODS RD DIST DEBT SERVICE FUND	17,409.93	331,857.68	340,022.83	9,244.78
101000	0875 SO COMMISSARY FUND	307,959.49			307,959.49
101000	0880 PAYROLL FUND	1,717,158.16	17,397,463.90	12,735,224.93	6,379,397.13
101000	0882 FLEET MAINTENANCE	924,530.13	297,111.92	382,454.71	839,187.34
101000	0885 WSMN CO BENEFITS FUND	(370,515.72)	2,053,542.43	2,646,296.20	(963,269.49)
101000	0888 FIDUCIARY FUNDS	100,000.00			100,000.00
101000	0999 INDIRECT PROJECTS/GRANTS FD	(1,287,357.95)	1,416,057.25	1,545,460.17	(1,416,760.87)
Total Cash		5,916,844.17	308,277,023.88	309,217,321.50	4,976,546.55
151000	0100 GENERAL FUND	1,810.43	368.12		2,178.55
151000	0200 ROAD & BRIDGE GENERAL FUND	24,834.04	27.40		24,861.44
151000	0350 LAW LIBRARY FUND	305,215.33	336.69		305,552.02
151000	0355 COURT REPORTER SERVICE FUND	1,101,665.01	1,215.30		1,102,880.31
151000	0360 COURTHOUSE SECURITY FUND	129,416.92	142.80		129,559.72
151000	0365 CHILD SAFETY FUND	366,309.66	403.73	365.66	366,347.73
151000	0370 ALTERNATE DISPUTE RESOLUTION FUND	223,063.68	246.06		223,309.74
151000	0372 JUSTICE COURT TECHNOLOGY FUND	468,352.82	516.71		468,869.53
151000	0384 RCDS ARCHIVE FUND - CO CLERK	1,932,442.72	2,131.80		1,934,574.52
151000	0385 RCDS MGMT/PRSRV FD-CO CLRK	1,902,775.35	2,099.08		1,904,874.43
151000	0390 RCDS MGMT/PRSRV FD-CO WIDE	429,919.96	474.28		430,394.24
151000	0408 D/A ASSET FORFEITURES	124,543.00	137.40		124,680.40
151000	0410 CO SHRF ASSET FORFEITURES	359,358.00	396.41		359,754.41
151000	0875 SO COMMISSARY FUND	1,516,512.03			1,516,512.03
151100	0100 GENERAL FUND	9,314,848.83	30,539,549.07	29,786,228.74	10,068,169.16
151100	0200 ROAD & BRIDGE GENERAL FUND	11,674,100.22	61,932.16		11,736,032.38
151100	0310 WM-FUTURE ENVIRONMENTAL LIAB	4,037.81	5.19		4,043.00
151100	0311 WM-MASTER SITE DEVELOPMENT	691,985.23	890.77		692,876.00
151100	0312 WM-COMMUNITY REC FACILITY	499,904.45	643.52		500,547.97
151100	0340 TOBACCO FUND	1,275,682.70	1,642.15		1,277,324.85
151100	0508 WMSN CO CONSERVATION FUND	902,148.32	1,161.32		903,309.64
151100	0600 DEBT SERVICE-COUNTY WIDE	57,269,233.22	28,619,997.46		85,889,230.68
151100	0852 AVERY RANCH FUND	1,163,276.62	348,456.89	10,611.37	1,501,122.14
151100	0885 WSMN CO BENEFITS FUND	3,239,589.28	4,170.22		3,243,759.50
151161	0777 CAPITAL PROJECTS FUND	406,045.23	522.68		406,567.91
151162	0777 CAPITAL PROJECTS FUND	3,158,114.29	871,498.03		4,029,612.32

Currency: USD
Entity=01 (Williamson County)

Object	Fund	Beginning Balance	Receipts	Disbursements	Ending Balance
Total TexPool/TexPool Prime		98,485,185.15	60,458,965.24	29,797,205.77	129,146,944.62
152000	0100 GENERAL FUND	121,038,885.42	27,792,838.95	6,934,884.46	141,896,839.91
152000	0200 ROAD & BRIDGE GENERAL FUND	16,000,999.10	6,547.57		16,007,546.67
152000	0250 PASS THRU FUNDING PROGRAM	31,122,805.20	12,105.32		31,134,910.52
152000	0310 WM-FUTURE ENVIRONMENTAL LIAB	1,520,139.37	500.70		1,520,640.07
152000	0340 TOBACCO FUND	2,000,301.00		57.50	2,000,243.50
152000	0508 WMSN CO CONSERVATION FUND	2,494,509.32	1,792.86		2,496,302.18
152180	0777 CAPITAL PROJECTS FUND	139,255,983.63	45,907.99	8,000,000.00	131,301,891.62
152181	0777 CAPITAL PROJECTS FUND	9,963,172.20	12,443.10		9,975,615.30
152182	0777 CAPITAL PROJECTS FUND	8,996,648.18	7,903,441.38		16,900,089.56
Total Investments		332,393,443.42	35,775,577.87	14,934,941.96	353,234,079.33
153500	0100 GENERAL FUND	33,997,660.98	62,110,383.47	40,581,054.19	55,526,990.26
153500	0250 PASS THRU FUNDING PROGRAM	3,642,082.94	4,709.17		3,646,792.11
153500	0854 PEARSON PLACE RD DIST DEBT SERVICE FUND	1,164,195.77	77,775.17	6,626.47	1,235,344.47
153500	0855 NORTHWOODS RD DIST OPERATING FUND	3,828,617.05	4,950.13	2,097.95	3,831,469.23
153500	0856 NORTHWOODS RD DIST DEBT SERVICE FUND	393,483.12	179,389.89		572,873.01
153780	0777 CAPITAL PROJECTS FUND	42,400,602.62	8,119,530.85	2,321,472.34	48,198,661.13
153781	0777 CAPITAL PROJECTS FUND	16,605,557.58	21,424.13	144,077.81	16,482,903.90
153782	0777 CAPITAL PROJECTS FUND	29,997,487.47	27,208.50	11,319,174.13	18,705,521.84
Total Logic		132,029,687.53	70,545,371.31	54,374,502.89	148,200,555.95
Grand Total		568,825,160.27	475,056,938.30	408,323,972.12	635,558,126.45

Commissioners Court - Regular Session **13.**

Meeting Date: 02/20/2018

Sheriff's Office Training Center, P323 - Change Order 41

Submitted By: Gina Wrehsnig, Infrastructure

Department: Infrastructure **Division:** Building Maintenance

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on accepting and approving a report on the Sheriff's Office Training Center Project; Change Order #41 in the amount of $494.00 for light block-out film added to exterior doors at training rooms, which was executed by Gary Wilson, Director of Williamson County Facilities, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded by the Construction Managers Contingency.

Background

On September 6, 2016, the Williamson County Commissioners Court granted Gary Wilson, Director of Williamson County Facilities, with general authority to approve change orders for the Agreement for Construction Services with American Constructors, Inc. in relation to the Williamson County Sheriff's Office Training Center Project for any increase in costs up to a total maximum amount of $30,000.00 in accordance with Section 262.031 of the Local Government Code – Changes in Plans and Specifications. This report is being provided for purposes of notifying the court of such change order and to place it in the minutes of the Commissioners Court.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

SOTC Change Order 41

SOTC CO41 Funds

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Gina Wrehsnig		Started On: 02/15/2018 08:38 AM
Final Approval Date: 02/15/2018		

COST ITEMIZATION

PCO NO.	**41**
PROJECT:	**Williamson County Sheriff's Office Training Center**
CONSTR. MGR.:	**American Constructors, Inc.**
DOCUMENT NAME:	PR 025
SUBJECT:	PR 025 Film on Doors

AMERICAN CONSTRUCTORS

DATE: 01/26/18

Funding Source CM Contingency

Extended Calendar Days Requested: 0 days

ITEMIZED COST BREAKDOWN

DESCRIPTION--Use Separate line for each item

Sub Name	*Work Description*	FIRM	ESTIMATED	TOTAL
Anchor Ven	**PR 025 Film on Doors**	**$494.00**		**$494.00**

PROPOSAL REQUEST

BRINKLEY SARGENT WIGINTON ARCHITECTS

Distribution: OWNER ☒ ARCHITECT ☒ CONSULTANT ☐ CONTRACTOR ☒ FIELD ☐ OTHER ☐

PROJECT: **Williamson County Sheriff's Office Training Center**
8160 Chandler Road
Hutto, TX 78634

PROPOSAL REQUEST NO: **25**

OWNER: Williamson County
3151 SE Inner Loop
Georgetown, Texas 78626

TO: American Constructors, Inc.
11900 West Parmer Lane
Cedar Park, TX 78613

INITIATION DATE: 1/9/2018

PROJECT NO.: 21522.00

CONTRACT FOR: General Construction

CONTRACT DATE: 12/20/16

Please submit an itemized quotation for changes in the Contract Sum and/or Time incidental to proposed modifications to the Contract Documents described herein.

Description: Incorporate the following revisions to the documents to provide light blockout film on exterior doors in Training and Defense Tactics.

Item No. 1. At doors 157B and 143B, provide Solyx SXF-5050-SOLYX 100% total Light Blockout film (White) on interior face of glass. Follow manufacturer's installation directions.

Attachments: Specification for SXF-5050 Total Light Blocking Safety Film

END OF PROPOSAL REQUEST #25

ISSUED: BRINKLEY SARGENT WIGINTON ARCHITECTS
By: David Achterberg January 9, 2018

ARCHITECT DATE

Document: BSWA-CA-PR Version: 1.01

Specification Sheet

decorativefilms

SOLYX® Glass Finishes

SXF-5050 Total Light Blocking Safety Film

SOLYX: SXF-5050
Total Light Blockout



Product Details

SOLYX® SXF-5050 Total Light Blocking Safety Film: This film is designed for application to interior glass, single or double pane and exterior facing glass.
Safe for use on all types of glass without the concerns of Thermal Shock glass breakage. This film can also be installed on exterior applications. Made of durable Polyester with a satin surface, perfect for privacy, decorative or architectural applications. The total nominal thickness is 5 mil. Manufactured with a silicone liner, which protects the clear, pressure-sensitive adhesive, and applied using the same tools and techniques for window films.

Product Description

SOLYX® SXF-5050 Total Light Blocking Safety Film This is lamination of multi layer white opaque polyester films coated with a permanent pressure sensitive acrylic adhesive and backed with a clear ultra smooth polyester release liner.

Specifications

Product Code	SXF-5050
Product Family	Architectural/Opaque
Film Type	Polyester
Adhesive Type	Pressure-sensitive
Usage	Interior or Exterior
Available Width(s)	60" (1524mm)
Length	100 linear feet (30.5m)
Thickness	5 mil
Visible Light Reflection	15%
Visible Light Transmission	Less than .5%
UV Transmission	0%
Total Solar Energy Rejected	46%
Solar Energy Absorbed	31%
Glare Reduction	100%

Product Construction

Face Film	Adhesive	Release Liner
5 mil polyester	Clear, Pressure-sensitive	Silicone

Installation and Warranty

Installation

Installation should be in accordance with manufacturer's installation instructions.

Warranty

This SOLYX® product will be free from defects in material and manufacture for a period of ten (10) years from the date of installation. See warranty information for specific details

MECHANICAL PROPERTIES

Structure	5 Mil.
Tensile Strength at Break	28,500 PSI
Break Strength	112 lb./inch
Elongation at Break	125%
Peel Strength	7 to 9 lb./inch

Brings untempered glass up to Tempered Glass Safety Standards

PASSES: ANSI Z97.1-1984
16 CFR 1201 U.S.G.S. Category 1: Break Strength 100PLI

Product Distribution and Contact Information

Distribution

SOLYX® Decorative Films are available through qualified Installing Dealers, Distributors or from Decorative Films, LLC.

Samples submitted upon request.

Contact Information

Decorative Films, LLC
1-888-657-5224
www.decorativefilm.com

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SOLYX® SXF-5050 White Total Light Blocking Safety film

Product Construction Sheet



SOLYX: SXF-5050
Total Light Blockout

GENERAL DESCRIPTION:
This is lamination of multi layer white opaque polyester films coated with a permanent pressure sensitive acrylic adhesive and backed with a clear ultra smooth polyester release liner.

PHYSICAL PROPERTIES
ASTM D 3652
Mil (micron) Adhesive: 0.8-0.9 (20-23) +/- 0.1 (3)
Film: 4.5 mil +/- 10 %
Adhesive: 1.2-1.3 (30-33) +/- 0.1 (3) V63 UV adhesive
Liner: 1.4 (36) +/- 5 %
Dimensional Stability (%) MD: 0.50 On Al panel at 160°F
TD: 0.50 (71°C) for 24 hr.

ADHESION PROPERTIES**
Average Adhesion from oz/in (N/m)
Stainless Steel 91 (1001) ASTM D 903 (Modified for Acrylic 104 (1144) 72 hr dwell time)
Glass 81 (891)
Polypropylene 8 (88)
Expected Shear 100 + ASTM D 3654 Method A (1 hr (hours) dwell, 1 sq. in, 4 lb. load)
Tack (gm) 470 ASTM D 2979
** For guidance only, not to be used for setting specifications. Due to the custom nature of this product the data presented are based on three or less production runs.

SERVICE TEMPERATURE RANGE -40°F to 302°F (-40°C to 150°C)
Product may lose embossing over 100°F (37°C)

MINIMUM APPLICATION TEMPERATURE 50°F (10°C)

STORAGE STABILITY Two years stored at 70°F (21°C) and 50% RH

SOLAR PROPERTIES:

Film Thickness	5 mil
Visible Light Transmitted	Less than .5%
Ultraviolet Radiation Rejected	100%
Total Solar Energy Absorbed	31%
Reflectance	15%
Total Solar Energy Rejected	46%

MECHANICAL PROPERTIES

Structure	5 Mil.
Tensile Strength at Break	28,500 PSI
Break Strength	112 lb./inch
Elongation at Break	125%
Peel Strength	7 to 9 lb./inch

Brings untempered glass up to Tempered Glass Safety Standards
PASSES:
ANSI Z97.1-1984
16 CFR 1201 U.S.G.S. Category 1: Break Strength 100PLI

Warranty: The SOLYX® product will be free from defects in material and manufacture for a period of five (5) years from the date of installation. See Warranty information for specific details.

ANCHOR VENTANA
GLASS • SHOWER DOORS • MIRRORS

Change Proposal

1/22/2018

AMERICAN CONSTRUCTORS, LLC
11900 WEST PARMER LANE
CEDAR PARK , TX 78613

Attn:
Project: WILLIAMSON CO SHERIFF'S OTC
Re: 009

Please add $494.00 to Contract. Per GC request, Apply Solyx Whiteout (SXF-5050) to glass at doors 143B & 157B only.

Please sign or send confirmation.

ACCEPTED BY:

Caesar Barrientoz
Project Manager

ACCEPTED BY:

Signature

Typed Name Date

This proposal will be honored for 60 days.
If you do not have an account, prepayment will be required.

Mailing Address: P.O. Box 191
Round Rock, TX 78680

Showroom: 1609 Chisholm Trail #100
Round Rock

Williamson County Facilities - Job Cost Tracking Log

Project: SO Training Center # P323 **Change Order #:** 41

Change Order No.	Court Agenda Date	Party of Initiation	Time Ext. (Days)	GMP Breakdown						GMP Total	Total Updated Contract Amount
				Cost of Work	CM Contingency	Owner Contingency	Allowance	General Conditions	Construction Phase Fee		
Contract				**$ 6,509,639.00**	**$ 285,095.00**	**$ 285,095.00**	**$ 203,500.00**	**$ 502,053.00**	**$ 209,258.00**	**$ 7,994,640.00**	**$ 7,994,640.00**
1	5/30/2017		22	$ 1,200.00	$ -	$ -	$ (1,200.00)				$ 7,994,640.00
2	7/11/2017		16	$ 106,356.00	$ (106,356.00)	$ -	$ -				$ 7,994,640.00
3	5/30/2017		0	$ 8,330.00	$ (8,330.00)	$ -	$ -				$ 7,994,640.00
4	5/30/2017		0	$ 225.00	$ -	$ -	$ (225.00)				$ 7,994,640.00
5	5/30/2017		0	$ 22,460.00	$ (22,460.00)	$ -	$ -				$ 7,994,640.00
6	5/30/2017		0	$ 8,807.11	$ -	$ -	$ (8,807.11)				$ 7,994,640.00
7	10/24/2017		0	$ 95,783.00	$ -	$ -	$ (95,783.00)				$ 7,994,640.00
8	10/24/2017		0	$ 23,156.00	$ -	$ -	$ (23,156.00)				$ 7,994,640.00
9	1/30/2018	Architect	0	$ 31,780.23			$ (31,780.23)				$ 7,994,640.00
10	PENDING REVIEW										$ 7,994,640.00
11	1/9/2018	Architect	0	$ 2,582.21	$ -	$ -	$ (2,582.21)				$ 7,994,640.00
12	5/30/2017		0	$ (10,441.00)	$ 10,441.00	$ -	$ -				$ 7,994,640.00
13	5/30/2017		0	$ (12,751.00)	$ 12,751.00	$ -	$ -				$ 7,994,640.00
14	10/24/2017		0	$ 37,736.00	$ (37,736.00)	$ -	$ -				$ 7,994,640.00
15	7/11/2017		0	$ 4,743.00	$ -	$ -	$ (4,743.00)				$ 7,994,640.00
16	7/11/2017		0	$ 31,331.65	$ (31,331.65)	$ -	$ -				$ 7,994,640.00
17	7/11/2017		0	$ (1,856.86)	$ 1,856.86	$ -	$ -				$ 7,994,640.00
18	7/11/2017		0	$ (5,083.00)	$ 5,083.00	$ -	$ -				$ 7,994,640.00
19	7/11/2017		0	$ 665.00	$ (665.00)	$ -	$ -				$ 7,994,640.00
20	7/11/2017		0	$ (8,023.00)	$ 8,023.00	$ -	$ -				$ 7,994,640.00
21	7/11/2017		0	$ 6,139.00	$ (6,139.00)	$ -	$ -				$ 7,994,640.00
22	7/11/2017		0	$ 12,050.00	$ (12,050.00)	$ -	$ -				$ 7,994,640.00
23	PENDING REVIEW										$ 7,994,640.00
24	PENDING REVIEW										$ 7,994,640.00
25	10/24/2017		0	$ 9,244.00	$ (9,244.00)	$ -	$ -				$ 7,994,640.00
26	PENDING REVIEW										$ 7,994,640.00
27	10/24/2017			$ 13,203.08	$ (13,203.08)	$ -	$ -				$ 7,994,640.00
28	10/24/2017		5	$ (16,602.00)	$ 16,602.00	$ -	$ -				$ 7,994,640.00
29	10/24/2017		0	$ (22,116.00)	$ 22,116.00	$ -	$ -				$ 7,994,640.00
30	10/24/2017		5	$ 2,009.15	$ (2,009.15)	$ -	$ -				$ 7,994,640.00
31	12/12/2017	Architect	0	$ 4,336.00	$ (4,336.00)	$ -	$ -				$ 7,994,640.00
32	10/24/2017		3	$ 2,825.00	$ (2,825.00)	$ -	$ -				$ 7,994,640.00
33	12/12/2017		3	$ 6,569.00	$ (6,569.00)	$ -	$ -				$ 7,994,640.00
34	12/12/2017	Architect	0	$ (3,993.00)	$ 3,993.00	$ -	$ -				$ 7,994,640.00
35	PENDING REVIEW										$ 7,994,640.00
36	12/12/2017	Owner	7	$ 8,620.10	$ (8,620.10)	$ -	$ -				$ 7,994,640.00
37	12/12/2017	Architect	0	$ 579.60	$ (579.60)	$ -	$ -				$ 7,994,640.00
38	1/9/2018	Architect	0	$ 12,383.00	$ (12,383.00)						$ 7,994,640.00
39	1/9/2018	Architect	0	$ 4,872.28	$ -	$ -	$ (4,872.28)				$ 7,994,640.00
40	1/9/2018	Architect	0	$ 8,560.00	$ (8,560.00)	$ -	$ -				$ 7,994,640.00
41		Architect	0	$ 494.00	$ (494.00)						$ 7,994,640.00
											$ 7,994,640.00
			61	**$ 6,895,812.55**	**$ 72,070.28**	**$ 285,095.00**	**$ 30,351.17**	**$ 502,053.00**	**$ 209,258.00**	**$ 7,994,640.00**	**$ 7,994,640.00**

Commissioners Court - Regular Session **14.**

Meeting Date: 02/20/2018

WCCHD Remodel P322; Change Order #13

Submitted By: Gina Wrehsnig, Infrastructure

Department: Infrastructure **Division:** Building Maintenance

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on accepting and approving a report on the Texas Avenue Remodel Project; Change Order # 13 in the amount of $13,788.75 for additional electrical, plumbing and fire sprinkler work which was necessary due to HVAC installation conflicts, which was executed by Bob Lubecker, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

Background

On August 15, 2017, the Williamson County Commissioners Court granted Bob Lubecker, Williamson County Facilities Project Manager, with general authority to approve change orders for the Agreement for Construction Services with Trimbuilt Construction, Inc. in relation to the Williamson County Texas Avenue Facility Remodel (WCCHD Office Renovations) Project for any increase in costs up to a total maximum amount of $30,000.00 in accordance with Section 262.031 of the Local Government Code – Changes in Plans and Specifications. This report is being provided for purposes of notifying the court of such change order and to place it in the minutes of the Commissioners Court.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

WCCHD Change Order 13

WCCHD CO13 Funds

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Gina Wrehsnig		Started On: 02/15/2018 08:39 AM
Final Approval Date: 02/15/2018		

P. O. Box 80169
Austin, TX 78708-0169
(512) 832-1979

Trimbuilt Construction, Inc.
On time. Every time.

Change Request

To: Williamson County
710 Main St.
Georgetown, TX 78626

PH: (512) 943-1599 Fax: (512) 930-3313

Number: 13
Date: 12/1/2017
Project: Wilco WCCHD Office Renovations
Job #: 6148E

Description: RFI#13 HVAC Layout Changes

We are pleased to offer the following specifications and pricing to make the following changes:

As previously discussed and documented through RFI #'s 9, 13, and 20, design conflicts for the new air handler locations and duct work had been observed in the field throughout the first and second floor. Some of these conflicts were addressed by the design team through official responses. We made the changes in the field per the provided direction. When additional conflicts were found, it was agreed upon on site by all parties, that in an attempt to save time and money on the owner's behalf, Trimbuilt would work out the conflicts in the field and submit the costs for reimbursement. We have gathered and attached the subcontractor costs for these changes.
From initial discovery, the RFI process, investigation, design changes, field modifications, etc. these conflicts have taken 10 weeks overall to resolve and delayed the critical path by 3 weeks. Therefore, the project end date shall be extended an additional 3 weeks.
(Mechanical breakout for this change order is under CO#18 to be approved at a later date)

Description:	Price
Electrical	4,568.50
Plumbing	1,175.00
Fire Sprinkler Systems	3,129.00
Supervision	2,700.00
Project Management	1,050.00
Insurance	189.34
Profit / Fee	656.61
P & P Bond	320.30
Total:	**13,788.75**

If you have any questions, please contact me at 512-832-1979.

Submitted by:

Trimbuilt Construction, Inc.

cc:

Approved By: _____

Date: 2-7-18

Western States Fire Protection Co.
2005 Lamar Drive
Round Rock, Texas 78664
(512) 832-8069 (512) 832-8611 FAX

Fire Protection Systems
Design •Fabrication • Installation
Commercial • Industrial •Residential • Institutional
Special Hazards • High Tech • Defense • Hangars
Retrofit • Service • Inspection • Maintenance

CHANGE ORDER REQUEST

SUBMITTED TO:	**JOB NAME:**	
Trimbuilt Construction	6148E – Wilco WCCHD Office Renovations	
12800 North Lamar Blvd	355 Texas Ave	
Austin, TX		
Attn: Michael Holiman	**WSFP Request NO.:** 001	**DATE:** 10/06/2017

We are hereby requesting a change in our contact due to changes to the original scope of work in the above project. The additions and changes are described as follows:

Work described within RFI013 Rev 1 sent via email on 10/05/2017. Scope includes the following breakdown:

- ***Labor = $1,744***
- ***Material=$1,385***
- ***Modify sprinkler components for revised ceilings and relocated AHU for the following areas***
  - AHU-1.2
  - Room 131
  - AHU-1.8
  - Room 148
  - Corridor C102
  - Corridor C103

Our schedule analysis has determined that the resulting change activity will add __2__ working day(s) to the project schedule. This cost is included in the pricing.

Your approval is required within __15__ calendar days to maintain the pricing and schedule. Any approval after this date may increase the cost and time associated with this change.

It is agreed this work constitutes an extra to the contract in the amount of:

Two Thousand One Hundred Twenty-Nine Dollars
$ 3,129.00

Performance of the above work will commence upon written acceptance of this change.

Western States Fire Protection Co.		**Contractor**	
Prepared By:		Signature:	
Name:	Scott Oatman	Name:	
Title:	Service Manager	Title:	
Date:	10/06/2017	Date:	

CHANGE ORDER REQUEST # 3

PROJECT INFORMATION

WCCHD
355 Texas Avenue
Round Rock Texas, 78664

CONTRACTOR INFORMATION

Trimbuilt Construction
Austin Texas

Change Order Amount: **$1,175.00**

Description:

Reroute a domestic waste line and domestic water lines to accommodate AC units in ceiling.

Exclusions:

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Scope of Work: Rooms: 115, 117, 118, 119, 120, 121 1. Remove and relocate existing M/C cable and electrical boxes to make room for new HVAC duct work. Labor- 1 Journeyman——4hrs 1- Apprentice——4hrs Materials- N/A	1	520.00	520.00
Scope of Work: Hallway near room 240 Remove and relocate security box and conduits that feed down to door. rework conduit to make room for new duct work. Labor- 1 Journeyman------4hrs Materials- 10ft. 3/4" EMT 3- 3/4" EMT couplings	1	271.00	271.00

Thank you for the opportunity.

Subtotal	
Sales Tax (8.25%)	
Total	

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Scope of Work: Hallway near room 246 1. Remove and relocate security box and conduits that feed down to door. rework conduit to make room for new duct work. Time- 1 Journeyman------4hrs Materials- 10ft. 3/4" EMT 3- 3/4" EMT couplings	1	271.00	271.00
Scope of Work: Hallway near room 225 1. Remove conduit, wires, and box to make room for new duct work. Reinstall and extend conduit plus add new wire for lighting. Labor- 1 Journeyman------3hrs Materials- 60ft- #12 THHN wire 1- EMT coupling	1	207.00	207.00

Thank you for the opportunity.

Subtotal	
Sales Tax (8.25%)	
Total	

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Scope of Work: Hallway near room 124 1. Remove conduit, wires, and (3) boxes to make room for new duct work. Reinstall and extend conduit plus add new wire for lighting. Labor- 1 Journeyman------4hrs Materials- 20ft. 3/4" EMT 2- 3/4" EMT couplings 120ft- #12 THHN wire	1	306.00	306.00
Scope of Work: Hallway near room 205 1. Remove conduit, wires, and box to make room for new duct work. Reinstall and extend conduit plus add new wire for lighting. Labor- 2- Journeyman------2hrs each Materials- N/A	1	260.00	260.00

Thank you for the opportunity.

Subtotal	
Sales Tax (8.25%)	
Total	

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Scope of Work: Bathroom Room 167 1. Remove and raise existing M/C cable for new ceiling. Labor- 1 Journeyman------1hrs Materials- N/A	1	65.00	65.00
Scope of Work: Hallway near Room 246 1. Remove and relocate conduit and box to make room for new duct work. Labor- 1- Journeyman------ 1/2hr. Material- N/A	1	32.50	32.50

Thank you for the opportunity.	**Subtotal**
	Sales Tax (8.25%)
	Total

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Scope of Work: Hallway near Room 203 1. Disconnect power and relocate power for drinking fountain. 2. Add GFCI receptacle- This was noted on drawings to remain but was located in incorrect area. Labor- 1 Journeyman------ 1hr 1 Apprentice--------- 1hr Material- 1- GFCI receptacle 10ft M/C cable	1	132.00	132.00
Room 151 Scope of Work: 1. Remove (3) receptacles along with boxes and wire. 2. Provide (1) GFCI in location of removed receptacle. Labor- 2 Journeyman------ 4hrs each Material- 1 GFCI receptacle	1	540.00	540.00

Thank you for the opportunity.

Subtotal	
Sales Tax (8.25%)	
Total	

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Room 155 Scope of Work: 1. Disconnect and remove existing conduit and boxes. 2. Relocate conduit and boxes for new ductwork. 3. Reuse conduit, wire, and boxes that were removed. Labor- 1 Journeyman------ 2hrs 1 Apprentice -------- 2hrs Material: 1- 3/4" EMT coupling	1	200.00	200.00

Thank you for the opportunity.

Subtotal	
Sales Tax (8.25%)	
Total	

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Room 155 Scope of Work: 1. Disconnect and remove existing conduit and boxes. 2. Relocate existing lighting conduit and boxes for new ductwork. 3. Reused some existing conduit, wire, and boxes that were removed. Labor- 1 Journeyman------ 2hrs 1 Apprentice ------- 2hrs Material: 1- 1/2" EMT coupling 1- 3/4" Bang-on 90 clamp 1- 3/4" EMT coupling	1	204.00	204.00

Thank you for the opportunity.

Subtotal	
Sales Tax (8.25%)	
Total	

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Room 155 Scope of Work: Relocate conduit feeding lighting for new duct work. 1. Remove and rework existing conduit and repull wire feeding lighting fixtures. Labor- 1 Journeyman------ 3hrs 1 Apprentice ------ 3hrs Material: 20ft- 3/4" EMT 1- 3/4" EMT coupling 60ft- #12 THHN wire	1	239.00	239.00

Thank you for the opportunity.

Subtotal	
Sales Tax (8.25%)	
Total	

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Room 148 Scope of Work: Move existing homeruns for new ductwork 1. Mark and pair wires, remove wire, and conduit. 2. Reused some existing conduit and wire that were removed. 3. Rework and extend conduit and wires for (7) circuits. Labor- 1 Journeyman------ 6hrs 1 Apprentice -------- 6hrs Material- 30ft- 3/4" EMT 3- 3/4" EMT couplings 4- 3/4" EMT connectors 2- 4sq. junction boxes 330ft of #12 THHN wire	1	712.00	712.00

Thank you for the opportunity.

Subtotal	
Sales Tax (8.25%)	
Total	

Brieth Electric LLC

404 E Ave J
Lampasas, TX 76550

Estimate

Date	Estimate #
11/6/2017	3461

Name / Address
Trimbuilt Construction

Project
WCCHD Office Ren...

Description	Qty	Rate	Total
Room 148 Scope of Work: Move existing lighting homeruns for new ductwork 1. Mark and pair wires, remove wire, and conduit. 2. Reused some existing conduit and wire that were removed. 3. Rework and extend conduit and wires for (6) circuits. Labor- 1 Journeyman------ 5hrs 1 Apprentice -------- 5hrs Material- 30ft- 3/4" EMT 3- 3/4" EMT couplings 4- 3/4" EMT connectors 2- 4sq. junction boxes 300ft of #12 THHN wire	1	609.00	609.00

Thank you for the opportunity.

Subtotal	$4,568.50
Sales Tax (8.25%)	$0.00
Total	$4,568.50

Williamson County Facilities - Job Cost Tracking Log

Project: WCCHD Remodel # P322 **Change Order #:** 13

Change Order No.	Court Agenda Date	Party of Initiation	Time Ext. (Days)	GMP Breakdown						GMP Total	Total Updated Contract Amount
				Cost of Work	CM Contingency	Owner Contingency	Buyout Savings (Current)	General Conditions	Construction Phase Fee		
Contract				$ 1,440,000.00		$ 100,000.00				$ 1,540,000.00	$ 1,540,000.00
1	Pending										$ 1,540,000.00
2	Denied										$ 1,540,000.00
3	Denied										$ 1,540,000.00
4	9/26/2017	Owner	7	$ 3,113.00		$ (3,113.00)					$ 1,540,000.00
5	11/14/2017	Owner		$ 1,071.25		$ (1,071.25)					$ 1,540,000.00
6	1/9/2018	Architect	0	$ 7,733.00		$ (7,733.00)					$ 1,540,000.00
7	11/14/2017	Architect		$ 7,386.00		$ (7,386.00)					$ 1,540,000.00
8	11/14/2017	Owner		$ 5,987.00		$ (5,987.00)					$ 1,540,000.00
9	1/9/2018	Architect	0	$ 2,376.00		$ (2,376.00)					$ 1,540,000.00
10	1/9/2018	Owner	0	$ 5,236.02		$ (5,236.02)					$ 1,540,000.00
11	1/9/2018	Architect	0	$ 2,071.00		$ (2,071.00)					$ 1,540,000.00
12	1/9/2018	Owner	0	$ 4,755.13		$ (4,755.13)					$ 1,540,000.00
13		Contractor	21	$ 13,788.75		$ (13,788.75)					$ 1,540,000.00
14	Pending										$ 1,540,000.00
15	Pending										$ 1,540,000.00
16	Pending										$ 1,540,000.00
17	1/30/2018	Contractor	0	$ 5,919.97		$ (5,919.97)					$ 1,540,000.00
18											$ 1,540,000.00
19											$ 1,540,000.00
20											$ 1,540,000.00
21											$ 1,540,000.00
22											$ 1,540,000.00
23											$ 1,540,000.00
24											$ 1,540,000.00
25											$ 1,540,000.00
26											$ 1,540,000.00
27											$ 1,540,000.00
28											$ 1,540,000.00
29											$ 1,540,000.00
30											$ 1,540,000.00
			28	**$ 1,499,437.12**	**$ -**	**$ 40,562.88**	**$ -**	**$ -**	**$ -**	**$ 1,540,000.00**	**$ 1,540,000.00**

Commissioners Court - Regular Session **15.**

Meeting Date: 02/20/2018

WCCHD Remodel P322; Change Order #18

Submitted By: Gina Wrehsnig, Infrastructure

Department: Infrastructure **Division:** Building Maintenance

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on accepting and approving a report on the Texas Avenue Remodel Project; Change Order # 18 in the amount of $29,520.84 for additional mechanical work that is necessary due to unforeseen conflicts with structural members and other existing items, which was executed by Bob Lubecker, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

Background

On August 15, 2017, the Williamson County Commissioners Court granted Bob Lubecker, Williamson County Facilities Project Manager, with general authority to approve change orders for the Agreement for Construction Services with Trimbuilt Construction, Inc. in relation to the Williamson County Texas Avenue Facility Remodel (WCCHD Office Renovations) Project for any increase in costs up to a total maximum amount of $30,000.00 in accordance with Section 262.031 of the Local Government Code – Changes in Plans and Specifications. This report is being provided for purposes of notifying the court of such change order and to place it in the minutes of the Commissioners Court.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

WCCHD Change Order 18

WCCHD CO18 Funds

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Gina Wrehsnig		Started On: 02/15/2018 08:40 AM
Final Approval Date: 02/15/2018		

P. O. Box 80169
Austin, TX 78708-0169
(512) 832-1979

Trimbuilt Construction, Inc.
On time. Every time.

Change Request

To: Williamson County
710 Main St.
Georgetown, TX 78626

PH: (512) 943-1599 Fax: (512) 930-3313

Number: 18
Date: 1/18/2018
Project: Wilco WCCHD Office Renovations
Job #: 6148E

Description: Mechanical for HVAC Changes

We are pleased to offer the following specifications and pricing to make the following changes:

Mechanical portion of RFI#13 (continuation from CO#13):
As previously discussed and documented through RFI #'s 9, 13, and 20, design conflicts for the new air handler locations and duct work had been observed in the field throughout the first and second floor. Some of these conflicts were addressed by the design team through official responses. We made the changes in the field per the provided direction. When additional conflicts were found, it was agreed upon on site by all parties, that in an attempt to save time and money on the owner's behalf, Trimbuilt would work out the conflicts in the field and submit the costs for reimbursement. We have gathered and attached the subcontractor costs for these changes.
From initial discovery, the RFI process, investigation, design changes, field modifications, etc. these conflicts have taken 10 weeks overall to resolve and delayed the critical path by 3 weeks. This project extension of 3 weeks was included in CO#13.

Description:	Price
Mechanical	23,274.00
Supervision	2,700.00
Project Management	1,050.00
Insurance	405.36
Profit / Fee	1,405.75
P & P Bond	685.73
Total:	**29,520.84**

If you have any questions, please contact me at 512-832-1979.

Submitted by:

Trimbuilt Construction, Inc.

cc:

Approved By: _____

Date: 2-7-18

Trimbuilt Construction, Inc.
On time. Every time.

P. O. Box 80169
Austin, TX 78708-0169
Phone: (512) 832-1979
Fax: (512) 873-0142

Request for Information

RFI#9

To:	Michael Cowan	**Fax:**	
From:		**Date:**	9/15/2017
Project:	6148E - Wilco WCCHD Office Renovations	**Pages:**	
CC:	Michael Holiman	**Return by:**	9/20/2017

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

There are several areas throughout the building that will not allow for the specified ceiling heights due to the specified above ceiling MEP space requirements and existing wall heights that are not shown to be increased. Please advise.

Keep the ceilings as tall as possible to accommodate mechanical and existing wall heights. If ceilings can be higher in meeting & conference rooms or in the lobbies, please make them so.

Haddon+Cowan Architects 9.15.17

Trimbuilt Construction, Inc.
On time. Every time.

P. O. Box 80169
Austin, TX 78708-0169
Phone: (512) 832-1979
Fax: (512) 873-0142

Request for Information

RFI#13

To:	Michael Cowan	**Fax:**	
From:		**Date:**	9/27/2017
Project:	6148E - Wilco WCCHD Office Renovations	**Pages:**	
CC:		**Return by:**	9/29/2017

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

As discussed previously, there are conflicts with the mounting locations shown for several of the new air handlers. These conflicts included scheduled ceiling heights, bar joists, bar joist stiffeners, and existing fire sprinkler lines. Please evaluate on site the scheduled location for each air handler in accordance with their dimensions shown on the reviewed submittal and send direction for a resolution.

For example:

Unit 1.1 under the bar joist would leave a 6'11" / 7' ceiling. We would need to relocate the unit up between the bar joists. By doing so we encounter a conflict with the sprinkler system.

We are currently installing ductwork and will not be able to do so in areas of conflict until receiving direction.

Please respond by the end of day 9/29/17.

DBR Response: Melissa Coad, P.E. October 5, 2017

Please see attached revised drawing M2.01 for additional information.

Brief summary is as follows:

AHU-1.1: Shift RA main plan north away from exterior wall approximately 2'-0". Flatten RA duct under structural beam at Nursing 135. Move AHU-1.1 plan south into Nurse/NP 132, Coordinate with existing bar joists for maintenance access (check AHU configuration from factory). Flatten SA duct under structural beam at Nursing Room 135.

AHU-1.2: Modify sprinkler piping, cut sway bar and room shall have ceiling at 8'-0".

AHU-1.4: Move AHU plan west approximately 1'-0" to allow for connection and transition to flattened 24/8 SA duct under beam at Checkout 155 and 2 CSRs 154.

AHU-1.8: Move AHU plan west approximately 1'-0" to allow for connection and transition to flattened 24/8 SA duct under beam between Break Room 148 and Meeting Room 147. Per architect, Break Room 148 will have 8'-0" ceiling. Modify water line as needed.

AHU-1.9: Shift SA duct down from plan north perimeter wall to middle of rooms along perimeter wall to allow for clearance under beams.

AHU-1.10: Shift unit plan east approximately 1'-6" in an attempt to avoid sprinkler piping. If shift is not feasible, modify sprinkler piping and cut sway bar.

Architect's Notes:
Room 131: the ceiling is allowable to be lowered to 8'-0" if needed but still keep as tight as possible

Corridor C102: the ceiling below AHU 1.10 is allowable to soffited to 8'-0" if needed but still keep as tight as possible

Corridor C103: the ceiling below AHU 1.3 & 1.4 is allowable to soffited to 8'-6" if needed but still keep as tight as possible

Room 148: the ceiling is allowable to be lowered to 8'-0" if needed but still keep as tight as possible

Haddon+Cowan Architects 10.5.17

Trimbuilt Construction, Inc.
On time. Every time.

P. O. Box 80169
Austin, TX 78708-0169
Phone: (512) 832-1979
Fax: (512) 873-0142

Request for Information

RFI#20

To:	Michael Cowan	**Fax:**	
From:		**Date:**	10/6/2017
Project:	6148E - Wilco WCCHD Office Renovations	**Pages:**	
CC:		**Return by:**	10/9/2017

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

This is a follow up to RFI #13. Resolution for the HVAC conflicts for the second floor were not included in the RFI response.

These items were discussed with the architect on site on 9/29/17. The beams are too low to install the duct where shown on the plans. The engineer is also aware per the conversation we had in the meeting at Bob's office. The return air shown will also need to be relocated. These units are 2.1/2.2/2.3 plus exhaust. Marked up plans are attached.

This issue is critical to the project schedule and is causing delays. The full impact of the delays cannot be assessed until complete direction is received, the changes priced and approval received to proceed.

HADDON+COWAN ARCHITECTS

October 6, 2017

2301 E. Riverside Drive
Bldg A, Suite 80
Austin, TX 78741
(512) 374-9120
haddoncowan.com

Construction Observation Report

Project: WCCHD Renovations
Round Rock, Texas

From: Haddon+Cowan Architects
2301 East Riverside Dr
Building A, Suite 80
Austin, Texas 78741

Architect's Project Number: 16-1010

Site: 355 Texas Ave.
Round Rock, TX

Attendees: Michael Cowan, HCA
Austin Young, Trimbilt

Observation Notes:

Walked the building with Austin Young and reviewed the structural conflicts with proposed mechanical units on the 2nd floor and issues with the outside-air intake location.

- The existing main pre-engineered building structure conflicts with the proposed location of supply ductwork at the low-end of the roof eave (noted in RFI #20). Recommendation is to move the units and ductwork farther in from the edges of the building to allow for clearance. If required the ductwork can also be flattened per MEP response to RFI #20.
- The existing beam at the edge of the building conflicts with the proposed fresh-air intake vent and ductwork on the South side of the 2nd floor. Recommendation from review of this condition is to move this vent to the East wall in the adjacent room and take over an exhaust vent location that is not being re-used.
- It was also noted that there was some small water leakage during the last rain storm into room 217 along the column location. This did not appear to be coming from the roof but rather the exterior wall. Recommendation is to examine the exterior façade and re-caulk the joints of the exterior panels in the area of the water leak.

Reported By:

Michael D. Cowan, AIA
Haddon+Cowan Architects

DBR Response: Melissa Coad, P.E., October 6, 2017

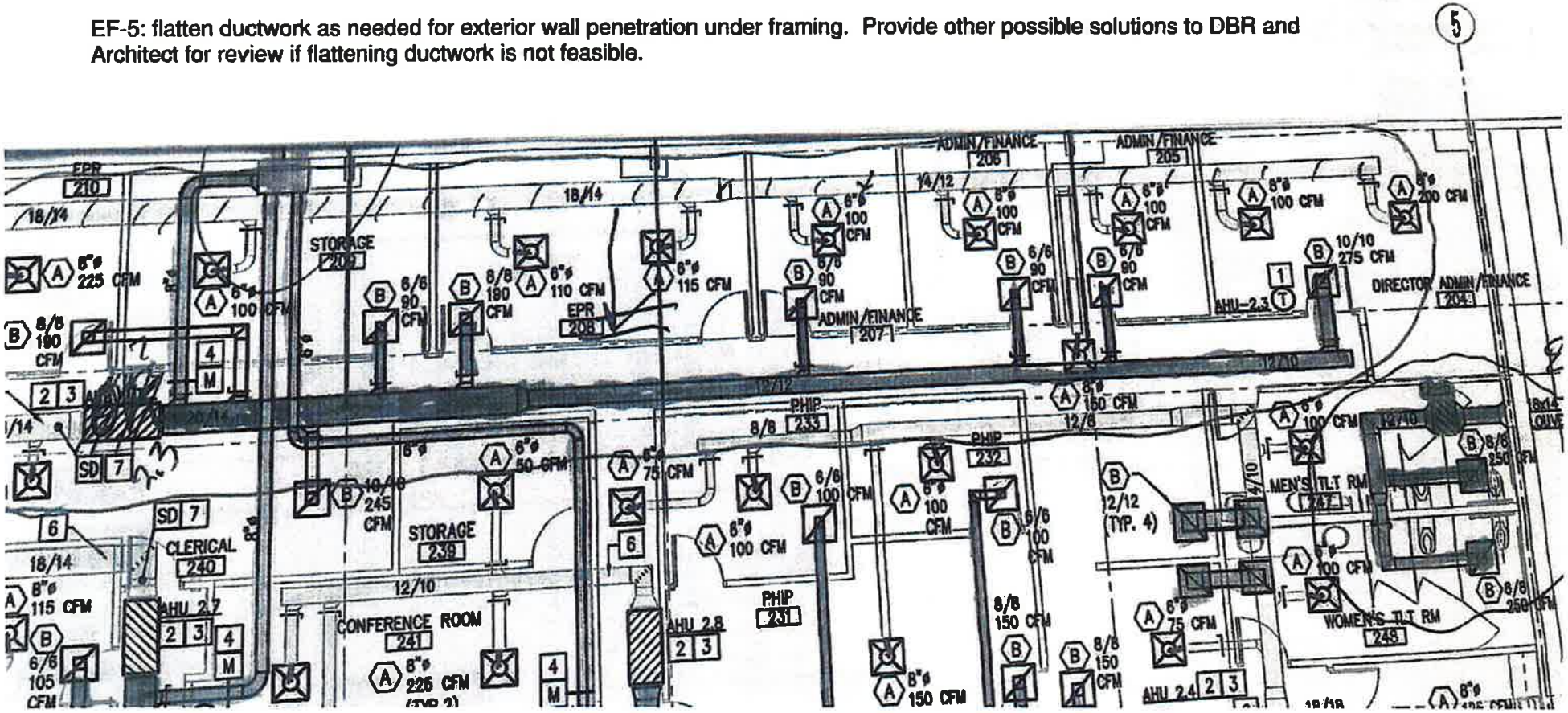
Please note: Specification section 230200, 1.03, B, requires the mechanical subcontractor to submit coordinated shop drawings for DBR's review during submittal phase. These shop drawings shall show show any transitions, offsets, clearances and exhaust locations of AHU's and ductwork that were established by actual field measurements, coordination with the structural, architectural and reflected ceiling plans, and other trades.

AHU-2.1: shift AHU-2.1 plan east for clearance away from beam. Provide supply air duct transition to get duct under beam (possibly 24/8). Shift supply duct up to middle of Rooms 219, 220, etc...until clear under beams. Provide duct transitions as required to get duct under beams.

AHU-2.2: Flatten supply air ductwork from AHU-2.2 (perhaps 30/8) for clearance under beam. If zero clearance is available under beam, shift AHU-2.2 and associated ductwork plan east. Western-most supply diffuser may need to shift plan east away from beam.

AHU-2.3: shift supply duct main from AHU-2.3 plan south until clear under beams. Provide transitions as needed and offset ductwork.

EF-5: flatten ductwork as needed for exterior wall penetration under framing. Provide other possible solutions to DBR and Architect for review if flattening ductwork is not feasible.



LOCHRIDGE PRIEST
HEATING • AIR CONDITIONING • PLUMBING

TACLA28343C

M-41036

Price Change Order #4

Date: **December 1, 2017**

To: **Trimbuilt Construction, Inc.**
12800 N. Lamar Blvd.
Austin, TX 78753

Attn: **Michael Holiman**

Job Name: **WCCHD Office Renovations**

Job Location: 355 Texas Avenue
Round Rock, TX

LP Job #: **TLC17-604**

Reference: **Change to HVAC work per RFI #13**

Please add the amount below to install the items listed in the breakout sheet (attached) as per comments from GC to specifications listed. Please note: this changes will not take effect until Lochridge Priest receives a notice to proceed or a Contract Change Order.

Total: **$23,274.00**

***** THIS WORK TOOK LOCHRIDGE PRIEST 3 ADDITIONAL WEEK TO PERFORM *****

Exclusions: **Bond, overtime and original contract exclusions.**

By:

Brad Milam
Project Manager

Please Note: Lochridge Priest has the right to reprice this change order in the event that the supplied information is incorrect or differs from the actual field situation.

HVAC & PLUMBING SHORT RECAP

JOB NAME: WCCHD Renovation - Sheet Metal Changes
LOCATION:

PRINT TIME: 12/1/2017 0:00
BID DATE: 11/21/2017
EST. NO.: 4

LABOR RATE: $ 45.00
MCA %: 100%

	QUAN	DESCRIPTION		MAN HRS UNIT HRS	MAN HRS EXT HRS	EQUIP $	MAT'L $	LABOR $	SUB-MISC
PLUMBING	1			0	0	$ -	$ -	$ -	$ -
	1			0	0	$ -	$ -	$ -	$ -
	1	-		0	0	$ -	$ -	$ -	$ -
	1	-		0	0	$ -	$ -	$ -	$ -
	1	-		0	0	$ -	$ -	$ -	$ -
	1			0	0	$ -	$ -	$ -	$ -
	1	20% ADD FOR MED. GAS. PIP		0	0	$ -	$ -	$ -	$ -
	1	10% ADD FOR DOM. WTR. PIF		0	0	$ -	$ -	$ -	$ -
	-	TAG & ID		-	0		$ -	$ -	$ -
	-	TESTING		-	0			$ -	$ -
	-	SUPERVISION	10.0%	-	0			$ -	$ -
		PLUMBING TOTALS →			0	$ -	$ -	$ -	$ -
	QUAN	DESCRIPTION							
PIPING	1			0	0	$ -	$ -	$ -	$ -
	1			0	0	$ -	$ -	$ -	$ -
	1	-		0	0	$ -	$ -	$ -	$ -
	1	-		0	0	$ -	$ -	$ -	$ -
	1	-		0	0	$ -	$ -	$ -	$ -
	1	-		0	0	$ -	$ -	$ -	$ -
	1	-		0	0	$ -	$ -	$ -	$ -
	1	10% ADD FOR 1" & DOWN PIF		0	0	$ -	$ -	$ -	$ -
	-	TAG & ID		-	0	$ -	$ -	$ -	$ -
	-	SUPERVISION	10.0%	-	0	$ -	$ -	$ -	$ -
		PIPING TOTALS			0	0	0	0	0
SHEETMETAL		#'S OF DUCT:	10,473				$ -		
	LABOR RATES						$ -		
	1	$ 40.00	SHOP	12	12		$ -	$ 480	
	0	$ 40.00	HANDLING	-	0		$ -	$ -	
	1	$ 43.00	FIELD	242	242		$ -	$ 10,406	
	QUAN	DESCRIPTION							
		Sheetmetal Shop Expense							$ -
	1	20% FIELD CORR. FACTOR		0	0	$ -	$ -	$ -	$ -
	1	Project Manager		4	4	$ -	$ -	$ 172	$ -
	1	Sheetmetal Materials		0	0	$ -	$ 5,817	$ -	$ -
	1			0	0	$ -	$ -	$ -	$ -
	1	-		0	0	$ -	$ -	$ -	$ -
	1			0	0	$ -	$ -	$ -	$ -
	-	SUPERVISION	10.0%		26	$ -	$ -	$ 1,109	$ -
		SHEETMETAL TOTALS			284	$ -	$ 5,817	$ 12,167	$ -
		HVAC TOTALS →			284	$ -	$ 5,817	$ 12,167	$ -

	LINE	DESCRIPTION	VENDOR					SUBCONTRACTOR
SUB & MISC	1	INSULATION	Chesperal		$ -	$ -	$ -	$ -
	2	TEMP CONTROLS			$ -	$ -	$ -	$ -
	3				$ -	$ -	$ -	$ -
	4				$ -	$ -	$ -	$ -
	5	-			$ -	$ -	$ -	$ -
	6	-			$ -	$ -	$ -	$ -
	7	CLEAN UP CREW			$ -	$ -	$ 243	$ -
	8	EQUIPMENT RENTAL						$ -
	9	SU; T & B ; G & A					$ -	$ 1,022
	-	SMALL TOOL/MISC MTL/WARRANTY				$ 989		$ -
		SUB & MISC. TOTALS			$ -	$ 989	$ 243	$ 1,022

MISC		
STARTUP LABOR RATE:	$ 90.00	
EQUIPMENT ADJUSTMENT:	$ -	
WARRANTY %:	4%	
MISC. MATERIAL %:	17%	
DESCRIPTION:		
	0.00%	
	0%	
	15%	

SUMMARY

	HVAC	SUB & MISC.	PLUMBING	TOTALS
EQUIP	$ -	$ -	$ -	$ -
MATL	$ 5,817	$ 989	$ -	$ 6,806
LABOR	$ 12,167	$ 243	$ -	$ 12,411
S/M	$ -	$ 1,022	$ -	$ 1,022
TAX	$ -	$ -	$ -	$ -
COST	$ 17,984	$ 2,254	$ -	$ 20,238
GEN. COND.	$ -	$ -	$ -	$ -
SUBTOTAL	$ 17,984	$ 2,254	$ -	$ 20,238
FEE	$ 2,698	$ 338	$ -	$ 3,036
BID W/O BOND	$ 20,682	$ 2,592	$ -	$ 23,274
PERF. BOND	→		→	$ -
JOB TOTAL BID	→		→	$ 23,274
% M/U v LABOR	22.2%	138.9%	0.0%	24.5%

AHU-1.1	Was moved into the room from hall and added 1-10" riser 1-10" drop, 1-20" riser, 1-20" drop on S.A. 1-20" drop on R.A. (We had it ran out and had to take it down and redo for max ceiling ~~height~~ height
AHU-1.2	Had to move S.A. line into rooms instead of hall
AHU-1.3	Had to move R.A. line into rooms instead of hall
AHU-1.4	We added a 24x8 droping down 12" then a 24x8 rising 12" under I beam
AHU-1.5	~~Had to move S.A. into the rooms~~ ☆ Nothing changed ☆
AHU-1.6	We added 2-8x8 45's and droped 12" for I beam
AHU-1.7	We added 2-26x8 to 16x12 trans. and a 26x8x57 5/4 for I beam
~~AHU-1.8~~ AHU-1.8	nothing changed
AHU-1.9	On R.A. we had to move line into rooms we added 1-16x12 45 and dropped 15" then 1-16x12 and went up 15" for I beam, we added 1-8x12 45 dropping 15" ~~[illegible]~~ ON BACK

Scanned by CamScanner

AHU-1.9 We added a 20x12 6" drop, a 20x12 22" riser a 20x12 22" drop, a 10x12 22" drop and a 22 drop

On this unit we hung and had to take down for ceiling height thats when we added risers and drop

AHU-1.10 stayed the same

HEPA was moved 1 room over and might be moved again

EF-2 & EF3 was moved over bathrooms for a clear path

AHU-1.D stayed the same

Scanned by CamScanner

Williamson County Facilities - Job Cost Tracking Log

Project: WCCHD Remodel # P322 **Change Order #:** 18

Change Order No.	Court Agenda Date	Party of Initiation	Time Ext. (Days)	GMP Breakdown						GMP Total	Total Updated Contract Amount
				Cost of Work	CM Contingency	Owner Contingency	Buyout Savings (Current)	General Conditions	Construction Phase Fee		
Contract				$ 1,440,000.00		$ 100,000.00				$ 1,540,000.00	$ 1,540,000.00
1	Pending										$ 1,540,000.00
2	Denied										$ 1,540,000.00
3	Denied										$ 1,540,000.00
4	9/26/2017	Owner	7	$ 3,113.00		$ (3,113.00)					$ 1,540,000.00
5	11/14/2017	Owner		$ 1,071.25		$ (1,071.25)					$ 1,540,000.00
6	1/9/2018	Architect	0	$ 7,733.00		$ (7,733.00)					$ 1,540,000.00
7	11/14/2017	Architect		$ 7,386.00		$ (7,386.00)					$ 1,540,000.00
8	11/14/2017	Owner		$ 5,987.00		$ (5,987.00)					$ 1,540,000.00
9	1/9/2018	Architect	0	$ 2,376.00		$ (2,376.00)					$ 1,540,000.00
10	1/9/2018	Owner	0	$ 5,236.02		$ (5,236.02)					$ 1,540,000.00
11	1/9/2018	Architect	0	$ 2,071.00		$ (2,071.00)					$ 1,540,000.00
12	1/9/2018	Owner	0	$ 4,755.13		$ (4,755.13)					$ 1,540,000.00
13		Contractor	21	$ 13,788.75		$ (13,788.75)					$ 1,540,000.00
14	Pending										$ 1,540,000.00
15	Pending										$ 1,540,000.00
16	Pending										$ 1,540,000.00
17	1/30/2018	Contractor	0	$ 5,919.97		$ (5,919.97)					$ 1,540,000.00
18		Contractor	0	$ 29,520.84		$ (29,520.84)					$ 1,540,000.00
19											$ 1,540,000.00
20											$ 1,540,000.00
21											$ 1,540,000.00
22											$ 1,540,000.00
23											$ 1,540,000.00
24											$ 1,540,000.00
25											$ 1,540,000.00
26											$ 1,540,000.00
27											$ 1,540,000.00
28											$ 1,540,000.00
29											$ 1,540,000.00
30											$ 1,540,000.00
			28	**$ 1,528,957.96**	**$ -**	**$ 11,042.04**	**$ -**	**$ -**	**$ -**	**$ 1,540,000.00**	**$ 1,540,000.00**

Commissioners Court - Regular Session **16.**

Meeting Date: 02/20/2018

WCCHD Remodel P322; Change Order #19

Submitted By: Gina Wrehsnig, Infrastructure

Department: Infrastructure **Division:** Building Maintenance

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on accepting and approving a report on the Texas Avenue Remodel Project; Change Order # 19 in the amount of $7,548.26 for additional door hardware and associated work, which was executed by Bob Lubecker, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

Background

On August 15, 2017, the Williamson County Commissioners Court granted Bob Lubecker, Williamson County Facilities Project Manager, with general authority to approve change orders for the Agreement for Construction Services with Trimbuilt Construction, Inc. in relation to the Williamson County Texas Avenue Facility Remodel (WCCHD Office Renovations) Project for any increase in costs up to a total maximum amount of $30,000.00 in accordance with Section 262.031 of the Local Government Code – Changes in Plans and Specifications. This report is being provided for purposes of notifying the court of such change order and to place it in the minutes of the Commissioners Court.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

WCCHD Change Order 19

WCCHD CO19 Funds

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Gina Wrehsnig		Started On: 02/15/2018 08:42 AM
Final Approval Date: 02/15/2018		

P. O. Box 80169
Austin, TX 78708-0169
(512) 832-1979

Trimbuilt Construction, Inc.
On time. Every time.

Change Request

To: Williamson County
710 Main St.
Georgetown, TX 78626

PH: (512) 943-1599 Fax: (512) 930-3313

Number: 19
Date: 1/24/2018
Project: Wilco WCCHD Office Renovations
Job #: 6148E

Description: Misc Items

We are pleased to offer the following specifications and pricing to make the following changes:

Hardware additions per ASI-03:
Doors ST1B & ST2C HW Set 0.08 – add panic hardware. Wall Stop and Silencers originally specified and will be used – No credit.
Door ST2A HW Set 0.09 – add panic hardware and cylinder. No spec at time of bid.
Doos ST2B & E101 HW Set 0.10 – add panic hardware and cylinder. No spec at time of bid.

We have field verified that existing doors ST2B and E101 have functioning panic bars that can be re-used. They have cypher locks on the outside that will have to be replaced with pulls. This pricing assumes that will be acceptable. $5,285

Per RFI#43 - soffit around supply duct in electrical room
Drywall $1,200
Paint $320

Dropbox not to be used at entrance of building - closed up from inside and had to be painted - $120

Description:	Price
Drywall Acoustical Demo	1,200.00
Painting	440.00
Insurance	103.88
Door Frames Hardware	5,285.00
Profit / Fee	346.25
P & P Bond	173.13
Total:	**7,548.26**

If you have any questions, please contact me at 512-832-1979.

Submitted by:

Trimbuilt Construction, Inc.

cc:

Approved By: _____

Date: 2-8-18

P. O. Box 80169
Austin, TX 78708 - 0169
(512) 832 - 1979

Trimbuilt Construction, Inc.
On time. Every time.

Change Order
Wilco ASI 3
6148E

Date 1/22/18

To: **Michael H**

	Amount
Doors ST1B-ST2C Add panic per spec	$ 2,545.00
Door ST2A Add panic per spec	$ 1,325.00
Doors ST2B – E101 Add panics per spec (bars existing add handle)	$ 465.00
Cylinders (no cores)	$ 125.00
	$
labor	$ 825.00
	$
	$
	$
TOTAL	$ 5,285.00

If you have any questions, please contact me at (512) 832-1979.

Submitted by:
Trimbuilt Construction, Inc.

Quote expires in 90 days if not accepted, and is subject to escalation rates based on commencement date of project

Traci Dolph

From: Steve Blount
Sent: Monday, January 15, 2018 8:01 AM
To: Traci Dolph
Cc: Michael Holiman; Joe Sanchez; Greg Stepanski; Howard Kindred
Subject: RE: RFI #43 Response - Need Pricing - WCCHD Reno

$1200.00 reply all if approved
Thnks

From: Traci Dolph
Sent: Monday, January 15, 2018 7:56 AM
To: Steve Blount; 'Julio Vazquez'
Cc: Michael Holiman; Austin Young
Subject: RE: RFI #43 Response - Need Pricing - WCCHD Reno
Importance: High

Checking on this pricing Steve and Julio – please advise.

Kind Regards,

Traci Dolph
Assistant Project Manager
Trimbuilt Construction, Inc.
12800 North Lamar Blvd
Austin, Texas 78753
512-832-1979 Office
512-529-6992 Cell
512-873-0142 Fax
tdolph@trimbuilt.com
www.trimbuilt.com



From: Traci Dolph
Sent: Wednesday, January 10, 2018 12:12 PM
To: Austin Young <ayoung@trimbuilt.com>; Steve Blount <SBlount@trimbuilt.com>; Julio Vazquez <jvpaintstexas@gmail.com>
Cc: Michael Holiman <MHoliman@trimbuilt.com>
Subject: RFI #43 Response - Need Pricing - WCCHD Reno
Importance: High

See attached RFI response. Steve/Julio – please get me pricing.

Kind Regards,

Traci Dolph
Assistant Project Manager

JVPainters
Residential, Commercial, Interior & Exterior

Change order 2

DESCRIPTION OF WORK
Project Name: WILCO WCCHD Office Renovations **Location: 355 Texas Avenue Round Rock, TX 78664** **Tape, float and paint corner to corner the sheetrock that will cover the duct above the panels.** • **Tape and floated** • **Sand** • **Primer** • **Apply finish paint** **TOTAL COST $320**

JVPainters
Residential, Commercial, Interior & Exterior

Change order

DESCRIPTION OF WORK

Project Name: WILCO WCCHD Office Renovations
Location: 355 Texas Avenue Round Rock, TX 78664

Tape, float and paint corner to corner

- **Tape and floated**
- **Sand**
- **Primer**
- **Apply finish paint**

TOTAL COST $120

(dropbox)

Trimbuilt Construction, Inc.
On time. Every time.

P. O. Box 80169
Austin, TX 78708-0169
Phone: (512) 832-1979
Fax: (512) 873-0142

Request for Information

RFI#43

To:	Michael Cowan	**Fax:**	
From:		**Date:**	1/10/2018
Project:	6148E - Wilco WCCHD Office Renovations	**Pages:**	
CC:	Michael Holiman	**Return by:**	1/12/2018

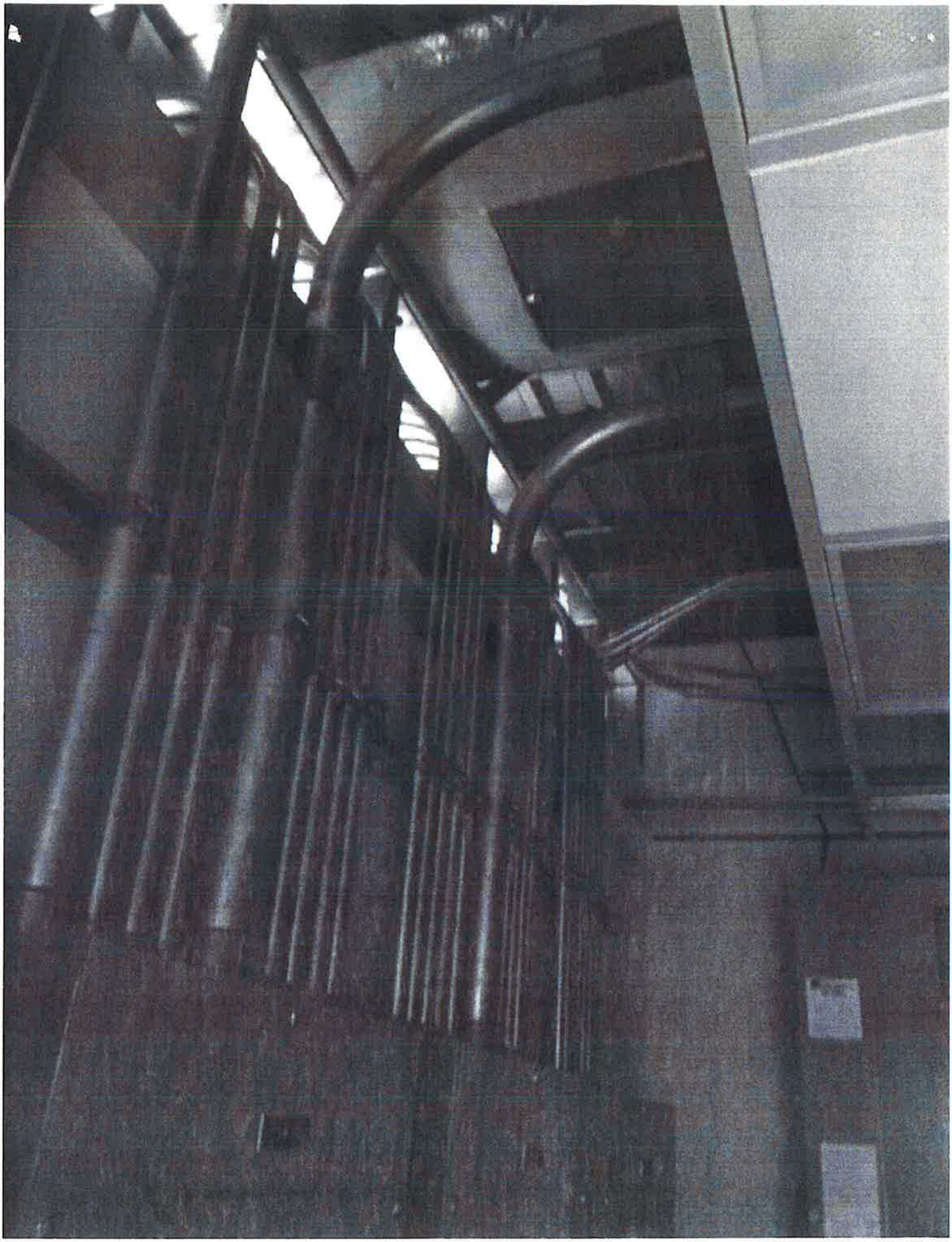
☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

During our walk through with the electric inspector he noticed the duct running through the electric room above the panels. Code requires 6' clearance above the panels unless it is a structure. After explaining our situation, he agreed to allow us to enclose the duct with sheet rock and he said he would consider that as a structure. It is only the supply duct that runs above the panels. Please advise.

Proceed and price the soffit around the supply duct in the electrical room.

Haddon+Cowan Architects 1.10.18





Williamson County Facilities - Job Cost Tracking Log

Project: WCCHD Remodel # P322 **Change Order #:** 19

Change Order No.	Court Agenda Date	Party of Initiation	Time Ext. (Days)	GMP Breakdown						GMP Total	Total Updated Contract Amount
				Cost of Work	CM Contingency	Owner Contingency	Buyout Savings (Current)	General Conditions	Construction Phase Fee		
Contract				$ 1,440,000.00		$ 100,000.00				$ 1,540,000.00	$ 1,540,000.00
1	Pending										$ 1,540,000.00
2	Denied										$ 1,540,000.00
3	Denied										$ 1,540,000.00
4	9/26/2017	Owner	7	$ 3,113.00		$ (3,113.00)					$ 1,540,000.00
5	11/14/2017	Owner		$ 1,071.25		$ (1,071.25)					$ 1,540,000.00
6	1/9/2018	Architect	0	$ 7,733.00		$ (7,733.00)					$ 1,540,000.00
7	11/14/2017	Architect		$ 7,386.00		$ (7,386.00)					$ 1,540,000.00
8	11/14/2017	Owner		$ 5,987.00		$ (5,987.00)					$ 1,540,000.00
9	1/9/2018	Architect	0	$ 2,376.00		$ (2,376.00)					$ 1,540,000.00
10	1/9/2018	Owner	0	$ 5,236.02		$ (5,236.02)					$ 1,540,000.00
11	1/9/2018	Architect	0	$ 2,071.00		$ (2,071.00)					$ 1,540,000.00
12	1/9/2018	Owner	0	$ 4,755.13		$ (4,755.13)					$ 1,540,000.00
13		Contractor	21	$ 13,788.75		$ (13,788.75)					$ 1,540,000.00
14	Pending										$ 1,540,000.00
15	Pending										$ 1,540,000.00
16	Pending										$ 1,540,000.00
17	1/30/2018	Contractor	0	$ 5,919.97		$ (5,919.97)					$ 1,540,000.00
18		Contractor	0	$ 29,520.84		$ (29,520.84)					$ 1,540,000.00
19		Contractor	0	$ 7,548.26		$ (7,548.26)					$ 1,540,000.00
20											$ 1,540,000.00
21											$ 1,540,000.00
22											$ 1,540,000.00
23											$ 1,540,000.00
24											$ 1,540,000.00
25											$ 1,540,000.00
26											$ 1,540,000.00
27											$ 1,540,000.00
28											$ 1,540,000.00
29											$ 1,540,000.00
30											$ 1,540,000.00
			28	**$ 1,536,506.22**	**$ -**	**$ 3,493.78**	**$ -**	**$ -**	**$ -**	**$ 1,540,000.00**	**$ 1,540,000.00**

Commissioners Court - Regular Session **17.**

Meeting Date: 02/20/2018

WCCHD Remodel P322; Change Order #20

Submitted By: Gina Wrehsnig, Infrastructure

Department: Infrastructure **Division:** Building Maintenance

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on accepting and approving a report on the Texas Avenue Remodel Project; Change Order # 20 in the amount of $3,024.76 for AED cabinets and additional exterior wall and roof panel work, which was executed by Bob Lubecker, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

Background

On August 15, 2017, the Williamson County Commissioners Court granted Bob Lubecker, Williamson County Facilities Project Manager, with general authority to approve change orders for the Agreement for Construction Services with Trimbuilt Construction, Inc. in relation to the Williamson County Texas Avenue Facility Remodel (WCCHD Office Renovations) Project for any increase in costs up to a total maximum amount of $30,000.00 in accordance with Section 262.031 of the Local Government Code – Changes in Plans and Specifications. This report is being provided for purposes of notifying the court of such change order and to place it in the minutes of the Commissioners Court.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

WCCHD Change Order 20

WCCHD CO20 Funds

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Gina Wrehsnig		Started On: 02/15/2018 08:43 AM
Final Approval Date: 02/15/2018		

P. O. Box 80169
Austin, TX 78708-0169
(512) 832-1979

Trimbuilt Construction, Inc.
On time. Every time.

Change Request

To: Williamson County
710 Main St.
Georgetown, TX 78626

PH: (512) 943-1599 Fax: (512) 930-3313

Number: 20
Date: 2/7/2018
Project: Wilco WCCHD Office Renovations
Job #: 6148E

Description: AED Cabs/Misc Paint/Metal

We are pleased to offer the following specifications and pricing to make the following changes:

Qty 2 AED Cabinets - $331

Installation by TCI - $210

Paint and caulk 8 exterior panels - $480
Match existing paint and caulk for 8 exterior panels around the building - Paint may not be exact match
-Light sand
-Prime
-Caulk
-Apply finish paint
-Stucco or cementitious patching is excluded

Provide boom lift and fasteners to secure loose rake metal at perimeter edge (approx 250 LF) - $1,754

Description:	Price
Drywall Acoustical Demo	210.00
Painting	480.00
Roofing	1,754.00
Misc	331.00
Insurance	41.63
Profit / Fee	138.75
P & P Bond	69.38
Total:	**3,024.76**

If you have any questions, please contact me at 512-832-1979.

Submitted by:

Trimbuilt Construction, Inc.

cc:

Approved By: _____

Date: 2-13-18

KENTEX Roofing Systems, LLC
8291 Springdale Road
Suite 200
Austin, TX 78724
Office: (512) 491-9000
Fax: (512) 263-2391
www.kentexroofing.com

TO: Traci Dolph
Trimbuilt Construction, Inc.
PO Box 80169
Austin, TX 78708

2/8/2018

PROPOSAL

Williamson County and Cities Health
ADDRESS: 355 Texas Ave, Round Rock , TX 78664 USA
AREA(S): Perimeter Rake Metal

KENTEX Roofing Systems, LLC proposes to do the following work:

1. KENTEX Roofing Systems to provide OSHA approved safety equipment and procedures.
2. Provide boom lift and fasteners to secure loose rake metal at perimeter edge. (approx. 250 L.F.)
3. Make ready for final approval.

PRICE	**$1,754.00 Plus Sales Tax**
****Please fax Tax Exemption/Resale Certification with acceptance, if applicable**	

NOTES:
1. All material and workmanship to be covered by our two-year contractor warranty.
2. This proposal is valid for thirty days.

Approved By:

PRINT NAME

SIGNATURE

Kenny Prater

JVPainters
Residential, Commercial, Interior & Exterior

Change order

DESCRIPTION OF WORK

Project Name: Wilco WCCHD Office Renovation
Location: 355 Texas Avenue Round Rock, TX 78664

~~**Match existing building paint in order to repaint 48 exterior holes. The matching of the paint might not be 100% accurate.**~~

- ~~**Prime**~~
- ~~**Apply finish paint**~~
- ~~**Stucco or cementitious patching is excluded**~~

~~**TOTAL COST: $2,880**~~

Match existing paint and caulk for 8 exterior panels around the building. Please remember the paint might not be an exact match

- **Light sand**
- **Prime**
- **Caulk**
- **Apply finish paint**
- **Stucco or cementitious patching is excluded**

Total Cost: $480

AED ONE-STOP SHOP

QUOTE

6300 Riverside Plaza Lane NW
Suite 100
Albuquerque, NM 87120
(855) 677-2337

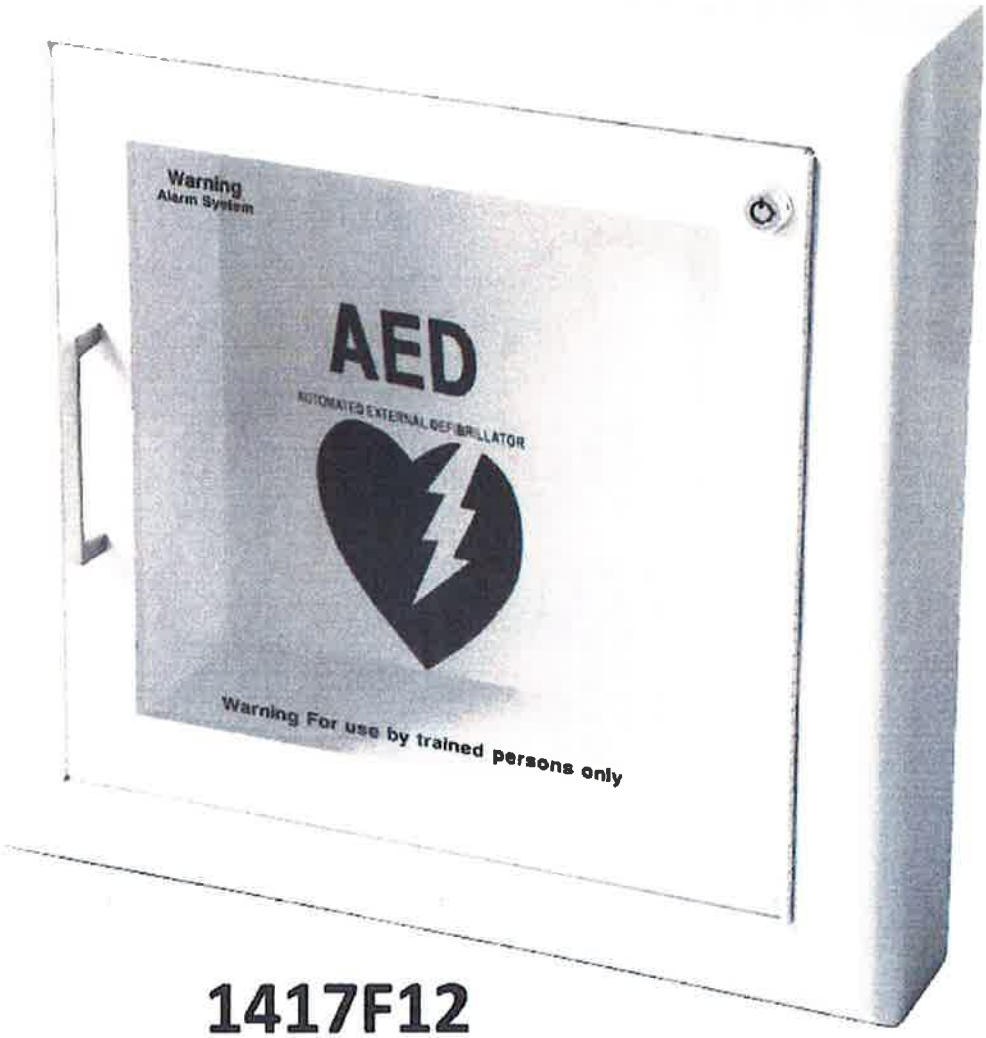
Quote Number	00003799
Date	1/30/2018

Bill To Name	Trimbuilt Construction, Inc.	Ship To Name	Trimbuilt Construction, Inc.
Bill To	12800 North Lamar Blvd Austin, TX 78753 United States	Ship To	12800 North Lamar Blvd Austin, TX 78753 United States
Ship Via	FedEx Ground	Sales Rep	Laurence Saban
		FOB	Factory

Product	Product Code	Product Description	Quantity	Sales Price	Total Price
Cabinet Small Alarmed Semi-Rec JLI	1417F12	Semi-Recessed steel AED white cabinet with audible alarm. 14W X 14H x 6 3/4D TUB ID.	2.00	$158.00	$316.00

Subtotal	$316.00
Total Price	$316.00
Shipping and Handling	$15.00
Grand Total	$331.00

Terms and Conditions: All sales are final and payment for products and services are due upon receipt of invoice, unless otherwise specified on the order. Return policy for unopened AED devices and accessories are 21 days and are subject to a 20% restocking fees. Custom-built or specially configured devices have a strict no return policy. Quotes remain good for 60 days from the date of the quote.


Warning
Alarm System
AED
AUTOMATED EXTERNAL DEFIBRILLATOR
Warning For use by trained persons only

1417F12

SUBMITTAL: 1400 SERIES AED CABINET

Description: 1400 Series is designed to accommodate all Automated External Defibrillators (AED's) on the market today, with all except surface-mounted models, ADAC-Compliant . Select from steel, stainless steel or aluminum construction.



Trim Construction: #4 brushed stainless steel, clear anodized aluminum or CRS with white powder-coat finish. 1-3/4" trim on face.

Door: Formed door with 1-3/4" trim, mounted in a 5/8" door stop with zinc-plated handle and roller catch and continuous hinge. View AED through a clear acrylic window. Standard AED Graphics included.

Alarm: 85 db Commander (audible) alarm standard.

Trim Style & Depth: *Recessed* – 3/8" flat trim, *Semi*-Recessed – 1-1/2" square edge or 3" rolled edge. *Surface-mount* has a square edge.

Tub: White powder-coated CRS except for aluminum and stainless surface-mounted models. Fire-rated available - See Separate Submittal

STEP 1: SELECT MODEL NUMBER AND QUANTITY ON CHART (refer to chart below)

A. Determine Trim Style according to wall depth.

B. Determine Tub I.D. according to size most suited for extinguisher and wall opening.

STEP 2: SELECT DOOR STYLE WITH HANDLE — Check one box below

- ☒ **F12** Full Glazing & Pull
- ☐ **G12** Full Glazing with SAF-T-LOK™ & Pull
- ☐ **D12** Horizontal Duo Panel & Pull
- ☐ **E12** Horizontal Dual Panel with SAF-T-LOK™ & Pull
- ☐ **S21** Solid Door & Pull
- ☐ **L22** Solid with SAF-T-LOK™ & Pull
- ☐ **V12** Vertical Duo & Pull
- ☐ **W 12** Vertical Duo with SAF-T-LOK™ & Pull

Optional Features at Additional Cost:

- ☐ **(SA)** Siren Strobe Alarm and 85 db Alarm (3" Trim & Surface-Mount Models Only)
- ☐ **(14STC)** Saf-T-Clasp for Visual Notification When Door has been opened
- ☐ Custom Door Graphics available—company logos, photos, etc. Contact C. S.
- ☐ AED Wall Signs - See Separate Submittal
- ☐ Optional Colors View Optional Colors Online Contact Customer Service
- ☐ Optional Anodized Aluminum Finishes View Finishes Online
- ☐ Optional Stainless Steel Finishes View Finishes Online
- ☐ Optional Rolled Edge Surface Mount (1419) (1439)
- ☐ Bronze or Brass Finish Contact Customer Service
- ☐ **(14MAG)** Magnetic Door Contact for Existing Alarm Systems
- ☐ **(14RR)** Roller Reed Ball Contact for Existing Alarm Systems
- ☐ Custom Colors (Provide Paint Chip) Contact Customer Service
- ☐ Optional Tub Color: ☐ Black ☐ Red
- ☐ Optional Tub Material ☐ Stainless ☐ Aluminum
- ☐ Etched or Engraved Lettering in Glass or Metal
- ☐ Recessed Pull, Pulls in Other Finishes . Lever Handle

1413F12SA " Surface-Mounted Cabinet With

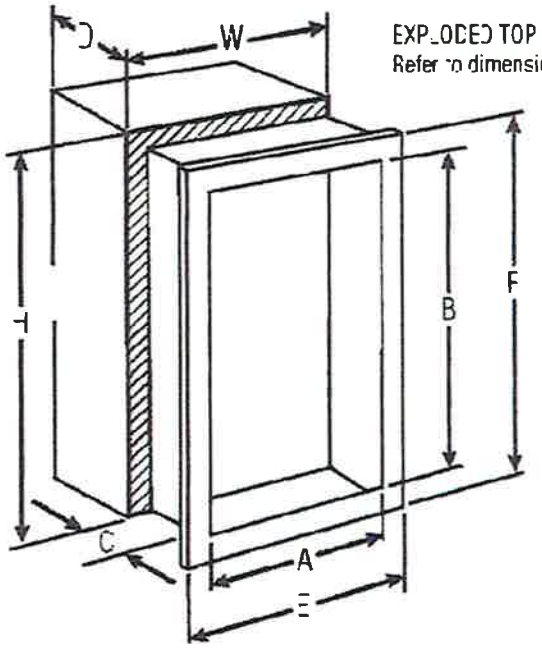


1436F12 Semi-Recessed Cabinet in Stainless Steel with 1-1/2" Square Trim

JL INDUSTRIES / ACTIVAR Inc. www.activarcpg.com Construction Products Group	Distributor:	Quantity:
	Contractor:	Approved By:
	Model #:	Architect:
	Project:	Date:

HEADQUARTERS & JL INDUSTRIES:4450 WEST 78TH ST CIRCLE, BLOOMINGTON, MN 55435-5416 PH: 800-554-6077 FAX: 952-835-2218 EMAIL: SALES@JLINDUSTRIES.COM WWW.ACTIVARCPG.COM
ACPG SOUTHEAST (THOMAS ENTERPRISES): FT MYERS, FL ACPG WAREHOUSES: COMMERCE CA (SAMSON MFG), DALLAS TX, LANCASTER PA, ATLANTA GA , Seattle WA 4-25-2013

SUBMITTAL: 1400 SERIES AED CABINET



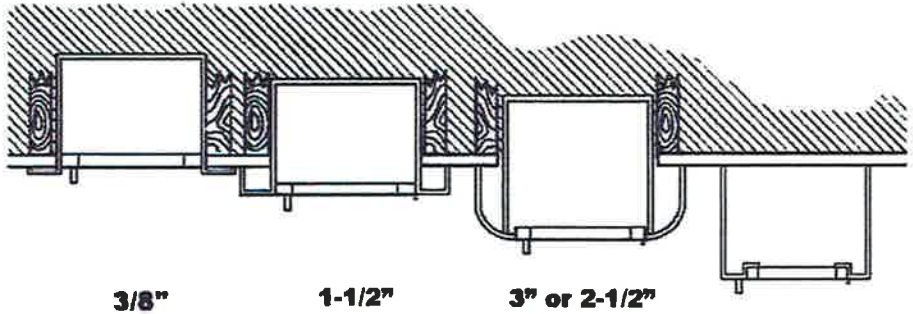
EXPLODED TOP & SIDE VIEWS
Refer to dimensions table



1417 3" Rolled Edge Recessed



1419SA with Custom Graphics & Optional Color



3/8" Flat Trim | **1-1/2" Square Trim** | **3" or 2-1/2" Rolled Edge** | **Surface Mount Square Trim**

TRIM & DOOR MATERIAL & SERIES #							TUB I.D.			FRAME O.D.		WALL OPENING		
QTY	STEEL	QTY	ALUMINUM	QTY	STAINLESS STEEL	TRIM STYLE	A	B	C	E	F	W	H	D
	1415		1425		1435	3/8" Flat Trim	14"	14"	6-3/4"	17-3/8"	17-3/8"	15-1/4"	15-1/4"	6-1/2"
	1416		1426		1436	1-1/2" Square	14"	14"	6-3/4"	17-3/8"	17-3/8"	15-1/4"	15-1/4"	5-7/8"
	1417		*1427		1437	3" or 2-1/2" Rolled	14"	14"	6-3/4"	17-3/8"	17-3/8"	15-1/4"	15-1/4"	3-3/4"
	1413 Sq Edge		1423 Sq. Edge		—	Surface Mounted	17-3/16"	17-3/16"	7"	17-3/8"	17-3/8"	–	–	–
	~~1419 Rolled Edge~~		—		~~1439 Rolled Edge~~	~~Surface Mounted~~	~~17-3/16"~~	~~17-3/16"~~	~~7"~~	~~17-3/8"~~	~~17-3/8"~~	–	–	–

* Model 1427 has 2-1/2" Trim & Requires 5/8" Deeper Wall Opening

Williamson County Facilities - Job Cost Tracking Log

Project: WCCHD Remodel # P322 **Change Order #:** 20

Change Order No.	Court Agenda Date	Party of Initiation	Time Ext. (Days)	GMP Breakdown						GMP Total	Total Updated Contract Amount
				Cost of Work	CM Contingency	Owner Contingency	Buyout Savings (Current)	General Conditions	Construction Phase Fee		
Contract				$ 1,440,000.00		$ 100,000.00				$ 1,540,000.00	$ 1,540,000.00
1	Pending										$ 1,540,000.00
2	Denied										$ 1,540,000.00
3	Denied										$ 1,540,000.00
4	9/26/2017	Owner	7	$ 3,113.00		$ (3,113.00)					$ 1,540,000.00
5	11/14/2017	Owner		$ 1,071.25		$ (1,071.25)					$ 1,540,000.00
6	1/9/2018	Architect	0	$ 7,733.00		$ (7,733.00)					$ 1,540,000.00
7	11/14/2017	Architect		$ 7,386.00		$ (7,386.00)					$ 1,540,000.00
8	11/14/2017	Owner		$ 5,987.00		$ (5,987.00)					$ 1,540,000.00
9	1/9/2018	Architect	0	$ 2,376.00		$ (2,376.00)					$ 1,540,000.00
10	1/9/2018	Owner	0	$ 5,236.02		$ (5,236.02)					$ 1,540,000.00
11	1/9/2018	Architect	0	$ 2,071.00		$ (2,071.00)					$ 1,540,000.00
12	1/9/2018	Owner	0	$ 4,755.13		$ (4,755.13)					$ 1,540,000.00
13		Contractor	21	$ 13,788.75		$ (13,788.75)					$ 1,540,000.00
14	Pending										$ 1,540,000.00
15	Pending										$ 1,540,000.00
16	Pending										$ 1,540,000.00
17	1/30/2018	Contractor	0	$ 5,919.97		$ (5,919.97)					$ 1,540,000.00
18		Contractor	0	$ 29,520.84		$ (29,520.84)					$ 1,540,000.00
19		Contractor	0	$ 7,548.26		$ (7,548.26)					$ 1,540,000.00
20		Owner	0	$ 3,024.76		$ (3,024.76)					$ 1,540,000.00
21											$ 1,540,000.00
22											$ 1,540,000.00
23											$ 1,540,000.00
24											$ 1,540,000.00
25											$ 1,540,000.00
26											$ 1,540,000.00
27											$ 1,540,000.00
28											$ 1,540,000.00
29											$ 1,540,000.00
30											$ 1,540,000.00
			28	**$ 1,539,530.98**	**$ -**	**$ 469.02**	**$ -**	**$ -**	**$ -**	**$ 1,540,000.00**	**$ 1,540,000.00**

Commissioners Court - Regular Session **18.**

Meeting Date: 02/20/2018

Jail Remodel Project P411 - Change Order 2

Submitted By: Gina Wrehsnig, Infrastructure

Department: Infrastructure **Division:** Building Maintenance

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on accepting and approving a report on the Jail Kitchen and Plumbing Remodel Project; Change Order # 2 in the amount of $42,482.97 for additional structural concrete work associated with the demo and unforeseen conditions related to the walk-in coolers and freezer, which was executed by Dale Butler, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded out of the Owners Contingency.

Background

On August 15, 2017, the Williamson County Commissioners Court granted Dale Butler, Williamson County Facilities Project Manager, with general authority to approve change orders for the Agreement for Construction Services with STR Constructors, Ltd. in relation to the Williamson County Jail Kitchen and Plumbing Remodel Project for any increase in costs up to a total maximum amount of $50,000.00 in accordance with Section 262.031 of the Local Government Code – Changes in Plans and Specifications. This report is being provided for purposes of notifying the court of such change order and to place it in the minutes of the Commissioners Court.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Jail Change Order 2

Jail CO2 Funds

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Gina Wrehsnig		Started On: 02/15/2018 08:44 AM
Final Approval Date: 02/15/2018		

WILLIAMSON COUNTY, TEXAS
FACILITIES DEPARTMENT
3101 SE Inner Loop
Georgetown, TX 78626
512-943-1609

CHANGE ORDER

For Project: **WILLIAMSON COUNTY JAIL KITCHEN & PLUMBING REMODEL**
Date of Issuance: 1/26/2018
Contractor: STR Constructors, LTD.
Project Enginner: Talex, Inc.
Change Order No: 2
PID:

Explanation:
This change order is due to the following:
PCO #06 - Coolers & Freezer Unforeseen Slab issues (Removal & Replacement of Topping Slab)

Description of Work:	Cost	Additional Time KITCHEN AREA	Additional Time OVERALL PROJECT
See attached PCO #06	$ 42,482.97	7 Days	7 Days
		0 Days	0 Days
		0 Days	0 Days
		0 Days	0 Days
	$ -	0 Days	0 Days
	$ -	0 Days	0 Days
Weather Days -			0 Days
(Jan 16th - Extreme Cold)		1 Days	1 Days
Sub-Total CO #2	**$ 42,482.97**	**8 Days**	**8 Days**

Please Refer to Attached Backup Documents:

Cost and Time Change Summary	Cost	Additional Time KITCHEN AREA	Additional Time OVERALL PROJECT
Original Contract:	**$ 1,781,645.00**	**120 Days**	**180 Days**
Previous Change Order(s):	*$ 118,633.53*	*0 Days*	*10 Days*
Contract Prior to this CO:	$ 1,900,278.53	120 Days	190 Days
Net Increase from this CO:	$ 42,482.97	8 Days	8 Days
Revised Contract Total:	**$ 1,942,761.50**	**128 Days**	**198 Days**

RECOMMENDED BY:

Oscar Villarreal Engineer Signature	Oscar Villarreal, P.E. Engineer Name	1/26/18 Signature Date
 Contractor Signature*	T. R. Kennedy, President Contractor Name	1/26/18 Signature Date
ACCEPTED BY: Owner Signature	Dale Bulter, Asst Dir - Projects Owners' Rep Name	1/26/18 Signature Date

*By Signing this change order the Contractor accepts the changes herein and agrees to perform the change(s) for the price and time indicated. The prices include all costs to perform the work.
No work shall be done until this change order is executed. No payment to the Contractor (or Consultant) shall be made for work included in this Change Order until Contractor's pay estimate is updated.
In case of conflict between construction documents and this change order, this change order shall govern.
Upon execution of this Change Order by all parties, the identified time and cost changes herein are made part of the contract documents.

STR CONSTRUCTORS, LTD.
CHANGE PROPOSAL

PROPOSAL ISSUED TO:	**Wilco Jail Kitchen & Plumbing Remodel** **508 South Rock Street** **Georgetown, TX**	STR's PCO NO.: **06r1**
ATTENTION:	**Dale Bulter** Asst Director, Projects	

DESCRIPTION:

Removal of the unforessen topping slabs in the Cooler Areas, and the under laying non-structural "mud slab" in the freezer area, and the accompanying Cooler Area Pour back per eaching plan details

Description	Subcontracts	Material	Labor	Total
STR Constructor's Direct Costs				$ -
(STR GC Breakdown)		$ 1,402.00	$ 2,160.00	$ 3,562.00
				$ -
				$ -
				$ -
Subcontract Cost				$ -
Maynard Const - Demo				$ -
(demo cooler topping slab)	$8,950.00			$ 8,950.00
(demo freezer lower mud slab)	$3,175.00			$ 3,175.00
				$ -
Casto Lopez Conc - Pour Back (REVISED)	$20,773.00			$ 20,773.00
				$ -
				$ -
				$ -
				$ -
DIRECT COST	$ 32,898.00	$ 1,402.00	$ 2,160.00	$ 36,460.00
PAYROLL TAX & INSURANCE (STR's Labor)	32.58%			$ 703.73
STR FEE ON OWN WORK	15.00%			$ 639.86
STR FEE ON SUBCONTRACTORS	10.00%			$ 3,289.80
BOND	2.50%			$ 1,027.34
INSURANCE	0.86%			$ 362.24
TOTAL COST				**$ 42,482.97**

QUALIFICATIONS & CLARIFICATIONS:

STR hereby requests an additonal 7 calendar days Kitchen Related Time Extention for this additional unforeseen work, falling on the Critical Path. (Note: Per Owner directive work has already begun to minimize project impacts)

This change proposal becomes null & void after ten calendar days (10) and extends the contract completion date by **5** working days at $ 1,058.40 dollars of cost for general conditions expenses per each calendar day. Work stoppage due to late acceptance of this change proposal voids this quotation and will increase the cost by the General Contractor's general conditions expenses which exceed ($ 1,481.76) per work day. One Work day = 1.4 Calendar days.

STR CONSTRUCTORS, LTD. *TD Stanfield*		Approved by:
DATE: Project Manager	*1/22/2018*	Date:

Maynard Construction Services

Change Order #2

To: STR Constructors Ltd.
Attn: Tom Stanfield
str@strconstructors.com
512-515-0254 Ext. 223

Date: January 10, 2018

Williamson County Jail Kitchen & Plumbing Remodel		
Description of Work: Jack hammer and remove concrete and insulation in coolers & freezer by hand.		
EXCLUSIONS:		
	Subtotal:	**$8,950**
	20% Mark Up:	
	Change Order Amount:	**$8,950**

Direct all inquiries to:
Kenneth Maynard
(512) 924-5279
ken@maynardcs.com

Accepted by:

_____

_____

Date: _____

Maynard Construction Services
P.O. Box 127
Briggs, Texas 78608
512-887-DEMO
www.maynardcs.com

Thank You For Your Business!

Maynard Construction Services

Change Order #3

To: STR Constructors Ltd.
Attn: Tom Stanfield
str@strconstructors.com
512-515-0254 Ext. 223

Date: January 19, 2018

Williamson County Jail Kitchen & Plumbing Remodel		
Description of Work: Take out bottom slab in freezer area, Beam to remain in place. Price does not include saw cutting.		
EXCLUSIONS:		
	Subtotal:	**$3,175**
	20% Mark Up:	
	Change Order Amount:	**$3,175**

Direct all inquiries to:
Kenneth Maynard
(512) 924-5279
ken@maynardcs.com

Accepted by:

_____

_____

Date: _____

Maynard Construction Services
P.O. Box 127
Briggs, Texas 78608
512-887-DEMO
www.maynardcs.com

Thank You For Your Business!

CONCRETE

CASTO LOPEZ CONCRETE LLC

To: Estimating Department

Subject: Williamson County Jail Freezer

Reference: Cast-In-Place Concrete - Change Order #1

Sir,
Casto Lopez Concrete will provide manpower, equipment, materials, and labor to perform the scope below.

Building Concrete

Cooler Slab at Building by S100:

- 620 SF of 7" Thick Concrete Slab
- Rebar Reinforcement #4 @ 12" E.W & Dwls #4
- Place and Finish Concrete
- Concrete Material

Price: $20,773.00

Total Base Bid Foundation: $20,773.00

A job Information sheet will be required for the project is awarded. Please contact Venancio Lopez if you have any questions at 512-351-6316.

Sincerely,
Josue Orozco

CASTO LOPEZ CONCRETE LLC

512-523-8295

1955 FM 2001 Suite 200
Buda Texas 78610
clconcreteatx@gmail.com

January 22, 2018

HUB #491371/1472749211900
CITY OF AUSTIN VENDOR #V00000919820
CITY OF AUSTIN MBE CERTIFICATION
CITY OF AUSTIN RIGHT-OF-WAY CONTRACTOR #2014-043835 LC
DUNS AND BRADSTREET #023325192

Williamson County Facilities - Job Cost Tracking Log

Project: Jail Kitchen Remodel P411 **Change Order #:** 2

Change Order No.	Court Agenda Date	Party of Initiation	Time Ext. (Days)	Cost of Work	Owner Contingency	Total Updated Contract Amount
Contract			**180**	**$ 1,781,645.00**	**$ 250,000.00**	**$ 2,031,645.00**
1	12/12/2017	Architect	10	$ 118,633.53	$ (118,633.53)	$ 1,900,278.53
2			8	$ 42,482.97	$ (42,482.97)	$ 1,942,761.50
Total			**198**	**$ 1,942,761.50**	**$ 88,883.50**	

Commissioners Court - Regular Session **19.**

Meeting Date: 02/20/2018

Georgetown Annex P325 - Change Order 5

Submitted By: Gina Wrehsnig, Infrastructure

Department: Infrastructure **Division:** Building Maintenance

Agenda Category: Consent

Information

Agenda Item

Discuss, consider and take appropriate action on accepting and approving a report on the Georgetown Annex Project; Change Order # 2 in the amount of $19,110.50 to approve an additional french drain to re-route ground water away from the building foundation and to accept a credit for plumbing material changes, which was executed by Dale Butler, Williamson County Facilities Project Manager, pursuant to the previous grant of authority under Section 262.031 of the Local Government Code. This change order is being funded by the Owner's Contingency.

Background

On September 6, 2016, the Williamson County Commissioners Court granted Dale Butler, Williamson County Facilities Project Manager, with general authority to approve change orders for the Agreement for Construction Services with Chasco Constructors, LTD, L.L.P. in relation to the Williamson County Georgetown Annex Project for any increase in costs up to a total maximum amount of $30,000.00 in accordance with Section 262.031 of the Local Government Code – Changes in Plans and Specifications. This report is being provided for purposes of notifying the court of such change order and to place it in the minutes of the Commissioners Court.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

GTA Change Order 5

GTA CO5 Funds

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Gina Wrehsnig		Started On: 02/15/2018 08:45 AM
Final Approval Date: 02/15/2018		

CHASCO CONSTRUCTORS

P.O. BOX 1057
ROUND ROCK, TX 78680
Ph : 512-244-0600

Change Order

Project:
20-15092 WILCO ANNEX - GC
151 WILCO WAY
GEORGETOWN, TX

Change Order: 5
Date: 1/26/2018
Architect's Project:

To Contractor:
CHASCO CONSTRUCTORS
P.O. BOX 1057
ROUND ROCK, TX 78680

The Contract is changed as follows:
Misc. Changes

11	French Drain addition 2	$0.00
12	Credit for using PVC in basement instead of Cast Iron	$0.00
	Total:	$0.00

The original Contract Amount was	$14,919,081.00
Net change by previously authorized Change Orders	$0.00
The Contract Amount prior to this Change Order was	$14,919,081.00
The Contract will be increased by this Change Order in the amount of	$0.00
The new Contract Amount including this Change Order will be	$14,919,081.00

The date of Substantial Completion as of the date of this Change Order therefore is

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACT AND OWNER.

ARCHITECT	CHASCO CONSTRUCTORS CONTRACTOR P.O. BOX 1057 ROUND ROCK, TX 78680	OWNER
(Signature)	(Signature)	(Signature)
Keith A. Hickman	BILL BAMBRICK	Dale Butler
By	By	By
31 Jan 2018	1-31-18	1-31-18
Date	Date	Date

EMAILED TO DALE BUTLER 1-27-18

CHASCO CONSTRUCTORS

P.O. BOX 1057
ROUND ROCK, TX 78680
Ph : 512-244-0600

Change Request

To: Dale Butler
WILLIAMSON COUNTY, TEXAS
710 MAIN STREET, STE 101
GEORGETOWN, TX 78626

Number: 11
Date: 1/25/18
Job: 20-15092 WILCO ANNEX - GC
Phone:

Description: French Drain addition 2

We are pleased to offer the following specifications and pricing to make the following changes:

Item#	Description	Price
1	French drain add 2- CHASCO	$37,110.50
2	Reduce Owner's Contigency	$-37,110.50
	Subtotal:	$0.00
	Total:	**$0.00**

If you have any questions, please contact me at .

Submitted by:

Approved by: _____
Date: _____

Cc:

CR # 11

CHASCO CONSTRUCTORS

P.O. Box 1057
Round Rock, TX 78680
(512) 244-0600
Fax: (512) 244-0489

15092 - WILLIAMSON COUNTY ANNEX FRENCH DRAIN ADDITION 2

01/15/18

DESCRIPTION	Q'TY	UNIT	TOTAL BID
6" FRENCH DRAIN	670	LF	$ 28,140.00
6" CLEANOUT	5	EA	$ 2,875.00
CONNECT TO EXISTING MANHOLE	1	EA	$ 1,500.00
TRENCH SAFETY	670	LF	$ 770.50
REMOVE & REPLACE SBGRADE MATERIAL	3	EA	$ 3,825.00
TOTAL CHANGE ORDER			**$ 37,110.50**

CHASCO CONSTRUCTORS

P.O. BOX 1057
ROUND ROCK, TX 78680
Ph : 512-244-0600

Change Request

To: Dale Butler
WILLIAMSON COUNTY, TEXAS
710 MAIN STREET, STE 101
GEORGETOWN, TX 78626

Number: 12
Date: 1/25/18
Job: 20-15092 WILCO ANNEX - GC
Phone:

Description: Credit for using PVC in basement instead of Cast Iron

We are pleased to offer the following specifications and pricing to make the following changes:

Item#	Description	Price
1	PVC in lieu Cast Fe	$-18,000.00
2	Add Owner Contigency	$18,000.00
	Subtotal:	$0.00
	Total:	**$0.00**

If you have any questions, please contact me at .

Submitted by:

Approved by: _____
Date: _____

Cc:

Change Order

CR #12

Accent Plumbing, Inc.
21101 FM 685
Pflugerville, TX 78660
512-251-2819
512-251-6416 fax

Date: January 17, 2018

Owner:

Contractor: Chasco Constructors

Project name: Williamson County Annex

Change order number:

Original contract date:

Credit….. $18,000.00…. for using PVC in basement at Williamson County Annex instead of Cast Iron

Net amount of previous change orders:

Total original contract amount plus or minus net change orders:

Total amount of this change order: ($18,000.00)

The contract time will be changed by the following number of days: ( ) Days

The date of completion as of the date of this change order is:

Contractor:

Accent Plumbing

Company name
21101 FM 685

Address
Pflugerville, TX 78660

City, State, Zip

Date

Mary Pieper

Signature

Owner:

Chaco Contructors

Name

Address

City, State, Zip

Date

Signature

Williamson County Facilities - Allowance & Contingency Tracking Log

Change Orders To-Date: 4

Change Order No.	Date Submitted	Date Approved	Description	Affected Sub/Supplier	Court Agenda Date	Party of Initiation	Time Ext (Days)	Cost of Work	$ 10,000.00 Structural Concrete Allowance	$ 10,000.00 Reinforcing Steel Allowance	$ 10,000.00 Structural Steel Allowance	$ 70,000.00 Owner Signage Allowance	$ 10,000.00 Owner Residential Appliance Allowance	$ 60,000.00 Owner Commercial Kitchen Allowance	$ 2,500.00 Owner Interior Blinds Allowance	$ 305,099.00 Owner's Project Contingency	$ 431,081.00 CM Contingency	$ 20,000.00 Misc. Utility costs	$ 449,630.00 General Conditions	$ 418,526.00 Construction Phase Fee	$ 95,947.00 Buyout Savings (Current)	GMP Total	Total Updated Contract Amount
Contract																						$14,919,081.00	**$14,919,081.00**
CO#1, CR#1	10/17/17	10/30/17	Temporary Electrical	CHASCO	10/24/17	CHASCO	0	($18,000.00)								$18,000.00						$0.00	$14,919,081.00
CO#1, CR#2	10/17/17	10/30/17	Revise pavement cross-section	CHASCO	10/24/17	WILCO	10	$82,000.00								($82,000.00)						$0.00	$14,919,081.00
CO#1, CR#3	10/17/17	13/30	Add french drain	CHASCO	10/24/17	CHASCO	5	$32,775.00								($32,775.00)						$0.00	$14,919,081.00
CO#2, CR#4	12/22/17	1/17/18	Revise pier reinforcing at pavilion	CMC	2/6/18	JQ ENG	0	$1,714.00		($1,714.00)												$0.00	$14,919,081.00
CO#2, CR#4	VOID	VOID	Form Savers at Leave Outs	CMC		JQ ENG	0	$2,821.00	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	$0.00	$14,919,081.00
CO#2, CR#5	12/22/17	1/17/18	Electrician Additional Bond Fee	COLVIN	2/6/18	CHASCO	0	$681.00									($681.00)					$0.00	$14,919,081.00
CO#2, CR#6	12/22/17	1/17/18	Waterline Changes	CHASCO	2/6/18	CHASCO	0	$18,743.00										($18,743.00)				$0.00	$14,919,081.00
CO#3, CR#7	12/7/17	12/19/17	Additional Lime Treatment	LHOIST	12/12/17	CHASCO	0	$52,152.70								($52,152.70)						$0.00	$14,919,081.00
CO#4, CR#8	12/22/17	1/17/18	Lime Treatment Deduct	LHOIST	2/6/18	CHASCO	0	($9,585.64)								$9,585.64						$0.00	$14,919,081.00
CO#4, CR#9	12/22/17	1/17/18	Revise Floor Boxes	COLVIN ELECTRIC	2/6/18	KAH	0	$2,154.00								($2,154.00)						$0.00	$14,919,081.00
CO#4, CR#10	12/22/17	1/17/18	Timely Door Frames - Alumatone	AM. DOOR	2/6/18	KAH	0	$3,149.00								($3,149.00)						$0.00	$14,919,081.00
CO#5, CR#11	1/31/18	1/31/18	French Drain # 2	CHASCO		CHASCO	0	$37,110.50								($37,110.50)						$0.00	$14,919,081.00
CO#5, CR#12	1/31/18	1/31/18	PVC in lieu Cast Fe	ACCENT PLUMBING		CHASCO	0	($18,000.00)								$18,000.00						$0.00	$14,919,081.00

Commissioners Court - Regular Session **20.**

Meeting Date: 02/20/2018

Discuss consider and take appropriate action on approval of the preliminary plat for the Liberty Hill 90 subdivision - Pct 2

Submitted For: Terron Evertson **Submitted By:** Adam Boatright, Infrastructure

Department: Infrastructure **Division:** Road & Bridge

Agenda Category: Consent

Information

Agenda Item

Discuss, consider, and take appropriate action on approval of the preliminary plat for the Liberty Hill 90 subdivision - Pct 2.

Background

This proposed subdivision consists of 56 lots and 3,885 feet of new public roads.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

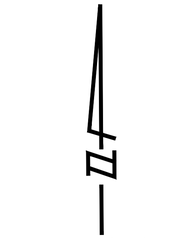
Preliminary Plat - Liberty Hill 90

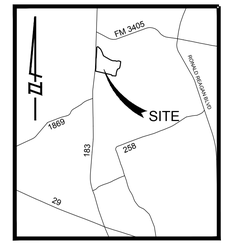
Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 12:31 PM
Form Started By: Adam Boatright		Started On: 02/15/2018 11:26 AM
Final Approval Date: 02/15/2018		

LIBERTY HILL 90
PRELIMINARY PLAT







LOCATION MAP
NTS

LEGEND	
1	LOT NUMBER
Ⓐ	BLOCK NUMBER
	BOUNDARY LINE
	EXIST. MAJOR CONTOURS
	EXIST. MINOR CONTOURS
	BUILDING SETBACK
	MAILBOX KIOSK

LINE TABLE			
NUMBER	DIRECTION	DISTANCE	RECORD COURSES
L1	N02°59'11"W	122.67'	N02°59'43"W 122.93'
L2	N09°06'30"E	203.81'	N09°01'29"E 203.82'
L3	S70°12'49"E	48.39'	S70°12'49"E 48.39'
L4	S55°19'18"E	236.23'	S55°19'18"E 236.23'
L5	S44°10'54"E	150.19'	S44°10'54"E 150.19'
L6	S36°03'57"E	192.17'	S36°03'57"E 192.17'
L7	S25°35'15"E	125.45'	S25°35'15"E 125.45'
L8	S12°09'07"E	135.81'	S12°09'07"E 135.81'
L9	S19°30'41"E	117.32'	S19°30'41"E 117.32'
L10	S28°17'00"E	204.41'	S28°17'00"E 204.41'
L11	S45°46'42"E	216.55'	S45°46'42"E 216.55'
L12	S52°30'05"E	144.33'	S52°30'05"E 144.33'
L13	S63°04'20"E	270.57'	S63°04'20"E 270.57'
L14	S73°08'14"E	292.51'	S73°08'14"E 292.51'
L15	N89°04'27"E	140.87'	N89°04'27"E 140.87'
L16	S76°28'19"E	183.07'	S76°28'19"E 183.07'
L17	S05°59'28"W	343.24'	S05°56'18"W 343.08'
L18	S08°18'00"W	30.70'	S08°07'16"W 30.79'
L19	S08°08'00"W	260.61'	S08°04'37"W 260.92'
L20	S27°32'21"W	95.60'	S27°41'38"W 95.39'
L21	S62°14'22"W	204.32'	S62°15'27"W 204.49'
L22	S19°17'54"W	127.67'	S19°43'50"W 127.55'
L23	S12°10'14"W	201.84'	S12°03'50"W 201.59'
L24	S08°12'48"W	329.37'	S08°08'20"W 330.08'
L25	S51°37'48"W	48.54'	S51°12'20"W 48.51'
L26	N82°39'43"W	228.66'	N82°36'51"W 228.82'
L27	N84°01'25"W	130.74'	N84°01'51"W 130.70'
L28	N19°33'09"W	104.78'	N19°33'32"W 105.03'
L29	N88°10'50"W	119.78'	
L30	N88°45'50"W	99.66'	
L31	N87°09'29"W	98.04'	
L32	S54°13'15"E	50.27'	
L33	S83°39'11"E	38.67'	
L34	S83°39'11"E	27.94'	
L35	S75°05'49"E	30.78'	
L36	S53°51'51"E	36.65'	
L37	S24°26'48"E	33.62'	
L38	S61°04'00"E	46.60'	
L39	N83°00'51"W	78.22'	

INTERMANDECO GP LLC	
OWNER	INTERMANDECO GP LLC P.O. BOX 670649 DALLAS, TEXAS 75367 PHONE (512) 669-5560 brett@intermandeco.com
ENGINEER	GRAY ENGINEERING INC. (ATTN: SCOTT W. MAHAM, P.E.) 8834 NORTH CAPITAL OF TEXAS HIGHWAY, SUITE 140 AUSTIN, TEXAS 78759 smaham@grayengineeringinc.com
SURVEYOR	G&R SURVEYING LLC 1805 OUIDA DRIVE AUSTIN, TEXAS 78728 PHONE: (512) 844-4504 FAX: (512) 836-8385
SUBMITTAL DATE	2/7/2018
NUMBER OF BLOCKS	4
LINEAR FEET OF NEW STREETS	3,885 LF
NUMBER OF LOTS BY TYPE	54 SINGLE FAMILY 2 OPEN SPACE/DETENTION
SITE ACREAGE	90.434 AC.
ACREAGE BY LOT TYPE	SINGLE FAMILY: 81.60 AC. OPEN SPACE/DETENTION: 2.96 AC.
BENCHMARK DESCRIPTION AND ELEVATION	A PERMANENT BENCHMARK WILL BE INSTALLED TO WILLIAMSON COUNTY SPECIFICATIONS UPON CONSTRUCTION OF THIS SUBDIVISION.
PATENT SURVEY	SAMUEL SMITH SURVEY, ABSTRACT NO. 586

CURVE TABLE						
NO.	DELTA	RADIUS	ARC	CHORD BEARING	CHORD	RECORD CHORD
C1	5°01'54"	5789.58'	508.44'	N04°15'35"E	508.27'	N04°15'54"E 508.20'

GENERAL NOTES:

1. THIS SUBDIVISION IS NOT LOCATED WITHIN ANY EXTRA TERRITORIAL JURISDICTION
2. FEMA PANEL 48491C0275E eff. 9/26/2008
3. FEMA PANEL 48053C0550F eff. 3/15/2012
4. FEMA APPROVED LOMR 15-06-4383P eff.7/7/2016
5. AREAS OUTSIDE 100-YEAR FLOODPLAIN ARE CLASSIFIED AS ZONE X
6. ALL SIDEWALKS ARE TO BE MAINTAINED BY EACH OF THE ADJACENT PROPERTY OWNERS
7. ALL PROPOSED STREETS WILL BE PUBLIC
8. DRIVEWAYS SHALL CONNECT ONLY TO INTERNALLY PLATTED ROADS AND NOT TO CR 257 OR US 183

STATE OF TEXAS
SCOTT W. MAHAM
88571
LICENSED
PROFESSIONAL ENGINEER

02/14/2018

PROJECT NO.	1653-11181	DRAWN BY:	EA
DATE:	2/14/18	CHECKED BY:	SM

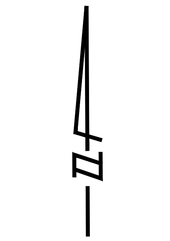
8834 N. Capital of Texas Hwy.
Suite 140
Austin, Texas 78759
(512)452-0371
FAX(512)454-9933
TBPE FIRM #2946
GRAY ENGINEERING

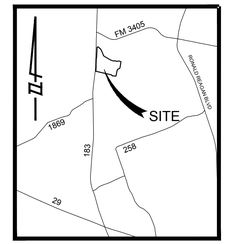
LIBERTY HILL 90
PRELIMINARY PLAT
SHEET 1 OF 3

H:\PROJECTS\1653 - INTERMANDECO GP LLC\11181 LH 90 TRACT\CAD\SHEETS\11181-OVERALL PRELIM PLAN.DWG DATE: 12/14/2017 1:11:41 PM BY: EARBEIGUN

LIBERTY HILL 90
PRELIMINARY WATER PLAN







LOCATION MAP
NTS

WATER LEGEND	
—— W ——	PROP. WATERLINE
	PROP. GATE VALVE
	PROP. TEE
	PROP. FIRE HYDRANT
- - - - - -	PROP. WATERLINE EASEMENT

SCOTT W. MAHAM
88571
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS

02/14/2018

PROJECT NO.	1653-11181	DRAWN BY:	EA
DATE:	2/14/18	CHECKED BY:	SM

GRAY ENGINEERING
8834 N. Capital of Texas Hwy.
Suite 140
Austin, Texas 78759
(512)452-0371
FAX(512)454-9933
TBPE FIRM #2946

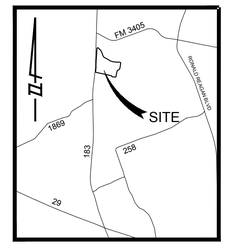
LIBERTY HILL 90
PRELIMINARY PLAT
SHEET 2 OF 3

H:\PROJECTS\1653 - ENTERMANDECO GP LLC\11181 LH 90\TRACTCADSHEETS\11181-PRELIM WATER PLAN.DWG DATE: 12/15/2017 11:26:33 AM BY: EABREGUN

LIBERTY HILL 90
PRELIMINARY DRAINAGE PLAN



SCALE: 1"=200'
GRAPHIC SCALE IN FEET
0 100 200 300 400



LOCATION MAP
NTS

LEGEND	
	PROPOSED STORM SEWER LINE
	PROPOSED STORM SEWER MANHOLE
	PROPOSED HEADWALL
	PROPOSED SLOPED HEADWALL
	DRAINAGE EASEMENT
	EXIST. MAJOR CONTOURS
	EXIST. MINOR CONTOURS
100YR	FEMA 100 YEAR FLOODPLAIN

GENERAL NOTES:

1. FEMA PANEL 48491C0275E eff. 9/26/2008
2. FEMA PANEL 48053C0550F eff. 3/15/2012
3. FEMA APPROVED LOMR 15-06-4383P eff.7/7/2016
4. AREAS OUTSIDE 100-YEAR FLOODPLAIN ARE CLASSIFIED AS ZONE X
5. STREET INCLUDES ROADSIDE DITCH ON BOTH SIDES OF PAVEMENT

STATE OF TEXAS
SCOTT W. MAHAM
88571
LICENSED PROFESSIONAL ENGINEER

02/14/2018

PROJECT NO.	1653-11181	DRAWN BY:	EA
DATE:	2/14/18	CHECKED BY:	SM

GRAY ENGINEERING
8834 N. Capital of Texas Hwy.
Suite 140
Austin, Texas 78759
(512)452-0371
FAX(512)454-9933
TBPE FIRM #2946

LIBERTY HILL 90
PRELIMINARY PLAT
SHEET 3 OF 3

H:\PROJECTS\1653 - INTERMARKS\CO OP LLC\11181 LH 90 TRACT\CAD\SHEETS\11181-PRELIM DRAINAGE PLAN.DWG, DATE: 10/15/2017 11:43:47 AM, BY: EARREGUIN

Commissioners Court - Regular Session **21.**

Meeting Date: 02/20/2018

DWI/Drug Court Award

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 recognizing the Williamson County DWI/Drug Court for winning the 2018 "*Spotlight on Success Award for Outstanding DWI Court Team"* that was presented to Judge Laura Barker and the Project Team by the Texas Center for the Judiciary during the DWI Court Team Advanced Conference.

Background

Below is the press release regarding the award that was presented to Judge Laura Barker and the Project Team:

WilCo DWI/Drug Court Team Garners
Spotlight on Success Award

February 12, 2018 Williamson County, TX – The Williamson County DWI/Drug Court was presented the 2018 "*Spotlight on Success Award for Outstanding DWI Court Team"* during the DWI Court Team Advanced Conference, recently held in Austin. The award honored the DWI/Drug Court Team led by the Honorable Laura Barker, presiding judge of Williamson County Court at Law #2. The DWI/Drug Court model uses evidence-based standards to dramatically improve outcomes for individuals involved in the justice system due to substance use disorders. The Williamson County DWI/Drug Court is a multidisciplinary team that uses best-practices to change and save lives and provide a consistent approach that both enhances the individual's opportunity to succeed and maximizes community safety.

The Williamson County DWI/Drug Court was established in November 2006, with the assistance of grant funding from the Office of the Governor-Criminal Justice Division. The program is designed to provide interventions for DWI/Drug offenders to help break the substance abuse cycle.

The Texas Center for the Judiciary presents the annual award to recognize the efforts of an exemplary DWI/Drug Court Team in the State of Texas. The Texas Center for the Judiciary promotes judicial excellence and education, so courts can administer justice with fairness, efficiency and integrity.

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	02/14/2018 09:08 AM
Form Started By: Kathy Pierce		Started On: 02/13/2018 04:17 PM
Final Approval Date: 02/14/2018		

Commissioners Court - Regular Session **22.**

Meeting Date: 02/20/2018

Bill Pickett and Horse Statue

Submitted For: Larry Madsen **Submitted By:** Julia Cooper, Commissioner Pct. #4

Department: Commissioner Pct. #4

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on approving the concept for the placement of a life size bronze statue of African-American Pro Rodeo Hall of Fame Cowboy “Bill Pickett” and his horse Spradley to be located in the arena area of the Williamson County Expo Center, Taylor, Texas.

Background

Gerald Anderson, a relative of Bill Pickett, is working with local sculpture artist Adam Davenport of Taylor to commission the life size statue of Bill Pickett and his horse Spradley. They are asking to place the statue, once complete, at the Expo Center.
Willie M. “Bill” Pickett (December 5, 1870 – April 2, 1932) was a cowboy, rodeo, Wild West show performer and actor. In 1989, Pickett was inducted into the Pro Rodeo Hall of Fame.

He invented the technique of bulldogging, the skill of grabbing cattle by the horns and wrestling them to the ground. It was known among cattlemen that, with the help of a trained bulldog, a stray steer could be caught. Bill Pickett had seen this happen on many occasions. He also thought that if a bulldog could do this feat, so could he. Pickett practiced his stunt by riding hard, springing from his horse, and wrestling the steer to the ground. Pickett’s method for bulldogging was biting a cow on the lip and then falling backwards. He also helped cowboys with bulldogging. This method eventually lost popularity as the sport morphed into the steer wrestling that is practiced in rodeos.

Honors:

- 1971 Rodeo Hall of Fame of the National Cowboy and Western Heritage Museum
- 1989 Pro Rodeo Hall of Fame
- 1997 Texas Trail of Fame
- 2003 National Multicultural Western Heritage Museum and Hall of Fame

If this concept is approved by the Williamson County Commissioners Court, Gerald Anderson and others will work to obtain donations and funds for the creation of the statue. If sufficient funds are obtained, the county will then need to enter into a license agreement with Gerald Anderson and/or the non-profit organization supporting this effort setting out the rights and responsibilities of the parties in relation to the statue (*i.e.* maintenance responsibilities, release of liability for damage by third parties, etc.).

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Statue Drawing

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 04:02 PM
Form Started By: Julia Cooper		Started On: 02/14/2018 01:32 PM
Final Approval Date: 02/14/2018		


ADAM DAGGETT

Commissioners Court - Regular Session **23.**

Meeting Date: 02/20/2018

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

Submitted For: Robert Daigh **Submitted By:** Lydia Linden, Infrastructure

Department: Infrastructure

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	01/23/2018 02:22 PM
Form Started By: Lydia Linden		Started On: 01/23/2018 12:46 PM
Final Approval Date: 01/23/2018		

Commissioners Court - Regular Session **24.**

Meeting Date: 02/20/2018

Inner Loop at Wilco Way (Animal Shelter) - Agent Authorization Form

Submitted By: Dawn Haggard, Road Bond

Department: Road Bond

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action regarding a TCEQ Agent Authorization Form for the Edwards Aquifer Protection Program on the Inner Loop at Wilco Way (Animal Shelter Driveway) project.

Background

The Inner Loop at Wilco Way (Animal Shelter Driveway) project requires TCEQ approval of a Exception Request prior to construction. A TCEQ Agent Authorization Form is required to authorize an employee of K Friese & Associates, a sub-consultant to the design engineer, to submit the needed Exception Request for TCEQ review and approval on behalf of the County.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Inner Loop at Wilco Way (Animal Shelter Driveway) Agent Authorization Form

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Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 12:31 PM
Form Started By: Dawn Haggard		Started On: 02/15/2018 08:29 AM
Final Approval Date: 02/15/2018		

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Dan A. Gattis,
Print Name

County Judge,
Title - Owner/President/Other

of Williamson County,
Corporation/Partnership/Entity Name

have authorized Victoria M. Ortega, P.E.
Print Name of Agent/Engineer

of K Friese & Associates, Inc.
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature _____ Date _____

THE STATE OF _____ §

County of _____ §

BEFORE ME, the undersigned authority, on this day personally appeared _____known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this ____ day of _____,_____.

_____
NOTARY PUBLIC

_____
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: _____

Commissioners Court - Regular Session **25.**

Meeting Date: 02/20/2018

CR 278 Real Estate 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 TD-Tucker Ranch Holdings, LLC. for right of way needed on the CR 278 @ Bagdad Rd. project (Parcel 3). Funding Source: Road Bonds P438

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Jacobs Contract

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 08:33 AM
Form Started By: Charlie Crossfield		Started On: 02/15/2018 08:16 AM
Final Approval Date: 02/15/2018		

REAL ESTATE CONTRACT
Bagdad Road/CR 278 Right of Way—Parcel 3

THIS REAL ESTATE CONTRACT ("Contract") is made by TD-TUCKER RANCH HOLDINGS, LLC, a Texas limited liability company (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 3.043 acre (132,566 Sq. Ft.) tract of land in the Joseph Lee Survey, Abstract No. 393, Williamson County, Texas; being more fully described by metes and bounds in Exhibit "A", attached hereto and incorporated herein (**Parcel 3**);

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 Exhibits "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 and/or cost to cure for the remaining property of Seller shall be the sum of ONE HUNDRED FOURTEEN THOUSAND and 00/100 Dollars ($114,000.00).

By execution of this Contract the parties agree that any improvements or other personal property located within the Property that are to be retained by Seller shall be removed or relocated off of the Property on or before February 15th, 2018, or they shall otherwise become subject to removal or relocation by Purchaser, its contractors or agents after that date.

Payment of Purchase Price

2.02. The Purchase Price shall be payable in cash at the Closing.

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.

Title

3.03. Within seven (7) days from the Effective Date of this Contract, Purchaser shall cause the Title Company to furnish to the Purchaser a current commitment ("Title Commitment") for the issuance of an Owner's Policy of Title Insurance together with legible copies of all documents constituting exceptions to Seller's title as reflected in the Title Commitment. Purchaser may, on or prior to five (5) days after its receipt of the later of the Title Commitment, deliver to Seller in writing such reasonable objections as Purchaser may have to anything contained or set forth in the Title Commitment or the title exception documents. In the event Purchaser timely objects to any matter contained in the Title Commitment or title exception documents, Seller shall have a reasonable period of time after receipt of Purchaser's objections within which Seller may attempt to cure such objections specified by Purchaser; provided, however, Seller shall provide reasonable responsive cooperation and assistance requested by Purchaser to cure any objections, but shall be under no obligation to incur any costs whatsoever in connection with such cure. In the event Seller has not yet satisfied each and every of Purchaser's stated title objections within ten (10) days following the date of Purchaser's objections, Purchaser shall elect to either (i) terminate this Contract, or (ii) waive those title objections which Seller has not satisfied and proceed to Closing. In the event Purchaser fails to elect (i) or (ii) in writing within such period, then, and in such event, Purchaser shall be deemed to have elected (ii).

3.04. Seller and Purchaser agree that Special Warranty Deed delivered at the Closing shall include the following deed restriction (the "New Deed Restriction"):

No utility poles for overhead electric lines or other utility lines shall be permitted on the Property within fifty feet of the northern boundary or the southern boundary of the entry right-of-way for the Highland Oaks subdivision that provides ingress and egress between the Highland Oaks subdivision and County Road 279, as the location of such entry right-of-way is shown on the Final Plat of Highland Oaks Phase 1 recorded as Document No. 2017089429 in the Official Public Records of Williamson County, Texas

Inspection

3.05. Purchaser acknowledges that Seller is providing Purchaser with an opportunity to thoroughly inspect the Property prior to Closing or all purposes, including any concerns with respect to any past, current or future violation of environmental laws or with respect to the presence, either now or in the past, of any hazardous substances at the Property.

ARTICLE IV
REPRESENTATIONS AND WARRANTIES OF SELLER

After the Effective Date, Seller agrees that Purchaser shall be entitled to enter upon the Property and to conduct such inspections and audits as Purchaser may reasonably desire.

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) Seller has not entered into any lease or other agreement, whether written or oral, granting any other party the right to possess the Property. To Seller's actual knowledge, 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) To Seller's actual knowledge, Seller has complied with all applicable laws, ordinances, regulations, statutes, rules and restrictions relating to the Property, or any part thereof.

For purposes of this Contract, wherever the terms "knowledge," "belief," or words of similar import are used with respect to the Seller, such knowledge or belief shall be limited to the actual knowledge of James H. Jacobs, in his capacity as Manager of the Seller.

The Property herein is being conveyed to Purchaser under threat of condemnation.

PURCHASER HEREBY EXPRESSLY ACKNOWLEDGES THAT IT HAS OR WILL HAVE, PRIOR TO THE CLOSING, THOROUGHLY INSPECTED AND EXAMINED THE PROPERTY TO THE EXTENT DEEMED NECESSARY BY THE PURCHASER IN ORDER TO ENABLE THE PURCHASER TO EVALUATE THE PURCHASE OF THE PROPERTY.

PURCHASER REPRESENTS THAT IT IS A KNOWLEDGEABLE PURCHASER OF ASSETS SUCH AS THE PROPERTY AND THAT IT IS RELYING SOLELY ON ITS OWN EXPERTISE AND THAT OF PURCHASER'S CONSULTANTS, AND THAT PURCHASER WILL CONDUCT SUCH INSPECTIONS AND INVESTIGATIONS OF THE PROPERTY, INCLUDING BUT NOT LIMITED TO THE PHYSICAL AND ENVIRONMENTAL CONDITIONS THEREOF, AND SHALL RELY UPON SAME, AND UPON CLOSING SHALL ASSUME THE RISK OF ANY ADVERSE MATTERS, INCLUDING BUT NOT LIMITED TO, ADVERSE PHYSICAL AND ENVIRONMENTAL CONDITIONS, THAT MAY NOT HAVE BEEN REVEALED BY PURCHASER'S INSPECTIONS AND INVESTIGATIONS. PURCHASER FURTHER ACKNOWLEDGES AND AGREES THAT PURCHASER IS ACQUIRING THE PROPERTY ON AN AS-IS, WHERE-IS AND WITH ALL FAULTS BASIS WITHOUT REPRESENTATIONS, WARRANTIES OR COVENANTS, EXPRESS OR IMPLIED, OF ANY KIND OR NATURE, EXCEPT THOSE EXPRESSLY INDICATED IN THIS CONTRACT. PURCHASER DISCLAIMS RELIANCE UPON ALL ORAL REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, OF ANY KIND OR NATURE, EXCEPT THOSE EXPRESSLY INDICATED IN THIS CONTRACT. PURCHASER HEREBY WAIVES AND RELINQUISHES ALL RIGHTS AND PRIVILEGES ARISING OUT OF, OR WITH RESPECT OR IN RELATION TO, ANY REPRESENTATIONS, WARRANTIES OR COVENANTS, WHETHER EXPRESS OR IMPLIED, WHICH MAY HAVE BEEN MADE OR GIVEN, OR WHICH MAY HAVE BEEN DEEMED TO HAVE BEEN MADE OR GIVEN, BY THE SELLER, EXCEPT THOSE EXPRESSLY INDICATED IN THIS CONTRACT. PURCHASER HEREBY AGREES THAT SELLER SHALL NOT BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL OR OTHER DAMAGES RESULTING OR ARISING FROM OR RELATING TO THE OWNERSHIP, USE, CONDITION, LOCATION, MAINTENANCE, REPAIR OR OPERATION OF THE PROPERTY.

SURVIVAL. IT IS AGREED AND UNDERSTOOD THAT THE TERMS AND PROVISIONS OF THIS ARTICLE IV SHALL EXPRESSLY SURVIVE THE CLOSING AND NOT MERGE THEREIN.

ARTICLE V
CLOSING

Closing Date

5.01. The Closing shall be held at the office of Independence Company (the "Title Company") on or before March 31st, 2018 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 Special Warranty 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;

(c) the New Deed Restriction; and

(d) 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) Cooperate, to the extent required, to ensure that the Title Company will 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 promulgated 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".

(3) 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;

(b) Pay the costs of Closing as required by this Contract.

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 (including the base premium and the cost of all endorsements and special elective coverages) and survey to be paid by Purchaser.

(2) Deed (including recording costs), 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; Total Agreement; Modification

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. This Contract constitutes the entire agreement among the parties pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements and understandings of the parties in connection therewith, specifically including any letter of intent negotiated by the parties in relation to the Property. No representation, warranty, covenant, agreement or condition not expressed in this Contract shall be binding upon the parties hereto or shall affect or be effective to interpret, change or restrict the provisions of this Contract. This Contract may not be modified or amended, except by an agreement in writing signed by both the Seller and the Purchaser.

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.

No Recordation

8.08. Seller and Purchaser hereby acknowledge that neither this Contract nor any memorandum or affidavit thereof shall be recorded of public record in the county where the Property is located or any other county in Texas.

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:

TD-TUCKER RANCH HOLDINGS, LLC,
a Texas limited liability company

By: _____
James H. Jacobs,
Manager

Date: 2-13-2018

Address: 4441 S. IH35, SUITE 100
GEORGETOWN, TX. 78626

PURCHASER:

WILLIAMSON COUNTY, TEXAS

By: _____
Dan A. Gattis
County Judge

Date: _____

Address: 710 Main Street, Suite 101
Georgetown, Texas 78626

EXHIBIT A

County: Williamson
Parcel No.: 3
Highway: Bagdad Road
Limits: From: 1,500' North of C.R. 278
To: 100' South of Silver Creek Drive

DESCRIPTION FOR PARCEL 3

DESCRIPTION OF A 3.043 ACRE (132,566 SQ. FT.) PARCEL OF LAND, LOCATED IN THE JOSEPH LEE SURVEY, ABSTRACT 393, WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A 163.125 ACRE TRACT OF LAND AS DESCRIBED IN A DEED TO TD TUCKER RANCH HOLDINGS, LLC, RECORDED IN DOCUMENT NO. 2016091159 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.TX.), SAID 3.043 ACRE (132,566 SQ. FT.) PARCEL, AS SHOWN ON A RIGHT-OF-WAY SKETCH PREPARED BY SAM, LLC, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING at a 1/2-inch iron rod found for the northwest corner of Lot 1A, Block A, Silver Creek Ranch Phase One, a subdivision of record in Cabinet P, Slides 201-203, of the Official Records of Williamson County, Texas (O.R.W.C.TX.), described in a deed to SCR Property Owners Association, Inc., recorded in Document Number 2007044460, O.P.R.W.C.TX., said point being on the south line of said 163.125 acre tract of land;

THENCE N 68°57'04" E, with the common line of said Lot 1A and said 163.125 acre tract, a distance of 990.00 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILLIAMSON COUNTY" set 92.44 feet left of Bagdad Road Engineer's Centerline Station (E.C.S.) 543+30.41, on the proposed west right-of-way line of Bagdad Road, a variable width right-of-way, for the **POINT OF BEGINNING** (Grid Coordinates= N:10,202,469.83, E:3,059,984.48) and the southwest corner of the parcel described herein;

THENCE departing the common line of said 163.125 acre tract and said Lot 1A, with the proposed west right-of-way line of said Bagdad Road, over and across said 163.125 acre tract, the following six (6) courses and distances numbered 1-6:

1) N 13°05'24" W, a distance of 53.14 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILLIAMSON COUNTY" set 95.61 feet left of Bagdad Road E.C.S. 543+84.09, said point being the beginning of a curve to the right,

2) With said curve to the right, an arc distance of 112.59 feet, through a central angle of 01°16'16", having a radius of 5,075.00 feet, and a chord that bears N 12°27'16" W, a distance of 112.59 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILLIAMSON COUNTY" set 99.66 feet left of Bagdad Road E.C.S. 544+98.32, said point being the beginning of a curve to the right,

3) With said curve to the right, an arc distance of 713.23 feet, through a central angle of 08°02'08", having a radius of 5,085.51 feet, and a chord that bears N 10°12'53" W, a distance of 712.65 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILLIAMSON COUNTY" set 113.56 feet left of Bagdad Road E.C.S. 552+00.94, said point being the beginning of a curve to the right,

4) With said curve to the right, an arc distance of 211.06 feet, through a central angle of 02°22'08", having a radius of 5,105.00 feet, and a chord that bears N 02°36'47" W, a distance of 211.05 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILLIAMSON COUNTY" set 107.27 feet left of Bagdad Road E.C.S. 554+07.35,

5) N 01°25'43" W, a distance of 180.41 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILLIAMSON COUNTY" set 105.00 feet left of Bagdad Road E.C.S. 555+84.58, and

6) N 55°59'23" W, a distance of 52.19 feet to a 5/8-inch iron rod with an aluminum cap stamped "WILLIAMSON COUNTY" set 147.52 feet left of Bagdad Road E.C.S. 556+14.84 on the north line of said 163.125 acre tract, same being the south line of a 6.829 acre tract of land, as described in a deed to Williamson County, Texas, recorded in Document No. 2014076251, O.P.R.W.C.TX., for the northwest corner of the parcel described herein;

7) **THENCE** N 69°26'57" E, departing the proposed west right-of-way line of said Bagdad Road, with the common line of said 163.125 acre tract and said 6.829 acre tract, a distance of 156.25 feet to a calculated point 0.11 feet right of Bagdad Road E.C.S. 556+66.03 on the existing west right-of-way line of said Bagdad Road, no record information found, for the northeast corner of said 163.125 acre tract and the parcel described herein, from which a 1/2-inch iron rod with cap stamped "WALKER 5283" found for the southeast corner of said 6.829 acre tract bears N 69°26'57" E, a distance of 16.46 feet;

THENCE departing the common line of said 163.125 acre tract and said 6.829 acre tract, with the existing west right-of-way line of said Bagdad Road, the following two (2) courses and distances numbered 8-9:

8) S 04°13'09" E, a distance of 946.37 feet to a calculated point 23.81 feet left of Bagdad Road E.C.S. 547+20.84, and

9) S 08°47'26" E, a distance of 378.26 feet to a 1/2-inch iron rod found 36.10 feet left of Bagdad Road E.C.S. 543+41.92 for the northeast corner of said Lot 1A, the southeast corner of said 163.125 acre tract and the parcel described herein;

10) **THENCE** S 68°57'04" W, departing the existing west right-of-way line of said Bagdad Road, with the common line of said 163.125 acre tract and said Lot 1A, a distance of 57.50 feet to the **POINT OF BEGINNING**, and containing 3.043 acres (132,566 sq. ft.) of land, more or less.

This property description is accompanied by a plat of even date.

All bearings are based on the Texas State Plane Coordinate System, Central Zone, NAD83. All distances shown hereon are adjusted to the surface using a combined scale factor of 1.000140

THE STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF TRAVIS §

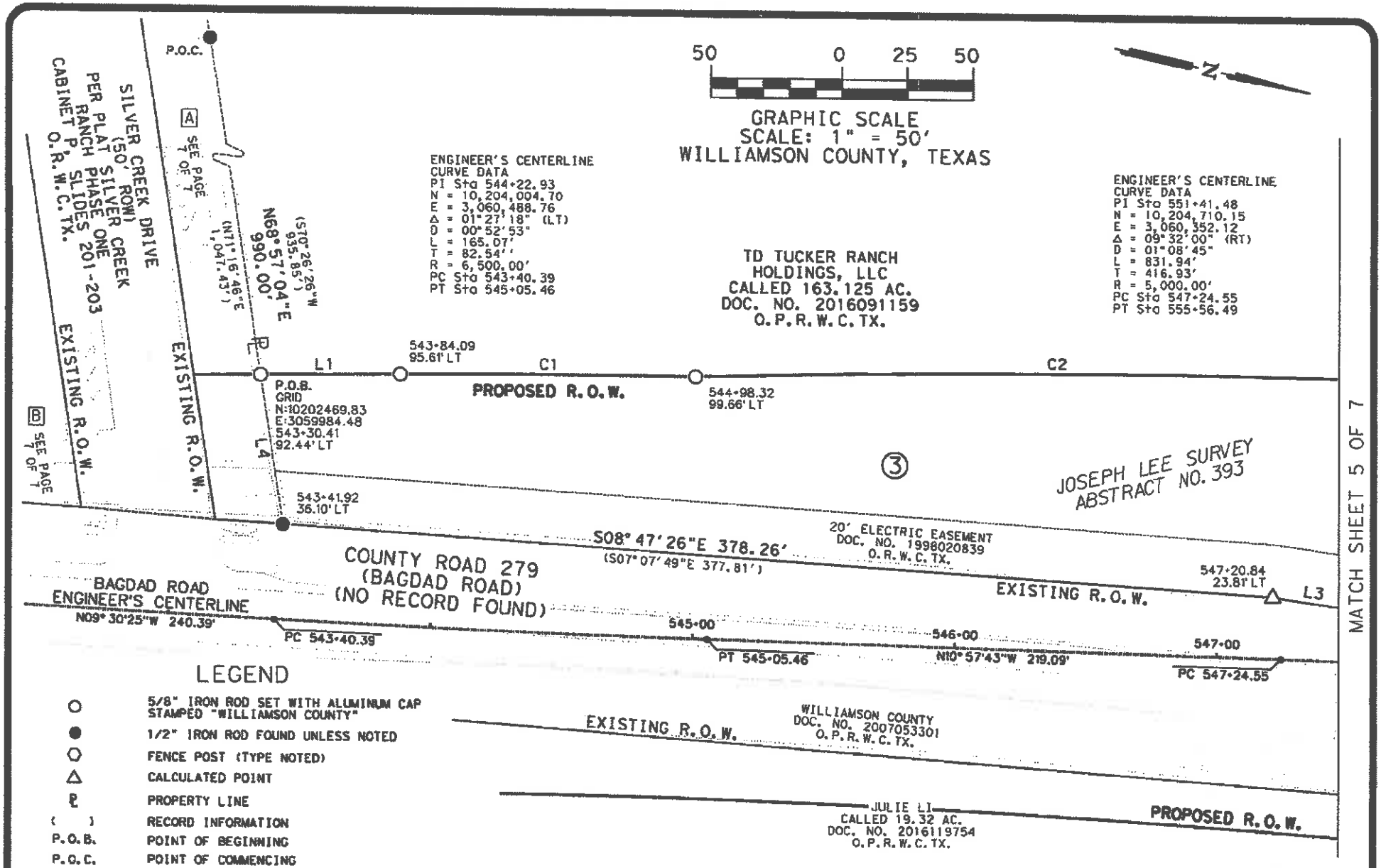
That I, William R. Herring, a Registered Professional Land Surveyor, do hereby certify that the above description is true and correct to the best of my knowledge and belief and that the property described herein was determined by a survey made on the ground under my direction and supervision.

WITNESS MY HAND AND SEAL at Austin, Travis County, Texas this the 17th day of May, 2017.

SURVEYING AND MAPPING, LLC.
4801 Southwest Parkway
Parkway Two, Suite 100
Austin, Texas 78735
Texas Firm Registration No. 10064300

William R. Herring
Registered Professional Land Surveyor
No. 6355-State of Texas





LEGEND

○	5/8" IRON ROD SET WITH ALUMINUM CAP STAMPED "WILLIAMSON COUNTY"
●	1/2" IRON ROD FOUND UNLESS NOTED
○	FENCE POST (TYPE NOTED)
△	CALCULATED POINT
℄	PROPERTY LINE
( )	RECORD INFORMATION
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCING
P.O.R.	POINT OF REFERENCE
N.T.S.	NOT TO SCALE
D.R.W.C.TX.	DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
O.R.W.C.TX.	OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
O.P.R.W.C.TX.	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
---\/---	DISTANCE NOT TO SCALE
---1---	DEED LINE (COMMON OWNERSHIP)

REF. FIELD NOTE NO. 32403

FILE:\\samino\aus\PROJECTS\1016036782\100\Survey\02Base\DGN V8i\Parcels\P-3_1_R1.dgn

EXISTING	163.125 AC.	ACQUIRE	3.043 AC.	REMAINING	160.082 AC. LEFT

SAM
SURVEYING·AERIAL MAPPING·ENGINEERING
4801 Southwest Parkway
Building Two, Suite 100
Austin, Texas 78735
(512) 447-0575
Fax: (512) 326-3029
Texas Firm Registration No. 10064300

RIGHT-OF-WAY SKETCH
SHOWING PROPERTY OF
TD TUCKER RANCH HOLDINGS, LLC
PARCEL 3
3.043 AC. (132,566 SQ. FT.)

ENGINEER'S CENTERLINE
CURVE DATA
PI Sta 551+41.48
N = 10,204,710.15
E = 3,060,352.12
Δ = 09°32'00" (RT)
D = 01°08'45"
L = 831.94'
T = 416.93'
R = 5,000.00'
PC Sta 547+24.55
PT Sta 555+56.49

TD TUCKER RANCH
HOLDINGS, LLC
CALLED 163.125 AC.
DOC. NO. 2016091159
O.P.R.W.C.TX.

N

50 0 25 50

GRAPHIC SCALE
SCALE: 1" = 50'
WILLIAMSON COUNTY, TEXAS

MATCH SHEET 4 OF 7

MATCH SHEET 6 OF 7

C2

PROPOSED R.O.W.

C3

552+00.94
113.56' LT

③

JOSEPH LEE SURVEY
ABSTRACT NO. 393

20' ELECTRIC EASEMENT
DOC. NO. 1998020839
O.R.W.C.TX.

BAGDAD ROAD
ENGINEER'S CENTERLINE

549+00

S04°13'09"E 946.37'
(S02°38'49"E 945.15')

351+00

552+00

EXISTING R.O.W.

COUNTY ROAD 279
(BAGDAD ROAD)
(NO RECORD FOUND)

EXISTING R.O.W.

PROPOSED R.O.W.

JULIE LI
CALLED 19.32 AC.
DOC. NO. 2016119754
O.P.R.W.C.TX.

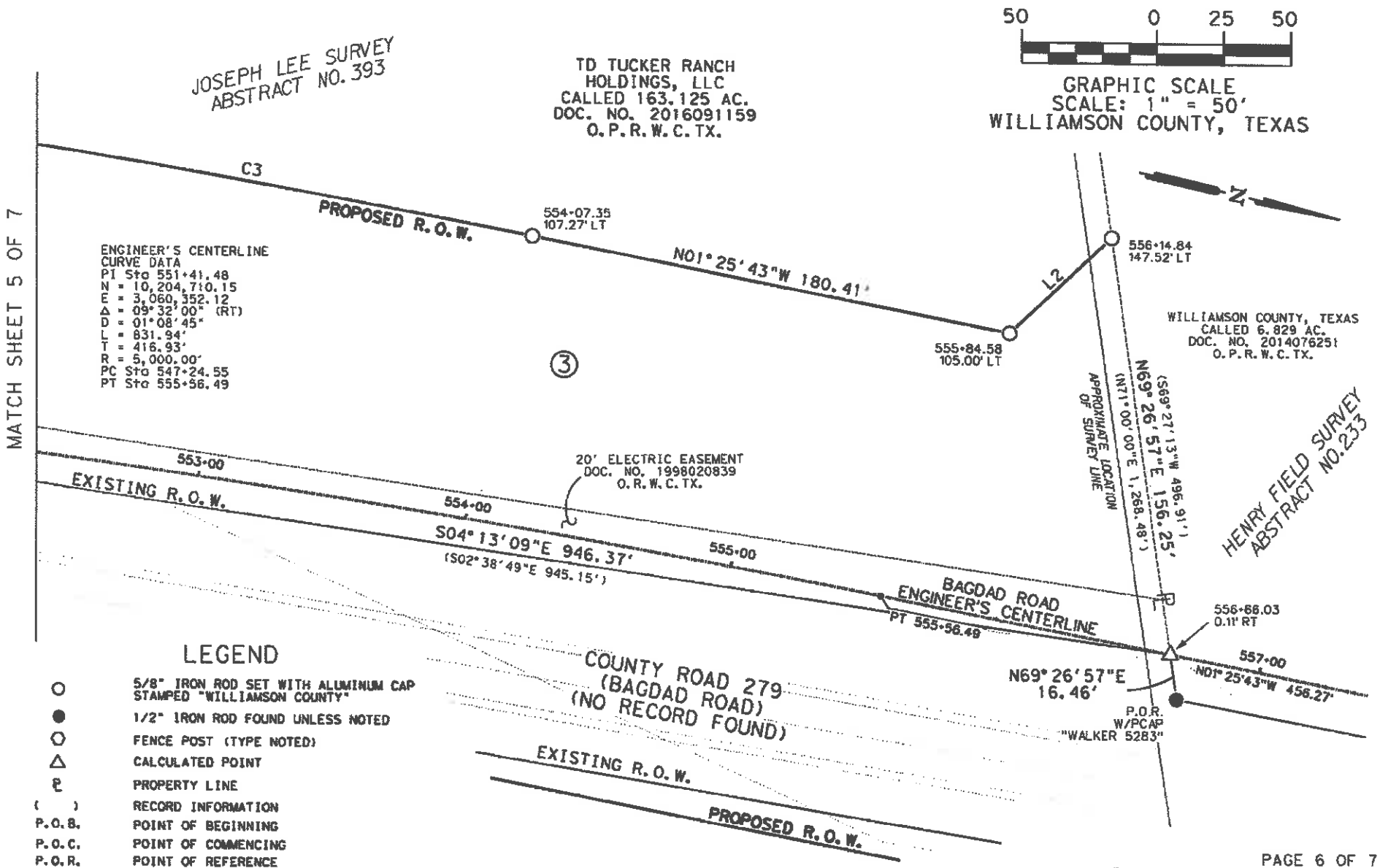
PAGE 5 OF 7
REF. FIELD NOTE NO. 32403

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EXISTING	163.125 AC.	ACQUIRE	3.043 AC.	REMAINING	160.082 AC. LEFT

SAM
SURVEYING-AERIAL MAPPING-ENGINEERING
4801 Southwest Parkway
Building Two, Suite 100
Austin, Texas 78735
(512) 447-0575
Fax (512) 326-3029
Texas Firm Registration No. 10064300

RIGHT-OF-WAY SKETCH
SHOWING PROPERTY OF
TD TUCKER RANCH HOLDINGS, LLC
PARCEL 3
3.043 AC. (132,566 SQ. FT.)



REF. FIELD NOTE NO. 32403

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RIGHT-OF-WAY SKETCH
SHOWING PROPERTY OF
TD TUCKER RANCH HOLDINGS, LLC
PARCEL 3
3.043 AC. (132,566 SQ. FT.)

Ⓐ

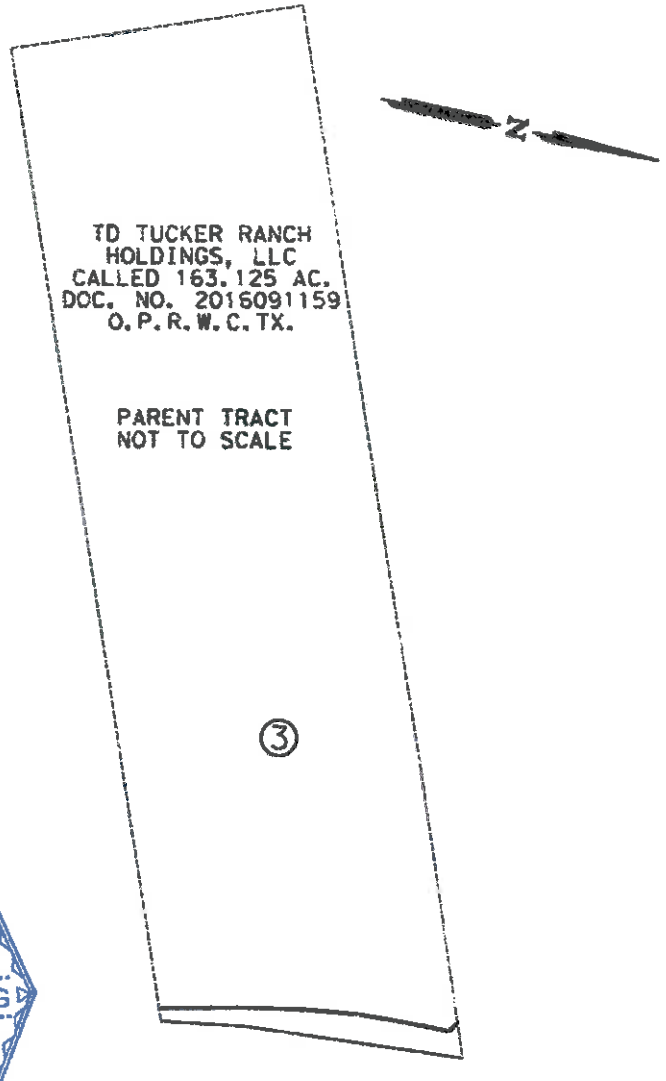
SCR PROPERTY OWNERS
ASSOCIATION, INC.
DOC. NO. 2007044460
O.P.R.W.C.TX.

LOT 1A, BLOCK A
SILVER CREEK RANCH
PHASE ONE
CABINET P, SLIDES 201-203
O.R.W.C.TX.

Ⓑ

SCR PROPERTY OWNERS
ASSOCIATION, INC.
DOC. NO. 2007044460
O.P.R.W.C.TX.

LOT 1A, BLOCK B
SILVER CREEK RANCH
PHASE ONE
CABINET P, SLIDES 201-203
O.R.W.C.TX.



CURVE TABLE

NO.	DELTA	RADIUS	LENGTH	CHORD	CHORD BEARING
C1	01°16'16"	5,075.00'	112.59'	112.59'	N12°27'16"W
C2	08°02'08"	5,085.51'	713.23'	712.65'	N10°12'53"W
C3	02°22'08"	5,105.00'	211.06'	211.05'	N02°36'47"W

LINE TABLE

LINE NO.	BEARING	DISTANCE
L1	N13°05'24"W	53.14'
L2	N55°59'23"W	52.19'
L3	S04°13'09"E	946.37'
L4	S68°57'04"W	57.50'

NOTES:

1. ALL BEARINGS SHOWN ARE BASED ON NAD83/93/NAVD88 TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE. ALL DISTANCES SHOWN ARE SURFACE AND MAY BE CONVERTED TO GRID BY MULTIPLYING BY A SURFACE ADJUSTMENT FACTOR OF 1.00014. ALL COORDINATES SHOWN ARE IN GRID AND MAY BE CONVERTED TO SURFACE BY MULTIPLYING BY THE SAME FACTOR. PROJECT UNITS ARE IN U.S. SURVEY FEET.
2. THIS SURVEY WAS COMPLETED WITH THE BENEFIT OF TITLE REPORT, PROVIDED BY FIRST NATIONAL TITLE INSURANCE COMPANY, FILE NO. 16-285047-GT, EFFECTIVE DATE JANUARY 27, 2017 AND ISSUED DATE FEBRUARY 6, 2017, NO ADDITIONAL RESEARCH WAS PERFORMED FOR ANY EASEMENTS AND OR BUILDING LINES WHICH MAY OR MAY NOT AFFECT SUBJECT TRACT.
3. BAGDAD ROAD ENGINEER'S CENTERLINE ALIGNMENT DERIVED FROM LOCKWOOD, ANDREWS, & NEWMAN, INC. SCHEMATIC RECEIVED BY SAM, LLC. IN AUGUST, 2016.
4. THIS PLAT IS ACCOMPANIED BY A PROPERTY DESCRIPTION OF EVEN DATE.

* AREA CALCULATED BY SAM, LLC.

STATE OF TEXAS
REGISTERED
WILLIAM R. HERRING
6355
PROFESSIONAL
LAND SURVEYOR

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION AND THAT THIS PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WILLIAM R. HERRING
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 6355, STATE OF TEXAS

5/17/17
DATE

REF. FIELD NOTE NO. 32403
FILE:\\saming\aus\PROJECTS\1016036782\100\Survey\02Base\DGN V8i\Parcels\P-3_3_R1.dgn

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Texas Firm Registration No. 10064300

RIGHT-OF-WAY SKETCH
SHOWING PROPERTY OF
TD TUCKER RANCH HOLDINGS, LLC
PARCEL 3
3.043 AC. (132,566 SQ. FT.)

EXHIBIT "B"

Parcel 3

SPECIAL WARRANTY DEED
Bagdad Road/CR 278 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 MEN BY THESE PRESENTS:

That TD-TUCKER RANCH HOLDINGS, LLC, a Texas limited liability company, 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 3.043 acre (132,566 Sq. Ft.) tract of land in the Joseph Lee Survey, Abstract No. 393, Williamson County, Texas; being more fully described by metes and bounds in Exhibit "A", attached hereto and incorporated herein (**Parcel 3**)

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;

The restrictive covenant described on Exhibit "B" attached hereto and incorporated herein;

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 Bagdad Road/CR 278.

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, when the claim is by, through, or under Grantor, but not otherwise, except as to the Reservations from and Exceptions to Conveyance and Warranty.

This deed is being delivered in lieu of condemnation.

IN WITNESS WHEREOF, this instrument is executed on this the ____ day of _____, 2018.

GRANTOR:

TD-TUCKER RANCH HOLDINGS, LLC,
a Texas limited liability company

By:_____
James H. Jacobs, Manager

ACKNOWLEDGMENT

STATE OF TEXAS §
§
COUNTY OF _____ §

This instrument was acknowledged before me on this the ____ day of _____, 2018 by James H. Jacobs, Manager of TD-Tucker Ranch Holdings, LLC, 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 Auditor
710 Main Street, Suite 101
Georgetown, Texas 78626

AFTER RECORDING RETURN TO:

EXHIBIT "B" TO SPECIAL WARRANTY DEED

Grantor and Grantee agree that the Property is being conveyed subject to the following restrictive covenant which is established on the Property as of the effective date of this Special Warranty Deed (the "Restriction"):

> No utility poles for overhead electric lines or other utility lines shall be permitted on the Property described on Exhibit "A" within fifty feet of the northern boundary or the southern boundary of the entry right-of-way for the Highland Oaks subdivision that provides ingress and egress between the Highland Oaks subdivision and County Road 279, as the location of such entry right-of-way is shown on the Final Plat of Highland Oaks Phase 1 recorded as Document No. 2017089429 in the Official Public Records of Williamson County, Texas.

Grantor, as the fee simple owner of the Property and the adjacent property comprising the Highland Oaks subdivision, establishes the Restriction as a covenant, condition, and restriction, whether mandatory, prohibitive, permissive, or administrative, to regulate the uses of portions of the Property and the improvements placed on it. Grantor and Grantee stipulate that (a) the Restriction touches and concerns the Property; (b) privity of estate exists by reason of Grantor's ownership of the Property; (c) notice of the Restriction is given by filing this instrument in the real property records of Williamson County, Texas; and (d) the Restriction is reasonable, its purposes being for the common benefit of Grantor, Grantee, and all future owners of the real property adjacent to the Property that is owned by Grantor as of the effective date of this Special Warranty Deed, including all current and future owners of residential home sites in the Highland Oaks Subdivision (the "Affected Property Owners"). The Restriction runs with the land making up the Property, is binding on Grantee and Grantee's successors and assigns forever, and inures to the benefit of Grantor, Grantee, the Affected Property Owners, and their successors and assigns forever.

The Restriction may be enforced by Grantor, Grantee, or any Affected Property Owner(s) (whether acting individually or through a property owners' association that represents the Affected Property Owners) by restraining orders and injunctions (temporary or permanent) prohibiting interference and commanding compliance. Restraining orders and injunctions will be obtainable on proof of the existence of noncompliance or threatened noncompliance, without the necessity of proof of inadequacy of legal remedies or irreparable harm; provided, however, that the act of obtaining an injunction or restraining order will not be deemed to be an election of remedies or a waiver of any other rights or remedies available at law or in equity.

Commissioners Court - Regular Session **26.**

Meeting Date: 02/20/2018

CR 200 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 Brian P. Schoenfeld for right of way needed on the CR 200 project. (Parcel 20) Funding Source: P285

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Schoenfeld Contract

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 08:33 AM
Form Started By: Charlie Crossfield		Started On: 02/15/2018 08:19 AM
Final Approval Date: 02/15/2018		

REAL ESTATE CONTRACT
CR 200 Right of Way—Parcel 20

THIS REAL ESTATE CONTRACT ("Contract") is made by **BRIAN P. SCHOENFELD** (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 of land described as follows:

> All of that certain 0.063-acre (2,763 square feet) tract of land out of Lot 73, Cierra Vista Subdivision, a Plat Recorded in Document No. 2007078025 of the Official Public Records of Williamson County, Texas (O.P.R.W.C.) and in Cabinet DD, Slide 314 of the Plat Records of Williamson County, Texas, said Lot 73 being conveyed to BRIAN P. SCHOENFIELD, by Deed Recorded in Document No. 2014014094, O.P.R.W.C. corrected to BRIAN P. SCHOENFELD by Affidavit recorded in Document No. 2014047116, O.P.R.W.C., said 0.063 acres being more fully described by metes and bounds and accompanying sketch in Exhibit "A", attached hereto and incorporated herein (**Parcel 20**);

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 and/or cost to cure for the remaining property of Seller shall be the sum of SEVEN THOUSAND FIVE HUNDRED TEN and 00/100 Dollars ($7,510.00).

By execution of this Contract the parties agree that any improvements or other personal property located within the Property that are to be retained by Seller shall be removed or relocated

off of the Property on or before February 28th, 2018, or they shall otherwise become subject to removal or relocation by Purchaser, its contractors or agents after that date.

Payment of Purchase Price

2.02. The Purchase Price shall be payable in cash at the Closing.

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.

Title

3.03. Within seven (7) days from the Effective Date of this Contract, Purchaser shall cause the Title Company to furnish to the Purchaser a current commitment ("Title Commitment") for the issuance of an Owner's Policy of Title Insurance together with legible copies of all documents constituting exceptions to Seller's title as reflected in the Title Commitment. Purchaser may, on or prior to five (5) days after its receipt of the later of the Title Commitment, deliver to Seller in writing such reasonable objections as Purchaser may have to anything contained or set forth in the Title Commitment or the title exception documents. In the event Purchaser timely objects to any matter contained in the Title Commitment or title exception documents, Seller shall have a reasonable period of time after receipt of Purchaser's objections within which Seller may attempt to cure such objections specified by Purchaser; provided, however, Seller shall provide reasonable responsive cooperation and assistance requested by Purchaser to cure any objections, but shall be under no obligation to incur any costs whatsoever in connection with such cure. In the event Seller has not yet satisfied each and every of Purchaser's stated title objections within ten (10) days following the date of Purchaser's objections, Purchaser shall elect to either (i) terminate this Contract, or (ii) waive those title objections which Seller has not satisfied and proceed to Closing. In the event Purchaser fails to elect (i) or (ii) in writing within such period, then, and in such event, Purchaser shall be deemed to have elected (ii).

Inspection

Purchaser acknowledges that Seller is providing Purchaser with an opportunity to thoroughly inspect the Property prior to Closing or all purposes, including any concerns with respect to any past, current or future violation of environmental laws or with respect to the presence, either now or in the past, of any hazardous substances at the Property.

ARTICLE IV
REPRESENTATIONS AND WARRANTIES OF SELLER

After the Effective Date, Seller agrees that Purchaser shall be entitled to enter upon the Property and to conduct such inspections and audits as Purchaser may reasonably desire.

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) Seller has not entered into any lease or other agreement, whether written or oral, granting any other party the right to possess the Property. To Seller's actual knowledge, 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) To Seller's actual knowledge, Seller has complied with all applicable laws, ordinances, regulations, statutes, rules and restrictions relating to the Property, or any part thereof.

For purposes of this Contract, wherever the terms "knowledge," "belief," or words of similar import are used with respect to the Seller, such knowledge or belief shall be limited to the actual knowledge of Seller.

The Property herein is being conveyed to Purchaser under threat of condemnation.

PURCHASER HEREBY EXPRESSLY ACKNOWLEDGES THAT IT HAS OR WILL HAVE, PRIOR TO THE CLOSING, THOROUGHLY INSPECTED AND EXAMINED THE PROPERTY TO THE EXTENT DEEMED NECESSARY BY THE PURCHASER IN ORDER TO ENABLE THE PURCHASER TO EVALUATE THE PURCHASE OF THE PROPERTY. PURCHASER REPRESENTS THAT IT IS A KNOWLEDGEABLE PURCHASER OF ASSETS SUCH AS THE PROPERTY AND THAT IT IS RELYING SOLELY ON ITS OWN EXPERTISE AND THAT OF PURCHASER'S CONSULTANTS, AND THAT PURCHASER WILL CONDUCT SUCH INSPECTIONS AND INVESTIGATIONS OF THE PROPERTY, INCLUDING BUT NOT LIMITED TO THE PHYSICAL AND ENVIRONMENTAL CONDITIONS THEREOF, AND SHALL RELY UPON SAME, AND UPON CLOSING SHALL ASSUME THE RISK OF ANY ADVERSE MATTERS, INCLUDING BUT NOT LIMITED TO,

ADVERSE PHYSICAL AND ENVIRONMENTAL CONDITIONS, THAT MAY NOT HAVE BEEN REVEALED BY PURCHASER'S INSPECTIONS AND INVESTIGATIONS. PURCHASER FURTHER ACKNOWLEDGES AND AGREES THAT PURCHASER IS ACQUIRING THE PROPERTY ON AN AS-IS, WHERE-IS AND WITH ALL FAULTS BASIS WITHOUT REPRESENTATIONS, WARRANTIES OR COVENANTS, EXPRESS OR IMPLIED, OF ANY KIND OR NATURE, EXCEPT THOSE EXPRESSLY INDICATED IN THIS CONTRACT. PURCHASER DISCLAIMS RELIANCE UPON ALL ORAL REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, OF ANY KIND OR NATURE, EXCEPT THOSE EXPRESSLY INDICATED IN THIS CONTRACT. PURCHASER HEREBY WAIVES AND RELINQUISHES ALL RIGHTS AND PRIVILEGES ARISING OUT OF, OR WITH RESPECT OR IN RELATION TO, ANY REPRESENTATIONS, WARRANTIES OR COVENANTS, WHETHER EXPRESS OR IMPLIED, WHICH MAY HAVE BEEN MADE OR GIVEN, OR WHICH MAY HAVE BEEN DEEMED TO HAVE BEEN MADE OR GIVEN, BY THE SELLER, EXCEPT THOSE EXPRESSLY INDICATED IN THIS CONTRACT. PURCHASER HEREBY AGREES THAT SELLER SHALL NOT BE LIABLE FOR ANY SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL OR OTHER DAMAGES RESULTING OR ARISING FROM OR RELATING TO THE OWNERSHIP, USE, CONDITION, LOCATION, MAINTENANCE, REPAIR OR OPERATION OF THE PROPERTY.

SURVIVAL. IT IS AGREED AND UNDERSTOOD THAT THE TERMS AND PROVISIONS OF THIS ARTICLE IV SHALL EXPRESSLY SURVIVE THE CLOSING AND NOT MERGE THEREIN.

ARTICLE V
CLOSING

Closing Date

5.01. The Closing shall be held at the office of Austin Title Company (the "Title Company") or another title company of Purchaser's choosing, on or before February 28th, 2018 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 Special Warranty 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 a form substantially similar to that shown in Exhibit "B" attached hereto and incorporated herein.

(2) Cooperate, to the extent required, to ensure that the Title Company will 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 promulgated 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".

(3) 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;

(b) Pay the costs of Closing as required by this Contract.

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 (including the base premium and the cost of all endorsements and special elective coverages) and survey to be paid by Purchaser.

(2) Deed (including recording costs), 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; Total Agreement; Modification

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. This Contract constitutes the entire agreement among the parties pertaining to the subject matter hereof and supersedes all prior and contemporaneous agreements and understandings of the parties in connection therewith, specifically including any letter of intent negotiated by the parties in relation to the Property. No representation, warranty, covenant, agreement or condition not expressed in this Contract shall be binding upon the parties hereto or shall affect or be effective to interpret, change or restrict the provisions of this Contract. This Contract may not be modified or amended, except by an agreement in writing signed by both the Seller and the Purchaser.

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.

No Recordation

8.08. Seller and Purchaser hereby acknowledge that neither this Contract nor any memorandum or affidavit thereof shall be recorded of public record in the county where the Property is located or any other county in Texas.

Compliance

8.09. In accordance with the requirements of Section 1101.555 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.

Exhibits

8.12. The following Exhibits are attached hereto:

- Exhibit "A": Property metes and bounds legal description
- Exhibit "B": Agreed Deed Form

[signature page follows]

SELLER:

By:_____
BRIAN P. SCHOENFELD

Address: 232 Sarahs In
Liberty Hill, Texas 78642

PURCHASER:

WILLIAMSON COUNTY, TEXAS

By:_____
Dan A. Gattis
County Judge

Date:_____

Address: 710 Main Street, Suite 101
Georgetown, Texas 78626

EXHIBIT
tabbies
A

County: Williamson County
Roadway: **CR. 200**

PROPERTY DESCRIPTION
PARCEL 20

BEING A 0.063 ACRE (2,763 SQUARE FEET) TRACT OF LAND OUT OF LOT 73, CIERRA VISTA SUBDIVISION, A PLAT RECORDED IN DOCUMENT NO. 2007078025 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.) AND IN CABINET DD, SLIDE 314 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID LOT 73 BEING CONVEYED TO BRIAN P. SCHOENFIELD, AN UNMARRIED PERSON, BY DEED RECORDED IN DOCUMENT NO. 2014014094, O.P.R.W.C., AND CORRECTED TO BRIAN P. SCHOENFELD BY STATUTORY CORRECTION AFFIDAVIT RECORDED IN DOCUMENT NO. 2014047116, O.P.R.W.C., SAID 0.063 ACRES, AS SHOWN ON THE ACCOMPANYING SKETCH, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a ½" iron rod with plastic cap stamped "SURVTEX" set at the intersection of the proposed westerly right-of-way (R.O.W.) line of Williamson County Road 200 (C.R. 200) with the south line of said Lot 73, same being the north line of Lot 74 of said Cierra Vista Subdivision, and being the southwest corner hereof, from which the calculated southeast corner of said Lot 73 bears S 68°52'11" W, 295.79' and from said calculated corner, a ½" iron rod found bears N 68°52'11" E, 1.72' for reference;

1. **THENCE** N 20°29'37" W, across said Lot 73 and with the proposed westerly R.O.W. line of C.R. 200, 138.18' to a Mag nail with washer stamped "SURVTEX" set at the intersection of the proposed westerly R.O.W. line of C.R. 200 with a common line being the north line of said Lot 73 and the south line of Clark Place, a called 50.00' wide R.O.W. recorded on said Cierra Vista plat, for the northwest corner hereof;

2. **THENCE** N 68°53'33" E, with said common line, 20.00' to a calculated point on the the existing west margin of C.R. 200 (no recording information found), for the easterly termination of the southerly line of said Clark Place, same being the northeast corner of said Lot 73 and hereof, from which ½" iron rod with cap stamped "3DS" found bears S 68°53'33" W, 0.08' for reference;

3. **THENCE** S 20°29'37" E, with the existing west margin of said C.R. 200, same being the east line of said Lot 73, 138.17' to a ½" iron rod found marking the common east corner of said Lots 73 and 74 for the southeast corner hereof;

EXHIBIT A

County: Williamson County
Roadway: **CR. 200**

4. **THENCE** S 68°52'11" W, with the south line of said Lot 73, same being the north line of said Lot 74, 20.00' to the **POINT OF BEGINNING** and containing 0.063 acres (2,763 square feet) of land, more or less.

The bearings shown hereon are based: Texas State Plane, Central Zone, NAD 83 (2011). Distances are surface values, scaled using a project Surface Adjustment Factor of 1.00015. (Surface = Plane x 1.00015).

The square footage calculated and shown herein is based on a computed closure of this parcel(s) and is included for informational purposes only.

This property description is accompanied by a separate plat of even date.

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

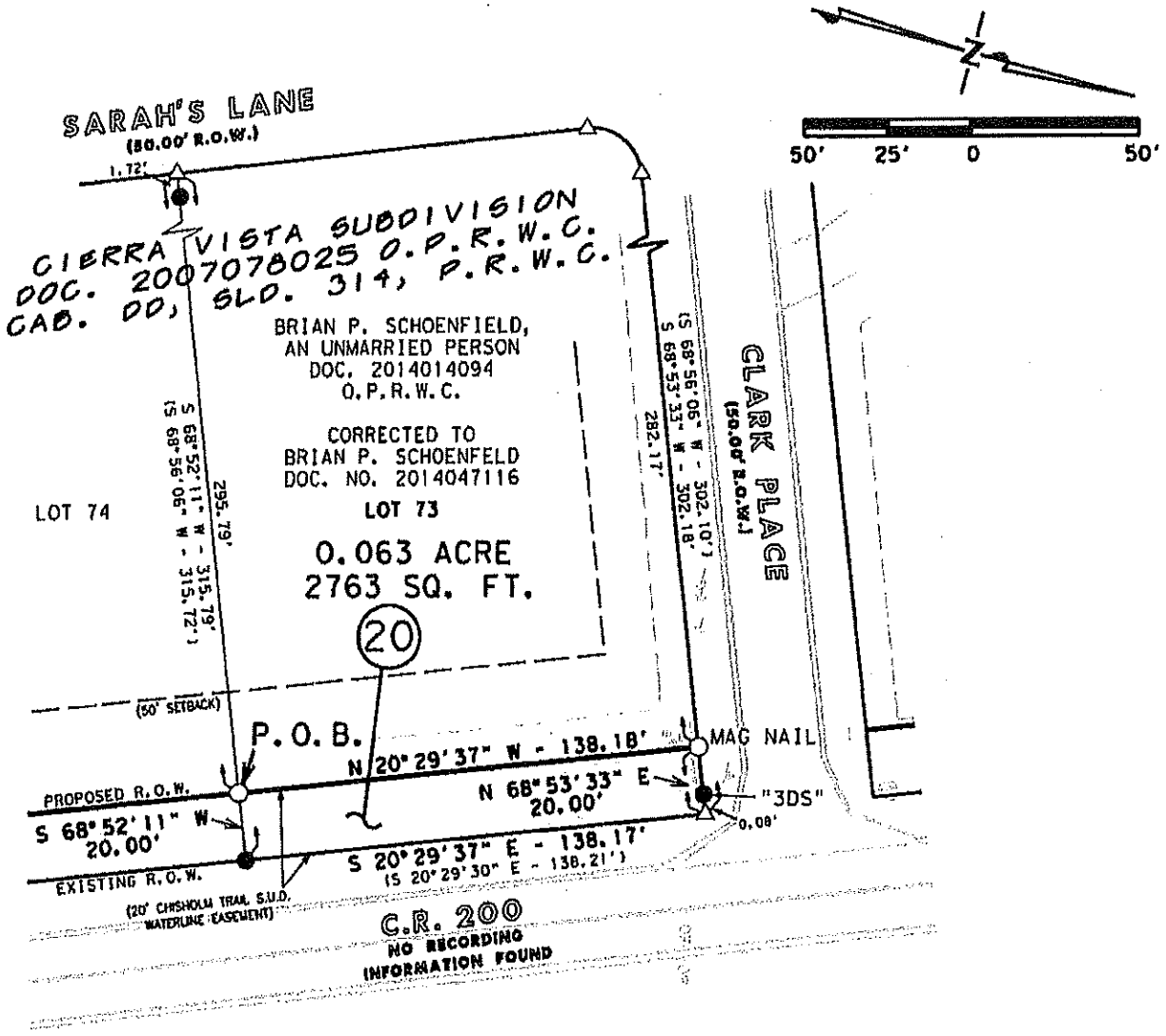
That I, Jason E. Parker, a Registered Professional Land Surveyor, do hereby state that the above description is true and correct to the best of my knowledge and belief and that the property described herein was determined by a survey made on the ground under my direction and supervision.

WITNESS MY HAND AND SEAL at Cedar Park, Williamson County, Texas this the 25th day of OCT., 2017, A.D.

STATE OF TEXAS REGISTERED JASON E. PARKER 6643 PROFESSIONAL LAND SURVEYOR

SURVTEX LLC
600 W. Whitestone Blvd
Cedar Park, Texas 78613
(512) 249-8875
TBPLS Firm #10084600

Jason Parker
Registered Professional Land Surveyor
No. 6643 – State of Texas



NOTES:

1. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT, RECORD INFORMATION ON THIS SKETCH IS BASED ON A PUBLIC RECORDS SEARCH BY THE SURVEYOR AND MAY NOT INCLUDE ALL EASEMENTS OR INSTRUMENTS PERTAINING TO THIS PROPERTY.

2. THE BEARINGS SHOWN HEREON ARE: TEXAS STATE PLANE, CENTRAL ZONE, NAD 83 (2011). DISTANCES ARE SURFACE VALUES, SCALED USING A PROJECT SURFACE ADJUSTMENT FACTOR OF 1.00015. (SURFACE = PLANE X 1.00015).

3. IMPROVEMENTS SHOWN ARE FROM ON THE GROUND MAPPING PERFORMED IN 2015.

4. THE SQUARE FOOTAGE CALCULATED AND SHOWN HEREON IS BASED ON A COMPUTED CLOSURE OF THIS PARCEL AND IS FOR INFORMATIONAL PURPOSES ONLY.

5. PROPERTY DESCRIPTION WITH SAME DATE WAS PREPARED WITH THIS PLAT.

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION, AND THIS PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

10.25.17
DATE

JASON E. PARKER
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 6643, STATE OF TEXAS

LEGEND
(UNLESS OTHERWISE NOTED)

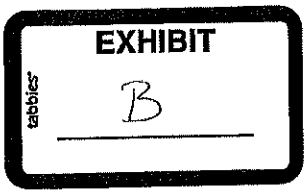
■	TxDOT TYPE 1 MONUMENT FOUND
○	1/2" IRON ROD SET WITH "SURVTEX" CAP
●	1/2" IRON ROD FOUND
△	CALCULATED POINT
( )	RECORD INFORMATION
D.R.W.C.	DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
O.R.W.C.	OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
O.P.R.W.C.	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
P.R.W.C.	PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
P.O.R.	POINT OF REFERENCE

STATE OF TEXAS
REGISTERED
JASON E. PARKER
6643
PROFESSIONAL
LAND SURVEYOR

PARCEL 20
ACRES: 0.063
HIGHWAY: C.R. 200
ROW CSJ:
COUNTY: WILLIAMSON
SCALE: 1" = 50'
SHEET 3 OF 3

FILE: P20.dgn

SURVTEX LLC
PROFESSIONAL SURVEYING AND MAPPING SERVICES
600 W. WHITESTONE BLVD.
CEDAR PARK, TEXAS 78613
PHONE: (512) 249-8875
FAX (512) 249-5040
TBPLS FIRM NO. 10084600



Parcel 20

SPECIAL WARRANTY DEED
CR 200 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 MEN BY THESE PRESENTS:

That **BRIAN P. SCHOENFELD**, 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 0.063 acre (2,763 square feet) tract of land out of Lot 73, Cierra Vista Subdivision, a Plat Recorded in Document No. 2007078025 of the Official Public Records of Williamson County, Texas (O.P.R.W.C.) and in Cabinet DD, Slide 314 of the Plat Records of Williamson County, Texas, said Lot 73 being conveyed to BRIAN P. SCHOENFIELD, by Deed Recorded in Document No. 2014014094, O.P.R.W.C. corrected to BRIAN P. SCHOENFELD by Affidavit recorded in Document No. 2016047116, O.P.R.W.C., and 0.063 acres being more fully described by metes and bounds and accompanying sketch in Exhibit "A", attached hereto and incorporated herein.

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)

DRAFT

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 200.

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, when the claim is by, through, or under Grantor, but not otherwise, except as to the Reservations from and Exceptions to Conveyance and Warranty.

This deed is being delivered in lieu of condemnation.

IN WITNESS WHEREOF, this instrument is executed on this the ____ day of _____, 2018.

GRANTOR:

By:_____
BRIAN P. SCHOENFELD

DRAFT

(Acknowledgement Next Page)

ACKNOWLEDGMENT

STATE OF TEXAS §
§
COUNTY OF _____ §

This instrument was acknowledged before me on this the ____ day of _____, 2018 by BRIAN P. SCHOENFELD, 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 [illegible]
Round Rock, Texas 78664

GRANTEE'S MAILING ADDRESS:

Williamson County, Texas
Attn: County Auditor
710 Main Street, Suite 101
Georgetown, Texas 78626

DRAFT

EXHIBIT A

County: Williamson County
Roadway: **CR. 200**

PROPERTY DESCRIPTION
PARCEL 20

BEING A 0.063 ACRE (2,763 SQUARE FEET) TRACT OF LAND OUT OF LOT 73, CIERRA VISTA SUBDIVISION, A PLAT RECORDED IN DOCUMENT NO. 2007078025 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS (O.P.R.W.C.) AND IN CABINET DD, SLIDE 314 OF THE PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID LOT 73 BEING CONVEYED TO BRIAN P. SCHOENFIELD, AN UNMARRIED PERSON, BY DEED RECORDED IN DOCUMENT NO. 2014014094, O.P.R.W.C., AND CORRECTED TO BRIAN P. SCHOENFELD BY STATUTORY CORRECTION AFFIDAVIT RECORDED IN DOCUMENT NO. 2014047116, O.P.R.W.C., SAID 0.063 ACRES, AS SHOWN ON THE ACCOMPANYING SKETCH, BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a ½" iron rod with plastic cap stamped "SURVTEX" set at the intersection of the proposed westerly right-of-way (R.O.W.) line of Williamson County Road 200 (C.R. 200) with the south line of said Lot 73, same being the north line of Lot 74 of said Cierra Vista Subdivision, and being the southwest corner hereof, from which the calculated southeast corner of said Lot 73 bears S 68°52'11" W, 295.79' and from said calculated corner, a ½" iron rod found bears N 68°52'11" E, 1.72' for reference;

1. **THENCE** N 20°29'37" W, across said Lot 73 and with the proposed westerly R.O.W. line of C.R. 200, 138.18' to a Mag nail with washer stamped "SURVTEX" set at the intersection of the proposed westerly R.O.W. line of C.R. 200 with a common line being the north line of said Lot 73 and the south line of Clark Place, a called 50.00' wide R.O.W. recorded on said Cierra Vista plat, for the northwest corner hereof;

2. **THENCE** N 68°53'33" E, with said common line, 20.00' to a calculated point on the the existing west margin of C.R. 200 (no recording information found), for the easterly termination of the southerly line of said Clark Place, same being the northeast corner of said Lot 73 and hereof, from which ½" iron rod with cap stamped "3DS" found bears S 68°53'33" W, 0.08' for reference;

3. **THENCE** S 20°29'37" E, with the existing west margin of said C.R. 200, same being the east line of said Lot 73, 138.17' to a ½" iron rod found marking the common east corner of said Lots 73 and 74 for the southeast corner hereof;

EXHIBIT A

County: Williamson County
Roadway: **CR. 200**

4. **THENCE** S 68°52'11" W, with the south line of said Lot 73, same being the north line of said Lot 74, 20.00' to the **POINT OF BEGINNING** and containing 0.063 acres (2,763 square feet) of land, more or less.

The bearings shown hereon are based: Texas State Plane, Central Zone, NAD 83 (2011). Distances are surface values, scaled using a project Surface Adjustment Factor of 1.00015. (Surface = Plane x 1.00015).

The square footage calculated and shown herein is based on a computed closure of this parcel(s) and is included for informational purposes only.

This property description is accompanied by a separate plat of even date.

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

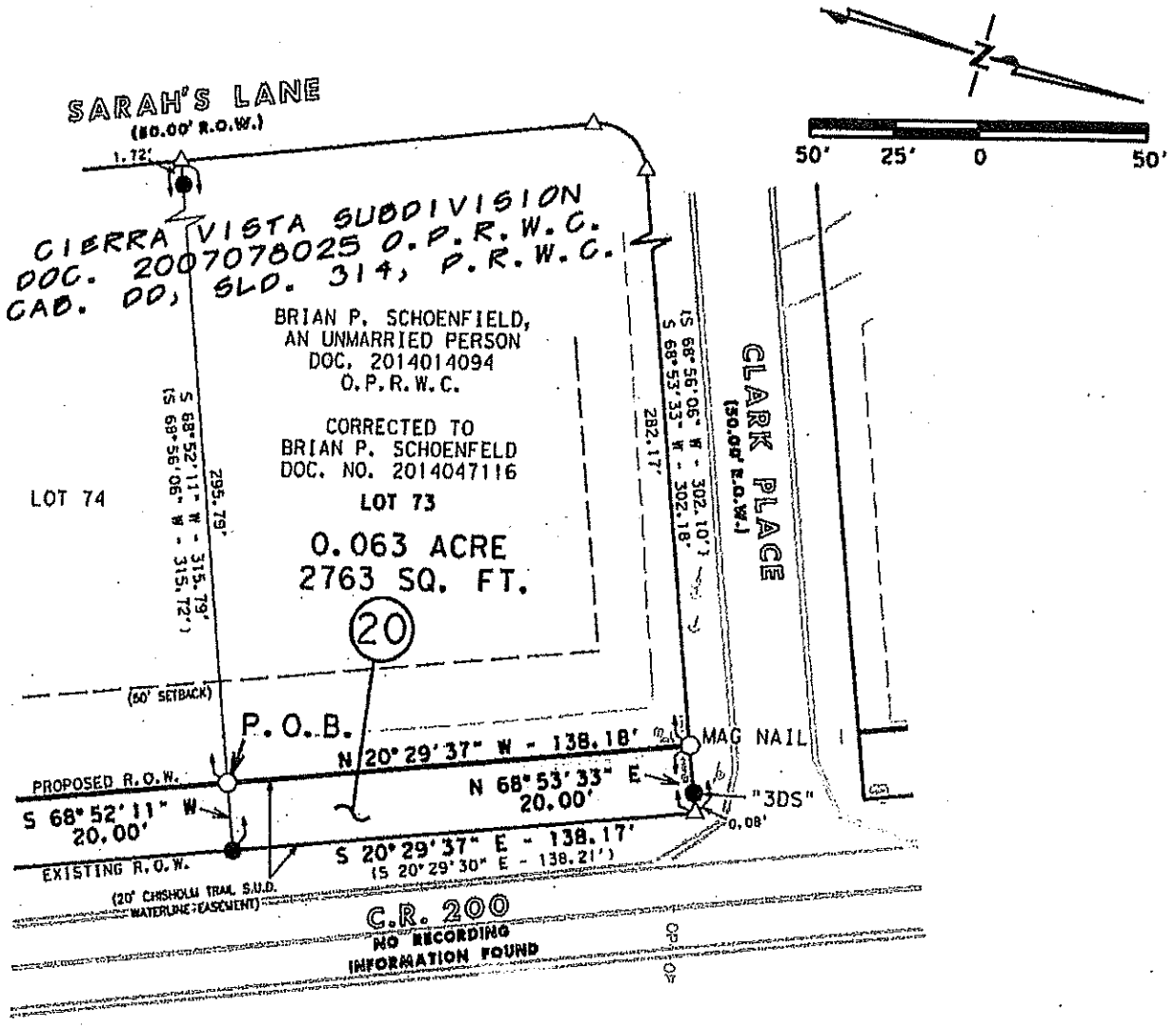
That I, Jason E. Parker, a Registered Professional Land Surveyor, do hereby state that the above description is true and correct to the best of my knowledge and belief and that the property described herein was determined by a survey made on the ground under my direction and supervision.

WITNESS MY HAND AND SEAL at Cedar Park, Williamson County, Texas this the 25th day of OCT., 2017, A.D.

STATE OF TEXAS
REGISTERED
JASON E. PARKER
6643
PROFESSIONAL
LAND SURVEYOR

SURVTEX LLC
600 W. Whitestone Blvd
Cedar Park, Texas 78613
(512) 249-8875
TBPLS Firm #10084600

Jason Parker
Registered Professional Land Surveyor
No. 6643 – State of Texas



NOTES:

1. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT. RECORD INFORMATION ON THIS SKETCH IS BASED ON A PUBLIC RECORDS SEARCH BY THE SURVEYOR AND MAY NOT INCLUDE ALL EASEMENTS OR INSTRUMENTS PERTAINING TO THIS PROPERTY.

2. THE BEARINGS SHOWN HEREON ARE: TEXAS STATE PLANE, CENTRAL ZONE, NAD 83 (2011). DISTANCES ARE SURFACE VALUES, SCALED USING A PROJECT SURFACE ADJUSTMENT FACTOR OF 1.00015. (SURFACE = PLANE X 1.00015).

3. IMPROVEMENTS SHOWN ARE FROM ON THE GROUND MAPPING PERFORMED IN 2015.

4. THE SQUARE FOOTAGE CALCULATED AND SHOWN HEREON IS BASED ON A COMPUTED CLOSURE OF THIS PARCEL AND IS FOR INFORMATIONAL PURPOSES ONLY.

5. PROPERTY DESCRIPTION WITH SAME DATE WAS PREPARED WITH THIS PLAT.

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION, AND THIS PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

10.25.17
DATE

JASON E. PARKER
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 6643, STATE OF TEXAS

LEGEND
(UNLESS OTHERWISE NOTED)

■	TxDOT TYPE I MONUMENT FOUND
O	1/2" IRON ROD SET WITH "SURVTEX" CAP
●	1/2" IRON ROD FOUND
△	CALCULATED POINT
( )	RECORD INFORMATION
D.R.W.C.	DEED RECORDS OF WILLIAMSON COUNTY, TEXAS
O.R.W.C.	OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS
O.P.R.W.C.	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
P.R.W.C.	PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
P.O.R.	POINT OF REFERENCE

STATE OF TEXAS
REGISTERED
JASON E. PARKER
6643
PROFESSIONAL
LAND SURVEYOR

PARCEL 20
ACRES: 0.063
HIGHWAY: C.R. 200
ROW CSJ:
COUNTY: WILLIAMSON
SCALE: 1" = 50'
SHEET 3 OF 3

FILE: P20.dgn

SURVTEX LLC
PROFESSIONAL SURVEYING AND MAPPING SERVICES
600 W. WHITESTONE BLVD.
CEDAR PARK, TEXAS 78613
PHONE: (512) 249-8875
FAX (512) 249-5040
TBPLS FIRM NO. 10084600

Commissioners Court - Regular Session **27.**

Meeting Date: 02/20/2018

Interlocal Agreement

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 an Interlocal Agreement Regarding Improvement of County Road 174 with the City of Round Rock.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Hairy Man ILA

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 08:32 AM
Charlie Crossfield (Originator)	Charlie Crossfield	02/15/2018 08:33 AM
Form Started By: Charlie Crossfield		Started On: 02/15/2018 08:23 AM
Final Approval Date: 02/15/2018		

INTERLOCAL AGREEMENT REGARDING IMPROVEMENT OF COUNTY ROAD 174

THE STATE OF TEXAS §
§ KNOW ALL BY THESE PRESENTS:
COUNTY OF WILLIAMSON §

THIS INTERLOCAL AGREEMENT REGARDING THE IMPROVEMENT OF COUNTY ROAD 174 ("**Agreement**") is entered into between the City of Round Rock, a political subdivision of the State of Texas ("**City**") and Williamson County, a political subdivision of the State of Texas (the "**County**"). In this Agreement, the City and the County are sometimes individually referred to as "**a Party**" and collectively referred to as "**the Parties**".

WHEREAS, V.T.C.A., Government Code, Chapter 791, cited as the Texas Interlocal Cooperation Act, provides that any one or more local governments may contract with each other for the performance of governmental functions or services for the promotion and protection of the health and welfare of the inhabitants of this State and the mutual benefit of the parties; and

WHEREAS, the County plans to improve County Road 174, also known as Hairy Man Road, from Walsh Drive to Sam Bass Road (the "County Project"); and

WHEREAS, the City is considering annexing certain property abutting CR 174 / Hairy Man Road; and

WHEREAS, the City desires the County to complete the County Project after annexation; and

NOW, THEREFORE, in consideration of the foregoing premises and the mutual promises and agreements of the Parties contained in this Agreement, the Parties agree as follows:

I.
PROJECT

1.01 General. The purpose of this Agreement is to provide for the County's improvement of CR 174 / Hairy Man Road before annexation by the City.

1.02 County Project. The County Project shall include widening of Hairy Man Road from Walsh Drive to Sam Bass Road to provide for two 11.5- foot lanes and 2- foot shoulders on each side. Additionally, the improvements will include raised profile markings along the center line and shoulders. The County will complete the County Project by December 31, 2019.

1.03 Annexation and Maintenance. The City agrees to annex that portion of Hairy Man Road as shown on Exhibit "A" prior to completion of the County Project and assume operations and maintenance of that portion after the County has completed the County Project.

II.
GENERAL PROVISIONS

2.01 Authority. This Agreement is made in part under the authority conferred in Chapter 791, *Texas Government Code.*

2.02 Severability. The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement will not be affected and this Agreement will be construed as if the invalid portion had never been contained herein.

2.03 Payments from Current Revenues. Any payments required to be made by a Party under this Agreement will be paid from current revenues or other funds lawfully available to the Party for such purpose.

2.04 Cooperation. The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

2.05 Entire Agreement. This Agreement contains the entire agreement of the Parties regarding the subject matter hereof and supersedes all prior or contemporaneous understandings or representations, whether oral or written, regarding the subject matter and only relates to those portions of the County Project shown in the Project Plans.

2.06 Amendments. Any amendment of this Agreement must be in writing and will be effective if signed by the authorized representatives of the Parties.

2.07 Applicable Law; Venue. This Agreement will be construed in accordance with Texas law. Venue for any action arising hereunder will be in Williamson County, Texas.

2.08 Notices. Any notices given under this Agreement will be effective if (i) forwarded to a Party by hand-delivery; (ii) transmitted to a Party by confirmed telecopy; or (iii) deposited with the U.S. Postal Service, postage prepaid, certified, to the address of the Party indicated below:

CITY:
City Manager
Attn: Laurie Hadley
221 E. Main Street
Round Rock, Texas 78664

COUNTY:
Williamson County
710 Main Street, Suite 101
Georgetown, Texas 78626
Attn: Judge Dan Gattis

2.09 Counterparts; Effect of Partial Execution. This Agreement may be executed simultaneously in multiple counterparts, each of which will be deemed an original, but all of which will constitute the same instrument.

2.10 Authority. Each Party represents and warrants that it has the full right, power and authority to execute this Agreement.

(SIGNATURES ON FOLLOWING PAGE)

ATTEST:

_____
Sara White, City Clerk

CITY OF ROUND ROCK, TEXAS:

By:_____
Craig Morgan, Mayor

Date: _____

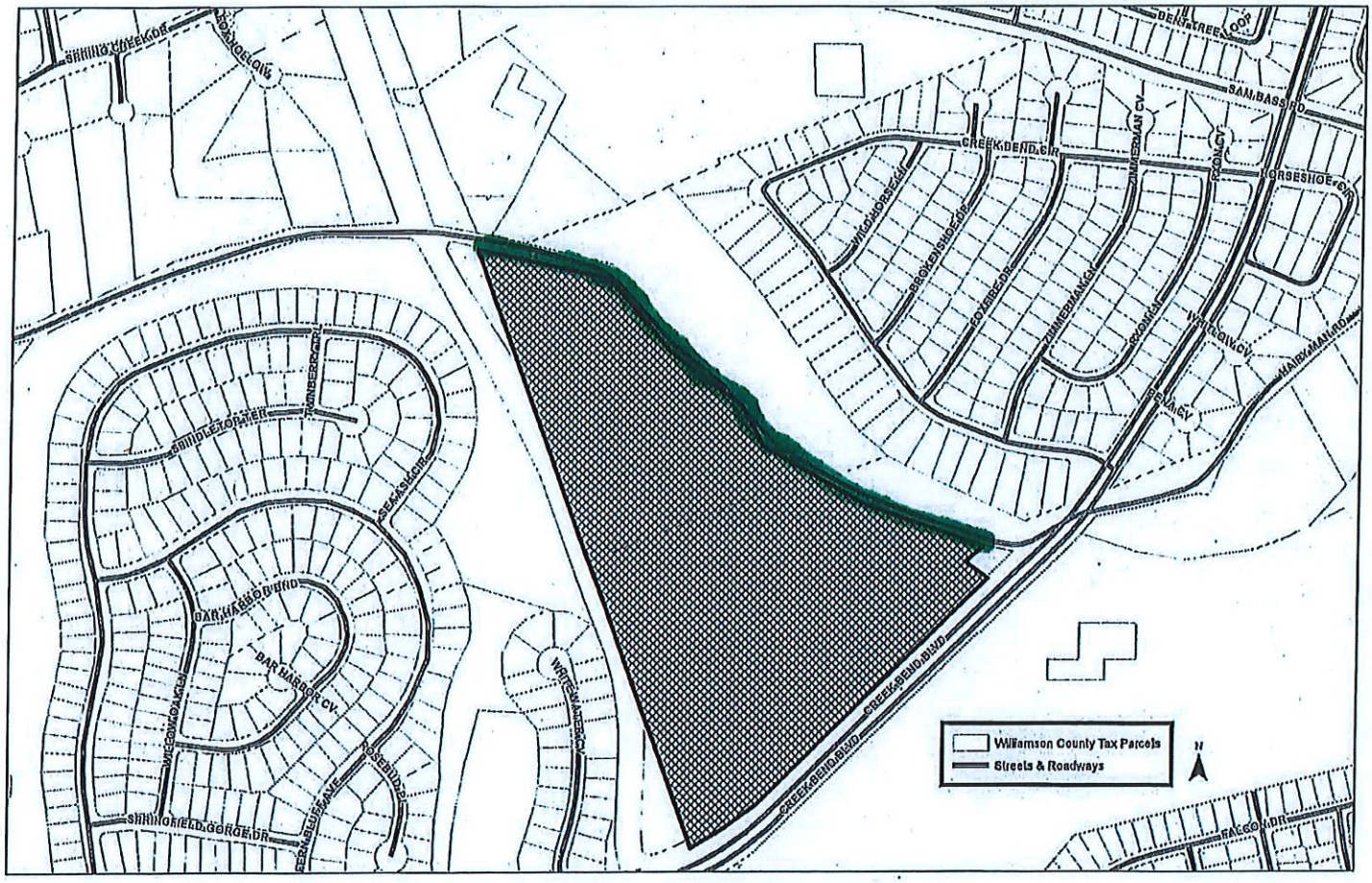
ATTEST:

_____
Nancy Rister, County Clerk

WILLIAMSON COUNTY:

By:_____
Dan Gattis, County Judge

Date: _____


SHIMMERING CREEK DR
SAM BASS RD
CREEK BEND CIR
CREEK BEND BLVD
SHIMMERMIST DR
SHIMMERGLEN DR
SHIMMERMIST CV
SHIMMERGLEN CV
SHIMMERMIST CV
SHIMMERGLEN CV
HAIRY MAN RD
SHIMMERGLEN DR
SHIMMERMIST DR
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Commissioners Court - Regular Session **28.**

Meeting Date: 02/20/2018

County Burn Ban

Submitted For: Jarred Thomas **Submitted By:** Jarred Thomas, Emergency Management

Department: Emergency Management

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on the issuance of a county-wide burn ban for a period not to exceed 90 days and to authorize the County Judge to lift the ban when conditions approve.

Background

Williamson County continues to experience conditions that are favorable to the rapid spread of wildfire.

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	02/15/2018 10:53 AM
Form Started By: Jarred Thomas		Started On: 02/15/2018 10:10 AM
Final Approval Date: 02/15/2018		

Commissioners Court - Regular Session **29.**

Meeting Date: 02/20/2018

Investment Report for 1st Qtr FY 2018

Submitted For: David Heselmeyer **Submitted By:** David Heselmeyer, County Treasurer

Department: County Treasurer

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take action on approving the Investment Reports for the Quarter ending December 31, 2017 which was approved by the Investment Committee on January 29, 2018.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Investment Report 1-18

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM

Form Started By: David Heselmeyer Started On: 02/14/2018 10:43 AM

Final Approval Date: 02/14/2018

FirstSouthwest
AssetManagement
A Hilltop Holdings Company.

Investment Portfolio Summary

Williamson County

WILLIAMSON COUNTY
1848

For the Quarter Ended

December 31, 2017

Prepared by
FirstSouthwest Asset Management

FirstSouthwest AssetManagement
A Hilltop Holdings Company.

Table of Contents / Market Recap

Report Name

Certification Page

Executive Summary

Benchmark Comparison

Detail of Security Holdings

Change in Value

Earned Income

Investment Transactions

Amortization and Accretion

Projected Fixed Income Cash Flows

MARKET RECAP - DECEMBER 2017:

Tax reform dominated the headlines through much of December, and just before Christmas, Congress passed and President Trump signed into law the "Tax Cuts and Jobs Act." The package includes a number of reforms and tax cuts, including a reduction in the corporate tax rate, fewer individual tax brackets, a higher standard deduction and the elimination of the state and local tax deduction. The tax plan is generally expected to provide a boost to economic growth in the near-term. Tax reform helped stock markets extend their 14-month post-election rally with the DOW, S&P 500 and NASDAQ all reaching historical highs in late December. As expected, Fed officials raised the overnight funds rate by another 25 basis points in mid-December. The third hike this year, and the fifth in the current tightening cycle, boosted the fed funds target to a range of 1.25% to 1.50%. The so-called "dot plot," which represents the future rate expectations of committee members, was little changed from the September meeting. The median overnight rate expectation at the end of 2018 is 2.1%, indicating three hikes in 2018, and 2.7% for the end of in 2019, indicating two more. Bond yields followed suit as the two-year Treasury-note crested above the 1.90% mark on December 26th for the first time since September 2008, while the 12-month Treasury-bill yield topped 1.70%, a nine-year high.

December's slate of economic data largely supported the increase in interest rates. Nonfarm payrolls rose by +228k in November, topping the median Bloomberg forecast for +195k. Through the first 11 months of 2017, U.S. companies have added an average of +174k new jobs per month, a moderation from +187k in 2016 and +226k in 2015. The unemployment rate held steady at 4.1% in November while wage inflation remained subdued with average hourly earnings rising just +0.2%. Year-over-year earnings growth fell short of the +2.7% median forecast at +2.5%. For comparison sake, at the end of 2016 hourly earnings were rising at a quicker +2.9% pace. The ISM manufacturing index slipped from 58.7 to 58.2 in November, while the ISM non-manufacturing index fell from October's lofty 60.1 to 57.4. Both remain at very high levels. November retail sales were much better than expected with headline sales gaining +0.8, well above the +0.3% median forecast. Core retail sales, which exclude auto, gasoline and building materials also climbed +0.8%, the seventh best month in the last five years. Turning to inflation data, the headline Producer Price Index (PPI) rose by +0.4% in November and on a year-over-year basis, PPI jumped from +2.8% to +3.1%, the quickest pace in nearly six years. The Consumer Price Index (CPI) also rose +0.4% in November, thanks mainly to a +7.3% jump in gas prices, but core CPI gained just +0.1%. The year-over-year headline CPI climbed from +2.0% to +2.2%, while the core CPI annual pace fell from +1.8% to +1.7%. Core PCE, the Fed's preferred inflation measure, crept higher for the fourth straight month, although the +1.5% November pace is still well below the Fed's +2.0% target. The final revision to third quarter GDP took the annualized quarterly growth rate down a notch from +3.3% to +3.2%, still a fine quarter. Optimism abounds heading into 2018 with the passage of tax reform a tail wind behind low unemployment and record high stock markets.

For the Quarter Ended
December 31, 2017

This report is prepared for the **Williamson County** (the "Entity") in accordance with Chapter 2256 of the Texas Public Funds Investment Act ("PFIA"). Section 2256.023(a) of the PFIA states that: "Not less than quarterly, the investment officer shall prepare and submit to the governing body of the entity a written report of the investment transactions for all funds covered by this chapter for the preceding reporting period." This report is signed by the Entity's investment officers and includes the disclosures required in the PFIA. To the extent possible, market prices have been obtained from independent pricing sources.

The investment portfolio complied with the PFIA and the Entity's approved Investment Policy and Strategy throughout the period. All investment transactions made in the portfolio during this period were made on behalf of the Entity and were made in full compliance with the PFIA and the approved Investment Policy.

Officer Names and Titles:

Name: D. Scott Heselmeyer Title: County Treasurer

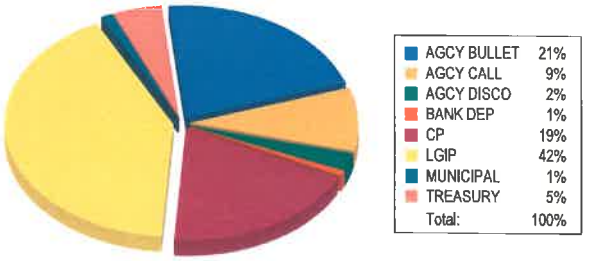
FirstSouthwest AssetManagement
A Hilltop Holdings Company.

Williamson County
Executive Summary
As of 12/31/17

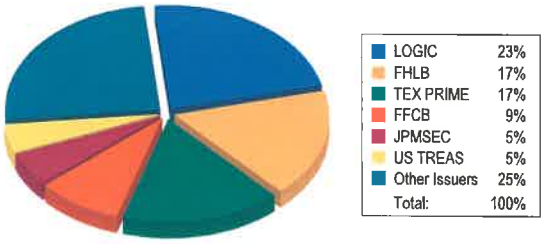
Account Summary

	Beginning Values as of 09/30/17	Ending Values as of 12/31/17
Par Value	420,633,971.66	578,201,370.19
Market Value	420,189,303.17	576,988,297.50
Book Value	420,429,888.38	577,524,813.60
Unrealized Gain /(Loss)	(240,585.21)	(536,516.10)
Market Value %	**99.94%**	**99.91%**
Weighted Avg. YTW	1.199%	1.385%
Weighted Avg. YTM	1.199%	1.385%

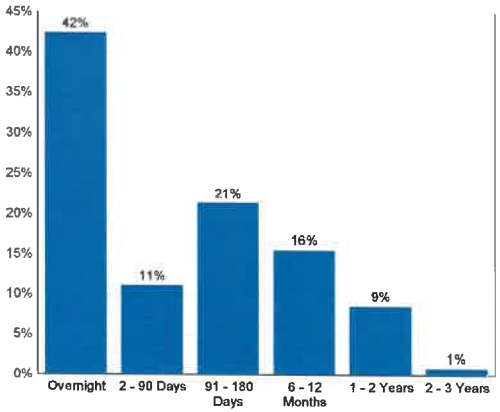
Allocation by Security Type



Allocation by Issuer

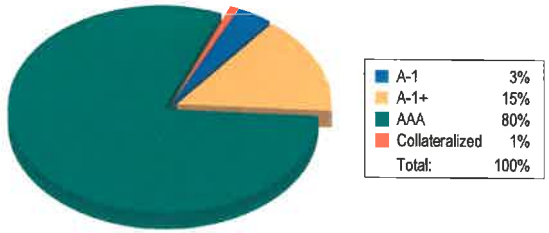


Maturity Distribution %



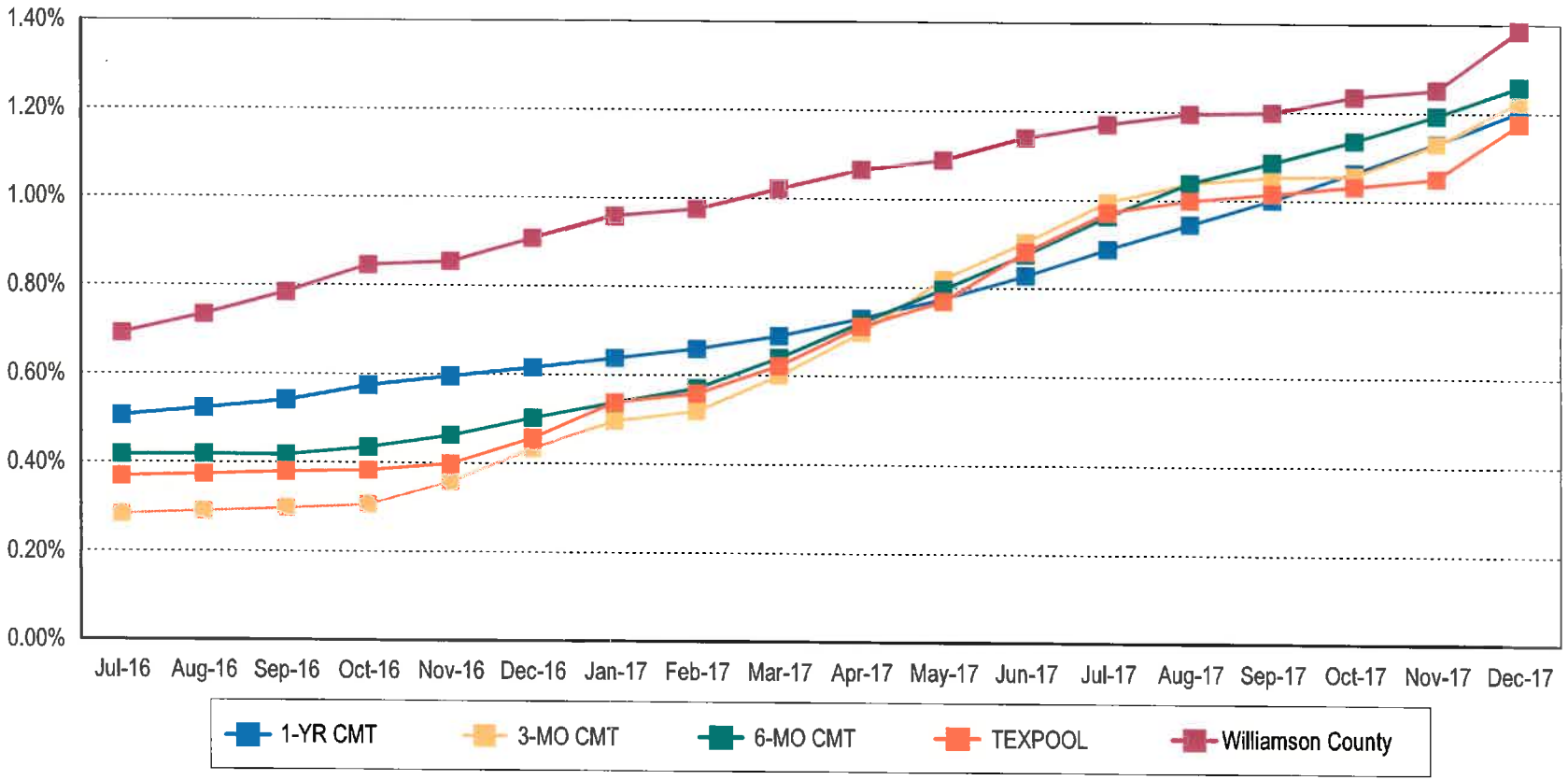
Weighted Average Days to Maturity: 127

Credit Quality



FirstSouthwest
AssetManagement
A Hilltop Holdings Company

Williamson County
Benchmark Comparison
As of 12/31/2017



Note 1: CMT stands for Constant Maturity Treasury. This data is published in Federal Reserve Statistical Release H.15 and represents an average of all actively traded Treasury securities having that time remaining until maturity. This is a standard industry benchmark for Treasury securities. The CMT benchmarks are moving averages. The 3-month CMT is the daily average for the previous 3 months, the 6-month CMT is the daily average for the previous 6 months, and the 1-year and 2-year CMT's are the daily averages for the previous 12-months.

Note 2: Benchmark data for TexPool is the monthly average yield.

CUSIP	Settle Date	Sec. Type	Sec. Description	CPN	Mty Date	Next Call	Call Type	Par Value	Purch Price	Orig Cost	Book Value	Mkt Price	Market Value	Days to Mty	Days to Call	YTM	YTW
2013 Park Bond																	
LOGIC		LGIP	LOGIC					16,605,557.58	100.000	16,605,557.58	16,605,557.58	100.000	16,605,557.58	1		1.378	1.378
46640QC25	06/09/17	CP - DISC	J.P.Morgan Sec		03/02/18			5,000,000.00	98.958	4,947,908.33	4,988,250.00	99.727	4,986,360.00	61		1.425	1.425
48306BE35	11/15/17	CP - DISC	Kaiser Foundation Hospital		05/03/18			5,000,000.00	99.305	4,965,261.11	4,974,922.20	99.409	4,970,445.00	123		1.490	1.490
Total for 2013 Park Bond								**26,605,557.58**	**99.674**	**26,518,727.02**	**26,568,729.78**	**99.838**	**26,562,362.58**	**35**		**1.408**	**1.408**
2013 Road Bond																	
LOGIC		LGIP	LOGIC					42,400,602.62	100.000	42,400,602.62	42,400,602.62	100.000	42,400,602.62	1		1.378	1.378
89233HA46	04/11/17	CP - DISC	Toyota Mtr Cr		01/04/18			8,000,000.00	99.002	7,920,195.56	7,999,106.64	99.984	7,998,736.00	4		1.354	1.354
912828UR9	03/09/17	TREAS NOTE	U.S. Treasury	0.750	02/28/18			6,000,000.00	99.652	5,979,140.63	5,996,565.60	99.904	5,994,264.00	59		1.109	1.109
46640QC58	06/12/17	CP - DISC	J.P.Morgan Sec		03/05/18			5,000,000.00	98.958	4,947,908.33	4,987,662.50	99.707	4,985,335.00	64		1.425	1.425
79583TC86	12/07/17	CP - DISC	Salvation Army		03/08/18			2,200,000.00	99.626	2,191,769.56	2,194,030.67	99.702	2,193,448.40	67		1.486	1.486
46640QCL3	06/26/17	CP - DISC	J.P.Morgan Sec		03/20/18			5,000,000.00	98.895	4,944,745.83	4,983,858.35	99.647	4,982,335.00	79		1.507	1.507
3133EG3A1	01/31/17	AGCY BULET	FFCB	1.040	04/04/18			9,000,000.00	100.058	9,005,256.00	9,001,156.32	99.901	8,991,090.00	94		0.990	0.990
92181PD90	09/01/17	CP - DISC	Vanderbilt Univ		04/09/18			7,000,000.00	99.132	6,939,255.56	6,972,941.08	99.533	6,967,275.00	99		1.432	1.432
912828QG8	04/27/17	TREAS NOTE	U.S. Treasury	2.625	04/30/18			7,000,000.00	101.504	7,105,273.44	7,034,420.89	100.390	7,027,307.00	120		1.121	1.121
36164KEE7	08/22/17	CP - DISC	GE Capital Treasury		05/14/18			4,000,000.00	98.969	3,958,777.78	3,979,311.12	99.356	3,974,244.00	134		1.415	1.415
46640QEV9	09/01/17	CP - DISC	J.P.Morgan Sec		05/29/18			5,000,000.00	98.845	4,942,250.00	4,968,344.45	99.243	4,962,130.00	149		1.558	1.558
313379DT3	02/13/17	AGCY BULET	FHLB	1.250	06/08/18			9,000,000.00	100.300	9,027,000.00	9,008,972.37	99.857	8,987,121.00	159		1.020	1.020
46640QGL9	10/26/17	CP - DISC	J.P.Morgan Sec		07/20/18			2,000,000.00	98.754	1,975,080.00	1,981,333.34	98.922	1,978,448.00	201		1.701	1.701
912828QY9	07/07/17	TREAS NOTE	U.S. Treasury	2.250	07/31/18			5,000,000.00	101.000	5,050,000.00	5,027,355.15	100.371	5,018,535.00	212		1.302	1.302
46640QHX2	12/08/17	CP - DISC	J.P.Morgan Sec		08/31/18			4,700,000.00	98.633	4,635,753.61	4,641,550.28	98.698	4,638,806.00	243		1.876	1.876
3130ACYC2	12/08/17	AGCY BULET	FHLB	1.625	12/04/18			20,000,000.00	99.910	19,982,000.00	19,983,159.00	99.766	19,953,280.00	338		1.717	1.717
3133EHP23	12/08/17	AGCY BULET	FFCB	1.500	02/06/19			5,000,000.00	99.716	4,985,800.00	4,986,568.80	99.594	4,979,675.00	402		1.748	1.748
3133782M2	12/08/17	AGCY BULET	FHLB	1.500	03/08/19			6,000,000.00	99.675	5,980,500.00	5,981,498.04	99.486	5,969,190.00	432		1.763	1.763
3133782M2	12/18/17	AGCY BULET	FHLB	1.500	03/08/19			2,845,000.00	99.621	2,834,217.45	2,834,536.32	99.486	2,830,390.93	432		1.814	1.814
3133782M2	12/18/17	AGCY BULET	FHLB	1.500	03/08/19			7,155,000.00	99.621	7,127,882.55	7,128,684.48	99.486	7,118,259.08	432		1.814	1.814
3130ABKQ8	12/18/17	AGCY CALL	FHLB	1.500	06/28/19	3/28/2018	QRTLY	19,675,000.00	99.427	19,562,262.25	19,564,928.21	99.362	19,549,394.80	544	87	1.882	1.882
Total for 2013 Road Bond								**181,975,602.62**	**99.738**	**181,495,671.17**	**181,656,586.23**	**99.740**	**181,499,866.83**	**194**		**1.488**	**1.488**

CUSIP	Settle Date	Sec. Type	Sec. Description	CPN	Mty Date	Next Call	Call Type	Par Value	Purch Price	Orig Cost	Book Value	Mkt Price	Market Value	Days to Mty	Days to Call	YTM	YTW
2015 CO Bonds																	
LOGIC		LGIP	LOGIC					29,997,487.47	100.000	29,997,487.47	29,997,487.47	100.000	29,997,487.47	1		1.378	1.378
3133EG3A1	01/31/17	AGCY BULET	FFCB	1.040	04/04/18			6,000,000.00	100.058	6,003,504.00	6,000,770.88	99.901	5,994,060.00	94		0.990	0.990
3135G0WJ8	06/12/17	AGCY BULET	FNMA	0.875	05/21/18			3,000,000.00	99.668	2,990,040.00	2,995,877.31	99.738	2,992,125.00	141		1.231	1.231
Total for 2015 CO Bonds								**38,997,487.47**	**99.983**	**38,991,031.47**	**38,994,135.66**	**99.965**	**38,983,672.47**	**26**		**1.307**	**1.307**
Conservation Fund																	
TEXPRIME		LGIP	TexPool Prime					902,148.32	100.000	902,148.32	902,148.32	100.000	902,148.32	1		1.392	1.392
46640QB67	08/04/17	CP - DISC	J.P.Morgan Sec		02/06/18			1,000,000.00	99.261	992,611.67	998,570.00	99.842	998,417.00	37		1.441	1.441
3130A8PK3	02/06/17	AGCY BULET	FHLB	0.625	08/07/18			1,500,000.00	99.325	1,489,875.00	1,495,939.32	99.382	1,490,731.50	219		1.079	1.079
Total for Conservation Fund								**3,402,148.32**	**99.486**	**3,384,634.99**	**3,396,657.64**	**99.681**	**3,391,296.82**	**108**		**1.268**	**1.268**
County Benefits Program																	
TEXPRIME		LGIP	TexPool Prime					3,239,589.28	100.000	3,239,589.28	3,239,589.28	100.000	3,239,589.28	1		1.392	1.392
Total for County Benefits Program								**3,239,589.28**	**100.000**	**3,239,589.28**	**3,239,589.28**	**100.000**	**3,239,589.28**	**1**		**1.392**	**1.392**
Debt Service Fund																	
TEXPRIME		LGIP	TexPool Prime					57,269,233.22	100.000	57,269,233.22	57,269,233.22	100.000	57,269,233.22	1		1.392	1.392
Total for Debt Service Fund								**57,269,233.22**	**100.000**	**57,269,233.22**	**57,269,233.22**	**100.000**	**57,269,233.22**	**1**		**1.392**	**1.392**
Future Environmental Liability																	
TEXPRIME		LGIP	TexPool Prime					4,037.81	100.000	4,037.81	4,037.81	100.000	4,037.81	1		1.392	1.392
912828WD8	12/01/17	TREAS NOTE	U.S. Treasury	1.250	10/31/18			1,525,000.00	99.648	1,519,638.67	1,520,139.37	99.600	1,518,893.90	304		1.639	1.639
Total for Future Environmental Liability								**1,529,037.81**	**99.649**	**1,523,676.48**	**1,524,177.18**	**99.601**	**1,522,931.71**	**303**		**1.638**	**1.638**

CUSIP	Settle Date	Sec. Type	Sec. Description	CPN	Mty Date	Next Call	Call Type	Par Value	Purch Price	Orig Cost	Book Value	Mkt Price	Market Value	Days to Mty	Days to Call	YTM	YTW
General Fund																	
LOGIC		LGIP	LOGIC					33,997,660.98	100.000	33,997,660.98	33,997,660.98	100.000	33,997,660.98	1		1.378	1.378
TEXPOOL		LGIP	TexPool					1,810.43	100.000	1,810.43	1,810.43	100.000	1,810.43	1		1.176	1.176
TEXPRIME		LGIP	TexPool Prime					9,314,848.83	100.000	9,314,848.83	9,314,848.83	100.000	9,314,848.83	1		1.392	1.392
WF-CASH		BANK DEP	Wells Fargo					5,486,774.04	100.000	5,486,774.04	5,486,774.04	100.000	5,486,774.04	1		0.000	0.000
89233HBD5	12/15/17	CP - DISC	Toyota Mtr Cr		02/13/18			7,000,000.00	99.755	6,982,850.00	6,987,709.19	99.812	6,986,826.00	44		1.474	1.474
313378A43	10/29/15	AGCY BULET	FHLB	1.375	03/09/18			5,000,000.00	101.332	5,066,617.00	5,005,370.35	100.007	5,000,360.00	68		0.804	0.804
79584KCN1	12/20/17	CP - DISC	Salvation Army		03/22/18			7,000,000.00	99.586	6,971,020.00	6,974,800.00	99.640	6,974,800.00	81		1.627	1.627
3134G7M73	09/30/15	AGCY CALL	FHLMC	1.000	03/30/18	Expired	QRTLY	5,000,000.00	100.000	5,000,000.00	5,000,000.00	99.897	4,994,830.00	89		1.000	1.000
8827234A4	11/02/16	MUNICIPAL	TX Trans Comm Hwy Impt GO	5.000	04/01/18			2,000,000.00	105.775	2,115,500.00	2,020,501.76	100.888	2,017,760.00	91		0.882	0.882
4497W1DP8	12/20/17	CP - DISC	ING Funding		04/23/18			7,000,000.00	99.428	6,959,975.56	6,963,848.92	99.480	6,963,621.00	113		1.670	1.670
48306BE35	11/15/17	CP - DISC	Kaiser Foundation Hospital		05/03/18			7,000,000.00	99.305	6,951,365.56	6,964,891.08	99.409	6,958,623.00	123		1.490	1.490
3134G9JD0	05/17/16	AGCY CALL	FHLMC	1.000	05/11/18	2/11/2018	QRTLY	5,000,000.00	100.000	5,000,000.00	5,000,000.00	99.813	4,990,635.00	131	42	1.000	1.000
74081KEB4	12/20/17	CP - DISC	Harvard Univ		05/11/18			7,000,000.00	99.345	6,954,165.56	6,958,038.92	99.370	6,955,935.00	131		1.671	1.671
89233HF41	12/20/17	CP - DISC	Toyota Mtr Cr		06/04/18			7,000,000.00	99.225	6,945,773.33	6,949,693.31	99.264	6,948,501.00	155		1.693	1.693
313379DT3	06/16/17	AGCY BULET	FHLB	1.250	06/08/18			7,000,000.00	99.977	6,998,390.00	6,999,282.36	99.857	6,989,983.00	159		1.274	1.274
46640QFV8	10/03/17	CP - DISC	J.P.Morgan Sec		06/29/18			3,000,000.00	98.790	2,963,685.00	2,975,835.00	99.104	2,973,126.00	180		1.640	1.640
742651DS8	06/28/17	AGCY BULET	PEFCO	1.875	07/15/18			1,800,000.00	100.569	1,810,236.60	1,805,286.64	100.092	1,801,661.40	196		1.326	1.326
912828K82	12/20/17	TREAS NOTE	U.S. Treasury	1.000	08/15/18			7,000,000.00	99.605	6,972,382.81	6,973,757.28	99.601	6,972,070.00	227		1.607	1.607
36164KJA0	12/20/17	CP - DISC	GE Capital Treasury		09/10/18			7,000,000.00	98.665	6,906,573.33	6,910,820.00	98.700	6,908,993.00	253		1.845	1.845
3134G9NM5	06/28/16	AGCY CALL	FHLMC	1.150	09/28/18	3/28/2018	QRTLY	5,500,000.00	100.000	5,500,000.00	5,500,000.00	99.499	5,472,461.50	271	87	1.150	1.150
23542JBD6	07/07/16	MUNICIPAL	Dallas Wtrwks & Swr	0.985	10/01/18			5,000,000.00	100.000	5,000,000.00	5,000,000.00	99.372	4,968,600.00	274		0.985	0.985
3133EFLY1	10/29/15	AGCY BULET	FFCB	0.930	10/29/18			5,000,000.00	99.874	4,993,680.00	4,998,238.30	99.333	4,966,665.00	302		0.973	0.973
3136G1KL2	05/25/17	AGCY CALL	FNMA	1.150	10/30/18	1/30/2018	QRTLY	7,000,000.00	99.750	6,982,500.00	6,989,813.32	99.474	6,963,201.00	303	30	1.327	1.327
742651DG4	02/17/17	AGCY BULET	PEFCO	4.375	03/15/19			2,000,000.00	106.019	2,120,380.00	2,070,265.20	102.864	2,057,280.00	439		1.424	1.424
3133EGZK4	10/31/16	AGCY CALL	FFCB	1.070	04/24/19	Anytime	CONT	7,000,000.00	99.841	6,988,870.00	6,994,069.39	98.808	6,916,539.00	479	5	1.135	1.135
3135G0T86	11/09/17	AGCY CALL	FNMA	1.950	11/09/20	2/9/2018	QRTLY	5,000,000.00	99.930	4,996,500.00	4,996,664.40	99.644	4,982,210.00	1,044	40	1.974	1.974
Total for General Fund								170,101,094.28	99.935	169,981,559.03	169,839,979.70	99.688	169,565,775.18	162		1.348	1.348

CUSIP	Settle Date	Sec. Type	Sec. Description	CPN	Mty Date	Next Call	Call Type	Par Value	Purch Price	Orig Cost	Book Value	Mkt Price	Market Value	Days to Mty	Days to Call	YTM	YTW
Northwoods Rd Debt Service Fund																	
LOGIC		LGIP	LOGIC					393,483.12	100.000	393,483.12	393,483.12	100.000	393,483.12	1		1.378	1.378
Total for Northwoods Rd Debt Service Fund								393,483.12	100.000	393,483.12	393,483.12	100.000	393,483.12	1		1.378	1.378
Northwoods Rd Operating Fund																	
LOGIC		LGIP	LOGIC					3,828,617.05	100.000	3,828,617.05	3,828,617.05	100.000	3,828,617.05	1		1.378	1.378
Total for Northwoods Rd Operating Fund								3,828,617.05	100.000	3,828,617.05	3,828,617.05	100.000	3,828,617.05	1		1.378	1.378
Pass Toll Series 2009																	
TEXPRIME		LGIP	TexPool Prime					406,045.23	100.000	406,045.23	406,045.23	100.000	406,045.23	1		1.392	1.392
Total for Pass Toll Series 2009								406,045.23	100.000	406,045.23	406,045.23	100.000	406,045.23	1		1.392	1.392
Passthrough Toll Reimb																	
LOGIC		LGIP	LOGIC					3,642,082.94	100.000	3,642,082.94	3,642,082.94	100.000	3,642,082.94	1		1.378	1.378
313313VJ4	06/09/17	AGCY DISCO	FFCB		04/10/18			8,000,000.00	98.983	7,918,666.67	7,973,600.00	99.622	7,969,728.00	100		1.212	1.212
3133EF3B1	04/27/17	AGCY BULET	FFCB	0.750	04/18/18			6,155,000.00	99.639	6,132,780.45	6,148,209.43	99.782	6,141,594.41	108		1.123	1.123
3130A4GJ5	05/04/17	AGCY BULET	FHLB	1.125	04/25/18			4,800,000.00	99.963	4,798,224.00	4,799,422.80	99.893	4,794,878.40	115		1.163	1.163
3130A9AE1	09/08/17	AGCY BULET	FHLB	0.875	10/01/18			8,615,000.00	99.571	8,578,041.65	8,588,916.88	99.335	8,557,675.79	274		1.282	1.282
313376BR5	09/22/17	AGCY BULET	FHLB	1.750	12/14/18			3,600,000.00	100.451	3,616,254.00	3,612,656.09	99.903	3,596,497.20	348		1.377	1.377
Total for Passthrough Toll Reimb								34,812,082.94	99.639	34,686,049.71	34,764,888.14	99.685	34,702,456.74	162		1.242	1.242
Pearson Place Debt Service Fund																	
LOGIC		LGIP	LOGIC					1,164,195.77	100.000	1,164,195.77	1,164,195.77	100.000	1,164,195.77	1		1.378	1.378
Total for Pearson Place Debt Service Fund								1,164,195.77	100.000	1,164,195.77	1,164,195.77	100.000	1,164,195.77	1		1.378	1.378

CUSIP	Settle Date	Sec. Type	Sec. Description	CPN	Mty Date	Next Call	Call Type	Par Value	Purch Price	Orig Cost	Book Value	Mkt Price	Market Value	Days to Mty	Days to Call	YTM	YTW
Pooled Funds																	
TEXPOOL		LGIP	TexPool					11,227,031.23	100.000	11,227,031.23	11,227,031.23	100.000	11,227,031.23	1		1.176	1.176
TEXPRIME		LGIP	TexPool Prime					9,117,433.02	100.000	9,117,433.02	9,117,433.02	100.000	9,117,433.02	1		1.392	1.392
Total for Pooled Funds								20,344,464.25	100.000	20,344,464.25	20,344,464.25	100.000	20,344,464.25	1		1.273	1.273
Road and Bridge General																	
TEXPOOL		LGIP	TexPool					24,834.04	100.000	24,834.04	24,834.04	100.000	24,834.04	1		1.176	1.176
TEXPRIME		LGIP	TexPool Prime					11,674,100.22	100.000	11,674,100.22	11,674,100.22	100.000	11,674,100.22	1		1.392	1.392
313313SV1	04/04/17	AGCY DISCO	FFCB		02/08/18			5,000,000.00	99.079	4,953,930.56	4,994,352.80	99.864	4,993,215.00	39		1.080	1.080
89233HBC7	05/26/17	CP - DISC	Toyota Mtr Cr		02/12/18			3,000,000.00	99.032	2,970,961.67	2,995,344.99	99.816	2,994,483.00	43		1.343	1.343
3135G0WJ8	06/09/17	AGCY BULET	FNMA	0.875	05/21/18			3,000,000.00	99.665	2,989,950.00	2,995,876.11	99.738	2,992,125.00	141		1.231	1.231
742651DS8	07/25/17	AGCY BULET	PEFCO	1.875	07/15/18			5,000,000.00	100.555	5,027,750.00	5,015,425.20	100.092	5,004,615.00	196		1.299	1.299
Total for Road and Bridge General								27,698,934.26	99.793	27,641,526.49	27,699,933.36	99.944	27,683,372.26	63		1.296	1.296
Tobacco Funds																	
TEXPRIME		LGIP	TexPool Prime					1,275,682.70	100.000	1,275,682.70	1,275,682.70	100.000	1,275,682.70	1		1.392	1.392
313379DT3	05/24/17	AGCY BULET	FHLB	1.250	06/08/18			2,000,000.00	100.036	2,000,712.00	2,000,301.00	99.857	1,997,138.00	159		1.215	1.215
Total for Tobacco Funds								3,275,682.70	100.022	3,276,394.70	3,275,983.70	99.913	3,272,820.70	97		1.284	1.284
Unlimited Tax Road Bonds - Series 2007																	
TEXPRIME		LGIP	TexPool Prime					3,158,114.29	100.000	3,158,114.29	3,158,114.29	100.000	3,158,114.29	1		1.392	1.392
Total for Unlimited Tax Road Bonds - Series 2007								3,158,114.29	100.000	3,158,114.29	3,158,114.29	100.000	3,158,114.29	1		1.392	1.392
Total for Williamson County								578,201,370.19	99.847	577,303,013.27	577,524,813.60	99.791	576,988,297.50	127		1.385	1.385

FirstSouthwest AssetManagement
A Hilltop Holdings Company.

Williamson County
Change in Value
From 09/30/2017 to 12/31/2017

CUSIP	Security Type	Security Description	09/30/17 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	12/31/17 Book Value	09/30/17 Market Value	12/31/17 Market Value	Change in Mkt Value
2007 Park Limited -06											
TEXPRIME	LGIP	TexPool Prime	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total for 2007 Park Limited -06			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2008 TAN–COMPASS											
TEXPOOL	LGIP	TexPool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEXPRIME	LGIP	TexPool Prime	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total for 2008 TAN–COMPASS			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013 Park Bond											
LOGIC	LGIP	LOGIC	17,179,896.95	0.00	(574,339.37)	0.00	0.00	16,605,557.58	17,179,896.95	16,605,557.58	(574,339.37)
92181NYF8	CP - DISC	Vanderbilt Univ 0.000 11/15/17	4,992,312.50	0.00	(5,000,000.00)	7,687.50	0.00	0.00	4,992,205.00	0.00	(4,992,205.00)
46640QC25	CP - DISC	J.P.Morgan Sec 0.000 03/02/18	4,970,233.35	0.00	0.00	18,016.65	0.00	4,988,250.00	4,970,040.00	4,986,360.00	16,320.00
48306BE35	CP - DISC	Kaiser Foundation Hospital 0.000 05/03/18	0.00	4,965,261.11	0.00	9,661.09	0.00	4,974,922.20	0.00	4,970,445.00	4,970,445.00
Total for 2013 Park Bond			27,142,442.80	4,965,261.11	(5,574,339.37)	35,365.24	0.00	26,568,729.78	27,142,141.95	26,562,362.58	(579,779.37)

FirstSouthwest AssetManagement
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Williamson County
Change in Value
From 09/30/2017 to 12/31/2017

CUSIP	Security Type	Security Description	09/30/17 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	12/31/17 Book Value	09/30/17 Market Value	12/31/17 Market Value	Change in Mkt Value
2013 Road Bond											
LOGIC	LGIP	LOGIC	36,600,170.90	18,321,764.16	(12,521,332.44)	0.00	0.00	42,400,602.62	36,600,170.90	42,400,602.62	5,800,431.72
79584JXS0	CP - DISC	Salvation Army 0.000 10/26/17	1,998,263.88	0.00	(2,000,000.00)	1,736.12	0.00	0.00	1,998,240.00	0.00	(1,998,240.00)
46640PZ14	CP - DISC	J.P.Morgan Sec 0.000 12/01/17	4,988,138.90	0.00	(5,000,000.00)	11,861.10	0.00	0.00	4,989,235.00	0.00	(4,989,235.00)
742651DK5	AGCY BULET	PEFCO 2.250 12/15/17	5,972,446.84	0.00	(5,955,000.00)	(17,446.84)	0.00	0.00	5,964,879.35	0.00	(5,964,879.35)
89233GZF6	CP - DISC	Toyota Mtr Cr 0.000 12/15/17	3,988,666.68	0.00	(4,000,000.00)	11,333.32	0.00	0.00	3,989,444.00	0.00	(3,989,444.00)
89233HA46	CP - DISC	Toyota Mtr Cr 0.000 01/04/18	7,971,711.12	0.00	0.00	27,395.52	0.00	7,999,106.64	7,972,696.00	7,998,736.00	26,040.00
912828UR9	TREAS NOTE	U.S. Treasury 0.750 02/28/18	5,991,117.84	0.00	0.00	5,447.76	0.00	5,996,565.60	5,989,218.00	5,994,264.00	5,046.00
46640QC58	CP - DISC	J.P.Morgan Sec 0.000 03/05/18	4,969,645.85	0.00	0.00	18,016.65	0.00	4,987,662.50	4,968,710.00	4,985,335.00	16,625.00
79583TC86	CP - DISC	Salvation Army 0.000 03/08/18	0.00	2,191,769.56	0.00	2,261.11	0.00	2,194,030.67	0.00	2,193,448.40	2,193,448.40
46640QCL3	CP - DISC	J.P.Morgan Sec 0.000 03/20/18	4,964,819.45	0.00	0.00	19,038.90	0.00	4,983,858.35	4,966,515.00	4,982,335.00	15,820.00
3133EG3A1	AGCY BULET	FFCB 1.040 04/04/18	9,002,275.11	0.00	0.00	(1,118.79)	0.00	9,001,156.32	8,993,160.00	8,991,090.00	(2,070.00)
92181PD90	CP - DISC	Vanderbilt Univ 0.000 04/09/18	6,947,538.92	0.00	0.00	25,402.16	0.00	6,972,941.08	6,943,552.00	6,967,275.00	23,723.00
912828QG8	TREAS NOTE	U.S. Treasury 2.625 04/30/18	7,060,842.95	0.00	0.00	(26,422.06)	0.00	7,034,420.89	7,054,964.00	7,027,307.00	(27,657.00)
36164KEE7	CP - DISC	GE Capital Treasury 0.000 05/14/18	3,965,000.00	0.00	0.00	14,311.12	0.00	3,979,311.12	3,961,832.00	3,974,244.00	12,412.00
46640QEV9	CP - DISC	J.P.Morgan Sec 0.000 05/29/18	4,948,666.65	0.00	0.00	19,677.80	0.00	4,968,344.45	4,945,775.00	4,962,130.00	16,355.00
313379DT3	AGCY BULET	FHLB 1.250 06/08/18	9,014,096.34	0.00	0.00	(5,123.97)	0.00	9,008,972.37	8,998,254.00	8,987,121.00	(11,133.00)
46640QGL9	CP - DISC	J.P.Morgan Sec 0.000 07/20/18	0.00	1,975,080.00	0.00	6,253.34	0.00	1,981,333.34	0.00	1,978,448.00	1,978,448.00
912828QY9	TREAS NOTE	U.S. Treasury 2.250 07/31/18	5,039,049.85	0.00	0.00	(11,694.70)	0.00	5,027,355.15	5,037,110.00	5,018,535.00	(18,575.00)
46640QHX2	CP - DISC	J.P.Morgan Sec 0.000 08/31/18	0.00	4,635,753.61	0.00	5,796.67	0.00	4,641,550.28	0.00	4,638,806.00	4,638,806.00
3130ACYC2	AGCY BULET	FHLB 1.625 12/04/18	0.00	19,982,000.00	0.00	1,159.00	0.00	19,983,159.00	0.00	19,953,280.00	19,953,280.00
3133EHP23	AGCY BULET	FFCB 1.500 02/06/19	0.00	4,985,800.00	0.00	768.80	0.00	4,986,568.80	0.00	4,979,675.00	4,979,675.00
3133782M2	AGCY BULET	FHLB 1.500 03/08/19	0.00	15,942,600.00	0.00	2,118.84	0.00	15,944,718.84	0.00	15,917,840.01	15,917,840.01
3130ABKQ8	AGCY CALL	FHLB 1.500 06/28/19	0.00	19,562,262.25	0.00	2,665.96	0.00	19,564,928.21	0.00	19,549,394.80	19,549,394.80
Total for 2013 Road Bond			**123,422,451.28**	**87,597,029.58**	**(29,476,332.44)**	**113,437.81**	**0.00**	**181,656,586.23**	**123,373,755.25**	**181,499,866.83**	**58,126,111.58**
2015 CO Bonds											
LOGIC	LGIP	LOGIC	27,387,872.50	5,670,101.58	(3,060,486.61)	0.00	0.00	29,997,487.47	27,387,872.50	29,997,487.47	2,609,614.97
46640PZN6	CP - DISC	J.P.Morgan Sec 0.000 12/22/17	7,973,395.52	0.00	(8,000,000.00)	26,604.48	0.00	0.00	7,976,072.00	0.00	(7,976,072.00)
3133EG3A1	AGCY BULET	FFCB 1.040 04/04/18	6,001,516.74	0.00	0.00	(745.86)	0.00	6,000,770.88	5,995,440.00	5,994,060.00	(1,380.00)
3135G0WJ8	AGCY BULET	FNMA 0.875 05/21/18	2,993,234.16	0.00	0.00	2,643.15	0.00	2,995,877.31	2,992,503.00	2,992,125.00	(378.00)
Total for 2015 CO Bonds			**44,356,018.92**	**5,670,101.58**	**(11,060,486.61)**	**28,501.77**	**0.00**	**38,994,135.66**	**44,351,887.50**	**38,983,672.47**	**(5,368,215.03)**

CUSIP	Security Type	Security Description	09/30/17 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	12/31/17 Book Value	09/30/17 Market Value	12/31/17 Market Value	Change in Mkt Value
Combination Tax & Rev Series 2006 CO											
TEXPRIME	LGIP	TexPool Prime	210,929.37	0.00	(210,929.37)	0.00	0.00	0.00	210,929.37	0.00	(210,929.37)
Total for Combination Tax & Rev Series 2006 CO			**210,929.37**	**0.00**	**(210,929.37)**	**0.00**	**0.00**	**0.00**	**210,929.37**	**0.00**	**(210,929.37)**
Conservation Fund											
TEXPOOL	LGIP	TexPool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEXPRIME	LGIP	TexPool Prime	259,408.90	642,739.42	0.00	0.00	0.00	902,148.32	259,408.90	902,148.32	642,739.42
46640QB67	CP - DISC	J.P.Morgan Sec 0.000 02/06/18	994,915.56	0.00	0.00	3,654.44	0.00	998,570.00	995,198.00	998,417.00	3,219.00
3130A8PK3	AGCY BULET	FHLB 0.625 08/07/18	1,494,254.94	0.00	0.00	1,684.38	0.00	1,495,939.32	1,491,283.50	1,490,731.50	(552.00)
Total for Conservation Fund			**2,748,579.40**	**642,739.42**	**0.00**	**5,338.82**	**0.00**	**3,396,657.64**	**2,745,890.40**	**3,391,296.82**	**645,406.42**
County Benefits Program											
TEXPOOL	LGIP	TexPool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEXPRIME	LGIP	TexPool Prime	2,620,911.27	618,678.01	0.00	0.00	0.00	3,239,589.28	2,620,911.27	3,239,589.28	618,678.01
Total for County Benefits Program			**2,620,911.27**	**618,678.01**	**0.00**	**0.00**	**0.00**	**3,239,589.28**	**2,620,911.27**	**3,239,589.28**	**618,678.01**
Debt Service Fund											
TEXPOOL	LGIP	TexPool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEXPRIME	LGIP	TexPool Prime	7,447,240.79	49,821,992.43	0.00	0.00	0.00	57,269,233.22	7,447,240.79	57,269,233.22	49,821,992.43
Total for Debt Service Fund			**7,447,240.79**	**49,821,992.43**	**0.00**	**0.00**	**0.00**	**57,269,233.22**	**7,447,240.79**	**57,269,233.22**	**49,821,992.43**
Future Environmental Liability											
TEXPRIME	LGIP	TexPool Prime	22,250.25	3,053.88	(21,266.32)	0.00	0.00	4,037.81	22,250.25	4,037.81	(18,212.44)
46640PZ14	CP - DISC	J.P.Morgan Sec 0.000 12/01/17	1,496,441.67	0.00	(1,500,000.00)	3,558.33	0.00	0.00	1,496,770.50	0.00	(1,496,770.50)
912828WD8	TREAS NOTE	U.S. Treasury 1.250 10/31/18	0.00	1,519,638.67	0.00	500.70	0.00	1,520,139.37	0.00	1,518,893.90	1,518,893.90
Total for Future Environmental Liability			**1,518,691.92**	**1,522,692.55**	**(1,521,266.32)**	**4,059.03**	**0.00**	**1,524,177.18**	**1,519,020.75**	**1,522,931.71**	**3,910.96**

CUSIP	Security Type	Security Description	09/30/17 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	12/31/17 Book Value	09/30/17 Market Value	12/31/17 Market Value	Change in Mkt Value
General Fund											
BBVA-WC	BANK DEP	BBVA Compass MM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LOGIC	LGIP	LOGIC	20,348,798.25	25,093,858.56	(11,444,995.83)	0.00	0.00	33,997,660.98	20,348,798.25	33,997,660.98	13,648,862.73
TEXPOOL	LGIP	TexPool	1,163.60	646.83	0.00	0.00	0.00	1,810.43	1,163.60	1,810.43	646.83
TEXPRIME	LGIP	TexPool Prime	2,236,379.89	7,134,087.71	(55,618.77)	0.00	0.00	9,314,848.83	2,236,379.89	9,314,848.83	7,078,468.94
USB-WC	BANK DEP	Union St Bk	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WF-CASH	BANK DEP	Wells Fargo	10,252,532.39	4,219,012.84	(8,984,771.19)	0.00	0.00	5,486,774.04	10,252,532.39	5,486,774.04	(4,765,758.35)
46640PX24	CP - DISC	J.P.Morgan Sec 0.000 10/02/17	2,999,883.33	0.00	(3,000,000.00)	116.67	0.00	0.00	2,999,814.00	0.00	(2,999,814.00)
89233GX35	CP - DISC	Toyota Mtr Cr 0.000 10/03/17	7,999,417.76	0.00	(8,000,000.00)	582.24	0.00	0.00	7,999,256.00	0.00	(7,999,256.00)
91514BAA1	CP - INT	Univ of TX 1.200 10/20/17	5,000,000.00	0.00	(5,000,000.00)	0.00	0.00	0.00	5,000,150.00	0.00	(5,000,150.00)
3134G7V99	AGCY CALL	FHLMC 0.830 10/27/17	5,000,000.00	0.00	(5,000,000.00)	0.00	0.00	0.00	4,999,300.00	0.00	(4,999,300.00)
74081JYM1	CP - DISC	Harvard Univ 0.000 11/21/17	4,492,031.27	0.00	(4,500,000.00)	7,968.73	0.00	0.00	4,492,548.00	0.00	(4,492,548.00)
89233HBD5	CP - DISC	Toyota Mtr Cr 0.000 02/13/18	0.00	6,982,850.00	0.00	4,859.19	0.00	6,987,709.19	0.00	6,986,826.00	6,986,826.00
313378A43	AGCY BULET	FHLB 1.375 03/09/18	5,012,478.15	0.00	0.00	(7,107.80)	0.00	5,005,370.35	5,004,490.00	5,000,360.00	(4,130.00)
79584KCN1	CP - DISC	Salvation Army 0.000 03/22/18	0.00	6,971,020.00	0.00	3,780.00	0.00	6,974,800.00	0.00	6,974,800.00	6,974,800.00
3134G7M73	AGCY CALL	FHLMC 1.000 03/30/18	5,000,000.00	0.00	0.00	0.00	0.00	5,000,000.00	4,994,555.00	4,994,830.00	275.00
8827234A4	MUNICIPAL	TX Trans Comm Hwy Impt GO 5.000 04/01	2,041,003.52	0.00	0.00	(20,501.76)	0.00	2,020,501.76	2,040,060.00	2,017,760.00	(22,300.00)
4497W1DP8	CP - DISC	ING Funding 0.000 04/23/18	0.00	6,959,975.56	0.00	3,873.36	0.00	6,963,848.92	0.00	6,963,621.00	6,963,621.00
48306BE35	CP - DISC	Kaiser Foundation Hospital 0.000 05/03/18	0.00	6,951,365.56	0.00	13,525.52	0.00	6,964,891.08	0.00	6,958,623.00	6,958,623.00
3134G9JD0	AGCY CALL	FHLMC 1.000 05/11/18	5,000,000.00	0.00	0.00	0.00	0.00	5,000,000.00	4,990,740.00	4,990,635.00	(105.00)
74081KEB4	CP - DISC	Harvard Univ 0.000 05/11/18	0.00	6,954,165.56	0.00	3,873.36	0.00	6,958,038.92	0.00	6,955,935.00	6,955,935.00
89233HF41	CP - DISC	Toyota Mtr Cr 0.000 06/04/18	0.00	6,945,773.33	0.00	3,919.98	0.00	6,949,693.31	0.00	6,948,501.00	6,948,501.00
313379DT3	AGCY BULET	FHLB 1.250 06/08/18	6,998,870.55	0.00	0.00	411.81	0.00	6,999,282.36	6,998,642.00	6,989,983.00	(8,659.00)
46640QFV8	CP - DISC	J.P.Morgan Sec 0.000 06/29/18	0.00	2,963,685.00	0.00	12,150.00	0.00	2,975,835.00	0.00	2,973,126.00	2,973,126.00
742651DS8	AGCY BULET	PEFCO 1.875 07/15/18	1,807,724.21	0.00	0.00	(2,437.57)	0.00	1,805,286.64	1,807,144.20	1,801,661.40	(5,482.80)
912828K82	TREAS NOTE	U.S. Treasury 1.000 08/15/18	0.00	6,972,382.81	0.00	1,374.47	0.00	6,973,757.28	0.00	6,972,070.00	6,972,070.00
36164KJA0	CP - DISC	GE Capital Treasury 0.000 09/10/18	0.00	6,906,573.33	0.00	4,246.67	0.00	6,910,820.00	0.00	6,908,993.00	6,908,993.00
3134G9NM5	AGCY CALL	FHLMC 1.150 09/28/18	5,500,000.00	0.00	0.00	0.00	0.00	5,500,000.00	5,483,120.50	5,472,461.50	(10,659.00)
23542JBD6	MUNICIPAL	Dallas Wtrwks & Swr 0.985 10/01/18	5,000,000.00	0.00	0.00	0.00	0.00	5,000,000.00	4,969,900.00	4,968,600.00	(1,300.00)
3133EFLY1	AGCY BULET	FFCB 0.930 10/29/18	4,997,708.60	0.00	0.00	529.70	0.00	4,998,238.30	4,969,635.00	4,966,665.00	(2,970.00)
3136G1KL2	AGCY CALL	FNMA 1.150 10/30/18	6,986,762.37	0.00	0.00	3,050.95	0.00	6,989,813.32	6,972,532.00	6,963,201.00	(9,331.00)
742651DG4	AGCY BULET	PEFCO 4.375 03/15/19	2,084,708.06	0.00	0.00	(14,442.86)	0.00	2,070,265.20	2,079,538.00	2,057,280.00	(22,258.00)
3133EGZK4	AGCY CALL	FFCB 1.070 04/24/19	6,992,949.81	0.00	0.00	1,119.58	0.00	6,994,069.39	6,941,466.00	6,916,539.00	(24,927.00)
3135G0T86	AGCY CALL	FNMA 1.950 11/09/20	0.00	4,996,500.00	0.00	164.40	0.00	4,996,664.40	0.00	4,982,210.00	4,982,210.00

CUSIP	Security Type	Security Description	09/30/17 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	12/31/17 Book Value	09/30/17 Market Value	12/31/17 Market Value	Change in Mkt Value
Total for General Fund			115,752,411.76	100,051,897.09	(45,985,385.79)	21,056.64	0.00	169,839,979.70	115,581,764.83	169,565,775.18	53,984,010.35
Northwoods Rd Debt Service Fund											
LOGIC	LGIP	LOGIC	6,005.97	387,477.15	0.00	0.00	0.00	393,483.12	6,005.97	393,483.12	387,477.15
Total for Northwoods Rd Debt Service Fund			6,005.97	387,477.15	0.00	0.00	0.00	393,483.12	6,005.97	393,483.12	387,477.15
Northwoods Rd Operating Fund											
LOGIC	LGIP	LOGIC	8,805,869.67	15,240.63	(4,992,493.25)	0.00	0.00	3,828,617.05	8,805,869.67	3,828,617.05	(4,977,252.62)
Total for Northwoods Rd Operating Fund			8,805,869.67	15,240.63	(4,992,493.25)	0.00	0.00	3,828,617.05	8,805,869.67	3,828,617.05	(4,977,252.62)
Pass Toll Series 2009											
TEXPRIME	LGIP	TexPool Prime	404,701.58	1,343.65	0.00	0.00	0.00	406,045.23	404,701.58	406,045.23	1,343.65
Total for Pass Toll Series 2009			404,701.58	1,343.65	0.00	0.00	0.00	406,045.23	404,701.58	406,045.23	1,343.65
Passthrough Toll Reimb											
LOGIC	LGIP	LOGIC	3,510,855.93	131,227.01	0.00	0.00	0.00	3,642,082.94	3,510,855.93	3,642,082.94	131,227.01
TEXSTAR	LGIP	TexSTAR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
313313VJ4	AGCY DISCO	FFCB 0.000 04/10/18	7,949,066.64	0.00	0.00	24,533.36	0.00	7,973,600.00	7,950,600.00	7,969,728.00	19,128.00
3133EF3B1	AGCY BULET	FFCB 0.750 04/18/18	6,142,503.32	0.00	0.00	5,706.11	0.00	6,148,209.43	6,139,470.94	6,141,594.41	2,123.47
3130A4GJ5	AGCY BULET	FHLB 1.125 04/25/18	4,798,967.28	0.00	0.00	455.52	0.00	4,799,422.80	4,796,606.40	4,794,878.40	(1,728.00)
3130A9AE1	AGCY BULET	FHLB 0.875 10/01/18	8,580,259.58	0.00	0.00	8,657.30	0.00	8,588,916.88	8,577,964.12	8,557,675.79	(20,288.33)
313376BR5	AGCY BULET	FHLB 1.750 12/14/18	3,615,927.70	0.00	0.00	(3,271.61)	0.00	3,612,656.09	3,612,708.00	3,596,497.20	(16,210.80)
Total for Passthrough Toll Reimb			34,597,580.45	131,227.01	0.00	36,080.68	0.00	34,764,888.14	34,588,205.39	34,702,456.74	114,251.35
Pearson Place Construction Fund											
LOGIC	LGIP	LOGIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total for Pearson Place Construction Fund			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CUSIP	Security Type	Security Description	09/30/17 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	12/31/17 Book Value	09/30/17 Market Value	12/31/17 Market Value	Change in Mkt Value
Pearson Place Debt Service Fund											
LOGIC	LGIP	LOGIC	995,888.81	168,306.96	0.00	0.00	0.00	1,164,195.77	995,888.81	1,164,195.77	168,306.96
Total for Pearson Place Debt Service Fund			**995,888.81**	**168,306.96**	**0.00**	**0.00**	**0.00**	**1,164,195.77**	**995,888.81**	**1,164,195.77**	**168,306.96**
Pooled Funds											
TEXPOOL	LGIP	TexPool	10,744,034.16	482,997.07	0.00	0.00	0.00	11,227,031.23	10,744,034.16	11,227,031.23	482,997.07
TEXPRIME	LGIP	TexPool Prime	8,765,790.57	1,332,216.76	(980,574.31)	0.00	0.00	9,117,433.02	8,765,790.57	9,117,433.02	351,642.45
Total for Pooled Funds			**19,509,824.73**	**1,815,213.83**	**(980,574.31)**	**0.00**	**0.00**	**20,344,464.25**	**19,509,824.73**	**20,344,464.25**	**834,639.52**
PTT I-35											
TEXPRIME	LGIP	TexPool Prime	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total for PTT I-35			**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Road and Bridge General											
BBVA-WC	BANK DEP	BBVA Compass MM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEXPOOL	LGIP	TexPool	24,766.16	67.88	0.00	0.00	0.00	24,834.04	24,766.16	24,834.04	67.88
TEXPRIME	LGIP	TexPool Prime	8,222,603.57	3,451,496.65	0.00	0.00	0.00	11,674,100.22	8,222,603.57	11,674,100.22	3,451,496.65
313313SV1	AGCY DISCO	FFCB 0.000 02/08/18	4,980,680.55	0.00	0.00	13,672.25	0.00	4,994,352.80	4,980,110.00	4,993,215.00	13,105.00
89233HBC7	CP - DISC	Toyota Mtr Cr 0.000 02/12/18	2,985,148.32	0.00	0.00	10,196.67	0.00	2,995,344.99	2,984,925.00	2,994,483.00	9,558.00
3135G0WJ8	AGCY BULET	FNMA 0.875 05/21/18	2,993,232.45	0.00	0.00	2,643.66	0.00	2,995,876.11	2,992,503.00	2,992,125.00	(378.00)
742651DS8	AGCY BULET	PEFCO 1.875 07/15/18	5,022,535.65	0.00	0.00	(7,110.45)	0.00	5,015,425.20	5,019,845.00	5,004,615.00	(15,230.00)
Total for Road and Bridge General			**24,228,966.70**	**3,451,564.53**	**0.00**	**19,402.13**	**0.00**	**27,699,933.36**	**24,224,752.73**	**27,683,372.26**	**3,458,619.53**
Tobacco Funds											
TEXPOOL	LGIP	TexPool	8,514.54	7.44	(8,521.98)	0.00	0.00	0.00	8,514.54	0.00	(8,514.54)
TEXPRIME	LGIP	TexPool Prime	1,250,478.69	25,204.01	0.00	0.00	0.00	1,275,682.70	1,250,478.69	1,275,682.70	25,204.01
313379DT3	AGCY BULET	FHLB 1.250 06/08/18	2,000,472.78	0.00	0.00	(171.78)	0.00	2,000,301.00	1,999,612.00	1,997,138.00	(2,474.00)
Total for Tobacco Funds			**3,259,466.01**	**25,211.45**	**(8,521.98)**	**(171.78)**	**0.00**	**3,275,983.70**	**3,258,605.23**	**3,272,820.70**	**14,215.47**

FirstSouthwest AssetManagement
A Hilltop Holdings Company.

Williamson County
Change in Value
From 09/30/2017 to 12/31/2017

CUSIP	Security Type	Security Description	09/30/17 Book Value	Cost of Purchases	Maturities / Calls / Sales	Amortization / Accretion	Realized Gain/(Loss)	12/31/17 Book Value	09/30/17 Market Value	12/31/17 Market Value	Change in Mkt Value
Unlimited Tax Road Bonds - Series 2007											
TEXPOOL	LGIP	TexPool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEXPRIME	LGIP	TexPool Prime	3,401,906.95	3,728.39	(247,521.05)	0.00	0.00	3,158,114.29	3,401,906.95	3,158,114.29	(243,792.66)
Total for Unlimited Tax Road Bonds - Series 2007			3,401,906.95	3,728.39	(247,521.05)	0.00	0.00	3,158,114.29	3,401,906.95	3,158,114.29	(243,792.66)
Total for Williamson County			420,429,888.38	256,889,705.37	(100,057,850.49)	263,070.34	0.00	577,524,813.60	420,189,303.17	576,988,297.50	156,798,994.33

FirstSouthwest AssetManagement
A Hilltop Holdings Company

Williamson County
Earned Income
From 09/30/2017 to 12/31/2017

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
2007 Park Limited -06									
Total for 2007 Park Limited -06			0.00	0.00	0.00	0.00	0.00	0.00	0.00
2008 TAN--COMPASS									
Total for 2008 TAN--COMPASS			0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013 Park Bond									
LOGIC	LGIP	LOGIC	0.00	56,091.66	56,091.66	0.00	0.00	0.00	56,091.66
92181NYF8	CP - DISC	Vanderbilt Univ 0.000 11/15/17	0.00	0.00	0.00	0.00	0.00	7,687.50	7,687.50
46640QC25	CP - DISC	J.P.Morgan Sec 0.000 03/02/18	0.00	0.00	0.00	0.00	0.00	18,016.65	18,016.65
48306BE35	CP - DISC	Kaiser Foundation Hospital 0.000 05/03/18	0.00	0.00	0.00	0.00	0.00	9,661.09	9,661.09
Total for 2013 Park Bond			0.00	56,091.66	56,091.66	0.00	0.00	35,365.24	91,456.90

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
2013 Road Bond									
LOGIC	LGIP	LOGIC	0.00	122,078.42	122,078.42	0.00	0.00	0.00	122,078.42
79584JXS0	CP - DISC	Salvation Army 0.000 10/26/17	0.00	0.00	0.00	0.00	0.00	1,736.12	1,736.12
46640PZ14	CP - DISC	J.P.Morgan Sec 0.000 12/01/17	0.00	0.00	0.00	0.00	0.00	11,861.10	11,861.10
742651DK5	AGCY BULET	PEFCO 2.250 12/15/17	39,451.88	27,541.87	66,993.75	0.00	0.00	(17,446.84)	10,095.03
89233GZF6	CP - DISC	Toyota Mtr Cr 0.000 12/15/17	0.00	0.00	0.00	0.00	0.00	11,333.32	11,333.32
89233HA46	CP - DISC	Toyota Mtr Cr 0.000 01/04/18	0.00	0.00	0.00	0.00	0.00	27,395.52	27,395.52
912828UR9	TREAS NOTE	U.S. Treasury 0.750 02/28/18	3,853.59	11,436.47	0.00	0.00	15,290.06	5,447.76	16,884.23
46640QC58	CP - DISC	J.P.Morgan Sec 0.000 03/05/18	0.00	0.00	0.00	0.00	0.00	18,016.65	18,016.65
79583TC86	CP - DISC	Salvation Army 0.000 03/08/18	0.00	0.00	0.00	0.00	0.00	2,261.11	2,261.11
46640QCL3	CP - DISC	J.P.Morgan Sec 0.000 03/20/18	0.00	0.00	0.00	0.00	0.00	19,038.90	19,038.90
3133EG3A1	AGCY BULET	FFCB 1.040 04/04/18	46,020.00	23,400.00	46,800.00	0.00	22,620.00	(1,118.79)	22,281.21
92181PD90	CP - DISC	Vanderbilt Univ 0.000 04/09/18	0.00	0.00	0.00	0.00	0.00	25,402.16	25,402.16
912828QG8	TREAS NOTE	U.S. Treasury 2.625 04/30/18	76,895.38	46,450.61	91,875.00	0.00	31,470.99	(26,422.06)	20,028.55
36164KEE7	CP - DISC	GE Capital Treasury 0.000 05/14/18	0.00	0.00	0.00	0.00	0.00	14,311.12	14,311.12
46640QEV9	CP - DISC	J.P.Morgan Sec 0.000 05/29/18	0.00	0.00	0.00	0.00	0.00	19,677.80	19,677.80
313379DT3	AGCY BULET	FHLB 1.250 06/08/18	35,312.50	28,125.00	56,250.00	0.00	7,187.50	(5,123.97)	23,001.03
46640QGL9	CP - DISC	J.P.Morgan Sec 0.000 07/20/18	0.00	0.00	0.00	0.00	0.00	6,253.34	6,253.34
912828QY9	TREAS NOTE	U.S. Treasury 2.250 07/31/18	18,953.80	28,125.00	0.00	0.00	47,078.80	(11,694.70)	16,430.30
46640QHX2	CP - DISC	J.P.Morgan Sec 0.000 08/31/18	0.00	0.00	0.00	0.00	0.00	5,796.67	5,796.67
3130ACYC2	AGCY BULET	FHLB 1.625 12/04/18	0.00	20,763.89	0.00	(3,611.11)	24,375.00	1,159.00	21,922.89
3133EHP23	AGCY BULET	FFCB 1.500 02/06/19	0.00	4,791.66	0.00	(6,666.67)	11,458.33	768.80	5,560.46
3133782M2	AGCY BULET	FHLB 1.500 03/08/19	0.00	11,166.67	0.00	(64,166.67)	75,333.34	2,118.84	13,285.51
3130ABKQ8	AGCY CALL	FHLB 1.500 06/28/19	0.00	10,657.30	147,562.50	(139,364.58)	2,459.38	2,665.96	13,323.26
Total for 2013 Road Bond			**220,487.15**	**334,536.89**	**531,559.67**	**(213,809.03)**	**237,273.40**	**113,437.81**	**447,974.70**
2015 CO Bonds									
LOGIC	LGIP	LOGIC	0.00	84,778.91	84,778.91	0.00	0.00	0.00	84,778.91
46640PZN6	CP - DISC	J.P.Morgan Sec 0.000 12/22/17	0.00	0.00	0.00	0.00	0.00	26,604.48	26,604.48
3133EG3A1	AGCY BULET	FFCB 1.040 04/04/18	30,680.00	15,600.00	31,200.00	0.00	15,080.00	(745.86)	14,854.14
3135G0WJ8	AGCY BULET	FNMA 0.875 05/21/18	9,479.17	6,562.50	13,125.00	0.00	2,916.67	2,643.15	9,205.65
Total for 2015 CO Bonds			**40,159.17**	**106,941.41**	**129,103.91**	**0.00**	**17,996.67**	**28,501.77**	**135,443.18**

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
Combination Tax & Rev Series 2006 CO									
TEXPRIME	LGIP	TexPool Prime	0.00	213.24	213.24	0.00	0.00	0.00	213.24
Total for Combination Tax & Rev Series 2006 CO			**0.00**	**213.24**	**213.24**	**0.00**	**0.00**	**0.00**	**213.24**
Conservation Fund									
TEXPRIME	LGIP	TexPool Prime	0.00	2,739.42	2,739.42	0.00	0.00	0.00	2,739.42
46640QB67	CP - DISC	J.P.Morgan Sec 0.000 02/06/18	0.00	0.00	0.00	0.00	0.00	3,654.44	3,654.44
3130A8PK3	AGCY BULET	FHLB 0.625 08/07/18	1,406.25	2,343.75	0.00	0.00	3,750.00	1,684.38	4,028.13
Total for Conservation Fund			**1,406.25**	**5,083.17**	**2,739.42**	**0.00**	**3,750.00**	**5,338.82**	**10,421.99**
County Benefits Program									
TEXPRIME	LGIP	TexPool Prime	0.00	10,678.01	10,678.01	0.00	0.00	0.00	10,678.01
Total for County Benefits Program			**0.00**	**10,678.01**	**10,678.01**	**0.00**	**0.00**	**0.00**	**10,678.01**
Debt Service Fund									
TEXPRIME	LGIP	TexPool Prime	0.00	58,524.73	58,524.73	0.00	0.00	0.00	58,524.73
Total for Debt Service Fund			**0.00**	**58,524.73**	**58,524.73**	**0.00**	**0.00**	**0.00**	**58,524.73**
Future Environmental Liability									
TEXPRIME	LGIP	TexPool Prime	0.00	58.65	58.65	0.00	0.00	0.00	58.65
46640PZ14	CP - DISC	J.P.Morgan Sec 0.000 12/01/17	0.00	0.00	0.00	0.00	0.00	3,558.33	3,558.33
912828WD8	TREAS NOTE	U.S. Treasury 1.250 10/31/18	0.00	1,632.43	0.00	(1,632.42)	3,264.85	500.70	2,133.13
Total for Future Environmental Liability			**0.00**	**1,691.08**	**58.65**	**(1,632.42)**	**3,264.85**	**4,059.03**	**5,750.11**

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
General Fund									
LOGIC	LGIP	LOGIC	0.00	99,394.73	99,394.73	0.00	0.00	0.00	99,394.73
TEXPOOL	LGIP	TexPool	0.00	3.96	3.96	0.00	0.00	0.00	3.96
TEXPRIME	LGIP	TexPool Prime	0.00	17,946.16	17,946.16	0.00	0.00	0.00	17,946.16
46640PX24	CP - DISC	J.P.Morgan Sec 0.000 10/02/17	0.00	0.00	0.00	0.00	0.00	116.67	116.67
89233GX35	CP - DISC	Toyota Mtr Cr 0.000 10/03/17	0.00	0.00	0.00	0.00	0.00	582.24	582.24
91514BAA1	CP - INT	Univ of TX 1.200 10/20/17	25,333.33	3,166.67	28,500.00	0.00	0.00	0.00	3,166.67
3134G7V99	AGCY CALL	FHLMC 0.830 10/27/17	17,752.78	2,997.22	20,750.00	0.00	0.00	0.00	2,997.22
74081JYM1	CP - DISC	Harvard Univ 0.000 11/21/17	0.00	0.00	0.00	0.00	0.00	7,968.73	7,968.73
89233HBD5	CP - DISC	Toyota Mtr Cr 0.000 02/13/18	0.00	0.00	0.00	0.00	0.00	4,859.19	4,859.19
313378A43	AGCY BULET	FHLB 1.375 03/09/18	4,201.39	17,187.50	0.00	0.00	21,388.89	(7,107.80)	10,079.70
79584KCN1	CP - DISC	Salvation Army 0.000 03/22/18	0.00	0.00	0.00	0.00	0.00	3,780.00	3,780.00
3134G7M73	AGCY CALL	FHLMC 1.000 03/30/18	25,138.89	12,500.00	25,000.00	0.00	12,638.89	0.00	12,500.00
8827234A4	MUNICIPAL	TX Trans Comm Hwy Impt GO 5.000 04/01/18	50,000.00	25,000.00	50,000.00	0.00	25,000.00	(20,501.76)	4,498.24
4497W1DP8	CP - DISC	ING Funding 0.000 04/23/18	0.00	0.00	0.00	0.00	0.00	3,873.36	3,873.36
48306BE35	CP - DISC	Kaiser Foundation Hospital 0.000 05/03/18	0.00	0.00	0.00	0.00	0.00	13,525.52	13,525.52
3134G9JD0	AGCY CALL	FHLMC 1.000 05/11/18	19,444.44	12,500.00	25,000.00	0.00	6,944.44	0.00	12,500.00
74081KEB4	CP - DISC	Harvard Univ 0.000 05/11/18	0.00	0.00	0.00	0.00	0.00	3,873.36	3,873.36
89233HF41	CP - DISC	Toyota Mtr Cr 0.000 06/04/18	0.00	0.00	0.00	0.00	0.00	3,919.98	3,919.98
313379DT3	AGCY BULET	FHLB 1.250 06/08/18	27,465.28	21,875.00	43,750.00	0.00	5,590.28	411.81	22,286.81
46640QFV8	CP - DISC	J.P.Morgan Sec 0.000 06/29/18	0.00	0.00	0.00	0.00	0.00	12,150.00	12,150.00
742651DS8	AGCY BULET	PEFCO 1.875 07/15/18	7,125.00	8,437.50	0.00	0.00	15,562.50	(2,437.57)	5,999.93
912828K82	TREAS NOTE	U.S. Treasury 1.000 08/15/18	0.00	2,282.61	0.00	(24,157.61)	26,440.22	1,374.47	3,657.08
36164KJA0	CP - DISC	GE Capital Treasury 0.000 09/10/18	0.00	0.00	0.00	0.00	0.00	4,246.67	4,246.67
3134G9NM5	AGCY CALL	FHLMC 1.150 09/28/18	527.08	15,812.50	0.00	0.00	16,339.58	0.00	15,812.50
23542JBD6	MUNICIPAL	Dallas Wtrwks & Swr 0.985 10/01/18	24,625.00	12,312.50	24,625.00	0.00	12,312.50	0.00	12,312.50
3133EFLY1	AGCY BULET	FFCB 0.930 10/29/18	19,633.33	11,625.00	23,250.00	0.00	8,008.33	529.70	12,154.70
3136G1KL2	AGCY CALL	FNMA 1.150 10/30/18	33,765.28	20,125.00	40,250.00	0.00	13,640.28	3,050.95	23,175.95
742651DG4	AGCY BULET	PEFCO 4.375 03/15/19	3,888.89	21,875.00	0.00	0.00	25,763.89	(14,442.86)	7,432.14
3133EGZK4	AGCY CALL	FFCB 1.070 04/24/19	32,664.72	18,725.00	37,450.00	0.00	13,939.72	1,119.58	19,844.58
3135G0T86	AGCY CALL	FNMA 1.950 11/09/20	0.00	14,083.33	0.00	0.00	14,083.33	164.40	14,247.73
Total for General Fund			**291,565.41**	**337,849.68**	**435,919.85**	**(24,157.61)**	**217,652.85**	**21,056.64**	**358,906.32**

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
Northwoods Rd Debt Service Fund									
LOGIC	LGIP	LOGIC	0.00	247.38	247.38	0.00	0.00	0.00	247.38
Total for Northwoods Rd Debt Service Fund			0.00	247.38	247.38	0.00	0.00	0.00	247.38
Northwoods Rd Operating Fund									
LOGIC	LGIP	LOGIC	0.00	26,737.38	26,737.38	0.00	0.00	0.00	26,737.38
Total for Northwoods Rd Operating Fund			0.00	26,737.38	26,737.38	0.00	0.00	0.00	26,737.38
Pass Toll Series 2009									
TEXPRIME	LGIP	TexPool Prime	0.00	1,343.65	1,343.65	0.00	0.00	0.00	1,343.65
Total for Pass Toll Series 2009			0.00	1,343.65	1,343.65	0.00	0.00	0.00	1,343.65
Passthrough Toll Reimb									
LOGIC	LGIP	LOGIC	0.00	11,955.13	11,955.13	0.00	0.00	0.00	11,955.13
313313VJ4	AGCY DISCO	FFCB 0.000 04/10/18	0.00	0.00	0.00	0.00	0.00	24,533.36	24,533.36
3133EF3B1	AGCY BULET	FFCB 0.750 04/18/18	20,901.35	11,540.63	23,081.25	0.00	9,360.73	5,706.11	17,246.74
3130A4GJ5	AGCY BULET	FHLB 1.125 04/25/18	23,400.00	13,500.00	27,000.00	0.00	9,900.00	455.52	13,955.52
3130A9AE1	AGCY BULET	FHLB 0.875 10/01/18	37,690.63	18,845.31	37,690.63	0.00	18,845.31	8,657.30	27,502.61
313376BR5	AGCY BULET	FHLB 1.750 12/14/18	18,725.00	15,750.00	31,500.00	0.00	2,975.00	(3,271.61)	12,478.39
Total for Passthrough Toll Reimb			100,716.98	71,591.07	131,227.01	0.00	41,081.04	36,080.68	107,671.75
Pearson Place Construction Fund									
Total for Pearson Place Construction Fund			0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pearson Place Debt Service Fund									
LOGIC	LGIP	LOGIC	0.00	3,411.46	3,411.46	0.00	0.00	0.00	3,411.46
Total for Pearson Place Debt Service Fund			0.00	3,411.46	3,411.46	0.00	0.00	0.00	3,411.46

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
Pooled Funds									
TEXPOOL	LGIP	TexPool	0.00	30,087.53	30,087.53	0.00	0.00	0.00	30,087.53
TEXPRIME	LGIP	TexPool Prime	0.00	29,107.98	29,107.98	0.00	0.00	0.00	29,107.98
Total for Pooled Funds			0.00	59,195.51	59,195.51	0.00	0.00	0.00	59,195.51
PTT I-35									
Total for PTT I-35			0.00	0.00	0.00	0.00	0.00	0.00	0.00
Road and Bridge General									
TEXPOOL	LGIP	TexPool	0.00	67.88	67.88	0.00	0.00	0.00	67.88
TEXPRIME	LGIP	TexPool Prime	0.00	38,371.65	38,371.65	0.00	0.00	0.00	38,371.65
313313SV1	AGCY DISCO	FFCB 0.000 02/08/18	0.00	0.00	0.00	0.00	0.00	13,672.25	13,672.25
89233HBC7	CP - DISC	Toyota Mtr Cr 0.000 02/12/18	0.00	0.00	0.00	0.00	0.00	10,196.67	10,196.67
3135G0WJ8	AGCY BULET	FNMA 0.875 05/21/18	9,479.17	6,562.50	13,125.00	0.00	2,916.67	2,643.66	9,206.16
742651DS8	AGCY BULET	PEFCO 1.875 07/15/18	19,791.67	23,437.50	0.00	0.00	43,229.17	(7,110.45)	16,327.05
Total for Road and Bridge General			29,270.84	68,439.53	51,564.53	0.00	46,145.84	19,402.13	87,841.66
Tobacco Funds									
TEXPOOL	LGIP	TexPool	0.00	9.36	9.36	0.00	0.00	0.00	9.36
TEXPRIME	LGIP	TexPool Prime	0.00	4,180.11	4,180.11	0.00	0.00	0.00	4,180.11
313379DT3	AGCY BULET	FHLB 1.250 06/08/18	7,847.22	6,250.00	12,500.00	0.00	1,597.22	(171.78)	6,078.22
Total for Tobacco Funds			7,847.22	10,439.47	16,689.47	0.00	1,597.22	(171.78)	10,267.69
Unlimited Tax Road Bonds - Series 2007									
TEXPRIME	LGIP	TexPool Prime	0.00	10,713.72	10,713.72	0.00	0.00	0.00	10,713.72
Total for Unlimited Tax Road Bonds - Series 2007			0.00	10,713.72	10,713.72	0.00	0.00	0.00	10,713.72

FirstSouthwest AssetManagement
A Hilltop Holdings Company.

Williamson County

Earned Income

From 09/30/2017 to 12/31/2017

CUSIP	Security Type	Security Description	Beg. Accrued	Interest Earned	Interest Rec'd / Sold / Matured	Interest Purchased	Ending Accrued	Disc Accr / Prem Amort	Net Income
Total for Williamson County			691,453.02	1,163,729.04	1,526,019.25	(239,599.06)	568,761.87	263,070.34	1,426,799.38

Trade Date	Settle Date	CUSIP	Security Type	Security Description	Coupon	Mty Date	Call Date	Par Value	Price	Principal Amount	Int Purchased / Received	Total Amount	Realized Gain / Loss	YTM	YTW
2013 Park Bond															
Maturities															
11/15/17	11/15/17	92181NYF8	CP - DISC	Vanderbilt Univ		11/15/17		5,000,000.00	100.000	5,000,000.00	0.00	5,000,000.00		1.239	
Total for: Maturities								5,000,000.00		5,000,000.00	0.00	5,000,000.00		1.239	
Purchases															
11/14/17	11/15/17	48306BE35	CP - DISC	Kaiser Foundation Hospital		05/03/18		5,000,000.00	99.305	4,965,261.11	0.00	4,965,261.11		1.490	1.490
Total for: Purchases								5,000,000.00		4,965,261.11	0.00	4,965,261.11		1.490	1.490
2013 Road Bond															
Maturities															
10/26/17	10/26/17	79584JXS0	CP - DISC	Salvation Army		10/26/17		2,000,000.00	100.000	2,000,000.00	0.00	2,000,000.00		1.254	
12/01/17	12/01/17	46640PZ14	CP - DISC	J.P.Morgan Sec		12/01/17		5,000,000.00	100.000	5,000,000.00	0.00	5,000,000.00		1.415	
12/15/17	12/15/17	742651DK5	AGCY BULET	PEFCO	2.250	12/15/17		5,955,000.00	100.000	5,955,000.00	0.00	5,955,000.00		0.819	
12/15/17	12/15/17	89233GZF6	CP - DISC	Toyota Mtr Cr		12/15/17		4,000,000.00	100.000	4,000,000.00	0.00	4,000,000.00		1.374	
Total for: Maturities								16,955,000.00		16,955,000.00	0.00	16,955,000.00		1.177	
Purchases															
10/24/17	10/26/17	46640QGL9	CP - DISC	J.P.Morgan Sec		07/20/18		2,000,000.00	98.754	1,975,080.00	0.00	1,975,080.00		1.701	1.701
12/06/17	12/07/17	79583TC86	CP - DISC	Salvation Army		03/08/18		2,200,000.00	99.626	2,191,769.56	0.00	2,191,769.56		1.486	1.486
12/07/17	12/08/17	3130ACYC2	AGCY BULET	FHLB	1.625	12/04/18		20,000,000.00	99.910	19,982,000.00	3,611.11	19,985,611.11		1.717	1.717
12/07/17	12/08/17	3133782M2	AGCY BULET	FHLB	1.500	03/08/19		6,000,000.00	99.675	5,980,500.00	22,500.00	6,003,000.00		1.763	1.763
12/07/17	12/08/17	3133EHP23	AGCY BULET	FFCB	1.500	02/06/19		5,000,000.00	99.716	4,985,800.00	6,666.67	4,992,466.67		1.748	1.748
12/07/17	12/08/17	46640QHX2	CP - DISC	J.P.Morgan Sec		08/31/18		4,700,000.00	98.633	4,635,753.61	0.00	4,635,753.61		1.876	1.876
12/15/17	12/18/17	3130ABKQ8	AGCY CALL	FHLB	1.500	06/28/19	03/28/18	19,675,000.00	99.427	19,562,262.25	139,364.58	19,701,626.83		1.882	1.882
12/15/17	12/18/17	3133782M2	AGCY BULET	FHLB	1.500	03/08/19		2,845,000.00	99.621	2,834,217.45	11,854.17	2,846,071.62		1.814	1.814
12/15/17	12/18/17	3133782M2	AGCY BULET	FHLB	1.500	03/08/19		7,155,000.00	99.621	7,127,882.55	29,812.50	7,157,695.05		1.814	1.814
Total for: Purchases								69,575,000.00		69,275,265.42	213,809.03	69,489,074.45		1.787	1.787
Income Payments															
10/04/17	10/04/17	3133EG3A1	AGCY BULET	FFCB	1.040	04/04/18				0.00	46,800.00	46,800.00			

Trade Date	Settle Date	CUSIP	Security Type	Security Description	Coupon	Mty Date	Call Date	Par Value	Price	Principal Amount	Int Purchased / Received	Total Amount	Realized Gain / Loss	YTM	YTW
2013 Road Bond															
Income Payments															
10/31/17	10/31/17	912828QG8	TREAS NOTE	U.S. Treasury	2.625	04/30/18				0.00	91,875.00	91,875.00			
12/08/17	12/08/17	313379DT3	AGCY BULET	FHLB	1.250	06/08/18				0.00	56,250.00	56,250.00			
12/15/17	12/15/17	742651DK5	AGCY BULET	PEFCO	2.250	12/15/17				0.00	66,993.75	66,993.75			
12/28/17	12/28/17	3130ABKQ8	AGCY CALL	FHLB	1.500	06/28/19				0.00	147,562.50	147,562.50			
Total for: Income Payments										0.00	409,481.25	409,481.25			
2015 CO Bonds															
Maturities															
12/22/17	12/22/17	46640PZN6	CP - DISC	J.P.Morgan Sec		12/22/17		8,000,000.00	100.000	8,000,000.00	0.00	8,000,000.00		1.476	
Total for: Maturities								8,000,000.00		8,000,000.00	0.00	8,000,000.00		1.476	
Income Payments															
10/04/17	10/04/17	3133EG3A1	AGCY BULET	FFCB	1.040	04/04/18				0.00	31,200.00	31,200.00			
11/21/17	11/21/17	3135G0WJ8	AGCY BULET	FNMA	0.875	05/21/18				0.00	13,125.00	13,125.00			
Total for: Income Payments										0.00	44,325.00	44,325.00			
Future Environmental Liability															
Maturities															
12/01/17	12/01/17	46640PZ14	CP - DISC	J.P.Morgan Sec		12/01/17		1,500,000.00	100.000	1,500,000.00	0.00	1,500,000.00		1.415	
Total for: Maturities								1,500,000.00		1,500,000.00	0.00	1,500,000.00		1.415	
Purchases															
11/29/17	12/01/17	912828WD8	TREAS NOTE	U.S. Treasury	1.250	10/31/18		1,525,000.00	99.648	1,519,638.67	1,632.42	1,521,271.09		1.639	1.639
Total for: Purchases								1,525,000.00		1,519,638.67	1,632.42	1,521,271.09		1.639	1.639

Trade Date	Settle Date	CUSIP	Security Type	Security Description	Coupon	Mty Date	Call Date	Par Value	Price	Principal Amount	Int Purchased / Received	Total Amount	Realized Gain / Loss	YTM	YTW
General Fund															
Maturities															
10/02/17	10/02/17	46640PX24	CP - DISC	J.P.Morgan Sec		10/02/17		3,000,000.00	100.000	3,000,000.00	0.00	3,000,000.00		1.415	
10/03/17	10/03/17	89233GX35	CP - DISC	Toyota Mtr Cr		10/03/17		8,000,000.00	100.000	8,000,000.00	0.00	8,000,000.00		1.323	
10/20/17	10/20/17	91514BAA1	CP - INT	Univ of TX	1.200	10/20/17		5,000,000.00	100.000	5,000,000.00	28,500.00	5,028,500.00		1.200	
10/27/17	10/27/17	3134G7V99	AGCY CALL	FHLMC	0.830	10/27/17		5,000,000.00	100.000	5,000,000.00	0.00	5,000,000.00		0.830	
11/21/17	11/21/17	74081JYM1	CP - DISC	Harvard Univ		11/21/17		4,500,000.00	100.000	4,500,000.00	0.00	4,500,000.00		1.256	
Total for: Maturities								25,500,000.00		25,500,000.00	28,500.00	25,528,500.00		1.201	
Purchases															
10/02/17	10/03/17	46640QFV8	CP - DISC	J.P.Morgan Sec		06/29/18		3,000,000.00	98.790	2,963,685.00	0.00	2,963,685.00		1.640	1.640
10/27/17	11/09/17	3135G0T86	AGCY CALL	FNMA	1.950	11/09/20	02/09/18	5,000,000.00	99.930	4,996,500.00	0.00	4,996,500.00		1.974	1.974
11/14/17	11/15/17	48306BE35	CP - DISC	Kaiser Foundation Hospital		05/03/18		7,000,000.00	99.305	6,951,365.56	0.00	6,951,365.56		1.490	1.490
12/14/17	12/15/17	89233HBD5	CP - DISC	Toyota Mtr Cr		02/13/18		7,000,000.00	99.755	6,982,850.00	0.00	6,982,850.00		1.474	1.474
12/19/17	12/20/17	79584KCN1	CP - DISC	Salvation Army		03/22/18		7,000,000.00	99.586	6,971,020.00	0.00	6,971,020.00		1.627	1.627
12/19/17	12/20/17	4497W1DP8	CP - DISC	ING Funding		04/23/18		7,000,000.00	99.428	6,959,975.56	0.00	6,959,975.56		1.670	1.670
12/19/17	12/20/17	89233HF41	CP - DISC	Toyota Mtr Cr		06/04/18		7,000,000.00	99.225	6,945,773.33	0.00	6,945,773.33		1.693	1.693
12/19/17	12/20/17	912828K82	TREAS NOTE	U.S. Treasury	1.000	08/15/18		7,000,000.00	99.605	6,972,382.81	24,157.61	6,996,540.42		1.607	1.607
12/19/17	12/20/17	36164KJA0	CP - DISC	GE Capital Treasury		09/10/18		7,000,000.00	98.665	6,906,573.33	0.00	6,906,573.33		1.845	1.845
12/20/17	12/20/17	74081KEB4	CP - DISC	Harvard Univ		05/11/18		7,000,000.00	99.345	6,954,165.56	0.00	6,954,165.56		1.671	1.671
Total for: Purchases								64,000,000.00		63,604,291.15	24,157.61	63,628,448.76		1.661	1.661
Income Payments															
10/02/17	10/01/17	23542JBD6	MUNICIPAL	Dallas Wtrwks & Swr	0.985	10/01/18				0.00	24,625.00	24,625.00			
10/02/17	09/30/17	3134G7M73	AGCY CALL	FHLMC	1.000	03/30/18				0.00	25,000.00	25,000.00			
10/02/17	10/01/17	8827234A4	MUNICIPAL	TX Trans Comm Hwy Impt S	5.000	04/01/18				0.00	50,000.00	50,000.00			
10/24/17	10/24/17	3133EGZK4	AGCY CALL	FFCB	1.070	04/24/19				0.00	37,450.00	37,450.00			
10/27/17	10/27/17	3134G7V99	AGCY CALL	FHLMC	0.830	10/27/17				0.00	20,750.00	20,750.00			
10/30/17	10/29/17	3133EFLY1	AGCY BULET	FFCB	0.930	10/29/18				0.00	23,250.00	23,250.00			
10/30/17	10/30/17	3136G1KL2	AGCY CALL	FNMA	1.150	10/30/18				0.00	40,250.00	40,250.00			
11/13/17	11/11/17	3134G9JD0	AGCY CALL	FHLMC	1.000	05/11/18				0.00	25,000.00	25,000.00			
12/08/17	12/08/17	313379DT3	AGCY BULET	FHLB	1.250	06/08/18				0.00	43,750.00	43,750.00			

Trade Date	Settle Date	CUSIP	Security Type	Security Description	Coupon	Mty Date	Call Date	Par Value	Price	Principal Amount	Int Purchased / Received	Total Amount	Realized Gain / Loss	YTM	YTW
General Fund															
Total for: Income Payments										0.00	290,075.00	290,075.00			
Passthrough Toll Reimb															
Income Payments															
10/02/17	10/01/17	3130A9AE1	AGCY BULET	FHLB	0.875	10/01/18				0.00	37,690.63	37,690.63			
10/18/17	10/18/17	3133EF3B1	AGCY BULET	FFCB	0.750	04/18/18				0.00	23,081.25	23,081.25			
10/25/17	10/25/17	3130A4GJ5	AGCY BULET	FHLB	1.125	04/25/18				0.00	27,000.00	27,000.00			
12/14/17	12/14/17	313376BR5	AGCY BULET	FHLB	1.750	12/14/18				0.00	31,500.00	31,500.00			
Total for: Income Payments										0.00	119,271.88	119,271.88			
Road and Bridge General															
Income Payments															
11/21/17	11/21/17	3135G0WJ8	AGCY BULET	FNMA	0.875	05/21/18				0.00	13,125.00	13,125.00			
Total for: Income Payments										0.00	13,125.00	13,125.00			
Tobacco Funds															
Income Payments															
12/08/17	12/08/17	313379DT3	AGCY BULET	FHLB	1.250	06/08/18				0.00	12,500.00	12,500.00			
Total for: Income Payments										0.00	12,500.00	12,500.00			

Trade Date	Settle Date	CUSIP	Security Type	Security Description	Coupon	Mty Date	Call Date	Par Value	Price	Principal Amount	Int Purchased / Received	Total Amount	Realized Gain / Loss	YTM	YTW

Total for All Portfolios

Transaction Type	Quantity	Total Amount	Realized G/L	YTM	YTW
Total Maturities	56,955,000.00	56,983,500.00		1.242	
Total Purchases	140,100,000.00	139,604,055.41		1.717	1.717
Total Income Payments	0.00	888,778.13			

FirstSouthwest AssetManagement
A Hilltop Holdings Company.

Williamson County
Amortization and Accretion
From 09/30/2017 to 12/31/2017

CUSIP	Settle Date	Security Type	Security Description	Next Call Date	Purchase Qty	Orig Price	Original Cost	Amrt/Accr for Period	Total Amrt/Accr Since Purch	Remaining Disc / Prem	Book Value
2013 Park Bond											
92181NYF8	04/13/17	CP - DISC	Vanderbilt Univ 0.000 11/15/17		0.00	99.262	0.00	7,687.50	0.00	0.00	0.00
46640QC25	06/09/17	CP - DISC	J.P.Morgan Sec 0.000 03/02/18		5,000,000.00	98.958	4,947,908.33	18,016.65	40,341.67	11,750.00	4,988,250.00
48306BE35	11/15/17	CP - DISC	Kaiser Foundation Hospital 0.000 05/03/18		5,000,000.00	99.305	4,965,261.11	9,661.09	9,661.09	25,077.80	4,974,922.20
Total for 2013 Park Bond					10,000,000.00		9,913,169.44	35,365.24	50,002.76	36,827.80	9,963,172.20
2013 Road Bond											
79584JXS0	07/28/17	CP - DISC	Salvation Army 0.000 10/26/17		0.00	99.688	0.00	1,736.12	0.00	0.00	0.00
46640PZ14	03/07/17	CP - DISC	J.P.Morgan Sec 0.000 12/01/17		0.00	98.954	0.00	11,861.10	0.00	0.00	0.00
742651DK5	10/04/16	AGCY BULET	PEFCO 2.250 12/15/17		0.00	101.701	0.00	(17,446.84)	0.00	0.00	0.00
89233GZF6	03/24/17	CP - DISC	Toyota Mtr Cr 0.000 12/15/17		0.00	98.995	0.00	11,333.32	0.00	0.00	0.00
89233HA46	04/11/17	CP - DISC	Toyota Mtr Cr 0.000 01/04/18		8,000,000.00	99.002	7,920,195.56	27,395.52	78,911.08	893.36	7,999,106.64
912828UR9	03/09/17	TREAS NOTE	U.S. Treasury 0.750 02/28/18		6,000,000.00	99.652	5,979,140.63	5,447.76	17,424.97	3,434.40	5,996,565.60
46640QC58	06/12/17	CP - DISC	J.P.Morgan Sec 0.000 03/05/18		5,000,000.00	98.958	4,947,908.33	18,016.65	39,754.17	12,337.50	4,987,662.50
79583TC86	12/07/17	CP - DISC	Salvation Army 0.000 03/08/18		2,200,000.00	99.626	2,191,769.56	2,261.11	2,261.11	5,969.33	2,194,030.67
46640QCL3	06/26/17	CP - DISC	J.P.Morgan Sec 0.000 03/20/18		5,000,000.00	98.895	4,944,745.83	19,038.90	39,112.52	16,141.65	4,983,858.35
3133EG3A1	01/31/17	AGCY BULET	FFCB 1.040 04/04/18		9,000,000.00	100.058	9,005,256.00	(1,118.79)	(4,099.68)	(1,156.32)	9,001,156.32
92181PD90	09/01/17	CP - DISC	Vanderbilt Univ 0.000 04/09/18		7,000,000.00	99.132	6,939,255.56	25,402.16	33,685.52	27,058.92	6,972,941.08
912828QG8	04/27/17	TREAS NOTE	U.S. Treasury 2.625 04/30/18		7,000,000.00	101.504	7,105,273.44	(26,422.06)	(70,852.55)	(34,420.89)	7,034,420.89
36164KEE7	08/22/17	CP - DISC	GE Capital Treasury 0.000 05/14/18		4,000,000.00	98.969	3,958,777.78	14,311.12	20,533.34	20,688.88	3,979,311.12
46640QEV9	09/01/17	CP - DISC	J.P.Morgan Sec 0.000 05/29/18		5,000,000.00	98.845	4,942,250.00	19,677.80	26,094.45	31,655.55	4,968,344.45
313379DT3	02/13/17	AGCY BULET	FHLB 1.250 06/08/18		9,000,000.00	100.300	9,027,000.00	(5,123.97)	(18,027.63)	(8,972.37)	9,008,972.37
46640QGL9	10/26/17	CP - DISC	J.P.Morgan Sec 0.000 07/20/18		2,000,000.00	98.754	1,975,080.00	6,253.34	6,253.34	18,666.66	1,981,333.34
912828QY9	07/07/17	TREAS NOTE	U.S. Treasury 2.250 07/31/18		5,000,000.00	101.000	5,050,000.00	(11,694.70)	(22,644.85)	(27,355.15)	5,027,355.15
46640QHX2	12/08/17	CP - DISC	J.P.Morgan Sec 0.000 08/31/18		4,700,000.00	98.633	4,635,753.61	5,796.67	5,796.67	58,449.72	4,641,550.28
3130ACYC2	12/08/17	AGCY BULET	FHLB 1.625 12/04/18		20,000,000.00	99.910	19,982,000.00	1,159.00	1,159.00	16,841.00	19,983,159.00
3133EHP23	12/08/17	AGCY BULET	FFCB 1.500 02/06/19		5,000,000.00	99.716	4,985,800.00	768.80	768.80	13,431.20	4,986,568.80
3133782M2	12/08/17	AGCY BULET	FHLB 1.500 03/08/19		16,000,000.00	99.675	15,942,600.00	2,118.84	2,118.84	55,281.16	15,944,718.84
3130ABKQ8	12/18/17	AGCY CALL	FHLB 1.500 06/28/19	03/28/18	19,675,000.00	99.427	19,562,262.25	2,665.96	2,665.96	110,071.79	19,564,928.21
Total for 2013 Road Bond					139,575,000.00		139,095,068.55	113,437.81	160,915.06	319,016.39	139,255,983.61

FirstSouthwest
AssetManagement
A Hilltop Holdings Company.

Williamson County
Amortization and Accretion
From 09/30/2017 to 12/31/2017

CUSIP	Settle Date	Security Type	Security Description	Next Call Date	Purchase Qty	Orig Price	Original Cost	Amrt/Accr for Period	Total Amrt/Accr Since Purch	Remaining Disc / Prem	Book Value
2015 CO Bonds											
46640PZN6	03/31/17	CP - DISC	J.P.Morgan Sec 0.000 12/22/17		0.00	98.921	0.00	26,604.48	0.00	0.00	0.00
3133EG3A1	01/31/17	AGCY BULET	FFCB 1.040 04/04/18		6,000,000.00	100.058	6,003,504.00	(745.86)	(2,733.12)	(770.88)	6,000,770.88
3135G0WJ8	06/12/17	AGCY BULET	FNMA 0.875 05/21/18		3,000,000.00	99.668	2,990,040.00	2,643.15	5,837.31	4,122.69	2,995,877.31
Total for 2015 CO Bonds					**9,000,000.00**		**8,993,544.00**	**28,501.77**	**3,104.19**	**3,351.81**	**8,996,648.19**
Conservation Fund											
46640QB67	08/04/17	CP - DISC	J.P.Morgan Sec 0.000 02/06/18		1,000,000.00	99.261	992,611.67	3,654.44	5,958.33	1,430.00	998,570.00
3130A8PK3	02/06/17	AGCY BULET	FHLB 0.625 08/07/18		1,500,000.00	99.325	1,489,875.00	1,684.38	6,064.32	4,060.68	1,495,939.32
Total for Conservation Fund					**2,500,000.00**		**2,482,486.67**	**5,338.82**	**12,022.65**	**5,490.68**	**2,494,509.32**
Future Environmental Liability											
46640PZ14	03/08/17	CP - DISC	J.P.Morgan Sec 0.000 12/01/17		0.00	98.958	0.00	3,558.33	0.00	0.00	0.00
912828WD8	12/01/17	TREAS NOTE	U.S. Treasury 1.250 10/31/18		1,525,000.00	99.648	1,519,638.67	500.70	500.70	4,860.63	1,520,139.37
Total for Future Environmental Liability					**1,525,000.00**		**1,519,638.67**	**4,059.03**	**500.70**	**4,860.63**	**1,520,139.37**

CUSIP	Settle Date	Security Type	Security Description	Next Call Date	Purchase Qty	Orig Price	Original Cost	Amrt/Accr for Period	Total Amrt/Accr Since Purch	Remaining Disc / Prem	Book Value
General Fund											
46640PX24	01/06/17	CP - DISC	J.P.Morgan Sec 0.000 10/02/17		0.00	98.954	0.00	116.67	0.00	0.00	0.00
89233GX35	01/06/17	CP - DISC	Toyota Mtr Cr 0.000 10/03/17		0.00	99.018	0.00	582.24	0.00	0.00	0.00
91514BAA1	05/02/17	CP - INT	Univ of TX 1.200 10/20/17		0.00	100.000	0.00	0.00	0.00	0.00	0.00
3134G7V99	10/29/15	AGCY CALL	FHLMC 0.830 10/27/17		0.00	100.000	0.00	0.00	0.00	0.00	0.00
74081JYM1	06/29/17	CP - DISC	Harvard Univ 0.000 11/21/17		0.00	99.497	0.00	7,968.73	0.00	0.00	0.00
89233HBD5	12/15/17	CP - DISC	Toyota Mtr Cr 0.000 02/13/18		7,000,000.00	99.755	6,982,850.00	4,859.19	4,859.19	12,290.81	6,987,709.19
313378A43	10/29/15	AGCY BULET	FHLB 1.375 03/09/18		5,000,000.00	101.332	5,066,617.00	(7,107.80)	(61,246.65)	(5,370.35)	5,005,370.35
79584KCN1	12/20/17	CP - DISC	Salvation Army 0.000 03/22/18		7,000,000.00	99.586	6,971,020.00	3,780.00	3,780.00	25,200.00	6,974,800.00
3134G7M73	09/30/15	AGCY CALL	FHLMC 1.000 03/30/18	12/30/17	5,000,000.00	100.000	5,000,000.00	0.00	0.00	0.00	5,000,000.00
8827234A4	11/02/16	MUNICIPAL	TX Trans Comm Hwy Impt GO 5.000 04/01/18		2,000,000.00	105.775	2,115,500.00	(20,501.76)	(94,998.24)	(20,501.76)	2,020,501.76
4497W1DP8	12/20/17	CP - DISC	ING Funding 0.000 04/23/18		7,000,000.00	99.428	6,959,975.56	3,873.36	3,873.36	36,151.08	6,963,848.92
48306BE35	11/15/17	CP - DISC	Kaiser Foundation Hospital 0.000 05/03/18		7,000,000.00	99.305	6,951,365.56	13,525.52	13,525.52	35,108.92	6,964,891.08
3134G9JD0	05/17/16	AGCY CALL	FHLMC 1.000 05/11/18	11/11/17	5,000,000.00	100.000	5,000,000.00	0.00	0.00	0.00	5,000,000.00
74081KEB4	12/20/17	CP - DISC	Harvard Univ 0.000 05/11/18		7,000,000.00	99.345	6,954,165.56	3,873.36	3,873.36	41,961.08	6,958,038.92
89233HF41	12/20/17	CP - DISC	Toyota Mtr Cr 0.000 06/04/18		7,000,000.00	99.225	6,945,773.33	3,919.98	3,919.98	50,306.69	6,949,693.31
313379DT3	06/16/17	AGCY BULET	FHLB 1.250 06/08/18		7,000,000.00	99.977	6,998,390.00	411.81	892.36	717.64	6,999,282.36
46640QFV8	10/03/17	CP - DISC	J.P.Morgan Sec 0.000 06/29/18		3,000,000.00	98.790	2,963,685.00	12,150.00	12,150.00	24,165.00	2,975,835.00
742651DS8	06/28/17	AGCY BULET	PEFCO 1.875 07/15/18		1,800,000.00	100.569	1,810,236.60	(2,437.57)	(4,949.96)	(5,286.64)	1,805,286.64
912828K82	12/20/17	TREAS NOTE	U.S. Treasury 1.000 08/15/18		7,000,000.00	99.605	6,972,382.81	1,374.47	1,374.47	26,242.72	6,973,757.28
36164KJA0	12/20/17	CP - DISC	GE Capital Treasury 0.000 09/10/18		7,000,000.00	98.665	6,906,573.33	4,246.67	4,246.67	89,180.00	6,910,820.00
3134G9NM5	06/28/16	AGCY CALL	FHLMC 1.150 09/28/18	12/28/17	5,500,000.00	100.000	5,500,000.00	0.00	0.00	0.00	5,500,000.00
23542JBD6	07/07/16	MUNICIPAL	Dallas Wtrwks & Swr 0.985 10/01/18		5,000,000.00	100.000	5,000,000.00	0.00	0.00	0.00	5,000,000.00
3133EFLY1	10/29/15	AGCY BULET	FFCB 0.930 10/29/18		5,000,000.00	99.874	4,993,680.00	529.70	4,558.30	1,761.70	4,998,238.30
3136G1KL2	05/25/17	AGCY CALL	FNMA 1.150 10/30/18	10/30/17	7,000,000.00	99.750	6,982,500.00	3,050.95	7,313.32	10,186.68	6,989,813.32
742651DG4	02/17/17	AGCY BULET	PEFCO 4.375 03/15/19		2,000,000.00	106.019	2,120,380.00	(14,442.86)	(50,114.80)	(70,265.20)	2,070,265.20
3133EGZK4	10/31/16	AGCY CALL	FFCB 1.070 04/24/19		7,000,000.00	99.841	6,988,870.00	1,119.58	5,199.39	5,930.61	6,994,069.39
3135G0T86	11/09/17	AGCY CALL	FNMA 1.950 11/09/20	02/09/18	5,000,000.00	99.930	4,996,500.00	164.40	164.40	3,335.60	4,996,664.40
Total for General Fund					121,300,000.00		121,180,464.75	21,056.64	(141,579.33)	261,114.58	121,038,885.42

Williamson County
Amortization and Accretion
From 09/30/2017 to 12/31/2017

CUSIP	Settle Date	Security Type	Security Description	Next Call Date	Purchase Qty	Orig Price	Original Cost	Amrt/Accr for Period	Total Amrt/Accr Since Purch	Remaining Disc / Prem	Book Value
Passthrough Toll Reimb											
313313VJ4	06/09/17	AGCY DISCO	FFCB 0.000 04/10/18		8,000,000.00	98.983	7,918,666.67	24,533.36	54,933.33	26,400.00	7,973,600.00
3133EF3B1	04/27/17	AGCY BULET	FFCB 0.750 04/18/18		6,155,000.00	99.639	6,132,780.45	5,706.11	15,428.98	6,790.57	6,148,209.43
3130A4GJ5	05/04/17	AGCY BULET	FHLB 1.125 04/25/18		4,800,000.00	99.963	4,798,224.00	455.52	1,198.80	577.20	4,799,422.80
3130A9AE1	09/08/17	AGCY BULET	FHLB 0.875 10/01/18		8,615,000.00	99.571	8,578,041.65	8,657.30	10,875.23	26,083.12	8,588,916.88
313376BR5	09/22/17	AGCY BULET	FHLB 1.750 12/14/18		3,600,000.00	100.451	3,616,254.00	(3,271.61)	(3,597.91)	(12,656.09)	3,612,656.09
Total for Passthrough Toll Reimb					31,170,000.00		31,043,966.77	36,080.68	78,838.43	47,194.80	31,122,805.20
Road and Bridge General											
313313SV1	04/04/17	AGCY DISCO	FFCB 0.000 02/08/18		5,000,000.00	99.079	4,953,930.56	13,672.25	40,422.24	5,647.20	4,994,352.80
89233HBC7	05/26/17	CP - DISC	Toyota Mtr Cr 0.000 02/12/18		3,000,000.00	99.032	2,970,961.67	10,196.67	24,383.32	4,655.01	2,995,344.99
3135G0WJ8	06/09/17	AGCY BULET	FNMA 0.875 05/21/18		3,000,000.00	99.665	2,989,950.00	2,643.66	5,926.11	4,123.89	2,995,876.11
742651DS8	07/25/17	AGCY BULET	PEFCO 1.875 07/15/18		5,000,000.00	100.555	5,027,750.00	(7,110.45)	(12,324.80)	(15,425.20)	5,015,425.20
Total for Road and Bridge General					16,000,000.00		15,942,592.23	19,402.13	58,406.87	(999.10)	16,000,999.10
Tobacco Funds											
313379DT3	05/24/17	AGCY BULET	FHLB 1.250 06/08/18		2,000,000.00	100.036	2,000,712.00	(171.78)	(411.00)	(301.00)	2,000,301.00
Total for Tobacco Funds					2,000,000.00		2,000,712.00	(171.78)	(411.00)	(301.00)	2,000,301.00
Total for Williamson County					333,070,000.00		332,171,643.08	263,070.34	221,800.33	676,556.59	332,393,443.41

CUSIP	Security Type	Security Description	Pay Date	Interest	Principal	Total Amount
2013 Park Bond						
46640QC25	CP - DISC	J.P.Morgan Sec 0.000 03/02/18	03/02/18	0.00	5,000,000.00	5,000,000.00
48306BE35	CP - DISC	Kaiser Foundation Hospital 0.000 05/03/18	05/03/18	0.00	5,000,000.00	5,000,000.00
Total for 2013 Park Bond				**0.00**	**10,000,000.00**	**10,000,000.00**
2013 Road Bond						
89233HA46	CP - DISC	Toyota Mtr Cr 0.000 01/04/18	01/04/18	0.00	8,000,000.00	8,000,000.00
912828QY9	TREAS NOTE	U.S. Treasury 2.250 07/31/18	01/31/18	56,250.00	0.00	56,250.00
3133EHP23	AGCY BULET	FFCB 1.500 02/06/19	02/06/18	18,750.00	0.00	18,750.00
912828UR9	TREAS NOTE	U.S. Treasury 0.750 02/28/18	02/28/18	22,500.00	6,000,000.00	6,022,500.00
46640QC58	CP - DISC	J.P.Morgan Sec 0.000 03/05/18	03/05/18	0.00	5,000,000.00	5,000,000.00
3133782M2	AGCY BULET	FHLB 1.500 03/08/19	03/08/18	120,000.00	0.00	120,000.00
79583TC86	CP - DISC	Salvation Army 0.000 03/08/18	03/08/18	0.00	2,200,000.00	2,200,000.00
46640QCL3	CP - DISC	J.P.Morgan Sec 0.000 03/20/18	03/20/18	0.00	5,000,000.00	5,000,000.00
3133EG3A1	AGCY BULET	FFCB 1.040 04/04/18	04/04/18	46,800.00	9,000,000.00	9,046,800.00
92181PD90	CP - DISC	Vanderbilt Univ 0.000 04/09/18	04/09/18	0.00	7,000,000.00	7,000,000.00
912828QG8	TREAS NOTE	U.S. Treasury 2.625 04/30/18	04/30/18	91,875.00	7,000,000.00	7,091,875.00
36164KEE7	CP - DISC	GE Capital Treasury 0.000 05/14/18	05/14/18	0.00	4,000,000.00	4,000,000.00
46640QEV9	CP - DISC	J.P.Morgan Sec 0.000 05/29/18	05/29/18	0.00	5,000,000.00	5,000,000.00
3130ACYC2	AGCY BULET	FHLB 1.625 12/04/18	06/04/18	162,500.00	0.00	162,500.00
313379DT3	AGCY BULET	FHLB 1.250 06/08/18	06/08/18	56,250.00	9,000,000.00	9,056,250.00
3130ABKQ8	AGCY CALL	FHLB 1.500 06/28/19	06/28/18	147,562.50	0.00	147,562.50
Total for 2013 Road Bond				**722,487.50**	**67,200,000.00**	**67,922,487.50**
2015 CO Bonds						
3133EG3A1	AGCY BULET	FFCB 1.040 04/04/18	04/04/18	31,200.00	6,000,000.00	6,031,200.00
3135G0WJ8	AGCY BULET	FNMA 0.875 05/21/18	05/21/18	13,125.00	3,000,000.00	3,013,125.00
Total for 2015 CO Bonds				**44,325.00**	**9,000,000.00**	**9,044,325.00**

CUSIP	Security Type	Security Description	Pay Date	Interest	Principal	Total Amount
Conservation Fund						
46640QB67	CP - DISC	J.P.Morgan Sec 0.000 02/06/18	02/06/18	0.00	1,000,000.00	1,000,000.00
3130A8PK3	AGCY BULET	FHLB 0.625 08/07/18	02/07/18	4,687.50	0.00	4,687.50
Total for Conservation Fund				**4,687.50**	**1,000,000.00**	**1,004,687.50**
Future Environmental Liability						
912828WD8	TREAS NOTE	U.S. Treasury 1.250 10/31/18	04/30/18	9,531.25	0.00	9,531.25
Total for Future Environmental Liability				**9,531.25**	**0.00**	**9,531.25**
General Fund						
742651DS8	AGCY BULET	PEFCO 1.875 07/15/18	01/15/18	16,875.00	0.00	16,875.00
89233HBD5	CP - DISC	Toyota Mtr Cr 0.000 02/13/18	02/13/18	0.00	7,000,000.00	7,000,000.00
912828K82	TREAS NOTE	U.S. Treasury 1.000 08/15/18	02/15/18	35,000.00	0.00	35,000.00
313378A43	AGCY BULET	FHLB 1.375 03/09/18	03/09/18	34,375.00	5,000,000.00	5,034,375.00
742651DG4	AGCY BULET	PEFCO 4.375 03/15/19	03/15/18	43,750.00	0.00	43,750.00
79584KCN1	CP - DISC	Salvation Army 0.000 03/22/18	03/22/18	0.00	7,000,000.00	7,000,000.00
3134G9NM5	AGCY CALL	FHLMC 1.150 09/28/18	03/28/18	31,625.00	0.00	31,625.00
3134G7M73	AGCY CALL	FHLMC 1.000 03/30/18	03/30/18	25,000.00	5,000,000.00	5,025,000.00
23542JBD6	MUNICIPAL	Dallas Wtrwks & Swr 0.985 10/01/18	04/01/18	24,625.00	0.00	24,625.00
8827234A4	MUNICIPAL	TX Trans Comm Hwy Impt GO 5.000 04/01/18	04/01/18	50,000.00	2,000,000.00	2,050,000.00
4497W1DP8	CP - DISC	ING Funding 0.000 04/23/18	04/23/18	0.00	7,000,000.00	7,000,000.00
3133EGZK4	AGCY CALL	FFCB 1.070 04/24/19	04/24/18	37,450.00	0.00	37,450.00
3133EFLY1	AGCY BULET	FFCB 0.930 10/29/18	04/29/18	23,250.00	0.00	23,250.00
3136G1KL2	AGCY CALL	FNMA 1.150 10/30/18	04/30/18	40,250.00	0.00	40,250.00
48306BE35	CP - DISC	Kaiser Foundation Hospital 0.000 05/03/18	05/03/18	0.00	7,000,000.00	7,000,000.00
3135G0T86	AGCY CALL	FNMA 1.950 11/09/20	05/09/18	48,750.00	0.00	48,750.00
3134G9JD0	AGCY CALL	FHLMC 1.000 05/11/18	05/11/18	25,000.00	5,000,000.00	5,025,000.00
74081KEB4	CP - DISC	Harvard Univ 0.000 05/11/18	05/11/18	0.00	7,000,000.00	7,000,000.00
89233HF41	CP - DISC	Toyota Mtr Cr 0.000 06/04/18	06/04/18	0.00	7,000,000.00	7,000,000.00
313379DT3	AGCY BULET	FHLB 1.250 06/08/18	06/08/18	43,750.00	7,000,000.00	7,043,750.00
46640QFV8	CP - DISC	J.P.Morgan Sec 0.000 06/29/18	06/29/18	0.00	3,000,000.00	3,000,000.00
Total for General Fund				**479,700.00**	**69,000,000.00**	**69,479,700.00**

CUSIP	Security Type	Security Description	Pay Date	Interest	Principal	Total Amount
Passthrough Toll Reimb						
3130A9AE1	AGCY BULET	FHLB 0.875 10/01/18	04/01/18	37,690.62	0.00	37,690.62
313313VJ4	AGCY DISCO	FFCB 0.000 04/10/18	04/10/18	0.00	8,000,000.00	8,000,000.00
3133EF3B1	AGCY BULET	FFCB 0.750 04/18/18	04/18/18	23,081.25	6,155,000.00	6,178,081.25
3130A4GJ5	AGCY BULET	FHLB 1.125 04/25/18	04/25/18	27,000.00	4,800,000.00	4,827,000.00
313376BR5	AGCY BULET	FHLB 1.750 12/14/18	06/14/18	31,500.00	0.00	31,500.00
Total for Passthrough Toll Reimb				**119,271.87**	**18,955,000.00**	**19,074,271.87**
Road and Bridge General						
742651DS8	AGCY BULET	PEFCO 1.875 07/15/18	01/15/18	46,875.00	0.00	46,875.00
313313SV1	AGCY DISCO	FFCB 0.000 02/08/18	02/08/18	0.00	5,000,000.00	5,000,000.00
89233HBC7	CP - DISC	Toyota Mtr Cr 0.000 02/12/18	02/12/18	0.00	3,000,000.00	3,000,000.00
3135G0WJ8	AGCY BULET	FNMA 0.875 05/21/18	05/21/18	13,125.00	3,000,000.00	3,013,125.00
Total for Road and Bridge General				**60,000.00**	**11,000,000.00**	**11,060,000.00**
Tobacco Funds						
313379DT3	AGCY BULET	FHLB 1.250 06/08/18	06/08/18	12,500.00	2,000,000.00	2,012,500.00
Total for Tobacco Funds				**12,500.00**	**2,000,000.00**	**2,012,500.00**

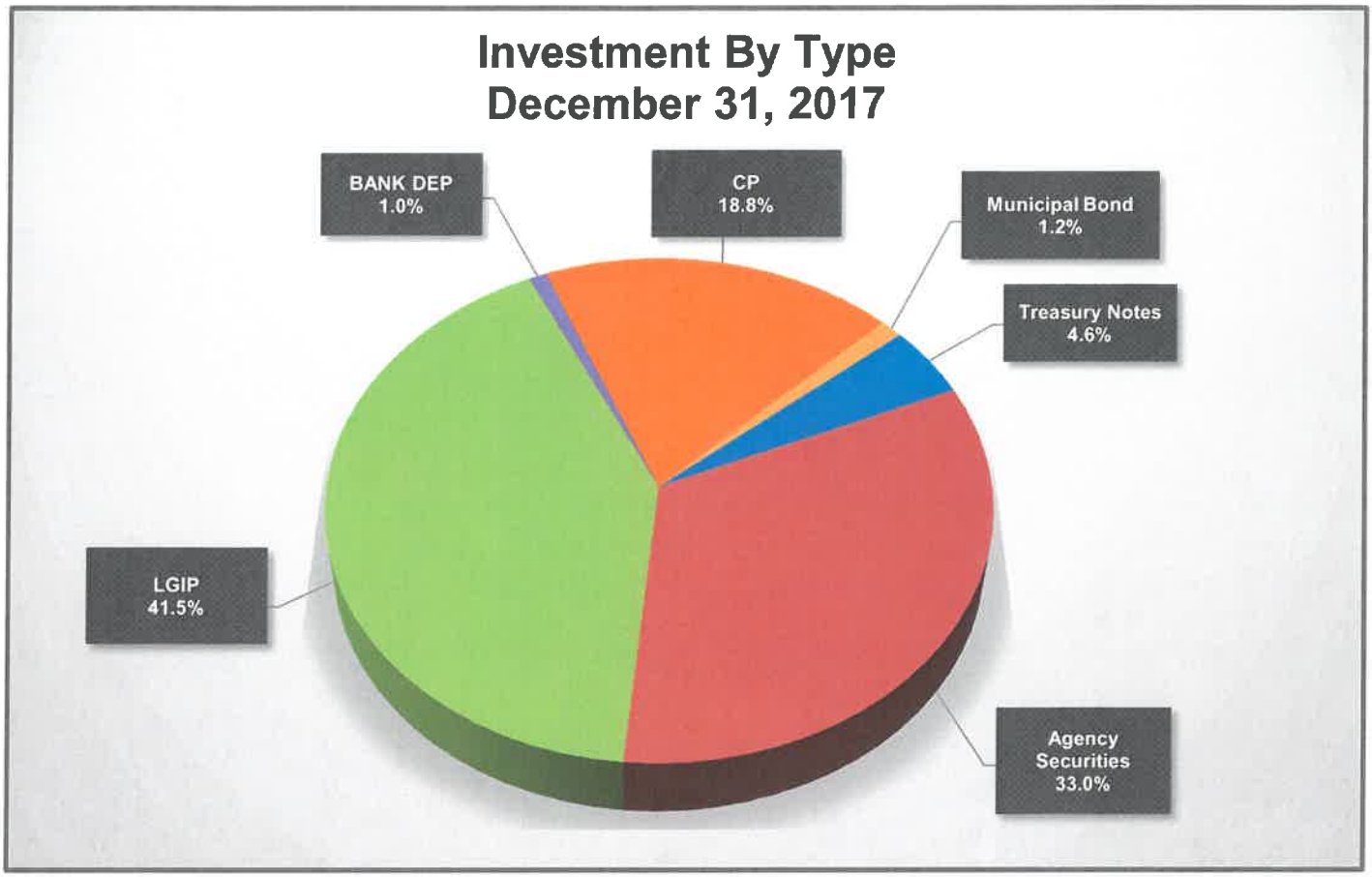
FirstSouthwest AssetManagement
A Hilltop Holdings Company.

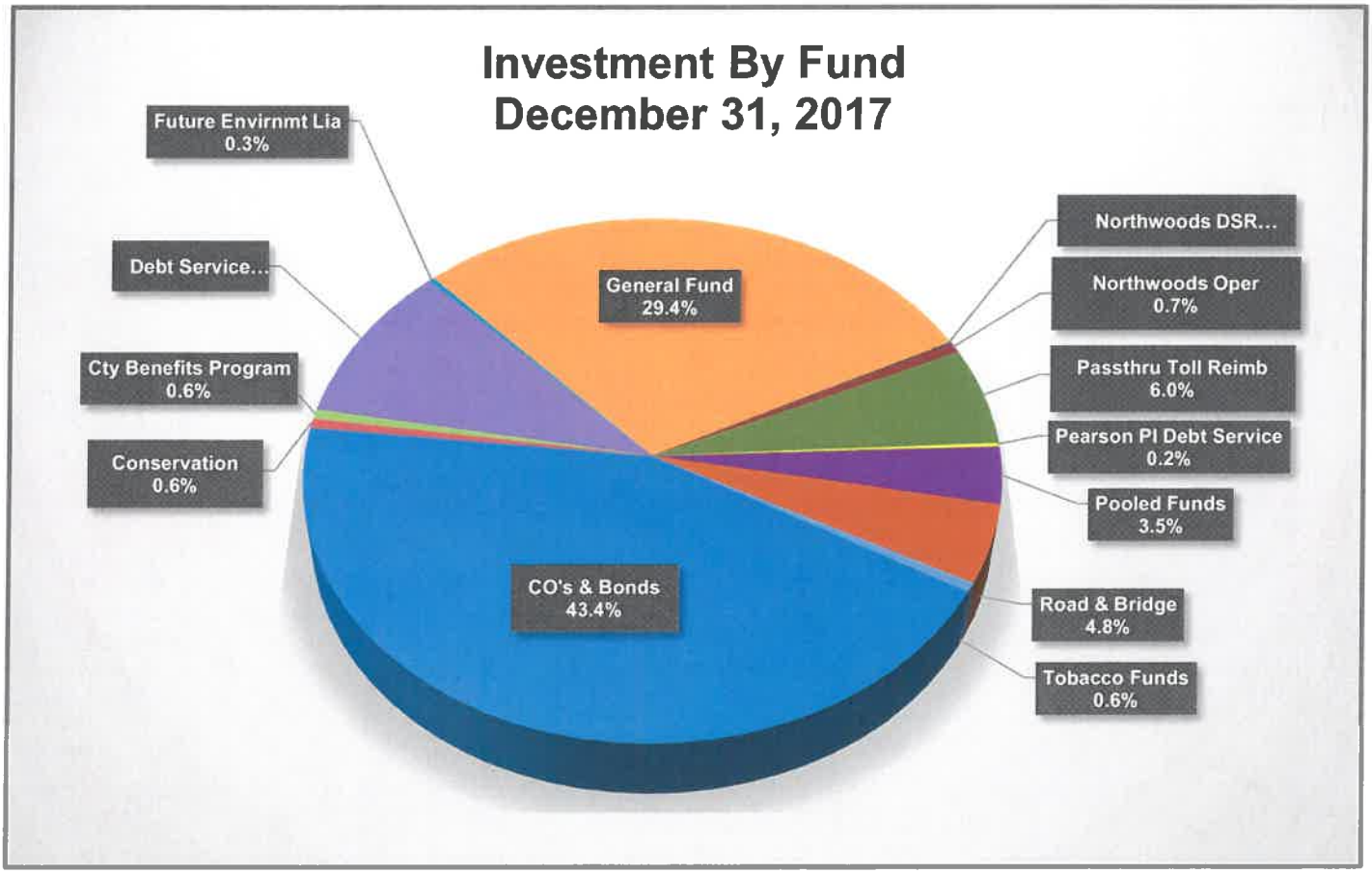
Williamson County

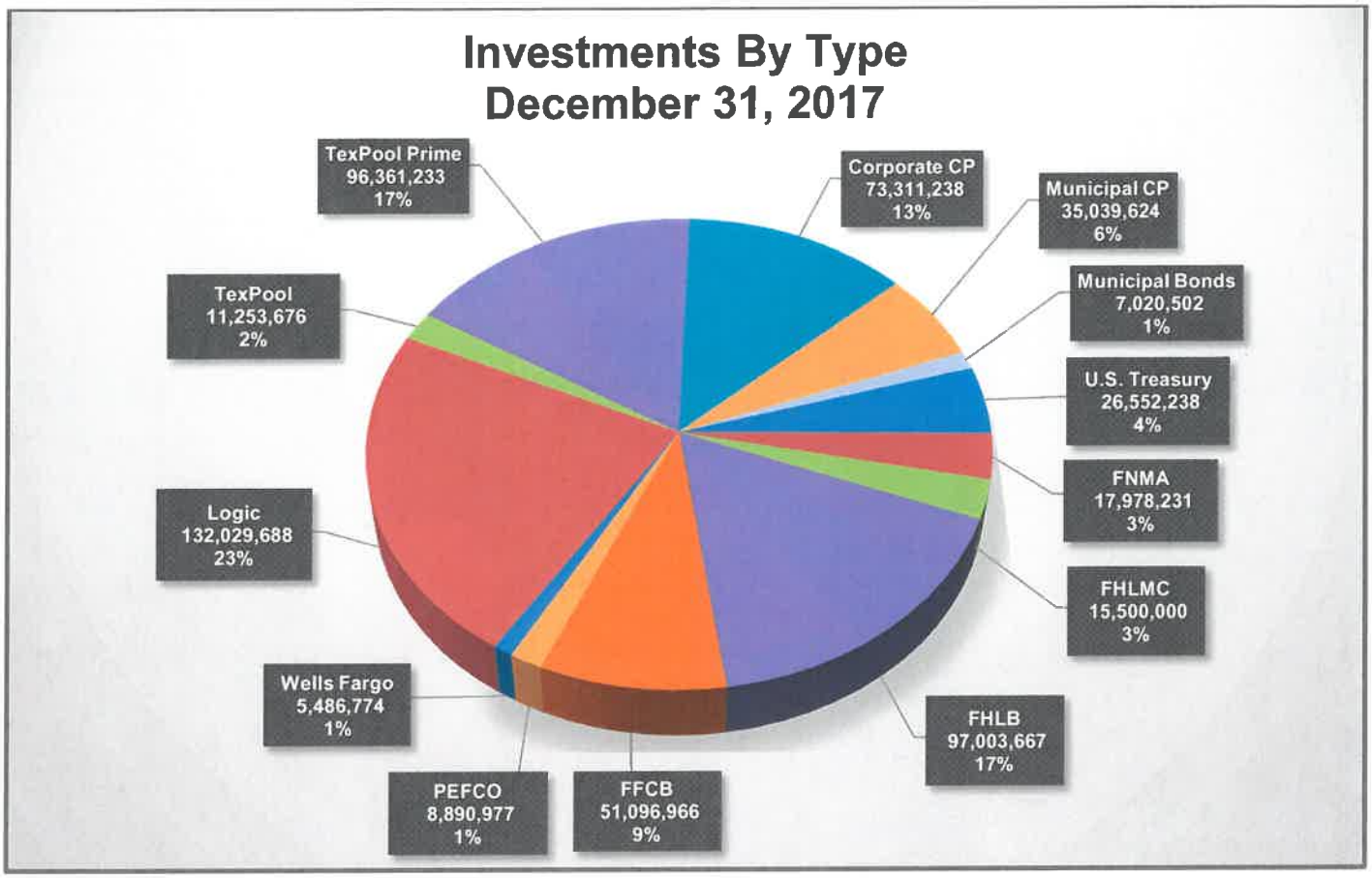
Projected Cash Flows

Cash Flows for next 180 days from 12/31/2017

CUSIP	Security Type	Security Description	Pay Date	Interest	Principal	Total Amount
Total for All Portfolios						
			January 2018	120,000.00	8,000,000.00	8,120,000.00
			February 2018	80,937.50	22,000,000.00	22,080,937.50
			March 2018	254,750.00	34,200,000.00	34,454,750.00
			April 2018	442,753.12	56,955,000.00	57,397,753.12
			May 2018	100,000.00	39,000,000.00	39,100,000.00
			June 2018	454,062.50	28,000,000.00	28,454,062.50
		Total Projected Cash Flows for Williamson County		**1,452,503.12**	**188,155,000.00**	**189,607,503.12**


Investment By Type
December 31, 2017
BANK DEP
1.0%
CP
18.8%
Municipal Bond
1.2%
Treasury Notes
4.6%
LGIP
41.5%
Agency
Securities
33.0%


Investment By Fund
December 31, 2017
Future Envirnmt Lia
0.3%
Debt Service...
Cty Benefits Program
0.6%
Conservation
0.6%
General Fund
29.4%
CO's & Bonds
43.4%
Northwoods DSR...
Northwoods Oper
0.7%
Passthru Toll Reimb
6.0%
Pearson PI Debt Service
0.2%
Pooled Funds
3.5%
Road & Bridge
4.8%
Tobacco Funds
0.6%


Investments By Type
December 31, 2017
TexPool Prime
96,361,233
17%
Corporate CP
73,311,238
13%
Municipal CP
35,039,624
6%
Municipal Bonds
7,020,502
1%
U.S. Treasury
26,552,238
4%
FNMA
17,978,231
3%
FHLMC
15,500,000
3%
FHLB
97,003,667
17%
FFCB
51,096,966
9%
PEFCO
8,890,977
1%
Wells Fargo
5,486,774
1%
Logic
132,029,688
23%
TexPool
11,253,676
2%


Investments By Maturity
December 31, 2017
Millions
$300
$250
$200
$150
$100
$50
$0
Pools
0-3 Months
3-6 Months
6-9 Months
9-12 Months
1-2 Years
2-3 Years
Over 3 Years

Commissioners Court - Regular Session **30.**

Meeting Date: 02/20/2018

2018 Invemstment Policy

Submitted For: David Heselmeyer **Submitted By:** David Heselmeyer, County Treasurer

Department: County Treasurer

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take action on approving revisions to the Williamson County Investment Policy, which were approved by the Investment Committee on October 24, 2017.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Investment Policy Redline

Investment Policy Clean

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM
Form Started By: David Heselmeyer		Started On: 02/14/2018 10:47 AM
Final Approval Date: 02/14/2018		

WILLIAMSON COUNTY

INVESTMENT POLICY

JANUARY 2018~~7~~

WILLIAMSON COUNTY
INVESTMENT POLICY
January ~~2016~~2018

I. INVESTMENT AUTHORITY

In accordance with Section 116.112(a) of the Local Government Code and/or Title X, Chapter 2256, Section 2256.005 (f) and (g), the Williamson County Treasurer, under the direction of the Williamson County Commissioners' Court (the "Court"), may invest the County funds that are not immediately required to pay obligations of Williamson County (the "County"). The Treasurer shall act as the Investment Officer of the County. The Commissioners' Court may designate one or more county officers or employees as Investment Officers to assist the Treasurer in investment related duties.

Not less than annually, the Court shall adopt a written resolution stating that it has reviewed the Investment Policy and that the written instrument so adopted shall record any amendments made to the Investment Policy.

II. SCOPE

This Investment Policy and Strategy applies to all County funds including General Revenue, Road and Bridge, Tobacco, Construction, Reserve funds, Debt Service funds and funds of the County Benefits Program. Additional non-county funds are listed in Section IX of this policy.

III. INVESTMENT OBJECTIVES

111.1 General Statement

Funds of the County will be invested in compliance with federal and state laws, this investment policy and written administrative procedures. The County will invest according to investment strategies for each group of funds as they are adopted by the Court's resolution.

111.2 Safety and Maintenance of Liquidity

The County is concerned about the return of its principal; therefore, safety of principal is a primary objective in any investment transaction. The County's investment portfolio must be structured in conformance with an asset/liability management plan that provides for liquidity necessary to pay obligations as they become due.

111.3 Diversification

It will be the policy of the County to diversify its portfolio to eliminate the risk of loss resulting from a concentration of assets in a specific maturity (save and except zero duration funds), a specific issuer or a specific class of investments. Investments of the County shall always be selected to provide stability of income and reasonable liquidity.

111.4 Yield

The yield objective of the County is to earn the maximum return on its investments within policy guidelines imposed by safety and liquidity objectives, investment strategies for each group of funds as well as state and federal law governing investment of public funds. Investment performance will be measured by weighted average yield to maturity at cost.

111.5 Maturity

Portfolio maturities will be structured to meet the obligations of the County first and then to achieve the highest rate of return of interest. When the County has funds not required to meet current-year obligations, maturity restraints will be imposed upon the investment strategy for each group of funds. The maximum allowable stated maturity of any individual investment owned by the County is three (3) years.

111.6 Quality and Capability of Investment Management

It is the County's policy to provide training as required by the Public Funds Investment Act. Periodic training in investments, policy and procedures for the County Investment Officer and members of the Investment Advisory Committee will be provided through courses and seminars offered by professional organizations and associations in order to ensure the quality and capability of county investment decisions. The County Investment Officer will be required to attend at least 10 hours of investment training each fiscal year provided through an independent source approved by the County Commissioners' Court or the Investment Advisory Committee. Investment Advisory Committee members shall also be required to attend at least 10 hours of investment training ~~not less than once in a~~during each two-year ~~period that begins on the first day of the fiscal year and consists of two consecutive fiscal years after that date~~, such that, on September 30 of each year, each such member shall have attended at least 10 hours of investment training during the immediately preceding 24-month period. Certification of training for the Investment Officer and the Investment Advisory Committee members will be presented for acceptance and entry into the official minutes of the Court.

111.7 Competitive Bidding

In order to achieve a fair market price in all its investment transactions, the County requires a competitive bidding process for all individual security purchases and sales except for transactions in money market mutual funds, local government investment pools and depository "sweep" products.

At least three bids or offers must be solicited for all other transactions involving individual securities. The County's Investment Advisor is also required to solicit at least three bids or offers when transacting trades on the County's behalf. In situations where the exact security being offered is not offered by other dealers, offers on the closest comparable investment may be used to establish a fair market price for the security.

111.8 Investment Advisors

The County may designate, with approval from the Court, a professional investment advisory firm, registered with the Securities and Exchange Commission under the 1940 Investment Advisors Act, as well as the State Securities Board to assist the County in the management of its funds. This Investment Advisor shall act solely in an advisory and administrative capacity within the guidelines of this policy. The County's relationship with the advisor shall be governed by a formal management contract between the two parties.

IV. INVESTMENT OBJECTIVES

The overall investment objectives of the County shall be to:

- ✓ Match the suitability of investments to financial requirements;
- ✓ Achieve safety of principal;
- ✓ Maintain required liquidity;
- ✓ Diversify the portfolio by investment type, issuer and maturity sector; and
- ✓ Seek the highest possible yield within policy and cash flow constraints.

V. INVESTMENT RESPONSIBILITY AND CONTROL

V.1 Investment Advisory Committee

The Investment Advisory Committee reviews investment policies and procedures, investment strategies, and investment performances. Members of the Committee include the County Judge, a County Commissioner, the Tax Assessor/Collector, and the County Auditor. The County Investment Officer will serve as an ex-officio member of the committee. Members should have demonstrated knowledge and expertise in the area of finance, investments, or cash management. The Chair of the Committee will be elected by the Committee and the meetings will be quarterly or more frequently if needed.

V.2 Liability of Investment Officer

The County Investment Officer is not responsible for any loss of County funds through the failure or negligence of the depository bank. This policy does not release the Investment Officer, or any other person for a loss resulting from any act of official misconduct, or negligence, or for any misappropriation of such funds. The designated Investment Officers shall perform their duties in accordance with the adopted Investment Policy and internal procedures. Investment Officers acting in good faith and in accordance with these policies and procedures shall be relieved of personal liability provided deviations are reported to the Advisory Committee on a timely basis.

V.3 Audit

The Court will review the Investment Policy and Strategies annually and, at a minimum, will have an annual compliance audit of management controls on investments and adherence to established investment policies. The independent auditor will report the results of the audit to the Court after completion of the audit.

V.4 Standard of Care

Investments shall be made with judgment and care, under prevailing circumstances, that a person of prudence, discretion, and intelligence would exercise in the management of the person's own affairs, not for speculation, but for investment, considering the probable safety of capital and the probable income to be derived. Investment of funds shall be governed by the following investment objectives, in order of priority: preservation and safety of principal; liquidity; and yield.

In determining whether the investment officer has exercised prudence with respect to an investment decision, the determination shall be made taking into consideration:

- ✓ the investment of all funds, or funds under the County's control, over which the Investment Officer had responsibility rather than a consideration as to the prudence of a single investment; and,
- ✓ whether the investment decision was consistent with the written investment policy of the County.

V.5 Investment Institution Defined

The County Investment Officer shall invest County funds with any or all of the institutions or groups consistent with federal and state regulations and approved by the Court.

V.6 Qualifications for Approval of Broker/Dealer

A written copy of the investment policy shall be presented to any person offering to engage in an investment transaction with the County. Broker/dealers shall sign an acknowledgement of receipt of policy. The qualified representative of the business organization seeking to sell an authorized investment, specifically public funds investement pools and discretionary investment management firms, shall execute a written instrument, provided by the County that the business organizations has:

- ✓ received and thoroughly reviewed the investment policy of the County; and
- ✓ acknowledged that the organization has implemented reasonable procedures and controls in an effort to preclude imprudent investment activities arising out of investment transactions conducted between the County and the organization.

The investment officer may not buy any investment instrument from an entity that has not delivered to the County the instrument signed by the qualified representative.

Along with the signed affidavit the business organization shall supply the County with the following:

- ✓ Completed Broker/Dealer questionnaire.
- ✓ Completed Anti-Collusion Agreement.
- ✓ Financial statements (to be provided annually).
- ✓ Delivery instructions.
- ✓ Financial Institutions Regulatory Authority (FINRA) Certification Proof.
- ✓ Texas State Securities Commission Registration Proof.

On an annual basis, the Investment Advisory Committee shall review, revise and adopt a list of qualified brokers authorized to engage in investment transactions with the County.

If the County chooses to utilize the services of an Investment Advisor, the advisor shall be responsible for performing due diligence on the dealers with which it conducts investment transactions, shall present to the Investment Advisory Committee a list of approved broker dealers from which it obtains competitive offers and shall sign the required affidavit on behalf of these approved broker dealers.

V.7 Standards of Operation

The County Investment Officer shall develop and maintain written administrative procedures for the operation of the investment program set by the Commissioners' Court of the County. The County Investment Officer shall determine the amount of cash available for payments by the County, invest the funds not required in the performance of that duty, and shall exercise good judgment and discretion to effectuate the policies herein set forth. The County Investment Officer shall be authorized to delegate to an employee(s) the authority to place orders for such investments and to perform all acts required to

acquire, pay for, hold, sell, exchange, tender or collect investments. Such designated employee(s) must have achieved the same certifications and training hours as the County Investment Officer.

V.8 Delivery vs. Payment

It will be the policy of the County that all investment securities shall be purchased using "Delivery vs. Payment" (DVP) method through the Federal Reserve System. By doing so, the County funds are not released until the County has received through the Federal Reserve wire, the securities purchased.

V.9 Standard of Ethics

The designated Investment Officers shall act as custodians of the public trust avoiding any transaction which might involve a conflict of interest, the appearance of a conflict of interest, or any activity which might otherwise discourage public confidence. Investment Officers shall refrain from personal business activity that might conflict with proper execution of the investment program or might impair their ability to make impartial investment decisions. Additionally, all Investment Officers shall file with Williamson County and the Texas Ethics Commission a statement disclosing any personal business relationship with any organization seeking to sell investments to the County; or, any relationship within the second degree of affinity or consanguinity to an individual seeking to sell investments to the County. For purposes of this subsection, an Investment Officer has a personal business relationship with a business organization if:

- ✓ the Investment Officer owns 10 percent or more of the voting stock or shares of the business organization or owns $5,000 or more of the fair market value of the business organization;
- ✓ funds received by the Investment Officer from the business organization exceed 10 percent of the Investment Officer's gross income for the previous year; or
- ✓ the Investment Officer has acquired from the business organization during the previous year investments with a book value of $2,500 or more for the personal account of the Investment Officer.

V.10 Downgrade Provision for Investment Ratings

An Investment that requires a minimum rating does not qualify as an authorized investment during the period the investment does not have the minimum rating. The County shall take all prudent measures that are consistent with its Investment Policy to liquidate an investment that does not have the minimum rating. The County shall also monitor the credit ratings on securities that require minimum ratings. This may be accomplished through research, or with the assistance of broker dealers, banks, safekeeping agents or the County's investment advisor.

VI. INVESTMENT REPORTING

VI.1 Portfolio Market Valuation

All securities held in the County investment portfolio shall be priced at the current market value on a quarterly basis and reported as part of the Quarterly Investment Report. Regular mark-to-market pricing will ensure awareness of portfolio value and price volatility by County officials. Market values should be obtained from a reputable and independent source including but not limited to Bloomberg, the Wall Street Journal and Interactive Data Corporation (I D C).

VI.2 Quarterly Investment Report

Not less than quarterly, the investment officer shall prepare and submit to the County Investment Advisory Committee a written report of investment transactions for all funds for the preceding reporting period within a reasonable time after the end of the period. The report must:

1. describe in detail the investment position of the County on the date of the report;

2. be signed by all investment officers of the County;

3. contain a summary statement of each pooled fund group that states:

   - ✓ beginning market value for the reporting period;
   - ✓ additions and changes to the market value during the period; and
   - ✓ ending market value for the period;

4. state the book value and market value of each separately invested asset at the end of the reporting period by the type of asset and fund type invested;

5. state the maturity date of each separately invested asset that has a maturity date;

6. state the account or fund or pooled group fund in the County for which each individual investment was required; and

7. state compliance of the investment portfolio of the County as it relates to:

   - ✓ strategy expressed in the County's investment policy; and
   - ✓ relevant provisions of the chapter.

The independent auditor shall review reports annually with findings presented to the Court.

VI.3 Notification of Investment Changes

It shall be the duty of the Investment Officer of the County to notify the Court of any significant changes in current investment methods and procedures prior to their implementation, regardless of whether they are authorized by this policy or not.

VII. INVESTMENT COLLATERAL AND SAFEKEEPING

VII.1 Collateralization Policy

Consistent with the requirement of State law, the County requires that all bank deposits to be federally insured or collateralized with authorized securities. Financial institutions serving as county depositories are required to sign a Depository Agreement with the County and the County's safekeeping agent. The safekeeping portion of the Agreement will define the County's rights to collateral in the event of default, bankruptcy, or closing and will establish a perfected security interest in compliance with federal and state regulations. In addition, repurchase agreements must be fully collateralized during the term of the agreement.

VII.2 Allowable Collateral

Securities eligible as collateral are defined by the Public Funds Collateral Act, as amended, and include all securities permitted under the Public Funds Investment Act. Collateral adequacy shall be verified

against monthly safekeeping reports. More frequent verification may be required during periods of high market volatility.

Certificates of Deposit
The market value of the principal portion of collateral pledged for certificates of deposit must at all times be *equal to or greater than* the par value of the certificate of deposit plus accrued interest, less the applicable level of FDIC insurance.

Repurchase Agreements
A repurchase agreement's collateral level must be maintained at or above 102% of the agreement's outstanding balance plus accrued interest.

VII.3 Correcting Collateral Deficiencies

Certificates of Deposit
If the collateral pledged for a CD falls below the par value of the deposit, plus accrued interest less FDIC insurance, the Bank issuing the CD will be notified by the Investment Officers and will be required to pledge additional securities no later than the end of the next succeeding business day.

Repurchase Agreements
If the value of the securities underlying a repurchase agreement falls below the margin maintenance levels specified above, the Investment Officers will request additional securities. If the repurchase agreement is scheduled to mature within five business days and the amount is deemed to be immaterial, then the request is not necessary.

VII.4 Collateral Substitution

Collateralized certificates of deposit and repurchase agreements often require substitution of collateral. Any broker, dealer or financial institution requesting substitution must contact the Investment Officers for approval and settlement. The only exception to this shall be in the case of a flexible repurchase agreement in which a third-party safekeeping agent is contractually responsible for maintaining collateral at the agreed-upon percentage. The substituted security's value will be calculated and substitution approved if its value is equal to or greater than the required security level. Substitution is permitted, but should be limited if possible to minimize potential administrative problems and transfer expense. In the case of a flexible repurchase agreement, an independent third-party custodian shall be responsible for collateral substitution and maintaining proper securitization.

VII.5 Safekeeping

All purchased securities shall be registered in the County's name and held in safekeeping at a third-party financial institution, or with the Federal Reserve Bank.

All certificates of deposit, insured by the FDIC, purchased outside the County Depository Bank shall be held in safekeeping by the County.

VIII. INVESTMENT TYPES

VIII.1 Authorized Investments

The County Investment Officers shall use any or all of the following authorized investment instruments consistent with Title X, Chapter 2256 of the Texas Government Code:

1. Obligations of the United States or its agencies and instrumentalities, including FHLB letters of credit;

2. Direct obligations of this state or its agencies and instrumentalities;

3. No-load money market mutual funds if the mutual fund:

   - ✓ is regulated by the SEC;
   - ✓ has a dollar-weighted average stated maturity of 60 days or less;
   - ✓ includes in its investment objectives the maintenance of a stable $1.00 net asset value per each share;
   - ✓ is limited as to the amount invested per the requirements set forth in Chapter 2256, Government Code Section 2256.014; and
   - ✓ has supplied the County with a prospectus and other information required by the Securities Exchange Act of 1934 or the Investment Company Act of 1940;

4. Other obligations, the principal and interest of which are unconditionally guaranteed or insured by, or backed by the full faith and credit of this state or the United States or their respective agencies or instrumentalities, including any obligation that is fully guaranteed or insured by the Federal Deposit Insurance Corporation (FDIC).

5. Obligations of states, agencies, counties, cities, and other political subdivisions of any state rated as to investment quality by a nationally recognized investment firm not less than A or its equivalent;

6. Certificates of deposit, if issued by a state or national bank located in this state and:

   - ✓ guaranteed or insured by the Federal Deposit Insurance Corporation or its successor; and
   - ✓ secured in any other manner and amount provided by law for deposits of the County;

7. A fully collateralized repurchase agreement, if it:

   - ✓ has a defined termination date;
   - ✓ is secured by any combination of cash and obligations described by Section 2256.009 (a)(1) of the Public Funds Investment Act; and
   - ✓ requires the securities being purchased by the County to be pledged to the County, held in the county's name, and deposited at the time the investment is made with the County or with a third party selected and approved by the County; and
   - ✓ is placed through a primary government securities dealer, approved by the County, or a financial institution doing business in this state; and,
   - ✓ is supported by a Master Repurchase Agreement executed by both parties.

8. Commercial paper is an authorized investment, limited to no more than 10% of the total portfolio per issuer at the time of purchase and no more than 30% total concentration of commercial paper, if the commercial paper:

- ✓ has a stated maturity of 270 days or fewer from the date of its issuance; and,
- ✓ is rated not less than A-1 or P-1 or an equivalent rating by at least;

    1. two nationally recognized credit rating agencies; or
    2. one nationally recognized credit rating agency and is fully secured by an irrevocable letter of credit issued by a bank organized and existing under the laws of the United States or any state.

9. Eligible investment pools, as defined in the Public Funds Investment Act. Each pool requires a written resolution from the Court authorizing investment in the particular pool. The investment pool shall invest the funds it receives from entities in authorized investments permitted by the Public Funds Investment Act. The County by contract may delegate to an investment pool the authority to hold legal title as custodian of investments purchased with its local funds.

~~9.~~10. Interest bearing bank savings deposits issued by state and national banks or savings bank or a state or federal credit union (having their main or branch office in Texas) that are guaranteed or insured by the Federal Deposit Insurance Corporation or the National Credit Union Share Insurance Fund (or their successor organizations). Also included are collateralized interest bearing savings deposits that have secured the uninsured portion of deposits with obligations of the U.S. Treasury and/or Federal agencies and instrumentalities.

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VIII.2 Prohibited Investments

The following securities are not eligible investments for Williamson County:

- ✓ Obligations whose payment represents the coupon payments on the outstanding principal balance of the underlying mortgage-backed security collateral and pays no principal.
- ✓ Obligations whose payment represents the principal payments on the outstanding principal balance of the underlying mortgage-backed security collateral and pays no interest.
- ✓ Collateralized mortgage obligations (CMO's) that have a stated maturity date of greater than 10 years.
- ✓ CMO's having a coupon rate determined by an index that adjusts opposite to changes in a market index ('Inverse Floater")

IX. NON-COUNTY FUNDS

The following funds are designated as non-county because they are under the authority of a Williamson County official who chooses to invest the funds within the guidelines designated by the statutes of the State of Texas. These funds may not be considered funds that belong to the County but could be considered a liability for the County. All funds will be invested in compliance with the Public Funds Investment Act and the County's Investment Policy. An exception may be made when required by state law.

IX.1 Tax Assessor/Collector

County funds are invested to enhance investment return for the County before the County receives the funds. State of Texas funds in the custody of the Tax Assessor/Collector may be invested before remitting to the state or to the entity for whom the Tax Assessor/Collector is contracted to collect taxes.

IX.2 County Clerk Registry Funds

County Clerk Registry Funds are received by court order from Commissioners' Court, County Court-at-Law, or County Courts. These funds must be deposited in the County depository and then invested according to the court orders. A court order is required from the County Courts and the County Courts-at-Law prior to disbursement of the funds.

IX.3 District Attorney Forfeiture funds

District Attorney Forfeiture Funds are designated by a court of law and placed under the authority of the District Attorney. These funds must be deposited in the County depository and then may be invested until a District Court order is issued to release the funds.

IX.4 District Clerk Registry Funds

District Clerk Registry Funds are received by court order from the District Courts. These funds must be deposited in the County depository and then invested according to the court orders. A court order is required from the District Courts prior to the disbursement of the funds.

IX.5 County Treasurer's Adult Probation Funds

Funds designated as the "County Treasurer's Adult Probation" funds may be invested by the County Investment Officer upon an inter-governmental agreement with the Commissioners' Court and the Williamson County Community Supervision and Corrections Department. All funds invested will adhere to the policies and procedures as set forth in the County's investment policy.

IX.6 Williamson County/Cities Health District Funds

The County Investment Officer upon an inter-governmental agreement approved by the Commissioners' Court may invest Williamson County/Cities Health District Funds. All funds invested will adhere to the policies and procedures as set forth in the County's investment policy.

IX.7 Williamson County Benefits Funds

The County Investment Officer upon an inter-governmental agreement approved by the Commissioners' Court may invest Williamson County Benefit Funds. All funds invested will adhere to the policies and procedures as set forth in the County's investment policy.

X. INVESTMENT FUND STRATEGIES

PREFACE

It is the policy of Williamson County that, giving due regard to the safety and risk of investment, all available funds shall be invested in conformance with State and Federal Regulations, applicable Bond Resolution requirements, adopted Investment Policy and adopted Investment Strategy.
In accordance with the Public Funds Investment Act, the County's investment strategies shall address the following priorities (in order of importance):

- ✓ Understanding the suitability of the investment to the financial requirements of the County,
- ✓ Preservation and safety of principal,
- ✓ Liquidity,
- ✓ Marketability of the investment prior to maturity,
- ✓ Diversification of the investment portfolio, and
- ✓ Yield.

Effective investment strategy development coordinates the primary objectives of the County's Investment Policy and cash management procedures to enhance interest earnings and reduce investment risk. Active cash management will increase the available "investment period" and subsequently interest earnings. Maturity selections shall be based on cash flow and market conditions to take advantage of various interest rate cycles. The County's portfolio shall be designed and managed in a manner responsive to the public trust and consistent with the Investment Policy.

Each major fund type has varying cash flow requirements and liquidity needs. Therefore specific strategies shall be implemented considering the fund's unique requirements. The County's funds shall be analyzed and invested according to the following major fund types:

Operating Funds
Construction and Capital Improvement Funds
Debt Service Funds
Enterprise Funds
Internal Service Funds

XI. STRATEGIES

In order to minimize risk of loss due to interest rate fluctuations, investment maturities will not exceed the anticipated cash flow requirements of the funds. Investment guidelines by fund-type are as follows:

A. Operating Funds

Suitability — Any investment eligible in the Investment Policy is suitable for the Operating Funds.

Safety of Principal- All Operating Funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the portfolio's weighted average maturity to less than 365 days and restricting the maximum allowable maturity to three years, the price volatility of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are necessary in the event of an unanticipated cash requirement. Historical market "spreads" between the bid and offer prices of a particular security- type of less than a quarter of a percentage point shall define an efficient secondary market.

Liquidity — The Operating Fund requires the greatest short-term liquidity of any of the fund types. Short-term investment pools and money market mutual funds shall provide

daily liquidity and may be utilized as a competitive yield alternative to fixed maturity investments.

Diversification — Investment maturities shall be staggered throughout the budget cycle to provide cash flow based on the anticipated operating needs of the County. Market cycle risk will be reduced by diversifying the appropriate maturity structure out along the maturity curve.

Yield — Attaining a competitive market yield for comparable security-types and portfolio restrictions is the desired objective. The 6-month Constant Maturity Treasury (CMT) bill shall be the minimum yield objective.

B. Construction and Capital Improvement Funds

Suitability — Any investment eligible in the Investment Policy is suitable for Construction and Capital Improvement (CC&I) Funds.

Safety of Principal — All CC&I Funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the Construction and Capital Improvement Fund's portfolio not to exceed the anticipated expenditure schedule, the market risk of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are necessary in the event of an unanticipated cash requirement. Historical market "spreads" between the bid and offer prices of a particular security- type of less than a quarter of a percentage point shall define an efficient secondary market.

Liquidity — County funds used for construction and capital improvement programs have reasonably predictable draw down schedules. Therefore investment maturities shall generally follow the anticipated cash flow requirements. Investment pools and money market mutual funds shall provide readily available funds generally equal to at least one month's anticipated cash flow needs, or a competitive yield alternative for short term fixed maturity investments. A singular repurchase agreement may be utilized if disbursements are allowed in the amount necessary to satisfy any expenditure request, this investment structure is commonly referred to as a flexible repurchase agreement.

Diversification — Market conditions and the arbitrage regulations influence the attractiveness of staggering the maturity of fixed rate investments for bond proceeds and other construction and capital improvement funds. With bond proceeds, if investment rates exceed the applicable arbitrage yield, the County is best served by locking in most investments. If the arbitrage yield can not be exceeded, then concurrent market conditions will determine the attractiveness of diversifying maturities or investing in shorter and larger lumps. At no time shall the anticipated expenditure schedule be exceeded in an attempt to bolster yield with any County funds.

Yield — Achieving a positive spread to the applicable arbitrage yield is the desired objective for bond proceeds. Non-bond proceeds construction and capital project funds will seek to exceed the 6-month Constant Maturity Treasury average.

C. Debt Service Funds

Suitability — Any investment eligible in the Investment Policy is suitable for the Debt Service Fund.

Safety of Principal — All Debt Service Funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the Debt Service Fund's portfolio not to exceed the debt service payment schedule, the market risk of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are not necessary as the event of an unanticipated cash requirement is not probable.

Liquidity — Debt service funds have predictable payment schedules. Therefore investment maturities shall not exceed the anticipated cash flow requirements. Investment pools and money market mutual funds shall provided a competitive yield alternative for short term fixed maturity investments. A singular repurchase agreement may be utilized if disbursements are allowed in the amount necessary to satisfy any debt service payment; this investment structure is commonly referred to as a flexible repurchase agreement.

Diversification — Market conditions influence the attractiveness of fully extending maturity to the next "un-funded" payment date. Generally, if investment rates are trending down, the County is best served by locking in most investments. If interest rates are flat or trending up, then concurrent market conditions will determine the attractiveness of extending maturity or investing in shorter alternatives. At no time shall the debt service schedule be exceeded in an attempt to bolster yield.

Yield — Attaining a competitive market yield for comparable security types and portfolio restrictions is the desired objective. The 6-month Constant Maturity Treasury (CMT) bill shall be the minimum yield objective.

D. Enterprise Funds

Suitability — Any investment eligible in the Investment Policy is suitable for the Enterprise Funds.

Safety of Principal — All Enterprise Funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the weighted average days to maturity for the Enterprise Fund portfolio to less than 365 days and restricting the maximum allowable maturity to two years, the price volatility of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are necessary in the event of an unanticipated cash requirement. Historical market "spreads" between the bid and offer prices of a particular security- type of less than a quarter of a percentage point shall define an efficient secondary market.

Liquidity — The Enterprise Fund requires short-term liquidity. Constant dollar investment pools and money market mutual funds shall provide daily liquidity and may be utilized as a competitive yield alternative to fixed maturity investments.

Diversification — Investment maturities shall be staggered throughout the budget cycle to provide cash flow based on the anticipated operating needs of the County. Market cycle risk will be reduced by diversifying the appropriate maturity structure out along the maturity curve.

Yield — Attaining a competitive market yield for comparable security-types and portfolio restrictions is the desired objective. The minimum yield objective shall be the 91-day Treasury bill average.

E. Internal Service

Suitability — Any investment eligible in the Investment Policy is suitable for the Internal Service Funds.

Safety of Principal — All funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the weighted average days to maturity for the Internal Service Fund portfolio to less than 365 days and restricting the maximum allowable maturity to two years, the price volatility of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are necessary in the event of an unanticipated cash requirement. Historical market "spreads" between the bid and offer prices of a particular security- type of less than a quarter of a percentage point shall define an efficient secondary market.

Liquidity — The Internal Service Fund requires short-term liquidity. Constant Dollar investment pools and money market mutual funds shall provide daily liquidity and may be utilized as a competitive yield alternative to fixed maturity investments.

Diversification — Investment maturities shall be staggered throughout the budget cycle to provide cash flow based on the anticipated operating needs of the County. Market cycle risk will be reduced by diversifying the appropriate maturity structure out through two years.

Yield — Attaining a competitive market yield for comparable security-types and portfolio restrictions is the desired objective. The average 91-day Treasury bill yield shall be the minimum yield objective.

WILLIAMSON COUNTY

INVESTMENT POLICY

JANUARY 2018

WILLIAMSON COUNTY
INVESTMENT POLICY
January 2018

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Not less than annually, the Court shall adopt a written resolution stating that it has reviewed the Investment Policy and that the written instrument so adopted shall record any amendments made to the Investment Policy.

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Funds of the County will be invested in compliance with federal and state laws, this investment policy and written administrative procedures. The County will invest according to investment strategies for each group of funds as they are adopted by the Court's resolution.

111.2 Safety and Maintenance of Liquidity

The County is concerned about the return of its principal; therefore, safety of principal is a primary objective in any investment transaction. The County's investment portfolio must be structured in conformance with an asset/liability management plan that provides for liquidity necessary to pay obligations as they become due.

111.3 Diversification

It will be the policy of the County to diversify its portfolio to eliminate the risk of loss resulting from a concentration of assets in a specific maturity (save and except zero duration funds), a specific issuer or a specific class of investments. Investments of the County shall always be selected to provide stability of income and reasonable liquidity.

111.4 Yield

The yield objective of the County is to earn the maximum return on its investments within policy guidelines imposed by safety and liquidity objectives, investment strategies for each group of funds as well as state and federal law governing investment of public funds. Investment performance will be measured by weighted average yield to maturity at cost.

111.5 Maturity

Portfolio maturities will be structured to meet the obligations of the County first and then to achieve the highest rate of return of interest. When the County has funds not required to meet current-year obligations, maturity restraints will be imposed upon the investment strategy for each group of funds. The maximum allowable stated maturity of any individual investment owned by the County is three (3) years.

111.6 Quality and Capability of Investment Management

It is the County's policy to provide training as required by the Public Funds Investment Act. Periodic training in investments, policy and procedures for the County Investment Officer and members of the Investment Advisory Committee will be provided through courses and seminars offered by professional organizations and associations in order to ensure the quality and capability of county investment decisions. The County Investment Officer will be required to attend at least 10 hours of investment training each fiscal year provided through an independent source approved by the County Commissioners' Court or the Investment Advisory Committee. Investment Advisory Committee members shall also be required to attend at least 10 hours of investment training during each two-year, such that, on September 30 of each year, each such member shall have attended at least 10 hours of investment training during the immediately preceding 24-month period. Certification of training for the Investment Officer and the Investment Advisory Committee members will be presented for acceptance and entry into the official minutes of the Court.

111.7 Competitive Bidding

In order to achieve a fair market price in all its investment transactions, the County requires a competitive bidding process for all individual security purchases and sales except for transactions in money market mutual funds, local government investment pools and depository "sweep" products.

At least three bids or offers must be solicited for all other transactions involving individual securities. The County's Investment Advisor is also required to solicit at least three bids or offers when transacting trades on the County's behalf. In situations where the exact security being offered is not offered by other dealers, offers on the closest comparable investment may be used to establish a fair market price for the security.

111.8 Investment Advisors

The County may designate, with approval from the Court, a professional investment advisory firm, registered with the Securities and Exchange Commission under the 1940 Investment Advisors Act, as well as the State Securities Board to assist the County in the management of its funds. This Investment Advisor shall act solely in an advisory and administrative capacity within the guidelines of this policy. The County's relationship with the advisor shall be governed by a formal management contract between the two parties.

IV. INVESTMENT OBJECTIVES

The overall investment objectives of the County shall be to:

- ✓ Match the suitability of investments to financial requirements;
- ✓ Achieve safety of principal;
- ✓ Maintain required liquidity;
- ✓ Diversify the portfolio by investment type, issuer and maturity sector; and
- ✓ Seek the highest possible yield within policy and cash flow constraints.

V. INVESTMENT RESPONSIBILITY AND CONTROL

V.1 Investment Advisory Committee

The Investment Advisory Committee reviews investment policies and procedures, investment strategies, and investment performances. Members of the Committee include the County Judge, a County Commissioner, the Tax Assessor/Collector, and the County Auditor. The County Investment Officer will serve as an ex-officio member of the committee. Members should have demonstrated knowledge and expertise in the area of finance, investments, or cash management. The Chair of the Committee will be elected by the Committee and the meetings will be quarterly or more frequently if needed.

V.2 Liability of Investment Officer

The County Investment Officer is not responsible for any loss of County funds through the failure or negligence of the depository bank. This policy does not release the Investment Officer, or any other person for a loss resulting from any act of official misconduct, or negligence, or for any misappropriation of such funds. The designated Investment Officers shall perform their duties in accordance with the adopted Investment Policy and internal procedures. Investment Officers acting in good faith and in accordance with these policies and procedures shall be relieved of personal liability provided deviations are reported to the Advisory Committee on a timely basis.

V.3 Audit

The Court will review the Investment Policy and Strategies annually and, at a minimum, will have an annual compliance audit of management controls on investments and adherence to established investment policies. The independent auditor will report the results of the audit to the Court after completion of the audit.

V.4 Standard of Care

Investments shall be made with judgment and care, under prevailing circumstances, that a person of prudence, discretion, and intelligence would exercise in the management of the person's own affairs, not for speculation, but for investment, considering the probable safety of capital and the probable income to be derived. Investment of funds shall be governed by the following investment objectives, in order of priority: preservation and safety of principal; liquidity; and yield.

In determining whether the investment officer has exercised prudence with respect to an investment decision, the determination shall be made taking into consideration:

- ✓ the investment of all funds, or funds under the County's control, over which the Investment Officer had responsibility rather than a consideration as to the prudence of a single investment; and,
- ✓ whether the investment decision was consistent with the written investment policy of the County.

V.5 Investment Institution Defined

The County Investment Officer shall invest County funds with any or all of the institutions or groups consistent with federal and state regulations and approved by the Court.

V.6 Qualifications for Approval of Broker/Dealer

A written copy of the investment policy shall be presented to any person offering to engage in an investment transaction with the County. Broker/dealers shall sign an acknowledgement of receipt of policy. The qualified representative of the business organization seeking to sell an authorized investment, specifically public funds investement pools and discretionary investment management firms, shall execute a written instrument, provided by the County that the business organizations has:

- ✓ received and thoroughly reviewed the investment policy of the County; and
- ✓ acknowledged that the organization has implemented reasonable procedures and controls in an effort to preclude imprudent investment activities arising out of investment transactions conducted between the County and the organization.

The investment officer may not buy any investment instrument from an entity that has not delivered to the County the instrument signed by the qualified representative.

Along with the signed affidavit the business organization shall supply the County with the following:

- ✓ Completed Broker/Dealer questionnaire.
- ✓ Completed Anti-Collusion Agreement.
- ✓ Financial statements (to be provided annually).
- ✓ Delivery instructions.
- ✓ Financial Institutions Regulatory Authority (FINRA) Certification Proof.
- ✓ Texas State Securities Commission Registration Proof.

On an annual basis, the Investment Advisory Committee shall review, revise and adopt a list of qualified brokers authorized to engage in investment transactions with the County.

If the County chooses to utilize the services of an Investment Advisor, the advisor shall be responsible for performing due diligence on the dealers with which it conducts investment transactions, shall present to the Investment Advisory Committee a list of approved broker dealers from which it obtains competitive offers and shall sign the required affidavit on behalf of these approved broker dealers.

V.7 Standards of Operation

The County Investment Officer shall develop and maintain written administrative procedures for the operation of the investment program set by the Commissioners' Court of the County. The County Investment Officer shall determine the amount of cash available for payments by the County, invest the funds not required in the performance of that duty, and shall exercise good judgment and discretion to effectuate the policies herein set forth. The County Investment Officer shall be authorized to delegate to an employee(s) the authority to place orders for such investments and to perform all acts required to acquire, pay for, hold, sell, exchange, tender or collect investments. Such designated employee(s) must have achieved the same certifications and training hours as the County Investment Officer.

V.8 Delivery vs. Payment

It will be the policy of the County that all investment securities shall be purchased using "Delivery vs. Payment" (DVP) method through the Federal Reserve System. By doing so, the County funds are not released until the County has received through the Federal Reserve wire, the securities purchased.

V.9 Standard of Ethics

The designated Investment Officers shall act as custodians of the public trust avoiding any transaction which might involve a conflict of interest, the appearance of a conflict of interest, or any activity which might otherwise discourage public confidence. Investment Officers shall refrain from personal business activity that might conflict with proper execution of the investment program or might impair their ability to make impartial investment decisions. Additionally, all Investment Officers shall file with Williamson County and the Texas Ethics Commission a statement disclosing any personal business relationship with any organization seeking to sell investments to the County; or, any relationship within the second degree of affinity or consanguinity to an individual seeking to sell investments to the County. For purposes of this subsection, an Investment Officer has a personal business relationship with a business organization if:

- ✓ the Investment Officer owns 10 percent or more of the voting stock or shares of the business organization or owns $5,000 or more of the fair market value of the business organization;
- ✓ funds received by the Investment Officer from the business organization exceed 10 percent of the Investment Officer's gross income for the previous year; or
- ✓ the Investment Officer has acquired from the business organization during the previous year investments with a book value of $2,500 or more for the personal account of the Investment Officer.

V.10 Downgrade Provision for Investment Ratings

An Investment that requires a minimum rating does not qualify as an authorized investment during the period the investment does not have the minimum rating. The County shall take all prudent measures that are consistent with its Investment Policy to liquidate an investment that does not have the minimum rating. The County shall also monitor the credit ratings on securities that require minimum ratings. This may be accomplished through research, or with the assistance of broker dealers, banks, safekeeping agents or the County's investment advisor.

VI. INVESTMENT REPORTING

VI.1 Portfolio Market Valuation

All securities held in the County investment portfolio shall be priced at the current market value on a quarterly basis and reported as part of the Quarterly Investment Report. Regular mark-to-market pricing will ensure awareness of portfolio value and price volatility by County officials. Market values should be obtained from a reputable and independent source including but not limited to Bloomberg, the Wall Street Journal and Interactive Data Corporation (I D C).

VI.2 Quarterly Investment Report

Not less than quarterly, the investment officer shall prepare and submit to the County Investment Advisory Committee a written report of investment transactions for all funds for the preceding reporting period within a reasonable time after the end of the period. The report must:

1. describe in detail the investment position of the County on the date of the report;

2. be signed by all investment officers of the County;

3. contain a summary statement of each pooled fund group that states:

   - ✓ beginning market value for the reporting period;
   - ✓ additions and changes to the market value during the period; and
   - ✓ ending market value for the period;

4. state the book value and market value of each separately invested asset at the end of the reporting period by the type of asset and fund type invested;

5. state the maturity date of each separately invested asset that has a maturity date;

6. state the account or fund or pooled group fund in the County for which each individual investment was required; and

7. state compliance of the investment portfolio of the County as it relates to:

   - ✓ strategy expressed in the County's investment policy; and
   - ✓ relevant provisions of the chapter.

The independent auditor shall review reports annually with findings presented to the Court.

VI.3 Notification of Investment Changes

It shall be the duty of the Investment Officer of the County to notify the Court of any significant changes in current investment methods and procedures prior to their implementation, regardless of whether they are authorized by this policy or not.

VII. INVESTMENT COLLATERAL AND SAFEKEEPING

VII.1 Collateralization Policy

Consistent with the requirement of State law, the County requires that all bank deposits to be federally insured or collateralized with authorized securities. Financial institutions serving as county depositories are required to sign a Depository Agreement with the County and the County's safekeeping agent. The safekeeping portion of the Agreement will define the County's rights to collateral in the event of default, bankruptcy, or closing and will establish a perfected security interest in compliance with federal and state regulations. In addition, repurchase agreements must be fully collateralized during the term of the agreement.

VII.2 Allowable Collateral

Securities eligible as collateral are defined by the Public Funds Collateral Act, as amended, and include all securities permitted under the Public Funds Investment Act. Collateral adequacy shall be verified against monthly safekeeping reports. More frequent verification may be required during periods of high market volatility.

Certificates of Deposit
The market value of the principal portion of collateral pledged for certificates of deposit must at all times be *equal to or greater than* the par value of the certificate of deposit plus accrued interest, less the applicable level of FDIC insurance.

Repurchase Agreements
A repurchase agreement's collateral level must be maintained at or above 102% of the agreement's outstanding balance plus accrued interest.

VII.3 Correcting Collateral Deficiencies

Certificates of Deposit
If the collateral pledged for a CD falls below the par value of the deposit, plus accrued interest less FDIC insurance, the Bank issuing the CD will be notified by the Investment Officers and will be required to pledge additional securities no later than the end of the next succeeding business day.

Repurchase Agreements
If the value of the securities underlying a repurchase agreement falls below the margin maintenance levels specified above, the Investment Officers will request additional securities. If the repurchase agreement is scheduled to mature within five business days and the amount is deemed to be immaterial, then the request is not necessary.

VII.4 Collateral Substitution

Collateralized certificates of deposit and repurchase agreements often require substitution of collateral. Any broker, dealer or financial institution requesting substitution must contact the Investment Officers for approval and settlement. The only exception to this shall be in the case of a flexible repurchase agreement in which a third-party safekeeping agent is contractually responsible for maintaining collateral at the agreed-upon percentage. The substituted security's value will be calculated and substitution approved if its value is equal to or greater than the required security level. Substitution is permitted, but should be limited if possible to minimize potential administrative problems and transfer expense. In the case of a flexible repurchase agreement, an independent third-party custodian shall be responsible for collateral substitution and maintaining proper securitization.

VII.5 Safekeeping

All purchased securities shall be registered in the County's name and held in safekeeping at a third-party financial institution, or with the Federal Reserve Bank.

All certificates of deposit, insured by the FDIC, purchased outside the County Depository Bank shall be held in safekeeping by the County.

VIII. INVESTMENT TYPES

VIII.1 Authorized Investments

The County Investment Officers shall use any or all of the following authorized investment instruments consistent with Title X, Chapter 2256 of the Texas Government Code:

1. Obligations of the United States or its agencies and instrumentalities, including FHLB letters of credit;

2. Direct obligations of this state or its agencies and instrumentalities;

3. No-load money market mutual funds if the mutual fund:

   - ✓ is regulated by the SEC;
   - ✓ has a dollar-weighted average stated maturity of 60 days or less;
   - ✓ includes in its investment objectives the maintenance of a stable $1.00 net asset value per each share;
   - ✓ is limited as to the amount invested per the requirements set forth in Chapter 2256, Government Code Section 2256.014; and
   - ✓ has supplied the County with a prospectus and other information required by the Securities Exchange Act of 1934 or the Investment Company Act of 1940;

4. Other obligations, the principal and interest of which are unconditionally guaranteed or insured by, or backed by the full faith and credit of this state or the United States or their respective agencies or instrumentalities, including any obligation that is fully guaranteed or insured by the Federal Deposit Insurance Corporation (FDIC).

5. Obligations of states, agencies, counties, cities, and other political subdivisions of any state rated as to investment quality by a nationally recognized investment firm not less than A or its equivalent;

6. Certificates of deposit, if issued by a state or national bank located in this state and:

   - ✓ guaranteed or insured by the Federal Deposit Insurance Corporation or its successor; and
   - ✓ secured in any other manner and amount provided by law for deposits of the County;

7. A fully collateralized repurchase agreement, if it:

   - ✓ has a defined termination date;
   - ✓ is secured by any combination of cash and obligations described by Section 2256.009 (a)(1) of the Public Funds Investment Act; and
   - ✓ requires the securities being purchased by the County to be pledged to the County, held in the county's name, and deposited at the time the investment is made with the County or with a third party selected and approved by the County; and
   - ✓ is placed through a primary government securities dealer, approved by the County, or a financial institution doing business in this state; and,
   - ✓ is supported by a Master Repurchase Agreement executed by both parties.

8. Commercial paper is an authorized investment, limited to no more than 10% of the total portfolio per issuer at the time of purchase and no more than 30% total concentration of commercial paper, if the commercial paper:

   - ✓ has a stated maturity of 270 days or fewer from the date of its issuance; and,
   - ✓ is rated not less than A-1 or P-1 or an equivalent rating by at least;

     1. two nationally recognized credit rating agencies; or

2. one nationally recognized credit rating agency and is fully secured by an irrevocable letter of credit issued by a bank organized and existing under the laws of the United States or any state.

9. Eligible investment pools, as defined in the Public Funds Investment Act. Each pool requires a written resolution from the Court authorizing investment in the particular pool. The investment pool shall invest the funds it receives from entities in authorized investments permitted by the Public Funds Investment Act. The County by contract may delegate to an investment pool the authority to hold legal title as custodian of investments purchased with its local funds.

10. Interest bearing bank savings deposits issued by state and national banks or savings bank or a state or federal credit union (having their main or branch office in Texas) that are guaranteed or insured by the Federal Deposit Insurance Corporation or the National Credit Union Share Insurance Fund (or their successor organizations). Also included are collateralized interest bearing savings deposits that have secured the uninsured portion of deposits with obligations of the U.S. Treasury and/or Federal agencies and instrumentalities.

VIII.2 Prohibited Investments

The following securities are not eligible investments for Williamson County:

- ✓ Obligations whose payment represents the coupon payments on the outstanding principal balance of the underlying mortgage-backed security collateral and pays no principal.
- ✓ Obligations whose payment represents the principal payments on the outstanding principal balance of the underlying mortgage-backed security collateral and pays no interest.
- ✓ Collateralized mortgage obligations (CMO's) that have a stated maturity date of greater than 10 years.
- ✓ CMO's having a coupon rate determined by an index that adjusts opposite to changes in a market index ('Inverse Floater")

IX. NON-COUNTY FUNDS

The following funds are designated as non-county because they are under the authority of a Williamson County official who chooses to invest the funds within the guidelines designated by the statutes of the State of Texas. These funds may not be considered funds that belong to the County but could be considered a liability for the County. All funds will be invested in compliance with the Public Funds Investment Act and the County's Investment Policy. An exception may be made when required by state law.

IX.1 Tax Assessor/Collector

County funds are invested to enhance investment return for the County before the County receives the funds. State of Texas funds in the custody of the Tax Assessor/Collector may be invested before remitting to the state or to the entity for whom the Tax Assessor/Collector is contracted to collect taxes.

IX.2 County Clerk Registry Funds

County Clerk Registry Funds are received by court order from Commissioners' Court, County Court-at-Law, or County Courts. These funds must be deposited in the County depository and then invested according to the court orders. A court order is required from the County Courts and the County Courts-at-Law prior to disbursement of the funds.

IX.3 District Attorney Forfeiture funds

District Attorney Forfeiture Funds are designated by a court of law and placed under the authority of the District Attorney. These funds must be deposited in the County depository and then may be invested until a District Court order is issued to release the funds.

IX.4 District Clerk Registry Funds

District Clerk Registry Funds are received by court order from the District Courts. These funds must be deposited in the County depository and then invested according to the court orders. A court order is required from the District Courts prior to the disbursement of the funds.

IX.5 County Treasurer's Adult Probation Funds

Funds designated as the "County Treasurer's Adult Probation" funds may be invested by the County Investment Officer upon an inter-governmental agreement with the Commissioners' Court and the Williamson County Community Supervision and Corrections Department. All funds invested will adhere to the policies and procedures as set forth in the County's investment policy.

IX.6 Williamson County/Cities Health District Funds

The County Investment Officer upon an inter-governmental agreement approved by the Commissioners' Court may invest Williamson County/Cities Health District Funds. All funds invested will adhere to the policies and procedures as set forth in the County's investment policy.

IX.7 Williamson County Benefits Funds

The County Investment Officer upon an inter-governmental agreement approved by the Commissioners' Court may invest Williamson County Benefit Funds. All funds invested will adhere to the policies and procedures as set forth in the County's investment policy.

X. INVESTMENT FUND STRATEGIES

PREFACE

It is the policy of Williamson County that, giving due regard to the safety and risk of investment, all available funds shall be invested in conformance with State and Federal Regulations, applicable Bond Resolution requirements, adopted Investment Policy and adopted Investment Strategy.

In accordance with the Public Funds Investment Act, the County's investment strategies shall address the following priorities (in order of importance):

- ✓ Understanding the suitability of the investment to the financial requirements of the County,
- ✓ Preservation and safety of principal,
- ✓ Liquidity,
- ✓ Marketability of the investment prior to maturity,
- ✓ Diversification of the investment portfolio, and
- ✓ Yield.

Effective investment strategy development coordinates the primary objectives of the County's Investment Policy and cash management procedures to enhance interest earnings and reduce investment risk. Active cash management will increase the available "investment period" and subsequently interest earnings. Maturity selections shall be based on cash flow and market conditions to take advantage of various interest rate cycles. The County's portfolio shall be designed and managed in a manner responsive to the public trust and consistent with the Investment Policy.

Each major fund type has varying cash flow requirements and liquidity needs. Therefore specific strategies shall be implemented considering the fund's unique requirements. The County's funds shall be analyzed and invested according to the following major fund types:

Operating Funds
Construction and Capital Improvement Funds
Debt Service Funds
Enterprise Funds
Internal Service Funds

XI. STRATEGIES

In order to minimize risk of loss due to interest rate fluctuations, investment maturities will not exceed the anticipated cash flow requirements of the funds. Investment guidelines by fund-type are as follows:

A. Operating Funds

Suitability — Any investment eligible in the Investment Policy is suitable for the Operating Funds.

Safety of Principal- All Operating Funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the portfolio's weighted average maturity to less than 365 days and restricting the maximum allowable maturity to three years, the price volatility of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are necessary in the event of an unanticipated cash requirement. Historical market "spreads" between the bid and offer prices of a particular security- type of less than a quarter of a percentage point shall define an efficient secondary market.

Liquidity — The Operating Fund requires the greatest short-term liquidity of any of the fund types. Short-term investment pools and money market mutual funds shall provide daily liquidity and may be utilized as a competitive yield alternative to fixed maturity investments.

Diversification — Investment maturities shall be staggered throughout the budget cycle to provide cash flow based on the anticipated operating needs of the County. Market

cycle risk will be reduced by diversifying the appropriate maturity structure out along the maturity curve.

Yield — Attaining a competitive market yield for comparable security-types and portfolio restrictions is the desired objective. The 6-month Constant Maturity Treasury (CMT) bill shall be the minimum yield objective.

B. Construction and Capital Improvement Funds

Suitability — Any investment eligible in the Investment Policy is suitable for Construction and Capital Improvement (CC&I) Funds.

Safety of Principal — All CC&I Funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the Construction and Capital Improvement Fund's portfolio not to exceed the anticipated expenditure schedule, the market risk of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are necessary in the event of an unanticipated cash requirement. Historical market "spreads" between the bid and offer prices of a particular security- type of less than a quarter of a percentage point shall define an efficient secondary market.

Liquidity — County funds used for construction and capital improvement programs have reasonably predictable draw down schedules. Therefore investment maturities shall generally follow the anticipated cash flow requirements. Investment pools and money market mutual funds shall provide readily available funds generally equal to at least one month's anticipated cash flow needs, or a competitive yield alternative for short term fixed maturity investments. A singular repurchase agreement may be utilized if disbursements are allowed in the amount necessary to satisfy any expenditure request, this investment structure is commonly referred to as a flexible repurchase agreement.

Diversification — Market conditions and the arbitrage regulations influence the attractiveness of staggering the maturity of fixed rate investments for bond proceeds and other construction and capital improvement funds. With bond proceeds, if investment rates exceed the applicable arbitrage yield, the County is best served by locking in most investments. If the arbitrage yield can not be exceeded, then concurrent market conditions will determine the attractiveness of diversifying maturities or investing in shorter and larger lumps. At no time shall the anticipated expenditure schedule be exceeded in an attempt to bolster yield with any County funds.

Yield — Achieving a positive spread to the applicable arbitrage yield is the desired objective for bond proceeds. Non-bond proceeds construction and capital project funds will seek to exceed the 6-month Constant Maturity Treasury average.

C. Debt Service Funds

Suitability — Any investment eligible in the Investment Policy is suitable for the Debt Service Fund.

Safety of Principal — All Debt Service Funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the Debt Service Fund's portfolio not to exceed the debt service payment schedule, the market risk of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are not necessary as the event of an unanticipated cash requirement is not probable.

Liquidity — Debt service funds have predictable payment schedules. Therefore investment maturities shall not exceed the anticipated cash flow requirements. Investment pools and money market mutual funds shall provided a competitive yield alternative for short term fixed maturity investments. A singular repurchase agreement may be utilized if disbursements are allowed in the amount necessary to satisfy any debt service payment; this investment structure is commonly referred to as a flexible repurchase agreement.

Diversification — Market conditions influence the attractiveness of fully extending maturity to the next "un-funded" payment date. Generally, if investment rates are trending down, the County is best served by locking in most investments. If interest rates are flat or trending up, then concurrent market conditions will determine the attractiveness of extending maturity or investing in shorter alternatives. At no time shall the debt service schedule be exceeded in an attempt to bolster yield.

Yield — Attaining a competitive market yield for comparable security types and portfolio restrictions is the desired objective. The 6-month Constant Maturity Treasury (CMT) bill shall be the minimum yield objective.

D. Enterprise Funds

Suitability — Any investment eligible in the Investment Policy is suitable for the Enterprise Funds.

Safety of Principal — All Enterprise Funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the weighted average days to maturity for the Enterprise Fund portfolio to less than 365 days and restricting the maximum allowable maturity to two years, the price volatility of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are necessary in the event of an unanticipated cash requirement. Historical market "spreads" between the bid and offer prices of a particular security- type of less than a quarter of a percentage point shall define an efficient secondary market.

Liquidity — The Enterprise Fund requires short-term liquidity. Constant dollar investment pools and money market mutual funds shall provide daily liquidity and may be utilized as a competitive yield alternative to fixed maturity investments.

Diversification — Investment maturities shall be staggered throughout the budget cycle to provide cash flow based on the anticipated operating needs of the County. Market cycle risk will be reduced by diversifying the appropriate maturity structure out along the maturity curve.

Yield — Attaining a competitive market yield for comparable security-types and portfolio restrictions is the desired objective. The minimum yield objective shall be the 91-day Treasury bill average.

E. Internal Service

Suitability — Any investment eligible in the Investment Policy is suitable for the Internal Service Funds.

Safety of Principal — All funds shall be invested in high quality securities with no perceived default risk. Market price fluctuations will occur, but by managing the weighted average days to maturity for the Internal Service Fund portfolio to less than 365 days and restricting the maximum allowable maturity to two years, the price volatility of the overall portfolio will be minimized.

Marketability — Securities with active and efficient secondary markets are necessary in the event of an unanticipated cash requirement. Historical market “spreads” between the bid and offer prices of a particular security- type of less than a quarter of a percentage point shall define an efficient secondary market.

Liquidity — The Internal Service Fund requires short-term liquidity. Constant Dollar investment pools and money market mutual funds shall provide daily liquidity and may be utilized as a competitive yield alternative to fixed maturity investments.

Diversification — Investment maturities shall be staggered throughout the budget cycle to provide cash flow based on the anticipated operating needs of the County. Market cycle risk will be reduced by diversifying the appropriate maturity structure out through two years.

Yield — Attaining a competitive market yield for comparable security-types and portfolio restrictions is the desired objective. The average 91-day Treasury bill yield shall be the minimum yield objective.

Commissioners Court - Regular Session **31.**

Meeting Date: 02/20/2018

County Attorney use of Unallocated funds

Submitted For: D. Hobbs **Submitted By:** Stephanie Lloyd, County Attorney

Department: County Attorney

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on the use of unallocated funds on the law enforcement scale in the County Attorney's office in the amount of $3,167.82.

Background

County Attorney's office has an L3.10 vacant position that county attorney is wanting to move another employee that is currently L3.7 into. Then would move current employee of L3.4 into the L3.7. This would leave our L3.4 vacant and County Attorney would then use $2,565.57 to post for L3.6 investigator.
The TCOLE records County Attorney's office has on file for each of these employees more than warrants the classifications we are requesting.

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	02/15/2018 12:31 PM
Form Started By: Stephanie Lloyd		Started On: 02/15/2018 11:15 AM
Final Approval Date: 02/15/2018		

Commissioners Court - Regular Session **32.**

Meeting Date: 02/20/2018

ESD #10 Appointment

Submitted For: Larry Madsen **Submitted By:** Julia Cooper, Commissioner Pct. #4

Department: Commissioner Pct. #4

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on the appointment of Mark Jaeger to the Emergency Services District (ESD) #10 Board of Directors for a two-year term beginning January 1, 2018 and ending on December 31, 2019.

Background

Mark Jaeger started his career with the Fire department in Taylor, Texas in February of 1991 where he worked until June of 1995 when he started with the Round Rock Fire Department. He worked as a Firefighter for four years, at which time he promoted to Driver. He was in the Driver position for Eleven years. He then promoted to Lieutenant in 2011 and started his carrier in the Fire Marshall's office where he conducted inspections and did plans, reviews of new construction and remodel projects throughout the city of Round Rock. In 2013 he attended the Police academy to obtain his Arson investigator certification. In March of 2014 he promoted to Captain and was assigned to the Training division. He is currently assigned as a Training Captain and Arson Investigator.

This is a new appointment of a board member to the ESD #10 Board of Directors. His resume and application are attached for reference.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Resume

Application

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM
Form Started By: Julia Cooper		Started On: 02/14/2018 09:20 AM
Final Approval Date: 02/14/2018		

Mark Jaeger

Graduated Lanier High School 1986

Attended Texas A&M Fire school 1987-1988

Currently working on Bachelor in Fire Investigation and Administration with Southern Columbia University.

Worked for Travis county Sheriffs Dept. 1990-1991

As a jailer in the main county jail and central booking facilities.

Started my career with the Fire department in Taylor Texas in February of 1991. Where I worked until June of 1995 when I started with the Round Rock Fire Department.

I worked as a Firefighter for four years, at which time I promoted to Driver. I was in the Driver position for Eleven years.

I promoted to Lieutenant in 2011 and started my carrier in the Fire Marshalls office. In the Fire Marshalls office, I conducted inspections and did plans reviews of new construction and remodel projects throughout the city of

Round Rock. In 2013 I attended the Police academy to obtain my Arson investigator certification.

March 0f 2014 I promoted to Captain and assigned to the Training division. I am currently assigned as a Training Captain and Arson Investigator.

Certifications:

Basic Peace Officer

Master Arson Investigator

Master Fire Investigator

Master Inspector

Instructor 2

Fire Officer 2

Driver Operator

Incident Safety Officer

Hazardous Materials Technician

Master Structure Fire Fighter

Williamson County
Application for Emergency Service District Board of Commissioners

Date: Feb 2, 2018

Application for ESD # 10

Name Mark Jaeger

Do you live in the district and if so, for how long? Yes 17yr

Do you own property in the district and if so, for how long? Yes 17yr

Are you a registered voter? yes

Please describe any experience and/or training you may have that would qualify you for this position, especially experience in management, financial or budget oversight and/or fire or emergency services.
I have been a Firefighter for 28 yrs and am currentely a training Captain and Arson investigator with Roundrock Fire department.

Please describe any community or public service in which you have participated in the last ten years.

Please explain briefly your reasons for interest in serving on the board.
I would like to apply my knowledge of the fire service to help expand emergency services to our residents in the eastern part of the county.

Are you a relative of anyone who is employed by this ESD and/or Fire Department that serves the ESD? NO

If yes, please name the relative and your relationship with him/her.

Have you ever been convicted of a crime? If yes, please provide an explanation. No

Please add any other relevant information.

Please attach additional pages if necessary.

Commissioners Court - Regular Session **33.**

Meeting Date: 02/20/2018

ESD #10 Appointment

Submitted For: Larry Madsen **Submitted By:** Julia Cooper, Commissioner Pct. #4

Department: Commissioner Pct. #4

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on the appointment of Chad Richter to the Emergency Services District (ESD) #10 Board of Directors for a two-year term beginning January 1, 2018 and ending on December 31, 2019.

Background

Chad Richter was employed part time with Williamson County EMS starting in August 1998 and began his full time career with them in November 2001 where he currently serves as Senior Medical Officer. He is also on both the Hiring Process Team and the Tactical Medic Team.

This is a new appointment of a board member to the ESD #10 Board of Directors. His resume and application are attached for reference.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Resume

Application

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM
Form Started By: Julia Cooper		Started On: 02/14/2018 09:28 AM
Final Approval Date: 02/14/2018		

Chad Richter

Career Objective

Motivation and interest are high and I welcome any challenge to expand my knowledge, whether it is an individual or group effort to assure the effectiveness of my performance. I pride myself in showing a professional concern for quality work leading to excellent care and customer satisfaction.

Education

Previous Education:

- Temple College / Scott and White Paramedic School – Taylor, TX January 1998 to December 1998
- Temple College: general studies and nursing school – Temple, TX August 1994 to December 1997
- Thorndale High School – Thorndale, TX

Special Teams & Officer Positions:

- Williamson County Senior Medical Officer – Current
- Williamson County Hiring Process Team – Current
- Williamson County Tactical Medic Team – Current

Certifications / Licenses/Awards:

- Licensed Paramedic through the Texas Department of Health
- Board for Critical Care Transport Paramedic Certification
- American Heart Association Basic Life Support Instructor
- Advanced Trauma Life Support (audited)
- National Association EMS Educators Instructor – Current
- Director's Award – 2002 and 2007
- Medical Director's Award – 2009

Special Training / Skills: (past & present)

- Rescue Training Inc. Tactical Medic Certification - Current
- Basic SWAT Certification – Current
- Swiftwater and Stillwater Certifications – Current
- Member of the A/TC EMS Special Operations Team
  (Sept. 1999 to Sept. 2001)
- Mass Casualty Incident Training – May 1999
- Hazardous Material Training – May 1999
- Incident Command System Training – May 1999

Employment History

Williamson County EMS
303 MLK Street
Georgetown, TX 78626
512-943-1264
Full time – November 2001 to Present
Part time – August 1998 to November 2001

Medivac 1 / STAT Air
Scott and White Hospital
2401 S. 31st Street
Temple, TX
January 2001 to January 2006

Austin/Travis County EMS Special Operations/Rescue Paramedic
15 Waller Street
Austin, TX
512-469-2050
March 1999 to September 2001

Williamson County
Application for Emergency Service District Board of Commissioners

Date: 2/6/2018

Application for ESD # 10

Name Chandler Scott Richter

Address_____

Home Phone #_____ Work Phone #_____

Cell Phone #_____ Email Address_____

Do you live in the district and if so, for how long? Yes, 12 years.

Do you own property in the district and if so, for how long? Yes, 12 years.

Are you a registered voter? Yes.

Please describe any experience and/or training you may have that would qualify you for this position, especially experience in management, financial or budget oversight and/or fire or emergency services.
I have been a Licensed Paramedic since December 1998 and was on our church council for 2 years.

Please describe any community or public service in which you have participated in the last ten years.
My profession IS public service and has been for 19+ years.

Please explain briefly your reasons for interest in serving on the board.
To make sure that the ESD funding is appropriately used and allocated fairly to all members of the ESD. Also to ensure that all citizens in ESD 10 have adequate fire/EMS protection.

Are you a relative of anyone who is employed by this ESD and/or Fire Department that serves the ESD? No.

If yes, please name the relative and your relationship with him/her.

Have you ever been convicted of a crime? If yes, please provide an explanation. No.

Please add any other relevant information.

Please attach additional pages if necessary.

Commissioners Court - Regular Session **34.**

Meeting Date: 02/20/2018

Discuss, consider and take any appropriate action regarding establishing the office of county fire marshal

Submitted For: Marty Herrin **Submitted By:** Kelly Luna, EMS

Department: Hazardous Materials

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take any appropriate action regarding establishing the office of county fire marshal to be effective at the proposed date of April 1, 2018 or as determined by the Court pursuant to authority granted to commissioners court under Tex. Loc. Gov't Code. § 352.011.

Background

Positions for the County Fire Marshal Office were funded during the FY18 annual budget process, with the expressed understanding that a County Fire Marshal office would be created.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

County Fire Marshal

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM
Form Started By: Kelly Luna		Started On: 02/12/2018 03:21 PM
Final Approval Date: 02/14/2018		

36 Tex. Prac., County And Special District Law § 31.5 (2d ed.)

Texas Practice Series TM | August 2017 Update
County And Special District Law
David B. Brooks [a0]

Part V. Public Health and Welfare
Chapter 31. Fire Protection

§ 31.5. County fire marshal

West's Key Number Digest

- West's Key Number Digest, Counties 61
- West's Key Number Digest, Counties 85
- West's Key Number Digest, Counties 92

Legal Encyclopedias

- C.J.S., Counties § 97
- C.J.S., Counties § 125
- C.J.S., Counties § 127
- C.J.S., Counties § 133

All counties are authorized, but not required, to provide for a "County Fire Marshal," pursuant to a 1951 law. [1] The statute authorized the commissioners court "at its option" to establish the office of county fire marshal for a period of time (as originally expressed) "not to exceed the term for which the members of said [commissioners] court are elected." [2] The county fire marshal may be furnished an office, equipment, transportation, assistance, and compensation. [3] The fire marshal, his assistants and employees, are not liable for any official acts or omissions except for cases of "gross negligence or willful malfeasance" in office. [4]

The duty of the county fire marshal is to immediately

> investigate the cause, origin, and circumstances of each fire that occurs within the county but outside the municipalities in the county and that destroys or damages property. [5]

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Legislation concerning the county fire marshal has concerned the scope of his inspection authority and the collection of inspection fees. Legislation in 1989 expanded the inspection authority to include appurtenances, fixtures, and real property within two hundred feet of any structure.[6] The commissioners court may authorize a fee to be assessed against owners of commercial property subject to fire inspection, and against the owner of a single-family residence if the fire inspection is requested.[7]

In 2001, emergency services districts were authorized to create the office of "district fire marshal."[8]

The county fire marshal must keep statistical information and information regarding circumstances of the origin of a fire and estimated amount of loss. This information was specifically declared by the statute to be "accessible and open for inspection."[9] However, much of the fire marshal's investigation is declared by the statute to be confidential and not subject to compulsory disclosure.

The county fire marshal has the power of subpoena and may administer oaths to any persons who appear as a witness before him.[10] He may also require the production of books, papers, and other documents concerning matters under his investigation. Persons who refuse to testify or produce documentary evidence before the fire marshal are subject to a $25 fine.[11] The "investigation or examination" may be conducted in private.[12] The fire marshal's investigation is comparable to that of a grand jury. All persons except those being questioned may be excluded from the examination and witnesses may be ordered not to communicate with each other until they have been questioned by the fire marshal.[13]

The county fire marshal's prerogative to refuse to produce records of his investigation has been upheld by the supreme court.[14] In the cited case the Harris County Fire Marshal had been ordered confined by the district court for refusing to produce records of a fire investigation and for refusing to answer questions. The fire marshal statute provides that no action on the part of the fire marshal shall affect the rights of a policyholder or any insurance company with respect to a loss by reason of any fire so investigated; nor may the result of the investigation be given in evidence upon trial of any civil action upon the policy.[15]

The litigation in *Pruitt* arose when an insurance company refused to pay a fire claim on the basis that the fire was intentionally caused by the owner. The owner sought to depose the fire marshal and to subpoena his files regarding his investigation. The fire marshal did release information regarding the cause of the fire and the property loss, but refused to produce other information. The supreme court held that the law means what it says: the fire marshal's investigation and information is not subject to disclosure and such information is not allowed to affect a fire policyholder or an insurance company in any litigation. Only the basic factual information regarding the fire is required to be made public. The court stated that the public policy behind the disclosure prohibition is "preventing interference with the fire marshal's duty of crime detection and law enforcement," which is similar to the law enforcement exception of the Texas Open Records Act.[16] The supreme court seemed to consider it significant that the investigation in question was still active, and thus disclosure would interfere in the fire marshal's duties. However, the statute does not speak in terms of active or inactive investigations, but provides that the result of any investigation is not admissible in trial.

The county fire marshal takes the official oath of office and may be required to post an official bond in an amount determined by the commissioners court. He is prohibited from having any interest in the sale of fire prevention equipment or fire insurance coverage.[17]

The county fire marshal is authorized to enter buildings for purposes of conducting investigations and to order the owner or occupants of any structure which constitutes a fire hazard to rectify it. Persons who fail to comply with the orders of the fire marshal are subject to being adjudged guilty of contempt—classified as a Class B misdemeanor.[18]

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The county fire marshal has the authority to enforce all state and county regulations pertaining to fire, and he is authorized to "coordinate the work of the various fire-fighting and fire prevention units in the county." [19] However, he does not have independent authority within the city limits of any incorporated municipality. He may take actions within the city only when so requested by the municipality. [20]

Although the county fire marshal is authorized to coordinate the work of the sundry fire prevention agencies within the unincorporated areas of the county, the attorney general has defined some limitations to this authority. [21] The fire marshal does not have the authority to require volunteer fire departments to meet minimum operating standards, although he may designate specific areas as primary service zones for a volunteer fire department. The fire marshal has no authority over the granting of charters to volunteer fire departments nor may he effect the transfer of real property from one volunteer fire department to another. Furthermore, the attorney general stated that the fire marshal has no authority to supervise or coordinate the activities of a rural fire prevention district or a fire department established by a water district.

In 2002, legislation was approved authorizing the adoption of "rules and procedures" by the commissioners court to govern county fire marshal investigations. [22] Other aspects of the office of county fire marshal were adjusted in this legislation, including, for example, the authority of a county fire marshal to assist rural fire prevention districts or EMS districts. [23]

In 2003, the county fire marshal was granted access to criminal history record information kept by the Department of Public Safety for job applicants. [24]

In 2009, the county fire marshal was vested with authority to approve siren-operated systems to open up gates at gated communities or apartment complexes. [25]

In 2011, the attorney general declared that volunteer assistant fire marshals are not, and cannot be, reserve peace officers. [26]

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Footnotes

a0 Of The Texas Bar.

1 V.T.C.A., Local Government Code §§ 352.011 to.023 (originally applicable to counties of 600,000+; amended in 1953 to 350,000+; amended in 1967 to extend to all counties).

2 See now, Id., § 352.011(b) (two-year term). Presumably, this phrase meant that the county fire marshal could not appointed for a term that extends past any of the current terms of members of the commissioners court. The Local Government Code clarified that the fire marshal serves a two-year term, as did commissioners in 1951.

3 Id., § 352.011(a). Legislation enacted in 1997 permits a county to exempt vehicles of the county fire marshal's office from required identification. V.T.C.A., Transportation Code § 721.005(b)(1)(H).

4 V.T.C.A., Local Government Code § 352.020.

5 Id., § 352.013.

6 Id., § 352.016(b).

7 Id., § 352.016(c), (d).

8 V.T.C.A., Health and Safety Code §§ 775.101 et seq.

9 V.T.C.A., Local Government Code § 352.014. The quoted language regarding accessibility was deleted in 1989 with the adoption of the Local Government Records Act.

10 Id., § 352.015.

11 Id., § 352.021.

12 Id., § 352.017(a)(1).

13 Id., § 352.017(a)(2), (3).

14 Ex parte Pruitt, 551 S.W.2d 706 (Tex. 1977).

15 V.T.C.A., Local Government Code § 352.018.

16 551 S.W.2d at 709; see, V.T.C.A., Government Code, ch. 552 (Texas Open Records Act), discussed at §§ 10.41 to 10.44.

17 V.T.C.A., Local Government Code § 352.012(b).

18 Id., § 352.022.

19 Id., § 352.019(b).

20 Id., § 352.019(c), (d); Op. Tex. Att'y Gen. No. MW-508 (1982) (fire marshal is required to conduct arson investigation within a city when requested; county-owned facilities subject to municipal fire codes).

21 Op. Tex. Att'y Gen. No. MW-375 (1981).

22 V.T.C.A., Local Government Code § 252.013(b).

23 V.T.C.A., Local Government Code § 352.019(b).

24 V.T.C.A., Government Code § 411.1237.

25 V.T.C.A., Local Government Code § 352.1145.

26 Op. Tex. Att'y Gen. No. GA-853 (2011) (Smith County).

End of Document

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Commissioners Court - Regular Session **35.**

Meeting Date: 02/20/2018

Discuss, consider and take appropriate action regarding appointment of a county fire marshal

Submitted For: Marty Herrin **Submitted By:** Kelly Luna, EMS

Department: Hazardous Materials

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action regarding appointment of a county fire marshal to be effective upon office creation or as determined by the Court for a term of office not to exceed two years pursuant to authority granted to commissioners court under Tex. Loc. Gov't Code. §§ 352.011 & .012. Action may include requirement to post an official bond in an amount determined by the commissioners court as set forth in Tex. Loc. Gov't Code. § 352.012.

Background

Positions for the County Fire Marshal Office were funded during the FY18 annual budget process, with the expressed understanding that a County Fire Marshal office would be created.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

County Fire Marshal

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM
Form Started By: Kelly Luna		Started On: 02/12/2018 03:27 PM
Final Approval Date: 02/14/2018		

36 Tex. Prac., County And Special District Law § 31.5 (2d ed.)

Texas Practice Series TM | August 2017 Update
County And Special District Law
David B. Brooks [a0]

Part V. Public Health and Welfare
Chapter 31. Fire Protection

§ 31.5. County fire marshal

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- West's Key Number Digest, Counties 61
- West's Key Number Digest, Counties 85
- West's Key Number Digest, Counties 92

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- C.J.S., Counties § 125
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Footnotes

a0 Of The Texas Bar.

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2 See now, Id., § 352.011(b) (two-year term). Presumably, this phrase meant that the county fire marshal could not appointed for a term that extends past any of the current terms of members of the commissioners court. The Local Government Code clarified that the fire marshal serves a two-year term, as did commissioners in 1951.

3 Id., § 352.011(a). Legislation enacted in 1997 permits a county to exempt vehicles of the county fire marshal's office from required identification. V.T.C.A., Transportation Code § 721.005(b)(1)(H).

4 V.T.C.A., Local Government Code § 352.020.

5 Id., § 352.013.

6 Id., § 352.016(b).

7 Id., § 352.016(c), (d).

8 V.T.C.A., Health and Safety Code §§ 775.101 et seq.

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13 Id., § 352.017(a)(2), (3).

14 Ex parte Pruitt, 551 S.W.2d 706 (Tex. 1977).

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18 Id., § 352.022.

19 Id., § 352.019(b).

20 Id., § 352.019(c), (d); Op. Tex. Att'y Gen. No. MW-508 (1982) (fire marshal is required to conduct arson investigation within a city when requested; county-owned facilities subject to municipal fire codes).

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25 V.T.C.A., Local Government Code § 352.1145.

26 Op. Tex. Att'y Gen. No. GA-853 (2011) (Smith County).

End of Document

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Commissioners Court - Regular Session **36.**

Meeting Date: 02/20/2018

Discuss, consider and take appropriate action regarding policy determining which fires warrant investigation by the county fire marshal

Submitted For: Marty Herrin **Submitted By:** Kelly Luna, EMS

Department: Hazardous Materials

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action regarding policy determining which fires warrant investigation by the county fire marshal in the unincorporated areas within the county, including proposal to honor fire investigations requested by any member of the Williamson County Fire Chiefs Association, pursuant to authority granted to commissioners court under Tex. Loc. Gov't Code. § 352.013(b).

Background

Positions for the County Fire Marshal Office were funded during the FY18 annual budget process, with the expressed understanding that a County Fire Marshal office would be created.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

County Fire Marshal

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM
Form Started By: Kelly Luna		Started On: 02/12/2018 03:30 PM
Final Approval Date: 02/14/2018		

36 Tex. Prac., County And Special District Law § 31.5 (2d ed.)

Texas Practice Series TM | August 2017 Update
County And Special District Law
David B. Brooks [a0]

Part V. Public Health and Welfare
Chapter 31. Fire Protection

§ 31.5. County fire marshal

West's Key Number Digest

- West's Key Number Digest, Counties 61
- West's Key Number Digest, Counties 85
- West's Key Number Digest, Counties 92

Legal Encyclopedias

- C.J.S., Counties § 97
- C.J.S., Counties § 125
- C.J.S., Counties § 127
- C.J.S., Counties § 133

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In 2001, emergency services districts were authorized to create the office of "district fire marshal."[8]

The county fire marshal must keep statistical information and information regarding circumstances of the origin of a fire and estimated amount of loss. This information was specifically declared by the statute to be "accessible and open for inspection."[9] However, much of the fire marshal's investigation is declared by the statute to be confidential and not subject to compulsory disclosure.

The county fire marshal has the power of subpoena and may administer oaths to any persons who appear as a witness before him.[10] He may also require the production of books, papers, and other documents concerning matters under his investigation. Persons who refuse to testify or produce documentary evidence before the fire marshal are subject to a $25 fine.[11] The "investigation or examination" may be conducted in private.[12] The fire marshal's investigation is comparable to that of a grand jury. All persons except those being questioned may be excluded from the examination and witnesses may be ordered not to communicate with each other until they have been questioned by the fire marshal.[13]

The county fire marshal's prerogative to refuse to produce records of his investigation has been upheld by the supreme court.[14] In the cited case the Harris County Fire Marshal had been ordered confined by the district court for refusing to produce records of a fire investigation and for refusing to answer questions. The fire marshal statute provides that no action on the part of the fire marshal shall affect the rights of a policyholder or any insurance company with respect to a loss by reason of any fire so investigated; nor may the result of the investigation be given in evidence upon trial of any civil action upon the policy.[15]

The litigation in *Pruitt* arose when an insurance company refused to pay a fire claim on the basis that the fire was intentionally caused by the owner. The owner sought to depose the fire marshal and to subpoena his files regarding his investigation. The fire marshal did release information regarding the cause of the fire and the property loss, but refused to produce other information. The supreme court held that the law means what it says: the fire marshal's investigation and information is not subject to disclosure and such information is not allowed to affect a fire policyholder or an insurance company in any litigation. Only the basic factual information regarding the fire is required to be made public. The court stated that the public policy behind the disclosure prohibition is "preventing interference with the fire marshal's duty of crime detection and law enforcement," which is similar to the law enforcement exception of the Texas Open Records Act.[16] The supreme court seemed to consider it significant that the investigation in question was still active, and thus disclosure would interfere in the fire marshal's duties. However, the statute does not speak in terms of active or inactive investigations, but provides that the result of any investigation is not admissible in trial.

The county fire marshal takes the official oath of office and may be required to post an official bond in an amount determined by the commissioners court. He is prohibited from having any interest in the sale of fire prevention equipment or fire insurance coverage.[17]

The county fire marshal is authorized to enter buildings for purposes of conducting investigations and to order the owner or occupants of any structure which constitutes a fire hazard to rectify it. Persons who fail to comply with the orders of the fire marshal are subject to being adjudged guilty of contempt—classified as a Class B misdemeanor.[18]

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The county fire marshal has the authority to enforce all state and county regulations pertaining to fire, and he is authorized to "coordinate the work of the various fire-fighting and fire prevention units in the county." [19] However, he does not have independent authority within the city limits of any incorporated municipality. He may take actions within the city only when so requested by the municipality. [20]

Although the county fire marshal is authorized to coordinate the work of the sundry fire prevention agencies within the unincorporated areas of the county, the attorney general has defined some limitations to this authority. [21] The fire marshal does not have the authority to require volunteer fire departments to meet minimum operating standards, although he may designate specific areas as primary service zones for a volunteer fire department. The fire marshal has no authority over the granting of charters to volunteer fire departments nor may he effect the transfer of real property from one volunteer fire department to another. Furthermore, the attorney general stated that the fire marshal has no authority to supervise or coordinate the activities of a rural fire prevention district or a fire department established by a water district.

In 2002, legislation was approved authorizing the adoption of "rules and procedures" by the commissioners court to govern county fire marshal investigations. [22] Other aspects of the office of county fire marshal were adjusted in this legislation, including, for example, the authority of a county fire marshal to assist rural fire prevention districts or EMS districts. [23]

In 2003, the county fire marshal was granted access to criminal history record information kept by the Department of Public Safety for job applicants. [24]

In 2009, the county fire marshal was vested with authority to approve siren-operated systems to open up gates at gated communities or apartment complexes. [25]

In 2011, the attorney general declared that volunteer assistant fire marshals are not, and cannot be, reserve peace officers. [26]

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Footnotes

a0 Of The Texas Bar.

1 V.T.C.A., Local Government Code §§ 352.011 to.023 (originally applicable to counties of 600,000+; amended in 1953 to 350,000+; amended in 1967 to extend to all counties).

2 See now, Id., § 352.011(b) (two-year term). Presumably, this phrase meant that the county fire marshal could not appointed for a term that extends past any of the current terms of members of the commissioners court. The Local Government Code clarified that the fire marshal serves a two-year term, as did commissioners in 1951.

3 Id., § 352.011(a). Legislation enacted in 1997 permits a county to exempt vehicles of the county fire marshal's office from required identification. V.T.C.A., Transportation Code § 721.005(b)(1)(H).

4 V.T.C.A., Local Government Code § 352.020.

5 Id., § 352.013.

6 Id., § 352.016(b).

7 Id., § 352.016(c), (d).

8 V.T.C.A., Health and Safety Code §§ 775.101 et seq.

9 V.T.C.A., Local Government Code § 352.014. The quoted language regarding accessibility was deleted in 1989 with the adoption of the Local Government Records Act.

10 Id., § 352.015.

11 Id., § 352.021.

12 Id., § 352.017(a)(1).

13 Id., § 352.017(a)(2), (3).

14 Ex parte Pruitt, 551 S.W.2d 706 (Tex. 1977).

15 V.T.C.A., Local Government Code § 352.018.

16 551 S.W.2d at 709; see, V.T.C.A., Government Code, ch. 552 (Texas Open Records Act), discussed at §§ 10.41 to 10.44.

17 V.T.C.A., Local Government Code § 352.012(b).

18 Id., § 352.022.

19 Id., § 352.019(b).

20 Id., § 352.019(c), (d); Op. Tex. Att'y Gen. No. MW-508 (1982) (fire marshal is required to conduct arson investigation within a city when requested; county-owned facilities subject to municipal fire codes).

21 Op. Tex. Att'y Gen. No. MW-375 (1981).

22 V.T.C.A., Local Government Code § 252.013(b).

23 V.T.C.A., Local Government Code § 352.019(b).

24 V.T.C.A., Government Code § 411.1237.

25 V.T.C.A., Local Government Code § 352.1145.

26 Op. Tex. Att'y Gen. No. GA-853 (2011) (Smith County).

End of Document

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Commissioners Court - Regular Session **37.**

Meeting Date: 02/20/2018

Discuss, consider and take appropriate action regarding authorizing a fee to be assessed against owners of commercia property

Submitted For: Marty Herrin **Submitted By:** Kelly Luna, EMS

Department: Hazardous Materials

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action regarding authorizing a fee to be assessed against owners of commercial property subject to fire inspection, and against the owner of a single-family residence if the fire inspection is requested, pursuant to authority granted to commissioners court under Tex. Loc. Gov't Code. §§ 352.016(c) & (d).

Background

Positions for the County Fire Marshal Office were funded during the FY18 annual budget process, with the expressed understanding that a County Fire Marshal office would be created.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

County Fire Marshal

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 12:17 PM
Form Started By: Kelly Luna		Started On: 02/12/2018 03:32 PM
Final Approval Date: 02/14/2018		

36 Tex. Prac., County And Special District Law § 31.5 (2d ed.)

Texas Practice Series TM | August 2017 Update
County And Special District Law
David B. Brooks [a0]

Part V. Public Health and Welfare
Chapter 31. Fire Protection

§ 31.5. County fire marshal

West's Key Number Digest

- West's Key Number Digest, Counties 61
- West's Key Number Digest, Counties 85
- West's Key Number Digest, Counties 92

Legal Encyclopedias

- C.J.S., Counties § 97
- C.J.S., Counties § 125
- C.J.S., Counties § 127
- C.J.S., Counties § 133

All counties are authorized, but not required, to provide for a "County Fire Marshal," pursuant to a 1951 law. [1] The statute authorized the commissioners court "at its option" to establish the office of county fire marshal for a period of time (as originally expressed) "not to exceed the term for which the members of said [commissioners] court are elected." [2] The county fire marshal may be furnished an office, equipment, transportation, assistance, and compensation. [3] The fire marshal, his assistants and employees, are not liable for any official acts or omissions except for cases of "gross negligence or willful malfeasance" in office. [4]

The duty of the county fire marshal is to immediately

> investigate the cause, origin, and circumstances of each fire that occurs within the county but outside the municipalities in the county and that destroys or damages property. [5]

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Legislation concerning the county fire marshal has concerned the scope of his inspection authority and the collection of inspection fees. Legislation in 1989 expanded the inspection authority to include appurtenances, fixtures, and real property within two hundred feet of any structure.[6] The commissioners court may authorize a fee to be assessed against owners of commercial property subject to fire inspection, and against the owner of a single-family residence if the fire inspection is requested.[7]

In 2001, emergency services districts were authorized to create the office of "district fire marshal."[8]

The county fire marshal must keep statistical information and information regarding circumstances of the origin of a fire and estimated amount of loss. This information was specifically declared by the statute to be "accessible and open for inspection."[9] However, much of the fire marshal's investigation is declared by the statute to be confidential and not subject to compulsory disclosure.

The county fire marshal has the power of subpoena and may administer oaths to any persons who appear as a witness before him.[10] He may also require the production of books, papers, and other documents concerning matters under his investigation. Persons who refuse to testify or produce documentary evidence before the fire marshal are subject to a $25 fine.[11] The "investigation or examination" may be conducted in private.[12] The fire marshal's investigation is comparable to that of a grand jury. All persons except those being questioned may be excluded from the examination and witnesses may be ordered not to communicate with each other until they have been questioned by the fire marshal.[13]

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Footnotes

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4 V.T.C.A., Local Government Code § 352.020.

5 Id., § 352.013.

6 Id., § 352.016(b).

7 Id., § 352.016(c), (d).

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9 V.T.C.A., Local Government Code § 352.014. The quoted language regarding accessibility was deleted in 1989 with the adoption of the Local Government Records Act.

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11 Id., § 352.021.

12 Id., § 352.017(a)(1).

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21 Op. Tex. Att'y Gen. No. MW-375 (1981).

22 V.T.C.A., Local Government Code § 252.013(b).

23 V.T.C.A., Local Government Code § 352.019(b).

24 V.T.C.A., Government Code § 411.1237.

25 V.T.C.A., Local Government Code § 352.1145.

26 Op. Tex. Att'y Gen. No. GA-853 (2011) (Smith County).

End of Document

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Commissioners Court - Regular Session **38.**

Meeting Date: 02/20/2018

Health District IT Managed Services ILA

Submitted By: Jay Schade, Information Technology

Department: Information Technology

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on Interlocal Cooperation Agreement Between Williamson County and Cities Health District and Williamson County, Texas for Managed Technology Services and Support.

Background

WCCHD has, up to this point, supported their own technology -- hardware and support. Recently, their IT staff quit and they have asked Williamson County IT to support them. It is vital that, County IT have the ability to direct and supervise the support staff for WCCHD since their equipment and internet access are on the County network and can affect the network security and access for all County business. After discussing this with counsel, HR and the auditors, this is best accomplished by having two positions on the County IT staff that are funded -- plus overhead -- by WCCHD. One position will be a technician to support hardware and the other position will be for a software analyst. These positions will not be directly dedicated to WCCHD, but by having these employees, County IT can accomodate the additional responsibilities and workload. WCCHD will benefit by having the full support of County IT.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

WCCHD ILA

Exhibit A - Costs Worksheet

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/15/2018 12:31 PM
Form Started By: Jay Schade		Started On: 02/15/2018 11:23 AM
Final Approval Date: 02/15/2018		

STATE OF TEXAS §
COUNTY OF WILLIAMSON §

INTERLOCAL COOPERATION AGREEMENT BETWEEN WILLIAMSON COUNTY AND CITIES HEALTH DISTRICT AND WILLIAMSON COUNTY, TEXAS, FOR MANAGED TECHNOLOGY SERVICES AND SUPPORT

THIS INTERLOCAL 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 **Williamson County and Cities Public Health District** (hereinafter "District"), a political subdivision of the State of Texas, acting herein by and through its governing body. This interlocal cooperation agreement is authorized and governed by the Interlocal Cooperation Act, Chapter 791 of the Texas Government Code.

I.

Managed Service Plan: The County will provide general network services and support, desktop support, and application support, including, but not limited to: network connectivity and monitoring, network security, virus protection, system performance and trends, hardware integrity and reliability, storage space and availability, review and installation of operating system updates, addition or removal of users, personal computer support, software support and any additional related services that are deemed necessary at the sole discretion of The County. The District will fall under the same Service Level Agreements (SLAs) for IT services as County Departments.

II.

Excluded Services and Items: The following list contains services and items not included under this Agreement:

1. Service and repair made necessary by the alteration or modification of equipment or systems other than that authorized by The County, including alterations, software installations or modifications of equipment made by The District, The District's employees or anyone other than The County.
2. Replacement or repair to parts, equipment or software not covered by vendor/manufacturer warranty or support.
3. The cost of any software, licensing or software renewal or upgrade fees of any kind.
4. The cost of any 3rd party vendor or manufacturer support or incident fees of any kind.
5. The cost to bring The District's environment up to Minimum Standards required (*e.g.*, proper operating systems) for services.
6. Failures due to acts of God, building modifications, power failures or other adverse environmental conditions or factors.

7. Maintenance of applications software packages, whether acquired from The County or any other source unless otherwise specified in the Managed Service Plan selected by The District.

8. Programming (modification of software code) and program (software) maintenance unless otherwise specified in the Managed Service Plan selected by The District.

9. Training services of any kind.

10. Services provided outside of the Normal Working Hours of 8:00 AM – 5:00 PM Central Standard Time, Monday through Friday, excluding County holidays.

Costs associated with the above listed items and services are not included in this Agreement. The County may, upon request of The District and to the extent possible, assist The District in procuring the above listed items and services. Any such assistance will be deemed Additional Services and shall be paid for by The District.

III.

Exclusion of Warranties; and Limitation of Liability: The services under this Agreement are subject to the following:

A. SPECIFIC EXCLUSION OF WARRANTIES. THE EXPRESS WARRANTIES SET OUT IN THIS AGREEMENT, IF ANY, ARE IN LIEU OF ALL OTHER WARRANTIES, AND THERE ARE NO OTHER WARRANTIES, REPRESENTATIONS, CONDITIONS OR GUARANTEES OF ANY KIND WHATSOEVER APPLICABLE, EITHER EXPRESS OR IMPLIED BY LAW (IN CONTRACT OR TORT OR OTHERWISE) OR CUSTOM, INCLUDING, BUT NOT LIMITED TO THOSE REGARDING MERCHANTABILITY, FITNESS FOR PURPOSE, DURABILITY, CORRESPONDENCE TO SAMPLE, TITLE, DESIGN, CONDITION, OR QUALITY. WITHOUT LIMITING THE ABOVE, THE COUNTY DOES NOT WARRANT THAT ANY PRODUCTS OR SERVICES PROVIDED HEREUNDER WILL MEET THE REQUIREMENTS OF THE DISTRICT OR THAT THE OPERATION OF PRODUCTS PROVIDED HEREUNDER WILL BE FREE FROM INTERRUPTION OR ERRORS.

B. RESTRICTIONS ON WARRANTY. THE COUNTY HAS NO OBLIGATION TO REPAIR OR REPLACE PRODUCTS DAMAGED BY EXTERNAL CAUSE (INCLUDING THE DISTRICT, THE DISTRICT'S EMPLOYEES, THIRD PARTIES AND ACTS OF GOD) OR THROUGH THE FAULT OR NEGLIGENCE OF ANY PARTY OTHER THAN THE COUNTY.

C. NO INDIRECT DAMAGES. WITHOUT LIMITING THE GENERALITY OF SECTIONS OF THIS ARTICLE, IN NO EVENT WILL THE COUNTY BE LIABLE TO THE DISTRICT OR TO ANY OTHER PARTY FOR INDIRECT DAMAGES OR LOSSES (IN CONTRACT OR TORT OR OTHERWISE), INCLUDING BUT NOT LIMITED TO DAMAGES FOR LOST PROFITS, LOST SAVINGS, LOST DATA, LOSS OF USE OF INFORMATION OR SERVICES, OR INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES.

D. LIMITS ON LIABILITY. IF, FOR ANY REASON, THE COUNTY BECOMES LIABLE TO THE DISTRICT OR ANY OTHER PARTY FOR DIRECT OR ANY OTHER DAMAGES FOR ANY CAUSE WHATSOEVER, AND REGARDLESS OF THE FORM OF ACTION (IN CONTRACT OR TORT OR OTHERWISE), THEN:

1. THE AGGREGATE LIABILITY OF THE COUNTY TO THE DISTRICT AND ALL OTHER PARTIES IN CONNECTION WITH THE PRODUCTS AND THE SERVICES WILL BE LIMITED TO THE AMOUNT OF FEES ACTUALLY PAID BY THE DISTRICT TO THE COUNTY AS CONSIDERATION FOR THE PRODUCTS AND SERVICES GIVING RISE TO SUCH CLAIM DURING THE TWELVE (12) MONTH PERIOD PRECEDING THE DATE ON WHICH THE CAUSE OF ACTION AROSE; AND

2. IN ANY CASE, THE DISTRICT MAY NOT BRING OR INITIATE ANY ACTION OR PROCEEDING AGAINST THE COUNTY ARISING OUT OF THIS AGREEMENT OR RELATING TO ANY PRODUCTS OR SERVICES PROVIDED HEREUNDER MORE THAN ONE (1) YEAR AFTER THE RELEVANT CAUSE OF ACTION HAS ARISEN.

E. SEPARATE ENFORCEABILITY. SECTIONS OF THIS ARTICLE ARE TO BE CONSTRUED AS SEPARATE PROVISIONS AND WILL EACH BE INDIVIDUALLY ENFORCEABLE.

IV.

General Obligations of The District: Without limiting any of The District's other obligations under this Agreement, The District will:

1. Upgrade to the latest mutually agreed-upon release or version(s) of software that is used by The District as soon as possible after becoming aware of its availability;
2. Ensure that at all times at least one current staff person of The District has been fully trained on the of software that is used by The District; and
3. Designate, by written notice, a primary and backup person as the point of contact for technology issues for each division.
4. Notify the County of any changes in staffing that requires The County's direct communication with regards to billing or network authorization by authorized users.

V.

Term: The initial term is from the date of execution of the Agreement to September 30, 2021. Following the initial term, the Agreement shall automatically renew each October 1st unless terminated pursuant to the terms of this Agreement.

VI.

No Assignment: This agreement may not be assigned.

VII.

Consideration and Compensation: The County will be compensated based on the costs for the specific project herein. The amount of compensation paid to The County shall be paid at **$162,404.36**.[1] This amount reflects out-of-pocket reimbursement for all costs such as labor and departmental resources, including equipment and ten percent (10%) overhead, committed to the services rendered herein. **Billing will be made on a monthly, quarterly or annual basis at the request of the District. The parties understand that the costs are *estimated* at this time and subject to final adjustments and billing as authorized by the Williamson County Commissioners Court; however, the parties will act in good faith to limit any changes to increase costs and with regard to abiding by the expense calculations shown in the attached worksheet (Exhibit "A").** Exhibit A is incorporated herein as if copied in full. The County may

[1] Salary may adjust 25% of Grade up to $177,935.89 as set forth in attached Exhibit "A," which is incorporated herein as if copied in full.

change Exhibit A without further review or authorization by District, although The County shall provide District written notice of any change to Exhibit A at least sixty (60) days prior to the date of that change taking effect.

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 District receives the goods under the agreement; (2) the date the performance of the service under the agreement is completed; or (3) the date the District receives an invoice for the goods or services. Interest charges for any overdue payments shall be paid by The District 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.

VIII.

No Authority to Bind: Neither Party shall incur any obligations for or in the name of the other Party, or have the authority to bind or obligate the other Party. Neither Party shall make, issue or authorize any statements (whether oral or written) in contravention of the foregoing.

IX.

No Waiver of Sovereign Immunity or Powers: Nothing in this agreement 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.

X.

Good Faith Clause: The Parties agree to act in good faith in the performance of this agreement.

XI.

Confidentiality: The District expressly agrees that it will not allow any of its employees or representatives unauthorized access to any of The County's confidential information that may be obtained while having access to The County's IT network. The District further agrees that it will not allow any of its employees or representatives to enter any unauthorized areas or access confidential information and will not disclose any information to unauthorized third parties, and will take care to guard the security of the information at all times.

XII.

Termination: This agreement may be terminated at any time at the option of either party, without future or prospective liability for performance upon giving thirty (30) days written notice

thereof. In the event of termination, The District will only be liable for its pro rata share of services rendered and goods actually received.

XIII.

Venue and Applicable Law: Venue of this agreement shall be Williamson County, Texas, and the laws of the State of Texas shall govern all terms and conditions.

XIV.

1.1. **Notices:** The Parties designate the following persons for receipt of notice:

If to Williamson County:
Name: Dan Gattis (or successor)
Title: County Judge
Address: Williamson County
710 Main Street
Georgetown, TX 78626
Phone: (512) 943-1550

If to District:
Name: John Teel (or successor)
Title: Executive Director
Address: Williamson County and Cities Health District
100 West 3rd Street
Georgetown, TX 78626
Phone: (512) 943-3600

The Parties may change the person designated for receipt of notice from time to time by giving notice in writing to the other parties, identifying the new person designated for receipt of service and identifying his/her name, title, address for notice and phone number.

XV.

Severability: In case any one or more of the provisions contained in this agreement 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 agreement and this agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained in it.

XVI.

Right to Audit: The District agrees that The County or its duly authorized representatives shall, until the expiration of three (3) years after final payment under this Agreement, have access to and the right to examine and photocopy any and all books, documents, papers and records of The District which are directly pertinent to the services to be performed under this Agreement for the purposes of making audits, examinations, excerpts, and transcriptions. The District agrees that The

County shall have access during normal working hours to all necessary The County 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 District reasonable advance written notice of intended audits, which will be at the County's discretion.

XVII.

County Judge or Presiding Officer Authorized to Sign Agreement: The presiding officer of The County's governing body who is authorized to execute this instrument by order duly recorded may execute this agreement on behalf of The County.

AGREED AND APPROVED;

WILLIAMSON COUNTY

By: _____ **Date:**_____
Dan A. Gattis
County Judge

HEALTH DISTRICT

By: _____ **Date:**_____
John Teel
Executive Director

Exhibit “A” (Worksheet Calculating Costs)

Exhibit A

Williamson County Technology Services
Costs of Health District IT Services

	Grade	At Minimum Salary		At 25% of Grade		Total Comp	
		Salary	Fringe	Salary	Fringe	at Minimum	25% of Grade
System Support Specialist II	B.24	42,815.50	18,339.87	47,640.06	19,381.49	61,155.37	67,021.55
IT Analysst	B.31	60,583.90	22,176.06	67,371.79	23,641.57	82,759.96	91,013.35
Sub-Total Compensation						**$ 143,915.33**	**$ 158,034.90**
Equipment							
PC or Laptop - 4 year depreciation - $1200 total per position - $300 per position per year						600.00	600.00
Vehicle - 8 year depreciation - $25,000 total - $3,125 per year						3,125.00	3,125.00
Total Equipment and Compensation						**$ 147,640.33**	**$ 161,759.90**
Overhead (Admin/Supervision) - 10%						**14,764.03**	**16,175.99**
Total for IT Services						**$ 162,404.36**	**$ 177,935.89**

	Max Salary
B.24	62,113.74
B.26	87,735.44
(for use in calculating 25% of grade)	

Commissioners Court - Regular Session **39.**

Meeting Date: 02/20/2018

ILA Contract with the City of Round Rock

Submitted For: Annie Burwell **Submitted By:** Jeanne Williby, Outreach

Department: Outreach

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider and take appropriate action on an Interlocal Agreement between Williamson County Mobile Outreach Team and the City of Round Rock, Texas for the establishment of Mobile Outreach Team Services and Personnel at Round Rock Fire Stations.

Background

This contract outlines the housing agreement between Round Rock Fire Department and the Williamson County Mobile Outreach Team (MOT). The contract also specifies funding and expectations for MOT/MM (Mental Health and Medic) Units in support of Round Rock Fire Department's Community Risk Reduction Program. MOT will provide training, emergency opioid overdose response and brief intervention services and emergency behavioral health services.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

CRR Sheet

RRFD Agreement

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/14/2018 04:02 PM
Form Started By: Jeanne Williby		Started On: 02/14/2018 01:14 PM
Final Approval Date: 02/14/2018		

Vision 20/20

National Strategies for Fire Loss Prevention

Why is Community Risk Reduction important?

- Our communities demand an integrated approach that balances emergency response capabilities with proactive measures that work together to reduce risks.
- CRR empowers station leaders to tailor their proactive strategies to meet local risks and improve efficiency.
- Partner with other community organizations to accomplish risk management objectives, and to enhance our relationship with the public we serve.

CRR
COMMUNITY RISK REDUCTION

Community Risk Reduction (CRR) is the identification and prioritization of risks followed by the integrated application of resources to improve public safety and reduce increasing call volumes.

CRR is NOT a new concept for the fire service!

- CRR is **NOT** just a name change for fire prevention. It is an integration of all our protection strategies – including emergency operations and prevention/mitigation efforts.
- Fire Departments have been doing CRR under a variety of names for years.
- Home safety visits have been singled out as one of the more effective measures that the fire service can take to improve public safety.

Is YOUR department on board?

- Are you making CRR part of your department's core mission?
- Do your personnel know how to identify risks, and apply CRR initiatives to reduce them?
- Does your department understand that, similar to Community Policing, CRR programs are necessary to control rising emergency incident rates and costs, while resources for fire departments are receiving cuts?

Fire is Everyone's Fight™

For more information, resources and free materials visit:

Vision 20/20
www.strategicfire.org

Washington Association of Fire Marshals
www.homesafetyvisit.org

www.facebook.com/strategicfire @strategicfire E-Mail: info@strategicfire.org

INTERLOCAL AGREEMENT BETWEEN WILLIAMSON COUNTY AND THE CITY OF ROUND ROCK, TEXAS FOR THE ESTABLISHMENT OF MOBILE OUTREACH TEAM SERVICES AND PERSONNEL HOUSING AT ROUND ROCK FIRE STATIONS

THIS INTERLOCAL AGREEMENT (hereinafter referred to as the "Agreement") is made and entered into by and between the undersigned Local Governments of the Stat of Texas, namely Williamson County, a political subdivision of the State of Texas (the "County"), and the City of Round Rock, Texas a home rule municipal cooperation (the "City"), both acting by and through their duly authorized representatives, pursuant to the provision of the Interlocal Cooperation Act, Texas Government Code, Section 791 et seq. The County and the City are referred to collectively herein as the "Parties," of individually as a "Party."

WITNESSETH:

WHEREAS, this Agreement is authorized by Chapter 791 of the Texas Government Code; and

WHEREAS, the Parties are local government as that term is defined in Section 791.011 of the Texas Government Code; and

WHEREAS, the Parties find that this Agreement is necessary for the benefit of the public; that each Party has the legal authority to perform and to provide the governmental function or service which is the subject matter for this Agreement; that any division of cost fairly compensates the performing Party for services performed under this Agreement; and the performance of this Agreement is in the common interest of both Parties; and

WHEREAS, the County desires to house MOT (Mobile Outreach Team) and MM (Medical and Mental Health) crews at certain Round Rock Fire Stations, specifically, Fire Station 4, located at 1301 Double Creek Drive (the "Stations") while such crews are not actively responding to calls for service; and

WHEREAS, the City currently has available an area at the Stations to serve the housing need of County MOT/MM crews; and

WHEREAS, the City is willing to provide an area at the Stations to the County as set forth herein and the County desires to occupy such area at the Stations for the purposes set forth herein;

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, the undersigned Parties agree as follows:

TERMS AND CONDITIONS

A. Primary Obligation of Round Rock. The City agrees to provide the County with the following:
    1. Three or more parking spaces at the Station for MOT vehicles;
    2. The use two rooms/offices and the sole use of one room with a locking door for patient records and storage for medical supplies; and

3. Shared use of one additional office or room on as needed basis and the reasonable usage of the shared facilities in the Station, which shall include but not be limited to the dining area, day room(s), kitchen, laundry, supply closets, restrooms (bath/showers and toilets) as well as all amenities within the Stations.

The City agrees to provide the County with the enjoyment and peaceful possession of the above-described areas during the term of this Agreement. In the event the above-described areas are not available in each of the Stations, the City and County may agree upon alternative areas acceptable to both Parties.

B. Consideration. The County agrees to provide improvement to the areas identified above to be solely occupied by the County's MOT crew and to prepare the solely occupied spaces for move-in by the County MOT crews.

C. Term. This Agreement shall be effective upon the approval of the governing bodies of County and City, signed by the authorized individuals ("Effective Date"), and shall continue in force for five (5) years or until such times as either Party terminates the Agreement as provided herein.

D. Removal of County's Improvements. Upon the termination of this Agreement, County shall remove its person property and may remove any of the improvements that the County made to the Stations, so long as the removal of such improvements does not unreasonably damage the Stations. In the event any damage is caused during the removal of such improvements, the County shall be obligated to repair or cause to be repaired any damage resulting from the removal of its improvements, normal wear and tear expected.

E. Condition of the Stations. The County shall not be responsible for maintaining and/or repairing, the Stations' roof, foundation, parking, grounds, common areas, the structural soundness of the exterior walls, building exterior, electrical systems, plumbing systems, HVAC system and all amenities with the Stations. The County shall be responsible for keeping the areas solely used by the County's MOT crew in a clean and neat condition. The County and City shall work in cooperation with one another in keeping the commonly used areas clean and neat.

F. Use of Premises. The County may only use the designated areas of the Stations for the express purposes set forth herein. Use of the Stations for any other purpose, shall require the written consent of the City. The County shall not make any alterations, additions, improvement, to the Stations without the written consent of the City. This includes the installation of any equipment. The County shall permit the City to enter, inspect, and make such repairs to its designated areas of the Stations as often as the City reasonably desires at any reasonable time. The County agrees that it is solely responsible for making, at its sole cost, any alterations, additions, or improvement that are mandated by any and all state, federal and local accessibility legal requirements and that become necessary due solely to the County's use of the Stations ("accessibility alterations"). In the event any alterations, additions, or improvement in the or to the Stations are made necessary by reason of the special use and occupancy by County and, provided that the

City grants its prior written permission to County regarding such alterations, additions, and improvement in or to the Stations at its own expense and in compliance with all building codes, ordinances, and governmental regulations pertaining to such work, use, or occupancy.

G. Utilities and Service. The City shall provide and maintain, at its sole cost, the mains, conduits and other facilities necessary to dispose of garbage, water, gas electricity, telephone, cable internet services and sewage service to the Stations. If any of the equipment or machinery necessary of useful for the provision of any of the above services breaks down or for any cause ceases to function properly, the City shall use reasonable diligence to repair the same promptly. If any of the area solely occupied by a County's MOT crew is in need of maintenance or repairs as solely determined by the City, The County shall be financially responsible for any maintenance and/or repairs other than the above described services.

H. Use of Additional Fire Stations. The County and City may mutually agree to allow County MOT crews to house in additional Round Rock Fire Station not described herein, without the consent of the Parties governing bodies, provided the Parties abide by the terms of this Agreement for any and all additional Fire Stations.

I. Damage or Injury. The City and the County agree that if either Party is solely negligent in causing real or personal property damage or personal injury to the other that such responsible Party shall pay for the actual cost and expenses incurred for such damage or injury to the extent permitted by law.

J. Default. Either Party's failure to comply with any provision of this Agreement shall be considered a default. In the event that either Party defaults under this Agreement, the non-defaulting Party shall give the defaulting Party written notice specifying such default. If the defaulting Party has not cured such default within thirty (30) days after its receipt of such written notice, or, if the default cannot with due diligence be cured within a 30-day period, and the defaulting Party has not commenced and proceeded diligently to cure such default, then the non-defaulting Party may terminate this Agreement. It is not a waiver of default if the non-defaulting Party fails to declare immediately a default or delays in taking any action. Pursuit of any remedies set forth in this Agreement does not preclude pursuit of other remedies that may be available in this Agreement and/under the law. The Parties have a duty to mitigate damages.

II. GENERAL PROVISIONS

A. Payments. Any payment made by a Party pursuant to this Agreement shall be made out of current revenues available to said Party as required by the Interlocal Cooperation Act. The County and Round Rock agree that there will be no monthly rental cost associated with this Agreement.

B. Approval by Governing Bodies. This Agreement has been approved by the governing bodies of Williamson County and of the City of Round Rock.

C. Tax Exempt. The County and the City are bodies corporate and politic under the law of the State of Texas and claim exemption for sales and use taxes under the Texas Tax Code Ann. 151.309, as amended, and the services subject hereof are being secured for use by County. Exemption certificates will be provided upon request.

D. Severability. If a provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall 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 shall be construed and enforced in accordance therewith. The Parties acknowledge that if a 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 will, to the maximum extent practicable, give effect to the intent of this Agreement and be deemed to be validated and enforceable.

E. Notices. Any notice to be given hereunder shall be in writing and may be affect by personal delivery, in writing or by registered or certified mail, return receipt requested, addressed to the proper Party, at the following address:

City of Round Rock: City of Round Rock
City Manger
221 E. Main Street
Round Rock, TX 78664

With Copy to: Stephan L. Sheets, City Attorney
309 East Main Street
Round Rock, TX 78664

Round Rock Fire Department
203 Commerce Boulevard
Round Rock, TX 78664

County: Williamson County Judge
Dan A. Gattis
710 Main Street, Suite 101
Georgetown, TX 78626

With Copy to: Williamson County MOT
c/o Annie Burwell, Director
301 SE Inner Loop, Suite 106
Georgetown TX 78626

F. 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 shall lie exclusively in Williamson County, Texas. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas.

G. Dispute Resolution. The Parties to this Agreement will work together in good faith to resolve any controversy, dispute or claim between the Parties which arises out of or relates to this Agreement whether stated in tor, contract statute, claim for benefits, bad faith, professional liability or otherwise ("Claim"). If the Parties are unable to resolve the Claim within thirty (30) days following the date in which one Party sent written notice the Claim to the other Party, and if a Party wishes to pursue the Claim, such Claim shall be addressed through non-binding medication under the Commercial Mediation Rules of the American Arbitration Association ("AAA"). A single mediator engaged in the practice of law, who is knowledgeable about subject matter of this Agreement, will conduct the medication under the then current rules of the AAA. Any mediation under this Agreement shall be conducted in Williamson County, Texas. All costs involved in the medication shall be borne equally between the Parties, except that each Party shall bear its own attorneys' fees. Nothing herein is intended to prevent either Party from seeking any other remedy available at law including seeing redress in a court of competent jurisdictions. This provision shall survive the termination of this Agreement.

H. Termination for Convenience.

1.) The County may terminate this Agreement for convenience and without cause or further liability upon ninety (90) days written notice to Round Rock.

2.) Round Rock may terminate this Agreement for convenience with or without cause or further liability upon ninety (90) days written notice to the County.

3.) All Parties to the contract may terminate upon written mutual consent signed and dated by all Parties to this agreement setting forth the agreed upon date of termination.

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

J. Relationship of the Parties. 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. The employees or agents of one Party shall not be deemed or construed to the employees of agents of the other Party of any purposes whatsoever.

K. No Waiver of Immunities. Nothing in this Agreement shall be deemed to waive, modify or amend any legal defense available at law or in equity to the Parties, their past or

present officers, employees, or agents or employees, nor to create any legal rights or claim on behalf of any third Party. The Parties do 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.

L. Non-Appropriation and Fiscal Funding. The obligations of the Parties under this Agreement do not constitute a general obligation or indebtedness of either Party for which such Party is obligated to levy, pledge, or collect any form of taxation. It is understood and agreed that County shall have the right to terminate this Agreement at the end of any County Fiscal year if the governing body of County does not appropriate sufficient fund as determined by County's budget for the fiscal year in question. County may effect such termination by giving written notice of termination at the end of its then-current fiscal year.

M. No agency Relationship: It is understood and agreed that County shall not in any sense be considered a partner or joining venture with the City, not shall any of the Parties in any manner hold themselves out as an agent or official representative of the County.

N. Entire Agreement. This Agreement represents the entire and integrated agreement between the Parties and supersedes all prior negotiations, representations, or agreements, either oral or written. This Agreement may be amended only by written instrumental 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 WILLIAMSON COUNTY COMMISIONERS COURT.

EXECUTED TO BE EFFECTIVE this ____ day of _____, 2018

WILLIAMSON COUNTY, TEXAS

By: _____
Dan Gattis, County Judge
Title: Williamson County Judge

Date _____

CITY OF ROUND ROCK, TEXAS

By: _____

Title:

Date: _____

For City, Attest:
By: _____

For City, Approved as to Form:
By: _____
Stephan L. Sheets, City Attorney

Attachment A

RESPONSIBILITIES OF WILLIAMSON COUNTY

- Provide 3 M&M (Medical and Mental Health) teams to respond to behavioral health emergencies within Round Rock Fire Department's jurisdiction. These teams are to be staffed with 3 FTE Mobile Outreach Team Community Risk Reduction Paramedics and 3 FTE Mobile Outreach Team Mental Health Specialists.
- Provide all vehicles, equipment, and supplies needed to perform emergency behavioral health services
- Provide a minimum of 40 hours per year of mental health and substance use training to Round Rock Fire Department's First Responder Advanced Paramedics (FRAPS).
- Support all goals and objectives of the Community Risk Reduction (CRR) Program.
- Support all goals and objectives of the Health and Human Services Commission (HHSC) Opioid Emergency Response Pilot.
- Collect, analyze, and report all data related to the M&M, CRR, and Opioid Emergency Response Pilot to all parties involved.
- In coordination with the Round Rock Fire Department, develop and implement protocols for the CRR and Opioid Emergency Response Pilot.
- Collaborate with area hospitals, Bluebonnet Trails Community Services, the Williamson County and Cities Health District, local non-profit agencies, and peer support programs to meet the goals of the HHSC Opioid Emergency Response Pilot.
- Attend any HHSC required meetings or presentations related to the HHSC Opioid Emergency Response Pilot and submit any reports in accordance with the contract between the City of Round Rock and HHSC.
- Provide one outreach event and/or Naloxone use training to a community agency or business during the HHSC Opioid Emergency Response Pilot.

Attachment B

RESPONSIBILITIES OF THE CITY OF ROUND ROCK

- Reimburse Williamson County for salary, retirement, and benefits for 3 FTE Community Risk Reduction Paramedics and 3 FTE Mental Health Specialists at the rate of **$58,333.33 per month** to be paid by The City of Round Rock upon 30 days of receipt of invoice from Williamson County.
- Participate in scheduled discussions with the Director of the Williamson County Outreach Department to review the status, ensure the provision of services under the Community Risk Reduction Model and the Health and Human Services Commission Opioid Emergency Response Pilot.
- Incorporate Peer Recovery Personnel into the Community Risk Reduction and Health and Human Services Opioid Emergency Response Pilot.
- Assist in data collection and management for the Community Risk Reduction and Health and Human Services Opioid Emergency Response Pilot.
- Provide adequate space, scheduling, and support for First Responder Advanced Paramedic training.

Commissioners Court - Regular Session **40.**

Meeting Date: 02/20/2018

Advertisement Approval RFCSP 1802-215 SWWCRP Additional Facilities

Submitted For: Randy Barker **Submitted By:** Thomas Skiles, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on authorizing the Purchasing Agent to advertise and receive competitive sealed proposals for Additional Facilities at Southwest Williamson County Regional Park under RFCSP #1802-215.

Background

Williamson County seeks a qualified firm to construct additional restroom facilities, site work, related utilities, covered parking, and storage buildings at Southwest Williamson County Regional Park located at 3005 County Road 175, Leander, TX. Total estimated budget for this project is $500,000.00. Time for Performance is 183 days (153 days for substantial completions/30 days for final completion).

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

RFCSP Packet

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:14 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Thomas Skiles		Started On: 02/08/2018 08:59 AM
Final Approval Date: 02/15/2018		

Solicitation 1802-215

Additional Facilities at Southwest Williamson County Regional Park

Bid Designation: Public

Williamson County, Texas

Bid 1802-215
Additional Facilities at Southwest Williamson County Regional Park

Bid Number	1802-215
Bid Title	Additional Facilities at Southwest Williamson County Regional Park
Expected Expenditure	**$500,000.00** (This price is expected - not guaranteed)
Bid Start Date	In Held
Bid End Date	Mar 16, 2018 3:00:00 PM CDT
Question & Answer End Date	Mar 9, 2018 5:00:00 PM CST
Bid Contact	Blake Skiles Senior Purchasing Specialist 512-**943**-1478 blake.skiles@wilco.org
Contract Duration	**One Time Purchase**
Contract Renewal	1 annual renewal
Prices Good for	**30 days**
Pre-Bid Conference	**Mar 12, 2018 1:00:00 PM CDT** **Attendance is optional** **Location: Cedar Rock Railroad - Located Within Southwest Williamson County Regional Park** **3005 County Road 175, Leander, TX**
Bid Comments	**Williamson County seeks a qualified firm to construct additional restroom facilities, site work, related utilities, covered parking, and storage buildings at Southwest Williamson County Regional Park located at 3005 County Road 175, Leander, TX.**

Item Response Form

Item	**1802-215--01-01 -** Total Proposal Price
Quantity	**1 each**
Unit Price	
Delivery Location	**Williamson County, Texas** No Location Specified **Qty** 1

Description
Total Proposal Price

Item	**1802-215--01-02 -** Please Attach All Documents To This Line
Quantity	**1 each**

Prices are not requested for this item.

Delivery Location **Williamson County, Texas**

No Location Specified

Qty 1

Description

Please Attach All Documents To This Line

PUBLIC ANNOUNCEMENT AND GENERAL INFORMATION

WILLIAMSON COUNTY PURCHASING DEPARTMENT
SOLICITATION NUMBER 1802-215
Additional Facilities at Southwest Williamson County Regional Park

PROPOSALS MUST BE RECEIVED ON OR BEFORE:
Mar 16, 2018 3:00:00 PM CDT

PROPOSALS WILL BE PUBLICLY OPENED:
Mar 16, 2018 3:00:00 PM CDT

Notice is hereby given that Competitive Sealed Proposals for the above-mentioned construction services will be accepted by the Williamson County Purchasing Department. Williamson County uses BidSync to distribute and receive Proposals. Specifications for this RFCSP may be obtained by registering at www.bidsync.com.

Williamson County prefers and requests electronic submittal of this Proposal.

All electronic proposals 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 RFCSP.

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 RFCSP.

Please note that a complete package must be submitted choosing one of the above two methods. Split packages where a partial submittal is received in paper and a partial submittal is received via BidSync 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 RFCSP, 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 "Competitive 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 and the names of the offerors and any monetary Proposals made by the offerors, 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 RFCSP 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.

Williamson County – Request for Competitive Sealed Proposal (RFCSP)

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 RFCSP and the Respondent's Proposal. Such Ensuing Agreement(s) shall contain the Proposal specifications, terms and conditions that are derived from the RFCSP.

Contract – means this RFCSP and the Proposal of the Successful Respondent shall become a Contract between the Successful Respondent and the County once the Successful Respondent 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, RFCSP 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 RFCSP package. A Proposal submitted in accordance with this RFCSP 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 RFCSP.

Request for Competitive Sealed Proposals (RFCSP) – 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 RFCSP should clearly reference the numbered sections of this RFCSP 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 RFCSP'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 RFCSP 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 RFCSP. 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 RFCSP.

E. Name, physical address, email address, business and fax number of the Respondent's principal contact person regarding all contractual matters relating to this RFCSP.

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 t 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 t 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 RFCSP. 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 RFCSP, 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 RFCSP. 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 RFCSP 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 RFCSP. **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 RFCSP**. 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 RFCSP, 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 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.

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), RFCSP, Request for Qualifications (RFQ), etc., excluding, but not limited to, certain Juvenile Service contracts, contracts funded with Sheriff

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 RFCSP package. Contents of each Proposal shall be submitted in accordance with this RFCSP.

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 RFCSP 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 "Competitive 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 and the names of the offerors and any monetary proposals made by the offerors, will be read aloud.

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 RFCSP.

General requirements apply to all advertised RFCSPs; however, these may be superseded, in whole or in part, by the proposal specifications, Addenda and modifications issued as a part of this RFCSP. Be sure your Proposal package is complete.

3.2 AMBIGUITY, CONFLICT, OR OTHER ERRORS IN THIS RFCSP

If a Respondent discovers any ambiguity, conflict, discrepancy, omission or other error in this RFCSP, 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 RFCSP 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 RFCSP, 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 RFCSP shall notify the Williamson County Purchasing Department 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 RFCSP. Such exhibits shall be clearly marked with the applicable reference number of the question in the RFCSP. Proposals must address the technical requirements as specified in the RFCSP. All questions posed by the RFCSP 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. REJECTION OR ACCEPTANCE

It is understood that the Commissioners Court of Williamson county, Texas, reserves the right to accept or reject any and/or all proposals for any or all materials and/or services covered in the RFP, and to waive informalities or defects in the proposal or to accept such proposal it shall deem to be in the best interest of Williamson County.

3.8 PROPOSAL OBLIGATION

The contents of the RFCSP, 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).

3.9 COMPLIANCE WITH RFCSP SPECIFICATIONS

It is intended that this RFCSP describe the requirements and the Proposal format in sufficient detail to secure comparable Proposal. Failure to comply with all provisions of the RFCSP may, at the sole discretion of the County, result in disqualification.

3.10 EVALUATION

The County reserves the right to use all pertinent information (also learned from sources other than disclosed in the RFCSP process) that might affect the County's judgment as to the appropriateness an 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's 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.

3.11 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.

3.12 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.

3.13 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.

3.14 SILENCE OF SPECIFICATIONS

The apparent silence of any RFCSP 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.

3.15 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 RFCSP. 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 RFCSP. 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 RFCSP, 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 RFCSP, the Contract and any Ensuing Agreement(s) is governed by the laws of the United States, this RFCSP, 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 RFCSP and its Addenda (if applicable), and the Respondent's 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 RFCSP 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 RFCSP 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 RFCSP 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.

A. 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.

4.6 IMPLIED REQUIREMENTS

Products or services not specifically described or required in the RFCSP, but are necessary to provide the functional capabilities described by the Respondent, shall be implied and deemed to be included in the Proposal.

4.7 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.

4.8 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.

4.9 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 RFCSP 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.

4.10 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.

4.11 TESTING AND INSPECTIONS

The County reserves the right to inspect and test equipment, supplies, materials and goods for quality and compliance with this RFCSP, 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).

4.12 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 RFCSP and the County will not reimburse the Respondents for such expenses.

4.13 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).

4.14 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).

4.15 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.

4.16 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.

4.17 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.

4.18 SEVERABILITY

If any provision of this RFCSP, 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 RFCSP, 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 RFCSP, 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 RFCSP, the Contract or any Ensuing Agreement(s) and be deemed to be validated and enforceable.

4.19 EQUAL OPPORTUNITY

Neither party shall discriminate against any employee or applicant for employment because of race, color, sex, religion or national origin.

4.20 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.

4.21 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.

4.22 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.

4.23 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.

4.24 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.

4.25 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 RFCSP, 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.

4.26 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.

4.27 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.

4.28 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.

4.29 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.

4.30 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 RFCSP 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 RFCSP. Williamson County and its architect or engineer may discuss with the Successful Respondent options for a scope or time modification and any price change associated with the modification. In the event such discussions are conducted and Williamson County and the Successful Respondent cannot agree to scope or time modifications and any price change associated with such modifications, County may still opt to contract with the Successful Respondent based on selected Respondent's original Proposal to the RFCSP.

The Successful Respondent shall be required to execute a formal contract at Williamson County offices in Georgetown, Texas within ten (10) days after the award. Said contract shall be in the same form as the Agreement Between Owner and Contractor which begins on the following page. The only anticipated changes in the contract will be to include additional exhibits, to fill in blanks to identify the contractor, and terms relating to the compensation, or to revise the contract to accommodate corrections, changes in the scope of services, or changes pursuant to addenda issued. Respondents should raise any questions regarding the terms of the contract, or submit requested changes in said terms, in the form of written questions or submittals. Because the signed contract will be substantively and substantially derived from the attached contract, each Respondent is urged to seek independent legal counsel as to any questions about the terms, conditions or provisions contained in the attached contract before submitting a Proposal. Again, the attached contract contains important legal provisions and is considered part and parcel of this RFCSP. Failure or refusal to sign aforesaid contract shall be grounds for Williamson County to revoke any award which has been issued, forfeit security, if applicable, and select another Respondent.

4.31 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.

4.32 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.

4.33 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

4.34 CONTRACTUAL FORMATION AND ENSUING AGREEMENT

The RFCSP 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 RFCSP and Respondent's Proposal.

4.35 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.

4.36 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.

4.37 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.

4.38 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.

4.39 COOPERATIVE PURCHASING PROGRAM

During the term of the Contract resulting from this RFCSP, 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 RFCSP 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.

4.40 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.

4.41 CONFIDENTIALITY

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.

Additional Stipulations

1 Additional Stipulations

1.1 Introduction

The Proposal evaluation and selection process is detailed in this section, as are other factors, and the format in which the Price Proposal of each Proposal should be submitted.

1.2 Price Proposal

The Respondent must utilize the price sheet form as provided which will be attached to this RFCSP. The Price Proposal should be included in each copy of the Proposal if submitted in paper form.

Note: Any reworked version of the Price Proposal that is intended to be a substitute and that is provided by a Respondent may be determined as non-responsive, and may, at the County's sole discretion, result in the Respondent's disqualification.

1.3 Proposal Evaluation and Selection

1.3.1 Evaluation/Selection Criteria

No later than the 45th day after the date on which the Proposals are opened, all Proposals received by the designated date and time will be evaluated based on the Respondent's Proposal and the published evaluation Criteria. Other information may be taken into consideration when that information potentially provides an additional benefit to the County, and further helps the County in receiving the services listed in the RFCSP.

Respondents' Proposals must meet all mandatory (minimum) requirements in order to be scored. Scoring may also be based on total information gathered by the County at its discretion, including but not limited to respondent's ability to perform "without delay or interference, character, responsibility, integrity, and experience or demonstrated capability; quality of prior work; compliance with laws; and noncompliance with requirements as to submission of relevant information."

1.3.2 Evaluation Committee and Selection Process

Williamson County will conduct a comprehensive, fair and impartial evaluation of all proposals received in response to the RFCSP. All Proposals will be evaluated by a County appointed Evaluation Committee. The Evaluation Committee may be composed of County Staff that may have expertise, knowledge or experience with the services and/or goods being procured hereunder. Those Respondents meeting all requirements and deemed most qualified may receive further evaluation via telephone or in-person interviews with members of the Evaluation Committee. Respondents may be interviewed and re-scored based upon the same criteria or other criteria, to be determined by the Evaluation Committee. The County will select a Respondent determined best and most responsible Respondent meeting minimum specifications and qualifications.

Respondents are advised that the Evaluation Committee, at its option, may recommend an award strictly on the basis of the initial RFCSP responses, or in addition, may have interviews with firms to determine its final recommendation. Williamson County then selects the proposal that offers the best value based on the published selection criteria and its ranking evaluation. Following the selection, the contract negotiation process begins. The County negotiates first with the highest ranked offeror. At this stage, the County and its architect or engineer may discuss modifications to the proposed score, time and price. Modifications are not required, and if they are discussed and not agreed to by the County and the offeror, a final contract may still be negotiated and agreed upon based on the original response to the RFCSP.

If the two parties are unable to reach a final agreement, the County must inform the offeror in writing that negotiations are ended. The County may then negotiate with the next ranked offeror. This continues in the order of the selection ranking until a contract is reached or all proposals are rejected. In this form of contract procurement, the County is not restricted to considering price alone in its selection, but may consider any other factor from among the established selection criteria to determine which offeror offers the County the best value. The Evaluation Committee will present its recommendation to the Williamson County Commissioners Court for approval and award of contract.

1.3.3 Mandatory Criteria

Minimum requirements (if applicable) must be passed in order to be considered for scoring as described in section 1.3.4.

1.3.4 Graded Evaluation Factors

The following graded evaluation factors will be used to determine how well a Respondent(s) meet(s) the desired performance.

1. **The price (40% of score – 40 points max)**
    a. Submit pricing per the attached price sheet.
2. **The Respondent's proposed personnel for the project (20% of score – 15 points max)**
    a. Respondent to provide list of proposed staff to be used on the project. Provide names of Company Owner, Project Manager, Superintendent, Etc. and/or equivalents.
3. **Respondent's experience and reputation (20% of score – 15 points max)**
    a. Respondent to provide a list of 3 similar (or larger) projects performed in Texas. Please include project name, owner contact name & contact information, brief project description with size/square footage and contracted dollar amount.
4. **Respondents office location as it relates to distance from the project site (20% of score – 15 points max)**
    a. Provide verifiable physical address of Respondent's closest permanent location to project and length of time at that location.

1.3.5 Interviews

Interview scoring (if applicable) will be provided along with invitation to interview candidates.

1.3.6 Additional Evaluation Information

The County reserves the right to award a contract for any or all areas of this RFCSP.

It is the responsibility of the Respondent to provide sufficient information/data in a convincing manner to the County to assure all of the terms, conditions and expectations **for** satisfactory performance of the services requested herein will be met.

All contact during the evaluation phase shall be through the Williamson County Purchasing Department only. The Respondent shall neither contact nor lobby evaluators during the evaluation process. Attempts by the Respondent to contact and/or influence members of the Evaluation Committee may result in disqualification of Proposal.

1.4 Technical Contact

Randy Bell (or successor), Director of Parks, Williamson County shall serve as the County's Technical Contact with designated responsibility to ensure compliance with the requirements of the Contract and any Ensuing Agreement, such as, but not limited to, acceptance, inspection and delivery. The Technical Contact together with the Purchasing Department will serve as a liaison between the Williamson County Commissioners Court and the Successful Respondent.

1.5 Time for Performance

A time frame of one hundred eighty three (183) days (one hundred fifty three (153) to substantial completion/thirty (30) to final completion) is given for completion of plans on this bid. This may begin at the time specified by the County within the three hundred sixty-five (365) days of the pricing quoted on this bid, starting on the day of award. The Contractor will be given written notice to begin work on this project. The Work on this project shall begin within ten (10) calendar days after such notification.

Liquidated damages for failure to substantially complete the work within the allotted time will be applied. Liquidated damages are $500 per working day.

The Contractor will be given written notice to begin work on this project. Work on this project shall begin within five (5) working days after such notification. Failure to begin work within the allotted time will result in liquidated damages being incurred at the rate of $500 per working day

1.6 Contract Extensions

At the end of the Initial Contract Term, the Commissioners Court reserves the right to extend the Initial Contract Term, by mutual agreement of both parties, as it deems to be in the best interest of the County. The extension may be negotiated if renewal indications are provided within the County's timeframe which reflect renewal terms for the forthcoming policy year that are deemed by the County to be competitive with current market conditions. However, the County may terminate the contract at any time if funds are restricted, withdrawn, not approved, or if service is unsatisfactory. Any extension will be in twelve (12) month increments for up to an additional twenty-four (24) months, with the terms and conditions remaining the same. The total period of the contract, including all extensions will not exceed a maximum combined period of sixty (60) months. The extension of the contract is contingent on the appropriation of necessary funds by the Commissioners Court for the fiscal year in question. Upon the failure of the Commissioners Court to so appropriate in any year, the Respondent may elect to terminate the contract, with no additional liability to the County. The County and the Respondent agree that termination shall be the Respondent's sole remedy under this circumstance.

1.7 Insurance Requirements

By signing its Proposal, the 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 this provision.

Respondent will be required to submit Certificates of Insurance **prior to commencing work.**

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.

The following coverage limits shall be required at a minimum:

A. Worker's Compensation — Statutory – Texas Law

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	$1,000,000	$1,000,000
Aggregate policy limits:	$1,000,000	

Successful Respondent’s property will not be covered by any insurance that may be carried by Williamson County. Successful Respondent assumes the risk of loss on its contents and property that are situated on/in/around the County property. The Successful Respondent is strongly encouraged to obtain insurance on its property to the extent deemed necessary by the Successful Respondent.

The deductible for an insurance policy required hereunder shall not exceed $100,000. **The County shall be named as an additional insured under any policy of insurance required hereunder.**

Successful Respondent shall not commence any work until it has obtained all required insurance and such insurance has been approved by County. Successful Respondent shall not allow any subcontractor(s) to commence work to be performed until all required insurance has been obtained by such subcontractor(s) and approved by County. Approval of the insurance by County shall not relieve or decrease the liability of Successful Respondent or its subcontractor(s) hereunder.

The required insurance must be written by a company approved to do business in the State of Texas with a financial standing of at least an A- rating, as reflected in Best's insurance ratings or by a similar rating system recognized within the insurance industry at the time the policy is issued. Successful Respondent shall furnish County with a certificate of coverage issued by the insurer. Successful Respondent shall not cause any insurance to be canceled nor permit any insurance to lapse. ALL INSURANCE CERTIFICATES SHALL INCLUDE A CLAUSE TO THE EFFECT THAT THE POLICY SHALL NOT BE CANCELED OR REDUCED, RESTRICTED OR LIMITED UNTIL TEN (10) CALENDAR DAYS AFTER COUNTY HAS RECEIVED WRITTEN NOTICE AS EVIDENCED BY RETURN RECEIPT OF REGISTERED OR CERTIFIED LETTER.

It is the intention of the County, and agreed to and hereby acknowledged by the Successful Respondent, that no provision of this Contract or any ensuing Agreement shall be construed to require the County to submit to mandatory arbitration or mediation in the settlement of any claim, cause of action or dispute, except as specifically required in direct connection with an insurance claim or threat of claim under an insurance policy required hereunder which absolutely requires arbitration or mediation of such claim, or as otherwise required by law or a court of law with jurisdiction over the provisions of this Contract or any ensuing Agreement.

Workers' Compensation Coverage Requirements

The Texas Labor Code, Section 406.096, requires workers' compensation insurance coverage for all persons providing services on a building or construction project for a governmental entity such as the County. The rule requires the County to timely obtain certificates of coverage and retain them for the duration of the project. The rule also sets out the language to be included in the Bid specifications and in contracts awarded by a governmental entity and the information required to be in the posted notice to employees. The rule is adopted under the Texas Labor Code, Section 402.061.

The information provided below is a result of this rule. By submitting your Bid to the County, you are acknowledging that this rule is a part of these Bid specifications, and that you will observe and abide by all of the requirements outlined in the rule. You are further agreeing that should your Bid be accepted by the Williamson County Commissioners Court, the necessary certificates of coverage showing workers' compensation coverage, will be provided to the following name and address prior to beginning work:

Williamson County Purchasing Department
901 S. Austin Ave.
Georgetown, TX 78626

Failure to comply with this request may result in termination of the Contract and any ensuing Agreement. If you have any questions related to this ruling and/or requirement, you are encouraged to contact either the Williamson County Purchasing Department at (512) 943-1546, or you may call the Texas Workers' Compensation Commission at (800) 372-7713.

A. The following words and terms, when used in this provision, shall have the following meanings. Terms not defined in this rule shall have the meaning defined in the Texas Labor Code, if so defined.

1. Certificate of coverage (certificate) – A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a workers' compensation 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 (including those subject to a coverage agreement) providing services on a project, for the duration of the project.

2. Building or Construction – Has the meaning defined in the Texas Labor Code, Section 406.096(e)(1).

3. Contractor – A person bidding for or awarded a building or construction project by Williamson County.

4. Coverage – Workers' compensation insurance meeting the statutory requirements of the Texas Labor Code, Section 401.011(44).

5. Coverage agreement – A written agreement on form TWCC-81, form TWCC-82, form TWCC-83, or form TWCC-84, filed with the Texas Workers' Compensation Commission which establishes a relationship between the parties for purposes of the Texas Workers' Compensation Act, pursuant to the Texas Labor Code, Chapter 406, Subchapters F and G, as one of employer/employee and establishes who will be responsible for providing workers' compensation coverage for persons providing services on the project.

6. Duration of the project--Includes the time from the beginning of work on the project until the work on the project has been completed and accepted by the County.

7. Persons providing services on the project ("subcontractor" in the Texas Labor Code, Section 406.096) – 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.

8. Project – Includes the provision of all services related to a building or construction contract for the County.

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 the Texas Labor Code, Section 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 workers compensation coverage to Williamson County prior to being awarded the Contract.

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 Williamson County showing that coverage has been extended.

E. The contractor shall obtain from each person providing services on a project, and provide to the County:

1. A certificate of coverage, prior to that person beginning work on the project, so Williamson County 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 County in writing by certified mail or personal delivery, within ten (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 whom 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:

    i. (a) a certificate of coverage, prior to the other person beginning work on the project; and
    ii. (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 certificates of coverage on file for the duration of the project and for one year thereafter;

6. Notify the County in writing by certified mail or personal delivery, within ten (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 this Contract or providing or causing to be provided a certificate of coverage, the contractor is representing to Williamson County 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 County to declare the contract void if the contractor does not remedy the breach within ten (10) days after receipt of notice of breach from the County.

Southwest Williamson County Regional Park - Restrooms and Storage

3005 CR 175
Leander, Texas 78641
United States

Williamson County Parks and Recreation

3005 CR 175
Leander, Texas 78641
United States

MODE Design Company

1102 S. Austin Ave.
Suite 103
Georgetown, Texas 78626
United States

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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. 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: SOUTHWEST WILLIAMSON COUNTY REGIONAL PARK - RESTROOMS.

1. Project Location: 3005 COUNTY ROAD 175, LEANDER, TX 78641.

B. Owner: WILLIAMSON COUNTY PARKS AND RECREATION.

1. Owner's Representative: RANDY BELL.

C. Architect: MODE DESIGN COMPANY, 1002 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: ENGINEERING 360.
2. M.E.P. ENGINEER: HENDRIX CONSULTING ENGINEERS.
3. CIVIL ENGINEER: WAELTZ & PRETE.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. SITE WORK AND UTILITIES FOR RESTROOMS AND STORAGE BUILDINGS. RESTROOM(S) AND POSSIBLE STORAGE BUILDINGS..

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 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 012300 - ALTERNATES

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 alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: RESTROOM #1 PREFAB OPTION.

1. Base Bid: RESTROOM BUILDING #1 as indicated on Sheet A-1.1
2. Alternate: RESTROOM BUILDING #1 - AS PREFABRICATED OPTION SIMILAR TO PUBLIC RESTROOM COMPANY PS-022-CE.

B. Alternate No. 2A: RESTROOM #2 - PER DRAWINGS.

1. Base Bid: RESTROOM BUILDING #2 -NO RESTROOM BUILDING
2. Alternate: RESTROOM BUILDING #2 - AS SHOWN ON DRAWINGS

C. Alternate No. 2B: RESTROOM #2 - PREFAB OPTION.

1. Base Bid: RESTROOM BUILDING #2 -NO RESTROOM BUILDING
2. Alternate: RESTROOM BUILDING #2 - AS PREFABRICATED OPTION SIMILAR TO PUBLIC RESTROOM COMPANY PS-022-CE.

D. Alternate No. 3: COVERED STORAGE BUILDING.

1. Base Bid: NO COVERED STORAGE BUILDING as indicated on Sheet A-2.0
2. Alternate: STORAGE BUILDING PER DRAWINGS as indicated on Sheet A-2.0

E. Alternate No. 4: CMU STORAGE BUILDINGS.

1. Base Bid: NO CMU STORAGE BUILDINGS as indicated on Sheet A-3.0
2. Alternate:(2) CMU STORAGE BUILDINGS as indicated on Sheet A-3.0

END OF SECTION 012300

SECTION 012500 - SUBSTITUTION 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 substitutions.

B. Related Requirements:

1. Section 012100 "Allowances" for products selected under an allowance.
2. Section 012300 "Alternates" for products selected under an alternate.
3. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use CSI Form 13.1A.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.

c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
b. Substitution request is fully documented and properly submitted.
c. Requested substitution will not adversely affect Contractor's construction schedule.
d. Requested substitution is compatible with other portions of the Work.
e. Requested substitution has been coordinated with other portions of the Work.

B. Substitutions for Convenience: Not allowed [unless otherwise indicated].

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012900 - PAYMENT 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 necessary to prepare and process Applications for Payment.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:

    a. Application for Payment forms with continuation sheets.
    b. Submittal schedule.
    c. Items required to be indicated as separate activities in Contractor's construction schedule.

2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
3. Subschedules for Separate Design Contracts: Where the Owner has retained design professionals under separate contracts who will each provide certification of payment requests, provide subschedules showing values coordinated with the scope of each design services contract as described in Section 011000 "Summary."

B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Identification: Include the following Project identification on the schedule of values:

    a. Project name and location.
    b. Name of Architect.
    c. Architect's project number.
    d. Contractor's name and address.
    e. Date of submittal.

2. Arrange schedule of values consistent with format of AIA Document G703.
3. Arrange the schedule of values in tabular form with separate columns to indicate the following for each item listed:

    a. Description of the Work.
    b. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.

        1) Labor.
        2) Materials.
        3) Equipment.

4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.

    a. Include separate line items under principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.

5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.

    a. Differentiate between items stored on-site and items stored off-site. If required, include evidence of insurance.

7. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
8. Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicate owner payments or deposits, if any, and balance to be paid by Contractor.
9. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

    a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.

10. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.

C. Application for Payment Forms: Use forms acceptable to Architect and Owner for Applications for Payment. Submit forms for approval with initial submittal of schedule of values.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.

E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
3. Provide summary documentation for stored materials indicating the following:

a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.

c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. Schedule of values.
2. Contractor's construction schedule (preliminary if not final).

I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

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. Requests for Information (RFIs).

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

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 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.

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.

B. Related Requirements:

1. Section 013300 "Submittal Procedures" for submitting schedules and reports.
2. Section 014000 "Quality Requirements" for submitting a schedule of tests and inspections.

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. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.

1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.

C. Construction Schedule Updating Reports: Submit with Applications for Payment.

D. Qualification Data: For scheduling consultant.

1.4 QUALITY ASSURANCE

A. Scheduling Consultant Qualifications: An experienced specialist in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within 24 hours of Architect's request.

1.5 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, list of subcontracts, 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 Substantial 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. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
3. 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.
4. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
5. 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.

6. 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. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.

D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion, and the following interim milestones:

1. Temporary enclosure and space conditioning.

E. 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.

1. See Section 012900 "Payment Procedures" for cost reporting and payment procedures.

F. 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.

G. 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 (CPM SCHEDULE)

A. General: Prepare network diagrams using AON (activity-on-node) format.

B. CPM Schedule: Prepare Contractor's construction schedule using a time-scaled CPM network analysis diagram for the Work.

1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 60 days after date established for the Notice to Proceed.

a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Architect's approval of the schedule.

2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule in order to coordinate with the Contract Time.

C. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.

1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:

a. Punch list and final completion.

2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.

a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.

5. Cost- and Resource-Loading of CPM Schedule: Assign cost to construction activities on the CPM schedule. Do not assign costs to submittal activities. Obtain Architect's approval prior to assigning costs to fabrication and delivery activities. Assign costs

under main subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project record documents, and demonstration and training (if applicable), in the amount of 5 percent of the Contract Sum.

a. Each activity cost shall reflect an appropriate value subject to approval by Architect.
b. Total cost assigned to activities shall equal the total Contract Sum.

D. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.

E. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:

1. Contractor or subcontractor and the Work or activity.
2. Description of activity.
3. Main events of activity.
4. Immediate preceding and succeeding activities.
5. Early and late start dates.
6. Early and late finish dates.
7. Activity duration in workdays.
8. Total float or slack time.
9. Average size of workforce.
10. Dollar value of activity (coordinated with the schedule of values).

F. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:

1. Identification of activities that have changed.
2. Changes in early and late start dates.
3. Changes in early and late finish dates.
4. Changes in activity durations in workdays.
5. Changes in the critical path.
6. Changes in total float or slack time.
7. Changes in the Contract Time.

G. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.

1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.
2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.
3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.
4. Prepare list for ease of comparison with payment requests; coordinate timing with progress meetings.

a. In both value summary lists, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.
b. Submit value summary printouts one week before each regularly scheduled progress meeting.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. 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.

B. 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 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.

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. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

C. 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.

D. 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. Action Submittals: Submit three paper copies of each submittal unless otherwise indicated. Architect will return two copies.
3. Informational Submittals: Submit two paper copies of each submittal unless otherwise indicated. Architect will not return copies.
4. 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. Standard color charts.

4. Submit Product Data before or concurrent with Samples.
5. Submit Product Data in the following format:

a. PDF electronic file.
b. Three paper copies of Product Data unless otherwise indicated. Architect will return two copies.

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. Notation of coordination requirements.
d. 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 (215 by 280 mm), but no larger than 30 by 42 inches (750 by 1067 mm).
3. Submit Shop Drawings in the following format:

a. PDF electronic file.

4. BIM File Incorporation: Develop and incorporate Shop Drawing files into Building Information Model established for Project.

a. Prepare Shop Drawings in the following format: Same digital data software program, version, and operating system as the original Drawings.
b. Refer to Section 013100 "Project Management and Coordination" for requirements for coordination drawings.

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.

2.2 DELEGATED-DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

C. BIM File Incorporation: Incorporate delegated-design drawing and data files into Building Information Model established for Project.

1. Prepare delegated-design drawings in the following format: Same digital data software program, version, and operating system as the original Drawings.

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 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.

C. Related Requirements:

1. Section 012100 "Allowances" for testing and inspecting allowances.

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 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 ACTION SUBMITTALS

A. Shop Drawings: For integrated exterior mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.

1. Indicate manufacturer and model number of individual components.
2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.6 CONTRACTOR'S QUALITY-CONTROL PLAN

A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule.

B. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.

1. Project quality-control manager may also serve as Project superintendent.

C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.

D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:

1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
2. Special inspections required by authorities having jurisdiction and indicated on the "Statement of Special Inspections."
3. Owner-performed tests and inspections indicated in the Contract Documents.

E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into

compliance with standards of workmanship established by Contract requirements and approved mockups.

F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.7 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.

1.8 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; 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 as indicated on Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials.

1.9 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.

1.10 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:

B. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviews the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect, Commissioning Authority, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect and Commissioning Authority with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.

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. "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."

C. "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.

D. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

E. "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.

F. "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. 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 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. Protection of installed construction.

B. Related Requirements:

1. Section 011000 "Summary" for limits on use of Project site.
2. 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.

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.

    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.
    h. <Insert miscellaneous element>.

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 unacceptable installation tolerances.
3. 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.

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 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 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 017300 "Execution" for progress cleaning of Project site.
2. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.
3. 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 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.5 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.

1.6 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."

1.7 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.

1.8 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 (215-by-280-mm) 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.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

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. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
d. Remove tools, construction equipment, machinery, and surplus material from Project site.
e. 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.
f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
g. Sweep concrete floors broom clean in unoccupied spaces.
h. Remove labels that are not permanent.
i. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
j. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
k. Leave Project clean and ready for occupancy.

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.

F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-

mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.

a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch (215-by-280-mm) white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

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. Operating logs.
5. Wiring diagrams.
6. Control diagrams.
7. Piped system diagrams.
8. 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.

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. Material and chemical composition.
5. 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.
6. Demonstration and training video recording, if available.

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.
3. Demonstration and training video recordings.

B. Allowances: Furnish demonstration and training instruction time under the Demonstration and Training Allowance as specified in Section 012100 "Allowances."

C. Unit Price for Instruction Time: Length of instruction time will be measured by actual time spent performing demonstration and training in required location. No payment will be made for time spent assembling educational materials, setting up, or cleaning up. See requirements in Section 012200 "Unit Prices."

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. Documentation: Review the following items in detail:

    a. Emergency manuals.
    b. Operations manuals.
    c. Maintenance manuals.
    d. Project record documents.
    e. Identification systems.
    f. Warranties and bonds.
    g. Maintenance service agreements and similar continuing commitments.

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. Troubleshooting: Include the following:

a. Diagnostic instructions.
b. Test and inspection procedures.

6. 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.

7. Repairs: Include the following:

a. Diagnosis instructions.
b. Repair instructions.
c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
d. Instructions for identifying parts and components.
e. Review of spare parts needed for operation and maintenance.

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 042200 - CONCRETE UNIT MASONRY

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. Concrete masonry units.
2. Mortar and grout.
3. Ties and anchors.
4. Embedded flashing.

B. Related Sections:

1. Section 071900 "Water Repellents" for water repellents applied to concrete unit masonry.
2. Section 076200 "Sheet Metal Flashing and Trim" for sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.

1.3 DEFINITIONS

A. CMU(s): Concrete masonry unit(s).

B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 QUALITY ASSURANCE

A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.

B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

C. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. 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, and in a dry location or in covered weatherproof dispensing silos.

E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.6 PROJECT CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

1. Extend cover a minimum of 24 inches (600 mm) down both sides of walls and hold cover securely in place.

B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.

C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over 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 the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and higher and will remain so until masonry has dried, but not less than 7 days after completing cleaning.

E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

B. Fire-Resistance Ratings: Where indicated, provide units that comply with requirements for fire-resistance ratings indicated as determined by testing according to ASTM E 119, by equivalent masonry thickness, or by other means, as acceptable to authorities having jurisdiction.

2.2 CONCRETE MASONRY UNITS

A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.

1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
2. Provide square-edged units for outside corners unless otherwise indicated.

B. CMUs: ASTM C 90.

1. Density Classification: Normal weight.
2. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.
3. Size (Width): Manufactured to the following dimensions:

    a. 100 mm nominal; 92 mm actual.
    b. 150 mm nominal; 143 mm actual.
    c. 200 mm nominal; 194 mm actual.
    d. 250 mm nominal; 244 mm actual.
    e. 300 mm nominal; 295 mm actual.
    f. 400 mm nominal; 396 mm actual.

4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.
5. Faces to Receive Plaster: Where units are indicated to receive a direct application of plaster, provide textured-face units made with gap-graded aggregates.

2.3 MASONRY LINTELS

A. General: Provide one of the following:

B. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs with reinforcing bars placed as indicated and filled with coarse grout. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.

2.4 MORTAR AND GROUT MATERIALS

A. Masonry Cement: ASTM C 91.

B. Aggregate for Mortar: ASTM C 144.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
2. For joints less than 1/4 inch (6 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.

C. Aggregate for Grout: ASTM C 404.

D. Water: Potable.

2.5 TIES AND ANCHORS

A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated.

1. Mill-Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 641/A 641M, Class 1 coating.
2. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
3. Stainless-Steel Wire: ASTM A 580/A 580M, Type 304.
4. Galvanized Steel Sheet: ASTM A 653/A 653M, Commercial Steel, G60 (Z180) zinc coating.
5. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
6. Stainless-Steel Sheet: ASTM A 666, Type 304.
7. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
8. Stainless-Steel Bars: ASTM A 276 or ASTM A 666, Type 304.

B. Partition Top Anchors: 0.105-inch-(2.66-mm-)thick metal plate with 3/8-inch-(9.5-mm-)diameter metal rod 6 inches (152 mm) long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube. Fabricate from steel, hot-dip galvanized after fabrication.

C. Rigid Anchors: Fabricate from steel bars 1-1/2 inches (38 mm) wide by 1/4 inch (6.35 mm) thick by 24 inches (610 mm) long, with ends turned up 2 inches (51 mm) or with cross pins unless otherwise indicated.

1. Corrosion Protection: Hot-dip galvanized to comply with ASTM A 153/A 153M.

2.6 MISCELLANEOUS ANCHORS

A. Unit Type Inserts in Concrete: Cast-iron or malleable-iron wedge-type inserts.

B. Anchor Bolts: Headed or L-shaped steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers; hot-dip galvanized to comply with ASTM A 153/A 153M, Class C; of dimensions indicated.

2.7 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual " and as follows:

1. Stainless Steel: ASTM A 240/A 240M, Type 304, 0.016 inch (0.40 mm) thick.
2. Copper: ASTM B 370, Temper H00, cold-rolled copper sheet, 16-oz./sq. ft. (4.9-kg/sq. m) weight or 0.0216 inch (0.55 mm) thick or ASTM B 370, Temper H01, high-yield copper sheet, 12-oz./sq. ft. (3.7-kg/sq. m) weight or 0.0162 inch (0.41 mm) thick.
3. Fabricate continuous flashings in sections 96 inches (2400 mm) long minimum, but not exceeding 12 feet (3.7 m). Provide splice plates at joints of formed, smooth metal flashing.
4. Fabricate through-wall flashing with snaplock receiver on exterior face where indicated to receive counterflashing.
5. Fabricate through-wall flashing with drip edge unless otherwise indicated. Fabricate by extending flashing 1/2 inch (13 mm) out from wall, with outer edge bent down 30 degrees and hemmed.
6. 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 (76 mm) 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.
7. Metal Drip Edge: Fabricate from stainless steel. Extend at least 3 inches (76 mm) into wall and 1/2 inch (13 mm) out from wall, with outer edge bent down 30 degrees and hemmed.

B. Flexible Flashing: Use one of the following unless otherwise indicated:

1. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymer alloy.

a. Accessories: Provide preformed corners, end dams, other special shapes, and seaming materials produced by flashing manufacturer.

C. 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 the wall face, use metal flashing.
3. Where flashing is partly exposed and is indicated to terminate at the wall face, use metal flashing with a drip edge.
4. Where flashing is fully concealed, use metal flashing or flexible flashing.

D. Solder and Sealants for Sheet Metal Flashings:

1. Solder for Stainless Steel: ASTM B 32, Grade Sn60, with acid flux of type recommended by stainless-steel sheet manufacturer.
2. Solder for Copper: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.
3. Elastomeric Sealant: ASTM C 920, chemically curing silicone sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.8 MORTAR AND GROUT 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 in mortar or grout.
2. Use masonry cement mortar unless otherwise indicated.
3. For exterior masonry, use masonry cement mortar.
4. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.

B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.

1. For masonry below grade or in contact with earth, use Type M.
2. For mortar parge coats, use Type S.
3. For exterior, above-grade, load-bearing and non-load-bearing walls and parapet walls; for interior load-bearing walls; for interior non-load-bearing partitions; and for other applications where another type is not indicated, use Type N.
4. For interior non-load-bearing partitions, Type O may be used instead of Type N.

C. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476, Table 1.

3. Provide grout with a slump of 8 to 11 inches (203 to 279 mm) as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
2. Verify that foundations are within tolerances specified.
3. Verify that reinforcing dowels are properly placed.

B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Build chases and recesses to accommodate items specified in this and other Sections.

B. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.

C. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch (12 mm) or minus 1/4 inch (6 mm).
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch (12 mm).
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch (6 mm) in a story height or 1/2 inch (12 mm) total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2 inch (12 mm) maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
5. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2 inch (12 mm) maximum.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm).
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch (3 mm).
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch (9 mm) or minus 1/4 inch (6 mm).
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm).

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.

C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4-inches (100-mm). Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.

D. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar before laying fresh masonry.

E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below and rod mortar or grout into core.

H. Fill cores in hollow CMUs with grout 24 inches (600 mm) under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

I. Build non-load-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.

1. Install compressible filler in joint between top of partition and underside of structure above.
2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide 1/2-inch (13-mm) clearance between end of anchor rod and end of tube. Space anchors 48 inches (1200 mm) o.c. unless otherwise indicated.
3. Wedge non-load-bearing partitions against structure above with small pieces of tile, slate, or metal. Fill joint with mortar after dead-load deflection of structure above approaches final position.
4. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Section 078446 "Fire-Resistive Joint Systems."

3.5 MORTAR BEDDING AND JOINTING

A. Lay hollow CMUs as follows:

1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.

B. Set cast-stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.

1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
2. Allow cleaned surfaces to dry before setting.
3. Wet joint surfaces thoroughly before applying mortar.

C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

D. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.

3.6 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

A. Anchor masonry to structural steel and concrete where masonry abuts or faces structural steel or concrete to comply with the following:

1. Provide an open space not less than 1/2 inch (13 mm) wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
3. Space anchors as indicated, but not more than 24 inches (610 mm) o.c. vertically and 36 inches (915 mm) o.c. horizontally.

3.7 CONTROL AND EXPANSION JOINTS

A. General: Install control and expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

B. Form control joints in concrete masonry using one of the following methods:

1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout and rake out joints in exposed faces for application of sealant.
2. Install preformed control-joint gaskets designed to fit standard sash block.
3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar or rake out joint for application of sealant.
4. Install temporary foam-plastic filler in head joints and remove filler when unit masonry is complete for application of sealant.

3.8 LINTELS

A. Provide masonry lintels where shown and where openings of more than 12 inches (305 mm) for brick-size units and 24 inches (610 mm) for block-size units are shown without structural steel or other supporting lintels.

B. Provide minimum bearing of 8 inches (200 mm) at each jamb unless otherwise indicated.

3.9 FLASHING

A. General: Install embedded flashing in masonry at lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.

B. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
2. At lintels, extend flashing a minimum of 6 inches (150 mm) into masonry at each end. At heads and sills, extend flashing 6 inches (150 mm) at ends and turn up not less than 2 inches (50 mm) to form end dams.
3. Interlock end joints of ribbed sheet metal flashing by overlapping ribs not less than 1-1/2 inches (38 mm) or as recommended by flashing manufacturer, and seal lap with elastomeric sealant complying with requirements in Section 079200 "Joint Sealants" for application indicated.
4. Install metal drip edges and sealant stops 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.
5. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch (13 mm) back from outside face of wall and adhere flexible flashing to top of metal drip edge.
6. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch (13 mm) back from outside face of wall and adhere flexible flashing to top of metal flashing termination.
7. Cut flexible flashing off flush with face of wall after masonry wall construction is completed.

C. Install single-wythe CMU flashing system in bed joints of CMU walls where indicated to comply with manufacturer's written instructions. Install CMU cell pans with upturned edges located below face shells and webs of CMUs above and with weep spouts aligned with face of wall. Install CMU web covers so that they cover upturned edges of CMU cell pans at CMU webs and extend from face shell to face shell.

D. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.

3.10 REINFORCED UNIT MASONRY INSTALLATION

A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other loads that may be placed on them during construction.

B. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.

C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than 60 inches (1520 mm).

3.11 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform tests and inspections. Retesting of materials that fail to meet specified requirements shall be done at Contractor's expense.

B. Inspections: Level 1 special inspections according to the "International Building Code."

1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.
2. Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcement.
3. Place grout only after inspectors have verified proportions of site-prepared grout.

C. Testing Prior to Construction: One set of tests.

D. Testing Frequency: One set of tests for each 5000 sq. ft. (464 sq. m) of wall area or portion thereof.

E. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C 140 for compressive strength.

F. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C 780.

G. Mortar Test (Property Specification): For each mix provided, according to ASTM C 780. Test mortar for mortar air content and compressive strength.

H. Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.

I. Prism Test: For each type of construction provided, according to ASTM C 1314 at 7 days and at 28 days.

3.12 PARGING

A. Parge exterior faces of below-grade masonry walls, where indicated, in 2 uniform coats to a total thickness of 3/4 inch (19 mm). Dampen wall before applying first coat and scarify first coat to ensure full bond to subsequent coat.

B. Use a steel-trowel finish to produce a smooth, flat, dense surface with a maximum surface variation of 1/8 inch per foot (3 mm per 300 mm). Form a wash at top of parging and a cove at bottom.

C. Damp-cure parging for at least 24 hours and protect parging until cured.

3.13 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

3.14 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.

1. Crush masonry waste to less than 4 inches (100 mm) in each dimension.
2. Mix masonry waste with at least two 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 (450 mm) of finished grade.

C. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042200

SECTION 074113.13 - FORMED METAL ROOF PANELS

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. Exposed-fastener, lap-seam, metal roof panels.

B. Related Sections:

1. Section 074213.53 "Metal Soffit Panels" for metal panels used in horizontal soffit applications.
2. Section 077253 "Snow Guards" for prefabricated devices designed to hold snow on the roof surface, allowing it to melt and drain off slowly.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.

B. Shop Drawings:

1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches (1:10).

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. UL-Certified, Portable Roll-Forming Equipment: UL-certified, portable roll-forming equipment capable of producing metal panels warranted by manufacturer to be the same as factory-formed products. Maintain UL certification of portable roll-forming equipment for duration of work.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Retain strippable protective covering on metal panels during installation.

1.6 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.7 COORDINATION

A. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.

B. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Structural failures including rupturing, cracking, or puncturing.
b. Deterioration of metals and other materials beyond normal weathering.

2. Warranty Period: Two years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 EXPOSED-FASTENER, LAP-SEAM, METAL ROOF PANELS

A. General: Provide factory-formed metal roof panels designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. Include accessories required for weathertight installation.

B. Tapered-Rib-Profile, Exposed-Fastener Metal Roof Panels-: Formed with raised, trapezoidal major ribs and intermediate stiffening ribs symmetrically spaced between major ribs.

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 Drawings or comparable product by one of the following:

a. Berridge Manufacturing Co.

3. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A 653/A 653M, G90 (Z275) coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

a. Nominal Thickness: 0.028 inch (0.71 mm).
b. Exterior Finish: Three-coat fluoropolymer.
c. Color: As selected by Architect from manufacturer's full range.

4. Major-Rib Spacing: 12 inches (305 mm) o.c.
5. Panel Coverage: 36 inches (914 mm).
6. Panel Height: 1.25 inches (32 mm).

2.2 UNDERLAYMENT MATERIALS

A. Self-Adhering, High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 30 mils (0.76 mm) thick, specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 220 deg F (111 deg C); ASTM D 1970.
2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F (29 deg C); ASTM D 1970.

B. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.

2.3 MISCELLANEOUS MATERIALS

A. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
2. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch-(25-mm-)thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

B. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

C. Gutters: Formed from same material as roof panels, complete with end pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch-(2400-mm-)long sections, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Furnish gutter supports spaced a maximum of 36 inches (914 mm) o.c., fabricated from same metal as gutters. Provide wire ball strainers of compatible metal at outlets. Finish gutters to match roof fascia and rake trim.

D. Downspouts: Formed from same material as roof panels. Fabricate in 10-foot-(3-m-)long sections, complete with formed elbows and offsets, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Finish downspouts to match gutters.

E. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

F. Panel Sealants: Provide sealant types recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
2. Joint Sealant: ASTM C 920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.4 FABRICATION

A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.

C. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

D. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.

E. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
2. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
3. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
4. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
5. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.

a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal panel manufacturer for application, but not less than thickness of metal being secured.

2.5 FINISHES

A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. 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 same piece are unacceptable. 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.

C. Steel Panels and Accessories:

1. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 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.
2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.

1. Examine primary and secondary roof framing to verify that rafters, purlins, angles, channels, and other structural panel support members and anchorages have been installed within alignment tolerances required by metal roof panel manufacturer.
2. Examine solid roof sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal roof panel manufacturer.

a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.3 UNDERLAYMENT INSTALLATION

A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply at locations indicated below, wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (152 mm) staggered 24 inches (610 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Extend underlayment into gutter trough. Roll laps with roller. Cover underlayment within 14 days.

1. Apply over the entire roof surface.
2. Apply over the roof area indicated below:

    a. Roof perimeter for a distance up from eaves of 24 inches (610 mm) beyond interior wall line.
    b. Valleys, from lowest point to highest point, for a distance on each side of 18 inches (460 mm). Overlap ends of sheets not less than 6 inches (152 mm).
    c. Rake edges for a distance of 18 inches (460 mm).
    d. Hips and ridges for a distance on each side of 12 inches (305 mm).
    e. Roof-to-wall intersections for a distance from wall of 18 inches (460 mm).
    f. Around dormers, chimneys, skylights, and other penetrating elements for a distance from element of 18 inches (460 mm).

B. Slip Sheet: Apply slip sheet over underlayment before installing metal roof panels.

C. Flashings: Install flashings to cover underlayment to comply with requirements specified in Section 076200 "Sheet Metal Flashing and Trim."

3.4 METAL PANEL INSTALLATION

A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Shim or otherwise plumb substrates receiving metal panels.
2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air or water-resistive barriers and flashings that are concealed by metal panels are installed.
3. Install screw fasteners in predrilled holes.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Install flashing and trim as metal panel work proceeds.

6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
8. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.

B. Fasteners:

1. Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior.

C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.

D. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.

1. Lap ribbed or fluted sheets one full rib. Apply panels and associated items true to line for neat and weathertight enclosure.
2. Provide metal-backed washers under heads of exposed fasteners bearing on weather side of metal panels.
3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
4. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
5. Flash and seal panels with weather closures at perimeter of all openings.
6. Watertight Installation:

    a. Apply a continuous ribbon of sealant or tape to seal lapped joints of metal panels, using sealant or tape as recommend by manufacturer on side laps of nesting-type panels and elsewhere as needed to make panels watertight.
    b. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
    c. At panel splices, nest panels with minimum 6-inch (152-mm) end lap, sealed with sealant and fastened together by interlocking clamping plates.

E. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal panel manufacturer; or, if not indicated, provide types recommended in writing by metal panel manufacturer.

F. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level. Install work with laps, joints, and seams that are permanently watertight.

1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof performance.
2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

G. Gutters: Join sections with riveted and soldered or lapped and sealed joints. Attach gutters to eave with gutter hangers spaced not more than 36 inches (914 mm) o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.

H. Downspouts: Join sections with telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch (25 mm) away from walls; locate fasteners at top and bottom and at approximately 60 inches (1524 mm) o.c. in between.

1. Provide elbows at base of downspouts to direct water away from building.

I. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to metal roof panels as recommended by manufacturer.

3.5 ERECTION TOLERANCES

A. Installation Tolerances: Shim and align metal panel units within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.6 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

B. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 074113.13

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.

B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.

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 (5 deg C).
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, or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, 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. Concrete.
    b. 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 horizontal traffic surfaces[-].

1. Joint Locations:

    a. Isolation and contraction joints in cast-in-place concrete slabs.

2. Joint Sealant: Urethane, M, P, 50, T, NT.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces[-].

1. Joint Locations:

    a. Construction joints in cast-in-place concrete.
    b. Control and expansion joints in unit masonry.
    c. Perimeter joints between materials listed above and frames of doors and louvers.
    d. Control and expansion joints in and other.
    e. 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.

C. Joint-Sealant Application: Interior joints in horizontal traffic surfaces[-].

1. Joint Locations:

    a. Isolation joints in cast-in-place concrete slabs.

2. Joint Sealant: Urethane, S, P, 25, T, NT.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

D. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces[-].

1. Joint Locations:

    a. Joints on underside of plant-precast structural concrete planks.

2. Joint Sealant: Urethane, S, NS, 25, 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 087111 "Door Hardware (Descriptive Specification)" 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-(102-mm-)high wood blocking. Provide minimum 1/4-inch (6-mm) 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. Curries

B. Source Limitations: Obtain hollow-metal work from single source from single manufacturer.

2.2 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.-.

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 (44.5 mm.)
c. Face: Metallic-coated steel sheet, minimum thickness of 0.042 inch (1.0 mm), with minimum G60 (Z180 or) A60 (ZF180) coating.
d. Edge Construction: Continuously welded with no visible seam.
e. Core: Steel stiffened.

3. Frames:

a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum G60 (Z180 or) A60 (ZF180) coating.
b. Construction: Full profile welded.

4. Exposed Finish: Prime.

2.3 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch (1.0 mm) thick, with corrugated or perforated straps not less than 2 inches (51 mm) wide by 10 inches (254 mm) long; or wire anchors not less than 0.177 inch (4.5 mm) thick.

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. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

F. 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.

G. Grout: ASTM C 476, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M.

H. 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.

I. Glazing: Comply with requirements in Section 088000 "Glazing."

J. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil (0.4-mm) 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 (0.66 mm), steel vertical stiffeners of same material as face sheets extending full-door height, with vertical webs spaced not more than 6 inches (152 mm) apart. Spot weld to face sheets no more than 5 inches (127 mm) 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 inverted closures, except provide flush closures at exterior doors 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. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
3. Jamb Anchors: Provide number and spacing of anchors as follows:

    a. Masonry Type: Locate anchors not more than 16 inches (406 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c., to match coursing, and as follows:

        1) Two anchors per jamb up to 60 inches (1524 mm) high.
        2) Three anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
        3) Four anchors per jamb from 90 to 120 inches (2286 to 3048 mm) high.
        4) Four anchors per jamb plus one additional anchor per jamb for each 24 inches (610 mm) or fraction thereof above 120 inches (3048 mm) high.

4. 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.

2.7 ACCESSORIES

A. Louvers: Provide louvers for interior doors, where indicated, which comply with SDI 111C, with blades or baffles formed of 0.020-inch-(0.5-mm-)thick, cold-rolled steel sheet set into 0.032-inch-(0.8-mm-)thick steel frame.

1. Sightproof Louver: Stationary louvers constructed with inverted-V or inverted-Y blades.

B. Grout Guards: Formed from same material as frames, not less than 0.016 inch (0.4 mm) thick.

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. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
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 (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
    c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
    d. Plumbness: Plus or minus 1/16 inch (1.6 mm), 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 (3.2 mm) plus or minus 1/32 inch (0.8 mm).
    b. Between Edges of Pairs of Doors: 1/8 inch (3.2 mm) to 1/4 inch (6.3 mm) plus or minus 1/32 inch (0.8 mm).
    c. At Bottom of Door: 3/4 inch (19.1 mm) plus or minus 1/32 inch (0.8 mm).
    d. Between Door Face and Stop: 1/16 inch (1.6 mm) to 1/8 inch (3.2 mm) plus or minus 1/32 inch (0.8 mm).

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 087111 - DOOR HARDWARE (DESCRIPTIVE SPECIFICATION)

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.

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. 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) Fastenings and other pertinent information.
5) Explanation of abbreviations, symbols, and codes contained in schedule.
6) Mounting locations for door hardware.
7) List of related door devices specified in other Sections for each door and frame.

1.4 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.

B. Source Limitations: Obtain each type of door hardware from a single manufacturer.

C. 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. (3 cu. m per minute/sq. m) at the tested pressure differential of 0.3-inch wg (75 Pa) of water.

D. Means of Egress Doors: Latches do not require more than 15 lbf (67 N) to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

E. 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 (22.2 N).
2. Comply with the following maximum opening-force requirements:

    a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
    b. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
    c. 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 (13 mm) 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 (75 mm) from the latch, measured to the leading edge of the door.

F. 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. 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 access control.
4. Address for delivery of keys.

1.5 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.

1.6 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified elsewhere.

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. 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.

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.

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 descriptive titles corresponding to requirements specified in Part 2.

2.2 HINGES

A. Hinges: BHMA A156.1.

B. Plain-Bearing Hinges: Grade 3 (standard weight).

1. Mounting: Full mortise (butts).
2. Base and Pin Metal: Steel with steel pin.
3. Pins: Nonremovable.
4. Tips: Flat button.
5. Corners: Square.

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 (13-mm) latchbolt throw.
2. Deadbolts: Minimum 1-inch (25-mm) bolt throw.

C. Lock Backset: 2-3/4 inches (70 mm), unless otherwise indicated.

D. 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.

E. Bored Locks: BHMA A156.2; Grade 1; Series 4000.

2.4 LOCK CYLINDERS

A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.

B. Standard Lock Cylinders: BHMA A156.5; Grade 1; permanent cores that are removable; face finished to match lockset.

1. Number of Pins: Five.
2. Type: Bored-lock type.

2.5 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: Nickel silver.

1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

a. Notation: "DO NOT DUPLICATE."

2.6 OPERATING TRIM

A. Operating Trim: BHMA A156.6; stainless steel, unless otherwise indicated.

B. Push-Pull Plates: 1/8 inch (3.2 mm) thick, 3-1/2 inches wide by 15-3/4 inches high (89 mm wide by 400 mm high) with square corners, beveled edges, and raised integral lip; secured with exposed screws.

2.7 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.

B. Surface Closer with Cover: Grade 1; Modern Type with mechanism enclosed in cover.

1. Mounting: Hinge side, top jamb.
2. Type: Regular arm.
3. Backcheck: Factory preset, effective between 60 and 85 degrees of door opening.
4. Cover Material: Aluminum.
5. Closing Power Adjustment: At least 50 percent more than minimum tested value.

2.8 OVERHEAD STOPS AND HOLDERS

A. Overhead Stops and Holders: BHMA A156.8.

B. Overhead Surface-Mounted, Jointed-Arm Holders: Type 3; Grade 1; hold open and release by push and pull of door; control capable of being set in inactive position; with stop and shock absorber; for single-acting doors opening 110 degrees.

2.9 DOOR GASKETING

A. Door Gasketing: BHMA A156.22; air leakage not to exceed 0.50 cfm per foot (0.000774 cu. m/s per m) 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.

B. Adhesive-Backed Perimeter Gasketing: Vinyl bulb gasket material applied to frame rabbet with self-adhesive.

C. Door Sweeps: Neoprene gasket material held in place by flat aluminum housing or flange; surface mounted to face of door with screws.

2.10 THRESHOLDS

A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.

B. Plate Thresholds: Solid metal plate.

1. Top Surface: Fluted with slip-resistant abrasive.
2. Base Metal: Aluminum.

2.11 METAL PROTECTIVE TRIM UNITS

A. Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch-(1.3-mm-)thick aluminum; with manufacturer's standard machine or self-tapping screw fasteners.

B. Kick Plates: 12 inches (305 mm) high by door width with allowance for frame stops.

2.12 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. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
2. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."
3. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.13 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. 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.

3.3 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights [indicated on Drawings][to comply with the following] unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.

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 work. 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 (750 mm) 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 (750 mm) of door height greater than 90 inches (2286 mm).

E. Lock Cylinders: Install construction cores to secure building and areas during construction period.

1. Furnish permanent cores to Owner for installation.

F. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."

G. 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.

H. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

I. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

J. 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. 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 087111

SECTION 089119 - FIXED LOUVERS

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. Fixed, formed-metal louvers.

B. Related Requirements:

1. Section 081113 "Hollow Metal Doors and Frames" for louvers in hollow-metal doors.
2. Section 099113 "Exterior Painting" for field painting louvers.

1.3 DEFINITIONS

A. Louver Terminology: Definitions of terms for metal louvers contained in AMCA 501 apply to this Section unless otherwise defined in this Section or in referenced standards.

B. Horizontal Louver: Louver with horizontal blades (i.e., the axes of the blades are horizontal).

C. Vertical Louver: Louver with vertical blades (i.e., the axes of the blades are vertical).

D. Drainable-Blade Louver: Louver with blades having gutters that collect water and drain it to channels in jambs and mullions, which carry it to bottom of unit and away from opening.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. For louvers specified to bear AMCA seal, include printed catalog pages showing specified models with appropriate AMCA Certified Ratings Seals.

B. Shop Drawings: For louvers and accessories. Include plans, elevations, sections, details, and attachments to other work. Show frame profiles and blade profiles, angles, and spacing.

1. Show weep paths, gaskets, flashing, sealant, and other means of preventing water intrusion.

2. Show mullion profiles and locations.

1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.3/D1.3M, "Structural Welding Code - Sheet Steel."

1.6 FIELD CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain louvers from single source from a single manufacturer where indicated to be of same type, design, or factory-applied color finish.

2.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Louvers shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated without permanent deformation of louver components, noise or metal fatigue caused by louver-blade rattle or flutter, or permanent damage to fasteners and anchors. Wind pressures shall be considered to act normal to the face of the building.

1. Wind Loads: Determine loads based on a uniform pressure of 20 lbf/sq. ft. (957 Pa), acting inward or outward.

B. SMACNA Standard: Comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" for fabrication, construction details, and installation procedures.

2.3 FIXED, FORMED-METAL LOUVERS

A. Horizontal, Drainable-Blade Louver-:

1. Louver Depth: 6 inches (150 mm).
2. Frame and Blade Material and Nominal Thickness: Galvanized-steel sheet, not less than 0.052 inch (1.32 mm) for frames and 0.040 inch (1.02 mm) for blades.
3. Mullion Type: Exposed.
4. AMCA Seal: Mark units with AMCA Certified Ratings Seal.

2.4 LOUVER SCREENS

A. General: Provide screen at each exterior louver.

1. Screen Location for Fixed Louvers: Interior face.
2. Screening Type: Insect screening.

B. Secure screen frames to louver frames with machine screws with heads finished to match louver, spaced a maximum of 6 inches (150 mm) from each corner and at 12 inches (300 mm) o.c.

C. Louver Screen Frames: Fabricate with mitered corners to louver sizes indicated.

1. Metal: Same type and form of metal as indicated for louver to which screens are attached. Reinforce extruded-aluminum screen frames at corners with clips.
2. Finish: Same finish as louver frames to which louver screens are attached.
3. Type: Rewirable frames with a driven spline or insert.

D. Louver Screening for Galvanized-Steel Louvers:

1. Insect Screening: Galvanized steel, 18-by-14 (1.4-by-1.8-mm) mesh, 0.011-inch (0.28-mm) wire.

2.5 MATERIALS

A. Galvanized-Steel Sheet: ASTM A 653/A 653M, G60 (Z180) zinc coating, mill phosphatized.

B. Fasteners: Use types and sizes to suit unit installation conditions.

1. Use tamper-resistant screws for exposed fasteners unless otherwise indicated.
2. For fastening galvanized steel, use hot-dip-galvanized steel or 300 series stainless-steel fasteners.
3. For color-finished louvers, use fasteners with heads that match color of louvers.

C. Postinstalled Fasteners for Concrete and Masonry: Torque-controlled expansion anchors, made from stainless-steel components, with capability to sustain, without failure, a load equal to 4 times the loads imposed, for concrete, or 6 times the load imposed for masonry, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.

D. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.6 FABRICATION

A. Factory assemble louvers to minimize field splicing and assembly. Disassemble units as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

B. Vertical Assemblies: Where height of louver units exceeds fabrication and handling limitations, fabricate units to permit field-bolted assembly with close-fitting joints in jambs and mullions, reinforced with splice plates.

1. Continuous Vertical Assemblies: Fabricate units without interrupting blade-spacing pattern unless horizontal mullions are indicated.
2. Horizontal Mullions: Provide horizontal mullions at joints unless continuous vertical assemblies are indicated.

C. Maintain equal louver blade spacing, including separation between blades and frames at head and sill, to produce uniform appearance.

D. Fabricate frames, including integral sills, to fit in openings of sizes indicated, with allowances made for fabrication and installation tolerances, adjoining material tolerances, and perimeter sealant joints.

1. Frame Type: Exterior flange unless otherwise indicated.

E. Include supports, anchorages, and accessories required for complete assembly.

F. Provide vertical mullions of type and at spacings indicated, but not more than is recommended by manufacturer, or 72 inches (1830 mm) o.c., whichever is less.

1. Fully Recessed Mullions: Where indicated, provide mullions fully recessed behind louver blades. Where length of louver exceeds fabrication and handling limitations, fabricate with close-fitting blade splices designed to permit expansion and contraction.
2. Semirecessed Mullions: Where indicated, provide mullions partly recessed behind louver blades so louver blades appear continuous. Where length of louver exceeds fabrication and handling limitations, fabricate with interlocking split mullions and close-fitting blade splices designed to permit expansion and contraction.
3. Exposed Mullions: Where indicated, provide units with exposed mullions of same width and depth as louver frame. Where length of louver exceeds fabrication and handling limitations, provide interlocking split mullions designed to permit expansion and contraction.
4. Exterior Corners: Prefabricated corner units with mitered blades with concealed close-fitting splices and with fully recessed mullions at corners.

G. Provide subsills made of same material as louvers for recessed louvers.

H. Join frame members to each other and to fixed louver blades with fillet welds concealed from view unless otherwise indicated or size of louver assembly makes bolted connections between frame members necessary.

2.7 GALVANIZED-STEEL SHEET FINISHES

A. Finish louvers after assembly.

B. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating compatible with the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas and repair according to ASTM A 780.

C. Baked-Enamel or Powder-Coat 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 2 mils (0.05 mm).

1. Color and Gloss: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and openings, 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. Coordinate setting drawings, diagrams, templates, instructions, and directions for installation of anchorages that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.

3.3 INSTALLATION

A. Locate and place louvers level, plumb, and at indicated alignment with adjacent work.

B. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.

C. Form closely fitted joints with exposed connections accurately located and secured.

D. Provide perimeter reveals and openings of uniform width for sealants and joint fillers, as indicated.

E. Protect unpainted galvanized and nonferrous-metal surfaces that are in contact with concrete, masonry, or dissimilar metals from corrosion and galvanic action by applying a heavy coating of bituminous paint or by separating surfaces with waterproof gaskets or nonmetallic flashing.

F. Install concealed gaskets, flashings, joint fillers, and insulation as louver installation progresses, where weathertight louver joints are required. Comply with Section 079200 "Joint Sealants" for sealants applied during louver installation.

3.4 ADJUSTING AND CLEANING

A. Clean exposed louver surfaces that are not protected by temporary covering, to remove fingerprints and soil during construction period. Do not let soil accumulate during construction period.

B. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to finishes. Thoroughly rinse surfaces and dry.

C. Restore louvers damaged during installation and construction so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by Architect, remove damaged units and replace with new units.

1. Touch up minor abrasions in finishes with air-dried coating that matches color and gloss of, and is compatible with, factory-applied finish coating.

END OF SECTION 089119

SECTION 096723 - RESINOUS 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 resinous flooring systems.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product. Include manufacturer's technical data, application instructions, and recommendations for each resinous flooring component required.

B. Samples for Initial Selection: For each type of exposed finish required.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage and mixing with other components.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting resinous flooring application.

B. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring application.

C. Close spaces to traffic during resinous flooring application and for 24 hours after application unless manufacturer recommends a longer period.

PART 2 - PRODUCTS

2.1 PERORMANCE REQUIREMENTS

A. Flammability: Self-extinguishing according to ASTM D 635.

2.2 MANUFACTURERS

A. Source Limitations: Obtain primary resinous flooring materials, including primers, resins, hardening agents, grouting coats, and topcoats, from single source from single manufacturer. Obtain secondary materials, including patching and fill material, joint sealant, and repair materials, of type and from manufacturer recommended in writing by manufacturer of primary materials.

2.3 RESINOUS FLOORING-

A. Resinous Flooring System: Abrasion-, impact-, and chemical-resistant, aggregate-filled, and resin-based monolithic floor surfacing designed to produce a seamless floor and integral cove base.

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 Tnemec Decotread or comparable product by one of the following:

    a. Tnemec Decotread

B. System Characteristics:

1. Color and Pattern: As selected by Architect from manufacturer's full range.
2. Wearing Surface: Manufacturer's standard wearing surface.
3. Overall System Thickness: 1/8 inch (3.2 mm).

C. Patching and Fill Material: Resinous product of or approved by resinous flooring manufacturer and recommended by manufacturer for application indicated.

PART 3 - EXECUTION

3.1 PREPARATION

A. Prepare and clean substrates according to resinous flooring manufacturer's written instructions for substrate indicated. Provide clean, dry substrate for resinous flooring application.

B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.

1. Roughen concrete substrates as follows:

a. Comply with ASTM C 811 requirements unless manufacturer's written instructions are more stringent.

2. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written instructions.
3. Verify that concrete substrates are dry and moisture-vapor emissions are within acceptable levels according to manufacturer's written instructions.

a. Relative Humidity Test: Use in situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.

C. Patching and Filling: Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.

1. Control Joint Treatment: Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written instructions.

D. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.

3.2 APPLICATION

A. Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.

1. Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.
2. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
3. Expansion and Isolation Joint Treatment: At substrate expansion and isolation joints, comply with resinous flooring manufacturer's written instructions.

B. Integral Cove Base: Apply cove base mix to wall surfaces before applying flooring. Apply according to manufacturer's written instructions and details, including those for taping, mixing, priming, troweling, sanding, and topcoating of cove base. Round internal and external corners.

1. Integral Cove Base: 4 inches (100 mm) high.

C. Topcoats: Apply topcoats in number indicated for flooring system and at spreading rates recommended in writing by manufacturer and to produce wearing surface indicated.

3.3 PROTECTION

A. Protect resinous flooring from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by resinous flooring manufacturer.

END OF SECTION 096723

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 099300 "Staining and Transparent Finishing" for surface preparation and the application of wood stains and transparent finishes on exterior wood substrates.

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 Initial Selection: For each type of topcoat product.

1.5 QUALITY ASSURANCE

A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each paint system.

    a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
    b. Other Items: Architect will designate items or areas required.

2. Final approval of color selections will be based on mockups.

    a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 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 (7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) 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.

1. Ten percent of surface area will be painted with deep tones.

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. CMU Substrates:

1. High-Build Latex System: Dry film thickness of not less than 10 mils (0.25 mm).

a. Prime Coat: As recommended in writing by topcoat manufacturer.
b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
c. Topcoat: Latex, exterior, high build.

B. Wood Substrates: Wood-based panel products.

1. Latex over Latex Primer System:

a. Prime Coat: Primer, latex for exterior wood.

b. Intermediate Coat: Latex, exterior, matching topcoat.
c. Topcoat: Latex, exterior, semi-gloss (MPI Gloss Level 5).

END OF SECTION 099113

SECTION 099300 - STAINING AND TRANSPARENT FINISHING

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 surface preparation and application of wood stains and transparent finishes on the following substrates:

1. Exterior Substrates:

a. Wood-based panel products.

1.3 DEFINITIONS

A. MPI Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. 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.

C. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

D. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

E. 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 Initial Selection: For each type of product.

1.5 QUALITY ASSURANCE

A. Mockups: Apply mockups of each finish system indicated and each color selected to verify preliminary selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each type of finish system and substrate.

a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
b. Other Items: Architect will designate items or areas required.

2. Final approval of stain color selections will be based on mockups.

a. If preliminary stain color selections are not approved, apply additional mockups of additional stain colors selected by Architect at no added cost to Owner.

1.6 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 (7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

A. Apply finishes only when temperature of surfaces to be finished and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply finishes when relative humidity exceeds 85 percent, at temperatures less than 5 deg F (3 deg C) above the dew point, or to damp or wet surfaces.

C. Do not apply exterior finishes in snow, rain, fog, or mist.

PART 2 - PRODUCTS

2.1 MATERIALS, 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 manufacturers of topcoat for use in paint system and on substrate indicated.

B. Stain Colors: As selected by Architect from manufacturer's full range.

2.2 SOURCE QUALITY CONTROL

A. Testing of Materials: Owner reserves the right to invoke the following procedure:

1. Owner will engage the services of a qualified testing agency to sample wood finishing materials. Contractor will be notified in advance and may be present when samples are taken. If 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 wood finishes if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying materials from Project site, pay for testing, and refinish surfaces finished with rejected materials. Contractor will be required to remove rejected materials from previously finished surfaces before refinishing with complying materials if the two finishes are incompatible or produce results that, in the opinion of the Architect, are aesthetically unacceptable.

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 Exterior Wood Substrates: 15 percent, when measured with an electronic moisture meter.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Proceed with finish application only after unsatisfactory conditions have been corrected.

1. Beginning finish application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and finishing.

1. After completing finishing operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean and prepare surfaces to be finished according to manufacturer's written instructions for each substrate condition and as specified.

1. Remove dust, dirt, oil, and grease by washing with a detergent solution; rinse thoroughly with clean water and allow to dry. Remove grade stamps and pencil marks by sanding lightly. Remove loose wood fibers by brushing.
2. Remove mildew by scrubbing with a commercial wash formulated for mildew removal and as recommended by stain manufacturer.

D. Exterior Wood Substrates:

1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
2. Prime edges, ends, faces, undersides, and backsides of wood.

a. For solid hide stained wood, stain edges and ends after priming.
b. For varnish-coated stained wood, stain edges and ends and prime with varnish. Prime undersides and backsides with varnish.

3. Countersink steel nails, if used, and fill with putty or plastic wood filler tinted to final color. Sand smooth when dried.

E. Interior Wood Substrates:

1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
2. Apply wood filler paste to open-grain woods, as defined in "MPI Architectural Painting Specification Manual," to produce smooth, glasslike finish.
3. Sand surfaces exposed to view and dust off.
4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dry.

3.3 APPLICATION

A. Apply finishes according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."

1. Use applicators and techniques suited for finish and substrate indicated.
2. Finish surfaces behind movable equipment and furniture same as similar exposed surfaces.
3. Do not apply finishes over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

B. Apply finishes to produce surface films without cloudiness, holidays, lap marks, brush marks, runs, ropiness, or other surface imperfections.

3.4 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing finish application, clean spattered surfaces. Remove spattered materials by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from finish application. Correct damage 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 finished wood surfaces.

3.5 EXTERIOR WOOD-FINISH-SYSTEM SCHEDULE

A. Wood Substrates: Wood-based panel products.

1. Semitransparent Stain System MPI EXT 6.4D:

a. Prime Coat: Stain, exterior, solvent based, semitransparent, matching topcoat.
b. Topcoat: Stain, exterior, solvent based, semitransparent.

END OF SECTION 099300

SECTION 101419 - DIMENSIONAL LETTER 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. Fabricated channel dimensional characters.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For dimensional letter 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, 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.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.5 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Deterioration of finishes beyond normal weathering.

b. Separation or delamination of sheet materials and components.

2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Thermal Movements: For exterior fabricated channel dimensional characters, allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 DIMENSIONAL CHARACTERS

A. Fabricated Channel Characters-: Metal face and side returns, formed free from warp and distortion; with uniform faces, sharp corners, and precisely formed lines and profiles; internally braced for stability and for securing fasteners; and as follows.

1. Character Material: Sheet or plate aluminum.
2. Material Thickness: Manufacturer's standard for size and design of character.
3. Character Height: As indicated.
4. Character Depth: 2".
5. Finishes:

a. Integral Aluminum Finish: Clear anodized.

6. Mounting: Projecting studs.

a. Hold characters at manufacturer's recommended distance from wall surface.

7. Typeface: Times Roman.

2.3 DIMENSIONAL CHARACTER MATERIALS

A. Aluminum Sheet and Plate: ASTM B 209 (ASTM B 209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.

B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.

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. For exterior exposure, furnish nonferrous-metal devices unless otherwise indicated.
2. Sign Mounting Fasteners:

a. Projecting Studs: Threaded studs with sleeve spacer, welded or brazed to back of sign material, screwed into back of sign assembly, or screwed into tapped lugs cast integrally into back of cast sign material, unless otherwise indicated.

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.

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. Organic, Anodic, and Chemically Produced Finishes: Apply to formed metal after fabrication but before applying contrasting polished finishes on raised features unless otherwise indicated.

2.7 ALUMINUM FINISHES

A. Clear Anodic Finish: AAMA 611, Class I, 0.018 mm or thicker.

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. 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.
3. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

B. Mounting Methods:

1. Projecting Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.

    a. Masonry Substrates: Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place spacers on studs, place sign in position, and push until spacers are pinched between sign and substrate, embedding the stud ends in holes. Temporarily support sign in position until adhesive fully sets.
    b. Thin or Hollow Surfaces: Place spacers on studs, place sign in position with spacers pinched between sign and substrate, and install washers and nuts on stud ends projecting through opposite side of surface, and tighten.

3.3 ADJUSTING AND CLEANING

A. Remove and replace damaged or deformed characters and signs that do not comply with specified requirements. Replace characters 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 101419

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.

1.3 DEFINITIONS

A. Accessible: In accordance with the accessibility standard.

1.4 COORDINATION

A. Furnish templates for placement of sign-anchorage devices embedded in permanent construction by other installers.

1.5 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.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.7 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 (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

B. Accessibility Standard: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities for signs.

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. Basis-of-Design Product: Restroom Identifcation signs to match owner standards..
2. Laminated-Sheet Sign: Photopolymer face sheet with raised graphics laminated over subsurface graphics to phenolic 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.

3. Sign-Panel Perimeter: Finish edges smooth.

a. Edge Condition: Square cut.
b. Corner Condition in Elevation: Square.

4. Mounting: Manufacturer's standard method for substrates indicated with
5. Text and Typeface: Accessible raised characters and Braille and Times Roman. Finish raised characters to contrast with background color, and finish Braille to match background color.

2.3 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.

2.4 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.

2.5 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. Install signs so they do not protrude or obstruct according to the accessibility standard.
3. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.

B. Room-Identification Signs and Other Accessible Signage: 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 102113.19 - PLASTIC TOILET COMPARTMENTS

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-plastic toilet compartments configured as urinal screens.

B. Related Requirements:

1. Section 102800 "Toilet, Bath, and Laundry Accessories" for toilet tissue dispensers, grab bars, purse shelves, and similar accessories mounted on toilet compartments.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

B. Shop Drawings: For toilet compartments.

1. Include plans, elevations, sections, details, and attachment details.
2. Show locations of cutouts for compartment-mounted toilet accessories.
3. Show locations of centerlines of toilet fixtures.
4. Show locations of floor drains.
5. Show overhead support or bracing locations.

C. Samples for Initial Selection: For each type of toilet compartment material indicated.

1. Include Samples of hardware and accessories involving material and color selection.

1.4 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities for toilet compartments designated as accessible.

2.2 SOLID-PLASTIC TOILET COMPARTMENTS-

A. Urinal-Screen Style: Wall hung.

B. Pilaster Shoes and Sleeves (Caps): Manufacturer's standard design; stainless steel.

C. Brackets (Fittings):

1. Stirrup Type: Ear or U-brackets, stainless steel.

2.3 HARDWARE AND ACCESSORIES

A. Hardware and Accessories: Manufacturer's standard operating hardware and accessories.

1. Material: Stainless steel.

B. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless-steel, hot-dip galvanized-steel, or other rust-resistant, protective-coated steel compatible with related materials.

2.4 MATERIALS

A. Aluminum Castings: ASTM B 26/B 26M.

B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M).

C. Brass Castings: ASTM B 584.

D. Brass Extrusions: ASTM B 455.

E. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.

F. Stainless-Steel Castings: ASTM A 743/A 743M.

2.5 FABRICATION

A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories where required for attachment of toilet accessories.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.

1. Confirm location and adequacy of blocking and supports required for installation.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.

1. Maximum Clearances:

a. Pilasters and Panels: 1/2 inch (13 mm).
b. Panels and Walls: 1 inch (25 mm).

2. Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than three brackets attached at midpoint and near top and bottom of panel.

a. Locate wall brackets so holes for wall anchors occur in masonry or tile joints.
b. Align brackets at pilasters with brackets at walls.

3.3 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 102113.19

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.

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.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch (0.8-mm) 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 (0.9-mm) minimum nominal thickness.

D. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 (Z180) 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-:

1. Description: Single-roll dispenser.
2. Mounting: Surface mounted.
3. Operation: Noncontrol delivery with theft-resistant spindle.
4. Capacity: Designed for 5-inch-(127-mm-) diameter tissue rolls.
5. Material and Finish: Stainless steel, No. 4 finish (satin).

2.3 WARM-AIR DRYERS

A. Warm-Air Dryer-:

1. Basis-of-Design Product: Xcelerator.
2. Mounting: Semirecessed.
3. Operation: Electronic-sensor activated with timed power cut-off switch.

    a. Operation Time: 30 to 40 seconds.

4. Cover Material and Finish: Steel, with white enamel finish.
5. Electrical Requirements: 115 V, 13 A, 1500 W.

2.4 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.

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 224213.13 - COMMERCIAL WATER CLOSETS

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. Water closets.
2. Flushometer valves.
3. Toilet seats.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for water closets.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For flushometer valves to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 WALL-MOUNTED WATER CLOSETS

A. Water Closets-: Wall mounted, top spud, accessible.

1. Bowl:

a. Standards: ASME A112.19.2/CSA B45.1 and ASME A112.19.5.
b. Material: Vitreous china.

c. Type: Siphon jet.
d. Style: Flushometer valve.
e. Height: Standard.
f. Rim Contour: Elongated.
g. Water Consumption: 1.28 gal. (4.8 L) per flush.
h. Spud Size and Location: NPS 1-1/2 (DN 40); top.

2. Flushometer Valve: Sloan Royal #111.
3. Toilet Seat: Bemis 1955C or equivalent. Stainless steel hardware only (no plastic allowed)..
4. Support:

a. Standard: ASME A112.6.1M.
b. Description: Waste-fitting assembly as required to match drainage piping material and arrangement with faceplates, couplings gaskets, and feet; bolts and hardware matching fixture. Include additional extension coupling, faceplate, and feet for installation in wide pipe space.
c. Water-Closet Mounting Height: Standard.

2.2 FLUSHOMETER VALVES

A. Lever-Handle, Diaphragm Flushometer Valves-:

1. Standard: ASSE 1037.
2. Minimum Pressure Rating: 125 psig (860 kPa).
3. Features: Include integral check stop and backflow-prevention device.
4. Material: Brass body with corrosion-resistant components.
5. Exposed Flushometer-Valve Finish: Chrome plated.
6. Style: Exposed.
7. Consumption: 1.28 gal. (4.8 L) per flush.
8. Minimum Inlet: NPS 1 (DN 25).
9. Minimum Outlet: NPS 1-1/4 (DN 32).

2.3 TOILET SEATS

A. Toilet Seats-:

1. Standard: IAPMO/ANSI Z124.5.
2. Material: Plastic.
3. Type: Commercial (Standard).
4. Shape: Elongated rim, open front.
5. Hinge: Check.
6. Hinge Material: Noncorroding metal.
7. Seat Cover: Not required.
8. Color: White.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before water-closet installation.

B. Examine walls and floors for suitable conditions where water closets will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Water-Closet Installation:

1. Install level and plumb according to roughing-in drawings.
2. Install floor-mounted water closets on bowl-to-drain connecting fitting attachments to piping or building substrate.
3. Install accessible, wall-mounted water closets at mounting height for handicapped/elderly, according to ICC/ANSI A117.1.

B. Support Installation:

1. Install supports, affixed to building substrate, for floor-mounted, back-outlet water closets.
2. Use carrier supports with waste-fitting assembly and seal.
3. Install wall-mounted, back-outlet water-closet supports with waste-fitting assembly and waste-fitting seals; and affix to building substrate.

C. Flushometer-Valve Installation:

1. Install flushometer-valve, water-supply fitting on each supply to each water closet.
2. Attach supply piping to supports or substrate within pipe spaces behind fixtures.
3. Install lever-handle flushometer valves for accessible water closets with handle mounted on open side of water closet.
4. Install actuators in locations that are easy for people with disabilities to reach.
5. Install fresh batteries in battery-powered, electronic-sensor mechanisms.

D. Install toilet seats on water closets.

E. Wall Flange and Escutcheon Installation:

1. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations and within cabinets and millwork.
2. Install deep-pattern escutcheons if required to conceal protruding fittings.
3. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."

F. Joint Sealing:

1. Seal joints between water closets and walls and floors using sanitary-type, one-part, mildew-resistant silicone sealant.
2. Match sealant color to water-closet color.
3. Comply with sealant requirements specified in Section 079200 "Joint Sealants."

3.3 CONNECTIONS

A. Connect water closets with water supplies and soil, waste, and vent piping. Use size fittings required to match water closets.

B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."

C. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."

D. Where installing piping adjacent to water closets, allow space for service and maintenance.

3.4 ADJUSTING

A. Operate and adjust water closets and controls. Replace damaged and malfunctioning water closets, fittings, and controls.

B. Adjust water pressure at flushometer valves to produce proper flow.

3.5 CLEANING AND PROTECTION

A. Clean water closets and fittings with manufacturers' recommended cleaning methods and materials.

B. Install protective covering for installed water closets and fittings.

C. Do not allow use of water closets for temporary facilities unless approved in writing by Owner.

END OF SECTION 224213.13

SECTION 224213.16 - COMMERCIAL URINALS

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. Urinals.
2. Flushometer valves.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for urinals.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For flushometer valves to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 WALL-HUNG URINALS

A. Urinals-: Wall hung, back outlet, washout, accessible.

1. Fixture:

a. Standards: ASME A112.19.2/CSA B45.1 and ASME A112.19.5.
b. Material: Vitreous china.
c. Type: Washout with extended shields.
d. Strainer or Trapway: Manufacturer's standard strainer with integral trap.

e. Water Consumption: Low.
f. Spud Size and Location: NPS 3/4 (DN 20), top.
g. Outlet Size and Location: NPS 2 (DN 50), back.
h. Color: White.

2. Flushometer Valve:-.
3. Waste Fitting:

a. Standard: ASME A112.18.2/CSA B125.2 for coupling.
b. Size: NPS 2 (DN 50).

4. Support: ASME A112.6.1M, Type I, urinal carrier with fixture support plates and coupling with seal and fixture bolts and hardware matching fixture. Include rectangular, steel uprights.

2.2 URINAL FLUSHOMETER VALVES

A. Lever-Handle, Diaphragm Flushometer Valves-:

1. Standard: ASSE 1037.
2. Minimum Pressure Rating: 125 psig (860 kPa).
3. Features: Include integral check stop and backflow-prevention device.
4. Material: Brass body with corrosion-resistant components.
5. Exposed Flushometer-Valve Finish: Chrome plated.
6. Style: Exposed.
7. Consumption: 0.5 gal. (1.9 L) per flush.
8. Minimum Inlet: NPS 3/4 (DN 20).
9. Minimum Outlet: NPS 3/4 (DN 20).

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before urinal installation.

B. Examine walls and floors for suitable conditions where urinals will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Urinal Installation:

1. Install urinals level and plumb according to roughing-in drawings.
2. Install wall-hung, back-outlet urinals onto waste fitting seals and attached to supports.

3. Install accessible, wall-mounted urinals at mounting height for the handicapped/elderly, according to ICC/ANSI A117.1.

B. Support Installation:

1. Install supports, affixed to building substrate, for wall-hung urinals.
2. Use off-floor carriers with waste fitting and seal for back-outlet urinals.
3. Use carriers without waste fitting for urinals with tubular waste piping.
4. Use chair-type carrier supports with rectangular steel uprights for accessible urinals.

C. Flushometer-Valve Installation:

1. Install flushometer-valve water-supply fitting on each supply to each urinal.
2. Attach supply piping to supports or substrate within pipe spaces behind fixtures.
3. Install lever-handle flushometer valves for accessible urinals with handle mounted on open side of compartment.

D. Wall Flange and Escutcheon Installation:

1. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations.
2. Install deep-pattern escutcheons if required to conceal protruding fittings.
3. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."

E. Joint Sealing:

1. Seal joints between urinals and walls and floors using sanitary-type, one-part, mildew-resistant silicone sealant.
2. Match sealant color to urinal color.
3. Comply with sealant requirements specified in Section 079200 "Joint Sealants."

3.3 CONNECTIONS

A. Connect urinals with water supplies and soil, waste, and vent piping. Use size fittings required to match urinals.

B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."

C. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."

D. Where installing piping adjacent to urinals, allow space for service and maintenance.

3.4 ADJUSTING

A. Operate and adjust urinals and controls. Replace damaged and malfunctioning urinals, fittings, and controls.

B. Adjust water pressure at flushometer valves to produce proper flow.

3.5 CLEANING AND PROTECTION

A. Clean urinals and fittings with manufacturers' recommended cleaning methods and materials.

B. Install protective covering for installed urinals and fittings.

C. Do not allow use of urinals for temporary facilities unless approved in writing by Owner.

END OF SECTION 224213.16

SECTION 224216.13 - COMMERCIAL LAVATORIES

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. Lavatories.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for lavatories.
2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For lavatories and faucets to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 ENAMELED, CAST-IRON, WALL-MOUNTED LAVATORIES

A. Lavatory-: Rectangular, enameled, cast iron, wall mounted.

1. Fixture:

a. Standard: ASME A112.19.1/CSA B45.2.
b. Type: Straight-front apron with straight back.
c. Nominal Size: Rectangular, 20 by 18 inches (508 by 457 mm).
d. Faucet-Hole Punching: Three holes, 2-inch (51-mm) centers.
e. Faucet-Hole Location: Top.
f. Color: White.

g. Mounting Material: Wall bracket.

2. Faucet:-.
3. Support: ASME A112.6.1M, Type III, lavatory carrier. Include rectangular, steel uprights.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before lavatory installation.

B. Examine counters and walls for suitable conditions where lavatories will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install lavatories level and plumb according to roughing-in drawings.

B. Install supports, affixed to building substrate, for wall-mounted lavatories.

C. Install accessible wall-mounted lavatories at handicapped/elderly mounting height for people with disabilities or the elderly, according to ICC/ANSI A117.1.

D. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."

E. Seal joints between lavatories, counters, and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Section 079200 "Joint Sealants."

F. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible lavatories. Comply with requirements in Section 220719 "Plumbing Piping Insulation."

3.3 CONNECTIONS

A. Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.

B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."

C. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."

3.4 ADJUSTING

A. Operate and adjust lavatories and controls. Replace damaged and malfunctioning lavatories, fittings, and controls.

B. Adjust water pressure at faucets to produce proper flow.

3.5 CLEANING AND PROTECTION

A. After completing installation of lavatories, inspect and repair damaged finishes.

B. Clean lavatories, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.

C. Provide protective covering for installed lavatories and fittings.

D. Do not allow use of lavatories for temporary facilities unless approved in writing by Owner.

END OF SECTION 224216.13

SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION

3005 CO RD 175, LEANDER, TX 78641

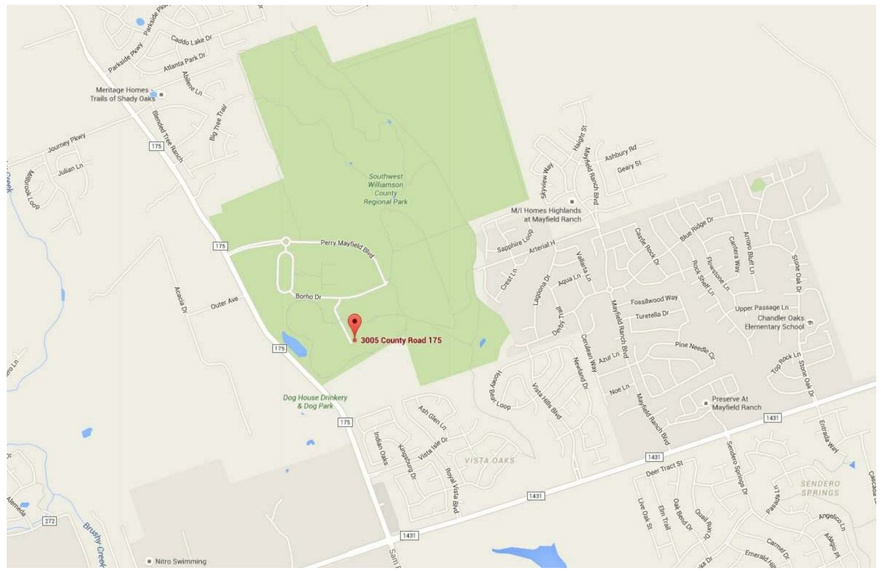
PROJECT TEAM

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512 | 733-1150
RYAN HANSANUWAT
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HENDRIX CONSULTING ENGINEER
115 E MAIN ST
ROUND ROCK, TX 78664
512 | 218-0060



SHEET INDEX

ARCHITECTURE

A-0.0	COVER SHEET
A-0.1	ACCESSIBILITY DIAGRAMS
A-0.2	ABBREVIATIONS AND NOTES
A-1.0	ALTERNATES PLAN
A-1.1	RESTROOM BUILDING
A-1.2	RESTROOM BUILDING SECTIONS AND DETAILS
A-2.0	COVERED STORAGE PLANS
A-2.1	COVERED STORAGE ELEVATIONS
A-3.0	STORAGE BUILDING

CIVIL ENGINEERING

C-1	COVER SHEET
C-2	GENERAL NOTES
C-3	TCEQ NOTES
C-4	TCEQ NOTES AND TREE LIST
C-5	OVERALL ESC AND UTILITY PLAN
C-6	SITE PLAN - RESTROOM #1
C-7	SITE PLAN - RESTROOM #2
~~C-8~~	~~SITE PLAN - FUTURE PAVILION~~ NOT IN CONTRACT
C-9	SITE PLAN - FUTURE MAINTENANCE BUILDING
C-10	WASTEWATER PLAN AND PROFILE (1 OF 2)
C-11	WASTEWATER PLAN AND PROFILE (2 OF 2)
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STRUCTURAL ENGINEERING

S000	STRUCTURAL SHEET INDEX
S001	STRUCTURAL NOTES
S100	FOUNDATION PLAN
S101	FOUNDATION PLAN
S200	CEILING/ROOF FRAMING PLAN
S201	ROOF FRAMING PLAN
S300	FOUNDATION DETAILS
S400	FRAMING DETAILS
S401	FRAMING DETAILS

MECHANICAL, ELECTRICAL, PLUMBING

E-1.1	SCHEDULES, NOTES, AND LEGENDS - ELECTRICAL
E-1.2	SCHEDULES - ELECTRICAL
E-2.1	FLOOR PLANS - ELECTRICAL

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REGISTERED ARCHITECT
RYAN HANSANUWAT
22732
STATE OF TEXAS

11/6/2017

SOUTHWEST WILCO PARK
WILLIAMSON COUNTY PARKS AND RECREATION
3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
15107-00
DATE ISSUED
11/6/2017
SHEET TITLE
COVER SHEET

SHEET NUMBER
A-0.0

2/15/2018 7:19 AM
Williamson County, Texas
Bid 19002-215

NOTE: STORAGE BUILDING LOCATION TBD.



1 BUILDING LOCATION PLAN
1" = 30'-0"

ALTERNATES SCHEDULE:

BASE BID: ALL UTILITIES AND SITEWORK SHOWN ON CIVIL DRAWINGS AND RESTROOM BUILDING #1 AS SHOWN ON DOCUMENTS CONTAINED HEREIN

ALTERNATE #1: OPTION TO PROVIDE PREFABRICATED RESTROOM BUILDING SIMILAR TO BASIS OF DESIGN: PUBLIC RESTROOM COMPANY PS-022-CE IN LIEU OF RESTROOM SHOWN ON SHEET A-1.1. PROVIDE COST AND SCHEDULE IMPACT.

ALTERNATE #2A: ADDITIONAL RESTROOM #2 SIMILAR TO RESTROOM SHOWN ON DOCUMENTS CONTAINED HEREIN

ALTERNATE #2B: ADDITIONAL RESTROOM #2 AS PREFABRICATED RESTROOM BUILDING SIMILAR TO BASIS OF DESIGN: PUBLIC RESTROOM COMPANY PS-022-CE IN LIEU OF RESTROOM SHOWN ON SHEET A-1.1. PROVIDE COST AND SCHEDULE IMPACT.

ALTERNATE #3: PROVIDE PREFABRICATED POLE-BARN BUILDING SHOWN SHEET A-2.0

ALTERNATE #4: PROVIDE (2) STORAGE BUILDINGS SHOWN SHEET A-3.0

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11/6/2017

SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION
3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
15107-00
DATE ISSUED
11/6/2017
SHEET TITLE

ALTERNATES PLAN

SHEET NUMBER

A-1.0

Williamson County, Texas
Bid 1602-215
2/15/2018 7:19 AM
p-201

WILLIAMSON COUNTY REGIONAL PARK
RESTROOM FACILITY AT THE CEDAR ROCK RAIL STATION

SITE DEVELOPMENT PLANS FOR:

WILLIAMSON COUNTY REGIONAL PARK
RESTROOM FACILITY AT THE CEDAR ROCK RAIL STATION

3005 COUNTY ROAD 175
LEANDER, TEXAS 78641
SEPTEMBER, 2016

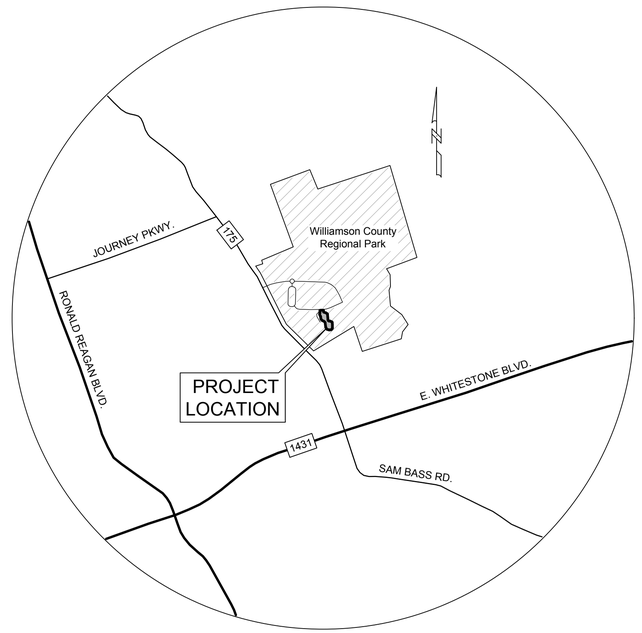
DESIGN PROFESSIONALS:

CIVIL ENGINEER / APPLICANT:

ANTONIO A. PRETE, P.E.
WAELTZ & PRETE, INC.
3000 JOE DiMAGGIO BLVD. #72
ROUND ROCK, TEXAS 78665
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ARCHITECT:

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LOCATION MAP
NTS

Texas 811
know what's below.
Call before you dig.

SHEET INDEX

SHT. No.	DESCRIPTION
C-1	COVER SHEET
C-2	GENERAL NOTES
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C-5	OVERALL ESC AND UTILITY PLAN
C-6	SITE PLAN - RESTROOM #1
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C-12	ESC DETAILS
C-13	UTILITY DETAILS (1 OF 2)
C-14	UTILITY DETAILS (2 OF 2)

NOTES:

1. THESE PLANS ARE NOT TO BE CONSIDERED FINAL FOR CONSTRUCTION UNTIL ACCEPTED BY THE COUNTY. CHANGES MAY BE REQUIRED PRIOR TO APPROVAL.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. THIS SITE IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
4. NO PORTION OF THIS PROJECT IS WITHIN THE FEMA 1% ANNUAL CHANCE FLOODPLAIN, PER PANEL NUMBER 48491C0470E, DATED SEPTEMBER 26, 2008.

STATE OF TEXAS

COUNTY OF WILLIAMSON

I, ANTONIO A. PRETE, P.E., DO HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS DESCRIBED HEREIN HAVE BEEN DESIGNED IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORMWATER DRAINAGE POLICY ADOPTED BY WILLIAMSON COUNTY, TEXAS.

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER

14Nov17

ANTONIO A. PRETE, P.E. DATE
STATE OF TEXAS #93759

JOB NO.: 082-002

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF ROUND ROCK MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

ACCEPTED FOR CONSTRUCTION:

WILLIAMSON COUNTY, TEXAS DATE
PARKS AND RECREATION DEPARTMENT

SWPPP PERMIT # _____

RECORDED PLAT DOC # _____

OWNER:

RANDY BELL, DIRECTOR
WILLIAMSON COUNTY PARD
219 PERRY MAYFIELD BLVD.
LEANDER, TEXAS 78641
PH: (512) 260-4283
EMAIL: randybell@wilco.org

ENGINEER:

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
3000 JOE DIMAGGIO BLVD. #72
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

REVISIONS:

No.	Date	Revision	ACC.	DATE

Williamson County Standard Construction Notes

GENERAL NOTES:

1. All construction shall be in accordance with the City of Round Rock Standard Specifications Manual.
2.
3. 2. Any existing utilities, pavement, curbs, sidewalks, structures, trees, etc., not planned for destruction or removal that are damaged or removed shall be repaired or replaced at his expense.

3. The Contractor shall verify all depths and locations of existing utilities prior to any construction. Any discrepancies with the construction plans found in the field shall be brought immediately to the attention of the Engineer who shall be responsible for revising the plans as appropriate.

4. Manhole frames, covers, valves, cleanouts, etc. shall be raised to finished grade prior to final paving construction.

5. The Contractor shall give the Williamson County PARD 48 hours notice before beginning each phase of construction.

6. All areas disturbed or exposed during construction shall be revegetated in accordance with the plans and specifications. Revegetation of all disturbed or exposed areas shall consist of sodding or seeding, at the Contractor's option. However, the type of revegetation must equal or exceed the type of vegetation present before construction.

7. Prior to any construction, the Engineer shall convene a preconstruction conference between the Williamson County, himself, the Contractor, other utility companies, any affected parties and any other entity the City or Engineer may require.

8. The Contractor and the Engineer shall keep accurate records of all construction that deviates from the plans. The Engineer shall furnish the Williamson County accurate "As-Built" drawings following completion of all construction. These "As-Built" drawings shall meet with the satisfaction of the Engineering and Williamson County PARD prior to final acceptance.

9. The Williamson County PARD shall not be petitioned for acceptance until all necessary easement documents have been signed and recorded.

10. When construction is being carried out within easements, the Contractor shall confine his work to within the permanent and any temporary easements. Prior to final acceptance, the Contractor shall be responsible for removing all trash and debris within the permanent and temporary easements. Clean-up shall be to the satisfaction of the Engineer.

11. Prior to any construction, the Contractor shall apply for and secure all proper permits from the appropriate authorities.

12. Available benchmarks (Williamson County Datum) that may be utilized for the construction of this project are described as follows:
(See Sheet C-5)

TRENCH SAFETY NOTES:

1 In accordance with the Laws of the State of Texas and the U. S. Occupational Safety and Health Administration regulations, all trenches over 5 feet in depth in either hard and compact or soft and unstable soil shall be sloped, shored, sheeted, braced or otherwise supported. Furthermore, all trenches less than 5 feet in depth shall also be effectively protected when hazardous ground movement may be expected. Trench safety systems to be utilized for this project will be provided by the contractor.

2 In accordance with the U. S. Occupational Safety and Health Administration regulations, when persons are in trenches 4-feet deep or more, adequate means of exit, such as a ladder or steps, must be provided and located so as to require no more than 25 feet of lateral travel.

3 If trench safety system details were not provided in the plans because trenches were anticipated to be less than 5 feet in depth and during construction it is found that trenches are in fact 5 feet or more in depth or trenches less than 5 feet in depth are in an area where hazardous ground movement is expected, all construction shall cease, the trenched area shall be barricaded and the Engineer notified immediately. Construction shall not resume until appropriate trench safety system details, as designed by a professional engineer, are retained and copies submitted to the Williamson County.

STREET AND DRAINAGE NOTES:

1. All testing shall be done by an independent laboratory at the Owner's expense. Any retesting shall be paid for by the Contractor. A County inspector shall be present during all tests. Testing shall be coordinated with the Counnty inspector and he shall be given a minimum of 24 hours notice prior to any testing.

2. Backfill behind the curb shall be compacted to obtain a minimum of 95% maximum density to within 3" of top of curb. Material used shall be primarily granular with no rocks larger than 6" in the greatest dimension. The remaining 3" shall be clean topsoil free from all clods and suitable for sustaining plant life.

3. Depth of cover for all crossings under pavement including gas, electric, telephone, cable tv, water services, etc., shall be a minimum of 30" below subgrade.

4. Street rights-of-way shall be graded at a slope of 1/4" per foot toward the curb unless otherwise indicated. However, in no case shall the width of right-of-way at 1/4" per foot slope be less than 10 feet unless a specific request for an alternate grading scheme is made to and accepted by the Williamson County Engineering and Development Services Department.

5. Barricades built to Williamson County standards shall be constructed on all dead-end streets and as necessary during construction to maintain job and public safety.

6. All R.C.P. shall be minimum class III.

7. The subgrade material for the streets shown herein was tested by: N/A

   And the paving sections designed in accordance with the current Williamson County design criteria. The paving sections are to be constructed as follows:
   N/A

   The Geotechnical Engineer shall inspect the subgrade for compliance with the design assumptions made during preparation of the Soils Report. Any adjustments that are required shall be made through revision of the construction plans.

8. Where PI's are over 20, subgrades must be stabilized utilizing a method acceptable to the Engineer. The Geotechnical Engineer shall recommend an appropriate subgrade stabilization if sulfates are determined to be present.

WATER AND WASTEWATER NOTES:

1. Pipe material for water mains shall be PVC (AWWA C-900, min. class 200), or Ductile Iron (AWWA C-100, min. class 200). Water services (2" or less) shall be polyethylene tubing (black, 200 psi, DR 9).

2. Pipe material for pressure wastewater mains shall be PVC (AWWA C-900, min. class 150), or Ductile Iron (AWWA C-100, min. class 200). Pipe material for gravity wastewater mains shall be PVC (ASTM D2241 or D3034, max. DR-26), Ductile Iron (AWWA C-100, min. class 200).

3. Unless otherwise accepted by the Engineer, depth of cover for all lines out of the pavement shall be 42" min., and depth of cover for all lines under pavement shall be a min. of 30" below subgrade.

4. All fire hydrant leads shall be ductile iron pipe (AWWA C-100, min. class 200).

5. All iron pipe and fittings shall be wrapped with minimum 8-mil polyethylene and sealed with duct tape or equal accepted by the Engineer.

6. The Contractor shall contact Andrew Hunt with Cross Road Utility Services at (512) 246-5921 to coordinate utility tie-ins and notify him at least 48 hours prior to connecting to existing lines.

7. All manholes shall be concrete with cast iron ring and cover. All manholes located outside of the pavement shall have bolted covers. Tapping of fiberglass manholes shall not be allowed.

8. The Contractor must obtain a bulk water permit or purchase and install a water meter for all water used during construction. A copy of this permit must be carried at all times by all who use water.

9. Line flushing or any activity using a large quantity of water must be scheduled with the water & wastewater superintendent, telephone 218-3235.

10. The Contractor, at his expense, shall perform sterilization of all potable water lines constructed and shall provide all equipment (including test gauges), supplies (including concentrated chlorine disinfecting material), and necessary labor required for the sterilization procedure. The sterilization procedure shall be monitored by Williamson County personnel. Water samples will be collected by Williamson County to verify each treated line has attained an initial chlorine concentration of 50 ppm. Where means of flushing is necessary, the Contractor, at his expense, shall provide flushing devices and remove said devices prior to final acceptance by Williamson County.

11. Sampling taps shall be brought up to 3 feet above grade and shall be easily accessible for City personnel. At the Contractor's request, and in his presence, samples for bacteriological testing will be collected by the Williamson County not less than 24 hours after the treated line has been flushed of the concentrated chlorine solution and charged with water approved by the City. The Contractor shall supply a check or money order, payable to the City of Round Rock, to cover the fee charged for testing each water sample. City of Round Rock fee amounts may be obtained by calling the Engineering and Development Services Department at 218-5555.

12. The Contractor, at his expense, shall perform quality testing for all wastewater pipe installed and pressure pipe hydrostatic testing of all water lines constructed and shall provide all equipment (including pumps and gauges), supplies and labor necessary to perform the tests. Quality and pressure testing shall be monitored by Williamson County personnel.

13. The Contractor shall coordinate testing with the City of Inspector and provide no less than 24 hours notice prior to performing sterilization, quality testing or pressure testing.

14. The Contractor shall not open or close any valves unless authorized by the Williamson County.

15. All valve boxes and covers shall be cast iron.

16. All water service, wastewater service and valve locations shall be appropriately marked as follows:

water service	"W" on top of curb
wastewater service	"S" on top of curb
valve	"V" on face of curb

Tools for marking the curb shall be provided by the Contractor. Other appropriate means of marking service and valve locations shall be provided in areas without curbs. Such means of marking shall be as specified by the Engineer and accepted by the Williamson County.

17. Contact Williamson County PARD (943-1920) or City of Round Rock at (218-5555) for assistance in obtaining existing water and wastewater locations.

18. The City of Round Rock Fire Department shall be notified 48 hours prior to testing of any building sprinkler piping in order that the Fire Department may monitor such testing.

19. Sand, as described in Specification item 510 pipe, shall not be used as bedding for water and wastewater lines. Acceptable bedding materials are pipe bedding stone, pea gravel and in lieu of sand, a naturally occurring or manufactured stone material conforming to ASTM C33 for stone quality and meeting the following gradation specification:

Sieve Size	Percent Retained By Weight
1/2"	0
3/8"	0-2
#4	40-85
#10	95-100

20. The Contractor is hereby notified that connecting to, shutting down, or terminating existing utility lines may have to occur at off-peak hours. Such hours are usually outside normal working hours and possibly between 12 a.m. and 6 a.m.

21. All wastewater construction shall be in accordance with the Texas Commission on Environmental Quality (TCEQ) Regulations, 30 TAC Chapter 213 and 217, as applicable. Whenever TCEQ and Williamson County Specifications conflict, the more stringent shall apply.

TRAFFIC MARKING NOTES:

1. Any methods, street markings and signage necessary for warning motorists, warning pedestrians or diverting traffic during construction shall conform to the Texas Manual of Uniform Traffic Control Devices for Streets and Highways, latest edition.

2. All pavement markings, markers, paint, traffic buttons, traffic controls and signs shall be installed in accordance with the Texas Department of Transportation Standard Specifications for Construction of Highways, Streets and Bridges and, the Texas Manual of Uniform Traffic Control Devices for Streets and Highways, latest editions.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. Erosion control measures, site work and restoration work shall be in accordance with the Williamson County Erosion and Sedimentation Control Ordinance.

2. All slopes shall be sodded or seeded with approved grass, grass mixtures or ground cover suitable to the area and season in which they are applied.

3. Silt fences, rock berms, sedimentation basins and similarly recognized techniques and materials shall be employed during construction to prevent point source sedimentation loading of downstream facilities. Such installation shall be regularly inspected by the Williamson County for effectiveness. Additional measures may be required if, in the opinion of the Engineer, they are warranted.

4. All temporary erosion control measures shall not be removed until final inspection and approval of the project by the Engineer. It shall be the responsibility of the Contractor to maintain all temporary erosion control structures and to remove each structure as approved by the Engineer.

5. All mud, dirt, rocks, debris, etc., spilled, tracked or otherwise deposited on existing paved streets, drives and areas used by the public shall be cleaned up immediately.

PROJECT SPECIAL NOTES:

1. The park will not be closed during construction. Public safety within the limits of construction shall be the Contractor's responsibility.

2. At the end of each workday, the construction areas shall be left in a neat and orderly condition, free of debris and random construction materials. All materials shall be stored at the approved staging area.

3. Prior to beginning construction, the Contractor shall coordinate the construction schedule with the operator of the Cedar Rock Railroad and the director of the Williamson County Parks and Recreation Department - Mr. Randy Bell.

ABBREVIATIONS:

BOT = BOTTOM
CL = CLASS
CNC = TOP OF CONCRETE
DET = DETENTION
D/S = DOWNSPOUT
DI = DUCTILE IRON
ESMT = EASEMENT
EX = EXISTING
FG = FINISHED GROUND
FH = FIRE HYDRANT
FL = FLOWLINE
FPS = FEET PER SECOND
FLG = FLANGE
GB = GRADE BREAK
GV = GATE VALVE
HPT = HIGHPOINT
LOC = LIMITS OF CONSTRUCTION
LPT = LOW POINT
MH = MANHOLE
MJ = MECHANICAL JOINT
NG = NATURAL GROUND
PAV = TOP OF PAVEMENT
PDWF = PEAK DRY WEATHER FLOW
PWWF = PEAK WET WEATHER FLOW
PROP = PROPOSED
PVC = POLYVINYL CHLORIDE
REF = REFERENCE
RS = RESILIENT SEAT
SCH = SCHEDULE
SF = SILT FENCE
SLAB = TOP OF SLAB
SS = STORM SEWER
SSL = STORM SEWER LINE
SW = TOP OF SIDEWALK
TC = TOP OF CURB
TG = TOP OF GRATE
TOF = TOP OF FOOTING
TOI = TOP OF INLET
TOW = TOP OF WALL
TP = TREE PROTECTION
TR = TOP OF MANHOLE RIM
TYP = TYPICAL
WL = WATER LINE
WQ = WATER QUALITY
WSE = WATER SURFACE ELEVATION
WTR = WATER
WWL = WASTEWATER LINE
WWMH = WASTEWATER MANHOLE

LEGEND

B — REBAR WITH "BAKER AICKLEN" CAP FOUND	x — BARB-WIRE FENCE
FH — FIRE HYDRANT	oo — CHAIN-LINK FENCE
WM — WATER METER	EDGE OF PAVEMENT
WV — WATER VALVE	GL — GAS LINE
WW — WASTEWATER MANHOLE	UE — UNDERGROUND ELEC.
SIGN	UT — UNDERGROUND TELEPHONE
303 — TREE	w — WATER LINE
POWER POLE	ww — WASTEWATER LINE
LIGHT POLE	// — WOOD FENCE
S — SPRLINKLER CONTROL VALVE	
BM #1 — BENCHMARK	

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FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:
WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES
3005 CO. RD. 175

CLIENT:
WILLIAMSON COUNTY

DESIGNED: AAP APPROVED: AAP
DRAWN: DAS DATE: 12/28/2017

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:
GENERAL NOTES

WP PROJECT NO.:
082-002

SHEET NO.:
C-2

Texas Commission on Environmental Quality
Organized Sewage Collection System
General Construction Notes

TCEQ-0596 (Rev. July 15, 2015)

1. This Organized Sewage Collection System (SCS) must be constructed in accordance with 30 Texas Administrative Code (TAC) §213.5(c), the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules and any local government standard specifications.

2. All contractors conducting regulated activities associated with this proposed regulated project must be provided with copies of the SCS plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors must be required to keep on-site copies of the plan and the approval letter.

3. A written notice of construction must be submitted to the presiding TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

4. Any modification to the activities described in the referenced SCS application following the date of approval may require the submittal of an SCS application to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval.

5. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. These controls must remain in place until the disturbed areas have been permanently stabilized.

6. If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovered. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing and the applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality while maintaining the structural integrity of the line.

7. Sewer lines located within or crossing the 5-year floodplain of a drainage way will be protected from inundation and stream velocities which could cause erosion and scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill, or the sewer lines must be encased in concrete. All concrete shall have a minimum thickness of 6 inches.

8. Blasting procedures for protection of existing sewer lines and other utilities will be in accordance with the National Fire Protection Association criteria. Sand is not allowed as bedding or backfill in trenches that have been blasted. If any existing sewer lines are damaged, the lines must be repaired and retested.

9. All manholes constructed or rehabilitated on this project must have watertight size on size resilient connectors allowing for differential settlement. If manholes are constructed within the 100-year floodplain, the cover must have a gasket and be bolted to the ring. Where gasketed manhole covers are required for more than three manholes in sequence or for more than 1500 feet, alternate means of venting will be provided. Bricks are not an acceptable construction material for any portion of the manhole.

   The diameter of the manholes must be a minimum of four feet and the manhole for entry must have a minimum clear opening diameter of 30 inches. These dimensions and other details showing compliance with the commission's rules concerning manholes and sewer line/manhole inverts described in 30 TAC §217.55 are included on Plan Sheet C-13.

   It is suggested that entrance into manholes in excess of four feet deep be accomplished by means of a portable ladder. The inclusion of steps in a manhole is prohibited.

10. Where water lines and new sewer line are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC §217.53(d) (Pipe Design) and 30 TAC §290.44(e) (Water Distribution).

11. Where sewers lines deviate from straight alignment and uniform grade all curvature of sewer pipe must be achieved by the following procedure which is recommended by the pipe manufacturer: N/A _____.

12. If pipe flexure is proposed, the following method of preventing deflection of the joint must be used: N/A _____.

    Specific care must be taken to ensure that the joint is placed in the center of the trench and properly bedded in accordance with 30 TAC §217.54.

13. New sewage collection system lines must be constructed with stub outs for the connection of anticipated extensions. The location of such stub outs must be marked on the ground such that their location can be easily determined at the time of connection of the extensions. Such stub outs must be manufactured wyes or tees that are compatible in size and material with both the sewer line and the extension. At the time of original construction, new stub-outs must be constructed sufficiently to extend beyond the end of the street pavement. All stub-outs must be sealed with a manufactured cap to prevent leakage. Extensions that were not anticipated at the time of original construction or that are to be connected to an existing sewer line not furnished with stub outs must be connected using a manufactured saddle and in accordance with accepted plumbing techniques.

    If no stub-out is present an alternate method of joining laterals is shown in the detail on Plan Sheet C-14. (For potential future laterals).

    The private service lateral stub-outs must be installed as shown on the plan and profile sheets on Plan Sheets C-10 and C-11 and marked after backfilling as shown in the detail on Plan Sheet C-14.

14. Trenching, bedding and backfill must conform with 30 TAC §217.54. The bedding and backfill for flexible pipe must comply with the standards of ASTM D-2321, Classes IA, IB, II or III. Rigid pipe bedding must comply with the requirements of ASTM C 12 (ANSI A 106.2) classes A, B or C.

15. Sewer lines must be tested from manhole to manhole. When a new sewer line is connected to an existing stub or clean-out, it must be tested from existing manhole to new manhole. If a stub or clean-out is used at the end of the proposed sewer line, no private service attachments may be connected between the last manhole and the cleanout unless it can be certified as conforming with the provisions of 30 TAC §213.5(c)(3)(E).

16. All sewer lines must be tested in accordance with 30 TAC §217.57. The engineer must retain copies of all test results which must be made available to the executive director upon request. The engineer must certify in writing that all wastewater lines have passed all required testing to the appropriate regional office within 30 days of test completion and prior to use of the new collection system. Testing method will be:

    (a) For a collection system pipe that will transport wastewater by gravity flow, the design must specify an infiltration and exfiltration test or a low-pressure air test. A test must conform to the following requirements:

    (1) *Low Pressure Air Test.*

    (A) A low pressure air test must follow the procedures described in American Society For Testing And Materials (ASTM) C-828, ASTM C-924, or ASTM F-1417 or other procedure approved by the executive director, except as to testing times as required in Table C.3 in subparagraph (C) of this paragraph or Equation C.3 in subparagraph (B)(ii) of this paragraph.

    (B) For sections of collection system pipe less than 36 inch average inside diameter, the following procedure must apply, unless a pipe is to be tested as required by paragraph (2) of this subsection.

    (i) A pipe must be pressurized to 3.5 pounds per square inch (psi) greater than the pressure exerted by groundwater above the pipe.

    (ii) Once the pressure is stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge is computed from the following equation:

    Equation C.3

    $$T = \frac{0.085xDxK}{Q}$$

    Where:

    T = time for pressure to drop 1.0 pound per square inch gauge in seconds
    K = 0.000419 X D X L, but not less than 1.0
    D = average inside pipe diameter in inches
    L = length of line of same size being tested, in feet
    Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface

    (C) Since a K value of less than 1.0 may not be used, the minimum testing time for each pipe diameter is shown in the following Table C.3:

Pipe Diameter *(inches)*	Minimum Time *(seconds)*	Maximum Length for Minimum Time *(feet)*	Time for Longer Length *(seconds/foot)*
6	340	398	0.8550
8	454	298	1.5200
10	567	239	2.3740
12	680	199	3.4190
15	850	159	5.3420
18	1020	133	7.6930
21	1190	114	10.4710
24	1360	100	13.6760
27	1530	88	17.3090
30	1700	80	21.3690
33	1870	72	25.8560

    (D) An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.

    (E) If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure.

    (F) Wastewater collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.

    (G) A testing procedure for pipe with an inside diameter greater than 33 inches must be approved by the executive director.

    (2) *Infiltration/Exfiltration Test.*

    (A) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the crown of a pipe at an upstream manhole.

    (B) An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.

    (C) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two feet above the crown of a pipe at an upstream manhole, or at least two feet above existing groundwater level, whichever is greater.

    (D) For construction within a 25-year flood plain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at the same minimum test head as in subparagraph (C) of this paragraph.

    (E) If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall undertake remedial action in order to reduce the infiltration or exfiltration to an amount within the limits specified. An owner shall retest a pipe following a remediation action.

    (b) If a gravity collection pipe is composed of flexible pipe, deflection testing is also required. The following procedures must be followed:

    (1) For a collection pipe with inside diameter less than 27 inches, deflection measurement requires a rigid mandrel.

    (A) Mandrel Sizing.

    (i) A rigid mandrel must have an outside diameter (OD) not less than 95% of the base inside diameter (ID) or average ID of a pipe, as specified in the appropriate standard by the STMs, American Water Works Association, UNI-BELL, or American National Standards Institute, or any related appendix.

    (ii) If a mandrel sizing diameter is not specified in the appropriate standard, the mandrel must have an OD equal to 95% of the ID of a pipe. In this case, the ID of the pipe, for the purpose of determining the OD of the mandrel, must equal be the average outside diameter minus two minimum wall thicknesses for OD controlled pipe and the average inside diameter for ID controlled pipe.

    (iii) All dimensions must meet the appropriate standard.

    (B) Mandrel Design.

    (i) A rigid mandrel must be constructed of a metal or a rigid plastic material that can withstand 200 psi without being deformed.

    (ii) A mandrel must have nine or more odd number of runners or legs.

    (iii) A barrel section length must equal at least 75% of the inside diameter of a pipe.

    (iv) Each size mandrel must use a separate proving ring.

    (C) Method Options.

    (i) An adjustable or flexible mandrel is prohibited.

    (ii) A test may not use television inspection as a substitute for a deflection test.

    (iii) If requested, the executive director may approve the use of a deflectometer or a mandrel with removable legs or runners on a case-by-case basis.

    (1) For a gravity collection system pipe with an inside diameter 27 inches and greater, other test methods may be used to determine vertical deflection.

    (2) A deflection test method must be accurate to within plus or minus 0.2% deflection.

    (3) An owner shall not conduct a deflection test until at least 30 days after the final backfill.

    (4) Gravity collection system pipe deflection must not exeed five percent (5%).

    (5) If a pipe section fails a deflection test, an owner shall correct the problem and conduct a second test after the final backfill has been in place at least 30 days.

17. All manholes must be tested to meet or exceed the requirements of 30 TAC §217.58.

    (a) All manholes must pass a leakage test.

    (b) An owner shall test each manhole (after assembly and backfilling) for leakage, separate and independent of the collection system pipes, by hydrostatic exfiltration testing, vacuum testing, or other method approved by the executive director.

    (3) Hydrostatic Testing.

    (A) The maximum leakage for hydrostatic testing or any alternative test methods is 0.025 gallons per foot diameter per foot of manhole depth per hour.

    (B) To perform a hydrostatic exfiltration test, an owner shall seal all wastewater pipes coming into a manhole with an internal pipe plug, fill the manhole with water, and maintain the test for at least one hour.

    (C) A test for concrete manholes may use a 24-hour wetting period before testing to allow saturation of the concrete.

    (2) Vacuum Testing.

    (A) To perform a vacuum test, an owner shall plug all lift holes and exterior joints with a non-shrink grout and plug all pipes entering a manhole.

    (B) No grout must be placed in horizontal joints before testing.

    (C) Stub-outs, manhole boots, and pipe plugs must be secured to prevent movement while a vacuum is drawn.

    (D) An owner shall use a minimum 60 inch/lb torque wrench to tighten the external clamps that secure a test cover to the top of a manhole.

    (E) A test head must be placed at the inside of the top of a cone section, and the seal inflated in accordance with the manufacturer's recommendations.

    (F) There must be a vacuum of 10 inches of mercury inside a manhole to perform a valid test.

    (G) A test does not begin until after the vacuum pump is off.

    (H) A manhole passes the test if after 2.0 minutes and with all valves closed, the vacuum is at least 9.0 inches of mercury.

18. All private service laterals must be inspected and certified in accordance with 30 TAC §213.5(c)(3)(I). After installation of and, prior to covering and connecting a private service lateral to an existing organized sewage collection system, a Texas Licensed Professional Engineer, Texas Registered Sanitarian, or appropriate city inspector must visually inspect the private service lateral and the connection to the sewage collection system, and certify that it is constructed in conformity with the applicable provisions of this section. The owner of the collection system must maintain such certifications for five years and forward copies to the appropriate regional office upon request. Connections may only be made to an approved sewage collection system.

Austin Regional Office
12100 Park 35 Circle, Bldg A
Austin, Texas 78753-1808
Phone (512) 339-2929
Fax (512) 339-3795

San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
Phone (210) 490-3096
Fax (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
3000 Joe DiMaggio Blvd. #72
Round Rock, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:
WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES
3005 CO. RD. 175

CLIENT:
WILLIAMSON COUNTY

DESIGNED: AAP APPROVED: AAP
DRAWN: DAS DATE: 12/28/2017

REVISIONS
No. | DATE | RECOM'D

SHEET TITLE:
TCEQ NOTES

WP PROJECT NO.:
082-002

SHEET NO.:
C-3

TREE LIST

	NUMBER	TYPE	SIZE
	1	OAK	17,17
*	2	OAK	18
	3	OAK	12
	4	OAK	10
	5	OAK	12
*	6	UNKNOWN	14
	7	OAK	6
*	8	UNKNOWN	5
*	9	UNKNOWN	14
	10	OAK	6
	11	OAK	8
	12	OAK	15
	13	OAK	15
	14	OAK	15
	15	OAK	17
	16	OAK	17
	17	OAK	14,8
	18	OAK	15
	19	OAK	16
	20	OAK	12
	21	OAK	6
	22	OAK	18,10
	23	OAK	15
	24	OAK	16
	25	OAK	8
	26	OAK	12,9,5
	27	MESQUITE	8
	28	OAK	12
	29	OAK	14
	30	OAK	14,14
	31	MESQUITE	6
	20012	CEDAR ELM	16
	20509	LIVEOAK	12
	20510	LIVEOAK	6
	20511	LIVEOAK	20
	20513	CEDAR	15
	20514	LIVEOAK	12
	20515	LIVEOAK	13,12
	20516	CEDAR	12
	20517	LIVEOAK	10
	20518	LIVEOAK	14
	20519	LIVEOAK	13
	20520	LIVEOAK	14
	20521	LIVEOAK	15

NUMBER	TYPE	SIZE
20522	LIVEOAK	14
20523	LIVEOAK	18
20524	LIVEOAK	9
20525	LIVEOAK	9
20527	LIVEOAK	9
20528	CEDAR	14
20529	LIVEOAK	13
20530	LIVEOAK	13
20531	LIVEOAK	17
20532	LIVEOAK	9
20533	LIVEOAK	14,10
20534	LIVEOAK	12, 12, 6
20535	LIVEOAK	14
20536	LIVEOAK	12
20537	LIVEOAK	9
20538	LIVEOAK	13
20539	LIVEOAK	14
20540	LIVEOAK	14
20541	LIVEOAK	15
20552	LIVEOAK	18
20555	LIVEOAK	11
20603	LIVEOAK	13
20604	LIVEOAK	24
20605	LIVEOAK	17
20606	LIVEOAK	13,12
20607	LIVEOAK	32,19
20618	LIVEOAK	11
20619	LIVEOAK	13
20634	LIVEOAK	20
20673	LIVEOAK	29
20674	LIVEOAK	19
20675	LIVEOAK	17
20676	LIVEOAK	17
20677	LIVEOAK	16
20678	LIVEOAK	16
20693	CEDAR	9,9
20700	CEDAR	11
20705	LIVEOAK	6
20706	LIVEOAK	5
20707	LIVEOAK	6
20708	LIVEOAK	6
20709	LIVEOAK	6
20724	ELM	11
20725	LIVEOAK	12

	NUMBER	TYPE	SIZE
	20726	CEDAR	11
	20728	LIVEOAK	9
	20729	LIVEOAK	13,8
	20730	LIVEOAK	14,11
*	20732	ELM	9
*	20734	LIVEOAK	13
*	20735	LIVEOAK	10
*	20744	LIVEOAK	18,14
*	20745	LIVEOAK	14
	20748	LIVEOAK	17,15
	20749	LIVEOAK	15,8
	20750	LIVEOAK	6
	20751	LIVEOAK	9
	20752	LIVEOAK	12
	20753	LIVEOAK	7
	20754	LIVEOAK	14
	20755	LIVEOAK	11
	20756	LIVEOAK	7
	20757	CEDAR	13,5
	20758	LIVEOAK	10,8
	20759	LIVEOAK	10,10
	20761	LIVEOAK	21
	20762	LIVEOAK	14
	20763	LIVEOAK	15
	20764	LIVEOAK	15,9,8
*	20765	LIVEOAK	17
	20766	ELM	12
	20767	LIVEOAK	22
	20768	LIVEOAK	20
	20769	ELM	10,8
	20770	ELM	9
	20771	ELM	12,10
	20772	ELM	9
	20773	CEDARAR	12,6
	20774	CEDARAR	18
	20797	LIVEOAK	14
	20798	LIVEOAK	19
	20799	LIVEOAK	9
	20800	LIVEOAK	14
	20801	LIVEOAK	11
	20802	LIVEOAK	11
	20803	LIVEOAK	9
	20804	LIVEOAK	10
	20810	LIVEOAK	10

NUMBER	TYPE	SIZE
20811	LIVEOAK	8
20812	LIVEOAK	6
20813	LIVEOAK	7
20814	LIVEOAK	11
20815	LIVEOAK	12
20816	LIVEOAK	11
20817	LIVEOAK	13
20818	LIVEOAK	12
20819	LIVEOAK	7
20820	LIVEOAK	9
20821	LIVEOAK	8
20822	LIVEOAK	11
20823	LIVEOAK	10
20824	LIVEOAK	12
20825	LIVEOAK	11
20826	LIVEOAK	8
20831	CEDAR	16
20832	ELM	10
20838	CEDAR	15
20839	LIVEOAK	8
20851	LIVEOAK	17
20852	LIVEOAK	8
20853	LIVEOAK	10
20854	LIVEOAK	7
20862	LIVEOAK	11
20863	LIVEOAK	11
20864	LIVEOAK	11
20865	LIVEOAK	15
20866	LIVEOAK	8
20867	LIVEOAK	8
20868	LIVEOAK	9
20869	LIVEOAK	12
20870	LIVEOAK	15
20871	LIVEOAK	16

* DENOTES TREE TO BE REMOVED

Texas Commission on Environmental Quality
Water Pollution Abatement Plan

TCEQ-0592 (Rev. 3/15/07)

General Construction Notes:

1. Written construction notification must be given to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the regulated activity. Information must include the date on which the regulated activity will commence, the name of the approved plan for the regulated activity, and the name of the prime contractor and the name and telephone number of the contact person.

2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.

3. If any sensitive feature is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. The regulated activities near the sensitive feature may not proceed until the TCEQ has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality.

4. No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

5. Prior to commencement of construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during construction. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegetated and the areas have become permanently stabilized.

6. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

7. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake must be provided that can indicate when the sediment occupies 50% of the basin volume.

8. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.

10. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

11. The following records shall be maintained and made available to the TCEQ upon request: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; and the dates when stabilization measures are initiated.

12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

    A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;

    B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;

    C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

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San Antonio, Texas 78233-4480
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Fax (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

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CIVIL ENGINEERS
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STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:
WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES

3005 CO. RD. 175

CLIENT:
WILLIAMSON COUNTY

DESIGNED: AAP APPROVED: AAP
DRAWN: DAS DATE: 12/28/2017

RECOM'D
REVISIONS
DATE
No.

SHEET TITLE:
TCEQ NOTES AND TREE LIST

WP PROJECT NO.:
082-002

SHEET NO.:
C-4

SPECIAL NOTE TO CONTRACTOR:

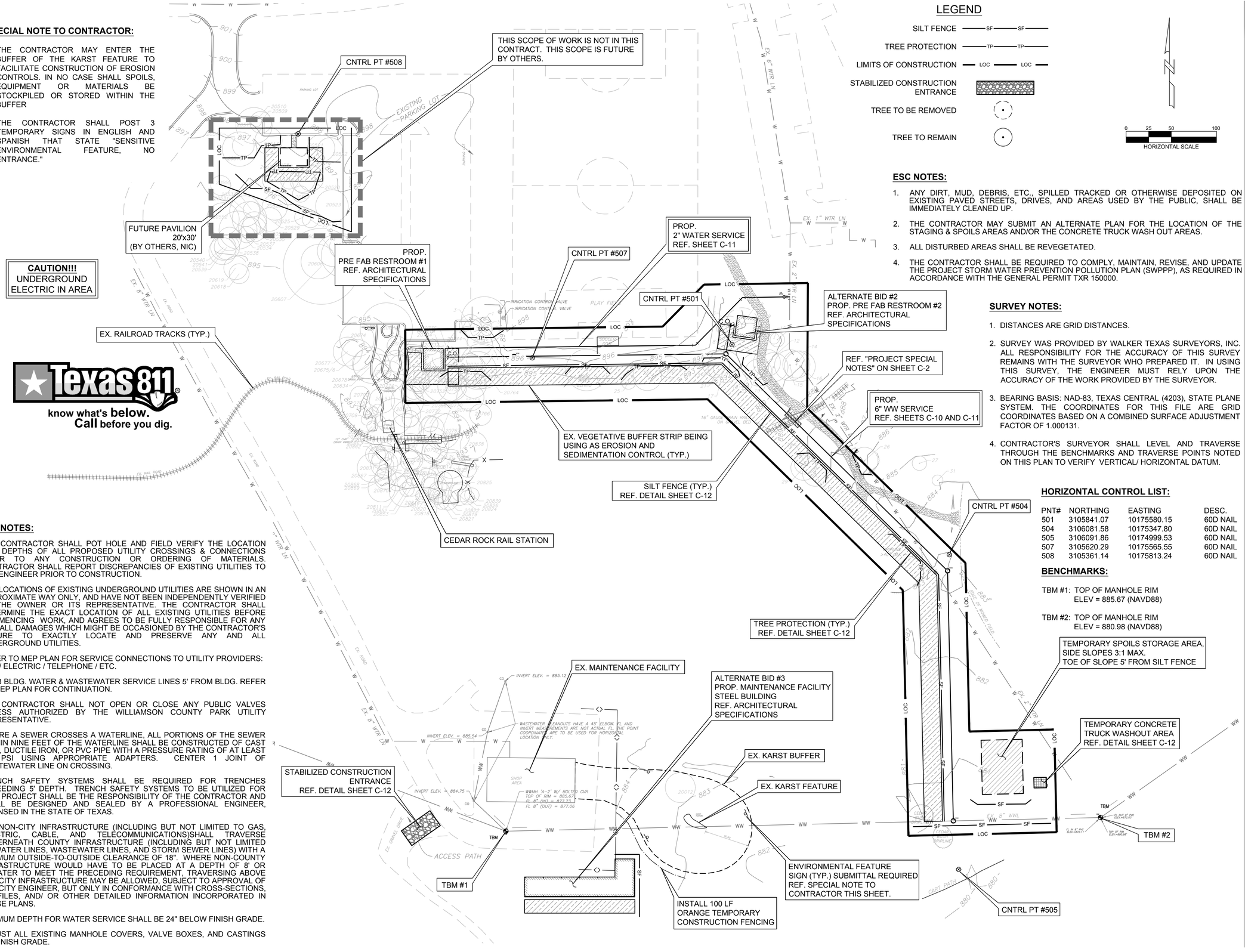
1. THE CONTRACTOR MAY ENTER THE BUFFER OF THE KARST FEATURE TO FACILITATE CONSTRUCTION OF EROSION CONTROLS. IN NO CASE SHALL SPOILS, EQUIPMENT OR MATERIALS BE STOCKPILED OR STORED WITHIN THE BUFFER
2. THE CONTRACTOR SHALL POST 3 TEMPORARY SIGNS IN ENGLISH AND SPANISH THAT STATE "SENSITIVE ENVIRONMENTAL FEATURE, NO ENTRANCE."

CAUTION!!!
UNDERGROUND
ELECTRIC IN AREA

Texas 811
know what's below.
Call before you dig.

UTILITY NOTES:

1. THE CONTRACTOR SHALL POT HOLE AND FIELD VERIFY THE LOCATION AND DEPTHS OF ALL PROPOSED UTILITY CROSSINGS & CONNECTIONS PRIOR TO ANY CONSTRUCTION OR ORDERING OF MATERIALS. CONTRACTOR SHALL REPORT DISCREPANCIES OF EXISTING UTILITIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY, AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. REFER TO MEP PLAN FOR SERVICE CONNECTIONS TO UTILITY PROVIDERS: GAS / ELECTRIC / TELEPHONE / ETC.
4. STUB BLDG. WATER & WASTEWATER SERVICE LINES 5' FROM BLDG. REFER TO MEP PLAN FOR CONTINUATION.
5. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY PUBLIC VALVES UNLESS AUTHORIZED BY THE WILLIAMSON COUNTY PARK UTILITY REPRESENTATIVE.
6. WHERE A SEWER CROSSES A WATERLINE, ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. CENTER 1 JOINT OF WASTEWATER LINE ON CROSSING.
7. TRENCH SAFETY SYSTEMS SHALL BE REQUIRED FOR TRENCHES EXCEEDING 5' DEPTH. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF TEXAS.
8. ALL NON-CITY INFRASTRUCTURE (INCLUDING BUT NOT LIMITED TO GAS, ELECTRIC, CABLE, AND TELECOMMUNICATIONS)SHALL TRAVERSE UNDERNEATH COUNTY INFRASTRUCTURE (INCLUDING BUT NOT LIMITED TO WATER LINES, WASTEWATER LINES, AND STORM SEWER LINES) WITH A MINIMUM OUTSIDE-TO-OUTSIDE CLEARANCE OF 18". WHERE NON-COUNTY INFRASTRUCTURE WOULD HAVE TO BE PLACED AT A DEPTH OF 8' OR GREATER TO MEET THE PRECEDING REQUIREMENT, TRAVERSING ABOVE THE CITY INFRASTRUCTURE MAY BE ALLOWED, SUBJECT TO APPROVAL OF THE CITY ENGINEER, BUT ONLY IN CONFORMANCE WITH CROSS-SECTIONS, PROFILES, AND/ OR OTHER DETAILED INFORMATION INCORPORATED IN THESE PLANS.
9. MINIMUM DEPTH FOR WATER SERVICE SHALL BE 24" BELOW FINISH GRADE.
10. ADJUST ALL EXISTING MANHOLE COVERS, VALVE BOXES, AND CASTINGS TO FINISH GRADE.



LEGEND

- SILT FENCE — SF — SF
- TREE PROTECTION — TP — TP
- LIMITS OF CONSTRUCTION — LOC — LOC
- STABILIZED CONSTRUCTION ENTRANCE
- TREE TO BE REMOVED
- TREE TO REMAIN

0 25 50 100
HORIZONTAL SCALE

ESC NOTES:

1. ANY DIRT, MUD, DEBRIS, ETC., SPILLED TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES, AND AREAS USED BY THE PUBLIC, SHALL BE IMMEDIATELY CLEANED UP.
2. THE CONTRACTOR MAY SUBMIT AN ALTERNATE PLAN FOR THE LOCATION OF THE STAGING & SPOILS AREAS AND/OR THE CONCRETE TRUCK WASH OUT AREAS.
3. ALL DISTURBED AREAS SHALL BE REVEGETATED.
4. THE CONTRACTOR SHALL BE REQUIRED TO COMPLY, MAINTAIN, REVISE, AND UPDATE THE PROJECT STORM WATER PREVENTION POLLUTION PLAN (SWPPP), AS REQUIRED IN ACCORDANCE WITH THE GENERAL PERMIT TXR 150000.

SURVEY NOTES:

1. DISTANCES ARE GRID DISTANCES.
2. SURVEY WAS PROVIDED BY WALKER TEXAS SURVEYORS, INC. ALL RESPONSIBILITY FOR THE ACCURACY OF THIS SURVEY REMAINS WITH THE SURVEYOR WHO PREPARED IT. IN USING THIS SURVEY, THE ENGINEER MUST RELY UPON THE ACCURACY OF THE WORK PROVIDED BY THE SURVEYOR.
3. BEARING BASIS: NAD-83, TEXAS CENTRAL (4203), STATE PLANE SYSTEM. THE COORDINATES FOR THIS FILE ARE GRID COORDINATES BASED ON A COMBINED SURFACE ADJUSTMENT FACTOR OF 1.000131.
4. CONTRACTOR'S SURVEYOR SHALL LEVEL AND TRAVERSE THROUGH THE BENCHMARKS AND TRAVERSE POINTS NOTED ON THIS PLAN TO VERIFY VERTICAL/ HORIZONTAL DATUM.

HORIZONTAL CONTROL LIST:

PNT#	NORTHING	EASTING	DESC.
501	3105841.07	10175580.15	60D NAIL
504	3106081.58	10175347.80	60D NAIL
505	3106091.86	10174999.53	60D NAIL
507	3105620.29	10175565.55	60D NAIL
508	3105361.14	10175813.24	60D NAIL

BENCHMARKS:

TBM #1: TOP OF MANHOLE RIM
ELEV = 885.67 (NAVD88)

TBM #2: TOP OF MANHOLE RIM
ELEV = 880.98 (NAVD88)

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
3000 JOE DIMAGGIO BLVD. #72
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER

PROJECT:
WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES
3005 CO. RD. 175

CLIENT:
WILLIAMSON COUNTY

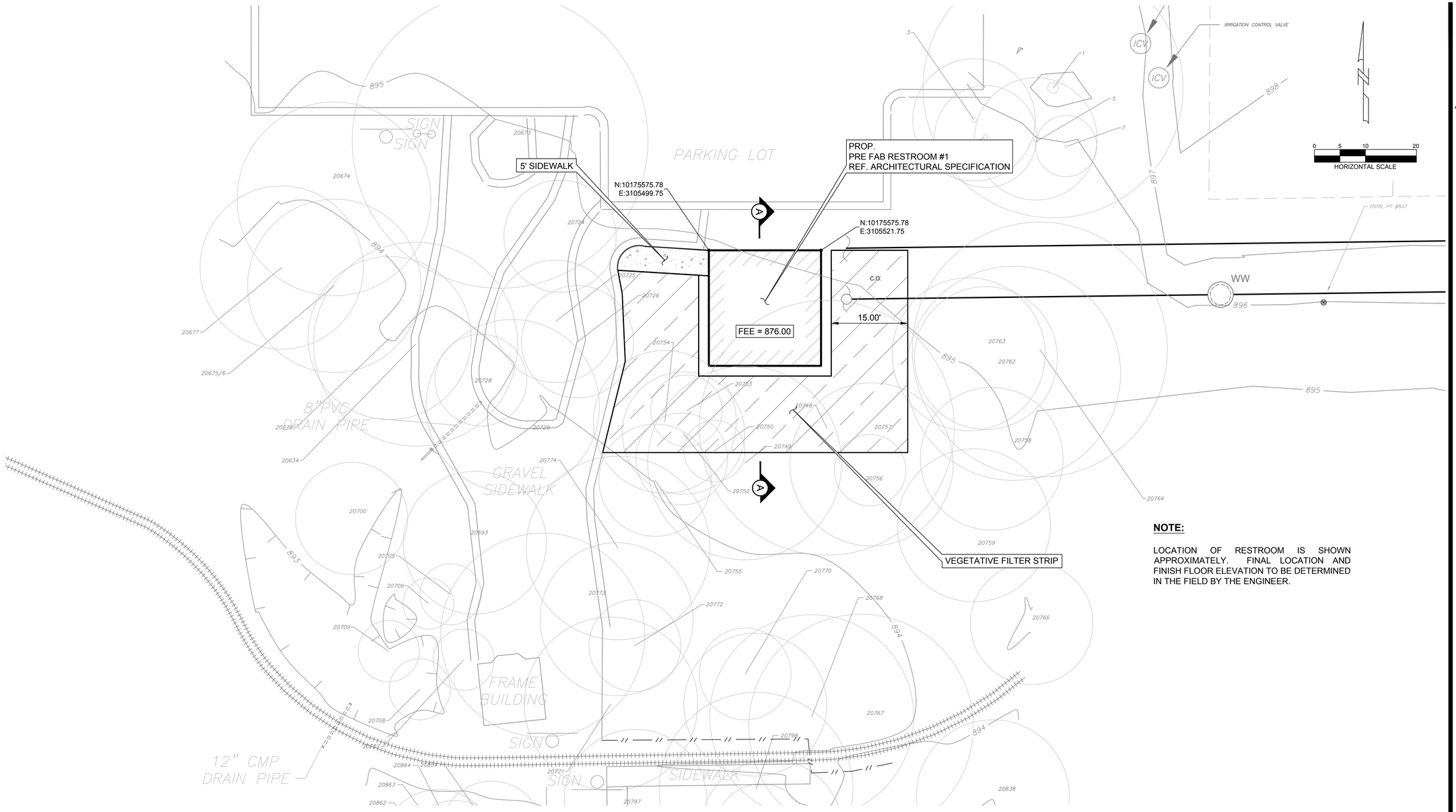
DESIGNED: AAP APPROVED: AAP
DRAWN: DAS DATE: 12/28/2017

RECOMD
REVISIONS
DATE
No.

SHEET TITLE:
OVERALL ESC AND UTILITY PLAN

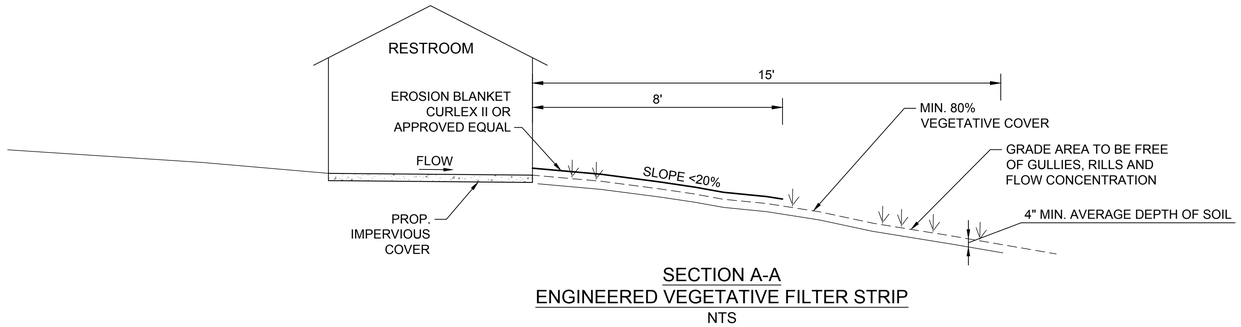
WP PROJECT NO.:
082-002

SHEET NO.:
C-5



NOTE:

LOCATION OF RESTROOM IS SHOWN APPROXIMATELY. FINAL LOCATION AND FINISH FLOOR ELEVATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.



SECTION A-A
ENGINEERED VEGETATIVE FILTER STRIP
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
3000 JOE DIMAGGIO BLVD. #72
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:
WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES

3005 CO. RD. 175

CLIENT:
WILLIAMSON COUNTY

DESIGNED: AAP APPROVED: AAP
DRAWN: DAS DATE: 12/28/2017

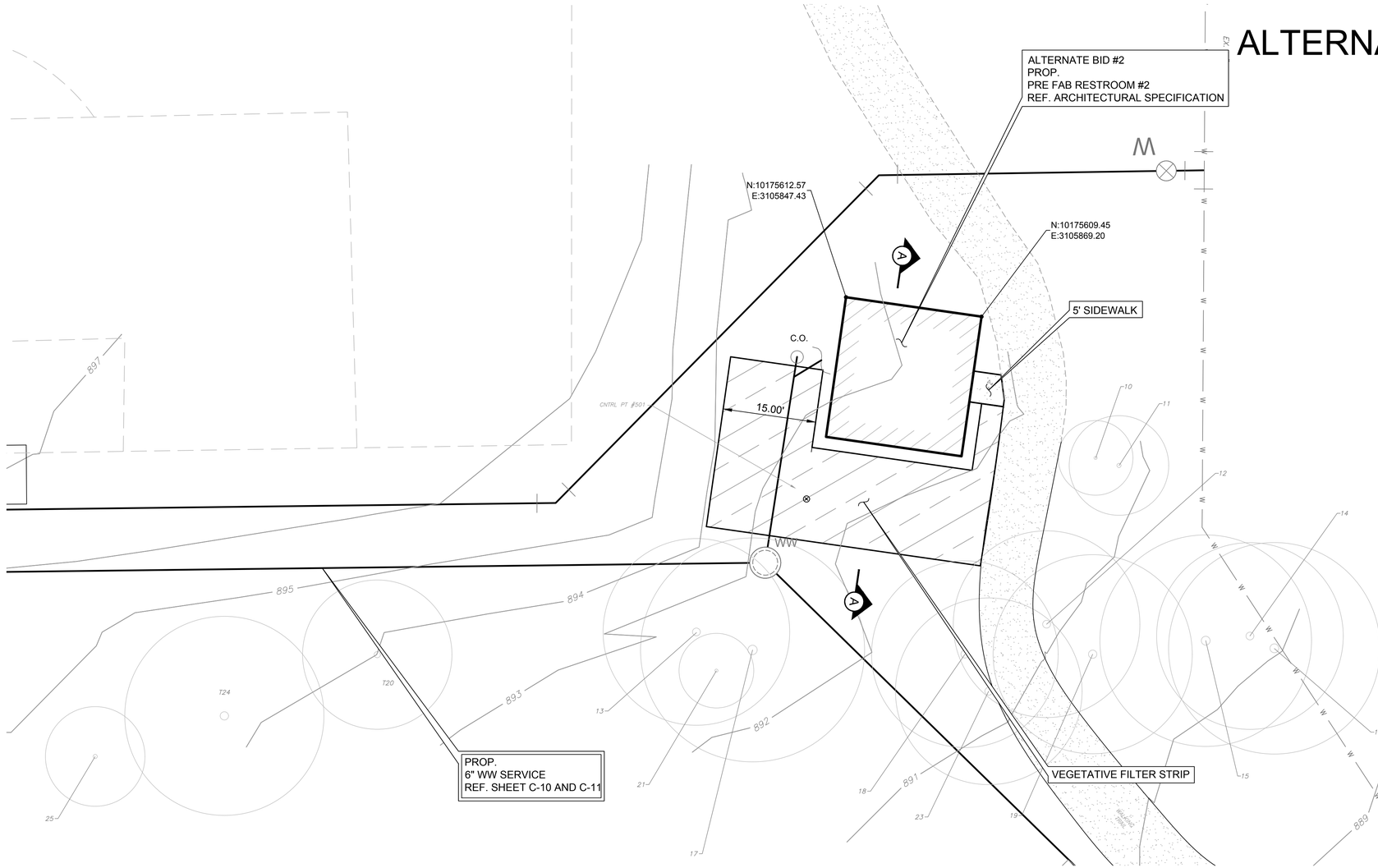
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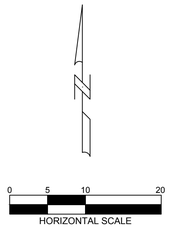
SHEET TITLE:
SITE PLAN - RESTROOM #1

WP PROJECT NO.:
082-002

SHEET NO.:
C-6

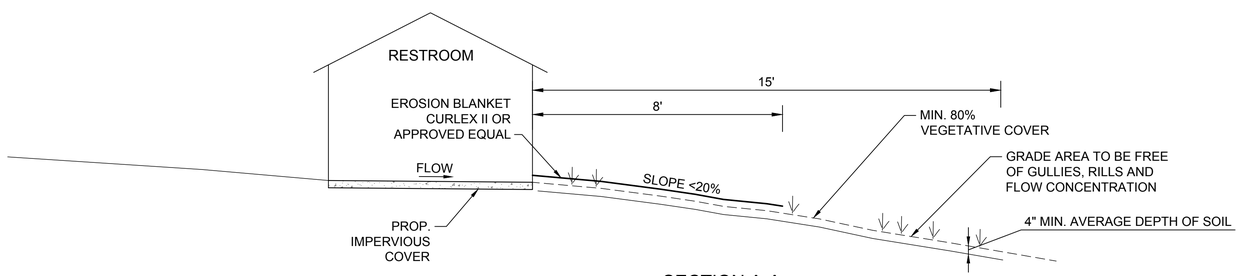
ALTERNATE BID #2





NOTE:

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SECTION A-A
ENGINEERED VEGETATIVE FILTER STRIP
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
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ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:

WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES

3005 CO. RD. 175

CLIENT:

WILLIAMSON COUNTY

DESIGNED: AAP APPROVED: AAP
DRAWN: DAS DATE: 12/28/2017

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:

SITE PLAN - RESTROOM #2

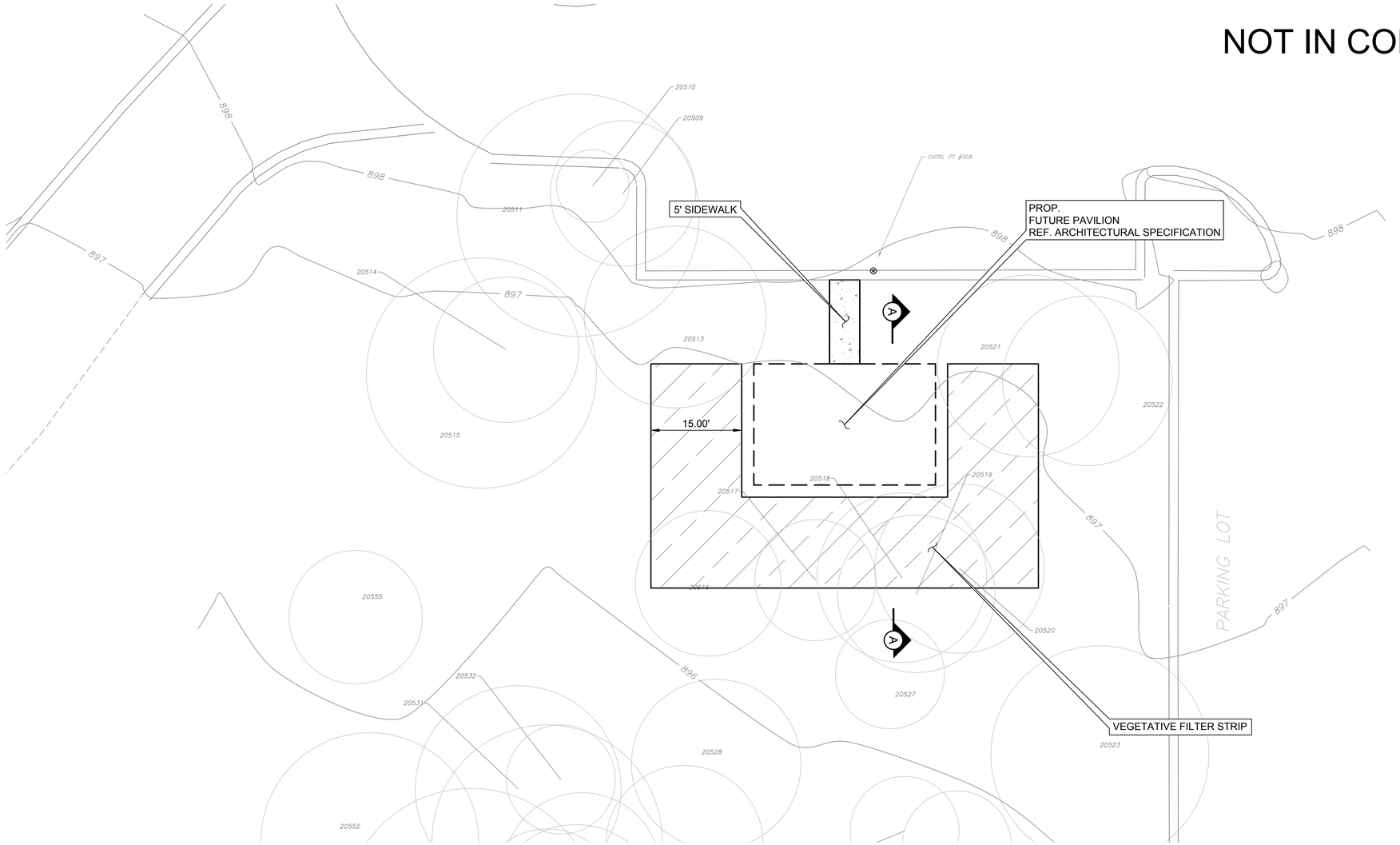
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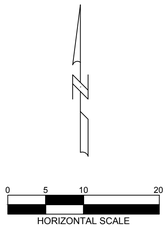
082-002

SHEET NO.:

C-7

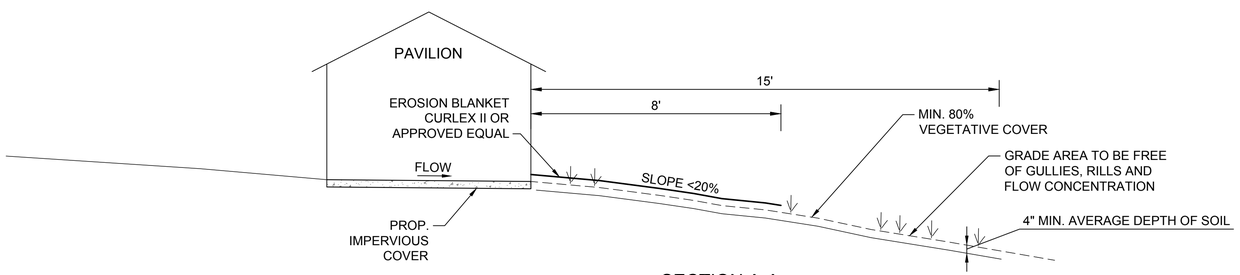
NOT IN CONTRACT





NOTE:

LOCATION OF PAVILION IS SHOWN APPROXIMATELY. FINAL LOCATION AND FINISH FLOOR ELEVATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.



SECTION A-A
ENGINEERED VEGETATIVE FILTER STRIP
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WAELTZ & PRETE, INC.
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FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:

WILLIAMSON COUNTY
REGIONAL PARK
RESTROOM
FACILITIES

3005 CO. RD. 175

CLIENT:

WILLIAMSON COUNTY

DESIGNED: AAP
DRAWN: DAS
APPROVED: AAP
DATE: 12/28/2017

No.	DATE	REVISIONS	RECOMTD

SHEET TITLE:

SITE PLAN - FUTURE
PAVILION

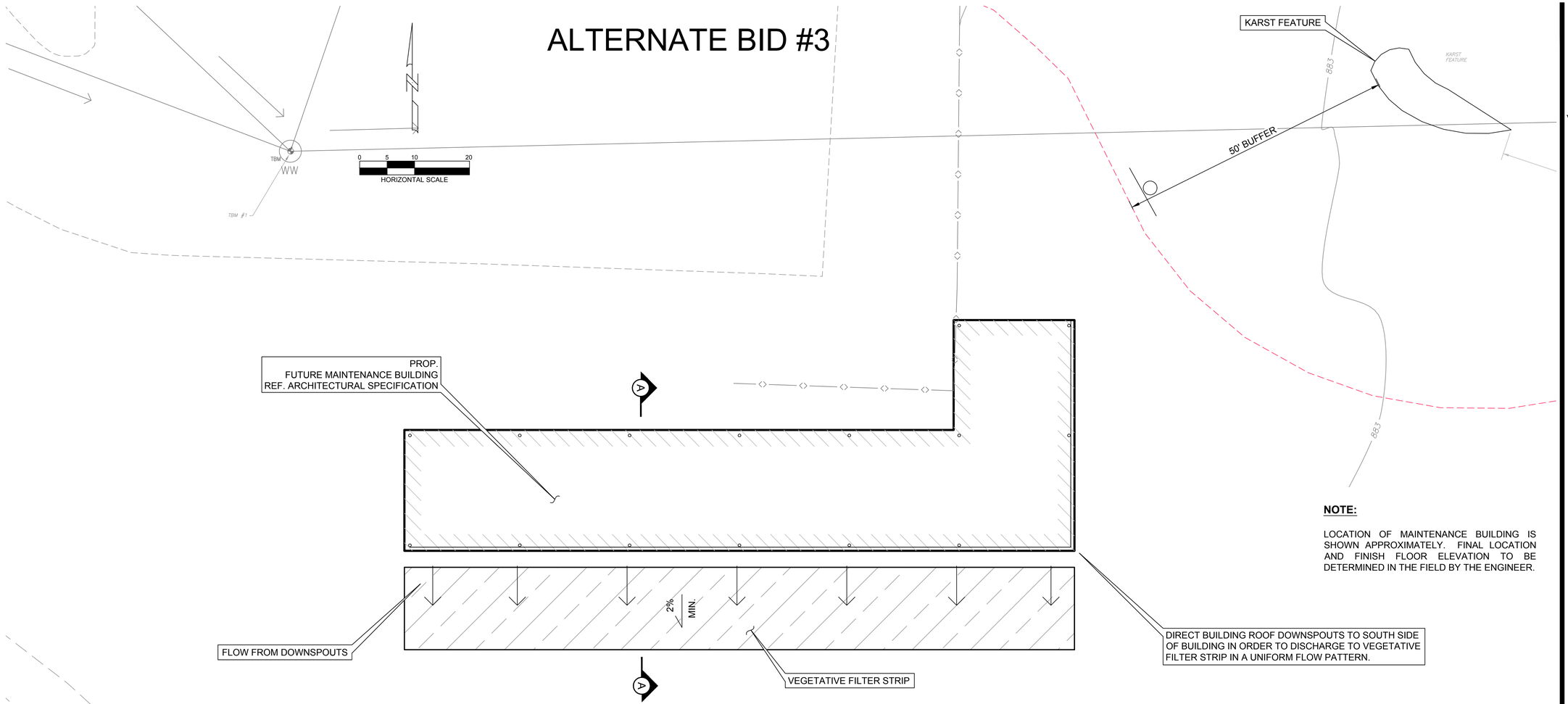
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082-002

SHEET NO.:

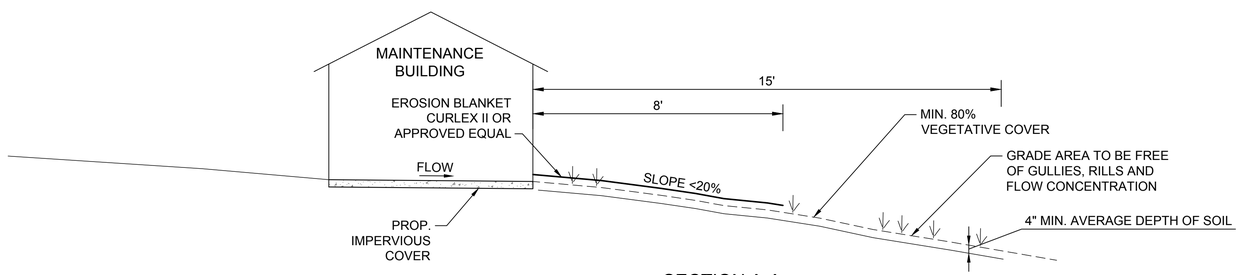
C-8

ALTERNATE BID #3



NOTE:

LOCATION OF MAINTENANCE BUILDING IS SHOWN APPROXIMATELY. FINAL LOCATION AND FINISH FLOOR ELEVATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER.



SECTION A-A
ENGINEERED VEGETATIVE FILTER STRIP
NTS

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PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:
WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES

3005 CO. RD. 175

CLIENT:
WILLIAMSON COUNTY

DESIGNED: AAP APPROVED: AAP
DRAWN: DAS DATE: 12/28/2017

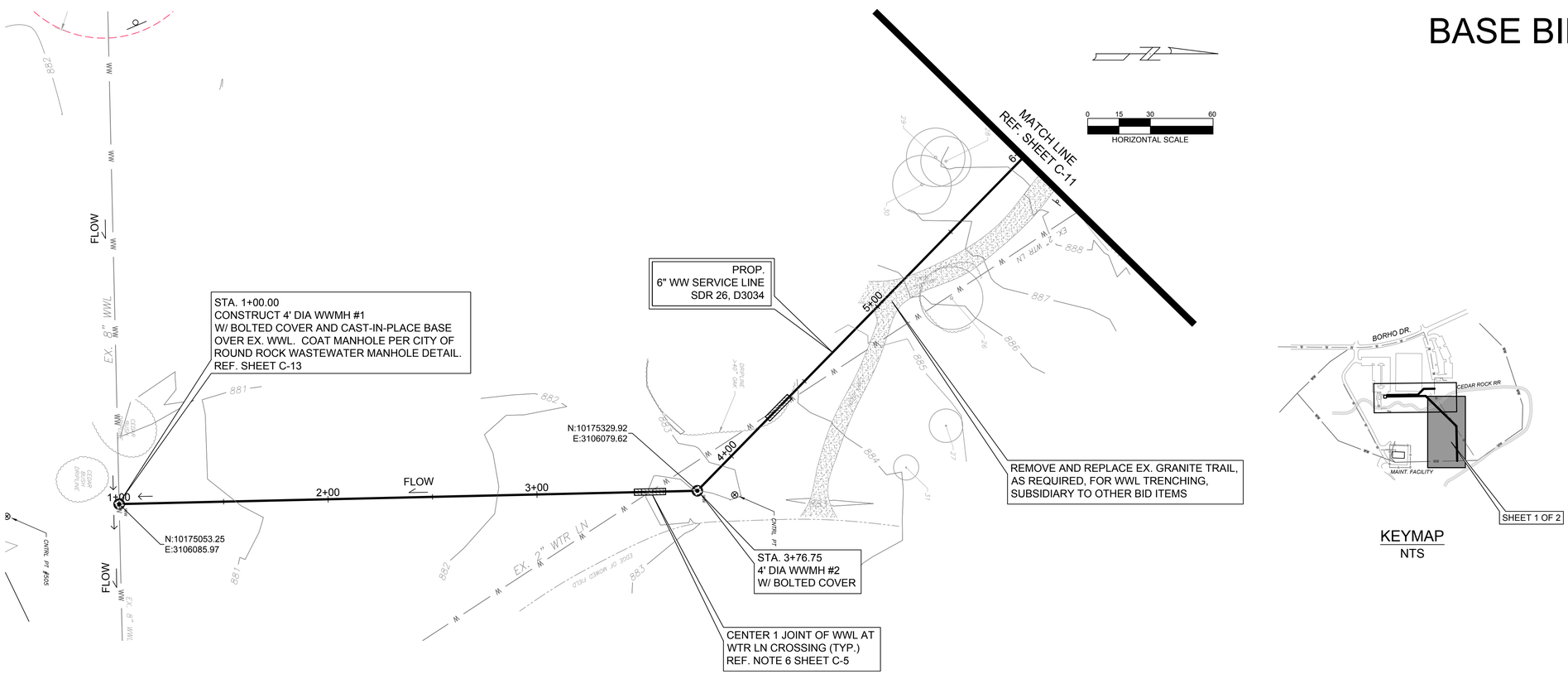
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		RECOM'D

SHEET TITLE:
SITE PLAN - FUTURE MAINTENANCE BUILDING

WP PROJECT NO.:
082-002

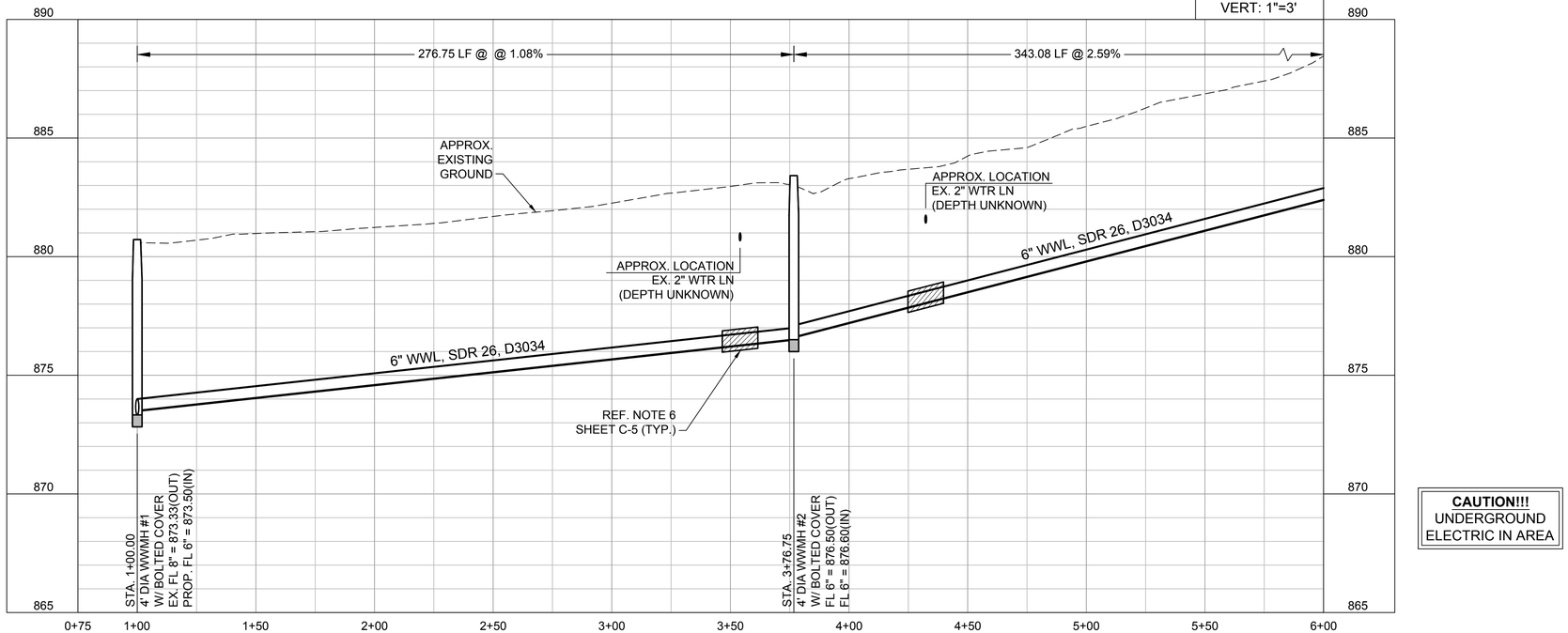
SHEET NO.:
C-9

BASE BID



KEYMAP
NTS

PROFILE SCALE:
HORZ: 1"=30'
VERT: 1"=3'



CAUTION!!!
UNDERGROUND
ELECTRIC IN AREA

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
3000 JOE DIMAGGIO BLVD. #72
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED
PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:
WILLIAMSON COUNTY
REGIONAL PARK
RESTROOM
FACILITIES
3005 CO. RD. 175

CLIENT:
WILLIAMSON COUNTY

DESIGNED: AAP
DRAWN: DAS
APPROVED: AAP
DATE: 12/28/2017

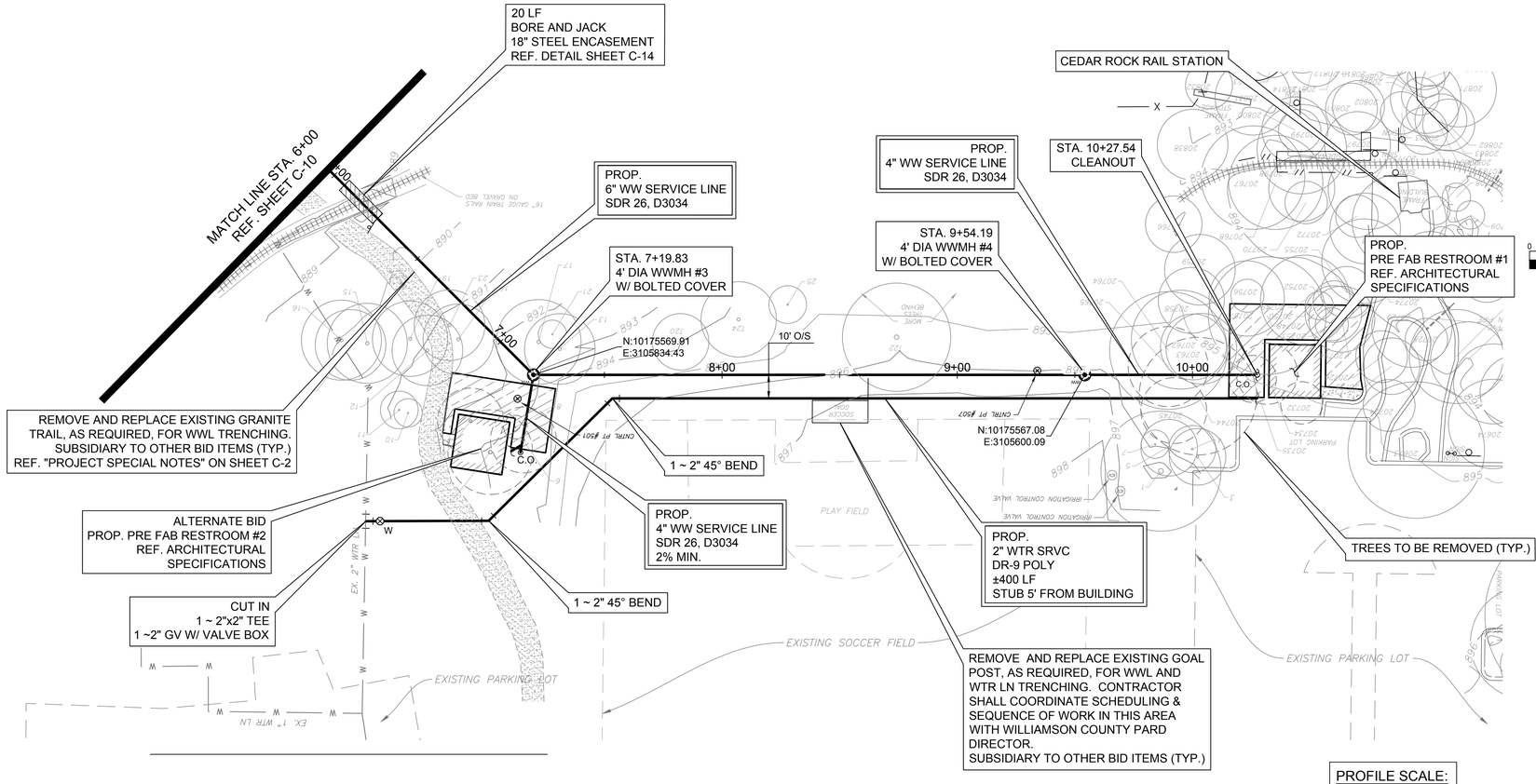
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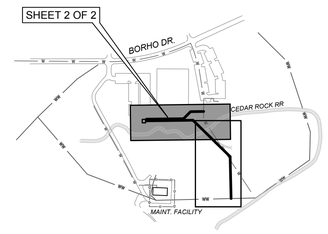
SHEET TITLE:
WASTEWATER
PLAN AND
PROFILE (1 OF 2)

WP PROJECT NO.:
082-002

SHEET NO.:
C-10

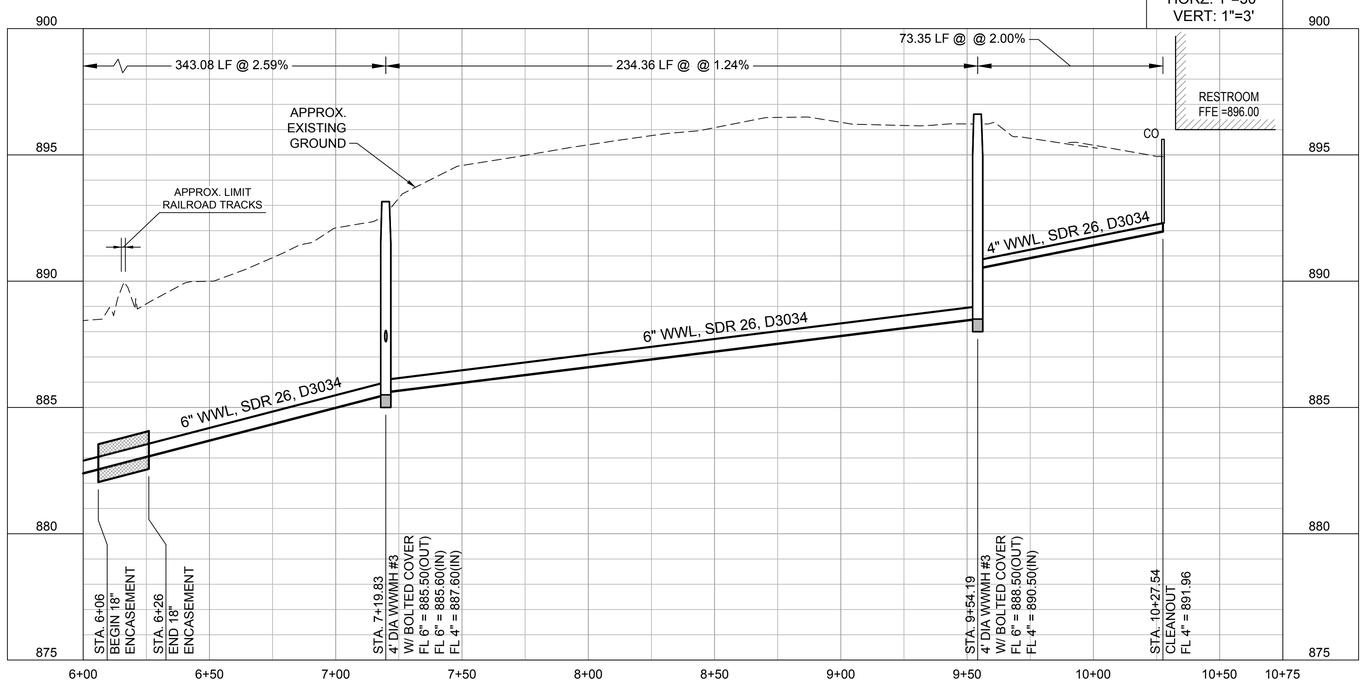
BASE BID





KEYMAP
NTS

PROFILE SCALE:
HORZ: 1"=30'
VERT: 1"=3'



CAUTION!!!
UNDERGROUND ELECTRIC IN AREA

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
3000 JOE DIMAGGIO BLVD. #72
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER

PROJECT:
WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES
3005 CO. RD. 175

CLIENT:
WILLIAMSON COUNTY

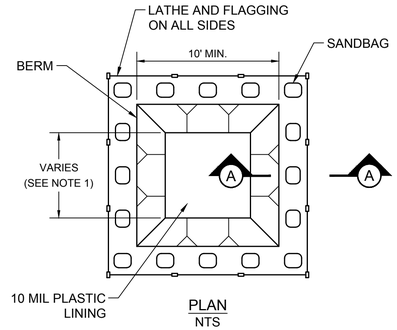
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DRAWN: DAS DATE: 12/28/2017

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:
WASTEWATER PLAN AND PROFILE (2 OF 2)

WP PROJECT NO.:
082-002

SHEET NO.:
C-11



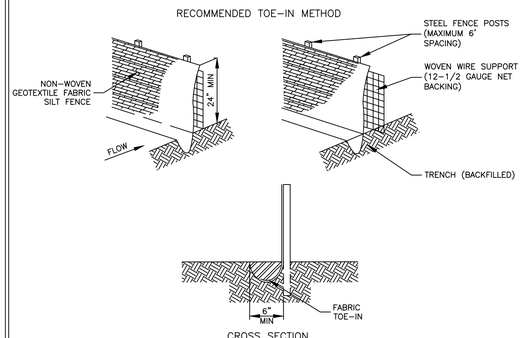
INSTALLATION NOTES:

1. 10' MIN. OR AS REQUIRED TO CONTAIN WASTE CONCRETE.
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
4. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

MAINTENANCE NOTES:

1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.
4. INSPECT WEEKLY, DURING AND AFTER EVERY STORM EVENT.

TEMPORARY CONCRETE TRUCK WASH OUT AREA
NTS

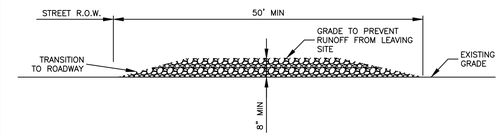


NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1') FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	SILT FENCE DETAIL	EC-10
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PLANNED, PASSION, TRANSPORT

SILT FENCE
NTS



NOTES:

1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	STABILIZED CONSTRUCTION ENTRANCE DETAIL	EC-09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PLANNED, PASSION, TRANSPORT

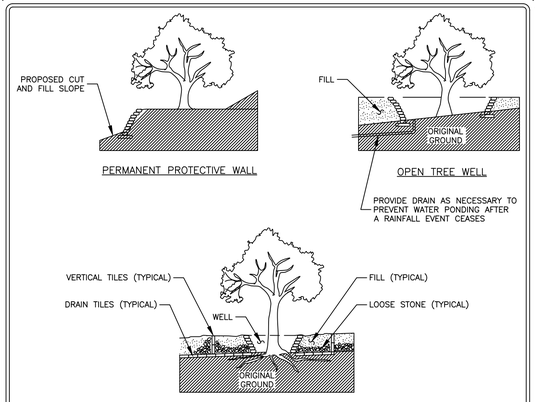
STABILIZED CONSTRUCTION ENTRANCE
NTS

1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL TREES TO BE PRESERVED FROM HIS ACTIVITIES.
2. ALL TREES SHOWN TO BE RETAINED WITHIN THE LIMITS OF CONSTRUCTION ON THE PLANS, SHALL BE PROTECTED DURING CONSTRUCTION WITH FENCING. SEE: TREE PROTECTION TREE WELLS (EC-02), TREE PROTECTION TREE LOCATION (EC-03) AND TREE PROTECTION FENCE-CHAIN LINK (EC-04).
3. TREE PROTECTION FENCES SHALL BE ERECTED ACCORDING TO CITY STANDARDS FOR TREE PROTECTION, INCLUDING TYPES OF FENCING AND SIGNAGE.
4. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR GRADING) AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
5. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIPLINES.
6. FENCES SHALL COMPLETELY SURROUND THE TREE OR CLUSTERS OF TREES, LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE) OR CRITICAL ROOT ZONE (CRZ), WHICHEVER IS GREATER; AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   - 6A. SOIL COMPACTION IN CRZ AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIAL.
   - 6B. CRZ DISTURBANCES DUE TO GRADE CHANGES OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE FORESTRY MANAGER.
   - 6C. WOUNDS TO EXPOSED ROOTS, TRUNK, OR LIMBS BY MECHANICAL EQUIPMENT
   - 6D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES.
7. EXCEPTIONS TO INSTALLING TREE FENCES AT THE TREE DRIPLINES OR CRZ, WHICHEVER IS GREATER, MAY BE PERMITTED IN THE FOLLOWING CASES:
   - 7A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, OR TREE WELL;
   - 7B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   - 7C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.
   - 7D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE FORESTRY MANAGER TO DISCUSS ALTERNATIVES.
8. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE THAT IS CLOSER THAN 5 FEET TO A TREE TRUNK, THE TRUNK SHALL BE PROTECTED BY STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
9. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES UNDER THE DRIPLINE OR CRZ, WHICHEVER IS GREATER, THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION.
10. ALL GRADING WITHIN CRZ AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA.
11. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL AND BACKFILLED WITH GOOD QUALITY TOP SOIL WITHIN TWO DAYS. IF EXPOSED ROOT AREAS CANNOT BE BACKFILLED WITHIN 2 DAYS, AN ORGANIC MATERIAL WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION SHALL BE PLACED TO COVER THE ROOTS UNTIL BACKFILL CAN OCCUR.
12. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE WITH A ROCK SAW OR SIMILAR EQUIPMENT, IN A LOCATION AND TO A DEPTH APPROVED BY THE FORESTRY MANAGER, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
13. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES WILL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS ARE TO BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON LEAVES.
14. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, A PLASTIC VAPOR BARRIER SHALL BE PLACED BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE CRZ.
15. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
16. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR (4) INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OR CRZ OF TREES, WHICHEVER IS GREATER. NO TOPSOIL IS PERMITTED ON ROOT FLARES OF ANY TREE.
17. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. ALL PRUNING MUST BE DONE ACCORDING TO CITY STANDARDS AND AS OUTLINED IN LITERATURE PROVIDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA PRUNING TECHNIQUES).
18. ALL OAK TREE CUTS, INTENTIONAL OR UNINTENTIONAL, SHALL BE SEALED WITH AN APPROVED PRUNING SEALER IMMEDIATELY (WITHIN 10 MINUTES). TREE PAINT MUST BE KEPT ON SITE AT ALL TIMES.
19. THE FORESTRY MANAGER HAS THE AUTHORITY TO REQUIRE ADDITIONAL TREE PROTECTION BEFORE OR DURING CONSTRUCTION.
20. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED. REFER TO THE CITY OF ROUND ROUND ROCK TREE TECHNICAL MANUAL FOR APPROPRIATE REMOVAL METHODS.
21. PRIOR TO CONSTRUCTION, ALL LOWER TREE LIMBS OVER ROADWAYS MUST BE PRUNED TO A HEIGHT OF 14 FEET USING THE TECHNIQUES DESCRIBED IN THE CITY OF ROUND ROCK TREE TECHNICAL MANUAL.
22. DEVIATIONS FROM THE ABOVE REQUIREMENTS AND NEGLIGENT DAMAGE TO TREES MAY BE CONSIDERED AS ORDINANCE VIOLATIONS.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	TREE PROTECTION NOTES	EC-01
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PLANNED, PASSION, TRANSPORT

TREE PROTECTION NOTES
NTS



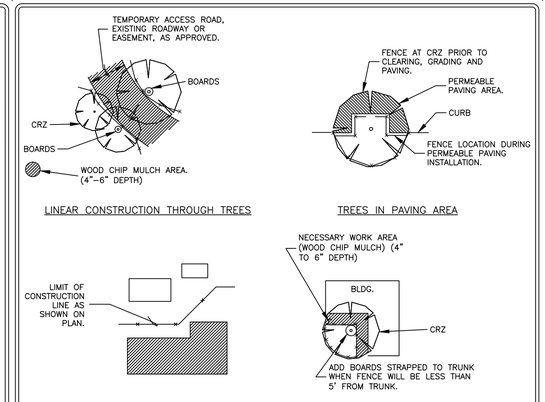
NOTE:

LOCATION, TYPE, DEPTHS AND CONSTRUCTION SPECIFICATIONS OF FILL, DRAINS AND WALLS SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	TREE PROTECTION TREE WELLS	EC-02
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PLANNED, PASSION, TRANSPORT

TREE PROTECTION TREE WELLS
NTS



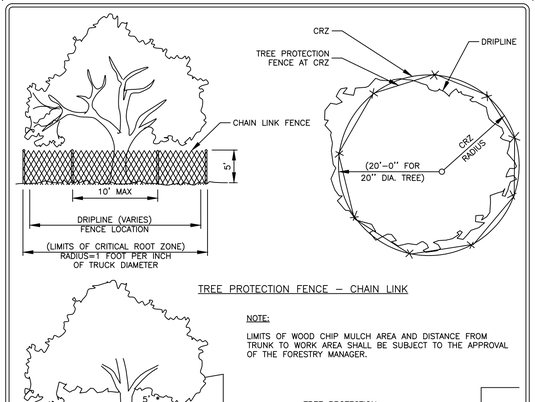
NOTE:

LIMITS OF MULCH AREAS AND DISTANCE FROM TRUNKS TO WORK/ PERMEABLE PAVING AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	TREE PROTECTION FENCE LOCATIONS	EC-03
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PLANNED, PASSION, TRANSPORT

TREE PROTECTION FENCE
NTS



NOTE:

LIMITS OF WOOD CHIP MULCH AREA AND DISTANCE FROM TRUNK TO WORK AREA SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO:
APPROVED 03-25-11 DATE	TREE PROTECTION FENCE CHAIN LINK	EC-04
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL. (NOT TO SCALE)		ROUND ROCK, TEXAS PLANNED, PASSION, TRANSPORT

TREE PROTECTION FENCE CHAIN LINK
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
3000 JOE DIMAGGIO BLVD. #72
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:

WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES

3005 CO. RD. 175

CLIENT:

WILLIAMSON COUNTY

DESIGNED: AAP APPROVED: AAP
DRAWN: DAS DATE: 12/28/2017

No.	DATE	REVISIONS	RECOMD

SHEET TITLE:

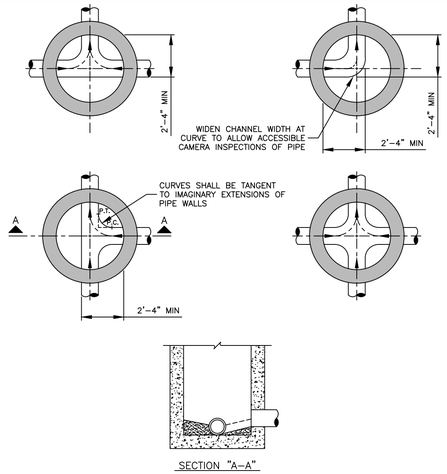
ESC DETAILS

WP PROJECT NO.:

082-002

SHEET NO.:

C-12

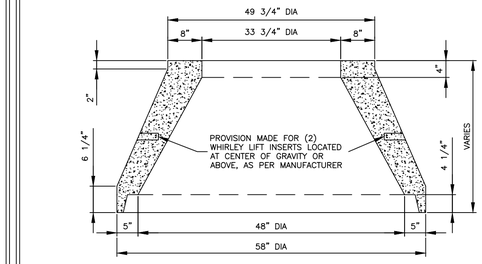


NOTES:

1. MINIMUM DROP FROM INLET TO OUTLET OF MANHOLE IS 0.1 FEET AND MAXIMUM DROP IS 2.5 FEET, UNLESS SPECIAL APPROVAL IS OBTAINED FROM THE CITY OF ROUND ROCK.
2. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
3. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
4. CHANNELS FOR FUTURE CONSTRUCTIONS, SHALL BE CONSTRUCTED WITH PIPE EXTENDING 3' BEYOND EXTERIOR OF MANHOLE WALL, WITH GLUED PLUG.
5. SLOPE MANHOLE BENCH AT 2:1 SLOPE FROM MANHOLE WALL TO CHANNEL.
6. INVERT CHANNEL SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR FOUR INCHES (4") DEEP.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: WW-11
APPROVED 04-01-10 DATE	WASTEWATER FLOW PATTERNS FOR INVERT CHANNELS DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

WW FLOW PATTERNS FOR INVERTS
NTS

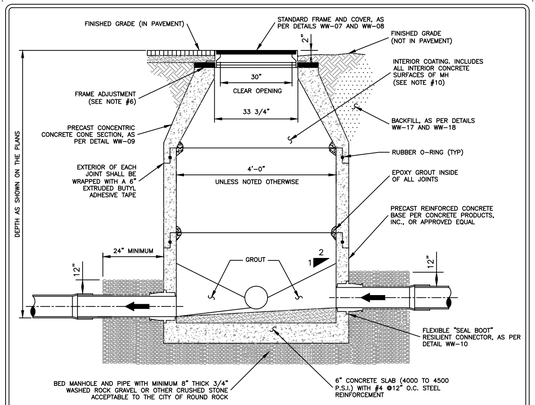


NOTE:

CONCENTRIC CONCRETE CONE SECTION SHALL BE MANUFACTURED USING 4000 TO 4500 P.S.I. CONCRETE, 28 DAY STRENGTH AND IN ACCORDANCE WITH ASTM C478, AS MANUFACTURED BY CONCRETE PRODUCTS, INCORPORATED, OR APPROVED EQUAL.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: WW-09
APPROVED 04-01-10 DATE	PRECAST 48" CONCENTRIC CONCRETE CONE SECTION DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

PRECAST 48" CONCENTRIC CONE
NTS

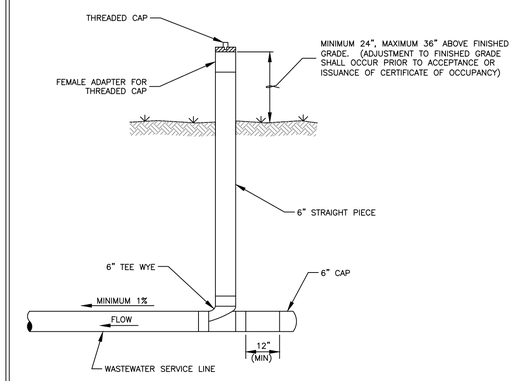


NOTES:

1. IF DROP IS SIX INCHES (6") TO TWO FEET (2'-0"), CONSTRUCTION OF DROP SHALL PROVIDE AN OVERSIZED INVERT TO EXTEND UNDER THE DROP CONNECTION.
2. SEE CONSTRUCTION PLANS FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZES AND TYPES.
3. MANHOLES SHALL BE PRECAST ASTM C478 BELL AND SPIGOT WITH "O" RING JOINTS.
4. MANHOLES TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR H20 TRAFFIC LOADING.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETED, WHEN MANHOLES ARE LOCATED OUTSIDE OF PAVEMENT.
6. FRAME ADJUSTMENT HEIGHT SHALL CONSIST OF FIVE INCHES (5") MINIMUM TO EIGHTEEN INCHES (18") MAXIMUM. GRADE RINGS SHALL BE GROUTED WITH A NON-SHRINK GROUT INSIDE AND OUTSIDE. HDPE GRADE RINGS, AS MANUFACTURED BY LABTECH, INCORPORATED, OR EQUAL, MAY NOT BE USED.
7. FOR MANHOLES TO BE VENTED, SEE DETAILS WW-05 AND WW-06.
8. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO THE FLOW STREAM. ALL P.V.C. PIPE SHALL BE REMOVED FROM INVERT.
9. BASE SECTION SHALL BE DESIGNED FOR H20 LOADING, PLUS EARTH LOAD AT 130 PCF.
10. ENTIRE INTERIOR CONCRETE SURFACES OF WASTEWATER MANHOLES TO BE COATED WITH RAVEN 405 SPRAYWALLS, OR APPROVED EQUAL (WITH A UNIFORM THICKNESS OF 124 MILS AND A MINIMUM THICKNESS OF 100 MILS, APPLIED AFTER MANHOLE HAS PASSED THE VACUUM TEST.) OR 1/2" MIN. THICKNESS CALCIUM ALUMINATE CEMENTITIOUS COATING. OTHER INTERIOR SURFACES MAY BE COATED IF RECOMMENDED BY COATING MANUFACTURER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: WW-01
APPROVED 04-01-10 DATE	PRECAST CONCRETE WASTEWATER MANHOLE DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

WASTEWATER MANHOLE
NTS



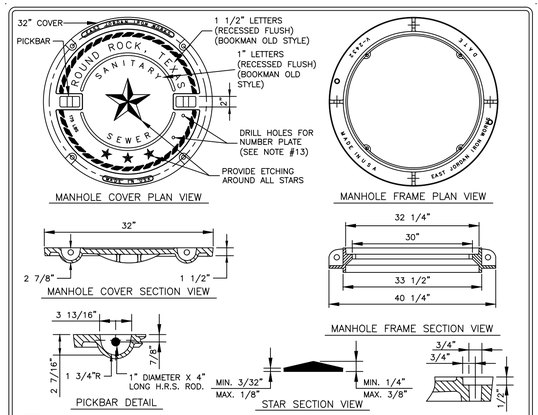
PROFILE VIEW

NOTES:

1. ALL PIPE AND FITTINGS TO BE SDR 26.
2. ALL FITTINGS SHALL BE SOLVENT WELD. CLEAR GLUE WILL NOT BE ACCEPTABLE.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: WW-14
APPROVED 04-01-10 DATE	WASTEWATER SERVICE CLEAN-OUT DETAIL (NON-PAVED SURFACES)	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

WASTEWATER CLEANOUT
NTS

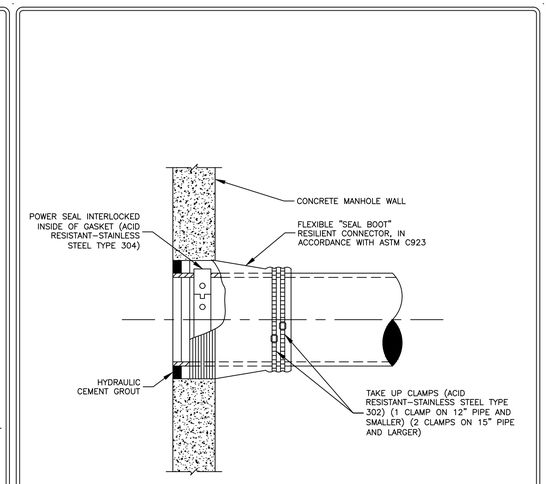


NOTES:

1. COVER AND FRAME SHALL COMPLY WITH STANDARD SPECIFICATIONS FOR DRAINAGE, SEWER, UTILITY AND RELATED CASTINGS: AASHTO DESIGNATION M306-04.
2. MANHOLE COVER SHALL BE MODEL NUMBER: V-2432-3 (PRODUCT NUMBER: 42432033), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
3. MANHOLE FRAME SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432010), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
4. MANHOLE COVER AND FRAME ASSEMBLY, IF ORDERED AS A SET, SHALL BE MODEL NUMBER: V-2432 (PRODUCT NUMBER: 42432073), AS MANUFACTURED BY EAST JORDAN IRON WORKS, INCORPORATED, OR APPROVED EQUAL.
5. ALL CORNERS AND EDGES SHALL HAVE A 1/16" MINIMUM AND 1/8" MAXIMUM RADIUS.
6. MANHOLE COVERS SHALL BE CAST WITH TWO 1" DIAMETER STEEL PICKBARS.
7. MANHOLE COVER WEIGHT SHALL BE 175 LBS. FOR DUCTILE IRON. WEIGHT SHALL BE CAST ON BOTH TOP AND BOTTOM OF COVER.
8. MANUFACTURER SHALL CERTIFY THAT EACH MANHOLE COVER MEETS HS-20 LOADING.
9. FILLETS SHALL BE 1/4" RADIUS UNLESS OTHERWISE SPECIFIED.
10. MANUFACTURER SHALL REMOVE EXCESS IRON AND MACHINE FINISH SEATING SURFACES TO NOTED DIMENSIONS.
11. COVER SHALL BE DIPPED IN A WATER-BASED ASPHALTIC COATING, PRIOR TO SHIPMENT FROM FOUNDRY.
12. BOLTS SHALL BE 5/8"-11NC X 2" LONG HEX STAINLESS STEEL WITH WASHER.
13. MANUFACTURER SHALL DRILL 2-3/16"X1/2" DEEP HOLES FOR A MANHOLE NUMBER PLATE TO BE PROVIDED BY THE CITY OF ROUND ROCK. THE TOP HOLE SHALL BE DRILLED 1" O.C. FROM THE BOTTOM OF THE PICKBAR AND THE BOTTOM HOLE SHALL BE DRILLED 4" O.C. FROM THE TOP HOLE.

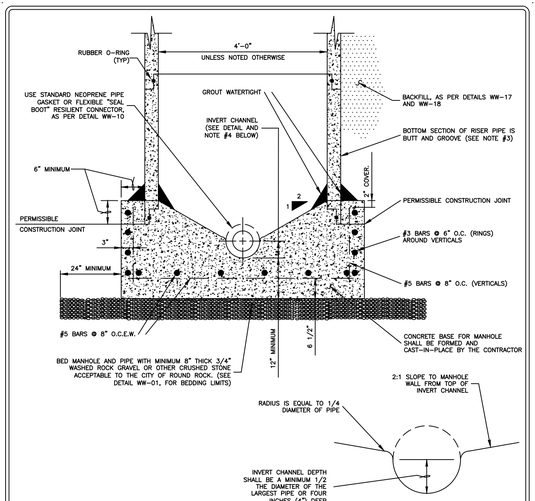
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: WW-07
APPROVED 04-01-10 DATE	BOLTED WASTEWATER MANHOLE COVER AND FRAME DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

BOLTED WASTEWATER MANHOLE COVER AND FRAME
NTS



RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: WW-10
APPROVED 04-01-10 DATE	FLEXIBLE "SEAL BOOT" RESILIENT CONNECTOR DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

FLEXIBLE SEAL BOOT RESILIENT CONNECTOR
NTS

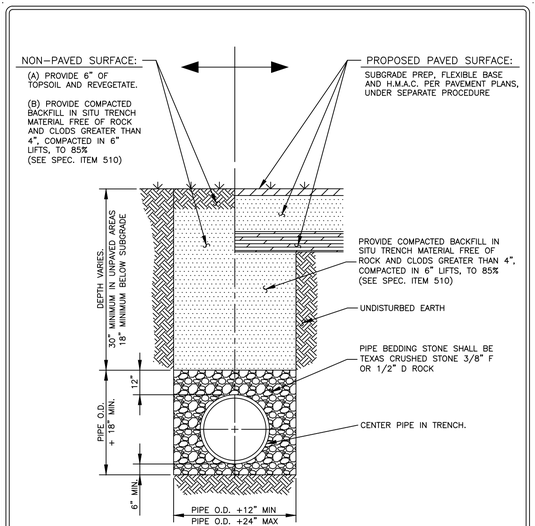


NOTES:

1. CAST-IN-PLACE BASE SHALL BE 4000 TO 4500 P.S.I. CONCRETE, 28 DAY STRENGTH.
2. STEEL SHALL BE GRADE 60.
3. MANHOLE RISER PIPE FURNISHED IN LENGTHS OF ONE (1), TWO (2), THREE (3), FOUR (4) OR SIX (6) FEET AND SHALL BE IN ACCORDANCE WITH ASTM C478.
4. INVERT CHANNEL SHALL BE PROVIDED THAT AS MUCH AS POSSIBLE, FORMS A SMOOTH CONTINUATION OF INLET AND OUTLET PIPES.
5. BASE SHALL BE PROPERLY FORMED IN THE FIELD WITH WOOD OR OTHER APPROVED FORMS.
6. VERTICAL BARS MAY BE EXTENSIONS OF BOTTOM STEEL OR SEPARATE FROM, BUT TIED TO BOTTOM STEEL.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: WW-04
APPROVED 04-01-10 DATE	CAST-IN-PLACE BASE FOR CONCRETE WASTEWATER MANHOLE DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

WASTEWATER MANHOLE CAST-IN-PLACE BASE
NTS



NOTE:

ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: WW-18
APPROVED 04-01-10 DATE	WASTEWATER LINE BEDDING AND SURFACE REPAIR DETAIL (NON-PAVED & PROPOSED PAVED SURFACE)	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

WASTEWATER LINE BEDDING AND PAVEMENT REPAIR (NON-PAVED AND PROPOSED PAVED SURFACE)
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
3000 JOE DIMAGGIO BLVD. #72
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308

STATE OF TEXAS
ANTONIO A. PRETE
93759
LICENSED PROFESSIONAL ENGINEER
14 Nov 17

PROJECT:

WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES

3005 CO. RD. 175

CLIENT:

WILLIAMSON COUNTY

DESIGNED: AAP APPROVED: AAP
DRAWN: DAS DATE: 12/28/2017

No. DATE REVISIONS RECOMD

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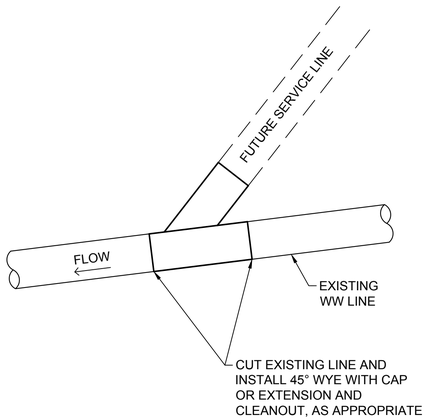
UTILITY DETAILS (1 OF 2)

WP PROJECT NO.:

082-002

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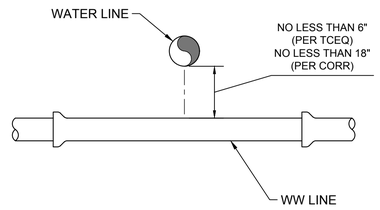
C-13



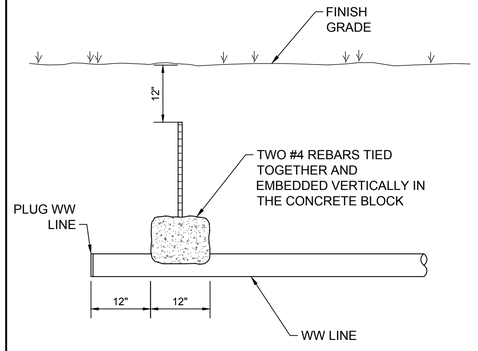
METHOD FOR JOINING FUTURE LATERALS
NTS

NOTE:

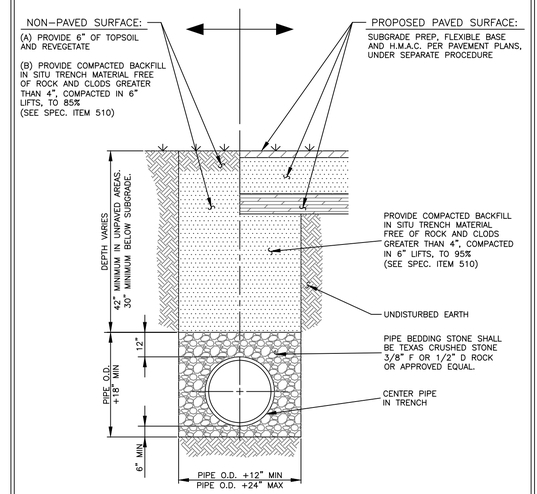
WHERE A SEWER LINE CROSSES A WATER LINE, ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. CENTER 1 JOINT OF WASTEWATER LINE ON CROSSING.



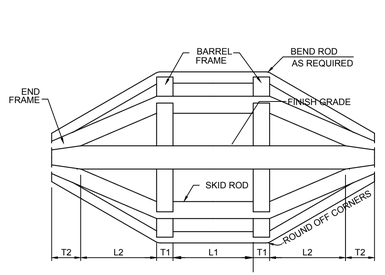
LINE CROSSING
NTS

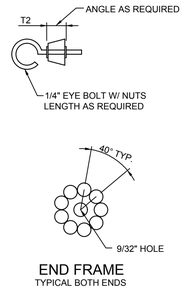


TYPICAL STUBOUT MARKING
NTS

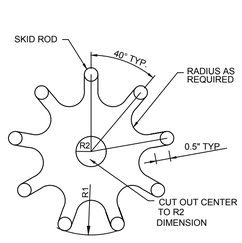


WATER LINE BEDDING
NTS





END FRAME
TYPICAL BOTH ENDS



BARREL FRAME

SIZE	TYPE	O.D. AVERAGE	MIN. WALL THICKNESS	R1	R2	L1	L2	T1	T2	ROD DIAMETER
6"	D3034 SDR35	6.275	0.180	2.810	0.750	4.500	6.000	0.375	1.000	0.375
6"	D3034 SDR26	6.275	0.241	2.750	1.750	4.500	6.000	0.375	1.000	0.375
6"	D2241 SDR26	6.625	0.255	2.900	0.750	4.500	6.000	0.375	1.000	0.375
8"	D3034 SDR35	8.400	0.241	3.760	1.250	6.000	6.000	0.375	1.000	0.375
8"	D3034 SDR26	8.400	0.323	3.680	1.250	6.000	6.000	0.375	1.000	0.375
8"	D2241 SDR26	8.625	0.331	3.780	1.250	6.000	6.000	0.375	1.000	0.375
10"	D3034 SDR35	10.50	0.300	4.700	1.500	7.500	6.000	0.375	1.000	0.375
10"	D3034 SDR26	10.50	0.404	4.600	1.500	7.500	6.000	0.375	1.000	0.375
10"	D2241 SDR26	10.75	0.413	4.710	1.500	7.500	6.000	0.375	1.000	0.375
12"	D3034 SDR35	12.50	0.357	5.600	1.750	9.000	6.000	0.375	1.000	0.375
12"	D3034 SDR26	12.50	0.481	5.480	1.750	9.000	6.000	0.375	1.000	0.375
12"	D2241 SDR26	12.75	0.490	5.590	1.750	9.000	6.000	0.375	1.000	0.375
15"	D3034 SDR35	15.30	0.437	6.850	2.000	11.250	6.000	0.375	1.000	0.375
15"	D3034 SDR26	15.30	0.588	6.710	2.000	11.250	6.000	0.375	1.000	0.375
16"	D2241 SDR26	16.0	0.615	7.010	2.000	11.250	6.000	0.375	1.000	0.375
18"	F679 T-1	18.701	0.536	8.060	2.500	13.500	9.000	0.500	1.500	0.500
21"	F679 T-1	22.047	0.632	9.500	3.000	150.750	9.000	0.500	1.500	0.500
24"	F679 T-1	24.803	0.711	10.680	3.500	18.000	9.000	0.500	1.500	0.500
27"	F679 T-1	27.953	0.801	12.030	4.000	20.25	9.000	0.500	1.500	0.500

*MANDRELL SHALL HAVE AN OUTSIDE DIAMETER (O.D.) EQUAL TO 95% OF THE INSIDE DIAMETER (I.D.) OF THE PIPE.

NOTES:

1. MANDREL SHALL BE CONSTRUCTED OF METAL OR A RIGID PLASTIC MATERIAL THAT CAN WITHSTAND 200PSI WITHOUT BEING DEFORMED.
2. AFTER WELDING IS COMPLETED, TRUE THE OUTSIDE DIAMETER DIMENSION. FOR THE FULL LENGTH OF "B" TO 0.010".
3. A PROVING RING SHALL BE PROVIDED AND USED FOR EACH SIZE MANDREL IN USE.
4. MANDREL OD MUST BE EQUAL TO 95% OF THE ID OF THE PIPE
5. MANDREL BARREL LENGTH 'B' MUST BE EQUAL TO 75% OF THE ID OF THE PIPE
6. ADJUSTABLE MANDREL IS NOT ACCEPTABLE.

WASTEWATER MANDREL
NTS

WAELTZ & PRETE, INC.
CIVIL ENGINEERS
3000 JOE DIMAGGIO BLVD. #72
ROUND ROCK, TX. 78665
PH (512) 505-8953
FIRM TX. REG. #F-10308



PROJECT:
WILLIAMSON COUNTY REGIONAL PARK RESTROOM FACILITIES
3005 CO. RD. 175

CLIENT:
WILLIAMSON COUNTY

DESIGNED: AAP
DRAWN: DAS
APPROVED: AAP
DATE: 12/28/2017

No.	DATE	REVISIONS	RECOM'D

SHEET TITLE:
UTILITY DETAILS
(2 OF 2)

WP PROJECT NO.:
082-002

SHEET NO.:
C-14

GENERAL

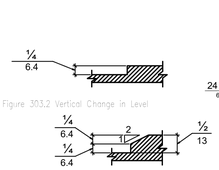


Figure 303.2 Vertical Change in Level

Figure 303.3 Beveled Change in Level

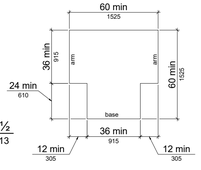


Figure 304.3.2 T-Shaped Turning Space

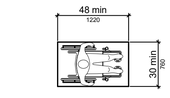


Figure 305.3 Clear Floor or Ground Space

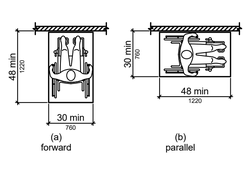


Figure 305.5 Position of Clear Floor or Ground Space

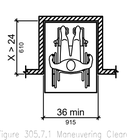


Figure 305.7.1 Maneuvering Clearance in an Alcove, Forward Approach

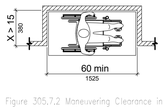


Figure 305.7.2 Maneuvering Clearance in an Alcove, Parallel Approach

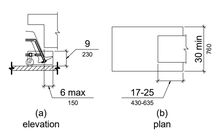


Figure 306.2 Toe Clearance

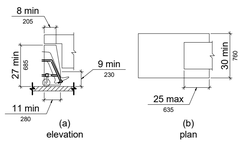


Figure 306.3 Knee Clearance

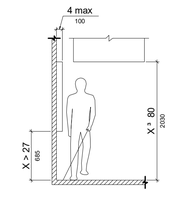


Figure 307.2 Limits of Protruding Objects

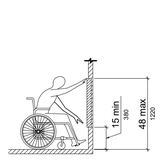


Figure 308.2.2 Obstructed High Forward Reach

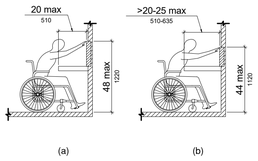


Figure 308.3.1 Unobstructed Side Reach

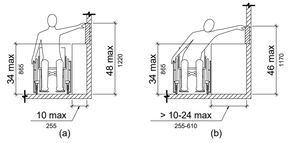


Figure 308.3.2 Obstructed High Side Reach

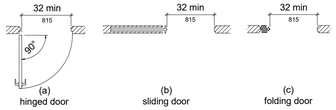


Figure 404.2.3 Clear Width of Doorways

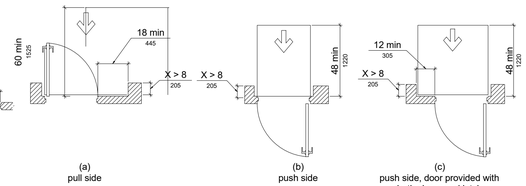


Figure 404.2.4.3 Maneuvering Clearances at Recessed Doors and Gates

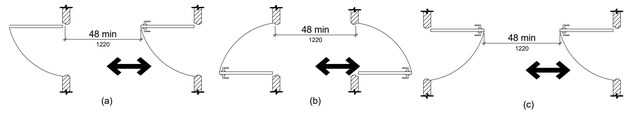


Figure 404.2.6 Doors in Series and Gates in Series

RAMPS AND STAIRS

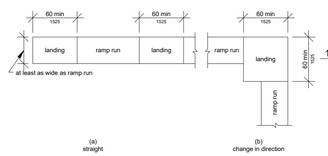


Figure 405.7 Ramp Landings

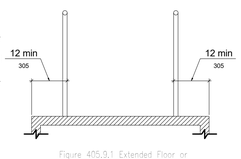


Figure 405.9.1 Extended Floor or Ground Surface Edge Protection

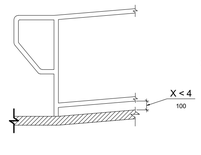


Figure 405.9.2 Curb or Barrier Edge Protection

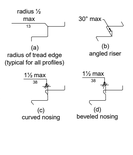


Figure 504.5 Stair Nosings

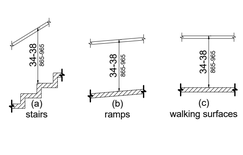


Figure 505.4 Handrail Height



Figure 505.5 Handrail Clearance



Figure 505.6 Horizontal Projections Below Gripping Surface

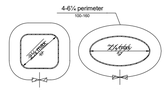


Figure 505.7.2 Handrail Non-Circular Cross Section

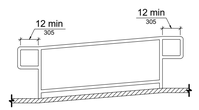


Figure 505.10.1 Top and Bottom Handrail Extension at Ramps

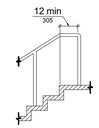


Figure 505.10.2 Top Handrail Extension at Stairs

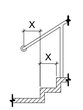


Figure 505.10.3 Bottom Handrail Extension at Stairs

TOILET AND BATHING ROOMS

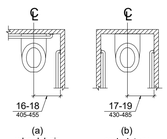


Figure 604.2 Water Closet Location

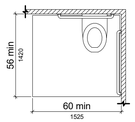


Figure 604.3.1 Size of Clearance at Water Closets

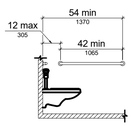


Figure 604.5.1 Side Wall Grab Bar at Water Closets

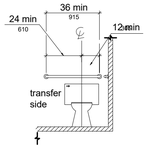


Figure 604.5.2 Rear Wall Grab Bar at Water Closets

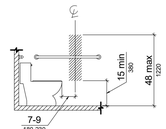


Figure 604.7 Dispenser Outlet Location

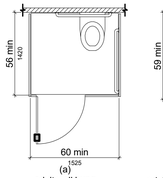


Figure 604.8.1.1 Size of Wheelchair Accessible Toilet Compartment

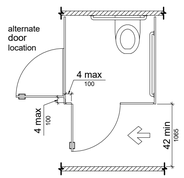


Figure 604.8.1.2 Wheelchair Accessible Toilet Compartment Doors

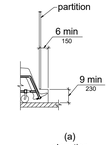
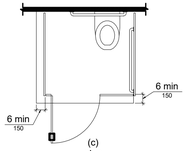


Figure 604.8.1.4 Wheelchair Accessible Toilet Compartment Toe Clearance



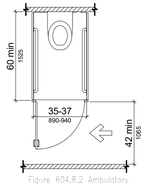


Figure 604.8.2 Ambulatory Accessible Toilet Compartment

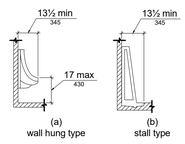
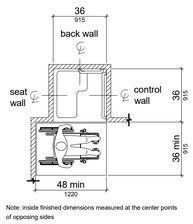
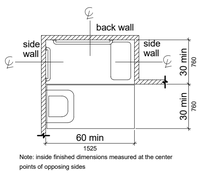


Figure 605.2 Height and Depth of Urinals



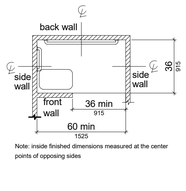
Note: inside finished dimensions measured at the center points of opposing sides

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

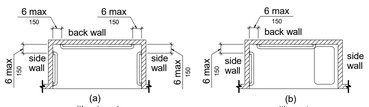


Figure 608.3.2 Grab Bars for Standard Roll-In Type Showers

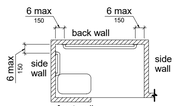


Figure 608.3.3 Grab Bars for Alternate Roll-In Type Showers

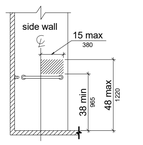
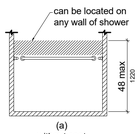


Figure 608.5.1 Transfer Type Shower Compartment Control Location



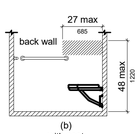
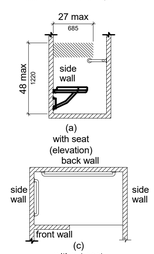


Figure 608.5.2 Standard Roll-In Type Shower Compartment Control Location



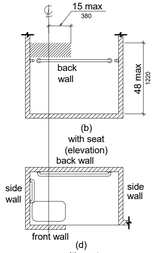


Figure 608.5.3 Alternate Roll-In Type Shower Compartment Control Location

SIGNAGE

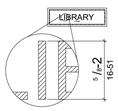


Figure 703.2.5 Height of Raised Characters

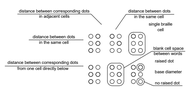


Figure 703.3.1 Braille Measurement

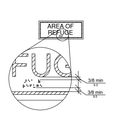


Figure 703.3.2 Position of Braille

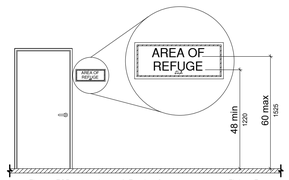


Figure 703.4.1 Height of Tactile Characters Above Finish Floor or Ground

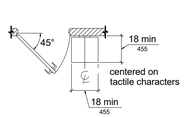


Figure 703.4.2 Location of Tactile Signs at Doors

MISC.

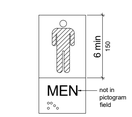


Figure 703.6.1 Pictogram Field

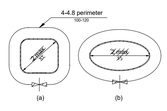


Figure 609.2.2 Grab Bar Non-Circular Cross Section

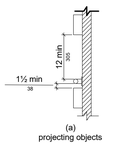


Figure 609.3 Spacing of Grab Bars

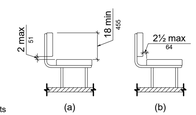


Figure 903.4 Bench Rack Support

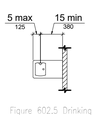


Figure 602.5 Drinking Fountain Spout Location

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11/6/2017

SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION

3005 CO RD 175, LEANDER, TX 78641

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CONSTRUCTION DOCUMENTS

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PROJECT NUMBER
15107-00
DATE ISSUED
11/6/2017
SHEET TITLE

ACCESSIBILITY DIAGRAMS

SHEET NUMBER

A-0.1

2/15/2018 7:19 AM
Williamson County, Texas
BID 1802-215

GENERAL NOTES

1. CONTRACTOR TO VISIT SITE AND VERIFY CONDITIONS PRIOR TO STARTING WORK.

2. CONTRACTOR TO FURNISH ALL PERMITS AND OBTAIN ALL APPROVALS REQUIRED BY GOVERNING AGENCIES.

3. ALL WORK TO COMPLY WITH APPLICABLE RULES OF THE AUTHORITY HAVING LAWFUL JURISDICTION.

4. ALL EQUIPMENT, FIXTURES, AND MATERIALS ARE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

5. TRADES ARE TO VERIFY CONDITION OF WORK BY OTHERS AS ACCEPTABLE FOR THEIR INSTALLATION PRIOR TO STARTING WORK. STARTING OF WORK INDICATES ACCEPTANCE.

6. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES IN THE DRAWINGS.

7. CONTRACTOR TO PROTECT AREAS AND SURFACES ADJACENT TO CONSTRUCTION AREA FROM DAMAGE AND DEBRIS.

8. GENERAL CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A CLEAN AND SAFE JOB SITE THROUGHOUT THE CONSTRUCTION PERIOD.

9. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF WORK OF ALL SUB-CONTRACTORS PRIOR TO INSTALLATION OF CONSTRUCTION.

10. PREPARE ALL SURFACES FOR INSTALLATION OF NEW FINISHES AND MATERIALS AS INDICATED ON PLANS.

11. AT THE COMPLETION OF CONSTRUCTION, GENERAL CONTRACTOR WILL THOROUGHLY CLEAN THE ENTIRE BUILDING, INCLUDING, BUT NOT LIMITED TO, ALL PARTITIONS, FLOORS, GLASS SURFACES, RETURN AND SUPPLY GRILLES, LIGHT FIXTURE LENSES AND PLASTIC LAMINATE MILLWORK.

12. PRIOR TO PURCHASE, CONTRACTOR SHALL SUBMIT FOR APPROVAL SAMPLES, MANUFACTURER'S CATALOG DATA, AND/OR SHOP DRAWINGS OF PRODUCTS AND MATERIALS OTHER THAN THOSE SPECIFIED.

13. ALL DOORS ARE LOCATED 6" OFF ADJACENT PARTITION, UNLESS NOTED OTHERWISE.

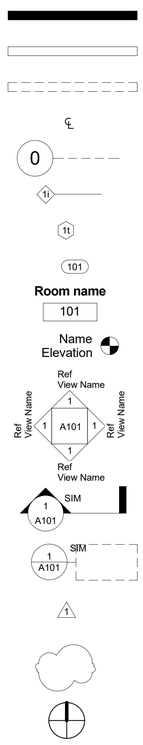
14. ALL DIMENSIONS ARE TO FINISH FACE OF PARTITION, UNLESS NOTED OTHERWISE.

15. INSTALL LIGHT SWITCHES 48" ABOVE FINISH FLOOR AND A MAXIMUM OF 6" FROM THE LATCH JAMB OR A MAXIMUM OF 6" BEYOND THE LATCH STILE OF THE DOOR IN ITS OPEN POSITION AGAINST THE DOOR STOP.

16. GENERAL CONTRACTOR TO USE MULTI-GANG BOXES IN ALL POSSIBLE LOCATIONS.

17. ALL INTERIOR DOOR OPENINGS ARE TO BE FRAMED WITH DOUBLE STUDS AT THE JAMB, UNLESS NOTED OTHERWISE.

FLOOR PLAN



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

1 View Name
1/8" = 1'-0"

VIEW TITLE

ARCHITECTURE

A/C	AIR CONDITIONING
ACC	ACCESS
ACP	ACOUSTICAL CEILING PANEL
ADDL	ADDITIONAL
ADDM	ADDENDUM
ADH	ADHESIVE
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AGG	AGGRETATE
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATELY
ARCH	ARCHITECT/ARCHITECTURAL
ASPH	ASPHALT
AUTO	AUTOMATIC
AV	AUDIO VISUAL
BD	BOARD
BL	BUILDING LINE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BEAM
B.M.	BENCH MARK
BRK	BRICK
BRZ	BRONZE
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BVL	BEVEL/BEVELED
CAB	CABINET
CB	CATCH BASIN
C/C	CENTER TO CENTER
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CI	CAST IRON
CG	CORNER GUARD
CLG	CEILING
CLK	CAULK/CAULKING
CLO	CLOSET
CLR	CLEAR/CLEARANCE
CMU	CONCRETE MASONRY UNIT
CND	CONDUIT
COL	COLUMN
COMP	COMPOSITION/COMPOSITE
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECTION
CONST	CONSTRUCTION
CSMT	CASEMENT
DEPT	DEPARTMENT
DH	DOUBLE HUNG
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
DW	DISHWASHER
DWG	DRAWING
E	EAST
EA	EACH
EB	EXPANSION BOLT
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC/ELECTRICAL
ELEV	ELEVATION/ELEVATOR
EMER	EMERGENCY
ENC	ENCLOSURE
ENT	ENTRANCE
EQ	EQUAL
EQPT	EQUIPMENT
ESTM	ESTIMATE
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXC	EXCAVATE
EXF	EXHAUST FAN
EXH	EXHAUST
EXT	EXTERIOR
FA	FIRE ALARM
FBD	FIBER BOARD
FBO	FURNISHED BY OWNER
FBRK	FIRE BRICK
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FFE	FINISHED FLOOR ELEVATION
FFL	FINISHED FLOOR LINE
FIN	FINISHED
FIXT	FIXTURE
FLOUR	FLOURESCENT
FLR	FLOOR
FNDN	FOUNDATION
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FP	FIREPROOF
FPL	FIREPLACE
FRC	FIRE RESISTANT COATING
FRT	FIRE RETARDANT
FT	FOOT/FEET
FTG	FOOTING
FURR	FURRED/FURRING
FURN	FURNISHED
GA	GUAGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GD	GRADE
GEN	GENERAL
GL	GLASS/GLAZING
GLB	GLASS BLOCK
GTR	GUTTER
GVL	GRAVEL
GYP	GYPSUM
GYP BD	GYPSUM BOARD
HB	HOSE BIB
HC	HOLLOW CORE
HDP	HANDICAP
HDR	HEADER
HDWD	HARDWOOD
HDWR	HARDWARE
HM	HOLLOW METAL
HORZ	HORIZONTAL
HT	HEIGHT
HTG	HEATING
HVAC	HEATING VENTILATION AIR CONDITIONING
HW	HOT WATER
IBC	INTERNATIONAL BUILDING CODE
IN	INCH
INCL	INCLUDED
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JBOX	JUNCTION BOX
JCT	JUNCTION
JST	JOIST
JT	JOINT
KIT	KITCHEN
KPL	KICKPLATE
KO	KNOCK OUT
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LH	LEFT HAND
LL	LIVE LOAD
LT	LIGHT
LWT	LIGHTWEIGHT
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MAN HOLE
MICRO	MICROWAVE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MLD	MOULDING
MLWK	MILLWORK
MO	MASONRY OPENING
MOD	MODULAR
MTD	MOUNTED
MTL	METAL
MULT	MULTIPLE
N	NORTH
NAT	NATURAL
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OBS	OBSCURE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OP	OPAQUE
OPNG	OPENING
OPP	OPPOSITE
OPP HD	OPPOSITE HAND
ORIG	ORIGINAL
OWJ	OPEN WEB JOIST
OZ	OUNCE
PAR	PARALLEL
PART	PARTITION
PART BD	PARTICLE BOARD
PC	PRECAST
PCF	POUNDS PER CUBIC FOOT
PED	PEDESTAL
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
PFL	POUNDS PER LINEAL FOOT
PKG	PARKING
PL	PLATE
PL	PROPERTY LINE
PLAS	PLASTER
PLAM	PLASTIC LAMINATE
PLMB	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PRF	PREFORMED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT
PVC	POLYVINYL CHLORIDE
R	RADIUS
RA	RETURN AIR
RD	ROOF DRAIN
RE BAR	REINFORCING BARS
RECP	RECEPTACLE
REF	REFERENCE
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCED
REQ'D	REQUIRED
RET	RETURN
RH	RIGHT HAND
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RT	RUBBER TILE
S	SOUTH
SBC	STANDARD BUILDING CODE
SC	SOLID CORE
SCHED	SCHEDULE
SCN	SCREEN
SEAL	SEALANT
SHTH	SHEATHING
SHT	SHEET
SH	SHINGLE HUNG
SIM	SIMILAR
SLV	SLEEVE
SPEC	SPECIFICATIONS
SQ	SQUARE
SQ FT	SQUARE FEET
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM
TAN	TANGENT
TAS	TEXAS ACCESSIBILITY STANDARDS
TECH	TECHNICAL
TELE	TELEPHONE
T&G	TONGUE AND GROOVE
THK	THICK
THRES	THRESHOLD
TLT	TOILET
TOB	TOP OF BLOCK
TOC	TOP OF CURB
TOM	TOP OF MASONRY
TOP	TOP OF PARAPET
TOPL	TOP OF PLATE
TOS	TOP OF STEEL
TOSL	TOP OF SLAB
TOW	TOP OF WALL
TRANS	TRANSFORMER
TS	TUBE STEEL
TV	TELEVISION
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VB	VAPOR BARRIER
VAR	VARIES
VERT	VERTICAL
VENT	VENTILATION
VOL	VOLUME
WTW	WALL TO WALL
WC	WATER CLOSET
WH	WATER HEATER
WP	WATER PROOFING
W	WEST
W/	WITH
W/O	WITHOUT
WD	WOOD
WDW	WINDOW
WT	WEIGHT
WI	WROUGHT IRON
YD	YARD

INTERIOR FINISHES ABBREVIATIONS

ACP	ACOUSTICAL CEILING PANEL
CONC	CONCRETE
CPT	CARPET/CARPET TILE
CT	CERAMIC TILE
F	FURNITURE
FAB	FABRIC (FURNITURE)
FWC	FABRIC WALLCOVERING
GL	GLASS/GLAZING
GLB	GLASS BLOCK
MTL	METAL
PL	PLASTIC LAMINATE
PT	PAINT
QT	QUARRY TILE
RAF	RAISED FLOORING
RB	RESILIENT BASE
RES	RESINOUS FLOORING
RF	RESILIENT FLOORING
SP	SPECIALTY PRODUCTS
SS	SOLID SURFACE
ST	STONE/STONE FLOORING
STC	STAINED CONCRETE
TZ	TERRAZZO
VCT	VINYL COMPOSITION TILE
VT	VINYL TILE
VWC	VINYL WALL COVERING
WD	WOOD VENEER/WOOD BASE/ WOOD TRIM
WDFL	WOOD FLOORING
WT	WINDOW TREATMENT

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11/6/2017

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WILLIAMSON COUNTY PARKS AND RECREATION
3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE
CONSTRUCTION DOCUMENTS
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PROJECT NUMBER
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DATE ISSUED
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SHEET TITLE

ABBREVIATIONS AND NOTES

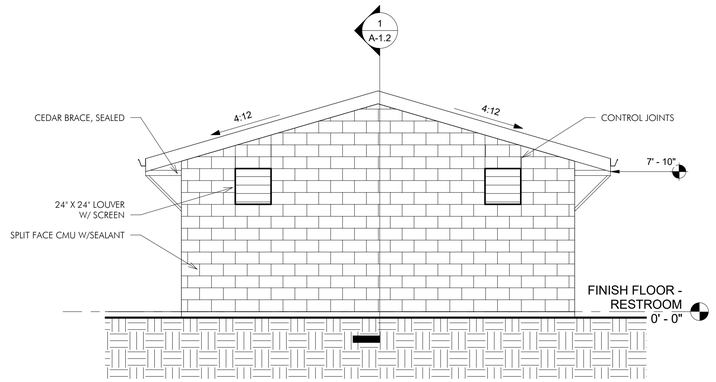
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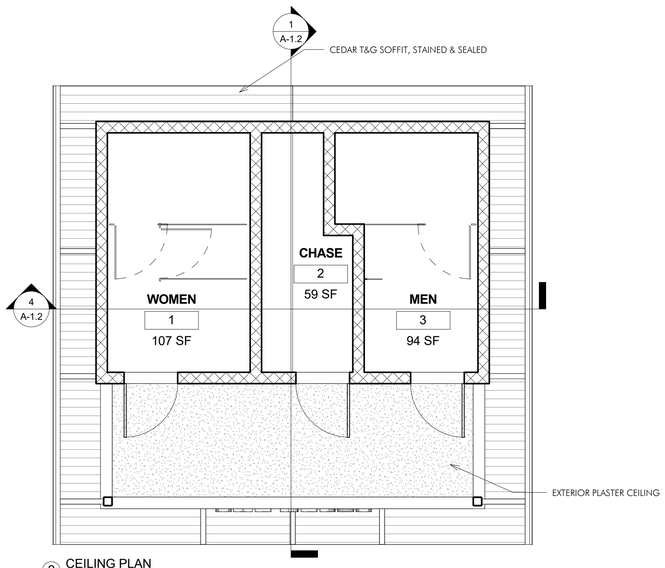
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Bid 1802-215
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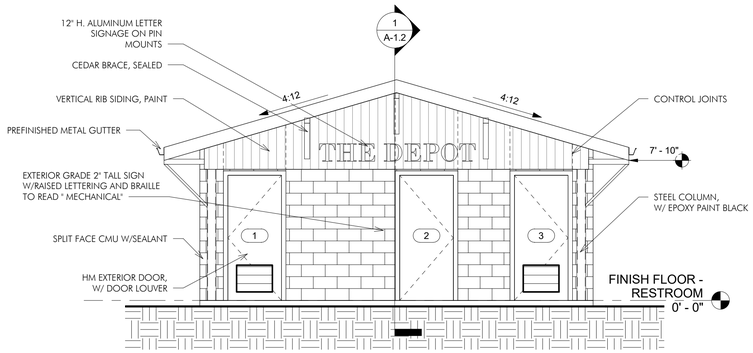
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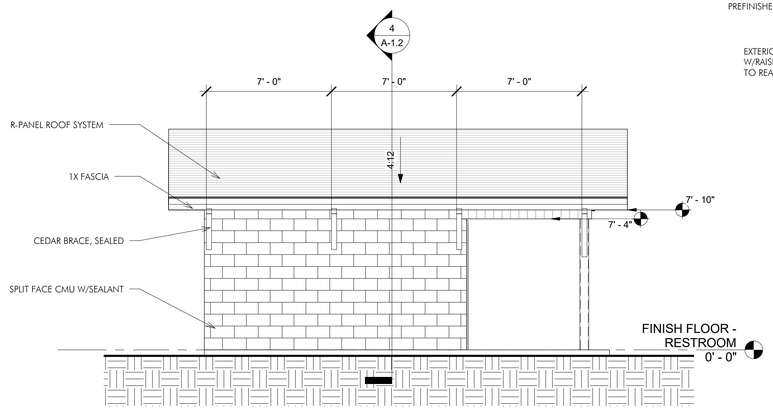
5 EXTERIOR ELEVATION
1/4" = 1'-0"



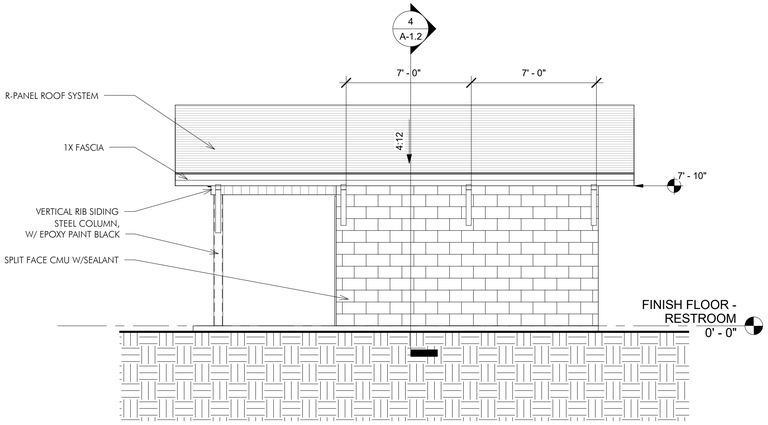
2 CEILING PLAN
1/4" = 1'-0"



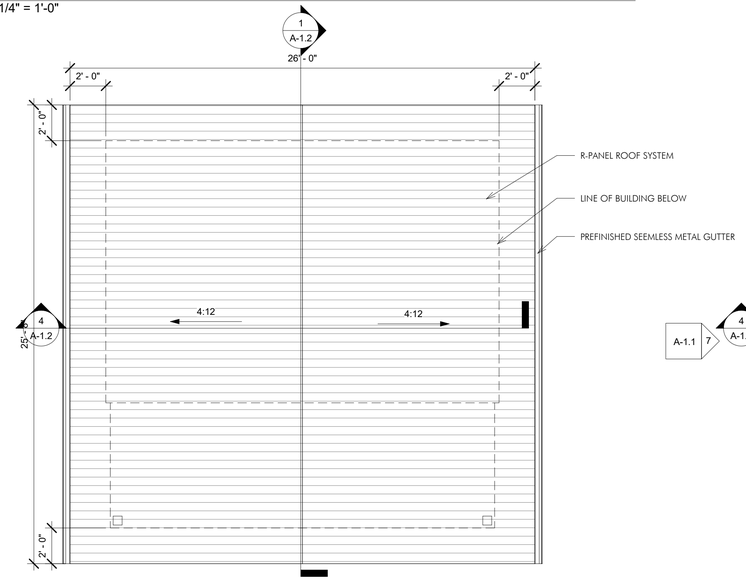
4 EXTERIOR ELEVATION
1/4" = 1'-0"



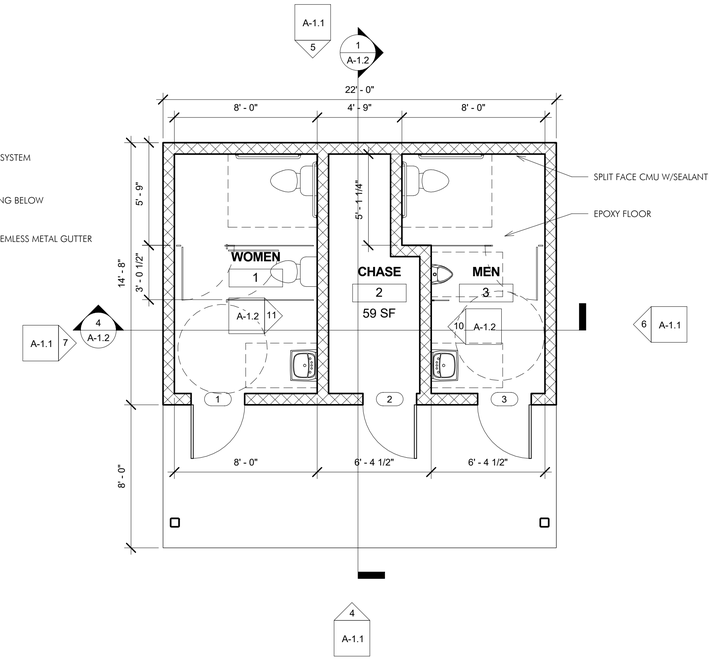
7 EXTERIOR ELEVATION
1/4" = 1'-0"



6 EXTERIOR ELEVATION
1/4" = 1'-0"



3 ROOF PLAN - RESTROOM
1/4" = 1'-0"



1 FINISH FLOOR - RESTROOM
1/4" = 1'-0"

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RESTROOM
BUILDING

SHEET NUMBER

A-1.1

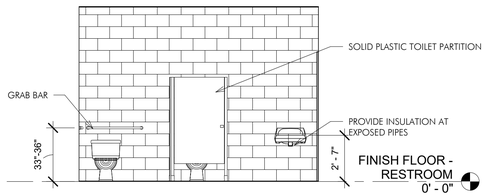
Williamson County, Texas

Bid 1602-215

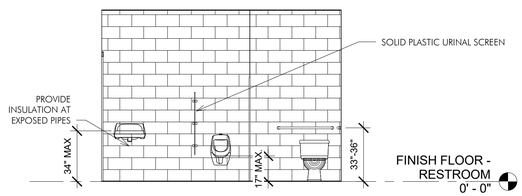
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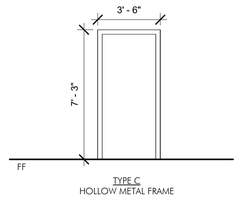
DOOR SCHEDULE										
DOOR NO.	FROM	TO	ROOM NAME	DOOR TYPE	FRAME TYPE	WIDTH	HEIGHT	THICKNESS	FIRE RATING	COMMENTS
1	1			C	1	3' - 0"	7' - 0"	1 1/2"		
2	2			C	1	3' - 0"	7' - 0"	1 1/2"		
3	3			C	1	3' - 0"	7' - 0"	1 1/2"		
5						10' - 0"	10' - 0"	3"		

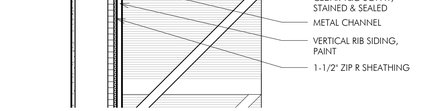


11 INTERIOR ELEVATION
1/4" = 1'-0"

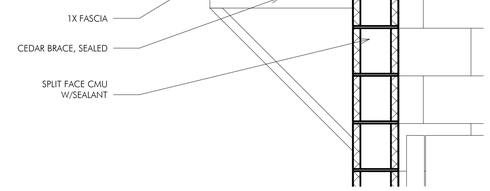


10 INTERIOR ELEVATION
1/4" = 1'-0"

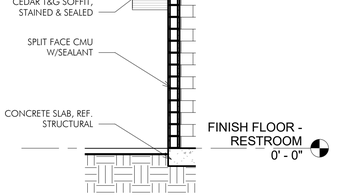




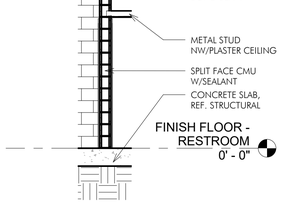
9 ROOF DETAIL
1" = 1'-0"



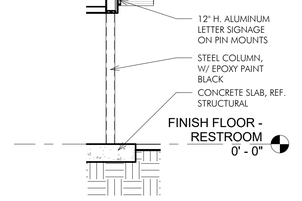
7 ROOF DETAIL
1" = 1'-0"



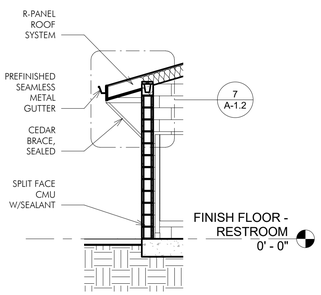
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1/4" = 1'-0"



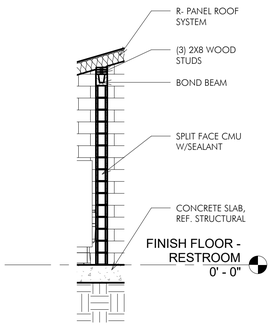
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1/4" = 1'-0"



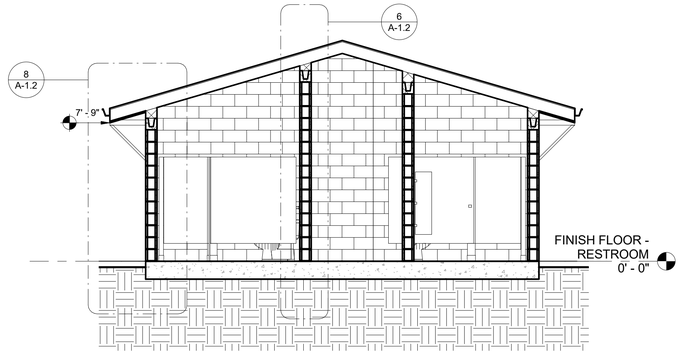
2 WALL DETAIL
1/4" = 1'-0"



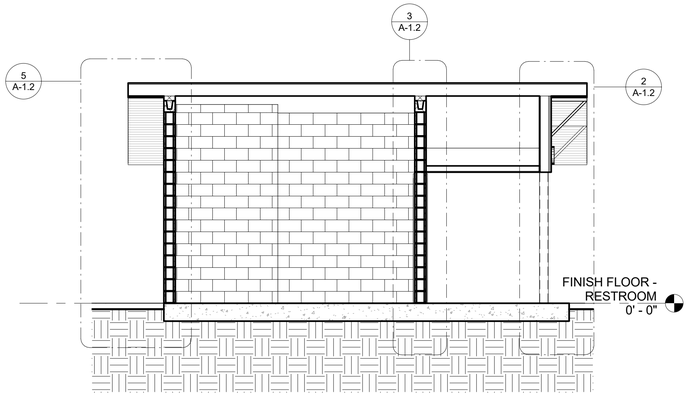
8 WALL DETAIL
1/4" = 1'-0"



6 WALL DETAIL
1/4" = 1'-0"



4 BUILDING SECTION
1/4" = 1'-0"



1 BUILDING SECTION
1/4" = 1'-0"

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11/6/2017

SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION
3005 CO RD 175, LEANDER, TX 78641

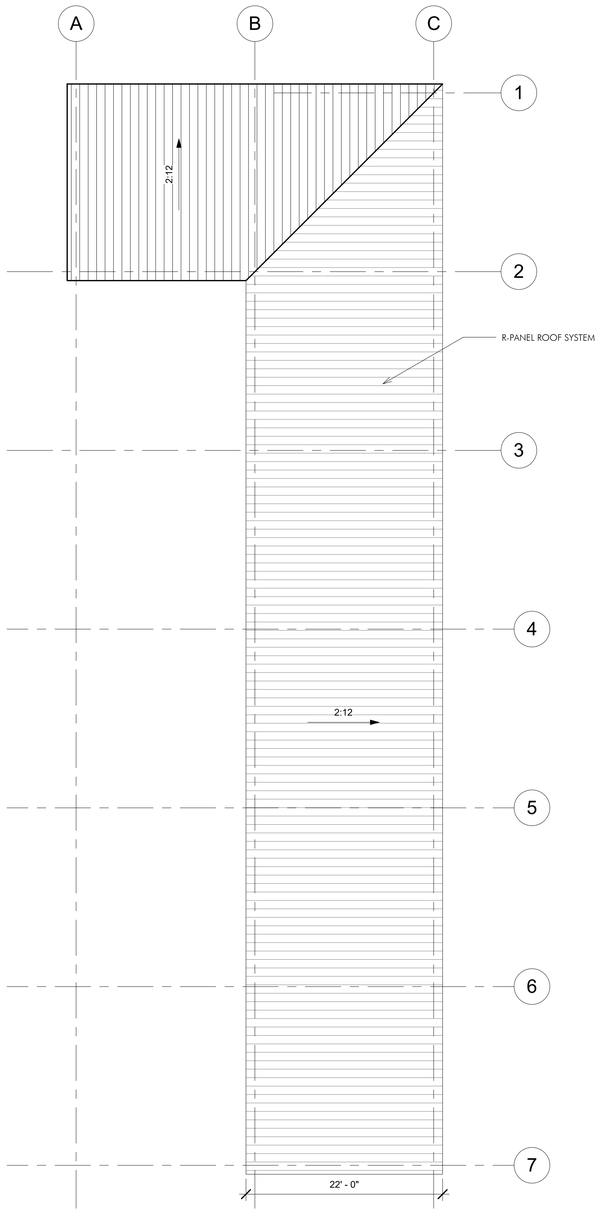
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CONSTRUCTION DOCUMENTS
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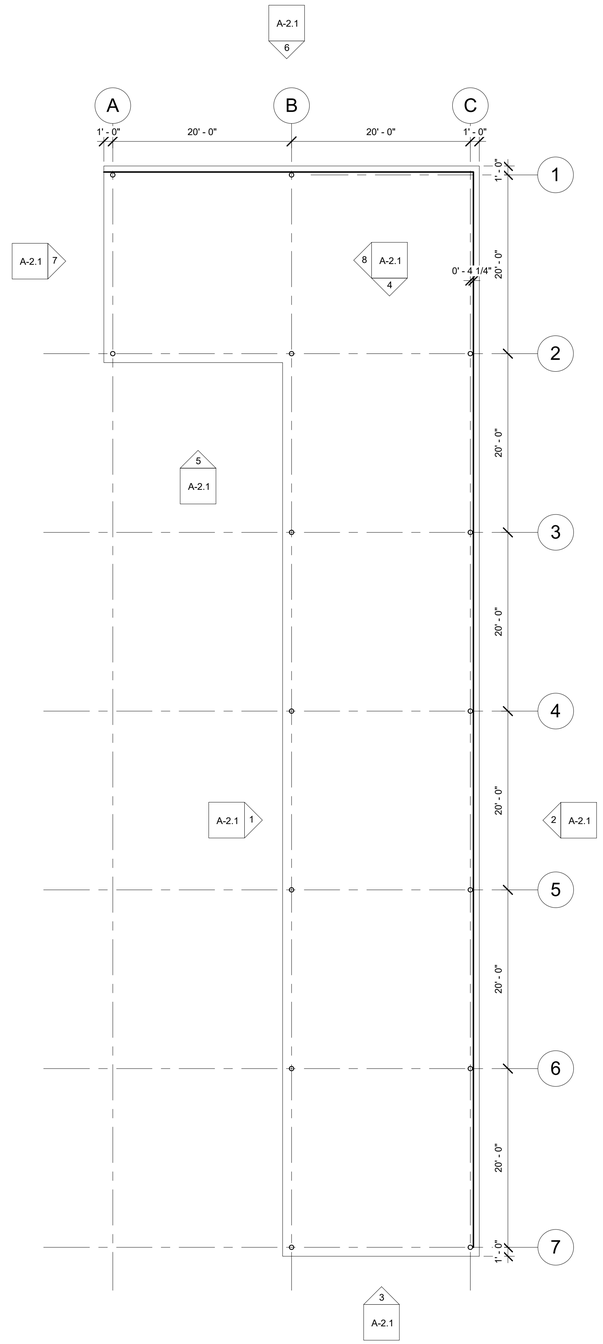
RESTROOM BUILDING SECTIONS AND DETAILS

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2/15/2018 7:19 AM
Williamson County, Texas
p 2/19
Bid 1802-215



2 ROOF PLAN - COVERED STORAGE
1/8" = 1'-0"



1 FINISH FLOOR - COVERED STORAGE
1/8" = 1'-0"

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COVERED STORAGE PLANS

SHEET NUMBER

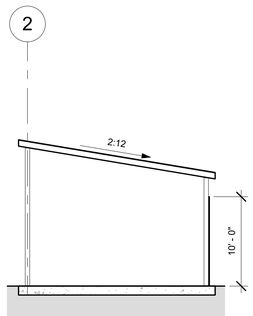
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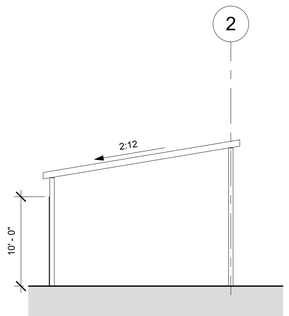
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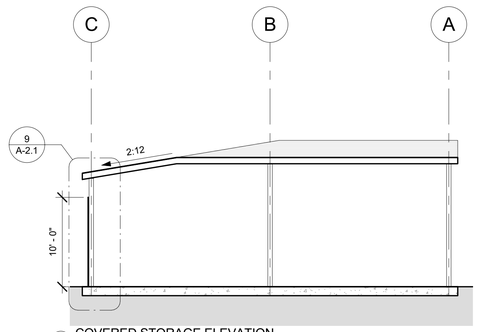
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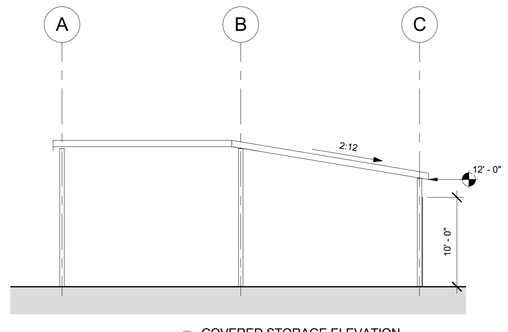
8 COVERED STORAGE ELEVATION
1/8" = 1'-0"



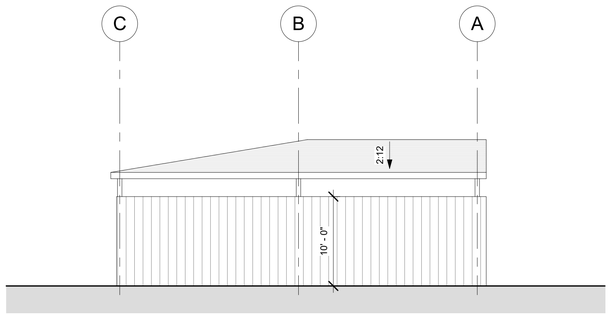
7 COVERED STORAGE ELEVATION
1/8" = 1'-0"



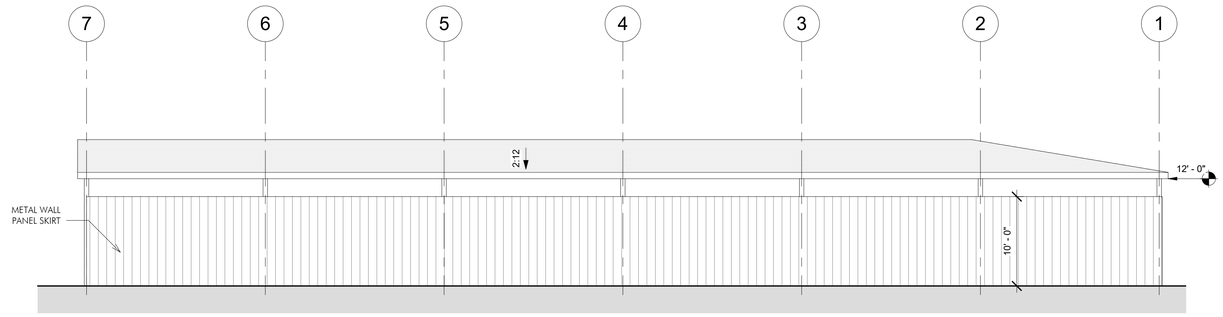
4 COVERED STORAGE ELEVATION
1/8" = 1'-0"



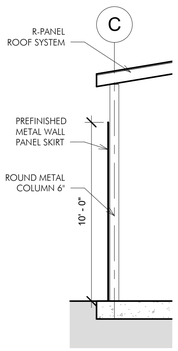
3 COVERED STORAGE ELEVATION
1/8" = 1'-0"



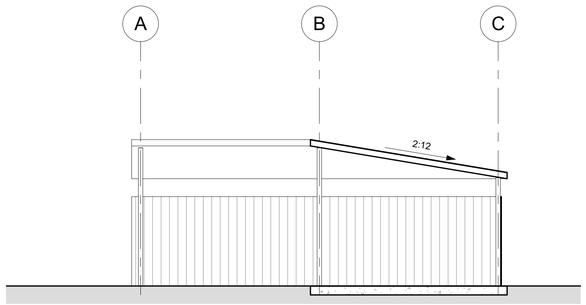
6 COVERED STORAGE ELEVATION
1/8" = 1'-0"



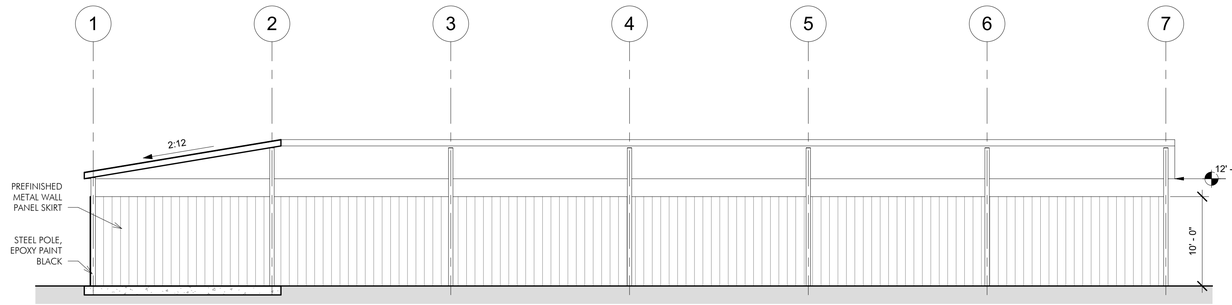
2 COVERED STORAGE ELEVATION
1/8" = 1'-0"



9 WALL SECTION
1/4" = 1'-0"



5 COVERED STORAGE ELEVATION
1/8" = 1'-0"



1 COVERED STORAGE ELEVATION
1/8" = 1'-0"

SOUTHWEST WILCO PARK

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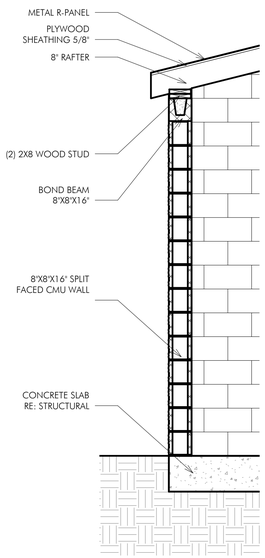
COVERED STORAGE ELEVATIONS

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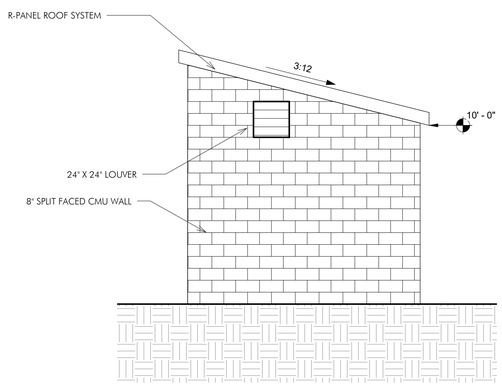
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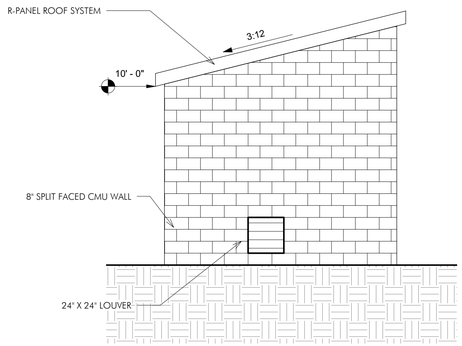
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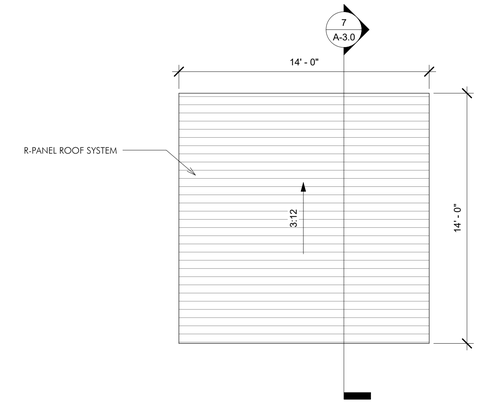
8 WALL SECTION
1/2" = 1'-0"



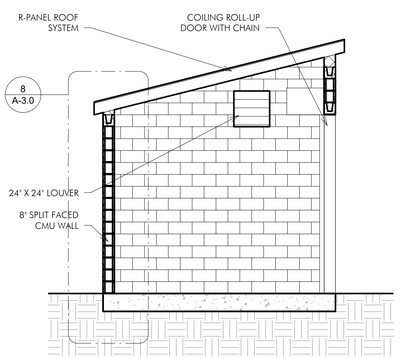
6 STORAGE BUILDING ELEVATION 04
1/4" = 1'-0"



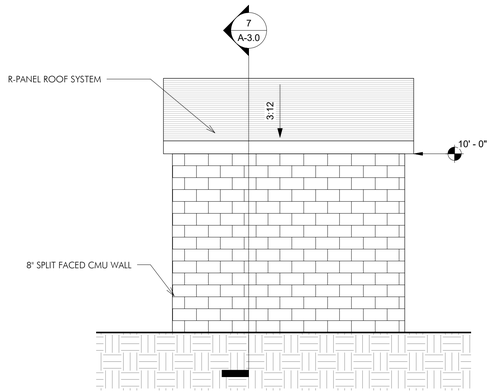
4 STORAGE BUILDING ELEVATION 02
1/4" = 1'-0"



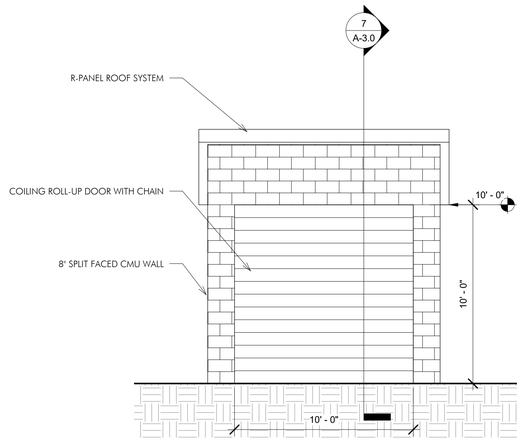
2 ROOF PLAN - STORAGE
1/4" = 1'-0"



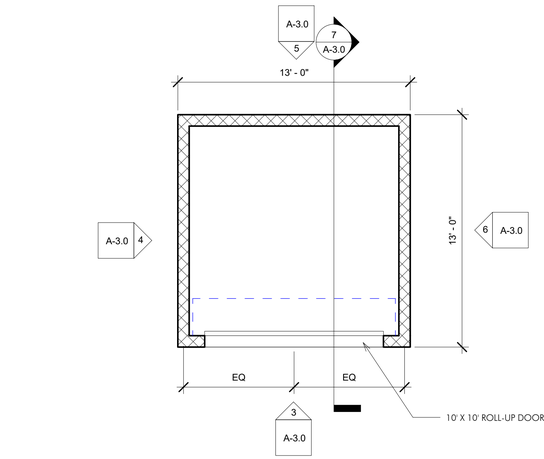
7 STORAGE BUILDING SECTION
1/4" = 1'-0"



5 STORAGE BUILDING ELEVATION 03
1/4" = 1'-0"



3 STORAGE BUILDING ELEVATION 01
1/4" = 1'-0"



1 FINISH FLOOR - STORAGE
1/4" = 1'-0"

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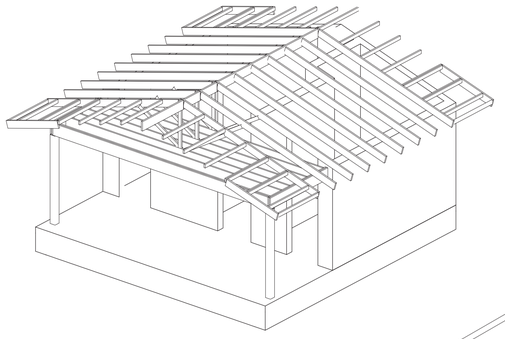
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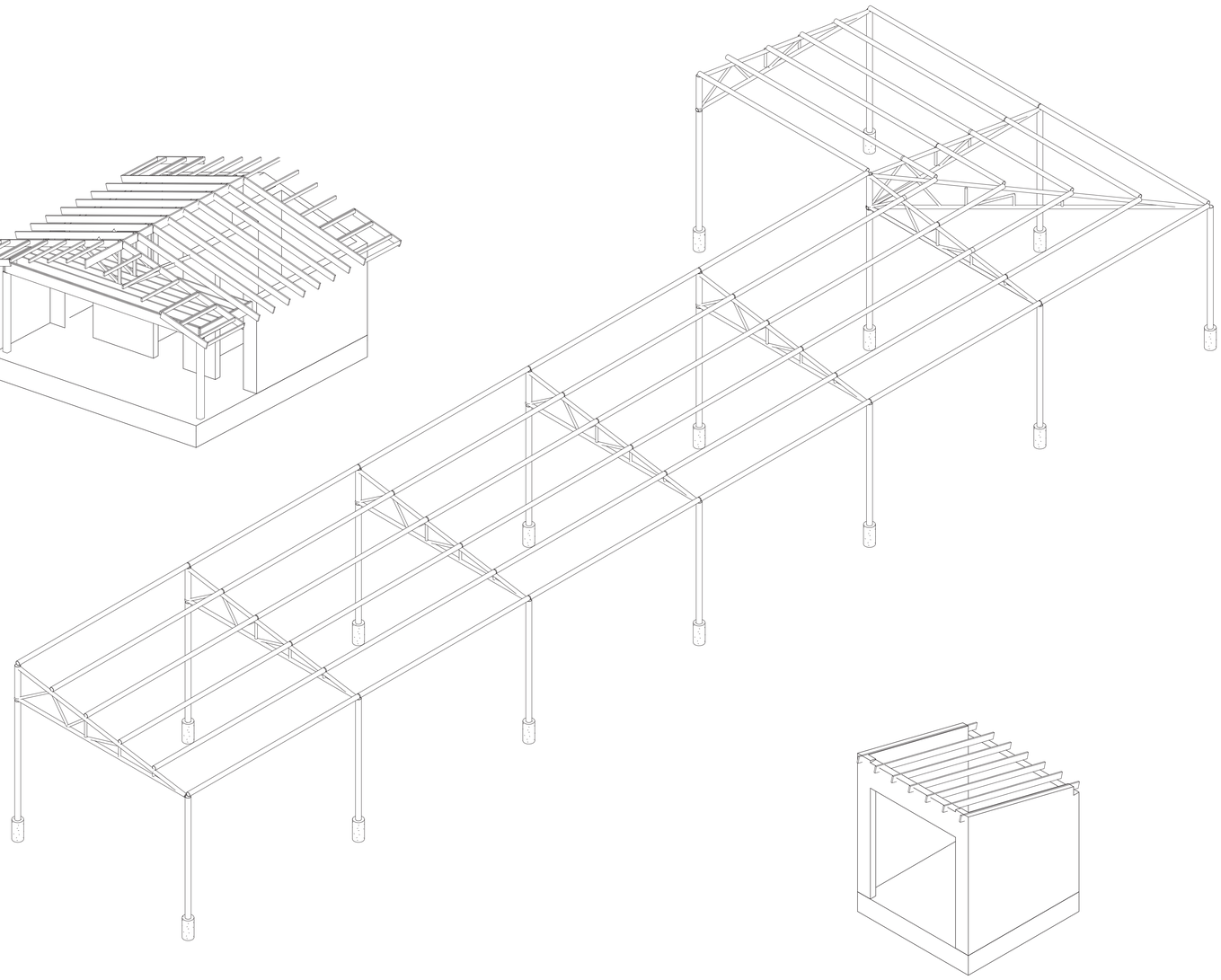
Williamson County, Texas

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STRUCTURAL SHEET INDEX





DRAWING SYMBOLS

- LOAD BEARING MASONRY WALL
- WOOD BLOCKING
- WELDED WIRE FABRIC
- SPAN DIRECTION OF HOLLOW CORE SLABS
- 12 / A — COLUMN GRIDLINE & GRID DESIGNATIONS — GRID DESIGNATION
- TYP. 1 / S101 — DETAIL TARGETS — DETAIL NUMBER / SHEET NUMBER
- EARTH/COMPACT FILL
- BEAM SPLICE LOCATION
- M — BEAM MOMENT CONNECTION
- 24 / S — PIER DIAMETER/EMBEDMENT INTO LIMESTONE STRATA
- P1 — TILTWALL PANEL NUMBER
- TYP. 1 / S101 — SECTION CUTS — SECTION NUMBER / SHEET NUMBER
- 1 / 1 S101 1 / 1 — 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, REVISE(D)
	REINF.	REINFORCE(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 PROJECT VIEW
S001 STRUCTURAL NOTES
S100 FOUNDATION PLAN
S101 FOUNDATION PLAN
S200 CEILING/ROOF FRAMING PLAN
S201 ROOF FRAMING PLAN
S300 FOUNDATION DETAILS
S400 FRAMING DETAILS
S401 FRAMING DETAILS

STATE OF TEXAS
LAURENCE J. FISHER
50110
REGISTERED
PROFESSIONAL ENGINEER
11/13/17

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SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION
3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
15107-00
DATE ISSUED
11-13-17
SHEET TITLE

PROJECT VIEW

SHEET NUMBER

S000

Williamson County, Texas
Bid 1802-215
p. 223

STRUCTURAL NOTES

I. DESIGN DATA

A. BUILDING CODE
INTERNATIONAL BUILDING CODE 2015 EDITION WITH CITY OF LEANDER, TX. AMMENDMENTS.

B. DESIGN LOADS

1.	Wind Load	Exposure	C
		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 3" 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. Foundations, retaining & basement walls, foundation drainage, slabs on grade & other items related to the soils are designed & shall be constructed in accordance with the recommendations of RABA KISTNER-BRYTEST CONSULTANTS, INC. REPORT NO. AAA00-00044-00 DATED DEC. 12, 2000.
2. Design net soil bearing capacity is as follows:
   Grade beams- 3,200 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 a minimum depth of 2'-6".
   All clay pockets within the building area shall be excavated to a maximum depth of 2'-6".
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 30 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. DRILLED PIERS

1. Drilled piers shall be excavated, cleaned, reinforced and concrete placed on the same day.
2. Temporary steel casing may be required during the installation of drilled piers (see Geotechnical Report).
3. Foundation conditions noted during construction which differ from those described in the Geotechnical Report shall be reported to the Architect, Structural Engineer and Geotechnical Engineer before further construction is attempted.
4. General Contractor shall notify the Architect and Structural Engineer 24 hours prior to placement of concrete in the piers.
5. Grade beams shall be formed and cast to insure 8" deep void below beam prior to installations of soil retainers.

IV. 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.

V. 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

VI. 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.

VII. 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 C94.
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.

VIII. CONCRETE MATERIAL PROPERTIES

		F'c PSI 28 DAYS	SLUMP INCHES
1.	CONCRETE PROPERTIES:		
	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 on 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.

IX. 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.

X. 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.

XI. 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.		

XII. 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.

XIII. ROOF TRUSSES

LOADING:
Top Chord Dead Load = 10 psf
Top Chord Live Load = 20 psf
Bot Chord Live Load = 0 psf
Uplift = 0 psf
Duration Factor of 125%

Trusses shall be Designed and Manufactured to be Equal to that Manufactured by Alpine Engineered Products, Inc. All trusses shall be engineered for the loading indicated and the manufacturer shall submit sealed engineering drawings for each truss type and length.

XIV. 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.

XV. DETAIL NOTES

Details noted as typical shall apply in all cases unless specifically shown or noted otherwise.

XVI. 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. Wood trusses
9. Structural steel
10. Concrete test results

XVII. 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. During pier drilling and placement of reinforcing and concrete piers
B. After forms, rebar, embeds and other accessories are in place and 48 hours prior to placement of concrete
C. All anchor bolts and embeds are to be set and adequately tied & held in position prior to the start of placing concrete
D. 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
E. After steel is erected but prior to covering with other materials
F. Framing
G. 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 2015 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: 3005 CO RD 175, LEANDER, TX 78641
LEANDER, TX.

SECTION 1705: REQUIRED VERIFICATION AND INSPECTION

Section 1705 of the International Building Code 2015, the following is a list of the required special inspections applicable for this project:

2015 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 conditions in the jurisdiction as approved by the building official. Unless otherwise required by the building official, special inspections are not required for
2. 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 2015, the following is a list of the required special inspections applicable for this project:

2015 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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SOUTHWEST WILCO PARK
WILLIAMSON COUNTY PARKS AND RECREATION
3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

STATE OF TEXAS
LAURENCE J. FISHER
50110
REGISTERED PROFESSIONAL ENGINEER
11/13/17
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LARRY J. FISHER, P.E. 50110.

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TBPE Registration No. F-12702
JOB NO. 17000

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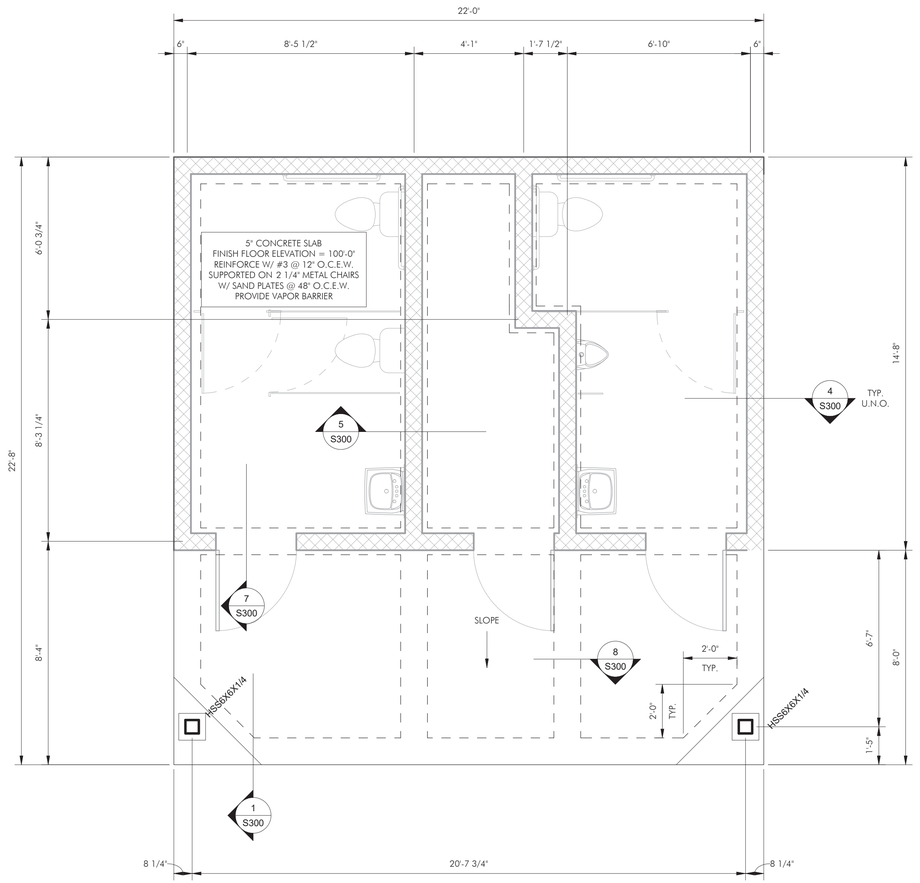
PROJECT NUMBER
15107-00
DATE ISSUED
11-13-17
SHEET TITLE

STRUCTURAL NOTES

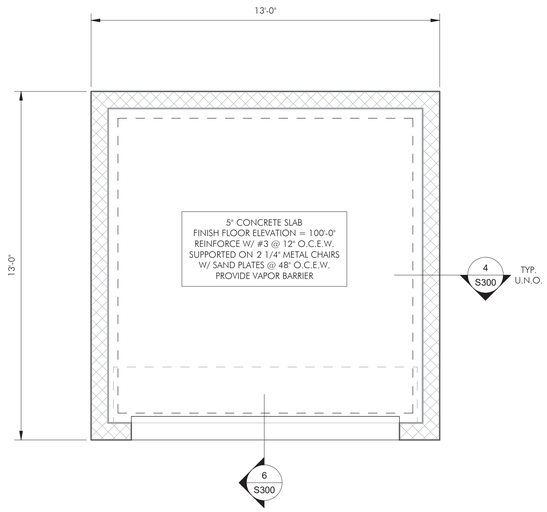
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Williamson County, Texas
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p. 224



NORTH	1	REST ROOM FOUNDATION PLAN
	3/8" = 1'-0"	



NORTH	2	STORAGE FOUNDATION PLAN
	3/8" = 1'-0"	

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 9/S400.
3. PLUMBING FIXTURES ARE SHOWN FOR REFERENCE ONLY. REFER ARCHITECTURAL AND PLUMBING PLANS FOR LOCATIONS, TYPE AND QUANTITIES.
4. REFER TO DETAIL 10/S400 FOR ALL PIPE/CONDUIT IN THE FOUNDATION.
5. REFER TO DETAIL 11 AND 12/S400 FOR GRADE BEAM PENETRATIONS.

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SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION

3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE

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11/13/17

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DATE ISSUED
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SHEET TITLE

FOUNDATION PLAN

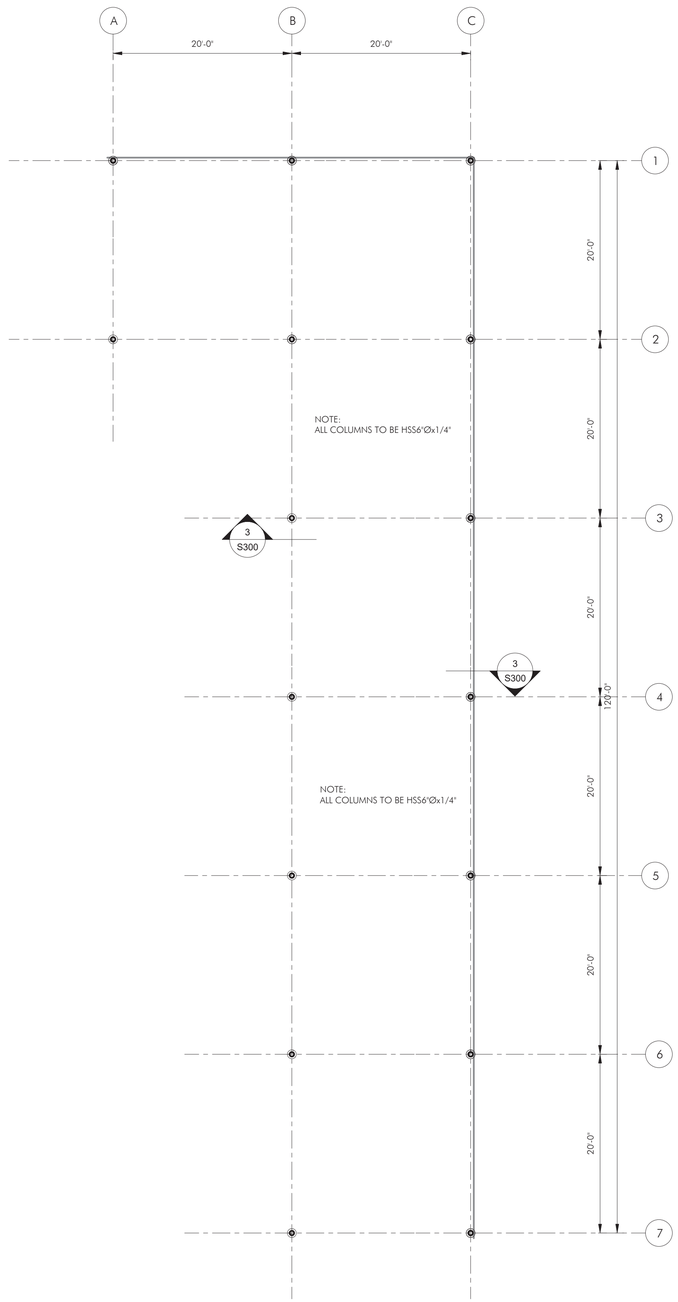
SHEET NUMBER

S100

Williamson County, Texas

2/15/2018 7:19 AM

B+I 1902-215



NORTH

1 COVERED STORAGE FOUNDATION PLAN

1/8" = 1'-0"

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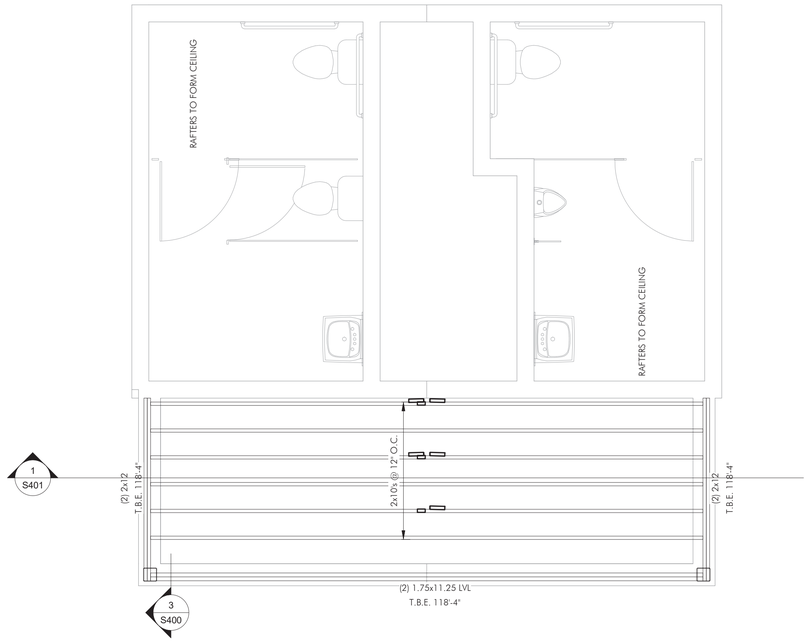
FOUNDATION PLAN

SHEET NUMBER

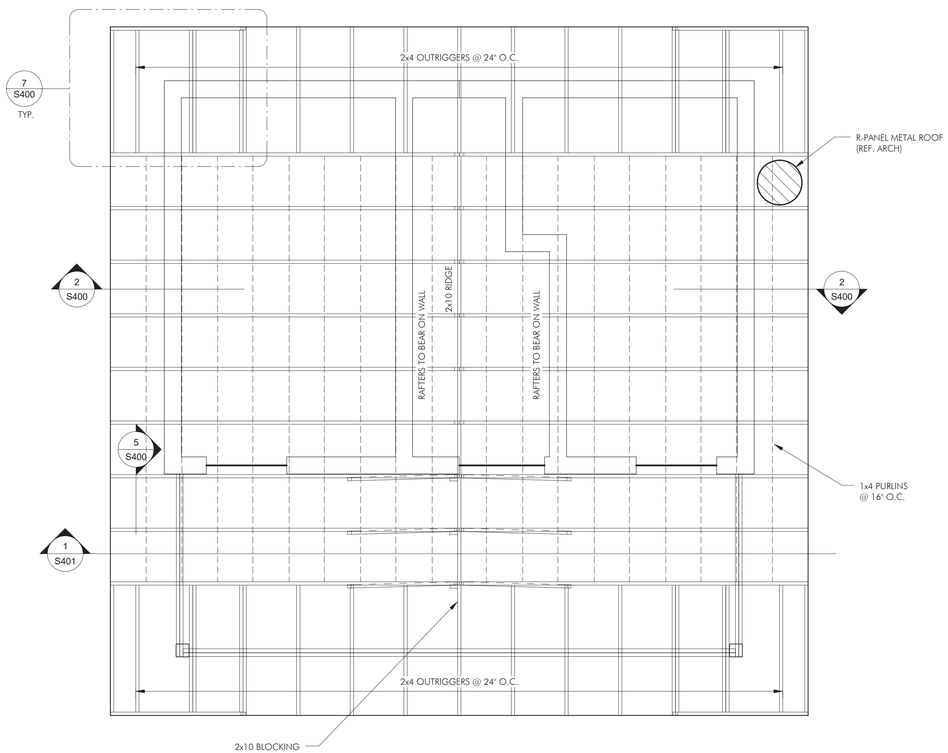
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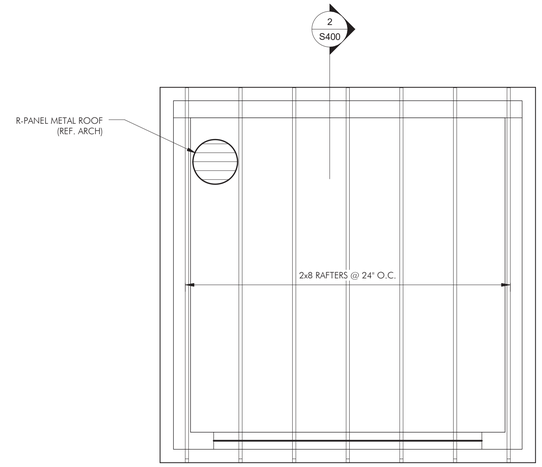
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NORTH | 3/8" = 1'-0" | 1 | REST ROOM CEILING FRAMING PLAN



NORTH | 3/8" = 1'-0" | 2 | REST ROOM ROOF PLAN



NORTH | 3/8" = 1'-0" | 3 | STORAGE ROOF PLAN

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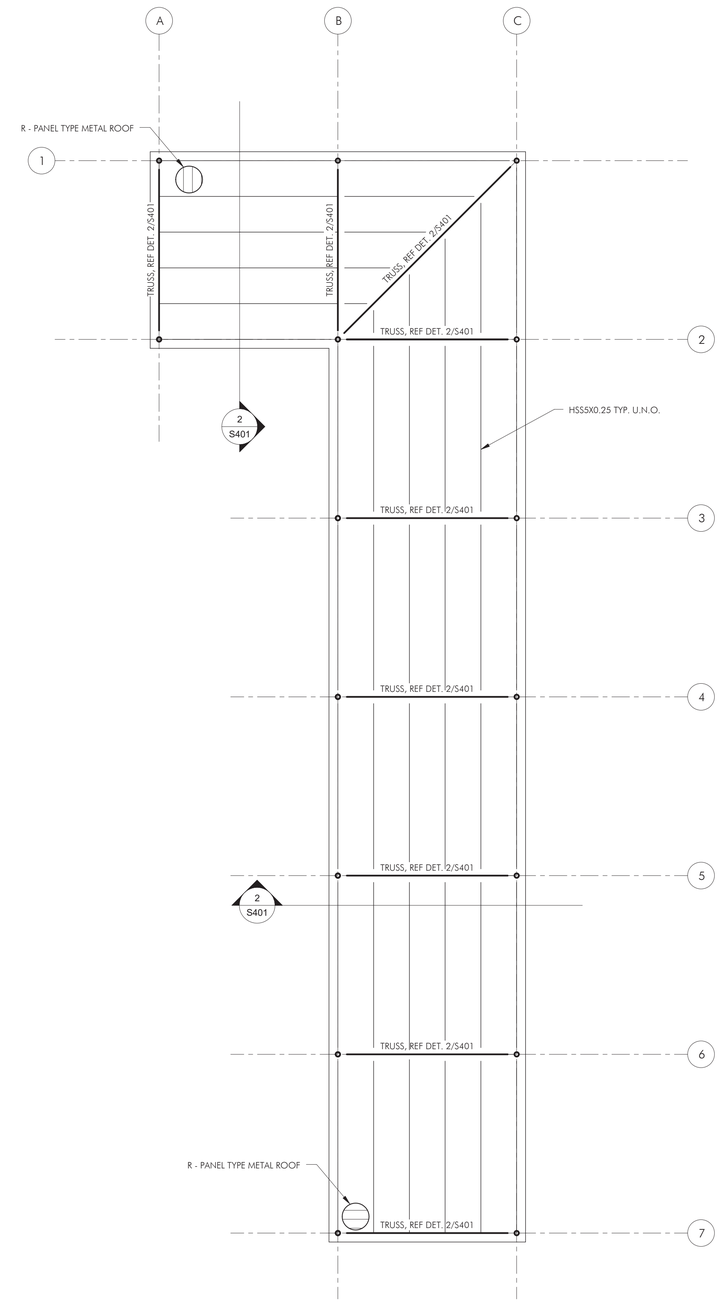
PROJECT NUMBER
15107-00
DATE ISSUED
11-13-17
SHEET TITLE

CEILING/ROOF FRAMING PLAN

SHEET NUMBER

S200

B-227
B43-1602-215



1 COVERED STORAGE ROOF PLAN

1/8" = 1'-0"

NORTH

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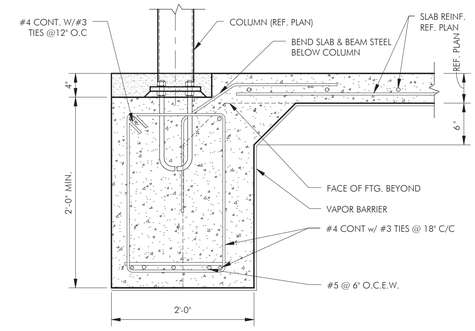
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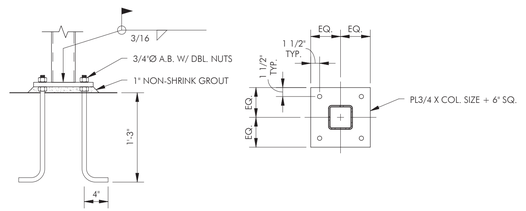
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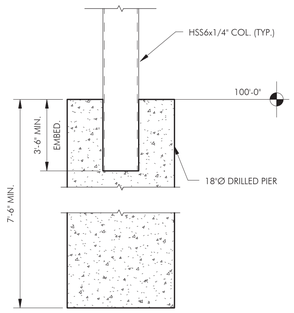
1 SECTION

1" = 1'-0"



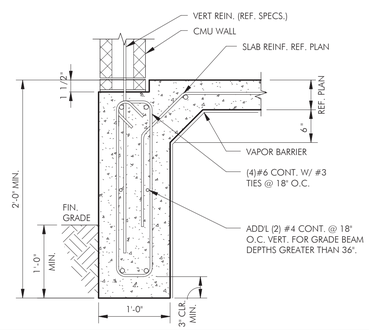
2 TYPICAL BASE PLATE DETAIL

1" = 1'-0"



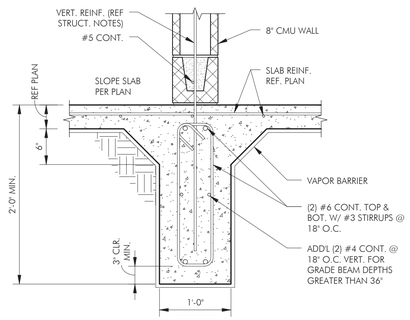
3 SECTION

1" = 1'-0"



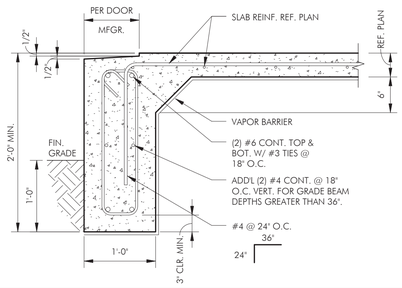
4 SECTION

1" = 1'-0"



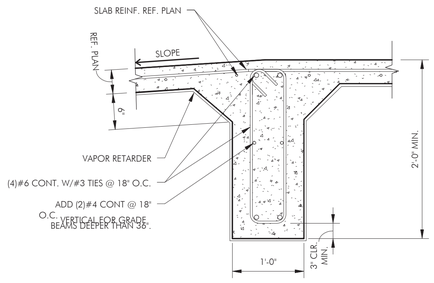
5 TYP. INT. GRADE BEAM

1" = 1'-0"



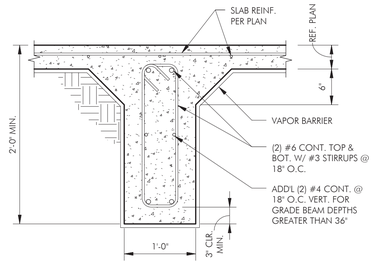
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1" = 1'-0"



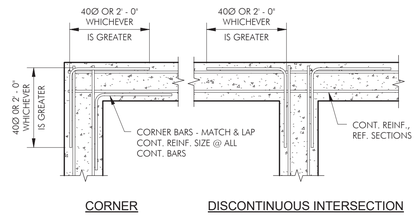
7 SECTION

1" = 1'-0"



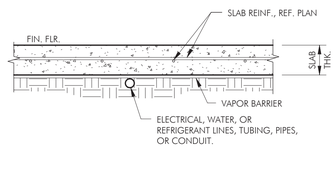
8 TYP. INT. GRADE BEAM

1" = 1'-0"



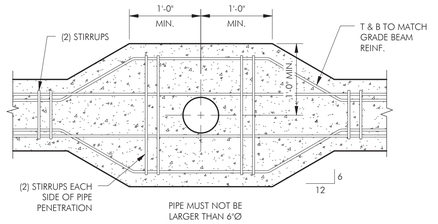
9 TYP. GRADE BEAM REINF. DETAIL

1" = 1'-0"



10 TYPICAL SLAB OVER UTILITIES DETAIL

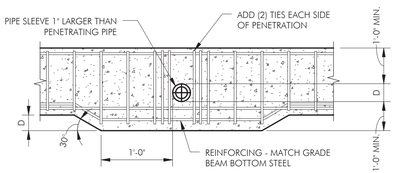
1" = 1'-0"



GRADE BEAM PLAN

11 TYP. GRADE BM. PENETRATION DETAIL

1" = 1'-0"



12 TYP. GRADE BM. PENETRATION DETAIL

1" = 1'-0"

NOT USED

NOT USED

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Williamson County, Texas

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SHEET TITLE

FOUNDATION DETAILS

SHEET NUMBER

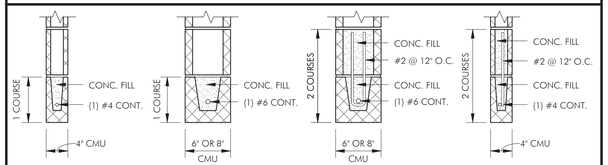
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BM 1902-215

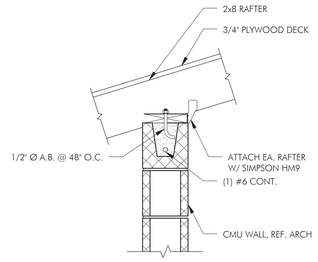
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BLOCK LINTEL SCHEDULE

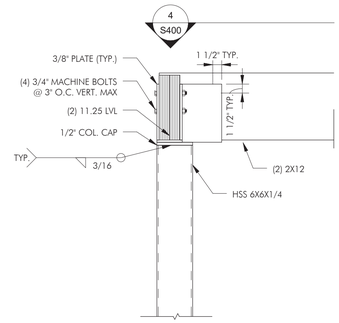
NOTE: PROVIDE BLOCK LINTELS FOR ALL OPENINGS IN INTERIOR BLOCK PARTITIONS AND IN EXTERIOR BLOCK WALLS FOR WHICH STEEL LINTELS ARE NOT SCHEDULED. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF OPENINGS. PROVIDE 8" MINIMUM BEARING AT EACH END.



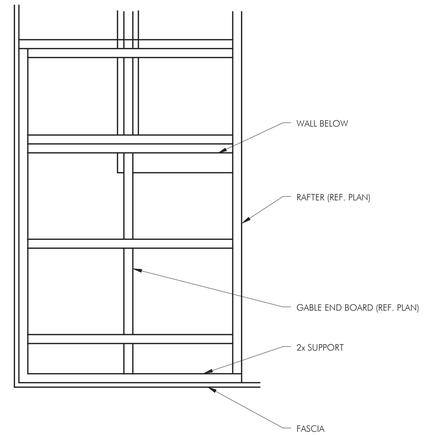
1 BLOCK LINTEL SCHEDULE
1" = 1'-0"

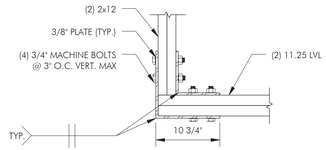


2 SECTION
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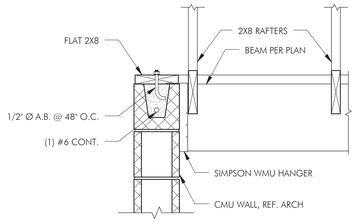


3 SECTION
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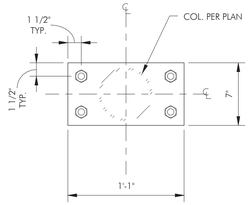




4 SECTION
1" = 1'-0"



5 SECTION
1" = 1'-0"



6 SECTION
1 1/2" = 1'-0"

7 SECTION
1" = 1'-0"

NOT USED

NOT USED

NOT USED

NOT USED

NOT USED

NOT USED

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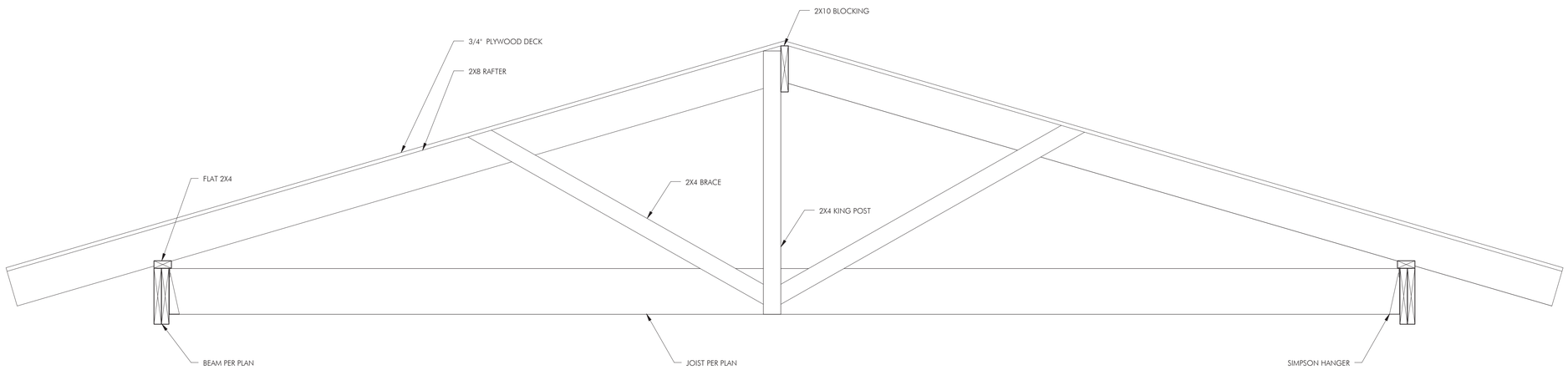
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11-13-17
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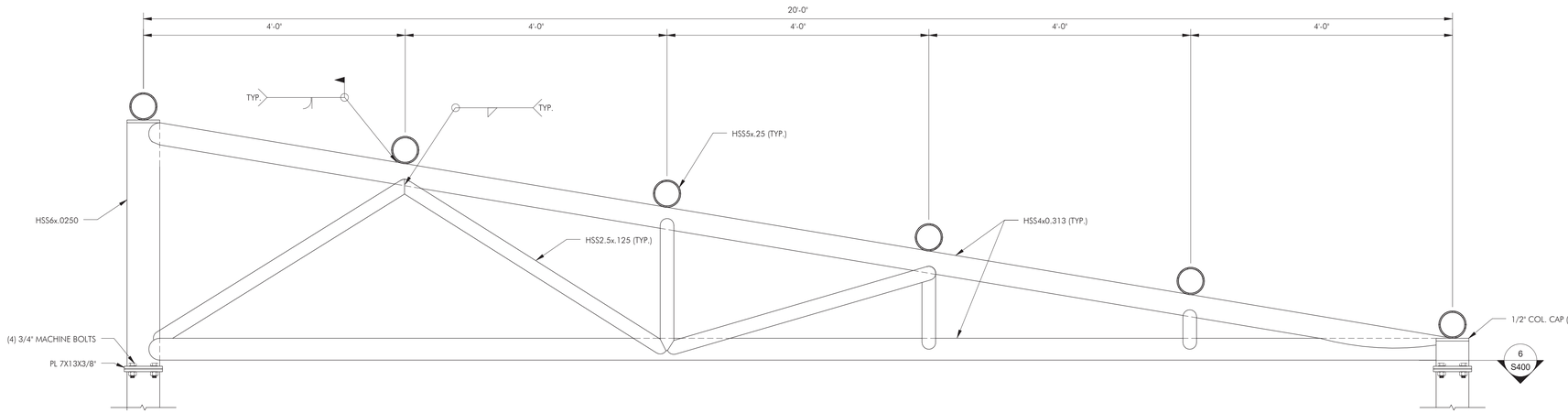
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Williamson County, Texas
BM 1602-215
p. 230



1 SECTION

1" = 1'-0"



2 SECTION

1" = 1'-0"

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SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION

3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE

CONSTRUCTION DOCUMENTS

REVISIONS

STATE OF TEXAS
LAURENCE J. FISHER
50110
REGISTERED PROFESSIONAL ENGINEER

11/13/17

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY LARRY J. FISHER, P.E. 50110.

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FRAMING DETAILS

SHEET NUMBER

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Williamson County, Texas

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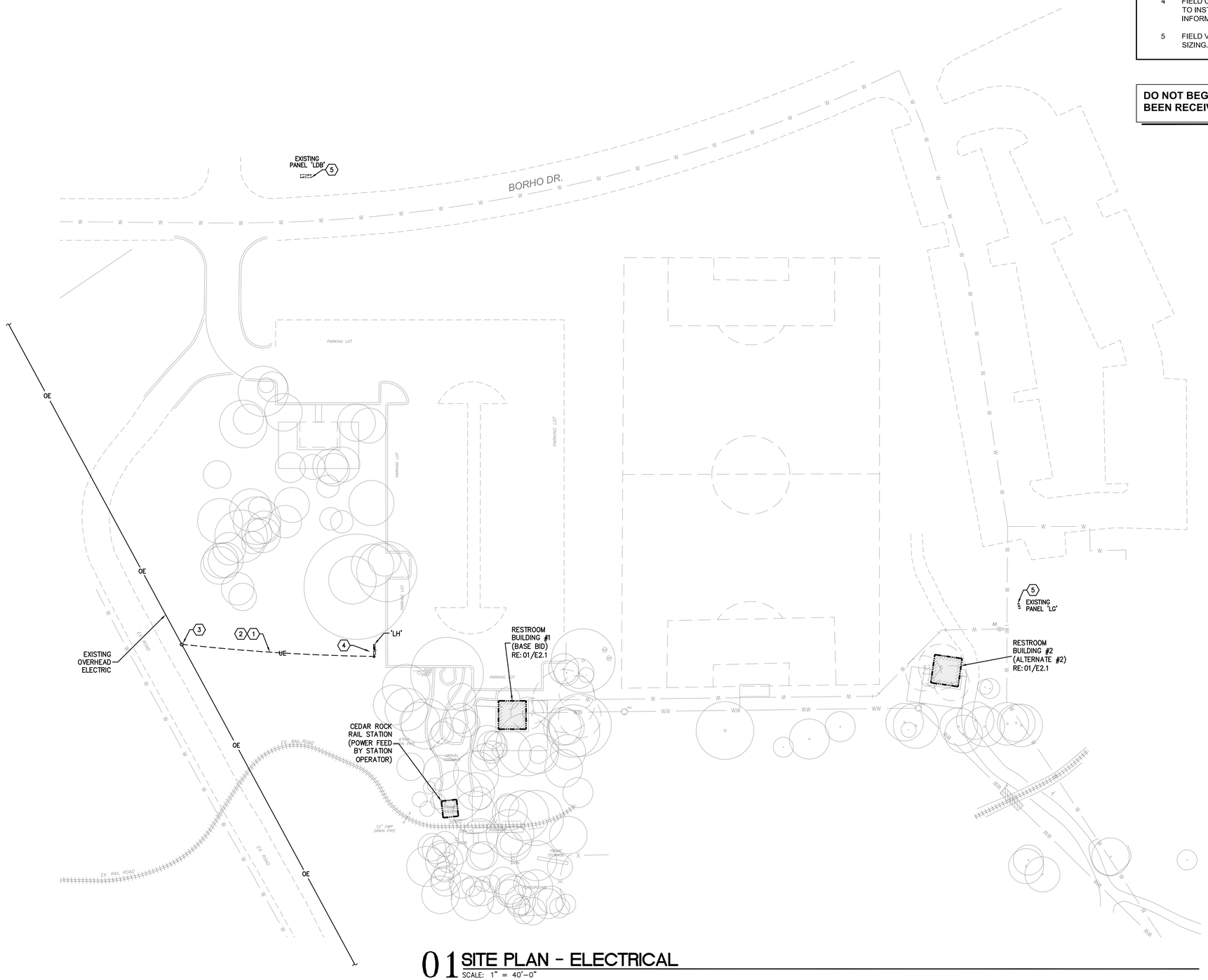
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KEYED NOTES

THESE NOTES APPLY TO THIS SHEET ONLY

1. UNDERGROUND ELECTRIC CONDUIT, PULL BOXES, ETC. REFERENCE RISER DIAGRAM ON SHEET E1.2. ALL UTILITIES PER LATEST UTILITY COMPANY REQUIREMENTS.
2. UNDERGROUND ELECTRIC, SECONDARY. REFERENCE RISER DIAGRAM ON SHEET E1.2
3. COORDINATE FINAL CONNECTION POINT AND REQUIREMENTS WITH UTILITY PROVIDER.
4. FIELD COORDINATE LOCATION OF SERVICE RACK WITH OWNER AND UTILITY PRIOR TO INSTALLATION. REFERENCE RISER FOR ADDITIONAL SERVICE RACK INFORMATION.
5. FIELD VERIFY LOCATIONS OF EXISTING PANELS AND INTERCONNECTING CONDUIT SIZING.

DO NOT BEGIN SITE UTILITY WORK UNTIL DRAWINGS HAVE BEEN RECEIVED FROM UTILITY COMPANY.



01 SITE PLAN - ELECTRICAL

SCALE: 1" = 40'-0"

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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY B.J. HENDRIX P.E. NO: 94813 ON: 11/17/2017

REFERENCE GENERAL NOTES ON SHEETS M1.1, P1.1 AND E1.1 FOR ADDITIONAL INFORMATION

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SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION

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PROJECT PHASE

CONSTRUCTION DOCUMENTS

REVISIONS

PROJECT NUMBER
15107-00
DATE ISSUED
11/17/2017
SHEET TITLE

SITE PLAN - ELECTRICAL

SHEET NUMBER

E-1.0

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ESC-2

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)	
	CIRCUIT ROUTED THRU CONTACTOR OR RELAY	
UE	UNDERGROUND ELECTRIC	
UT	UNDERGROUND TELEPHONE	
OE	OVERHEAD ELECTRIC	
OT	OVERHEAD TELEPHONE	
	CIRCUIT INDICATORS (HOT, NEUTRAL, GROUND, SWITCHLEG)	
	PHOTOCELL	
	JUNCTION BOX	
	JUNCTION BOX, FLOOR MOUNTED FLUSH	
	JUNCTION BOX, WALL MOUNTED – 3/4"C TO ABOVE CEILING	
	MANUAL STARTER WITH THERMAL TRIP	
	DISCONNECT SWITCH, REFER TO DISCONNECT SCHEDULE	
	STARTER	
	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	MECH	MECHANICAL
A/C	AIR CONDITIONING	MH	MANHOLE
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM
AHJ	AUTHORITY HAVING JURISDICTION	MISC	MISCELLANEOUS
AL	ALUMINUM	MLO	MAIN LUG ONLY
AUTO	AUTOMATIC	MSB	MAIN SWITCHBOARD
AUX	AUXILIARY	NEC	NATIONAL ELECTRICAL CODE
BFF	BELOW FINISHED FLOOR	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
BLDG	BUILDING		
C	CONDUIT	NF	NON-FUSED
CB	CIRCUIT BREAKER	NIC	NOT IN CONTRACT
CKT	CIRCUIT	NTS	NOT TO SCALE
COL	COLUMN	OC	ON CENTER(S)
CONC	CONCRETE	OE	OVERHEAD ELECTRIC
CONST	CONSTRUCTION	OT	OVERHEAD TELEPHONE
CONTR	CONTRACTOR	PC	PLUMBING CONTRACTOR
CTV	CABLE TELEVISION	PH	PHASE
DWG	DRAWING	PNL	PANEL
EC	ELECTRICAL CONTRACTOR	PVC	POLYVINYL CHLORIDE
EF	EXHAUST FAN	RE:	REFERENCE/REFER TO
DN	DOWN	RECPT	RECEPTACLE
ELEC	ELECTRIC/ELECTRICAL	RGS	RIGID GALVANIZED STEEL CONDUIT
EMT	ELECTRICAL METALLIC TUBING	RM	ROOM
EQUIP	EQUIPMENT	SCH	SCHEDULE
EX	EXISTING	SPEC	SPECIFICATIONS
FA	FIRE ALARM	TEL	TELEPHONE
FF	FINISHED FLOOR	TTB	TELEPHONE TERMINAL BOARD
FLR	FLOOR/FLOORING	TYP	TYPICAL
G	GROUND	UE	UNDERGROUND ELECTRIC
GC	GENERAL CONTRACTOR	UL	UNDERWRITER'S LABORATORIES
GFI	GROUND FAULT INTERRUPT	UON	UNLESS OTHERWISE NOTED
HD	HEAVY DUTY	UT	UNDERGROUND TELEPHONE
HP	HORSEPOWER	V	VOLTS/VOLTAGE
IMC	INTERMEDIATE METAL CONDUIT	VA	VOLT-AMPERES
KVA	KILOVOLT-AMPERES	W	WATTS
KW	KILOWATTS	W/	WITH
LGT	LIGHT/LIGHTING	W/O	WITHOUT
MAX	MAXIMUM	WP	WEATHER PROOF
MC	MECHANICAL CONTRACTOR	XFMR	TRANSFORMER
MCB	MAIN CIRCUIT BREAKER		
MDP	MAIN DISTRIBUTION PANEL		

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
	2#12, 1/2"C.	LN		2#4, 1#8G., 1"C.	LLG		3#1/0, 1#6G., 2"C.	LLNG
	2#12, 1#12G., 1/2" C.	LNG		3#4, 1" C.	LLL		3#1/0, 1#6G., 2" C.	LLLG
	2#12, 1#12G., 1/2" C.	LLG		3#4, 1#8G., 1" C.	LLNG		4#1/0, 1#6G., 2" C.	LLNG
	3#12, 1/2" C.	LLL		3#4, 1#8G., 1" C.	LLLG		2#2/0, 1 1/2" C.	LN
	3#12, 1#12G., 1/2" C.	LLNG		4#4, 1#8G., 1 1/4" C.	LLLNG		2#2/0, 1#4G., 1 1/2"C.	LNG
	3#12, 1#12G., 1/2" C.	LLLG		2#3, 1" C.	LN		2#2/0, 1#4G., 1 1/2"C.	LLG
	4#12, 1#12G., 1/2" C.	LLNG		2#3, 1#6G., 1"C.	LNG		3#2/0, 1 1/2" C.	LL
	2#10, 1/2"C.	LN		2#3, 1#6G., 1" C.	LLG		3#2/0, 1#4G., 2" C.	LLNG
	2#10, 1#10G., 1/2" C.	LNG		3#3, 1" C.	LLL		3#2/0, 1#4G., 2" C.	LLLG
	2#10, 1#10G., 1/2" C.	LLG		3#3, 1#8G., 1 1/4" C.	LLNG		4#2/0, 1#4G., 2" C.	LLNG
	3#10, 1/2" C.	LLL		3#3, 1#8G., 1 1/4" C.	LLLG		2#3/0, 1 1/2" C.	LN
	3#10, 1#10G., 1/2" C.	LLNG		4#3, 1#8G., 1 1/4" C.	LLLNG		2#3/0, 1#4G., 2" C.	LNG
	3#10, 1#10G., 1/2" C.	LLLG		2#2, 1"C.	LN		2#3/0, 1#4G., 2" C.	LLG
	4#10, 1#10G., 1/2" C.	LLNG		2#2, 1#8G., 1" C.	LNG		3#3/0, 2" C.	LL
	2#8, 1/2" C.	LN		2#2, 1#8G., 1" C.	LLG		3#3/0, 1#4G., 2" C.	LLNG
	2#8, 1#10G., 3/4" C.	LNG		3#2, 1 1/4" C.	LLL		3#3/0, 1#4G., 2" C.	LLLG
	2#8, 1#10G., 3/4" C.	LLG		3#2, 1#8G., 1 1/4" C.	LLNG		4#3/0, 1#4G., 2 1/2" C.	LLNG
	3#8, 3/4" C.	LLL		3#2, 1#8G., 1 1/4" C.	LLLG		2#4/0, 2" C.	LN
	3#8, 1#10G., 3/4" C.	LLNG		4#2, 1#8G., 1 1/4" C.	LLLNG		2#4/0, 1#4G., 2" C.	LNG
	3#8, 1#10G., 3/4" C.	LLLG		2#1, 1 1/4" C.	LN		2#4/0, 1#4G., 2" C.	LLG
	4#8, 1#10G., 1" C.	LLLNG		2#1, 1#6G., 1 1/4" C.	LNG		3#4/0, 2" C.	LL
	2#6, 3/4" C.	LN		2#1, 1#6G., 1 1/4" C.	LLG		3#4/0, 1#4G., 2 1/2" C.	LLNG
	2#6, 1#10G., 3/4" C.	LNG		3#1, 1 1/2" C.	LLL		3#4/0, 1#4G., 2 1/2" C.	LLLG
	2#6, 1#10G., 3/4" C.	LLG		3#1, 1#6G., 1 1/2" C.	LLNG		4#4/0, 1#4G., 2 1/2" C.	LLLNG
	3#6, 3/4"C.	LLL		3#1, 1#6G., 1 1/2" C.	LLLG			
	3#6, 1#10G., 3/4" C.	LLNG		4#1, 1#6G., 1 1/2" C.	LLLNG			
	3#6, 1#10G., 3/4" C.	LLLG		2#1/0, 1 1/4" C.	LN			
	4#6, 1#10G., 1" C.	LLLNG		2#1/0, 1#6G., 1 1/2" C.	LNG			
	2#4, 3/4" C.	LN		2#1/0, 1#6G., 1 1/2"C.	LLG			
	2#4, 1#8G., 1" C.	LNG		3#1/0, 1 1/2" C.	LLL			

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-I
	DUPLEX RECEPTACLE 20A/120V 16"AFF UON	CR20-I
	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-I
	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-I
	DUPLEX RECEPTACLE 20A/120V MOUNTED HORIZONTALLY 48" AFF UON	CR20-I
P	FOURPLEX RECEPTACLE FOR PROJECTOR	
WP	WEATHER/TAMPER-RESISTANT DUPLEX RECEPTACLE WITH "IN-USE" COVER 20A/120V 18"AFF UON	GFTR20I/ WP26M
	8" ABOVE COUNTER – GFI	
SS	DUPLEX RECEPTACLE W/ SURGE SUPPRESSION 20A/120V 16" AFF UON	IG5362-SA
T	SAFETY TYPE DUPLEX RECEPTACLE 20A/120V 16" AFF UON	CR20ITR
	DUPLEX RECEPTACLE, FLOOR MOUNTED FLUSH	CR20-I,PFBRG1 SB3083,S3825
	FOURPLEX RECEPTACLE, FLOOR MOUNTED FLUSH	(2) HBL-5362-I, PFBRG2 SB3084, (2)S3825
	EXISTING DUPLEX RECEPTACLE	
	EXISTING FOURPLEX RECEPTACLE	
	EXISTING 208V RECEPTACLE	
	SINGLE POLE SWITCH 20A, 48"AFF UON	CS120-I
3	THREE-WAY SWITCH 20A, 48"AFF UON	CS320-I
4	FOUR-WAY SWITCH 20A, 48"AFF UON	CS1224-I
K	SINGLE POLE KEY OPERATED SWITCH 20A, 48"AFF UON	HBL 1221-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-I
T	TIMER SWITCH, 48"AFF UON	INTERMATIC FF60MC
F	FAN SWITCH, 48"AFF UON	RF51
MOT	WALL MOTION SENSOR: 48" AFF UON, (IR) INFRARED	WS1277-I
MOT	WALL MOTION SENSOR: 48" AFF UON, (US) ULTRASONIC	AU1277I1
MOT	WALL MOTION SENSOR: 48" AFF UON, (DT) DUAL TECHNOLOGY	AD1277-I1
M US	MOTION SENSOR: US (ULTRASONIC)	ATU2000C
M IR	MOTION SENSOR: IR (INFRARED)	ATP1500C
M DT	MOTION SENSOR: DT (DUAL TECHNOLOGY)	ATD2000C

ESC-05

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
H	HAND DRYER	

ESC-17

DISCONNECT SWITCH SCHEDULE

REMARKS:
A. THIS SCHEDULE IS NOT A COMPREHENSIVE DISCONNECT SCHEDULE. REFERENCE OTHER ELECTRICAL CONNECTION SCHEDULES FOR ADDITIONAL DISCONNECT REQUIREMENTS.
B. COORDINATE FINAL FUSE SIZES WITH EQUIPMENT BEING PROVIDED PRIOR TO ROUGH-IN.
C. WHEN THE LENGTH OF THE SECONDARY CONDUCTORS OF ANY TRANSFORMER EXCEEDS TEN FEET, PROVIDE AN ENCLOSED CIRCUIT BREAKER OR FUSED DISCONNECT WITHIN TEN FEET OF THE TRANSFORMER SECONDARY TERMINALS IN ACCORDANCE WITH NEC ARTICLE 240-21(C)(2). THIS OVERCURRENT DEVICE SHALL HAVE AN AMP RATING EQUAL TO THE AMP RATING OF THE PANEL BEING SERVED. THE PANEL BEING FED MAY BE CHANGED TO MAIN LUG ONLY.
D. PROVIDE LUG KITS AND/OR WIRING GUTTERS FOR PANELS WITH OVERSIZED CONDUCTORS DUE TO VOLTAGE DROP AND/OR DISTANCE. MAKE CONNECTIONS IN ACCORDANCE WITH THE N.E.C.
E. PROVIDE SHOP DRAWINGS OF ALL ELECTRIC ROOMS INDICATING ALL PANEL, TRANSFORMER AND DISCONNECT LOCATIONS. ELECTRICAL EQUIPMENT MAY SHIFT IN LOCATION TO INSURE PROPER CLEARANCES.
F. PROVIDE DISCONNECTING MEANS FOR ALL EQUIPMENT PER N.E.C.
G. DISCONNECTS MOUNTED ABOVE CEILING MUST BE MOUNTED TO BE READILY ACCESSIBLE NEAR UNIT. HANDLE TO BE NO MORE THAN 36" ABOVE CEILING GRID.
H. 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.
** **FOR ALL PANELS SUBFED FROM TRANSFORMERS THAT REQUIRE DISCONNECT, REFERENCE PANEL SCHEDULE FOR ALL ENCLUSURE TYPE AND DISCONNECT/FUSE SIZING INFORMATION.**

MARK	VOLTAGE: 120, 240, 277, 480, 3 PHASE	AMPERES RATING: 30, 60, 100, 200, 400, 600, 800, 1000, 1200, 2000	POLES: 1, 2, 3	NEMA RATING: NEMA 1, NEMA 3R	FUSES: YES/NO	FUSE SIZE	NON-FUSED DISC. BREAK	REMARKS
						150		SERVICE "H"
						40		RR #1,PANEL "LH1"
						40		RR #2,PANEL "LG1"

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.

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REFERENCE GENERAL NOTES ON SHEETS M1.1, P1.1 AND E1.1 FOR ADDITIONAL INFORMATION

HENDRIX CONSULTING ENGINEERS

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SCHEDULES, NOTES, AND LEGENDS - ELECTRICAL

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ESC-01-NLIGHT

CIRCUIT BREAKER PANELBOARD ' LH '
SOUTHWEST WILCO PARK

STANDARD NOTES:
1. PROVIDE BALANCED LOAD ON EACH PHASE. CIRCUIT NUMBERS SHOWN ON DRAWINGS ARE FOR REFERENCE ONLY.
2. REFERENCE BRANCH CIRCUIT WIRE AND CONDUIT SCHEDULE.

NOTES: (THESE ITEMS APPLY ONLY WHERE SPECIFIED BELOW)
(a) REFERENCE SPLIT SYSTEM / ROOFTOP ELECTRICAL CONNECTION SCHEDULE.
(b) REFERENCE TRANSFORMER SCHEDULE.
(c) REFERENCE FAN POWERED BOX / VAV CONNECTION SCHEDULE.
(d) PROVIDE WITH SHUNT TRIP BREAKER.
(e) PROVIDE WITH 200% NEUTRAL BUS AND WIRE.
(f) PROVIDE PANEL EXTENSION WITH PHASE MONITORING PROTECTION.
(g) REFERENCE ASSOCIATED PANEL SCHEDULE.

120/208 VOLT, 3 PHASE, 4 WIRE, 150 A MLO, KA, RMS SYM.
SURFACE MOUNTED, NEMA 3R ENCLOSURE, S/N
FEEDER: REFERENCE PANELBOARD CONNECTION SCHEDULE

CKT		LOAD DESCRIPTION	WIRE/CONDUIT	KVA	C/B	KVA	WIRE/CONDUIT	LOAD DESCRIPTION		CKT
1	E	PANEL 'LH1'	(g)	4.3	40/2	10/2 15.0	--	FUTURE RAIL STATION LOAD	E	2
3		" "	--	--	--	-- --	--	" "		4
5	S	SPARE	--	--	40/2	10/2 --	--	SPARE	S	6
7		" "	--	--	--	-- --	--	" "		8
9	S	SPACE	--	--	--	-- --	--	SPACE	S	10
11		" "	--	--	--	-- --	--	" "		12
13	S	SPACE	--	--	14	-- --	--	SPACE	S	14
15			--	--	--	-- --	--			16
17	R	RECEPTACLES	2	0.5	20/1	20/1 --	--	SPARE	S	18

ELECTRICAL LOAD CALCULATIONS:

CONNECTED LOAD			DEMAND FACTOR	DEMAND LOAD			REMARKS:
LIGHTING	=	0.0 KVA	X 1.25	LIGHTING	=	0.0 KVA	
RECEPTACLE	=	0.5 KVA	NEC 220 - 14	RECEPTACLE	=	0.5 KVA	
EQUIPMENT	=	19.3 KVA	X 1.0	EQUIPMENT	=	19.3 KVA	
KITCHEN	=	0.0 KVA	NEC 220 - 56	KITCHEN	=	0.0 KVA	
SPARES	=	0.0 KVA	X 0.5	SPARES	=	0.0 KVA	
TOTAL	=	19.8 KVA		TOTAL	=	19.8 KVA	55 AMPS

CIRCUIT BREAKER PANELBOARD ' LG1 '
SOUTHWEST WILCO PARK

STANDARD NOTES:
1. PROVIDE BALANCED LOAD ON EACH PHASE. CIRCUIT NUMBERS SHOWN ON DRAWINGS ARE FOR REFERENCE ONLY.
2. REFERENCE BRANCH CIRCUIT WIRE AND CONDUIT SCHEDULE.

NOTES: (THESE ITEMS APPLY ONLY WHERE SPECIFIED BELOW)
(a) REFERENCE SPLIT SYSTEM / ROOFTOP ELECTRICAL CONNECTION SCHEDULE.
(b) REFERENCE TRANSFORMER SCHEDULE.
(c) REFERENCE FAN POWERED BOX / VAV CONNECTION SCHEDULE.
(d) PROVIDE WITH SHUNT TRIP BREAKER.
(e) PROVIDE WITH 200% NEUTRAL BUS AND WIRE.
(f) PROVIDE PANEL EXTENSION WITH PHASE MONITORING PROTECTION.
(g) REFERENCE ASSOCIATED PANEL SCHEDULE.

120/208 VOLT, 1 PHASE, 3 WIRE, 40A, MCB, KA, RMS SYM.
SURFACE MOUNTED, NEMA 1 ENCLOSURE, S/N
FEEDER: REFERENCE PANELBOARD CONNECTION SCHEDULE

CKT		LOAD DESCRIPTION	WIRE/CONDUIT	KVA	C/B	KVA	WIRE/CONDUIT	LOAD DESCRIPTION		CKT
1	E	WH-1	2	1.5	20/1	20/1 0.5	2	LIGHTING	L	2
3	E	EUH	3	1.5	20/1	20/1 0.1	2	EXTERIOR LIGHTING	L	4
5	R	RECEPTACLE	2	0.5	20/1	20/1 --	--	SPARE	S	6
7	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	8
9	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	10
11	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	12
13	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	14
15	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	16
17	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	18

ELECTRICAL LOAD CALCULATIONS:

CONNECTED LOAD			DEMAND FACTOR	DEMAND LOAD			REMARKS:
LIGHTING	=	0.6 KVA	X 1.25	LIGHTING	=	0.8 KVA	
RECEPTACLE	=	0.5 KVA	NEC 220 - 14	RECEPTACLE	=	0.5 KVA	
EQUIPMENT	=	3.0 KVA	X 1.0	EQUIPMENT	=	3.0 KVA	
KITCHEN	=	0.0 KVA	NEC 220 - 56	KITCHEN	=	0.0 KVA	
SPARES	=	0.0 KVA	X 0.5	SPARES	=	0.0 KVA	
TOTAL	=	4.1 KVA		TOTAL	=	4.3 KVA	20 AMPS

ELECTRICAL LOAD ANALYSIS
SW WILCO PARK

NOTES:

		KVA
1.	LIGHTING LOAD:	
	A. LIGHTING LOAD 0.6 KVA X 1.25	= 0.8
2.	RECEPTACLE LOAD:	
	A. 0.5 KVA - 10 KVA = N/A KVA x 50% = N/A KVA + 10 KVA	= 0.5
3.	EQUIPMENT LOAD:	
	A. AC	= 0.0
	B. HEAT	= 1.5
	C. WATER HEATER(S)	= 1.5
	D. ELEVATOR(S)	= 0.0
	E. MISCELLANEOUS	= 0.0
	F. EXST. LOAD PER UTILITY CO. KW X .9 PF X 125%	= 0.0
	G.	=
	H.	=
4.	KITCHEN LOAD:	
	A. KVA x DEMAND FACTOR (NEC 220-20)	= 0.0
5.	25% OF LARGEST MOTOR (HP) KVA	= 0.0
6.	TOTAL CONNECTED LOAD (KVA)	= 4.3
7.	FUTURE LOAD	= 19.8
	15.5 KVA + TOTAL CONNECTED LOAD 4.25 KVA	
8	TOTAL AMP LOAD OF:	
	55 AMPS AT 208 VOLT, 3 PHASE, 4 WIRE	

REMARKS: 120/208 3 PHASE, 150 AMP SERVICE

CIRCUIT BREAKER PANELBOARD ' LH1 '
SOUTHWEST WILCO PARK

STANDARD NOTES:
1. PROVIDE BALANCED LOAD ON EACH PHASE. CIRCUIT NUMBERS SHOWN ON DRAWINGS ARE FOR REFERENCE ONLY.
2. REFERENCE BRANCH CIRCUIT WIRE AND CONDUIT SCHEDULE.

NOTES: (THESE ITEMS APPLY ONLY WHERE SPECIFIED BELOW)
(a) REFERENCE SPLIT SYSTEM / ROOFTOP ELECTRICAL CONNECTION SCHEDULE.
(b) REFERENCE TRANSFORMER SCHEDULE.
(c) REFERENCE FAN POWERED BOX / VAV CONNECTION SCHEDULE.
(d) PROVIDE WITH SHUNT TRIP BREAKER.
(e) PROVIDE WITH 200% NEUTRAL BUS AND WIRE.
(f) PROVIDE PANEL EXTENSION WITH PHASE MONITORING PROTECTION.
(g) REFERENCE ASSOCIATED PANEL SCHEDULE.

120/208 VOLT, 1 PHASE, 3 WIRE, 40A, MCB, KA, RMS SYM.
SURFACE MOUNTED, NEMA 1 ENCLOSURE, S/N
FEEDER: REFERENCE PANELBOARD CONNECTION SCHEDULE

CKT		LOAD DESCRIPTION	WIRE/CONDUIT	KVA	C/B	KVA	WIRE/CONDUIT	LOAD DESCRIPTION		CKT
1	E	WH-1	2	1.5	20/1	20/1 0.5	2	LIGHTING	L	2
3	E	EUH	3	1.5	20/1	20/1 0.1	2	EXTERIOR LIGHTING	L	4
5	R	RECEPTACLE	2	0.5	20/1	20/1 --	--	SPARE	S	6
7	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	8
9	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	10
11	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	12
13	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	14
15	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	16
17	S	SPARE	--	--	20/1	20/1 --	--	SPARE	S	18

ELECTRICAL LOAD CALCULATIONS:

CONNECTED LOAD			DEMAND FACTOR	DEMAND LOAD			REMARKS:
LIGHTING	=	0.6 KVA	X 1.25	LIGHTING	=	0.8 KVA	
RECEPTACLE	=	0.5 KVA	NEC 220 - 14	RECEPTACLE	=	0.5 KVA	
EQUIPMENT	=	3.0 KVA	X 1.0	EQUIPMENT	=	3.0 KVA	
KITCHEN	=	0.0 KVA	NEC 220 - 56	KITCHEN	=	0.0 KVA	
SPARES	=	0.0 KVA	X0.5	SPARES	=	0.0 KVA	
TOTAL	=	4.1 KVA		TOTAL	=	4.3 KVA	20 AMPS

RISER KEYED NOTES

1. FIELD COORDINATE ACTUAL LOCATION OF SERVICE RACK WITH UTILITY AND OWNER TO MINIMIZE IMPACT TO EXISTING TREES.
2. NEW POLE MOUNTED UTILITY TRANSFORMER PROVIDED AND INSTALLED BY UTILITY COMPANY.
3. SECONDARY RISER TO SERVICE RACK LOCATION. COORDINATE RISER REQUIREMENTS WITH UTILITY COMPANY.
4. SERVICE RACK SHALL 2 1/2" RIGID PIPE VERTICALS BURIED A MINIMUM OF 3' IN THE GROUND AND ENCASED IN CONCRETE. PROVIDE SCREW CAPS AT TOP OF POLE TO PREVENT THE ENTRY OF WATER. HORIZONTALS MAY BE UNISTRUT INSTALLED AS NEEDED FOR SUPPORT OF PANEL AND RECEPTACLE ENCLOSURE. PROVIDE A COLD GALV PAINT ON ALL UNISTRUT CUTS TO PREVENT RUSTING.
5. TRANSOCKET METER PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR PER UTILITY REQUIREMENTS.
6. STUB 1-2"C TO A LOCATION 5 FEET OUTSIDE SERVICE RACK FOR ELECTRICAL SERVICE TO CEDAR ROCK RAIL STATION BY OTHERS.
7. REFERENCE PANELBOARD CONNECTION SCHEDULE FOR CONDUIT/WIRING SIZES AND QUANTITIES.
8. GROUND PER NEC 250.
9. REFERENCE DISCONNECT SCHEDULE FOR ADDITIONAL INFORMATION.
10. PROVIDE AND INSTALL 40A/2P CIRCUIT BREAKER IN EXISTING PANEL 'LG'
11. RE-FEED PANEL 'LG' WITH (3) #2/0 AND (1) # GROUND BACK TO EXISTING PANEL 'LDB' IN EXISTING 2"C. FIELD VERIFY EXISTING LENGTH AND ROUTING.
12. PROVIDE GROUND BAR OR EUPHER GROUND. CONNECT TO GROUND BAR ONLY. REFERENCE REMOTE BUILDING REQUIREMENTS, NEC 250-32.

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
$^{DT}	DUAL TECHNOLOGY WALL MOUNT MOTION AND DIMMING	nWSX-PDT-D-SA
$^{C1}	ONE ZONE CONTROLLER, ON/OFF AND DIMMING	nPODM-DX
$^{C2}	TWO ZONE CONTROLLER, ON/OFF AND DIMMING	nPODM-2P-DX
$^{C4}	FOUR ZONE CONTROLLER, 4 PRESET TOGGLE BUTTONS	nPODm-4S-DX
$^{K}	ONE ZONE KEYED CONTROLLER, ON/OFF AND DIMMING	nPOD-KEY
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

NLIGHT INTERIOR LIGHTING SCHEDULE

GENERAL NOTES:

POWER PACKS
FOR FIXTURES THAT ARE NOT NLIGHT COMPATIBLE, PROVIDE POWER PACKS TO ACHIEVE ZONING INDICATED ON PLANS.

AREAS WITH HIGH CEILINGS (25FT OR HIGHER). PROVIDE POWER PACKS TO ACHIEVE ZONING INDICATED ON PLANS. LOCATE POWER PACKS IN ACCESSIBLE LOCATION FROM LIGHTING PANEL SERVING CIRCUITS.

WHEN POWER PACKS ARE PROVIDED. CONTRACTOR MUST PROVIDE 0-10V DIMMING WIRES FROM POWER PACK TO FIXTURE FOR CONTROL IN LIEU OF CAT5 CABLE.

NLIGHT MANUFACTURER TO PROVIDE NLIGHT ENABLED FIXTURES OR POWER PACKS TO ACHIEVE ZONING SHOWN ON PLANS FOR SWITCHING AND DAYLIGHT ZONES TO PROVIDE BEST VALUE TO THE PROJECT.

MOTION SENSORS
PROVIDE COMPLETE MOTION SENSOR COVERAGE FOR ENTIRE BUILDING, EXCEPT ELECTRIC ROOMS, AND AS WHEN NOTED EXCEPTION SHOWN ON PLANS. PROVIDE DUAL TECHNOLOGY MOTION SENSORS IN EVERY ROOM AS REQUIRED BY IECC 2015. ASSUME CEILING MOUNT UNLESS WALL MOUNT SHOWN.

SPACE TYPE DESCRIPTION:

GANG RESTROOMS
A. PROVIDE COMPLETE MOTION SENSOR COVERAGE FOR MAJOR MOVEMENTS. AUTO ON. WHEN NO MOTION IS DETECTED AFTER 10 MINUTES, LIGHTS SHALL BE DIMMED TO 50%. IF NO ADDITIONAL MOTION IS DETECTED AFTER 30 MINUTES, 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 MOTION SENSOR COVERAGE FOR MINOR MOVEMENTS. MANUAL ON / AUTO OFF. 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	MANUFACTURERS CATALOG NUMBER	LAMPS NO. / TYPE / WATTS	FIXTURE VOLTS / WATTS	DESCRIPTION AND COMMENTS
J2	LITHONIA FEM L48-4000LM-LPAFL-MD-MVOLT-GZ10-35K-80CRI-N100	1/LED 4109L/30	MVOLT/30	ENCLOSED LED WET LOCATION STRIP, LOW PROFILE LENS. WHITE FINISH. DIM, NLIGHT
J3	LITHONIA FEM L48-6000LM-LPAFL-MD-MVOLT-GZ10-35K-80CRI-N100	1/LED 6057/46	MVOLT/46	ENCLOSED LED WET LOCATION STRIP, LOW PROFILE LENS. WHITE FINISH. DIM, NLIGHT
T1	VISIONAIRE LIGHTING VSC-1-T2-32-530-4000K-UNV-WM-DB	1/LED ENGINES/54	MVOLT/54	ARCHITECTURAL WALL MOUNTED LED FIXTURE WITH DIE CAST ALUMINUM HOUSING, FULL CUTT-OFF, DARK BRONZE FINISH. MOUNT CENTER OF FIXTURE AT APPROX. 12'-14' A.F.F. MATCH ARCHITECTURAL ELEVATIONS.
T5	VISIONAIRE LIGHTING VSC-1-T2-16-530-4000K-UNV-WM-BZ-WSC-X-DIM	1/LED ENGINES/27	MVOLT/27	SLIM ARCHITECTURAL WALL MOUNTED LED FIXTURE WITH DIE CAST ALUMINUM HOUSING, ALUMINUM REFLECTOR WITH FULL CUT-OFF, HIGH EFFICIENCY DRIVER WITH WATTSTOPPER FSP-211 FOR MOTION DIMMING AND PHOTOCELL CONTROL. DARK BRONZE FINISH. OVER DOOR OR TO SIDE OF DOOR AS SHOWN ON PLANS. APPROX 8'-10' AFF. COORDINATE FINAL HEIGHT WITH ARCHITECTURAL. PROVIDE WITH EMERGENCY BALLAST.
Y1	LITHONIA ELM2-LED	INCLUDED	277/20	EMERGENCY EGRESS FIXTURE WITH POLYCARBONATE HOUSING, EMERGENCY BATTERY PACK AND AMMETER. WHITE FINISH. WALL MT APPROX 9' AFF. CONNECT TO NEAREST UNSWITCHED LIGHT CIRCUIT.

GENERAL DISCONNECT NOTES

A. WHEN THE LENGTH OF THE SECONDARY CONDUCTORS OF ANY TRANSFORMER EXCEEDS TEN FEET, PROVIDE AN ENCLOSED CIRCUIT BREAKER OR FUSED DISCONNECT WITHIN TEN FEET OF THE TRANSFORMER SECONDARY TERMINALS IN ACCORDANCE WITH NEC ARTICLE 240-21(C)(2). THIS OVERCURRENT DEVICE SHALL HAVE AN AMP RATING EQUAL TO THE AMP RATING OF THE PANEL BEING SERVED. THE PANEL BEING FED MAY BE CHANGED TO MAIN LUG ONLY.

B. PROVIDE LUG KITS AND/OR WIRING GUTTERS FOR PANELS WITH OVERSIZED CONDUCTORS DUE TO VOLTAGE DROP AND/OR DISTANCE. MAKE CONNECTIONS IN ACCORDANCE WITH THE NEC,

C. PROVIDE SHOP DRAWINGS OF ALL ELECTRIC ROOMS INDICATING ALL PANEL, TRANSFORMER AND DISCONNECT LOCATIONS. ELECTRICAL EQUIPMENT MAY SHIFT IN LOCATION TO INSURE PROPER CLEARANCES.

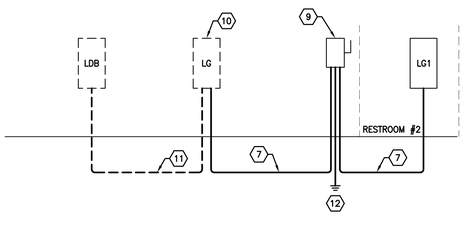
D. REFERENCE "DISCONNECT SCHEDULE" FOR ADDITIONAL DISCONNECT INFORMATION.

GEAR MANUFACTURER TO PROVIDE COORDINATION STUDY, FAULT CURRENT ANALYSIS AND DETERMINE FINAL KAIC RATINGS FOR ALL GEAR.

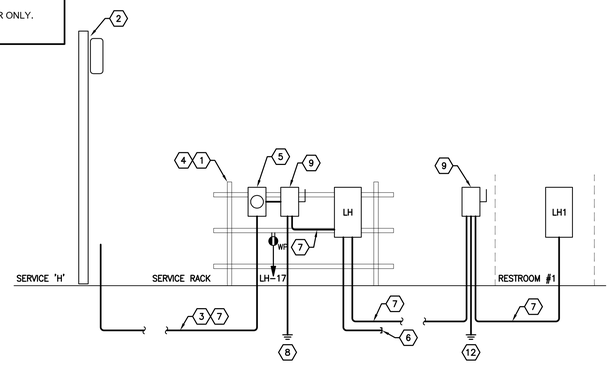
ELECTRICAL CONTRACTOR TO COORDINATE METER AND SERVICE LOCATION WITH DOOR LOCATION. CLEARANCES TO MEET N.E.C.

THE ELECTRICAL RISER DIAGRAM IS SHOWN SCHEMATICALLY IN NATURE TO INDICATE THE RELATIONSHIP OF THE ELECTRICAL SYSTEM COMPONENTS. IT DOES NOT REFLECT THE ACTUAL ROUTING OF CONDUITS. CONTRACTOR SHALL DETERMINE OVERHEAD OR UNDERGROUND CONDUIT ROUTING. CONDUIT SHALL NOT BE ROUTED EXPOSED ON EXTERIOR WALLS EXCEPT OUT OF THE BOTTOM OF THE PANEL TO RUN UNDER SLAB OR TO AN ADJACENT PANEL WITHIN 24". EXTERIOR EXPOSED CONDUIT SHALL BE MINIMIZED.

ELECTRICAL CONTRACTOR FILL OUT UTILITY COMPANY LOAD FORMS BASED ON LOAD ANALYSIS PROVIDED ON THE PLANS.



01 ELECTRICAL RISER DIAGRAM - SERVICE 'G'
SCALE: NONE



02 ELECTRICAL RISER DIAGRAM - SERVICE 'H'
SCALE: NONE

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REFERENCE GENERAL NOTES ON SHEETS M1.1, P1.1 AND E1.1 FOR ADDITIONAL INFORMATION

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HCE job no.: 17-014

SOUTHWEST WILCO PARK
WILLIAMSON COUNTY PARKS AND RECREATION
3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE
CONSTRUCTION DOCUMENTS
REVISIONS

PROJECT NUMBER
15107-00
DATE ISSUED
11/17/2017
SHEET TITLE
SCHEDULES - ELECTRICAL

SHEET NUMBER
E-1.2

C:\DOCUMENTS AND SETTINGS\RYAN.MODEDC\DESKTOP\WILCO\15107-00_SW WILCO PARK_CENTRAL_11-17-2017_1.RVT
Plotted: 11/17/2017 1:58:21 PM
11/15/2018 7:18 AM

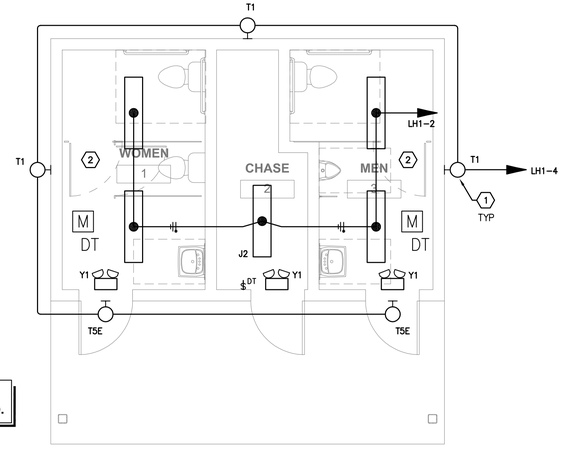
ELECTRICAL KEYED NOTES

THESE NOTES APPLY TO THIS SHEET ONLY

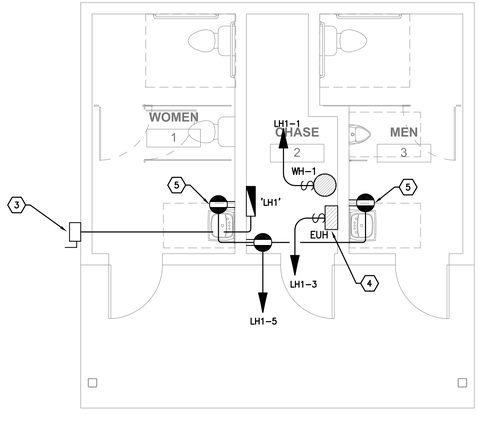
1. EXTERIOR LIGHTS CONTROLLED BY PHOTOCELL. PROVIDE PHOTOCELL ON NORTH SIDE IN THE SHADE. ELEVATION BY ARCHITECT.
2. INTERIOR BATHROOM LIGHTS RUN BY MOTION SENSOR ONLY.
3. REFERENCE DISCONNECT SCHEDULE.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE ELECTRIC UNIT HEATER (EUH): MODEL MARKEL E3313T2RPW, 1.5KW, 120V. ELECTRIC UNIT HEATER INSTALLED ABOVE DOOR. COORDINATE FINAL LOCATION WITH ALL TRADES. PROVIDE WITH BUILT-IN THERMOSTAT.PROVIDE SNAP SWITCH SERVICE DISCONNECT. FREEZE PROTECTION FOR CHASE ONLY.
5. POWER FOR AUTOMATIC FAUCET.

RESTROOM #1 LAYOUT IS TYPICAL FOR ALTERNATE RESTROOM #2. FOR RESTROOM #2, REPLACE PANEL AND CIRCUIT DESIGNATION 'LH1' WITH PANEL 'LG1'.

ALL LIGHT FIXTURES ARE TYPE 'J3' UNLESS OTHERWISE NOTED.



01 FLOOR PLAN - LIGHTING
SCALE: 1/4" = 1'-0"



02 FLOOR PLAN - POWER
SCALE: 1/4" = 1'-0"

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PROJECT NUMBER
15107-00
DATE ISSUED
11/17/2017
SHEET TITLE

FLOOR PLANS - ELECTRICAL

SHEET NUMBER

E-2.1

G:\SOUTHWEST PARK WILCO\PRODUCTION\E2-PWR-LTG.DWG, 11/17/2017 7:50:03 PM, Ryan Brewer, AIA/D.J.R./AIA_LSAM_Dwg, 1:1.0000

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. INSTALL ROOF JACK AS REQUIRED AT ALL GAS PIPING ROOF PENETRATIONS.

L. 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.

M. PROVIDE ALL APPROPRIATE TOOLS, WRENCHES, KEYS, ETC. AS REQUIRED FOR ACCESS AND OPERATION OF VALVES, COVERS, ETC.

N. 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.

O. PLUMBING CONTRACTOR IS RESPONSIBLE FOR PROVIDING FLUES AND COMBUSTION AIR PIPING TO EXTERIOR FOR GAS FIRED WATER HEATERS AND BOILERS.

P. 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.

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.

WCW
WATER CLOSET: AMERICAN STANDARD #2257.001, WALL MOUNTED, VITREOUS CHINA, 1 1/2" TOP SPUD, ELONGATED BOWL.
REFERENCE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
EXPOSED FLUSH VALVE: SLOAN ROYAL #111 WITH EBV-500-A SIDE MOUNT BATTERY PACK AUTO FLUSH, 1.28 GALLON FLUSH.
SEAT: BEMIS 1955C OR EQUIVALENT. STAINLESS STEEL HARDWARE ONLY (NO PLASTIC ALLOWED).

WCWH
WATER CLOSET (ADA): AMERICAN STANDARD #2257.001, WALL MOUNTED, VITREOUS CHINA, 1-1/2" TOP SPUD, ELONGATED BOWL.
REFERENCE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
EXPOSED FLUSH VALVE: SLOAN ROYAL #111 WITH EBV-500-A SIDE MOUNT BATTERY PACK AUTO FLUSH, 1.28 GALLON FLUSH.
SEAT: BEMIS 1955C OR EQUIVALENT. STAINLESS STEEL HARDWARE ONLY (NO PLASTIC ALLOWED).

URH
URINAL: SLOAN MODEL SU-1009-A UNIVERSAL HIGH EFFICIENCY, VITREOUS CHINA, 3/4" TOP SPUD.
EXPOSED FLUSH VALVE: SLOAN ROYAL #186-0.125 WITH EBV-500-A SIDE MOUNT BATTERY PACK AUTO FLUSH, 0.125 GALLON FLUSH.
REFERENCE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.

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 #116.122.AB.1 DUAL BEAM INFRARED SENSOR FAUCET WITH USER ADJUSTABLE MIXER, .5 GPM AERATOR, 12 SECOND RUN TIME. PROVIDE WITH 8" DECK PLATE AND PLUG IN TRANSFORMERS AS REQUIRED FOR BANK OF FAUCETS. PROVIDE ONE (1) HAND HELD PROGRAMMING UNIT MODEL#116.585.00.1 FOR PROJECT FOR ADJUSTING RUN TIME ON ALL FAUCETS.

WH-1
WATER HEATER: A.O.SMITH MODEL DEL-6, 6 GALLON STORAGE, 1.5KW-120V-1PH NON-SIMULTANEOUS ELEMENTS, 8 GPH RECOVERY AT 80 DEGREES RISE.

HB
HOSE BIBB: WOODFORD MODEL B67 SERIES, IN FLUSH MOUNTING WALL BOX, ASSE 1052 OR 1011 BACKFLOW PROTECTED AUTOMATIC DRAINING, FREEZELESS, NO SPRAYBACK. PROVIDE SHUT-OFF VALVE INSIDE BUILDING IN ACCESSIBLE LOCATION. SLOPE LINE FROM SHUT-OFF VALVE TO WALL HYDRANT TO ALLOW DRAINING OF LINE FOR FREEZE PROTECTION.

FD
FLOOR DRAIN (GENERAL PURPOSE): C.I. BODY, FLASHING COLLAR, WEEPHOLES, ADJUSTABLE HEAVY DUTY STAINLESS STEEL OR NICKEL BRONZE ROUND TOP (6" DIAMETER) AND STAINLESS STEEL SEDIMENT BASKET. MIFAB F1000-C-3-5-6-7 SERIES.

PLUMBING LEGEND

SYMBOL	ABB.	DESCRIPTION
—— CW ——	CW	COLD WATER PIPING
—— HW ——	HW	HOT WATER PIPING
—— HWR ——	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
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		
CHS	CHILLED WATER SUPPLY	PC	PLUMBING CONTRACTOR
CHR	CHILLED WATER RETURN	PH	PHASE
		PLBG	PLUMBING
DIA	DIAMETER		
DN	DOWN	R/A	RETURN AIR
DWG	DRAWING	REF	REFERENCE/REFER TO
DH	DUCT HEATER	RET	RETURN
E/A	EXHAUST AIR	REFRIG	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
GA	GAUGE	UON	UNLESS OTHERWISE NOTED
GC	GENERAL CONTRACTOR	UG	UNDERGROUND
GEN	GENERAL	UH	UNIT HEATER
GYP	GYPSUM BOARD	V	VENT (PLUMBING)
		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

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. 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.
3. COORDINATE ALL WASTEWATER FLOOR PENETRATIONS AND PIPING PENETRATIONS WITH STRUCTURAL PRIOR TO INSTALLATION. PIPING MAY BE OFFSET SLIGHTLY TO AVOID STRUCTURAL CONFLICTS.
4. 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.
5. 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	TW	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"
LAVATORY ∗	1/2"	–	1/2"	2"	1	1 1/2" ∗∗
SINK ∗∗∗	1/2"	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 (TEMPERED) 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.

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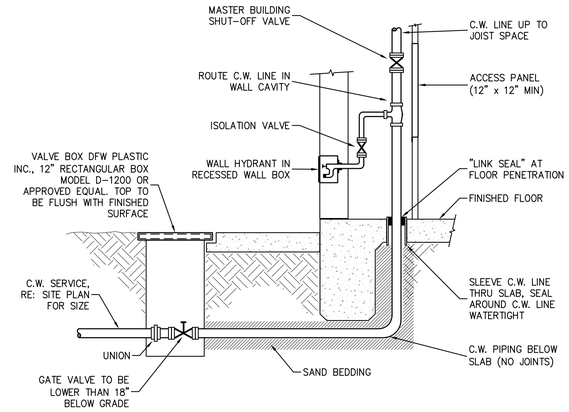
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SHEET TITLE

SCHEDULES, NOTES, AND LEGENDS - MECH/PLUMB

SHEET NUMBER

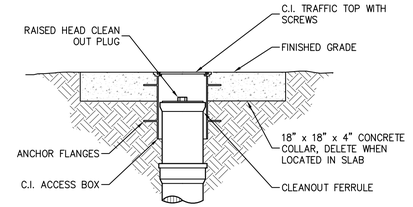
MP-1.1

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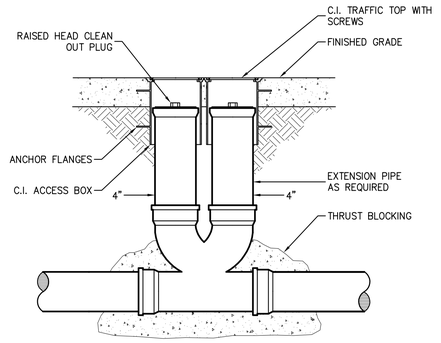
C.W. BUILDING ENTRY DETAIL

NO SCALE PDE52



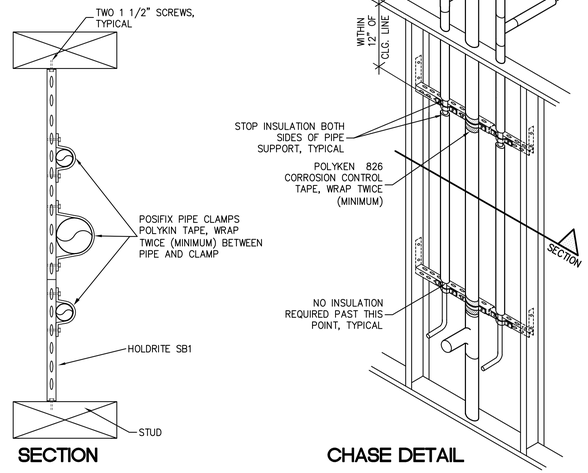
EXTERIOR CLEANOUT

NO SCALE PDE88



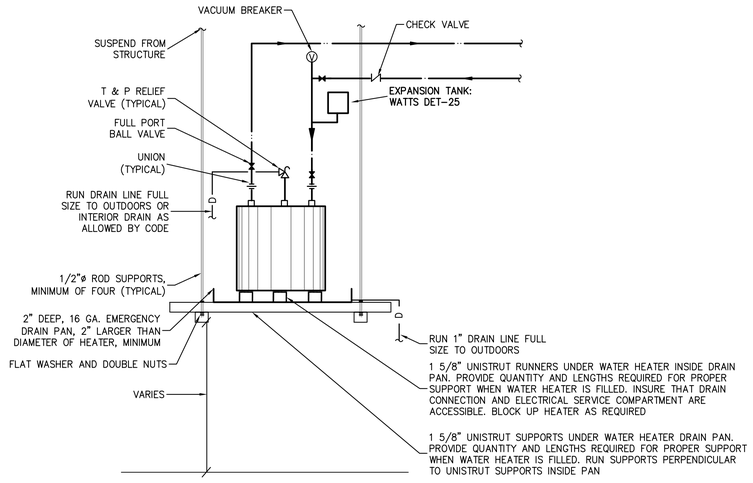
DOUBLE CLEANOUT DETAIL

NO SCALE PDE43



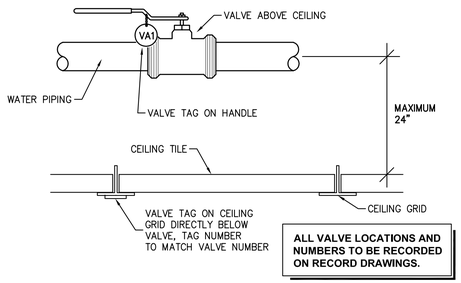
TYP. PLUMBING CHASE SUPPORT DETAIL

NO SCALE PDE30



SUSPENDED WATER HEATER DETAIL

NO SCALE PDE53



TYPICAL VALVE IDENTIFICATION DETAIL

SCALE: NO SCALE PDE27

MODE design company
109 S harris street round rock suite 200 texas 78664
ryan@modedc.us www.modedc.us
+1 512 733 1150

SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION
3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE
CONSTRUCTION DOCUMENTS
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: 11/17/2017

REFERENCE GENERAL NOTES ON SHEETS M1.1, P1.1 AND E1.1 FOR ADDITIONAL INFORMATION

HENDRIX CONSULTING ENGINEERS

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HCE job no.: 17-014

PROJECT NUMBER
15107-00
DATE ISSUED
11/17/2017
SHEET TITLE
DETAILS - MECHANICAL AND PLUMBING
SHEET NUMBER
MP-1.2

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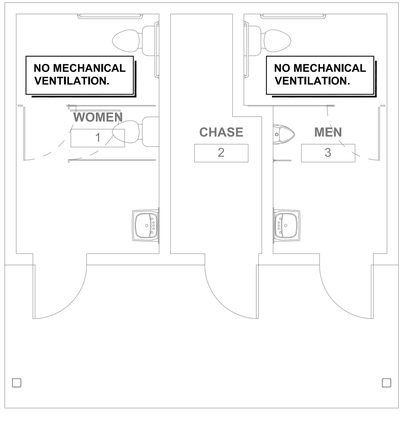
KEYED NOTES

THESE NOTES APPLY TO THIS SHEET ONLY

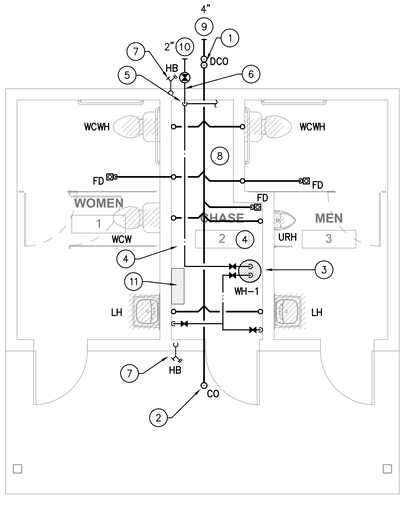
1. RE: DOUBLE CLEANOUT DETAIL ON PLUMBING DETAIL SHEET(S).
2. RE: EXTERIOR CLEANOUT DETAIL ON PLUMBING DETAIL SHEET(S).
3. WH-1: REFERENCE SCHEDULE AND DETAIL.
4. ALL UTILITIES IN CHASE TO BE RUN TIGHT TO WALLS TO ALLOW MAXIMUM ACCESS SPACE DOWN CENTER OF CHASE. RUN 2" CW MAIN DOWN EACH SIDE OF CHASE. PROVIDE SEPARATE SHUT-OFF VALVE FOR EACH SIDE IN ACCESSIBLE LOCATION.
5. PROVIDE MAIN BUILDING SHUT-OFF VALVE AT CW ENTRY TO CHASE. REFERENCE DETAIL.
6. RE: SIMILAR TO CW BUILDING ENTRY DETAIL ON PLUMBING DETAIL SHEET(S).
7. HOSE BIB FOR MAINTENANCE AND TO ASSIST IN DRAIN DOWN IN THE EVENT OF FREEZING TEMPERATURES.
8. REFERENCE PLUMBING FIXTURE CONNECTION SCHEDULE FOR ADDITIONAL INFORMATION.
9. CONNECT TO WASTEWATER (WW) STUB PROVIDED BY CIVIL. FIELD VERIFY EXACT LOCATION AND INVERT. PROVIDE ADAPTER AS REQUIRED TO MAKE SIZE AND/OR MATERIAL TRANSITION.
10. CONNECT TO COLD WATER (CW) STUB PROVIDED BY CIVIL. FIELD VERIFY EXACT LOCATION. PROVIDE ADAPTER AS REQUIRED TO MAKE SIZE AND/OR MATERIAL TRANSITION.
11. DO NOT ROUTE ANY PIPING ABOVE THIS AREA.

RESTROOM #1 LAYOUT IS TYPICAL FOR ALTERNATE RESTROOM #2.

UNIT HEATER IN CHASE PROVIDED BY ELECTRICAL CONTRACTOR. NO MECHANICAL SCOPE.



FREEZE PROTECTION IN CHASE ONLY. CHASE TO HAVE LID. FREEZE PROTECTION IN RESTROOMS NOT PROVIDED. PLUMBING MUST BE DRAINED.



01 FLOOR PLAN - MECHANICAL
SCALE: 1/4" = 1'-0"

02 FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"

MODE design company
109 S | harris street | round rock
suite 200 | texas 78664
ryan@modedc.us | www.modedc.us
+1 512 733 1150

SOUTHWEST WILCO PARK

WILLIAMSON COUNTY PARKS AND RECREATION
3005 CO RD 175, LEANDER, TX 78641

PROJECT PHASE
CONSTRUCTION DOCUMENTS
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: 11/17/2017

REFERENCE GENERAL NOTES ON SHEETS M1.1, P1.1 AND E1.1 FOR ADDITIONAL INFORMATION

HCE HENDRIX CONSULTING ENGINEERS

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HCE job no.: 17-014

PROJECT NUMBER
15107-00
DATE ISSUED
11/17/2017
SHEET TITLE

FLOOR PLANS - MECHANICAL AND PLUMBING

SHEET NUMBER

MP-2.1

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Autodesk Revit 2016 (U.S. English) Academic Use Only. © 2012

SECTION 004113 - BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

PART 1 - Bid Form - Stipulated Sum (Single-Prime Contract)

1.1 BID INFORMATION

A. Bidder: _____.

B. Project Name: Southwest Williamson Park Restroom(s).

C. Project Location: 3005 CR 175, Leander, TX 78641.

D. Owner: Williamson County Parks and Recreation.

E. Architect: MODE Design Company.

1.2 CERTIFICATIONS AND BASE BID

A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by MODE Design Company and Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:

1. _____ Dollars ($_____).

1.3 TIME OF COMPLETION

A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Architect, and shall fully complete the Work within_____ calendar days.

1.4 ACKNOWLEDGEMENT OF ADDENDA

A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

1. Addendum No. 1, dated _____.
2. Addendum No. 2, dated _____.
3. Addendum No. 3, dated _____.
4. Addendum No. 4, dated _____.

1.5 BID SUPPLEMENTS

A. The following supplements are a part of this Bid Form and are attached hereto.

1. Bid Form Supplement - Alternates.

1.6 CONTRACTOR'S LICENSE

A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in State of Texas, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

1.7 SUBMISSION OF BID

A. Respectfully submitted this ____ day of _____, 2018.

B. Submitted By:_____(Name of bidding firm or corporation).

C. Authorized Signature:_____(Handwritten signature).

D. Signed By:_____(Type or print name).

E. Title:_____(Owner/Partner/President/Vice President).

F. Witness By:_____(Handwritten signature).

G. Attest:_____(Handwritten signature).

H. By:_____(Type or print name).

I. Title:_____(Corporate Secretary or Assistant Secretary).

J. Street Address:_____.

K. City, State, Zip:_____.

L. Phone:_____.

M. License No.:_____.

N. Federal ID No.:_____(Affix Corporate Seal Here).

END OF SECTION 004113

SECTION 004323 - ALTERNATES FORM

PART 1 - Alternates Form

1.1 BID INFORMATION

A. Bidder: _____.

B. Prime Contract: _____.

C. Project Name: Southwest Williamson County Regional Park.

D. Project Location: 3005 COUNTY ROAD 175, LEANDER, TX 78641.

E. Owner: WILLIAMSON COUNTY PARKS AND RECREATION.

F. Architect: MODE DESIGN COMPANY.

G. Architect Project Number: 15107-00.

1.2 BID FORM SUPPLEMENT

A. This form is required to be attached to the Bid Form.

1.3 DESCRIPTION

A. The undersigned Bidder proposes the amount below be added to or deducted from the Base Bid if particular alternates are accepted by Owner. Amounts listed for each alternate include costs of related coordination, modification, or adjustment.

B. The Bidder shall be responsible for determining from the Contract Documents the affects of each alternate on the Contract Time and the Contract Sum.

C. Owner reserves the right to accept or reject any alternate, in any order, and to award or amend the Contract accordingly within 60 days of the Notice of Award unless otherwise indicated in the Contract Documents.

D. Acceptance or non-acceptance of any alternates by the Owner shall have no affect on the Contract Time unless the "Schedule of Alternates" Article below provides a formatted space for the adjustment of the Contract Time.

1.4 SCHEDULE OF ALTERNATES

A. Alternate No. 1: RESTROOM #1 - PREFABRICATED:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars ($_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.

B. Alternate No. 2: RESTROOM #2 - PER DRAWINGS:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars ($_____).

C. Alternate No. 3: COVERED STORAGE BUILDING PER DRAWINGS. SHEET A-2.0:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars ($_____).

D. Alternate No. 4:(2) STORAGE BUILDINGS PER DRAWINGS, SHEET A-3.0:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars ($_____).

1.5 SUBMISSION OF BID SUPPLEMENT

A. Respectfully submitted this ____ day of _____, 2018.

B. Submitted By:_____(Insert name of bidding firm or corporation).

C. Authorized Signature:_____(Handwritten signature).

D. Signed By:_____(Type or print name).

E. Title:_____(Owner/Partner/President/Vice President).

END OF SECTION 004323

AGREEMENT
BETWEEN OWNER AND CONTRACTOR

The **Owner**: Williamson County
710 Main Street, Ste. 101
Georgetown, Texas 78626

and **Contractor** _____
_____
_____ _____

for the **Project**: _____
_____
_____ _____

Architect: _____
_____
_____ _____

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 _____ (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**; and
h. The Drawings, Specifications, details and other documents developed by Architect to describe the Project and accepted by Owner, which are attached hereto **Exhibit 2**.

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 _____ (_____) 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 _____ (_____) 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 completion of the Work in accordance with the Contract Documents the amount 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 and such amount is not included in the Contract Price set out in 5.1 above. 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.

5.4 Allowable Overhead and Profit Markup on Changes in the Work. In case of an increase in the Contract Price due to a change in the Work and in accordance with § 7.3.7 of the General Conditions, the amounts Contractor may add to the pricing of a change for overhead and profit are as follows:

a. For Work performed directly by Contractor with its Own Employees: Contractor may add up to 15% for Work performed directly by Contractor for any specific change.

b. For Managing Subcontracted Work: Contractor may add up to 10% for managing subcontracted Work for any specific change.

Only one percentage, referenced above, shall be used for the purpose of calculating the markup for a specific change amount. On changes involving both additions and deletions,

the allowed markup will be allowed only on the net addition. The allowed markup shall cover all overhead expenses and profit of any kind relating to the specific change.

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:

_____
_____
_____ _____
Phone (512) _____
Fax (512) _____

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 Texas _____,
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 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. This 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, caused by certified acts of terrorism as defined in the Terrorism Risk Insurance Act, 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 shall include a waiver of subrogation in accordance with the requirements of Section 11.3.4 of the General Conditions.

C. 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 –DRAWINGS AND SPECIFICATIONS

FOR

_____

LIST OF DRAWINGS

DWG	DRAWING TITLE	ISSUE DATE

TABLE OF CONTENTS
For
TECHNICAL SPECIFICATION SECTIONS

DIVISION 1

END OF TECHNICAL SPECIFICATIONS

PROPOSAL AFFIDAVIT

This form must be completed, signed, notarized and returned with Proposal package

The undersigned attests that the company named below, under the provisions of Subtitle F, Title 10, Texas Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.001, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and
2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit

The undersigned certifies that the RFSCP and the Respondent's Proposal have been carefully reviewed and are submitted as correct and final. Respondent further certifies and agrees to furnish any and/or all goods and/or services upon which prices are extended at the price Proposal, and upon the conditions contained in the RFSCP.

I hereby certify that the foregoing Proposal has not been prepared in collusion with any other Respondent or other person or persons engaged in the same line of business prior to the official opening of this Proposal. Further, I certify that the Respondent 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 Proposal on, or to influence any person or persons to submit a Proposal or not to submit a Proposal thereon."

Name of Respondent:	
Address of Respondent:	
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 Proposal will in no way have a negative impact on the County's evaluation of the Proposal.

☐	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 Respondent 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 Respondent*) and have been duly authorized to execute the foregoing on behalf of the said _____ (*Name of Respondent*).

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.

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.

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:

Question and Answers for Bid #1802-215 - Additional Facilities at Southwest Williamson County Regional Park

Overall Bid Questions
There are no questions associated with this bid.

Commissioners Court - Regular Session **41.**

Meeting Date: 02/20/2018

FuelMaster Agreement with Syn-Tech Systems, Inc.

Submitted For: Randy Barker **Submitted By:** Dianne West, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on approving the Fuel System Management Extended Maintenance Agreement (FuelMaster) with Syn-Tech Systems, Inc. for software and hardware support, in the amount of $10,791, for the term of 3/23/18-3/22/19, and authorizing the execution of the agreement.

Background

This is the fuel management system (FuelMaster) used by Williamson County Fleet Department to track and dispense fuel to County vehicles. The funding source for this contract agreement is 004500 and 004505 - Maintenance Contracts/Software Maintenance and was approved in FY 2018 budget.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

FuelMaster

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:25 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:53 AM
Form Started By: Dianne West		Started On: 02/14/2018 10:58 AM
Final Approval Date: 02/15/2018		

FUELMASTER

ENGINEERED BY syntech

FUELMASTER® Fuel Management System

Extended Maintenance Agreement

The FUELMASTER® Fuel Management Systems Extended Maintenance Agreement is made and entered into on this day of **12/29/2017** Tallahassee, Florida, by and between SYN-/ECH SYSTEMS, INCORPORATED, (STS), a Florida Corporation having a principal place of business at 100 Four Points Way, Tallahassee, Florida 32305 and:

WILLIAMSON COUNTY

This initial term of this agreement shall commence as of **3/23/2018** and shall continue for a term expiring **3/22/2019** at which time the services will be automatically renewed unless otherwise directed by the customer. Customer will have the option to accept or terminate the services when invoiced.

The FUELMASTER® Maintenance Agreement provides a means of extending the normal one-year warranty that all FUELMASTER® customers receive. It covers parts and telephone support labor for all FUELMASTER® components, both software ad hardware, and provides free updates software/firmware, upon request. The customer will be sent replacement parts and a pre-paid label to return the defective parts. The customer must return the defective parts within seven business days. Support hours are 8:00 AM – 8:00 PM local time, Monday through Friday, excluding New Year's Day, Memorial Day, 4th of July, Labor Day, Veteran's Day, and Thanksgiving Day, the day after Thanksgiving, Christmas Eve, and Christmas Day.

WILLIAMSON CO - CENTRAL MAINT	8309	FMU-2500PLUSG	$1175
WILLIAMSON CO - CENTRAL MAINT	8305	FMU-2500PLUSG	$1175
WILLIAMSON CO - CEDAR PARK	9986	FMU-2500PLUSG	$1175
WILLIAMSON CO - GRANGER	8314	FMU-2500PLUSG	$1175
WILLIAMSON CO - FLORENCE	8312	FMU-2500PLUSG	$1175
WILLIAMSON CO - TAYLOR	8315	FMU-2500PLUSG	$1175
WILLIAMSON CO - CENTRAL MAINT	9987	FMU-2500PLUSG	$1175
WILLIAMSON CO - ROUND ROCK	9985	FMU-2500PLUSG	$1175
WILLIAMSON CO - CENTRAL MAINT	9958	FMU-2501PLUSG	$1175
WILLIAMSON CO - CENTRAL MAINT	8306	FMU-2501PLUSG	$1175

$11750

DISCOUNT -$1199

TOTAL $10791

THERE IS *A LATE FEE OF $25.00 A MONTH PER UNIT UP TO SIX MONTHS OR A MAXIMUM OF $150.00.* AFTER SIX MONTHS, THERE IS AN AMNESTY FEE OF $150.00 THAT INCLUDES VERIFICATION OF THE FUNCTIONALITY OF THE SYSTEM.- MULTIPLE YEARS OF MAINTENANCE MAY BE PURCHASED AT THE CURRENT RATE, BUT ALL YEARS MUST BE PURCHASED IN ADVANCE WITH ONE PAYMENT.

Syn-Tech Systems, Inc will provide at no additional charge Certificates of Insurance naming your company as a Certificate Holder.

Syn-tech Systems, Inc. recognizes the confidentiality of each customer's software and database information, and will not disclose this information to any third party. Syn-tech Systems, Inc. is certified by Payment Industries Standards to PA-DSS requirements and all data must be securely maintained.

Organizations under maintenance contract are provided a toll free number and have access to FUELMASTER® technicians to assist in FUELMASTER® operations and diagnostics.
Software updates will be provided free of charge upon request. The exception to this is for those system operators with customized software. Each customized program will have to be quoted on an individual basis. Customers with Extended Maintenance will only pay for the customization. The customer can make the decision as to whether he prefers to maintain his current system or update to the new software/firmware. Changes in hardware are not covered by this agreement.

Under terms of this agreement, FUELMASTER® technicians will telephonically diagnose problems with the assistance of the customer to determine warrantable conditions, and possible problem solutions. Syn-Tech will replace all defective parts and provide telephonic assistance to the customer in installation of replacement parts to allow the unit to be repaired as expeditiously as possible. Please note that FUELMASTER® was designed in a modular manner to provide easy and rapid exchange of parts, even by non-technical personnel. Other fuel management systems are not designed this way and consequently does not offer warranties comparable to FUELMASTER®. This agreement does not cover site visits by FUELMASTER® technicians for repair.

Please note that damage resulting from acts of God, user abuse, accidents, faulty installation or operation is not covered under the warranty. This warranty specifically excludes any indirect, special, or consequential damages to include, but not limited to, loss of product, profit, or litigation fees. Additionally, associated equipment including valves, pulsers, printers, personal computers, pumps, oilers, dispensers, and other items not manufactured by Syn-Tech, are warranted only to the extent covered by the original manufacturer. Additionally, warranty is limited to approve locations (generally the United States of America) and is not transferable except by written permission of Syn-Tech Systems, Inc.

- 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.

- Termination for Convenience: This agreement may be terminated at any time at the option of either party, without future or prospective liability for performance upon giving thirty (30) days written notice thereof. In the event of termination, The County will only be liable for its pro rata share of services rendered and goods actually received.

- 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.

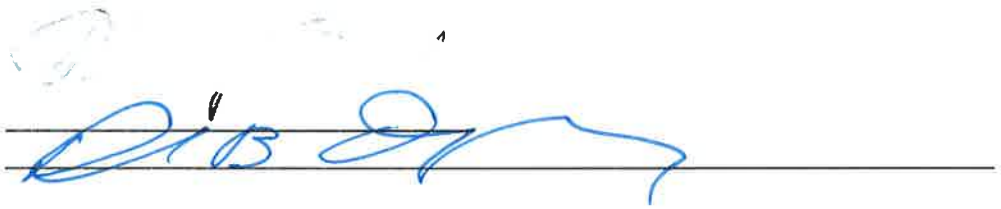
- Mediation: The parties agree to use mediation for dispute resolution prior to and formal legal action being taken on this Contract.

- Venue and Governing Law: Venue of this contract shall be Williamson County, Texas, and the law of the State of Texas shall govern.

- Right to Audit: Syn-Tech Systems, Inc agrees that licensee or its duly authorized representatives shall, until the expiration of three (3) years after final payment under this Agreement, have access to and the right to examine and photocopy any and all books, documents, papers and records of Syn-Tech Systems, Inc which are directly pertinent to the services to be performed under this Agreement for the purposes of making audits, examinations, excerpts, and transcriptions. Syn-Tech Systems, Inc agrees that licensee shall have access during normal working hours to all necessary Syn-Tech Systems, Inc facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. licensee shall give Syn-Tech Systems, Inc reasonable advance notice of intended audits.

The parties deem this agreement to be executed by their duly authorized representatives on the Agreement date.

SYN-TECH SYSTEMS, INCORPORATED:



(Signature)

David Oglesby

(Name)

Contracts Administrator

(Title)

CUSTOMER:

_____

(Company)

_____

(Signature)

_____
(Name)

_____
(Title)

_____ _____
(Telephone Number) (Fax Number)

_____
(Email Address, if applicable)

Commissioners Court - Regular Session **42.**

Meeting Date: 02/20/2018

Tyler Technologies Jury Web Portal Amendment

Submitted For: Randy Barker **Submitted By:** Dianne West, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on approving an Amendment to the Tyler Technologies Agreement to add Exhibit A pricing in the amount of $27,179 to the End User License Agreement and Professional Services Agreement for Jury Web Portal software and Project Management support, and authorizing the execution of the Amendment.

Background

This Jury Portal Amendment has been approved by the Commissioner's Court for the 2017/2018 District Clerk budget, line item 5741 - Computer Software.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Tyler Technologies Jury Web Portal Amendment

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:27 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:53 AM
Form Started By: Dianne West		Started On: 02/14/2018 01:40 PM
Final Approval Date: 02/15/2018		

AMENDMENT

This amendment ("Amendment") is made as of the date of last signature below (the "Amendment Effective Date") by and between Tyler Technologies, Inc. ("Tyler") and Williamson County, Texas ("End User").

WHEREAS, Tyler and End User are parties to that certain End User License Agreement and Professional Services Agreement dated September 14, 2011 (the "Agreement"); and

WHEREAS, Tyler and End User desire to amend the Agreement in certain respects as further set forth herein.

NOW THEREFORE, in consideration of the mutual promises hereinafter contained, Tyler and End User agree as follows:

1. The Licensed Software detailed in the attached Amendment Exhibit A is hereby added to the Agreement. Upon the Amendment Effective Date, End User shall pay Tyler the License Fees for the Licensed Software added hereby.

2. Upon the Amendment Effective Date, the Licensed Software added hereby shall become subject to the current Maintenance and Support Services Agreement and End User shall pay the Maintenance and Support Fees detailed on the attached Amendment Exhibit A on a prorated basis through the end of End User's current term, and thereafter, annually in advance in accordance with the current Maintenance and Support Services Agreement.

3. The Professional Services detailed in the attached Amendment Exhibit A are hereby added to the Agreement. Professional Services fees shall be invoiced to End User as delivered, on a time and materials basis.

4. Tyler shall invoice End User for travel expenses as such expenses are incurred.

5. This Amendment shall be governed by and construed in accordance with the terms and conditions of the Agreement.

6. All other terms and conditions of the Agreement shall remain in full force and effect. Except as defined herein or otherwise required by the context herein, all defined terms used in this Amendment have the meaning set forth in the Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the dates set forth below.

Tyler Technologies, Inc.	**Williamson County, Texas**
By: [signature]	By:
Name: BRUCE GRAHAM	Name:
Title: PRESIDENT, COJ	Title:
Date: 2/9/2018	Date:

Amendment Exhibit A

SOFTWARE PRODUCTS	LICENSE FEE	ANNUAL M&S INCREASE
Jury Web Portal	$20,000	$4,200
LICENSE FEE PAYMENT TERMS 100% upon Amendment Effective Date	TOTAL LICENSE FEE $20,000	ANNUAL M&S INCREASE $4,200
		MAINT. EFFECTIVE DATE **Upon Amendment Effective Date**

PROFESSIONAL SERVICES	HOURS	RATE/HR.	T&M AMOUNT
Project Management	2	180.00	$360
Deployment	16	165.00	$2,640
Setup, Configuration & Consulting	16	150.00	$2,400
Initial Training	8	150.00	$1,200
		EST. TRAVEL EXPENSE	$579
		TOTAL T&M SERVICES	$7,179

TOTAL LIC & SERVICES
$27,179

Commissioners Court - Regular Session **43.**

Meeting Date: 02/20/2018

Service Contract for HVAC Units at Juvenile Facility

Submitted For: Randy Barker **Submitted By:** Johnny Grimaldo, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on approving the agreement between Mtech and Williamson County for RTU Replacement at the Williamson County Juvenile Facility in the amount not to exceed $75,000.00 pursuant to TIPS contract #1032615.

Background

Mtech will disconnect and remove (5) rooftop units, provide and install (5) new rooftop units with matching capacity and perform work to satisfy the completion of the project. This expenditure will be charged to 01.0100.1045.005300 which was approved as a capital improvement for FY2018.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

Service Contract

MTECH QUOTE TIPS Contract

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:27 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:53 AM
Form Started By: Johnny Grimaldo		Started On: 02/15/2018 08:37 AM
Final Approval Date: 02/15/2018		

THE STATE OF TEXAS §

COUNTY OF WILLIAMSON §

SERVICES CONTRACT
FOR HVAC UNITS
(Juvenile Facility)
(TIPS #1032615)

Important Notice: County Purchase Orders and Contracts constitute expenditures of public funds, and all vendors are hereby placed on notice that any quotes, invoices or any other forms that seek to unilaterally impose contractual or quasicontractual terms are subject to the extent authorized by Texas law, including but not limited to Tex. Const. art. XI, § 7, the Texas Government Code, the Texas Local Government Code, the Texas Transportation Code, the Texas Health & Safety Code, and Opinions of the Texas Attorney General relevant to local governmental entities.

THIS 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 **Mtech Comfort Systems USA** (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.

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 agreement and shall in no manner incur any expense or liability on behalf of The County other than what may be expressly allowed under this agreement. 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. Service Provider agrees to indemnify, hold harmless, and defend The County against any claim,

demand, loss, injury, damages, action, or liability of any kind against The County resulting from any services Service Provider perform on behalf of The County.

II.

No Waiver of Sovereign Immunity or Powers: Nothing in this agreement 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.

III.

No Assignment: Service Provider may not assign this contract.

IV.

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.

V.

Consideration and Compensation: Service Provider will be compensated based on the attached Fee Proposal, dated February 6, 2018, which is marked as Exhibit "A" and incorporated herein as if copied in full. **The not-to-exceed amount under this agreement is $75,000.00, 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.

VI.

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*)	$1,000,000	$1,000,000
Aggregate policy limits:		$2,000,000

d. 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

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.

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.

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 or she is not an employee of The County. The

services include, but are not limited to the following items in order to complete the project:

As described in the Fee Proposal with Scope of Work for Installation, dated **February 6, 2018**, which is incorporated herein as if copied in full.

IX.

Good Faith Clause: Service Provider agrees to act in good faith in the performance of this agreement.

X.

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.

XI.

Termination: This agreement may be terminated at any time at the option of either party, without *future or prospective* liability for performance upon giving thirty (30) days written notice thereof.

XII.

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.

XIII.

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 period for the specific project and shall terminate upon project completion or when terminated pursuant to paragraph XI above.

XIV.

Severability: In case any one or more of the provisions contained in this agreement 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 agreement and this agreement shall be construed as if such invalid, illegal, or unenforceable provision had never been contained in it.

XV.

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 Agreement, 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 Agreement 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.

XVI.

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 the signatures of all parties in duplicate originals this the _____ day of _____, 2018.

WILLIAMSON COUNTY:

_____
Authorized Signature

SERVICE PROVIDER:

_____
Authorized Signature

Exhibit "A"
Quote Dated February 6, 2018, which is incorporated herein as if copied in full.

Mtech
Commercial HVAC · Plumbing · Electrical
COMFORT SYSTEMS USA

1720 Royston Lane
Round Rock, TX 78664
Phone: (512) 929-7090
Fax: (512) 929-7197
TACLA20760C / M 8751 / TECL 29725
ITBs to: mtech-itb@csusa.us

QUOTE TO: **Williamson County** **DATE:** **February 6, 2018**
FOR THE PROJECT: **New Juvenile Facility Williamson County RTU Replacement**
ATTENTION: **Toby Bonnet**
EMAIL: tbonnet@wilco.org

NEW JUVENILE FACILITY WILLIAMSON COUNTY – HVAC QUOTE

TIPS Contract #1032615

We offer the following proposal for your consideration for the HVAC scope of work on the above referenced project. Subject to the following scope narrative, exclusions & clarifications

HVAC PRICING: **$ 75,000.00**

INCLUDED IN HVAC PRICE:

1. Disconnect and remove (5) rooftop units
2. Provide and install (5) new rooftop units with matching capacity
3. Reconnect condensate and gas
4. (5) Curb adaptors
5. Dispose of existing rooftop units as required by owner
6. Filters
7. Equipment hoisting
8. Equipment labels
9. Start-up of equipment
10. One year standard warranty

NOT INCLUDED IN PRICE:

1. Equipment service or maintenance, except for warranty purposes
2. Permits
3. Wage scale
4. Smoke detectors
5. Service platforms – see add
6. Test and balance – see add
7. Dampers
8. Electrical / line voltage wiring (above 24v) / motor starters and/or disconnects
9. Lightening or ground protection
10. Controls
11. Fire protection
12. Roof work
13. Delays beyond Mtech's control
14. Structural engineering or structural supports / angle iron framing / structural steel
15. Painting of equipment or material beyond factory finishes

16. Allowances / alternates not specifically noted above
17. Curb sound attenuation or board/batt insulation
18. Repairs to existing material or equipment not specifically noted above
19. Engineering work of any kind
20. 3rd Party testing of any kind not specifically noted above
21. 3rd Party commissioning agent fees
22. 3rd Party duct cleaning
23. Taxes

Bart Hoover
Chief Estimator
512-908-1069
bart.hoover@csusa.us

PROPOSAL IS SUBJECT TO AND CONDITIONED UPON EACH OF THE FOLLOWING:
1. *APPROVAL OF CONTRACTOR'S CREDIT BY MECHANICAL TECHNICAL SERVICES, L.P. AND/OR RECEIPT OF A CERTIFICATE SHOWING A PAYMENT BOND IS IN PLACE FOR THE BENEFIT OF ALL SUBCONTRACTORS.*
2. *THE EXECUTION BY BOTH PARTIES OF A DEFINITIVE WRITTEN CONTRACT.*

NOTE: We may withdraw quote if not accepted within 30 days.
Regulated by the Texas Department of Licensing and Regulation, PO Box 12157, Austin, TX. 78711 1-800-803-9202, 512-463-6599

1720 Royston Lane
Round Rock, TX 78664
Phone: (512) 929-7090
Fax: (512) 929-7197
TACLA20760C / M 8751 / TECL 29725
ITBs to: mtech-itb@csusa.us

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FOR THE PROJECT: **New Juvenile Facility Williamson County RTU Replacement**
ATTENTION: **Toby Bonnet**
EMAIL: tbonnet@wilco.org

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10. Controls
11. Fire protection
12. Roof work
13. Delays beyond Mtech's control
14. Structural engineering or structural supports / angle iron framing / structural steel
15. Painting of equipment or material beyond factory finishes

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20. 3rd Party testing of any kind not specifically noted above
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Bart Hoover
Chief Estimator
512-908-1069
bart.hoover@csusa.us

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1. *APPROVAL OF CONTRACTOR'S CREDIT BY MECHANICAL TECHNICAL SERVICES, L.P. AND/OR RECEIPT OF A CERTIFICATE SHOWING A PAYMENT BOND IS IN PLACE FOR THE BENEFIT OF ALL SUBCONTRACTORS.*
2. *THE EXECUTION BY BOTH PARTIES OF A DEFINITIVE WRITTEN CONTRACT.*

NOTE: We may withdraw quote if not accepted within 30 days.

Commissioners Court - Regular Session **44.**

Meeting Date: 02/20/2018

IFB# 1802-216 Cast in Place Concrete Materials and Labor

Submitted For: Randy Barker **Submitted By:** Johnny Grimaldo, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on authorizing the Purchasing Agent to advertise and receive sealed bids for Cast in Place Concrete Materials and Labor under IFB #1802-216.

Background

Williamson County is seeking qualified companies to provide general roadway cast-in-place concrete work (material and labor) in accordance with Items 421, 423, 432, 465, 466, 467, 496, 529, and 531 of the Texas Department of Transportation, Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges 2014. This is a one (1) year contract with two (2) annual renewals. The budgeted amount is $500,00.00

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

IFB# 1802-216 Bid Packet

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:16 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:19 AM
Form Started By: Johnny Grimaldo		Started On: 02/15/2018 08:48 AM
Final Approval Date: 02/15/2018		

Solicitation 1802-216

Cast in Place Concrete Materials and Labor

Bid Designation: Public



Williamson County, Texas

Bid 1802-216
Cast in Place Concrete Materials and Labor

Bid Number	1802-216
Bid Title	Cast in Place Concrete Materials and Labor
Bid Start Date	In Held
Bid End Date	Mar 15, 2018 3:00:00 PM CDT
Question & Answer End Date	Mar 9, 2018 5:00:00 PM CST
Bid Contact	Johnny Grimaldo Purchasing Specialist II 512-943-1553 johnny.grimaldo@wilco.org
Contract Duration	1 year
Contract Renewal	2 annual renewals
Prices Good for	365 days
Bid Comments	**Williamson County is seeking qualified companies to provide general roadway cast-in-place concrete work (material and labor) in accordance with Items 421, 423, 432, 465, 466, 467, 496, 529, and 531 of the Texas Department of Transportation, Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges 2014.**

Item Response Form

Item	1802-216-01-01 - please attach all documents to this line item
Quantity	1 each

Prices are not requested for this item.

Delivery Location: Williamson County, Texas
No Location Specified

Qty 1

Description
please attach all documents to this line item

PUBLIC ANNOUNCEMENT AND GENERAL INFORMATION

WILLIAMSON COUNTY PURCHASING DEPARTMENT
SOLICITATION 1802-216
Cast in Place Concrete Materials and Labor

BIDS MUST BE RECEIVED ON OR BEFORE:
Mar 15, 2018 3:00:00 PM CDT

BIDS WILL BE PUBLICLY OPENED:
Mar 15, 2018 3:00:00 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.

Williamson County – Invitation for Bid (IFB)

SECTION 1 - DEFINITIONS

Addendum/Addenda – means any written or graphic instruments issued by the County prior to the consideration of Bids which modify or interpret the Bid Documents by additions, deletions, clarifications, or corrections.

Agreement/Ensuing Agreement(s) – means the Successful Bidder may be required by the County to sign an additional Agreement containing terms necessary to ensure compliance with the IFB and the Bidder's Bid. Such Ensuing Agreement(s) shall contain the Bid specifications, terms and conditions that are derived from the IFB.

Bid Documents – means the Legal Notice, IFB including attachments, and any Addenda issued by the County prior to the consideration of any Bids.

Bid – means the completed and signed bid form, (sometimes referred to as the Price Sheet), and ALL required forms and documentation listed in the IFB package which have been submitted in accordance with the terms and conditions described in the IFB package. A Bid submitted in accordance with this IFB is irrevocable during the specified period for evaluation and acceptance of Bids unless a waiver is obtained from the Williamson County Purchasing Agent.

Bidder – means a person or entity who submits a Bid in response to this IFB.

Contract – means this IFB and the Bid of the Successful Bidder shall become a Contract between the Successful Bidder and the County once the Successful Bidder's Bid is properly accepted by the Williamson County Commissioners Court.

Commissioner's Court – means the Williamson County Commissioners Court.

County – means Williamson County, a political subdivision of the State of Texas.

Invitation for Bid (IFB) – means this document, together with the attachments thereto and any future Addenda issued by the County.

Successful Bidder – means the liable Bidder to whom the County intends to award the Contract.

SECTION 2 - BID FORMAT AND SUBMISSION

2.1 ORGANIZATION OF BID CONTENTS FOR SUBMITTAL

Each Bid should be organized and items submitted in the order described below:

A. Transmittal Letter. Please see Section 2.3, Transmittal Letter, for more information.

B. Price Sheet.

C. Conflict of Interest Questionnaire. Please see Section 2.2, Conflict of Interest, for more information in regards to this. Please note that even if you deem there to be no Conflict of Interest, this signed questionnaire must be included in your package.

D. References. Please see Section 3.15, References, for more information.

E. Bid Affidavit.

F. Form 1295. Please see Section 2.4, Certificate of Interested Parties – Form 1295.

2.2 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 Bidders 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 Bidder must disclose any existing or potential conflict of interest relative to the performance of the requirements of this IFB. **Examples of potential conflicts of interest may include an existing business or personal relationship between the Bidder, 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 IFB**. Similarly, any personal or business relationship between the Bidder, 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 Bid disqualification.

By submitting a Bid in response to this IFB, all Bidders 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 Bidder must provide a Conflict of Interest Statement with their Bid Package. Package may be deemed incomplete without this form.

2.3 TRANSMITTAL LETTER

The Bidder should submit a Transmittal Letter that provides the following information:

A. Name and address of individual or business entity submitting the Bid.

B. Name, physical address, email address, business and fax number of the Bidder's principal contact person regarding all contractual matters relating to this IFB.

C. The Bid's Federal Employer Identification Number.

D. 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 4.36, Air Quality for more information.

2.4 CERTIFICATE OF INTERESTED PARTIES – FORM 1295

As of January 1, 2016, all Successful Bidders 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 Bidder unless the Bidder submits a disclosure of interested parties to the County at the time the Bidder 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 Bidder 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.

2.5 ETHICS

The Bidder 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.

2.6 BID SUBMITTAL DEADLINE

The Bid is due no later than the submittal date and time set forth in the Public Announcement and General Information listed in this IFB package. Contents of each Bid shall be submitted in accordance with this IFB.

2.7 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 publically and the names of Bidders and pricing will be read aloud.

SECTION 3 - INSTRUCTIONS AND GENERAL REQUIREMENTS

3.1 INSTRUCTIONS

Read this document carefully, and follow all instructions and requirements. All Bidders are responsible for fulfilling all requirements and specifications. Be sure to have a clear understanding of this IFB.

General requirements apply to all advertised IFBs; however, these may be superseded, in whole or in part, by the bid specifications, Addenda and modifications issued as a part of this IFB. Be sure your Bid package is complete.

3.2 AMBIGUITY, CONFLICT, OR OTHER ERRORS IN THIS IFB

If a Bidder discovers any ambiguity, conflict, discrepancy, omission or other error in this IFB, the Bidder 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 Bidder fails to notify the County prior to the date and time fixed for submission of Bids of an error or ambiguity in the IFB known to the Bidder, or an error or ambiguity that reasonably should have been known to the Bidder, then the Bidder shall be deemed to have waived the error or ambiguity or its later resolution.

The County may also modify the IFB, no later than forty-eight (48) hours prior to the date and time fixed for submission of Bids, by issuance of an Addendum. All Addenda will be numbered consecutively, beginning with one (1).

3.3 NOTIFICATION OF MOST CURRENT ADDRESS

All Bidders in receipt of this IFB 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 Bids.

3.4 SIGNATURE OF BIDDER

A. If the Bidder is a Corporation or Limited Liability Company, the legal name of the Corporation 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 Bidder 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 Bidder is a Limited Partnership, the name of the Limited Partner's General Partner shall provided with the signature of the officer authorized to sign on behalf of the General Partner.

D. If the Bidder 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 Bidder operates business under an Assumed Business Name, the Bidder must have on file with the Williamson County Clerk a current Assumed Name Certificate and provide a file marked copy of same.

3.6 BID OBLIGATION

The contents of the IFB, Bid, and any clarification thereof submitted by the Successful Bidder shall become part of the contractual obligation and incorporated by reference into the Contract and any Ensuing Agreement(s).

3.7 COMPLIANCE WITH IFB SPECIFICATIONS

It is intended that this IFB describe the requirements and the Bid format in sufficient detail to secure comparable Bids. Failure to comply with all provisions of the IFB may, at the sole discretion of the County, result in disqualification.

3.8 WITHDRAWAL OF BID

The Bidder may withdraw its Bid by submitting a written request with the company letterhead and the signature of an authorized individual, as described in Section 3.4, Signature of Bidder, to the Williamson County Purchasing Department any time prior to the submission deadline.

The Bidder may submit a new Bid prior to the deadline. Alterations of the Bid in any manner will not be considered if submitted after the deadline. Withdrawal of a Bid after the deadline will be subject to written approval of the Williamson County Purchasing Agent.

3.9 EVALUATION AND AWARD

The County reserves the right to use all pertinent information (also learned from sources other than disclosed in the Bid process) that might affect the County's judgment as to the appropriateness of award to the lowest and best evaluated Bid. This information may be appended to the Bid evaluation process results. Information on a Bidder from reliable sources, and not within the Bidder's Bid, may also be noted and made part of the evaluation file. The County shall have sole discretion for determining the reliability of the source.

To ensure the proper and fair evaluation of a solicitation, the County prohibits unsolicited communication initiated by the Bidder to the County Official or Employee evaluating or considering the Bids prior to the time an award has been made. Unsolicited communication may be ground for disqualifying the offending Bidder from consideration or award of the solicitation, or any future solicitation.

Communication between the Bidder and the County will be initiated by the appropriate County Official Employee in order to obtain information or clarification needed to develop a proper and accurate evaluation of the solicitation.

The County intends to award a Contract to the most responsible and responsive Bidder whose Bid will be most advantageous to the County. In accordance with Texas Government Code and Local Government Code, the County may consider, to the extent allowed by law, the following:

A. Price;
B. The Bidder's experience and reputation;
C. Quality of the Bidder's goods and/or services;
D. The Bidder's safety record;
E. The Bidder's proposed personnel;
F. The Bidder's financial capabilities; and
G. Any other relevant factors specifically listed in this IFB or authorized by law.

3.10 CONDISERATION OF LOCATION OF PRINCIPAL OFFICE

Pursuant to Texas Local Government Code, Section 271.905, in purchasing any real property or personal property that is not affixed to real property, if the County receives one or more Bids from a Bidder whose principal place of business is in Williamson County and whose Bid is within three (3) percent of the lowest Bid price received by the County from a Bidder who is not a resident of Williamson County, the County may enter into a contract with:

A. The lowest Bidder; or the Bidder whose principal place of business is in Williamson County if the Commissioners Court determines, in writing, that the local Bidder offers the County the best combination of contract price and additional economic development opportunities Williamson County created by the contract award, including the employment of residents Williamson County and increased tax revenues to Williamson County.

3.11 REJECTION OR ACCEPTANCE.

It is understood that the Commissioners Court of Williamson County, Texas, reserves the right to accept or reject any and/or all Bids for any or all goods and/or services covered in this IFB, and to waive informalities or defects in the Bid or to accept such Bid, if it shall deem to be in the best interest of the County.

Awards should be made approximately sixty (60) business days after the Bid opening date. Results may be obtained by viewing the Williamson County vendor portal at the following link:

http://www.wilco.org/CountyDepartments/Purchasing/SearchforaPastBid/tabid/5213/language/en-US/Default.aspx

3.12 RESPONSIBILITY

It is expected that a prospective Bidder will be able to affirmatively demonstrate responsibility. A prospective Bidder 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 Bidder's ability to meet these minimum standards listed above.

3.13 FIRM PRICING

For unit price items, all of the items listed are to be on a “per unit” basis, stating a firm price per unit or unit quantity of each item. The Bidder must submit a firm price that must be good from the date of Bid opening for the fixed period of time set out in this IFB. Unless the IFB expressly states otherwise, this period shall be until the end of the Initial Contract Period.

Bids which do not state a fixed price, or which are subject to change without notice, will not be considered. The Court may award a Contract for the period implied or expressly stated in the lowest and best Bid.

3.14 PURCHASE ORDERS

If required by the Williamson County Purchasing Department, a purchase order(s) may be generated to the Successful Bidder 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.

3.15 SILENCE OF SPECIFICATIONS

The apparent silence of these 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.

3.16 REFERENCES

The County may require the Bidder to supply a list of at least three (3) references where like services and/or goods have been supplied by their firm within the past five (5) years, to include names, titles, phone numbers and email addresses of key personnel, and dates of performance.

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, if requested, should be provided in accordance with this IFB. Bid may not be deemed complete without the inclusion of requested references.

SECTION 4 - TERMS AND CONDITIONS

4.1 VENUE AND GOVERNING LAW

The Bidder hereby agrees and acknowledges that venue and jurisdiction of any suit, right, or cause of action arising out of or in connection with this IFB, 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 IFB, the Contract and any Ensuing Agreement(s) is governed by the laws of the United States, this IFB, 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 IFB and its Addenda (if applicable), and the Bidder's Bid. 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 IFB and its Addenda (if applicable); and

   2. The Bidder's Bid.

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 IFB and its Addenda (if applicable), and the Bidder's Bid, applicable documents will be referred to for the purpose of clarification or for additional detail in the following order of precedence:

   1. Terms and conditions of the Ensuing Agreement;

   2. The IFB its Addenda; and

   3. The Bidder's Bid.

4.3 OWNERSHIP OF BID

Each Bid shall become the property of the County upon submittal and will not be returned to Bidders unless received after the submittal deadline.

4.4 DISQUALIFICATION OF BIDDER

Upon signing and submittal of the Bid, a Bidder offering to sell supplies, materials, services, or equipment to the County, certifies that the Bidder 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 in such line of business. Any or all Bids may be rejected if the County believes that collusion exists among the Bidders.

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 Bidders 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 Bidder may not assign, sell, or otherwise transfer the Contract or any other rights or interests obtained under the Contract without written permission of 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 IFB, but are necessary to provide the functional capabilities described by the Bidder, shall be implied and deemed to be included in the Bid.

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 Bidder breaches any of the Bid specifications, terms and conditions, including warranties of the Bidder, if any, or if the Successful Bidder 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 in equity or as may otherwise 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 Bidder. 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 Bidder 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 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 Bidder 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 Bidder fails to meet pursuant to the requirements set out herein. In the event the Successful Bidder 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 Bidder.

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 Bidder does not desire proprietary information in the Bid 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 Bidder, 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 Bidder.

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 IFB or in the Bidder's Bid 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 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 Bidder 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 Bidder, which are directly pertinent to the services to be performed or goods to be delivered for the purposes of making audits, examinations, excerpts and transcriptions. The Successful Bidder 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 Bidder 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 IFB, 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 Bidder to be in breach and terminate the Contract and/or any Ensuing Agreement(s).

4.13 BID PREPARATION COSTS

The cost of developing Bids is the sole responsibility of the Bidders and shall not be charged to the County. There is no expressed or implied obligation for the County to reimburse the Bidders for any expense incurred in preparing a Bid in response to this IFB and the County will not reimburse the Bidders for such expenses.

4.14 INDEMNIFICATION

The Successful Bidder 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 Bidder, its agents, servants or employees, performed hereunder that result from the negligent act, error, or omission of the Bidder or any of the Bidder agents, servants or employees, as well as all claims of loss or damage to the Bidder's and the County property, equipment, and/or supplies.

Furthermore, the County, its officials, employees, agents and agents' employees shall not be liable for damages to the Successful Bidder arising from any act of any third party, including, but not limited to, theft. The Successful Bidder 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 Bidder's performance of any services requested hereunder during the term of the Contract and/or any Ensuing Agreement(s).

The Successful Bidder 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 Bidder in the defense of each matter. The Successful Bidder'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 Bidder 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 Bidder are not an issue in the matter.

The Successful Bidder's indemnification shall cover, and the Successful Bidder agrees to, indemnify the County, in the event the County is found to have been negligent for having selected the Successful Bidder to perform the work described in this request. The provision by the Successful Bidder of insurance shall not limit the liability of the Successful Bidder under the Contract and/or any Ensuing Agreement(s).

4.15 WAIVER OF SUBROGATION

The Successful Bidder and the Successful Bidder'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 Bidder's performance under this Contract and any Ensuing Agreement(s).

4.16 RELATIONSHIP OF THE PARTIES

The Successful Bidder 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 Bidder 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 Bidder 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 Bidder's means, methods or details pertaining to the Successful Bidder's performance of the work. The County and the Successful Bidder hereby agree and declare that the Successful Bidder 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 Bidder is not an employee of the County, and that the Successful Bidder 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 Bidder 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 IFB, 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 IFB, 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 IFB, 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 IFB, 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 Bidder: Address set out in Bidder'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 Bidder 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 Bidder 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 IFB, 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 the Successful Bidder at the end of its then-current fiscal year.

4.28 FOB DESTINATION

To the extent applicable to this IFB, all of the items listed are to be Free On Board to final destination (FOB Destination) with all transportation charges if applicable to be included in the Bid, unless otherwise specified in the Invitation for Bids. The title and risk of loss of the goods shall not pass to the County until receipt and acceptance takes place at the FOB Destination point.

4.29 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.

4.30 ASSIGNMENT

The Successful Bidder's interest and duties hereunder may not be assigned or delegated to a third party without the express written consent of the County.

4.31 SAFETY

The Successful Bidder 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.

4.32 GENERAL OBLIGATIONS AND RELIANCE

The Successful Bidder 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 Bidder shall keep the County informed of the progress and quality of the services. The Successful Bidder agrees and acknowledges that the County is relying on the Successful Bidder's represented expertise and ability to provide the goods and/or services described herein. The Successful Bidder 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 accordance with the County's requirements and procedures. The Successful Bidder's duties, set forth herein, shall at no time be in any way diminished by reason of any approval by the County, nor shall the Successful Bidder be released from any liability by reason of such approval by the County, it being understood that the County at all times is ultimately relying upon the Successful Bidder's skill and knowledge in performing the services and providing any goods required hereunder.

4.33 ESTIMATED QUANTITIES

To the extent applicable to this IFB, the estimated quantity of each item listed in this IFB is only estimate; the actual quantity to be purchased may be more or less. The County is not obligated purchase any minimum amount, and the County may purchase any reasonable amount greater than the estimate for the same unit price. Any limit on quantities available must be stated expressly in the Bid.

4.34 CONTRACTUAL DEVELOPMENT

The contents of the IFB and the Successful Bidder's Bid will become an integral part of the Contract, but may be modified, at the County's sole discretion, by provisions of an Ensuing Agreement. Therefore, the Bidder must agree to an inclusion of an Ensuing Agreement of the Bid specifications, terms and conditions of this IFB. If an Ensuing Agreement is required under this IFB, information relative to t Agreement will be located in the Special Provisions Section of this IFB.

4.35 SURVIVABILITY

All applicable agreements that were entered into between the Successful Bidder 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 Bidder no later than ten (10) calendar days of the Contract expiration, this clause for emergencies only.

4.36 AIR QUALITY

In determining the overall best Bid, 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 Bids and give preference to goods and/or services of a Bidder that demonstrates that the Bidder meets or exceeds any and all state or federal environmental standards, including voluntary standards, relating to air quality. If the Bid 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 Bidder is encouraged to provide information in narrative indicating the anticipated air quality impact. All Bidders are expected to meet all mandated state and federal air quality standards.

4.37 ENTIRE AGREEMENT

The Contract and any Ensuing Agreement(s) shall supersede all prior Agreements, written or oral between the Successful Bidder 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 Bidder and the County.

4.38 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 Bidder, the County shall notify the Successful Bidder 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 Bidder, the Successful Bidder shall be entitled to receive interest on the unpaid balance of the invoice submitted by the Successful Bidder beginning on the date that the payment for the invoice became overdue. If the error is resolved in favor of the County, the Successful Bidder 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 Bidder 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

4.39 CONTRACTUAL FORMATION AND ENSUING AGREEMENT

The IFB and the Bidder's Bid, when properly accepted by the Commissioners Court, shall constitute a Contract equally binding between the Successful Bidder and the County.

If an Ensuing Agreement is required by this IFB, that information will be provided in Special Provisions section of this IFB. The Successful Bidder shall be required to execute the Agreement at the Williamson County Purchasing Department approximately ten (10) calendar days after the Successful Bidder is notified of award. The Ensuing Agreement shall be in the same form as the Agreement which is attached to the end of this IFB. The only anticipated changes in the Ensuing Agreement will be to include additional exhibits, to fill in blanks to identify the Successful Bidder, and terms relating to the compensation, or to revise the Agreement to accommodate corrections, changes in the scope of services, or changes pursuant to Addenda issued. **Bidders should raise any questions regarding the terms of the Agreement in the form of written questions or submittals as described in the Public Announcement and General Information portion of this IFB.** Because the signed Ensuing Agreement will be substantively and substantially derived from the attached Agreement, each Bidder is urged to seek independent legal counsel as to any questions about the terms, conditions or provisions contained in the Agreement *before* submitting a Bid. Again, the attached Agreement, if applicable, contains important legal provisions and is considered part and parcel of this IFB. Failure or refusal to sign aforesaid Agreement shall be grounds for the County to revoke any award which has been issued, forfeit Bid security, if applicable, and select another Bidder.

4.40 COOPERATIVE PURCHASING PROGRAM

During the term of the Contract resulting from this IFB, 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 IFB is subject to a properly authorized Purchasing Cooperative Inter-local Agreement 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.

4.41 INSURANCE REQUIREMENTS

To the extent applicable Insurance information will appear in the Additional Stipulations section that is in this IFB Package.

4.42 BIDDERS BOND, WARRANTY BOND, PERFORMANCE AND PAYMENT BONDS

To the extent applicable Bond information will appear in the Additional Stipulations section that is in this IFB Package.

4.43 LEGAL LIABILITY INFORMATION

The Successful Bidder 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.

4.44 INCLEMENT WEATHER

In case of inclement weather or any other unforeseen event causing the County to close for business on the date of a Bid submission deadline, the Bid 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 Bidders interested in the project to extend the deadline. It will be the responsibility of the Bidder 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.

4.45 CONFIDENTIALITY

The Bidder 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.

Additional Stipulations

1 Additional Stipulations

1.1 Introduction

The Bid evaluation and selection process is detailed in this section, as are other factors, and the format in which the Price Bid of each Bid should be submitted.

1.2 Technical Contact

J. Terron Evertson, P.E. (or successor), County Engineer, Williamson County 3151 South East Inner Loop, Suite B, Georgetown, Texas shall serve as the County's Technical Contact with designated responsibility to ensure compliance with the requirements of the Contract and any Ensuing Agreement, such as, but not limited to, acceptance, inspection and delivery. The Technical Contact together with the Purchasing Department will serve as a liaison between the Williamson County Commissioners Court and the Successful Bidder.

1.3 Contract Term

The Successful Bidder shall provide the goods and/or services described herein for an initial term of twelve (12) months, beginning March 27, 2018 and ending March 26, 2019.

1.4 Contract Extensions

At the end of the current fiscal year, the Commissioners Court reserves the right to extend this contract, by mutual agreement of both parties, as it deems to be in the best interest of the County. This extension will be in twelve (12) months increments for up to an additional twenty-four (24) months, with the terms and conditions remaining the same unless if requested by the successful bidder and approved be the Commissioners Court, a price escalation at renewal time is awarded of no more than the consumer price index, All urban consumers (CPI-U), US City Average, all items, as published by the United States department of Labor, Bureau of Labor Statistics.

The yearly increase in the CPI shall be the latest index published one hundred and eighty (180) days prior to the end of the contract year. The total period of this contract, including all extension will not exceed a maximum combined period of thirty-six (36) months. The extension of this contract is contingent on the appropriation of necessary funds by Commissioners Court for the fiscal year in question. Upon the failure of Commissioners Court to so appropriate in any year, the successful bidder may elect to terminate this agreement, with no additional liability to the County. The County and successful bidder agree that termination shall be the successful bidder's sole remedy under this circumstance.

1.5 Economic Adjustment

To the extent applicable to this IFB, the Successful Bidder may submit a request for a contract pricing adjustment for approval by the County if the Bidder can show just cause substantiating an adjustment. The requested adjustment must be for goods and/or services and in no way represent an increase in the Bidder's profits, labor or other overhead. The Bidder's request must include evidence in the form of a certified statement or affidavit from the supplier or manufacturer detailing the price adjustment, the effective date for the adjustment, and any other information requested by the Purchasing Department to verify the adjustment.

An adjustment request will not become effective until after approval of the Williamson County Commissioners Court. Until then, the original contract pricing will remain unchanged. If an issue regarding an adjustment request is not resolved, the Purchasing Department reserves the right to seek competition from other sources.

Any goods or services delivered by the Successful Bidder at a not agreed upon price are done so at the Successful Bidder's risk.

Pricing must remain firm for the first three (3) months of the initial contract period. A minimum period of three (3) months must elapse between adjustment requests.

1.6 Insurance Requirements

By signing its Bid, the Bidder agrees to maintain at all times during any term of the Contract and any ensuing Agreement at Bidder's cost, insurance in accordance with this provision.

Bidder will be required to submit Certificates of Insurance **prior to contract award and 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 Bidder and County.

The following coverage limits shall be required at a minimum:

A. Worker's Compensation — Statutory – Texas Law

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	$1,000,000	$1,000,000
Aggregate policy limits:	$1,000,000	

Successful Bidder's property will not be covered by any insurance that may be carried by Williamson County. Successful Bidder assumes the risk of loss on its contents and property that are situated on/in/around Williamson County property. The Successful Bidder is strongly encouraged to obtain insurance on its property to the extent deemed necessary by the Successful Bidder.

The deductible for an insurance policy required hereunder shall not exceed $100,000. **Williamson**

County shall be named as an additional insured under any policy of insurance required hereunder.

Successful Bidder shall not commence any work until it has obtained all required insurance and such insurance has been approved by County. Successful Bidder shall not allow any subcontractor(s) to commence work to be performed until all required insurance has been obtained by such subcontractor(s) and approved by County. Approval of the insurance by County shall not relieve or decrease the liability of Successful Bidder or its subcontractor(s) hereunder.

The required insurance must be written by a company approved to do business in the State of Texas with a financial standing of at least an A- rating, as reflected in Best's insurance ratings or by a similar rating system recognized within the insurance industry at the time the policy is issued. Successful Bidder shall furnish County with a certificate of coverage issued by the insurer. Successful Bidder shall not cause any insurance to be canceled nor permit any insurance to lapse. ALL INSURANCE CERTIFICATES SHALL INCLUDE A CLAUSE TO THE EFFECT THAT THE POLICY SHALL NOT BE CANCELED OR REDUCED, RESTRICTED OR LIMITED UNTIL TEN (10) CALENDAR DAYS AFTER COUNTY HAS RECEIVED WRITTEN NOTICE AS EVIDENCED BY RETURN RECEIPT OF REGISTERED OR CERTIFIED LETTER.

Additional Stipulations - Bid

It is the intention of the County, and agreed to and hereby acknowledged by the Successful Bidder, that no provision of this Contract or any ensuing Agreement shall be construed to require the County to submit to mandatory arbitration or mediation in the settlement of any claim, cause of action or dispute, except as specifically required in direct connection with an insurance claim or threat of claim under an insurance policy required hereunder which absolutely requires arbitration or mediation of such claim, or as otherwise required by law or a court of law with jurisdiction over the provisions of this Contract or any ensuing Agreement.

General Notes and Technical Specifications

Definition of Terms

County: Williamson County acting through the Road and Bridge Division.

Contractor: Successful bidder of the attached Invitation for Bid.

Engineer: Williamson County Director of Road and Bridge, or designee.

Inspector: Engineer's designee assigned full, or part, time to the contractor's crew for the oversight of the work.

Specifications: Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges 2014.

TxDOT: Texas Department of Transportation

Working Day: Monday through Friday (excluding County approved holidays), if weather permits the performance of the contract (as determined by the inspector) for a continuous period of at least 6 hrs. (excluding lunch) between 8:00 A.M. and 5:00 P.M.

Control of Materials

Source Control. The Contractor shall use only materials that meet Contract requirements. Unless otherwise specified or approved by the Engineer, the Contractor shall use new materials for the work. The Contractor shall secure the Engineer's approval of the proposed source of materials to be used before their delivery to the site. Materials can be approved by the Engineer at a supply source or staging area but may be re-inspected at the job site. Contractor shall be responsible for cost of additional sampling and testing if material source changes.

Material Quality. It is the Contractor's responsibility to correct or remove materials that fail to meet the contract requirements.

Materials not meeting Contract requirements will be rejected, unless the Engineer approves corrective actions. Upon rejection by the Engineer, the Contractor must immediately remove and replace rejected materials.

If the Contractor does not comply with this Article, the County may remove and replace defective material. The cost of testing, removal, and replacement will be deducted from invoice submitted to the County.

Manufacturer Warranties. Contractor shall transfer to the County warranties and guarantees required by the Contract, from Contractor sources, or received as part of normal trade practice.

Plant Inspection and Testing. The Engineer may, but is not obligated to, inspect materials at the acquisition or manufacturing source. Material samples will be obtained and tested for compliance with quality requirements. Materials produced under County inspection are for County use only unless released in writing by the Engineer.

If inspection is at the plant, Contractor shall meet the following conditions unless otherwise specified:

- Cooperate fully and assist the Engineer during the inspection.
- Ensure the Engineer has full access to all parts of the plant used to manufacture or produce materials.
- In accordance with pertinent items and the Contract, provide a facility at the plant for use by the Engineer as an office or laboratory.

The Engineer may provide inspection for periods other than daylight hours if:

- Continuous production of materials for County use is necessary due to the production volume being handled at the plant, and
- The lighting is adequate to allow satisfactory inspection.

General Notes

All work performed and all products furnished under the provision of the Contract shall comply with requirements which pertain to the various items of work included herein as *Standard Specifications for Construction of Highways, Streets and Bridges* of the Texas Department of Transportation, adopted November, 2014, and as amended and/or updated, which is incorporated herein by reference for all purposes. In the event that any specification set out herein conflicts with the said TxDOT specifications, the specification set out herein shall control and govern.

The actual quantity required may be varied from the estimated quantities in the contract. The Contractor shall be compensated for completed work based on actual quantities per bid item.

Contractor shall begin work within ten (10) working days of the Purchase Order issue date. Purchase Orders may include additional plans describing the work and the allowable number of working days or day of completion for which work must be completed.

Final cleanup will include the removal of excess material considered detrimental to vegetation growth within the working area. Materials such as excess concrete and other materials, as specified by the Engineer, will be removed at the Contractor's expense.

Contractor shall determine the exact location of all existing utilities before commencing work and is fully responsible for any and all damages associated by Contractor's failure to locate and preserve utilities.

Contractor shall maintain positive drainage for permanent and temporary site conditions for duration of project.

Contractor shall comply with insurance requirements dictated within this contract.

Do not park equipment or make stockpiles where driver sight distance to businesses and side street intersections is obstructed, especially after work hours. If it is necessary to park where drivers' views are blocked, Contractor shall make every effort to flag traffic accordingly. Give the travelling public first priority.

If multiple days are required to complete work, Contractor shall not leave work in hazardous conditions, as determined by Engineer.

Working day charges will begin within ten (10) days after the Purchase Order issue date, but not before, and will continue in accordance with the time allotted in the Purchase Order.

Once work begins, Contractor shall continuously execute the work until completion, unless otherwise directed by Engineer.

If Contractor cannot complete work within the number of working days or day of completion as dictated on Purchase Order, Contractor shall submit a revised progress schedule to be approved by Engineer. A revised progress schedule shall be submitted in writing by the Contractor within ten (10) working days of the Purchase Order issue date. The Engineer reserves the right to reject the proposed revised progress schedule.

Nighttime, weekend and holiday work is allowed with prior approval by Engineer.

The Contractor shall perform work during appropriate weather conditions, unless otherwise directed by the Engineer. If work is performed at the Contractor's option during, or prior to, inclement weather conditions and the work is damaged, the Contractor is responsible for all costs associated with replacing the work.

All construction equipment involved in roadway work shall be equipped with a permanently mounted 360 degree revolving or strobe warning light with amber lens. This light shall have a minimum lens height of 5 inches and a diameter of 5 inches.

This light shall have a mounting height of not less than 6 feet above the roadway surface and shall be visible from all sides. This equipment shall also have attached at each side of the rear end of the vehicle an approved orange warning flag mounted not less than 6 feet above the roadway surface.

Care shall be exercised to prevent damage to all property in and around the construction zone. The Contractor shall be liable for the repair and restoration of any property damaged as a result of the contractor's prosecution of the work.

This shall include, but is not limited to, re-vegetation of all areas damaged or destroyed by construction. Contractor will be held liable and responsible for such areas until growth is reestablished to the satisfaction of the County.

Ornamental landscape plantings of trees, shrubs and grasses that are damaged or destroyed during construction shall be replaced with plant material of comparable size and quality approved by the County.

Contractor's equipment and vehicles shall not be maintained on-site during construction, except at designated maintenance sites as approved by the Inspector.

An English-speaking Superintendent shall be available on the project at all times when work is being performed. The Contractor shall provide the Inspector with contact information for the Superintendent.

Contractor shall provide at least one portable restroom near the work site(s) at all times in order to provide a bathroom to individuals providing work hereunder. Contractor shall monitor and prevent its employees and any of its subcontractors that are providing work on the project from urinating or defecating on property in, on or adjacent to the areas in which work is being performed.

ITEMS 421, 423, 432, 465, 466, 467, 529, AND 531

For any single project that requires 7 cubic yards of concrete or less, Williamson County will provide the required concrete. In such cases, Contractor shall provide labor only and payment for services will reflect labor only.

Contractor shall not use wire-mesh, welded wire reinforcing, or similar for concrete reinforcing.

ITEM 421 – Hydraulic Cement Concrete

The specifications are amended by special provision 421—035.

Overdesign requirements, as defined in section 421.4 (A) Table 6 of the specifications, for compressive strength in non-structural elements are waived.

Minimum air entrainment requirements, as defined in section 421.4 (A) 2 Table 7 of the specifications, for all classes of concrete, except S, CO and DO, are waived. For all non-structural concrete, the entrained air content shall not exceed 8%.

ITEM 423 – Retaining Walls

Retaining wall backfill limits of excavation and excess material haul-off will be subsidiary to pertinent bid item. Backfill material will be provided by the County, if necessary.

Refer to TxDOT spread footing retaining wall standard drawings.

ITEM 432 – Riprap

Typical riprap shall be placed at a 5 inch thickness, or as directed by the Engineer.

Where proposed concrete riprap ties to existing concrete riprap, Contractor shall saw cut existing, and dowel and epoxy the joint before placing proposed riprap, to be subsidiary to pertinent bid item.

ITEM 465 – Manholes and Inlets

Construction of drop inlets shall be in accordance with the TxDOT Austin District Standards.

The specifications are amended by special provision 465--001.

ITEM 466 – Headwalls and Wingwalls

For conditions where the culvert is skewed to the roadway alignment, the County will provide the appropriate plans and/or standards.

For box culverts, safety end treatment pipe runners shall be provided and installed by the County.

Before the execution of work on box culvert end treatments, details and plan sheets will be provided to the Contractor. To the extent possible, design will follow TxDOT standard plan sheets.

ITEM 467 – Safety End Treatment

Contractor shall cut extruding pipe ends, in the field, to match roadway or driveway side slope and shall use asphalt based paint on cut end.

ITEM 496 - Removing Structures

If necessary, contractor shall perform traffic control for any structure removal, as directed by the Engineer.

Item 500 – Mobilization

This item shall conform to TxDOT Specification Item 500, Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges 2004 with the following exceptions:

> **500.3 (A) is changed to:** Payment will be made upon presentation of a paid invoice for the payment bond, performance bond, and required insurance. The combined payment for bonds and insurance will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less. However, payment will be made for the actual cost of the paid invoice when the combined payment for bonds and insurance exceeds 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.

500.3 (B) Deleted.

ITEM 502 - Barricades, Signs and Traffic Handling

This item will not be paid for directly but shall be considered subsidiary to various bid items.

Contractor shall provide all traffic control measures to prosecute the work in conformance with the Texas Manual on Uniform Traffic Control Devices, latest edition.

The Contractor will be required to maintain a minimum of one through lane in each direction during daylight hours on all roadways, except with written approval by the Inspector. Two lane roadways shall use single lane traffic control, which will require the use of flagmen. This shall not be paid for directly, but shall be considered subsidiary to various bid items.

Flaggers must comply with all requirements outlined in TxDOT Specification Item 502.2B.

Limiting access to all side streets and driveways shall be minimized to the extent possible.

The Contractor's crew leader shall be a competent person who will be responsible and available on the project site or in the immediate area to insure compliance with the TCP.

ITEM 529 - Concrete Curb, Gutter, and Combined Curb and Gutter

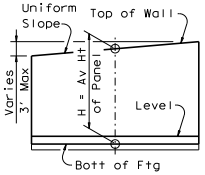
If proposed curb and gutter is to be placed adjacent to existing pavement, Contractor shall sawcut existing pavement to obtain a straight and clean edge that is absent of any chipping or flaking of existing pavement. Any damage to the edge of the pavement will be repaired by the Contractor as approved by the Engineer.

ITEM 531 - Sidewalks

Notify property owners who utilize access of sidewalk 48 hours in advance of proposed work.

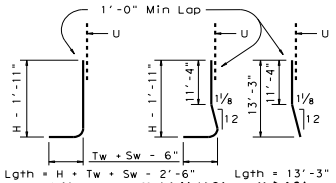
Access to property must be provided at all times by the Contractor.

Construction of sidewalks shall be accordance with the TxDOT Austin District Standards.

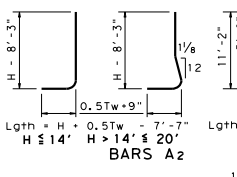


H DEFINITION

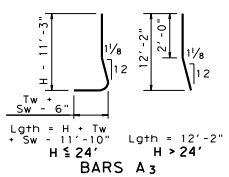
Wall Height "H"	PROPERTIES							REINFORCING STEEL FOR ONE 32' PANEL (DESIGN A)																												QUANTITY FOR ONE 32' PANEL		Wall Height "H"
	WALL DIMENSIONS						Max Soil Press	A_1 ~ 26 #5 at 15" c-c		A_2 ~ 25 #6 at 15" c-c		A_3 ~ 25 #7 at 15" c-c		A_4 ~ 26 #8 at 15" c-c		A_5 ~ 25 #9 at 15" c-c		A_6 ~ 25 #11 at 15" c-c		A_7 ~ 26 #11 at 15" c-c		B ~ 26 #5 at 15" c-c		C						D (#5) at 12" c-c		Dowel F at 12" c-c		H (#5) at 12" c-c		T (#5) at 12" c-c		U ~ 26 #5 at 15" c-c		CONC (CY)	REINF (LB)	
(Ft)	Fw	Tw	Sw	Hw	Ft	Kw	T/SF	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Size	No	Spa	Lgth	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Lgth	Wt			(Ft)
2	1'-8"	8"	1'-0"	0	9"	9"	0.11																						4	131	3	24			2	66	3'-4"	90	3.6	312	2
3	2'-0"	1'-0"	1'-0"	0	9"	9"	0.15																						6	197	4	32	2	66	2	66	5'-4"	145	5.1	506	3
4	2'-8"	1'-4"	1'-0"	4"	1'-0"	9"	0.21	3'-10"	104													3'-6"	95	#4	26	15"	1'-10"	32	8	263	6	48	2	66	2	66	7'-4"	199	7.4	873	4
5	3'-6"	1'-9"	1'-0"	9"	1'-0"	9"	0.23	5'-3"	142													4'-6"	122	#4	26	15"	2'-3"	39	10	329	7	56	2	66	3	99	8'-4"	226	9.6	1079	5
6	4'-3"	2'-2"	1'-0"	1'-1"	1'-0"	9"	0.24	6'-8"	181													5'-6"	149	#4	26	15"	2'-8"	46	12	394	8	64	3	99	3	99	8'-4"	226	11.6	1259	6
7	5'-0"	2'-6"	1'-0"	1'-6"	1'-0"	9"	0.27	8'-0"	217													6'-6"	176	#4	26	15"	3'-0"	52	14	460	9	72	3	99	3	99	8'-4"	226	13.7	1401	7
8	5'-8"	2'-10"	1'-0"	1'-10"	1'-0"	9"	0.30	9'-4"	253													7'-6"	203	#4	26	15"	3'-4"	58	16	526	10	80	3	99	4	131	8'-4"	226	15.7	1575	8
9	6'-4"	3'-2"	1'-0"	2'-2"	1'-0"	9"	0.33	10'-8"	284													8'-6"	231	#4	26	15"	3'-8"	64	18	591	11	88	3	99	4	131	8'-4"	226	17.7	1714	9
10	7'-0"	3'-6"	1'-0"	2'-6"	1'-0"	9"	0.36	12'-0"	325	4'-2"	156											9'-6"	258	#4	38	10"	4'-0"	102	20	657	12	96	4	131	4	131	8'-4"	226	19.6	2082	10
11	7'-9"	3'-10"	1'-0"	2'-11"	1'-0"	9"	0.39	13'-4"	362	5'-4"	200											10'-6"	285	#6	38	10"	4'-4"	247	22	723	13	104	4	131	5	164	8'-4"	226	21.7	2436	11
12	8'-6"	4'-3"	1'-0"	3'-3"	1'-0"	9"	0.40	14'-9"	400	6'-7"	247											11'-6"	312	#6	38	10"	4'-9"	271	24	789	14	112	4	131	5	164	8'-4"	226	23.8	2651	12
13	9'-2"	4'-7"	1'-0"	3'-7"	1'-0"	9"	0.43	16'-1"	436	7'-8"	288	6'-9"	345									12'-6"	339	#7	38	10"	5'-1"	395	26	854	15	120	5	164	6	197	8'-4"	226	25.8	3364	13
14	9'-10"	4'-11"	1'-0"	3'-11"	1'-0"	1'-0"	0.47	17'-5"	472	8'-11"	335	8'-1"	413									13'-6"	366	#8	38	10"	5'-5"	550	28	920	16	128	5	164	6	197	8'-4"	226	28.2	3771	14
15	10'-6"	5'-3"	1'-1 1/8"	4'-1 7/8"	1'-0"	1'-0"	0.50	18'-10"	511	10'-1"	379	9'-6"	485									14'-6"	393	#9	38	10"	5'-9"	743	30	986	17	136	6	197	6	197	8'-4"	226	30.3	4253	15
16	11'-2"	5'-7"	1'-2"	4'-5"	1'-3"	1'-3"	0.55	13'-3"	359	11'-2"	419	10'-11"	558	8'-5"	584							15'-6"	420	#9	38	10"	6'-1"	786	32	1051	18	144	6	197	7	230	8'-4"	226	36.0	4974	16
17	11'-10"	5'-11"	1'-3 1/8"	4'-7 7/8"	1'-3"	1'-3"	0.58	13'-3"	359	12'-5"	466	12'-4"	630	9'-10"	683							16'-6"	447	#9	38	10"	6'-5"	829	34	1117	19	152	7	230	7	230	8'-4"	226	38.5	5369	17
18	12'-6"	6'-3"	1'-4"	4'-11"	1'-6"	1'-3"	0.63	13'-3"	359	13'-7"	510	13'-9"	703	11'-2"	775							17'-6"	475	#9	38	10"	6'-9"	872	34	1117	19	152	7	230	8	263	8'-4"	226	44.3	5682	18
19	13'-3"	6'-7"	1'-5"	5'-3"	1'-6"	1'-6"	0.66	13'-3"	359	14'-9"	554	15'-2"	775	12'-8"	879							18'-6"	502	#9	38	10"	7'-2"	926	36	1183	20	160	7	230	8	263	8'-4"	226	48.1	6057	19
20	13'-10"	6'-11"	1'-6 1/4"	5'-4 3/4"	1'-6"	1'-6"	0.70	13'-3"	359	15'-11"	598	16'-7"	847	14'-1	978							19'-6"	529	#10	38	10"	7'-5"	1213	38	1248	21	168	8	263	8	263	8'-4"	226	50.9	6692	20
21	14'-6"	7'-3"	1'-7"	5'-8"	1'-9"	1'-6"	0.75	13'-3"	359	11'-2"	419	18'-0"	920	15'-5"	1070	9'-7"	815					20'-6"	556	#10	38	10"	7'-9"	1267	40	1314	22	176	8	263	9	296	8'-4"	226	57.7	7681	21
22	15'-2"	7'-7"	1'-8 1/8"	5'-10 5/8"	1'-9"	1'-6"	0.78	13'-3"	359	11'-2"	419	19'-5"	992	16'-11"	1174	10'-11"	928					21'-6"	583	#10	38	10"	8'-1"	1322	42	1380	23	184	8	263	9	296	8'-4"	226	61.0	8126	22
23	16'-0"	8'-0"	1'-9 1/4"	6'-2 3/4"	1'-9"	1'-6"	0.79	13'-3"	359	11'-2"	419	20'-11"	1069	18'-5"	1278	12'-4"	1048					22'-6"	610	#8	76	5"	8'-6"	1725	44	1446	24	192	9	296	10	329	8'-4"	226	64.8	8997	23
24	16'-6"	8'-3"	1'-10 1/8"	6'-4 7/8"	2'-0"	1'-6"	0.86	13'-3"	359	11'-2"	419	22'-3"	1137	19'-9"	1371	13'-7"	1155					23'-6"	637	#8	76	5"	8'-9"	1776	46	1511	25	200	9	296	10	329	8'-4"	226	72.4	9416	24
25	17'-3"	8'-7"	1'-11 1/4"	6'-8 3/4"	2'-0"	1'-6"	0.89	13'-3"	359	11'-2"	419	12'-2"	622	21'-2"	1469	15'-0"	1275	6'-1"	808			24'-6"	664	#8	76	5"	9'-2"	1860	48	1577	26	208	9	296	10	329	8'-4"	226	76.4	10112	25
26	18'-0"	9'-0"	2'-0 1/8"	6'-11 1/8"	2'-3"	1'-6"	0.93	13'-3"	359	11'-2"	419	12'-2"	622	22'-8"	1574	16'-4"	1388	7'-1"	941			25'-6"	692	#8	76	5"	9'-6"	1928	50	1643	27	217	10	329	11	361	8'-4"	226	85.2	10698	26
27	18'-6"	9'-4"	2'-1 1/4"	7'-0 3/4"	2'-3"	1'-6"	0.97	13'-3"	359	11'-2"	419	12'-2"	622	24'-1"	1672	17'-8"	1502	8'-1"	1074			26'-6"	719	#9	76	5"	9'-10"	2541	52	1708	28	225	10	329	11	361	8'-4"	226	89.0	11757	27
28	19'-3"	9'-7"	2'-2 3/8"	7'-5 5/8"	2'-3"	1'-9"	1.00	13'-3"	359	11'-2"	419	12'-2"	622	25'-5"	1764	19'-0"	1615	9'-1"	1206			27'-6"	746	#9	76	5"	10'-1"	2606	54	1774	29	233	10	329	12	394	8'-4"	226	94.5	12293	28
29	20'-0"	10'-0"	2'-3 1/2"	7'-8 1/2"	2'-3"	1'-9"	1.02	13'-3"	359	11'-2"	419	12'-2"	622	27'-0"	1874	20'-5"	1735	10'-1"	1339			28'-6"	773	#9	76	5"	10'-5"	2692	56	1840	30	241	11	361	12	394	8'-4"	226	99.2	12874	29
30	20'-6"	10'-4"	2'-4 5/8"	7'-9 3/8"	2'-3"	1'-9"	1.06	13'-3"	359	11'-2"	419	12'-2"	622	14'-4"	995	21'-9"	1849	11'-1"	1472	17'-0"	2348	29'-6"	800	#10	76	5"	10'-9"	3516	58	1906	31	249	11	361	12	394	8'-4"	226	103.3	15515	30
31	21'-3"	10'-7"	2'-5 3/4"	8'-2 1/4"	2'-3"	1'-9"	1.09	13'-3"	359	11'-2"	419	12'-2"	622	14'-4"	995	23'-0"	1955	12'-1"	1605	18'-4"	2533	30'-6"	827	#10	76	5"	11'-2"	3652	60	1971	32	257	11	361	13	427	8'-4"	226	108.2	16209	31
32	22'-0"	11'-0"	2'-6 1/2"	8'-5 1/2"	2'-6"	1'-9"	1.13	13'-3"	359	11'-2"	419	12'-2"	622	14'-4"	995	24'-5"	2075	13'-1"	1738	19'-10"	2740	31'-6"	854	#10	76	5"	11'-6"	3761	60	1971	32	257	12	394	13	427	8'-4"	226	118.9	16837	32



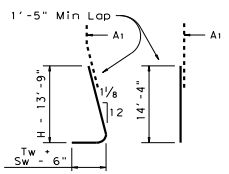
BARS A_1



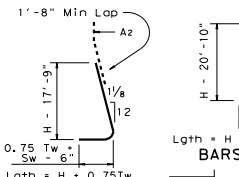
BARS A_2



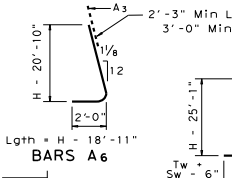
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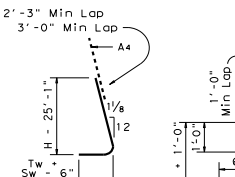
BARS A_4



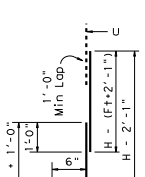
BARS A_5



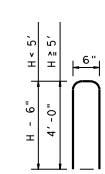
BARS A_6



BARS A_7

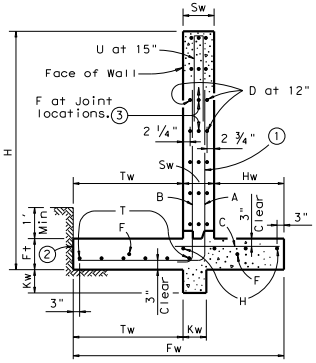


BARS B

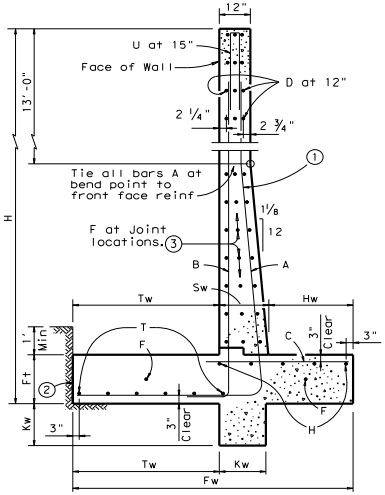


BARS U

1. Place vertical bars inside of horizontal bars (Typ both faces).
2. Place footing toe against undisturbed soil.
3. See standard RW 2 for size.

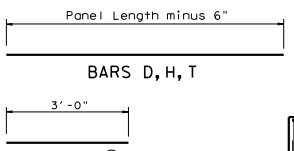


H ≤ 14'



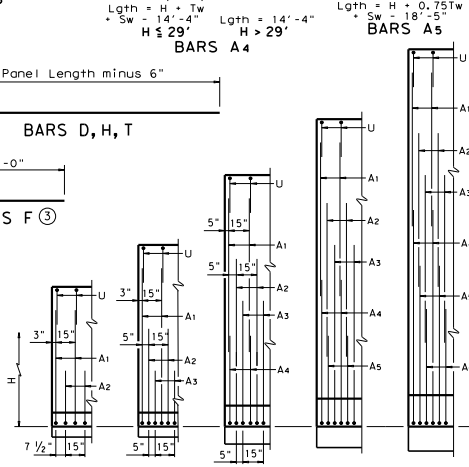
H > 14'

SECTIONS



BARS D, H, T

BARS F ③



PARTIAL WALL ELEVATIONS

(Showing vertical reinforcing pattern in back face)

GENERAL NOTES:

All concrete to be Class "C".
All reinforcing steel to be Grade 60.
For notes and details not shown on this sheet see sheet RW2.
Quantities are based on "H" being average height of panel.
Retaining Walls are designed to be coded as follows on Retaining Wall Layout Sheets.

HC - 21 - 28
LA - 28 - 32
- Panel Length ~ 32' is standard; 28' requires special quantities
- Average Height "H" of panel
- Design - A = no surcharge or slope above wall; B = slopes up to 4:1; C = traffic surcharge and/or slopes up to 2.5:1
- Footing pressure design ~ L = low, H = high

Texas Department of Transportation — Bridge Division Standard

RETAINING WALLS

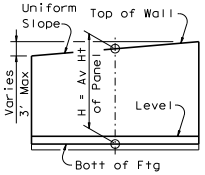
RW 1(L)A

FILE:	rwstde05.dgn	DN: TxDOT	CK: TxDOT	DW: GHO	CK: MPM
©TxDOT	March 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS		DIST	COUNTY		SHEET NO.

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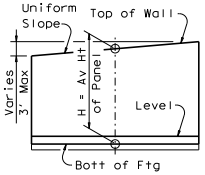
DATE:
FILE:

2/13/2018 9:30 AM



H DEFINITION

| Wall Height "H" | PROPERTIES | | | | | | | REINFORCING STEEL FOR ONE 32' PANEL (DESIGN B) | | | | | | |



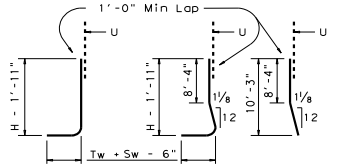
H DEFINITION

PROPERTIES — WALL DIMENSIONS

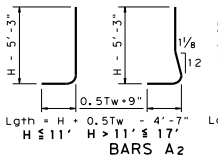
Wall Height "H"	Fw	Tw	Sw	Hw	Ft	Kw	Max Soil Press T/SF
(Ft)							
2	3'-6"	1'-9"	1'-0"	9"	1'-0"	9"	0.14
3	4'-3"	2'-2"	1'-0"	1'-1"	1'-0"	9"	0.17
4	5'-0"	2'-6"	1'-0"	1'-6"	1'-0"	9"	0.20
5	5'-8"	2'-10"	1'-0"	1'-10"	1'-0"	9"	0.24
6	6'-4"	3'-2"	1'-0"	2'-2"	1'-0"	9"	0.28
7	7'-0"	3'-6"	1'-0"	2'-6"	1'-0"	9"	0.32
8	7'-9"	3'-10"	1'-0"	2'-11"	1'-0"	9"	0.35
9	8'-6"	4'-3"	1'-0"	3'-3"	1'-0"	9"	0.37
10	9'-2"	4'-7"	1'-0"	3'-7"	1'-0"	9"	0.41
11	9'-10"	4'-11"	1'-0"	3'-11"	1'-0"	1'-0"	0.44
12	10'-6"	5'-3"	1'-1 1/8"	4'-1 1/8"	1'-0"	1'-0"	0.45
13	11'-2"	5'-7"	1'-2"	4'-5"	1'-3"	1'-3"	0.54
14	11'-10"	5'-11"	1'-3 1/8"	4'-7 1/8"	1'-3"	1'-3"	0.57
15	12'-6"	6'-3"	1'-4"	4'-11"	1'-6"	1'-3"	0.63
16	13'-3"	6'-7"	1'-5"	5'-3"	1'-6"	1'-6"	0.66
17	13'-10"	6'-11"	1'-6 1/4"	5'-4 3/4"	1'-6"	1'-6"	0.70
18	14'-6"	7'-3"	1'-7"	5'-8"	1'-9"	1'-6"	0.76
19	15'-2"	7'-7"	1'-8 1/8"	5'-10 5/8"	1'-9"	1'-6"	0.79
20	16'-0"	8'-0"	1'-9 1/4"	6'-2 3/4"	1'-9"	1'-6"	0.80
21	16'-6"	8'-3"	1'-10 1/8"	6'-4 7/8"	2'-0"	1'-6"	0.88
22	17'-3"	8'-7"	1'-11 1/4"	6'-8 3/4"	2'-0"	1'-6"	0.91
23	18'-0"	9'-0"	2'-0 3/8"	6'-11 7/8"	2'-3"	1'-6"	0.95
24	18'-6"	9'-4"	2'-1 1/4"	7'-0 3/4"	2'-3"	1'-6"	0.99
25	19'-3"	9'-7"	2'-2 3/8"	7'-5 5/8"	2'-3"	1'-9"	1.03
26	20'-0"	10'-0"	2'-3 1/2"	7'-8 1/2"	2'-3"	1'-9"	1.05
27	20'-6"	10'-4"	2'-4 5/8"	7'-9 7/8"	2'-3"	1'-9"	1.09
28	21'-3"	10'-7"	2'-5 3/4"	8'-2 1/4"	2'-3"	1'-9"	1.13
29	22'-0"	11'-0"	2'-6 1/2"	8'-5 1/2"	2'-6"	1'-9"	1.17

REINFORCING STEEL FOR ONE 32' PANEL (DESIGN C)

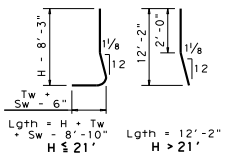
Wall Height "H"	A_1 ~ 26 #5 at 15" c-c		A_2 ~ 25 #6 at 15" c-c		A_3 ~ 25 #7 at 15" c-c		A_4 ~ 26 #8 at 15" c-c		A_5 ~ 25 #9 at 15" c-c		A_6 ~ 25 #11 at 15" c-c		A_7 ~ 26 #11 at 15" c-c		B ~ 26 #5 at 15" c-c		C					D (#5) at 12" c-c		Dowel F at 12" c-c		H (#5) at 12" c-c		T (#5) at 12" c-c		U ~ 26 #5 at 15" c-c		QUANTITY FOR ONE 32' PANEL		Wall Height "H"
	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Size	No	Spa	Lgth	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Lgth	Wt	CONC (CY)	REINF (LB)	
(Ft)																																				(Ft)
2																	#4	26	15"	2'-3"	39	4	131	4	32	2	66	3	99	3'-4"	90	6.0	458	2
3																	#4	26	15"	2'-8"	46	6	197	5	40	3	99	3	99	5'-4"	145	8.1	626	3
4	5'-0"	136													3'-6"	95	#4	26	15"	3'-0"	52	8	263	6	48	3	99	3	99	7'-4"	199	10.1	991	4
5	5'-8"	2'-10"	1'-0"	1'-10"	1'-0"	9"	0.24								4'-6"	122	#4	26	15"	3'-4"	58	10	329	7	56	3	99	4	131	8'-4"	226	12.1	1193	5
6	6'-4"	3'-2"	1'-0"	2'-2"	1'-0"	9"	0.28								5'-6"	149	#4	26	15"	3'-8"	64	12	394	8	64	3	99	4	131	8'-4"	226	14.1	1336	6
7	7'-0"	3'-6"	1'-0"	2'-6"	1'-0"	9"	0.32	9'-0"	244	4'-2"	156				6'-6"	176	#4	38	10"	4'-0"	102	14	460	9	72	4	131	4	131	8'-4"	226	16.1	1698	7
8	7'-9"	3'-10"	1'-0"	2'-11"	1'-0"	9"	0.35	10'-4"	280	5'-4"	200				7'-6"	203	#6	38	10"	4'-4"	247	16	526	10	80	4	131	5	164	8'-4"	226	18.1	2056	8
9	8'-6"	4'-3"	1'-0"	3'-3"	1'-0"	9"	0.37	11'-9"	319	6'-7"	247				8'-6"	231	#6	38	10"	4'-9"	271	18	591	11	88	4	131	5	164	8'-4"	226	20.2	2268	9
10	9'-2"	4'-7"	1'-0"	3'-7"	1'-0"	9"	0.41	13'-1"	355	7'-8"	288	6'-9"	345		9'-6"	258	#7	38	10"	5'-1"	395	20	657	12	96	5	164	6	197	8'-4"	226	22.2	2981	10
11	9'-10"	4'-11"	1'-0"	3'-11"	1'-0"	1'-0"	0.44	14'-5"	391	8'-11"	335	8'-1"	413		10'-6"	285	#8	38	10"	5'-5"	550	22	723	13	104	5	164	6	197	8'-4"	226	24.7	3382	11
12	10'-6"	5'-3"	1'-1 1/8"	4'-1 1/8"	1'-0"	1'-0"	0.45	15'-10"	429	10'-1"	379	9'-6"	485		11'-6"	312	#9	38	10"	5'-9"	743	24	789	14	112	6	197	6	197	8'-4"	226	26.7	3868	12
13	11'-2"	5'-7"	1'-2"	4'-5"	1'-3"	1'-3"	0.54	10'-3"	278	11'-2"	419	10'-11"	558	8'-5"	12'-6"	339	#9	38	10"	6'-1"	786	26	854	15	120	6	197	7	230	8'-4"	226	32.5	4591	13
14	11'-10"	5'-11"	1'-3 1/8"	4'-7 1/8"	1'-3"	1'-3"	0.57	10'-3"	278	12'-5"	466	12'-4"	630	9'-10"	13'-6"	366	#9	38	10"	6'-5"	829	28	920	16	128	7	230	7	230	8'-4"	226	34.9	4986	14
15	12'-6"	6'-3"	1'-4"	4'-11"	1'-6"	1'-3"	0.63	10'-3"	278	13'-7"	510	13'-9"	703	11'-2"	14'-6"	393	#9	38	10"	6'-9"	872	28	920	16	128	7	230	8	263	8'-4"	226	40.8	5298	15
16	13'-3"	6'-7"	1'-5"	5'-3"	1'-6"	1'-6"	0.66	10'-3"	278	14'-9"	554	15'-2"	775	12'-8"	15'-6"	420	#9	38	10"	7'-2"	926	30	986	17	136	7	230	8	263	8'-4"	226	44.5	5672	16
17	13'-10"	6'-11"	1'-6 1/4"	5'-4 3/4"	1'-6"	1'-6"	0.70	10'-3"	278	15'-11"	598	16'-7"	847	14'-1	16'-6"	447	#10	38	10"	7'-5"	1213	32	1051	18	144	8	263	8	263	8'-4"	226	47.3	6308	17
18	14'-6"	7'-3"	1'-7"	5'-8"	1'-9"	1'-6"	0.76	10'-3"	278	11'-2"	419	18'-0"	920	15'-5"	17'-6"	475	#10	38	10"	7'-9"	1267	34	1117	19	152	8	263	9	296	8'-4"	226	54.2	7298	18
19	15'-2"	7'-7"	1'-8 1/8"	5'-10 5/8"	1'-9"	1'-6"	0.79	10'-3"	278	11'-2"	419	19'-5"	992	16'-11"	18'-6"	502	#10	38	10"	8'-1"	1322	36	1183	20	160	8	263	9	296	8'-4"	226	57.5	7743	19
20	16'-0"	8'-0"	1'-9 1/4"	6'-2 3/4"	1'-9"	1'-6"	0.80	10'-3"	278	11'-2"	419	20'-11"	1069	18'-5"	19'-6"	529	#8	76	5"	8'-6"	1725	38	1248	21	168	9	296	10	329	8'-4"	226	61.3	8613	20
21	16'-6"	8'-3"	1'-10 1/8"	6'-4 7/8"	2'-0"	1'-6"	0.88	10'-3"	278	11'-2"	419	22'-3"	1137	19'-9"	20'-6"	556	#8	76	5"	8'-9"	1776	40	1314	22	176	9	296	10	329	8'-4"	226	68.8	9033	21
22	17'-3"	8'-7"	1'-11 1/4"	6'-8 3/4"	2'-0"	1'-6"	0.91	10'-3"	278	11'-2"	419	12'-2"	622	21'-2"	1469	15'-0"	1275	6'-1"	808			21'-6"	583	#8	76	5"	9'-2"	1860	42	1380	23	184	9	296	10	329	8'-4"	226	72.8	9729	22
23	18'-0"	9'-0"	2'-0 3/8"	6'-11 7/8"	2'-3"	1'-6"	0.95	10'-3"	278	11'-2"	419	12'-2"	622	22'-8"	1574	16'-4"	1388	7'-1"	941			22'-6"	610	#8	76	5"	9'-6"	1928	44	1446	24	192	10	329	11	361	8'-4"	226	81.7	10314	23
24	18'-6"	9'-4"	2'-1 1/4"	7'-0 3/4"	2'-3"	1'-6"	0.99	10'-3"	278	11'-2"	419	12'-2"	622	24'-1"	1672	17'-8"	1502	8'-1"	1074			23'-6"	637	#9	76	5"	9'-10"	2541	46	1511	25	200	10	329	11	361	8'-4"	226	85.4	11372	24
25	19'-3"	9'-7"	2'-2 3/8"	7'-5 5/8"	2'-3"	1'-9"	1.03	10'-3"	278	11'-2"	419	12'-2"	622	25'-5"	1764	19'-0"	1615	9'-1"	1206			24'-6"	664	#9	76	5"	10'-1"	2606	48	1577	26	208	10	329	12	394	8'-4"	226	91.0	11909	25
26	20'-0"	10'-0"	2'-3 1/2"	7'-8 1/2"	2'-3"	1'-9"	1.05	10'-3"	278	11'-2"	419	12'-2"	622	27'-0"	1874	20'-5"	1735	10'-1"	1339			25'-6"	692	#9	76	5"	10'-5"	2692	50	1643	27	217	11	361	12	394	8'-4"	226	95.6	12491	26
27	20'-6"	10'-4"	2'-4 5/8"	7'-9 7/8"	2'-3"	1'-9"	1.09	10'-3"	278	11'-2"	419	12'-2"	622	14'-4"	995	21'-9"	1849	11'-1"	1472	17'-0"	2348	26'-6"	719	#10	76	5"	10'-9"	3516	52	1708	28	225	11	361	12	394	8'-4"	226	99.7	15132	27
28	21'-3"	10'-7"	2'-5 3/4"	8'-2 1/4"	2'-3"	1'-9"	1.13	10'-3"	278	11'-2"	419	12'-2"	622	14'-4"	995	23'-0"	1955	12'-1"	1605	18'-4"	2533	27'-6"	746	#10	76	5"	11'-2"	3652	54	1774	29	233	11	361	13	427	8'-4"	226	104.6	15825	28
29	22'-0"	11'-0"	2'-6 1/2"	8'-5 1/2"	2'-6"	1'-9"	1.17	10'-3"	278	11'-2"	419	12'-2"	622	14'-4"	995	24'-5"	2075	13'-1"	1738	19'-10"	2740	28'-6"	773	#10	76	5"	11'-6"	3761	54	1774	29	233	12	394	13	427	8'-4"	226	115.3	16454	29



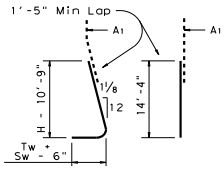
BARS A_1



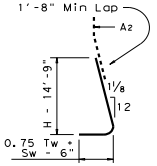
BARS A_2



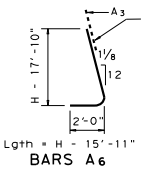
BARS A_3



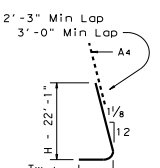
BARS A_4



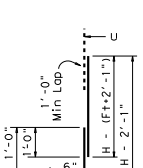
BARS A_5



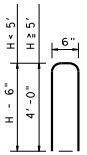
BARS A_6



BARS A_7

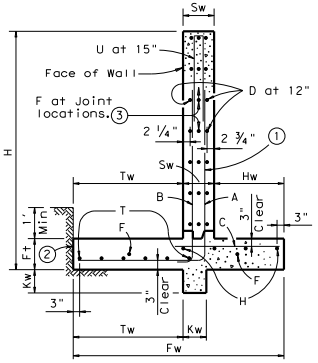


BARS B

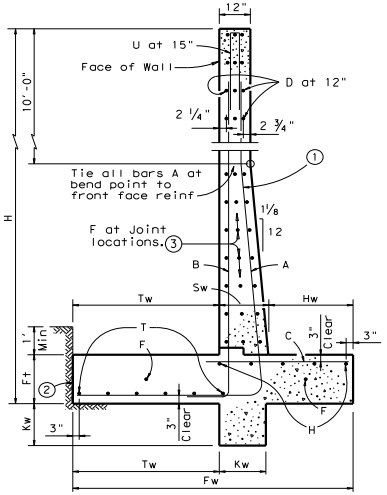


BARS U

1. Place vertical bars inside of horizontal bars (Typ both faces).
2. Place footing toe against undisturbed soil.
3. See standard RW 2 for size.

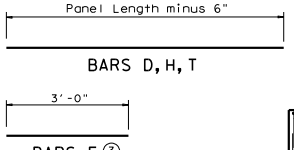


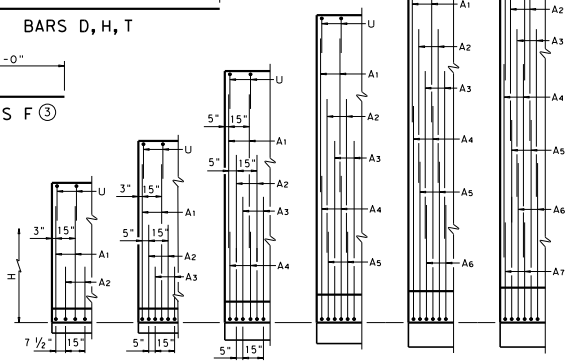
H ≤ 11'



SECTIONS

H > 11'





PARTIAL WALL ELEVATIONS

(Showing vertical reinforcing pattern in back face)

GENERAL NOTES:

All concrete to be Class "C".
All reinforcing steel to be Grade 60.
For notes and details not shown on this sheet see sheet RW2.
Quantities are based on "H" being average height of panel.
Retaining Walls are designed to be coded as follows on Retaining Wall Layout Sheets.

HC - 21 - 28
LA - 28 - 32
- Panel Length ~ 32' is standard; 28' requires special quantities
- Average Height "H" of panel
- Design - A = no surcharge or slope above wall; B = slopes up to 4:1; C = traffic surcharge and/or slopes up to 2.5:1
- Footing pressure design ~ L = low, H = high

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RETAINING WALLS

RW 1(L)C

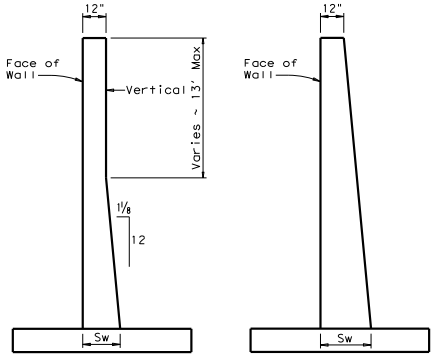
FILE:	rwstde07.dgn	DN: TxDOT	CK: TxDOT	DW: GHO	CK: MPM
©TxDOT	March 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS					
		DIST	COUNTY		SHEET NO.

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FILE:

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DATE:
FILE:

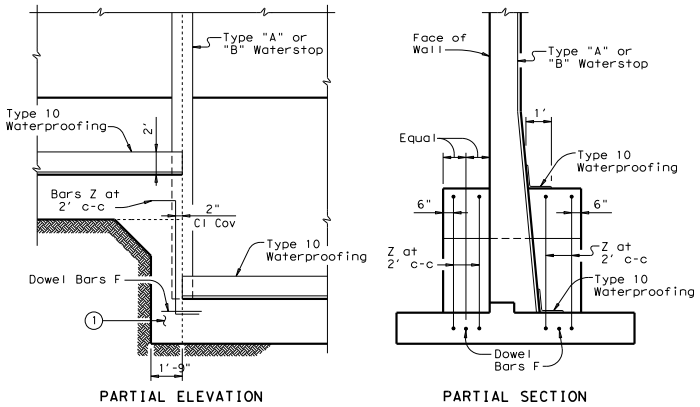


AS DETAILED ALL HEIGHTS
(Basis for payment)

FRONT FACE VERTICAL BACK FACE SLOPED

ALTERNATE STEM SLOPE DETAILS

Walls with slopes other than those shown may be used after approval by the Engineer. Sw shall not be less than shown in Table on Sheet 1. No payment will be made for excess concrete due to changing of slope of wall stem.

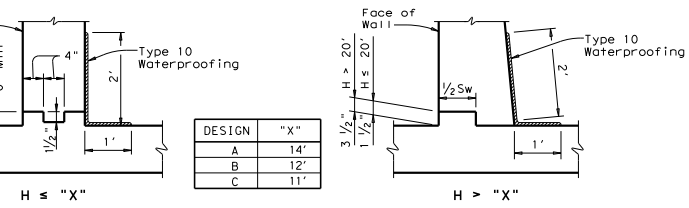


PARTIAL ELEVATION

PARTIAL SECTION

SHOWING WATERSTOP AT FOOTING JOINT

① Unreinforced Class "C" Concrete when difference in top of footing elevations is less than 6'. Omit when Dowel Bars F can be placed between adjacent footings with 4" cover top and bottom.

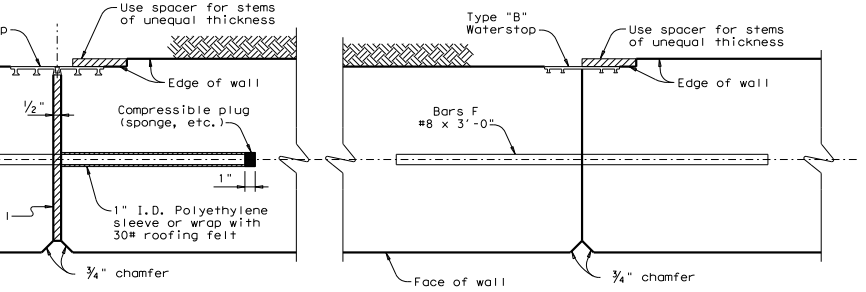


DESIGN	"X"
A	14'
B	12'
C	11'

H ≤ "X"

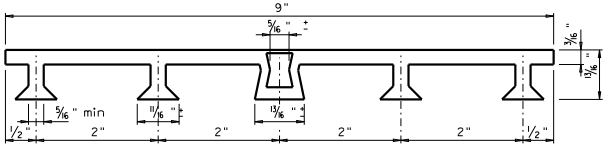
H > "X"

JOINT AND WATERSTOP DETAILS

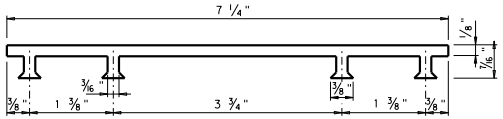


EXPANSION JOINT

CONSTRUCTION JOINT

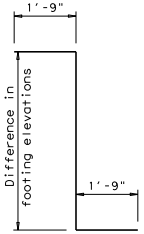


PVC WATERSTOP TYPE "A"



PVC WATERSTOP TYPE "B"

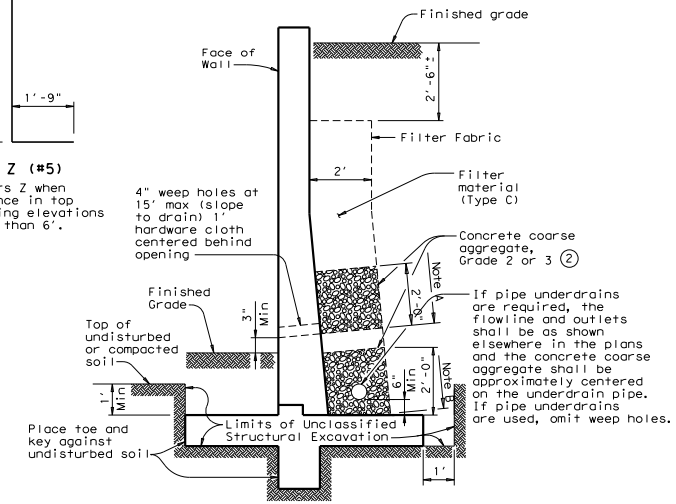
Note: Dimensions and shapes may vary slightly depending on manufacturer.



BARS Z (#5)

Omit Bars Z when difference in top of footing elevations is less than 6'.

② Crushed blast furnace slag, recycled crushed hydraulic cement concrete or combination there of may not be used.



DRAINAGE DETAILS AND EXCAVATION DIAGRAM

Note A: Stop coarse aggregate at this level when weep holes are used.

Note B: Use coarse aggregate to here with filter material above when underdrains are used.

GENERAL NOTES:

Walls are designed assuming unit weight of soil = 120 pcf, and coefficient of horizontal earth pressure = 0.33.

Walls are designed to provide a minimum factor of safety against sliding of 1.5. The undisturbed or compacted soil depth in front of walls, from bottom of Key up, shall not be less than Kw + Ft + 1'.

Retaining walls are detailed to be placed on grades up thru 10% with footing level, with no changes in reinforcing steel. Steeper grades can be accommodated by shortening Bars A1 and B and increasing length of legs of Bars U by the same amount. No change in Quantities will be involved

Retaining walls may be placed on Horizontal Curves by adjusting lengths of footing Bars T and H. Minor revisions of Concrete Quantities may be required.

Designed in accordance with current AASHTO Standard and Interim Specifications.

All concrete to be Class "C".

All reinforcing steel to be Grade 60.

Texas Department of Transportation

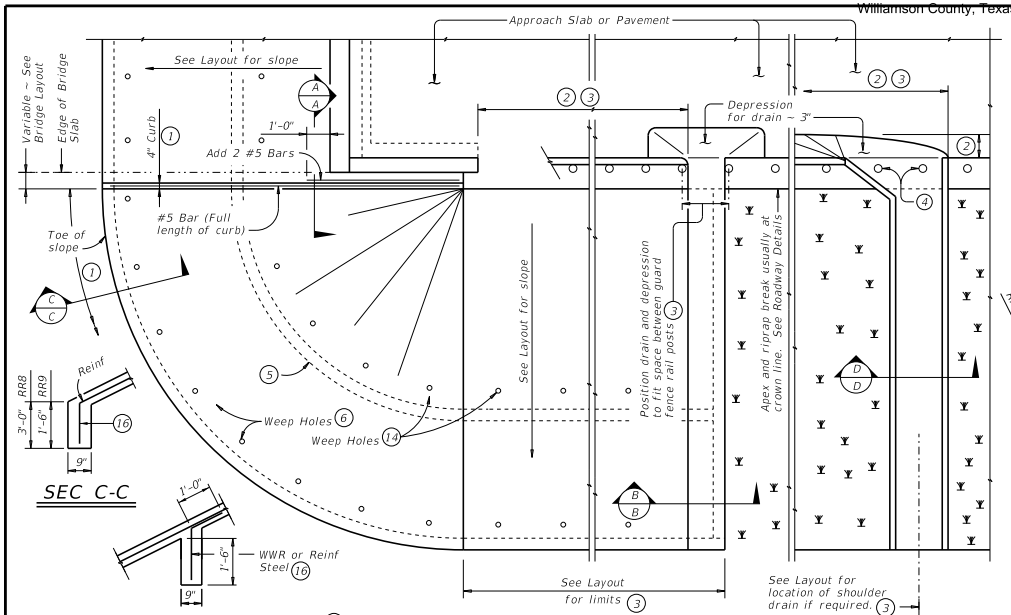
Bridge Division Standard

RETAINING WALL MISCELLANEOUS DETAILS

RW 2

FILE: rwstdet1.dgn	DN: TxDOT	CK: TxDOT	DW: JGD	CK: MJG
©TxDOT March 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS				
04-11: Added Note 2.	DIST	COUNTY		SHEET NO.

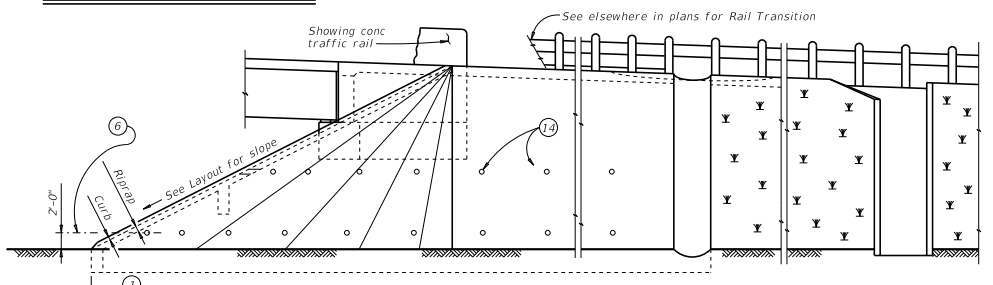
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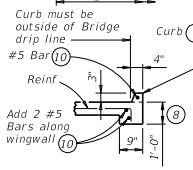
PLAN

SEC C-C

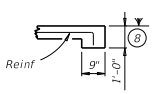
INTERMEDIATE TOEWALL



ELEVATION

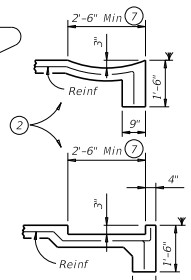


SEC A-A



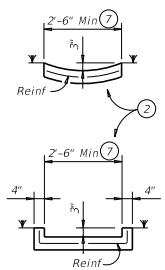
SEC B-B

(No Drain)



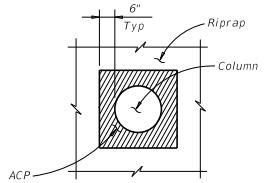
SEC B-B

(Shoulder Drain integral with riprap)



SEC D-D

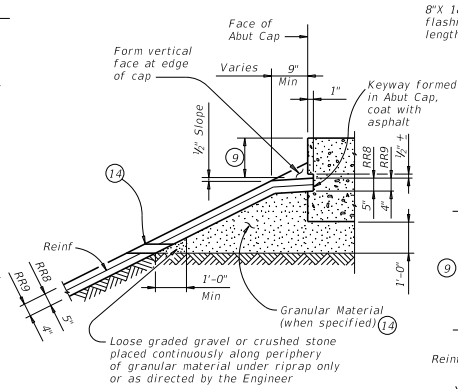
(Shoulder Drain)



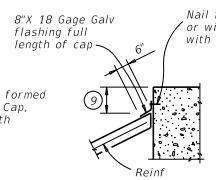
Riprap Blockout to be filled with ACP. (Subsidiary to Riprap)

RIPRAP DETAIL AT COLUMNS

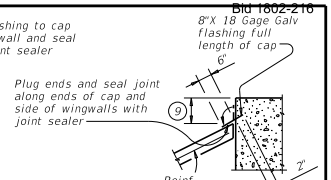
(As directed by the Engineer)



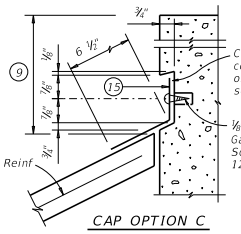
SHOWING KEYWAY OPTION



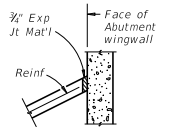
CAP OPTION A



CAP OPTION B



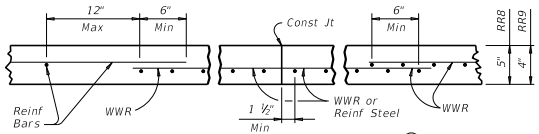
CAP OPTION C



SECT THRU RIPRAP AT WINGWALL (12)

SECTIONS THRU RIPRAP AT CAP (11)

1. When riprap is shown extended around header on layout, extend slab and toewall as shown and eliminate 4" curb.
2. Limits and configuration of drains and depressions are as shown elsewhere in plans or as directed by the Engineer.
3. Location of shoulder drain must consider limitations imposed by rail transition. Do not locate shoulder drains at expansion joints between approach slab and concrete pavement.
4. See details elsewhere in plans for installation of guard fence posts through concrete riprap.
5. Provide intermediate toewall only when designated elsewhere in the plans or included in the specifications.
6. Provide lower level of 2" Dia weep holes at 10' c-c backed by 1 CF packet of gravel and galvanized hardware cloth at all locations unless directed by the Engineer to eliminate.
7. Use wider or other drain configurations if shown elsewhere in plans or if directed by the Engineer.
8. Wall extension may be reduced or modified if approved by the Engineer. Increase wall extension to 1'-6" whenever the optional intermediate toewall is called for in the plans.
9. Top of cap to top of riprap dimension varies as directed by the Engineer. Should be 9" Min for beam/slab type bridges and 1'-6" for slab span, box beam, or slab beam bridges.
10. #5 bars shown are required even when synthetic fiber reinforcing option is selected.
11. Provide sealing option for joint between the face of cap and riprap as designated by the Engineer or as shown elsewhere on plans.
12. Flashing (shown in Cap Option A) may be used at wingwall in addition to Exp Jt Mat'l if shown on plans or directed by the Engineer.
13. Provide #3 reinforcing bars at 18" Spa c-c. Provide Welded Wire Reinforcement (WWR) as 6x6-D3xD3. Combinations of WWR and reinforcing bars may be used if both are permitted. Use lap splices of a minimum 6 inches, measured from the transverse wire of WWR, and the ends of reinforcing bars.
14. If granular material is specified, provide upper level of 2" Dia weep holes at 10' c-c backed by galvanized hardware cloth.
15. 8" x 18 Gage Galv Sheet Metal
16. Provide WWR or #3 bars, with 1'-0" extension into slope.



REINFORCEMENT DETAILS (13)

See General Notes for optional sythetic fiber reinforcement.

GENERAL NOTES:

Provide Class "B" concrete with a minimum compressive strength of 2,000 psi unless noted elsewhere in plans.

Provide Grade 60 reinforcing steel.

Provide synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Install construction joints or grooved joints extending the full slant slope height at intervals of approximately 20 feet unless otherwise directed by the Engineer.

Hardware cloth, loose grade stone behind weep holes, flashing, or other sealing material are subsidiary to the bid item "Riprap".

Use reinforcing bars, deformed Welded Wire Reinforcing (WWR), or any suitable combination of both types for riprap reinforcing, unless specified elsewhere in the plans.

See Layout for limits of riprap.

RR8 is to be used on stream crossings.

RR9 is to be used on other embankments.

FOR CONTRACTOR'S INFORMATION ONLY:
5" of RR8 = 0.015 CY/SF
4" of RR9 = 0.012 CY/SF
#3 Reinf at 18" c-c = 0.501 Lbs/SF
6x6-D3xD3 = 0.408 Lbs/SF

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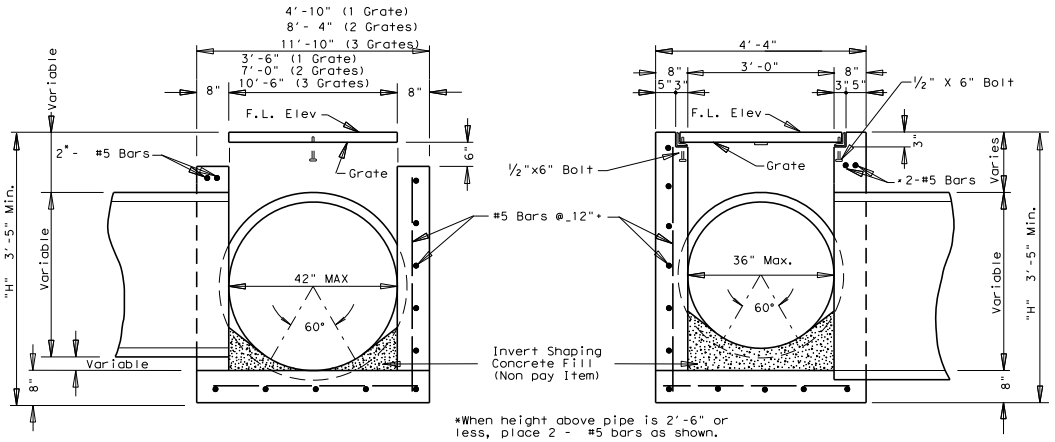
Bridge Division Standard

CONCRETE RIPRAP AND SHOULDER DRAINS
EMBANKMENTS AT BRIDGE ENDS (TYPES RR8 & RR9)

CRR

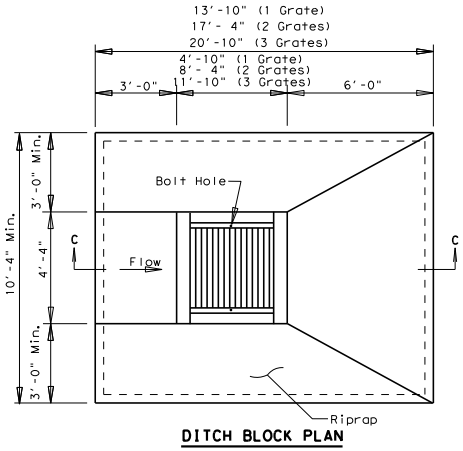
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©TxDOT	January 2015	CONT	SECT	JOB	HIGHWAY
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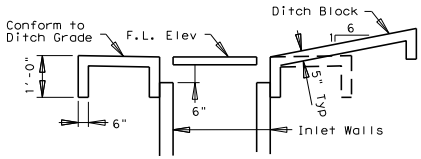


SECTION A-A

SECTION B-B

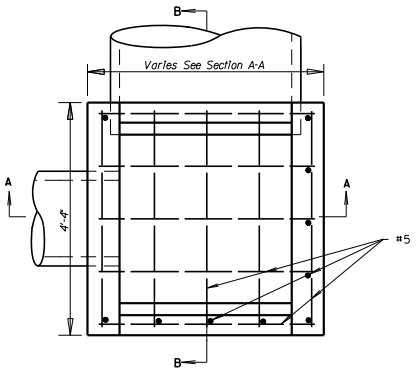


DITCH BLOCK PLAN

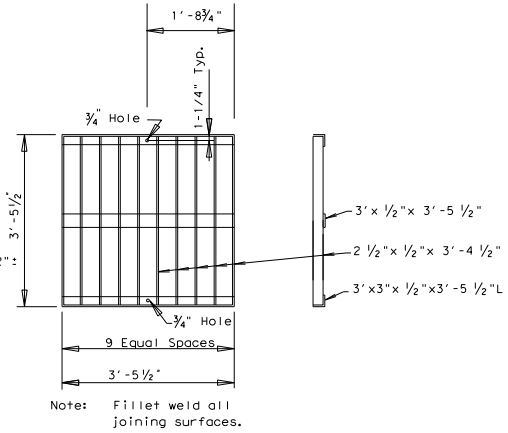


SECTION C-C

RIPRAP DETAILS



PLAN



Note: Fillet weld all joining surfaces.

GRATE DETAILS

GENERAL NOTES:

Use Class "A" Concrete for Drop Inlets.

Install Mounting Bolts as directed. Use galvanized Bolts, Nuts and Washers.

Place Riprap Concrete Class "B" and Grates in accordance with Item 432, "Riprap" and Item 471, "Frames, Grates, Rings and Covers." Consider these items subsidiary to pertinent Items.

For installation on Box Culverts, adjustments may be made by the Engineer to fit unusual conditions.

Place Riprap Concrete Class "B" as soon as practical to minimize erosion.

Use WWF 6X6-W2.9X2.9 Reinforcement for Riprap.

Ensure connecting pipes enters within 10 degrees of normal to inlet wall. Use pipe elbow or curved approach alignment as necessary to meet this requirement.

Consider Excavation and Backfill subsidiary to pertinent Item.

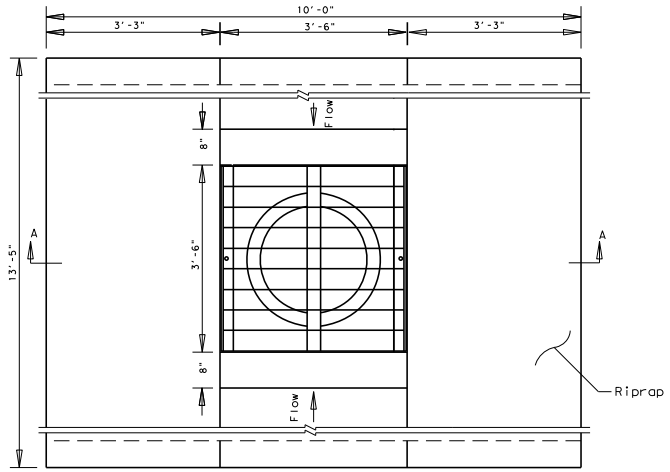
Texas Department of Transportation
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DROP INLET DETAILS TYPE I

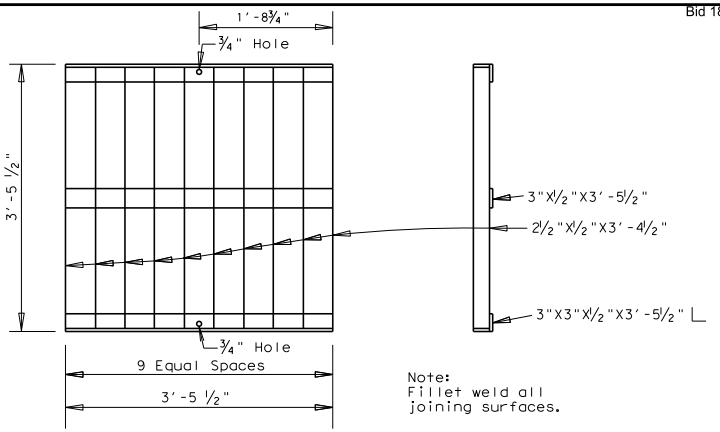
Austin District Standard

© TxDOT 2003	DIST	FED REG	FEDERAL AID PROJECT •	SHEET
REVISIONS 3/03 District Update 9/04 2004 Update	AUS	6		
	COUNTY		CONTROL SECT JOB	HIGHWAY
				p. 38

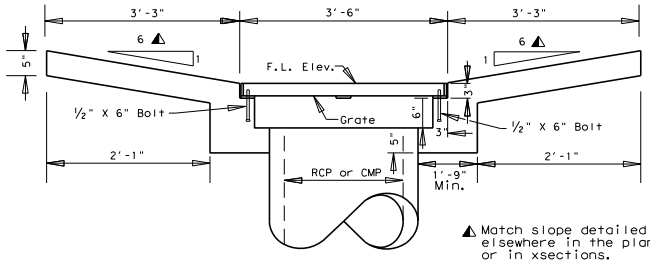
DI-TY1-04.dgn



PLAN

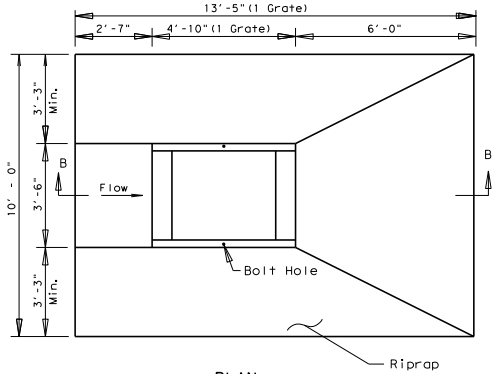


GRATE DETAILS



⚠ Match slope detailed elsewhere in the plans or in xsections.

SECTION A-A



PLAN
DITCH BLOCK
(SEE SECTION B-B)

GENERAL NOTES:

Install Mounting Bolts as directed.
Use Bolts, Nuts and Washers that are galvanized.

For installation on Box Culverts, adjustments may be made by the Engineer to fit unusual conditions.

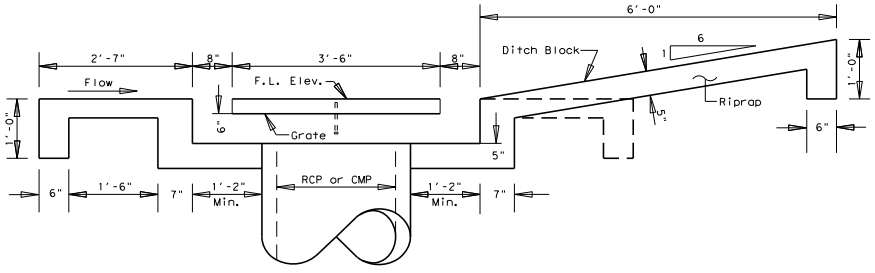
Place Standpipe, Riprap Concrete Class "B" and Grate in accordance with Item 460, "Corrugated Metal Pipe" or Item 464, "Reinforced Concrete Pipe", Item 432, "Riprap" and Item 471, "Frames, Grates, Rings and Covers." Consider Riprap and Grate(s) subsidiary to pertinent Items. Payment for length of Standpipe will be paid for under Item 460, "Corrugated Metal Pipe" or Item 464, "Reinforced Concrete Pipe." Length of Standpipe shall be as shown elsewhere on the plans.

Consider connections of the Standpipe to new or existing structures subsidiary to pertinent Items.

Place Riprap Concrete Class "B" as soon as practical to minimize erosion.

Use WWF 6X6-W2.9XW2.9 Reinforcement for Riprap.

Consider Excavation and Backfill subsidiary to pertinent Item.



SECTION B-B

TYPICAL PIPE INLET

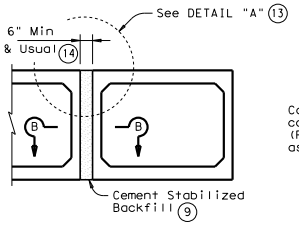
Texas Department of Transportation
Austin District Design

DROP INLET DETAILS TYPE II

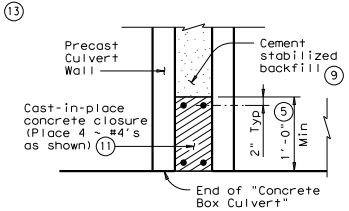
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REVISIONS	AUS	6		
3/03 District Update	COUNTY		CONTROL SECT JOB	HIGHWAY
9/04 2004 Update				p.39

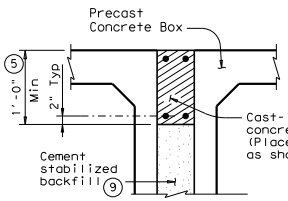
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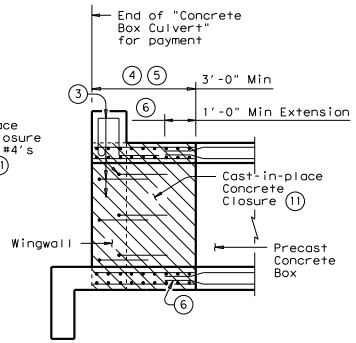
MULTIPLE UNIT PLACEMENT



SECTION B-B

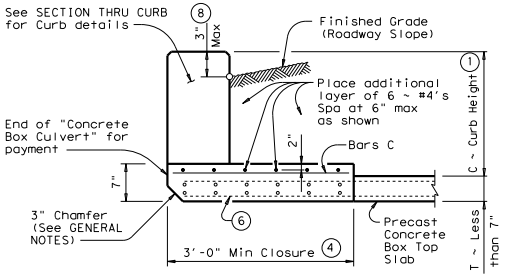


DETAIL "A" (13)

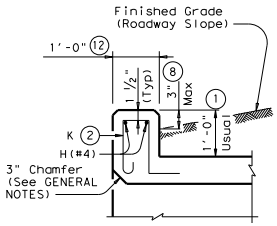


WINGWALL CONNECTION

(Also applies to Safety End Treatment)

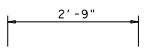


SECTION THRU TOP SLABS LESS THAN 7"

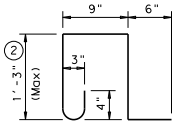


SECTION THRU CURB

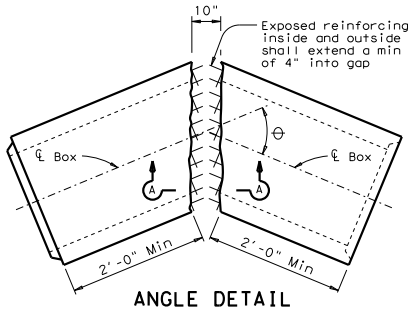
(10) QUANTITIES PER FOOT OF CURB	
Reinforcing Steel	4.18 Lb
Concrete	0.037 CY



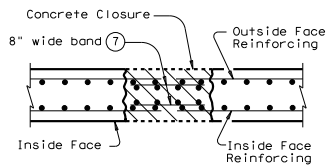
BARS C ~ #4
(Spa = 1'-0" Max)



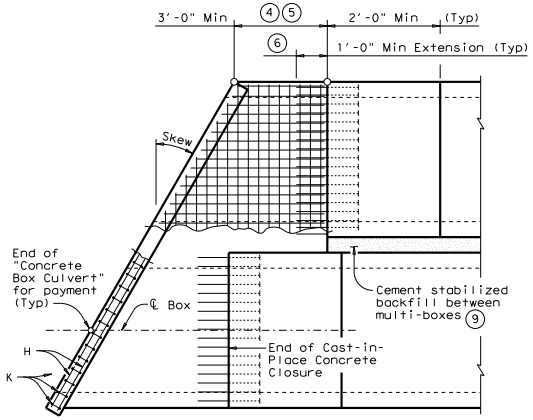
BARS K ~ #4
(Spa = 1'-0" Max)
(Length = 4'-3")



ANGLE DETAIL



SECTION A-A



PLAN OF SKEWED ENDS

(Showing multi-box placement)

1. 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 traffic rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.
2. For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted.
3. Curb, Wingwall or Safety End Treatment reinforcing shall extend into concrete closure. Any reinforcing that does not fit into the closure shall be bent or trimmed as necessary.
4. Cast-in-place concrete closure shall be 3'-0" min. Boxes shall be cast short or broken back in the field. All reinforcing in the closure shall be the same size and spacing as in the precast box section. Except where shown otherwise, the cast-in-place closure shall be flush with the inside and outside faces of the precast box section.
5. For multiple unit placements the length of the closure for the interior walls may be adjusted as necessary. The length of the top slab, bottom slab, and exterior wall closure shall not be less than 3'-0". See Section B-B detail when interior walls are cast full length.
6. Precast box reinforcing shall extend a minimum of 1'-0" into concrete closure (Typ).
7. Bands of reinforcing matching the inside and outside face reinforcing shall be placed in the gaps of the top and bottom slabs. A band matching the outside face reinforcing of the wall shall be placed in the gaps of the walls (placed in the outside face only). The bands shall be tack welded to the exposed reinforcing at each point of contact.
8. For vehicle safety, the following requirements must be met:
   - For structures without bridge rail, curbs shall project no more than 3" above finished grade.
   - For structures with bridge rail, curbs shall be flush with finished grade.

   Curb heights shall be reduced, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
9. Cement Stabilized Backfill between boxes is considered part of the Box Culvert for payment.
10. All curb concrete and reinforcing is considered part of the Box Culvert for payment.
11. Any additional concrete and reinforcing required for the closures shall be considered as subsidiary to the Concrete Box Culvert.
12. 1'-0" typical. 2'-0" when RAC standard is referred to elsewhere in the plans.
13. For multiple unit placement with overlay, with 1 to 2 course surface treatment, or with the top slab as the final riding surface, provide wall closure as shown in DETAIL "A".
14. This dimension may be increased with approval of the Engineer to allow the precast boxes to be tunneled or jacked in accordance with Item 476, "Jacking, Boring, or Tunneling Pipe or Box". No payment will be made for any additional material in the gap between adjacent boxes.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

All closure concrete shall be Class "C" with a minimum compressive strength of 3600 psi and shall be placed according to the Item, "Concrete Structures".

Any additional concrete required for the closures shall be considered as subsidiary to the Concrete Box Culvert.

Refer to the Single Box Culverts Precast standard for details not shown.

The bottom edge of the top slab closure shall be chamfered 3 inches at the entrance.

HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

BOX CULVERTS PRECAST MISCELLANEOUS DETAILS

SCP-MD

FILE: scpmdste.dgn	DN: GAF	CK: LMW	DW: BWH/TxDOT	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

DATE:
FILE:

TABLE OF DIMENSIONS & REINFORCING STEEL
(Wings for One Structure End)

Dimensions					Variable Reinforcing				Estimated Quantities per ft of wing length (2~Wings) ③	
					Bars J1		Bars J2			
Maximum Wingwall Height Hw	W	X	Y	Z	Size	Spa	Size	Spa	Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	33.73	0.248
3'-0"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	37.07	0.261
3'-6"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	37.74	0.273
4'-0"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	38.41	0.285
4'-6"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	41.75	0.330
5'-0"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	45.09	0.343
5'-6"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	45.75	0.355
6'-0"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	46.42	0.367
7'-0"	3'- 8"	1'- 9"	1'- 3"	7"	#4	1'-0"	#4	1'-0"	52.77	0.414
8'-0"	4'- 2"	2'- 0"	1'- 6"	8"	#5	1'-0"	#4	1'-0"	60.19	0.486
9'-0"	4'- 8"	2'- 3"	1'- 9"	8"	#4	6"	#4	6"	81.49	0.535
10'-0"	5'- 2"	2'- 6"	2'- 0"	8"	#5	6"	#4	6"	97.25	0.584
11'-0"	5'- 8"	2'- 9"	2'- 3"	8"	#6	6"	#5	6"	133.65	0.634
12'-0"	6'- 2"	3'- 0"	2'- 6"	9"	#7	6"	#5	6"	162.29	0.721
13'-0"	6'- 8"	3'- 3"	2'- 9"	11"	#7	6"	#5	6"	178.80	0.856
14'-0"	7'- 2"	3'- 6"	3'- 0"	1'- 0"	#8	6"	#5	6"	216.78	0.959
15'-0"	7'- 8"	4'- 0"	3'- 0"	1'- 1"	#9	6"	#6	6"	283.06	1.068
16'-0"	8'- 2"	4'- 6"	3'- 0"	1'- 3"	#9	6"	#6	6"	297.02	1.234

TABLE OF WINGWALL REINFORCING (2~Wings)

Bar	Size	No.	Spa
D	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

Bar	Size	No.	Spa
L	#4	~	1'-6"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

WING DIMENSION CALCULATIONS:

Formulas: (All values are in Feet)

Hw = H + T + C - 0.250'

Lw = (Hw - 0.333') (SL)

For Cast-in-place culverts:

Ltw = (N) (S) + (N+1) (U)

For Precast culverts:

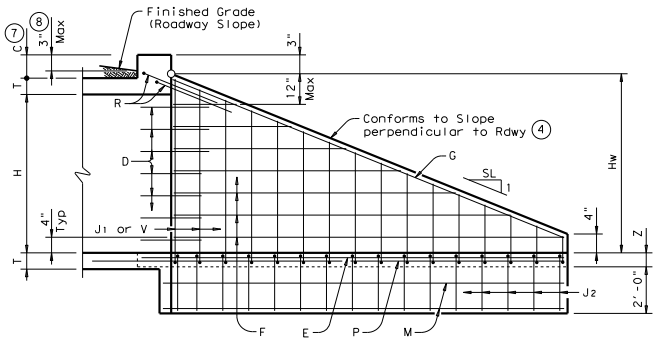
Ltw = (N) (2U + S) + (N - 1) (0.5')

Total Wingwall Area (Two Wings ~ S.F.) = (Hw + 0.333') (Lw)

Hw = Height of Wingwall
SL:1 = Side Slope Ratio (Horizontal:1 Vertical)
Lw = Length of Wingwall
Ltw = Culvert Toewall Length
N = Number of Culvert Spans

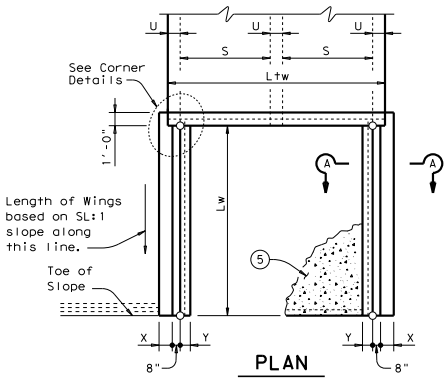
See applicable box culvert standard for H, S, T, and U values.

1. Extend Bars P 3'-0" minimum into bottom slab of Box Culvert.
2. Adjust to fit as necessary to maintain 1 1/4" clear cover and 4" minimum between bars.
3. Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings multiply the tabulated values by Lw.
4. Recommended values of Slope are: 2:1, 3:1, 4:1, & 6:1.
5. When shown elsewhere on the plans, a 5" deep concrete riprap shall be constructed. Payment for riprap shall be as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, the riprap shall have a 6" wide by 1'-6" deep reinforced concrete toewall along all edges adjacent to natural ground; the toewall shall be reinforced by extending typical riprap reinforcing into the toewall; construction joints or grooved joints, oriented in the direction of flow, shall extend across the full distance of the riprap, at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B will not be required.
6. At Contractor's option, Culvert Toewall may be ended flush with Wingwall Toewall. Adjust reinforcing from that shown as necessary.
7. 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.
8. For vehicle safety, curb heights and wall heights shall be reduced, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.



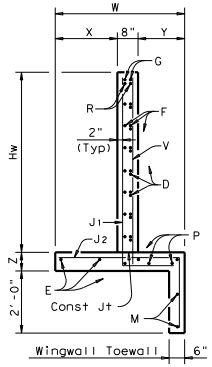
INSIDE ELEVATION

(Showing reinforcing. Culvert and Culvert Toewall reinforcing not shown for clarity.)

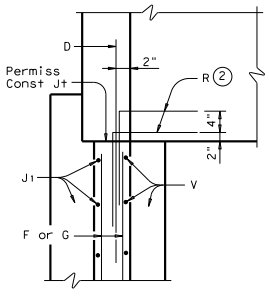


PLAN

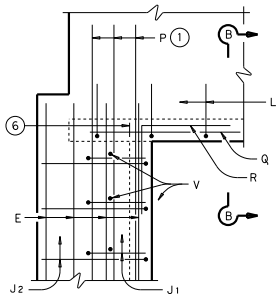
(Showing Dimensions)



SECTION A-A

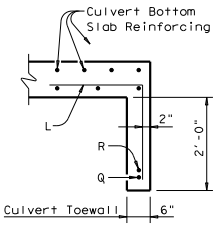


WINGWALL

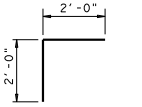


FOOTING AND TOEWALL

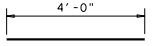
CORNER DETAILS



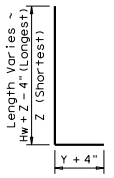
SECTION B-B ⑤



BARS R



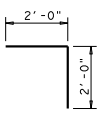
BARS D



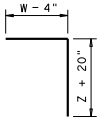
BARS J1



BARS V



BARS L



BARS J2

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

All reinforcing steel shall be Grade 60.

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

All reinforcing bars shall be adjusted to provide a minimum of 1 1/4" clear cover.

When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.

See BCS sheet for additional dimensions and information.

The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS WITH STRAIGHT WINGS FOR 0° SKEW BOX CULVERTS

SW-0

FILE: sw-0std.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS				
11-10- Add note for synthetic fibers.	DIST	COUNTY		SHEET NO.

DISCLAIMER:
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DATE:
FILE:

TABLE OF DIMENSIONS & REINFORCING STEEL
(Wings for One Structure End)

Dimensions					Variable Reinforcing				Estimated Quantities per ft of wing length (2~Wings) ③	
					Bars J1		Bars J2			
Maximum Wingwall Height Hw	W	X	Y	Z	Size	Spa	Size	Spa	Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	33.73	0.248
3'-0"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	37.07	0.261
3'-6"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	37.74	0.273
4'-0"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	38.41	0.285
4'-6"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	41.75	0.330
5'-0"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	45.09	0.343
5'-6"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	45.75	0.355
6'-0"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	46.42	0.367
7'-0"	3'- 8"	1'- 9"	1'- 3"	7"	#4	1'-0"	#4	1'-0"	52.77	0.414
8'-0"	4'- 2"	2'- 0"	1'- 6"	8"	#5	1'-0"	#4	1'-0"	60.19	0.486
9'-0"	4'- 8"	2'- 3"	1'- 9"	8"	#4	6"	#4	6"	81.49	0.535
10'-0"	5'- 2"	2'- 6"	2'- 0"	8"	#5	6"	#4	6"	97.25	0.584
11'-0"	5'- 8"	2'- 9"	2'- 3"	8"	#6	6"	#5	6"	133.65	0.634
12'-0"	6'- 2"	3'- 0"	2'- 6"	9"	#7	6"	#5	6"	162.29	0.721
13'-0"	6'- 8"	3'- 3"	2'- 9"	11"	#7	6"	#5	6"	178.80	0.856
14'-0"	7'- 2"	3'- 6"	3'- 0"	1'- 0"	#8	6"	#5	6"	216.78	0.959
15'-0"	7'- 8"	4'- 0"	3'- 0"	1'- 1"	#9	6"	#6	6"	283.06	1.068
16'-0"	8'- 2"	4'- 6"	3'- 0"	1'- 3"	#9	6"	#6	6"	297.02	1.234

TABLE OF WINGWALL REINFORCING (2~Wings)

Bar	Size	No.	Spa
D	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

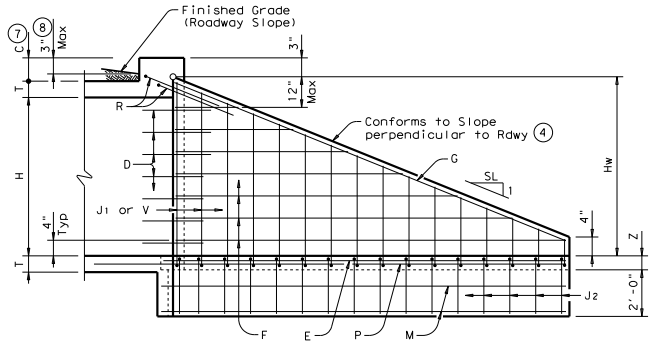
Bar	Size	No.	Spa
L	#4	~	1'-6"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

WING DIMENSION CALCULATIONS:

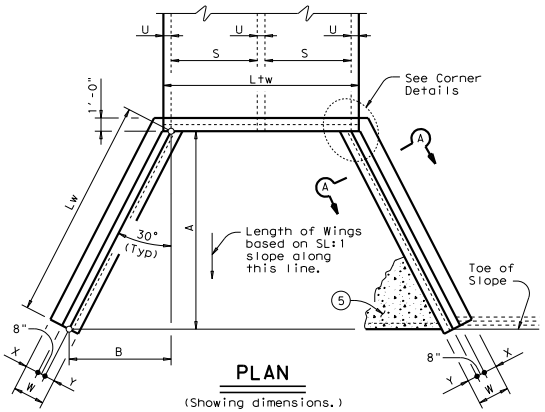
Formulas: (All values are in Feet)
Hw = H + T + C - 0.250'
A = (Hw - 0.333') (SL)
B = (A) Tangent (30°)
Lw = (A) ÷ Cosine (30°)
For Cast-in-place culverts:
Ltw = (N) (S) + (N+1) (U)
For Precast culverts:
Ltw = (N) (2U+S) + (N-1) (0.500')
Total Wingwall Area (Two Wings ~ S.F.) = (Hw + 0.333') (Lw)

Hw = Height of Wingwall
SL:1 = Side Slope Ratio (Horizontal:1 Vertical)
Lw = Length of Wingwall
Ltw = Culvert Toewall Length
N = Number of Culvert Spans

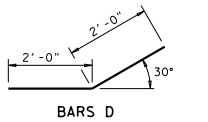
See applicable box culvert standard for H, S, T, and U values.



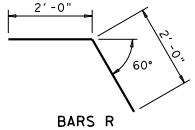
INSIDE ELEVATION
(Showing reinforcing. Culvert and Culvert Toewall reinforcing not shown for clarity.)



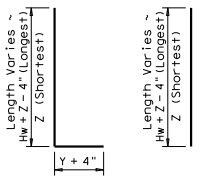
PLAN
(Showing dimensions.)



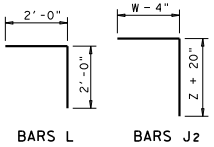
BARS D



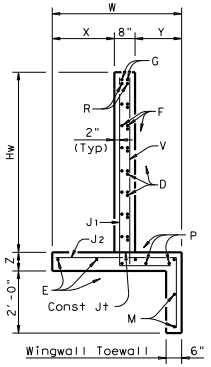
BARS R



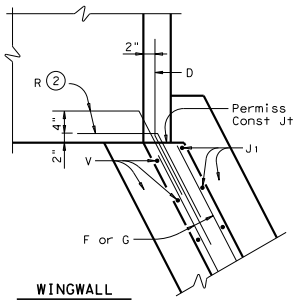
BARS J1 BARS V



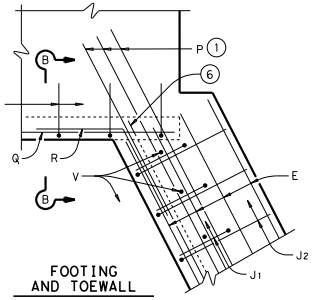
BARS L BARS J2



SECTION A-A

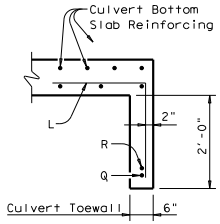


WINGWALL



FOOTING AND TOEWALL

CORNER DETAILS
(Culvert and Culvert Toewall reinforcing not shown for clarity.)



SECTION B-B ⑤

① Extend Bars P 3'-0" minimum into bottom slab of Box Culvert.

② Adjust to fit as necessary to maintain 1 ¼" clear cover and 4" minimum between bars.

③ Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings multiply the tabulated values by Lw.

④ Recommended values of Slope are: 2:1, 3:1, 4:1, & 6:1.

⑤ When shown elsewhere on the plans, a 5" deep concrete riprap shall be constructed. Payment for riprap shall be as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, the riprap shall have a 6" wide by 1'-6" deep reinforced concrete toewall along all edges adjacent to natural ground; the toewall shall be reinforced by extending typical riprap reinforcing into the toewall; construction joints or grooved joints, oriented in the direction of flow, shall extend across the full distance of the riprap, at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B will not be required.

⑥ At Contractor's option, Culvert Toewall may be ended flush with Wingwall Toewall. Adjust reinforcing from that shown as necessary.

⑦ 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.

⑧ For vehicle safety, curb heights and wall heights shall be reduced, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

All reinforcing steel shall be Grade 60.

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

All reinforcing bars shall be adjusted to provide a minimum of 1 ¼" clear cover.

When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.

See BCS sheet for additional dimensions and information.

The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS WITH FLARED WINGS FOR 0° SKEW BOX CULVERTS

FW-0

FILE: fw-0std.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS				
11-10- Add note for synthetic fibers.	DIST	COUNTY		SHEET NO.

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DATE:
FILE:

TABLE OF DIMENSIONS & REINFORCING STEEL
(Wings for One Structure End)

Maximum Wingwall Height Hw	W	X	Y	Z	Variable Reinforcing Bars J1 Size	Bars J1 Spa	Bars J2 Size	Bars J2 Spa	Estimated Quantities per ft of wing length (2~Wings) Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	33.73	0.248
3'-0"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	37.07	0.261
3'-6"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	37.74	0.273
4'-0"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	38.41	0.285
4'-6"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	41.75	0.330
5'-0"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	45.09	0.343
5'-6"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	45.75	0.355
6'-0"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	46.42	0.367
7'-0"	3'- 8"	1'- 9"	1'- 3"	7"	#4	1'-0"	#4	1'-0"	52.77	0.414
8'-0"	4'- 2"	2'- 0"	1'- 6"	8"	#5	1'-0"	#4	1'-0"	60.19	0.486
9'-0"	4'- 8"	2'- 3"	1'- 9"	8"	#4	6"	#4	6"	81.49	0.535
10'-0"	5'- 2"	2'- 6"	2'- 0"	8"	#5	6"	#4	6"	97.25	0.584
11'-0"	5'- 8"	2'- 9"	2'- 3"	8"	#6	6"	#5	6"	133.65	0.634
12'-0"	6'- 2"	3'- 0"	2'- 6"	9"	#7	6"	#5	6"	162.29	0.721
13'-0"	6'- 8"	3'- 3"	2'- 9"	11"	#7	6"	#5	6"	178.80	0.856
14'-0"	7'- 2"	3'- 6"	3'- 0"	1'- 0"	#8	6"	#5	6"	216.78	0.959
15'-0"	7'- 8"	4'- 0"	3'- 0"	1'- 1"	#9	6"	#6	6"	283.06	1.068
16'-0"	8'- 2"	4'- 6"	3'- 0"	1'- 3"	#9	6"	#6	6"	297.02	1.234

TABLE OF WINGWALL REINFORCING (2~Wings)

Bar	Size	No.	Spa
DL	#5	~	1'-0"
DS	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
RS	#5	3	~
RL	#5	3	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

Bar	Size	No.	Spa
L	#4	~	1'-6"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

WING DIMENSION CALCULATIONS:

Formulas: (All values are in Feet)

Hw = H + T + C - 0.250'

A = (Hw - 0.333') (SL)

B = (A) [Tangent (θ + 15°)]

Lw = (A) ÷ [Cosine (θ + 15°)]

For Cast-in-place culverts:

Ltw = [(N) (S) + (N+1) (U)] ÷ (Cosine θ)

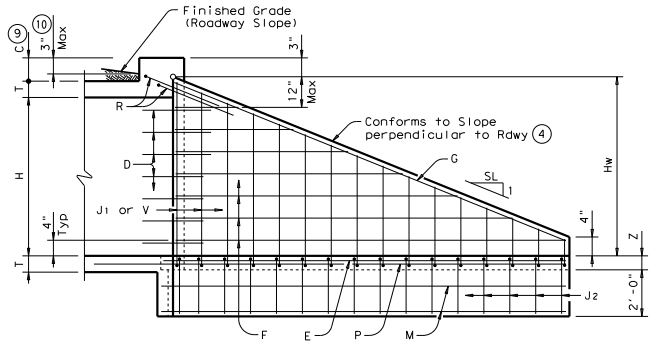
For Precast culverts:

Ltw = [(N) (2U+S) + (N-1) (0.500')] ÷ (Cosine θ)

Total Wingwall Area (Two Wings ~ S.F.) = (0.5) (Hw + 0.333') (Lw + A)

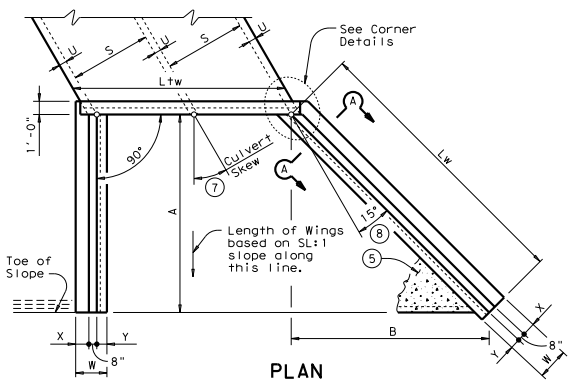
Hw = Height of Wingwall
SL:1 = Side Slope Ratio (Horizontal:1 Vertical)
A = Length of Short Wingwall
Lw = Length of Long Wingwall
Ltw = Culvert Toewall Length
N = Number of Culvert Spans
θ = Culvert Skew

See applicable box culvert standard for H, S, T, and U values.



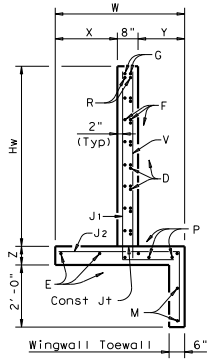
INSIDE ELEVATION

(Showing reinforcing. Culvert and Culvert Toewall reinforcing not shown for clarity.)

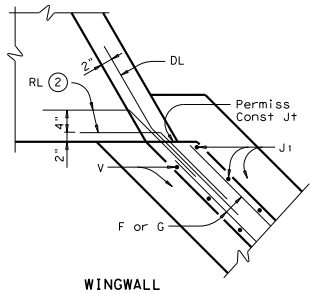


PLAN

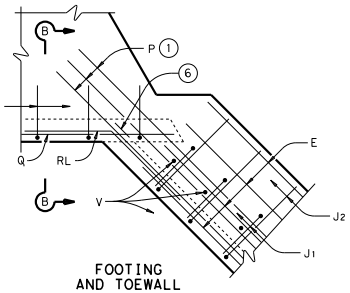
(Showing dimensions and 30° Skew.)



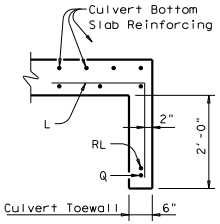
SECTION A-A



WINGWALL



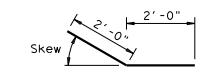
FOOTING AND TOEWALL



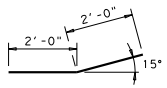
SECTION B-B (5)

CORNER DETAILS

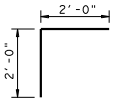
(Culvert and Culvert Toewall reinforcing not shown for clarity.)



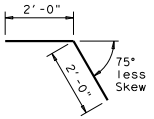
BARS DS
(Short Wing)



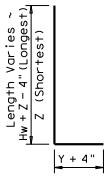
BARS DL
(Long Wing)



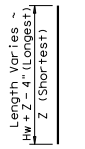
BARS RS
(Short Wing)



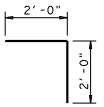
BARS RL
(Long Wing)



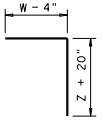
BARS J1



BARS V



BARS L



BARS J2

1. Extend Bars P 3'-0" minimum into bottom slab of Box Culvert.
2. Adjust to fit as necessary to maintain 1 ¼" clear cover and 4" minimum between bars.
3. Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings multiply the tabulated values by 0.5 x (A+Lw).
4. Recommended values of Slope are: 2:1, 3:1, 4:1, & 6:1.
5. When shown elsewhere on the plans, a 5" deep concrete riprap shall be constructed. Payment for riprap shall be as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, the riprap shall have a 6" wide by 1'-6" deep reinforced concrete toewall along all edges adjacent to natural ground; the toewall shall be reinforced by extending typical riprap reinforcing into the toewall; construction joints or grooved joints, oriented in the direction of flow, shall extend across the full distance of the riprap, at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B will not be required.
6. At Contractor's option, Culvert Toewall may be ended flush with Wingwall Toewall. Adjust reinforcing from that shown as necessary.
7. Applicable values of of Skew are: 15°, 30°, and 45°.
8. Typical wingwall angle for all skews.
9. 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.
10. For vehicle safety, curb heights and wall heights shall be reduced, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

All reinforcing steel shall be Grade 60.

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

All reinforcing bars shall be adjusted to provide a minimum of 1 ¼" clear cover.

When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.

See BCS sheet for additional dimensions and information.

The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS WITH FLARED WINGS FOR SKEWED BOX CULVERTS

FW-S

FILE: fw-sstde.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS 11-10: Add note for synthetic fibers.	DIST	COUNTY		SHEET NO.

DATE:
FILE:

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TABLE OF DIMENSIONS & REINFORCING STEEL
(Wings for One Structure End)

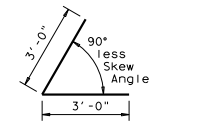
Dimensions					Variable Reinforcing				Estimated ④ Quantities per ft of wing (2~Wings)		Estimated Quantities per ft of Toewall (1~Toewall)	
					Bars J1		Bars J2					
Maximum Wingwall Height Hw	W	X	Y	Z	Size	Spa	Size	Spa	Reinf (Lb/Ft)	Conc (CY/Ft)	Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-10"	10"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	48.64	0.406	6.85	0.071
2'-9"	2'-10"	10"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	49.31	0.424	6.85	0.071
3'-0"	2'-10"	10"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	49.98	0.444	6.85	0.071
3'-3"	2'-10"	10"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	53.32	0.462	6.85	0.071
3'-6"	2'-10"	10"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	53.98	0.480	6.85	0.071
4'-0"	3'- 2"	1'- 2"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	55.77	0.532	6.85	0.071
4'-6"	3'- 2"	1'- 2"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	59.77	0.568	6.85	0.071
5'-0"	3'- 9"	1'- 7"	1'- 2"	7"	#4	1'-0"	#4	1'-0"	63.45	0.632	6.96	0.075
5'-6"	3'- 9"	1'- 7"	1'- 2"	7"	#4	1'-0"	#4	1'-0"	67.46	0.668	6.96	0.075
6'-0"	4'- 4"	2'- 0"	1'- 4"	7"	#5	1'-0"	#5	1'-0"	80.67	0.730	7.07	0.078
6'-6"	4'- 4"	2'- 0"	1'- 4"	7"	#5	1'-0"	#5	1'-0"	85.05	0.768	7.07	0.078
7'-0"	5'- 0"	2'- 3"	1'- 9"	8"	#5	1'-0"	#5	1'-0"	92.15	0.864	8.07	0.093
7'-6"	5'- 0"	2'- 3"	1'- 9"	8"	#5	1'-0"	#5	1'-0"	96.54	0.902	8.07	0.093
8'-0"	5'- 6"	2'- 8"	1'-10"	8"	#5	6"	#5	6"	139.04	0.962	8.13	0.095
8'-6"	5'- 6"	2'- 8"	1'-10"	8"	#5	6"	#5	6"	144.47	1.000	8.13	0.095
9'-6"	6'- 0"	2'-10"	2'- 2"	9"	#5	6"	#5	6"	156.93	1.136	8.41	0.110
10'-6"	6'- 5"	3'- 0"	2'- 5"	9"	#6	6"	#5	6"	196.27	1.234	8.57	0.117
11'-6"	7'- 2"	3'- 6"	2'- 8"	11"	#6	6"	#6	6"	230.13	1.438	9.52	0.140
12'-6"	7'- 8"	3'- 9"	2'-11"	1'- 0"	#7	6"	#6	6"	283.41	1.592	9.74	0.157
13'-6"	8'- 2"	4'- 0"	3'- 2"	1'- 2"	#8	6"	#6	6"	348.72	1.804	10.02	0.186
14'-6"	8'-10"	4'- 5"	3'- 5"	1'- 4"	#9	6"	#6	6"	432.94	2.046	10.30	0.218
15'-6"	9'- 6"	4'-10"	3'- 8"	1'- 6"	#9	6"	#7	6"	489.52	2.302	11.24	0.253
16'-0"	9'-11"	5'- 0"	3'-11"	1'- 7"	#9	6"	#7	6"	505.72	2.448	11.47	0.279

TABLE OF WINGWALL REINFORCING (2~Wings)

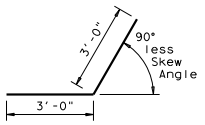
Bar	Size	No.	Spa
D1	#6	~	1'-0"
D2	#6	~	1'-0"
E1	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	~	8"
M1	#4	4	~
P	#4	~	1'-0"
V	#4	~	1'-0"

TABLE OF TOEWALL REINFORCING

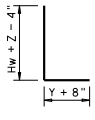
Bar	Size	No	Spa
J3	#4	~	1'-0"
M2	#4	2	~
E2	#4	~	1'-0"



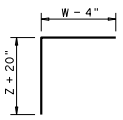
BARS D1



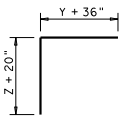
BARS D2



BARS J1



BARS J2



BARS J3

BARS V

WING DIMENSION CALCULATIONS:

Formulas: (All values are in Feet)

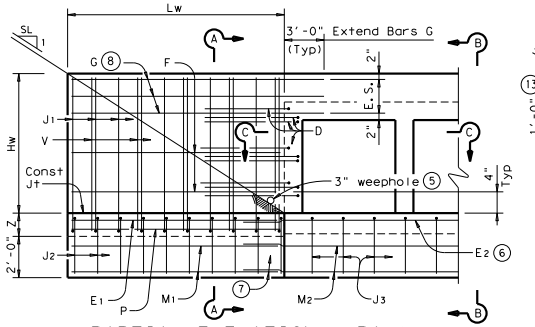
Hw = H + T + C
Lw = (Hw) (SL) ÷ Cosine θ for Ty PW-1
= (Hw - 1') (SL) ÷ Cosine θ for Ty PW-2 and Hw ≥ 4'
= (Hw - 0.5') (SL) ÷ Cosine θ for Ty PW-2 and Hw < 4'

For Cast-in-place culverts:
Ltw = [(N) (S) + (N + 1) (U)] ÷ Cosine θ

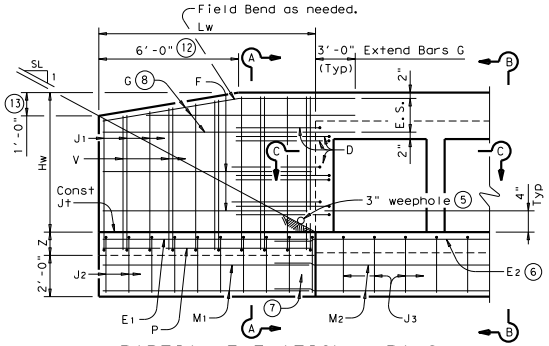
For Precast culverts:
Ltw = [(N) (2 U + S) + (N - 1) (0.5')] ÷ Cosine θ
Total Wingwall Area (Two Wings ~ SF)
= (2) (Hw) (Lw) for Ty PW-1
= (2) (Hw) (Lw) - 6 SF for Ty PW-2 and Hw ≥ 4'
= (2) (Hw) (Lw) - 1.5 SF for Ty PW-2 and Hw < 4'

Hw = Height of Wingwall
Lw = Length of Wingwall
Ltw = Culvert Toewall Length
N = Number of Culvert Spans
SL:1 = Channel Slope ratio. (Horizontal: 1 Vertical, Usual value is 2:1)
θ = Culvert Skew

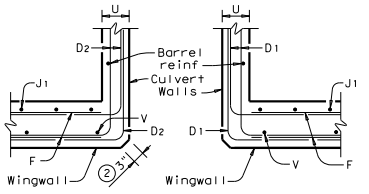
See applicable box culvert standard for S, H, T and U values.



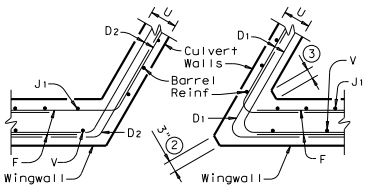
PARTIAL ELEVATION - PW-1



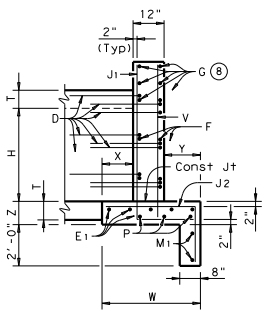
PARTIAL ELEVATION - PW-2



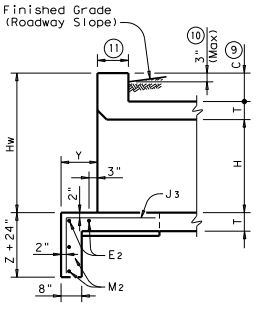
SECTION C-C



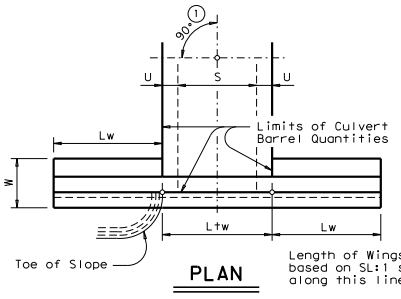
SECTION C-C



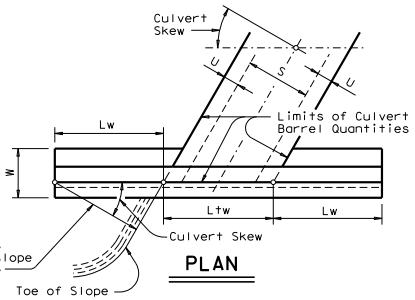
SECTION A-A
(Showing Wing Reinf)



SECTION B-B
(Showing Wing Reinf)



PLAN



PLAN

DETAILS FOR NON-SKEWED BOX CULVERTS

DETAILS FOR SKEWED BOX CULVERTS
(Showing 30° Skew)

① Skew Angle = 0°

② At discharge end, chamfer may be ¾".

③ For 15° Skew ~ 1"
For 30° Skew ~ 2"
For 45° Skew ~ 3"

④ Quantities shown are for two Type PW-1 wings. Adjust concrete volume for Type PW-2 wings. To determine estimated quantities for two wings, multiply the tabulated values by Lw. Quantities shown do not include weight of Bars D.

⑤ Provide weepholes for Hw = 5'-0" and greater. Fill around weepholes with coarse gravel.

⑥ Extend Bars E2 1'-6" minimum into the wingwall footing.

⑦ Lap Bars M1 1'-6" minimum with Bars M2.

⑧ Bars G equally spaced at 8" maximum, place as shown. Provide at least two pair Bars G per wing.

⑨ 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.

⑩ For vehicle safety, the following requirements must be met:
- For structures without bridge rail, curbs cannot project more than 3" above finished grade.
- For structures with bridge rail, build curbs flush with finished grade.
Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

⑪ 1'-0" typical. 2'-0" typical when RAC standard is referenced elsewhere in the plans.

⑫ 3'-0" for Hw < 4'.

⑬ 6" for Hw < 4'.

GENERAL NOTES:
Designed in accordance with AASHTO LRFD Bridge Design Specifications.
Provide Class "C" Concrete (f'c = 3,600 psi Min) and Grade 60 reinforcing steel.
Provide 1 ¼" Min clear cover to reinforcing steel.
Depth of toewalls for wingwalls and culverts may be reduced or eliminated when founded on solid rock, when directed by the Engineer.
See BCS sheet for wingwall type and additional dimensions and information.
The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for the Contractor's information only.

DESIGNER NOTES:
Type PW-1 can be used for all applications and must be used if railing is to be mounted to the wingwall.
Type PW-2 can only be used for applications without a railing mounted to the wingwall.

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS
WITH PARALLEL WINGS FOR BOX CULVERTS TYPES PW-1 AND PW-2

PW

FILE: pwstde01.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS 11-10: Reinforcing Quantities. 01-12: PW-1 & PW-2.	DIST	COUNTY		SHEET NO.

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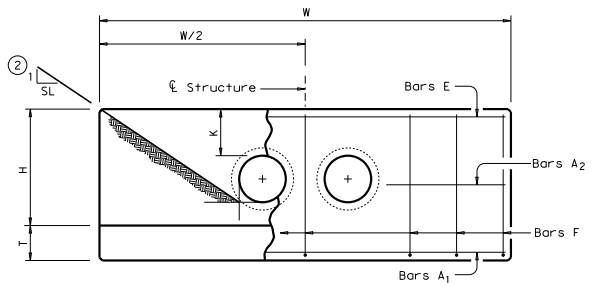
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TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

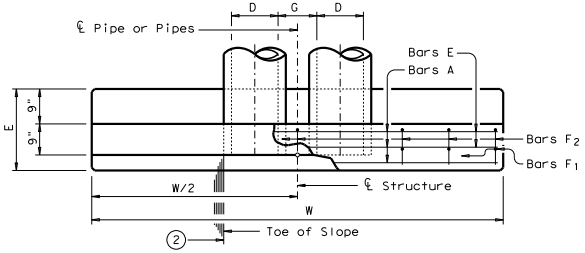
SLOPE	DIA. OF PIPE, D	Values for one Pipe			Values to be added for each addt'l Pipe		
		W	Reinf (Lbs)	Conc (CY) (1)	W	Reinf (Lbs)	Conc (CY) (1)
2:1	12"	9'- 0"	122	1.1	1'- 9"	15	0.2
	15"	10'- 3"	136	1.3	2'- 2"	16	0.2
	18"	11'- 6"	163	1.5	2'- 8"	19	0.3
	21"	12'- 9"	200	1.8	3'- 1"	31	0.4
	24"	14'- 0"	217	2.1	3'- 7"	34	0.4
	27"	15'- 3"	254	2.4	3'-11"	37	0.5
	30"	16'- 6"	272	2.7	4'- 4"	40	0.6
	33"	17'- 9"	314	3.1	4'- 8"	43	0.6
	36"	19'- 0"	371	3.9	5'- 1"	46	0.8
	42"	21'- 6"	442	4.9	5'-10"	52	1.0
	48"	25'- 0"	569	6.4	6'- 7"	59	1.3
	54"	27'- 6"	701	7.5	7'- 6"	82	1.6
	60"	30'- 0"	794	8.8	8'- 3"	90	1.8
	66"	32'- 6"	894	10.2	8'- 9"	96	2.0
	72"	35'- 0"	1055	11.7	9'- 4"	103	2.3
3:1	12"	13'- 0"	175	1.6	1'- 9"	14	0.2
	15"	14'- 9"	193	1.9	2'- 2"	17	0.2
	18"	16'- 6"	228	2.2	2'- 8"	19	0.3
	21"	18'- 3"	299	2.6	3'- 1"	31	0.4
	24"	20'- 0"	323	3.0	3'- 7"	33	0.4
	27"	21'- 9"	371	3.5	3'-11"	37	0.5
	30"	23'- 6"	415	4.0	4'- 4"	40	0.5
	33"	25'- 3"	469	4.6	4'- 8"	43	0.6
	36"	27'- 0"	556	5.7	5'- 1"	46	0.8
	42"	30'- 6"	675	7.1	5'-10"	52	1.0
	48"	35'- 6"	837	9.2	6'- 7"	59	1.3
	54"	39'- 0"	1015	11.0	7'- 6"	84	1.6
	60"	42'- 6"	1171	12.9	8'- 3"	91	1.8
	66"	46'- 0"	1298	14.9	8'- 9"	98	2.0
	72"	49'- 6"	1561	17.1	9'- 4"	103	2.3
4:1	12"	17'- 0"	229	2.0	1'- 9"	15	0.2
	15"	19'- 3"	266	2.4	2'- 2"	17	0.2
	18"	21'- 6"	308	2.9	2'- 8"	19	0.3
	21"	23'- 9"	382	3.5	3'- 1"	31	0.3
	24"	26'- 0"	430	3.9	3'- 7"	34	0.4
	27"	28'- 3"	486	4.7	3'-11"	37	0.5
	30"	30'- 6"	539	5.2	4'- 4"	40	0.6
	33"	32'- 9"	603	6.0	4'- 8"	42	0.6
	36"	35'- 0"	738	7.5	5'- 1"	47	0.8
	42"	39'- 6"	881	9.3	5'-10"	52	1.0
	48"	46'- 0"	1102	12.1	6'- 7"	61	1.3
	54"	50'- 6"	1364	14.4	7'- 6"	84	1.6
	60"	55'- 0"	1547	16.9	8'- 3"	91	1.8
	66"	59'- 6"	1741	19.5	8'- 9"	98	2.0
	72"	64'- 0"	2069	22.4	9'- 4"	102	2.3
6:1	12"	25'- 0"	336	3.0	1'- 9"	14	0.2
	15"	28'- 3"	384	3.6	2'- 2"	17	0.2
	18"	31'- 6"	452	4.2	2'- 8"	19	0.3
	21"	34'- 9"	581	5.1	3'- 1"	31	0.4
	24"	38'- 0"	644	5.8	3'- 7"	34	0.4
	27"	41'- 3"	737	6.9	3'-11"	37	0.5
	30"	44'- 6"	807	7.7	4'- 4"	39	0.6
	33"	47'- 9"	912	8.9	4'- 8"	44	0.6
	36"	51'- 0"	1108	11.0	5'- 1"	48	0.8
	42"	57'- 6"	1318	13.7	5'-10"	54	1.0
	48"	67'- 0"	1674	17.9	6'- 7"	59	1.3
	54"	73'- 6"	2064	21.3	7'- 6"	83	1.6
	60"	80'- 0"	2343	24.9	8'- 3"	89	1.8
	66"	86'- 6"	2635	28.9	8'- 9"	96	2.0
	72"	93'- 0"	3123	33.1	9'- 4"	101	2.3

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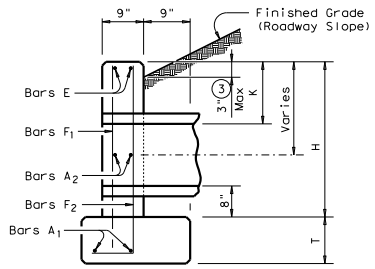
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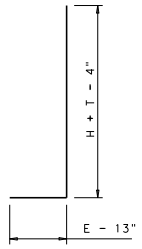
ELEVATION



PLAN OF NON-SKEWED PIPES



℄ SECTION



BARS F2

(1) Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.

(2) Indicated slope is perpendicular to centerline Pipe or Pipes.

(3) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(4) Quantities shown are for one structure end only (one headwall).

TABLE OF CONSTANT DIMENSIONS

DIA. OF PIPE, D	G	K	H	T	E
12"	9"	1'- 0"	2'- 8"	9"	1'- 9"
15"	11"	1'- 0"	2'-11"	9"	1'- 9"
18"	1'- 2"	1'- 0"	3'- 2"	9"	1'- 9"
21"	1'- 4"	1'- 0"	3'- 5"	9"	2'- 0"
24"	1'- 7"	1'- 0"	3'- 8"	9"	2'- 0"
27"	1'- 8"	1'- 0"	3'-11"	9"	2'- 3"
30"	1'-10"	1'- 0"	4'- 2"	9"	2'- 3"
33"	1'-11"	1'- 0"	4'- 5"	9"	2'- 6"
36"	2'- 1"	1'- 0"	4'- 8"	1'- 0"	2'- 6"
42"	2'- 4"	1'- 0"	5'- 2"	1'- 0"	2'- 9"
48"	2'- 7"	1'- 3"	5'-11"	1'- 0"	3'- 0"
54"	3'- 0"	1'- 3"	6'- 5"	1'- 0"	3'- 3"
60"	3'- 3"	1'- 3"	6'-11"	1'- 0"	3'- 6"
66"	3'- 3"	1'- 3"	7'- 5"	1'- 0"	3'- 9"
72"	3'- 4"	1'- 3"	7'-11"	1'- 0"	4'- 0"

TABLE OF REINFORCING STEEL (4)

Bar	Size	Spa	No.
A1	# 5	~	2
A2	# 5	1'-6"	~
E	# 5	~	2
F	# 5	1'-0"	~

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

No bridge rails of any type may be mounted directly to these culvert headwalls.

Texas Department of Transportation

Bridge Division Standard

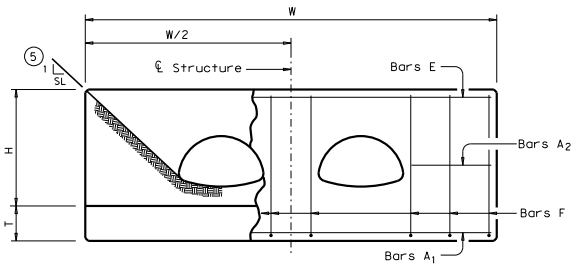
CONCRETE HEADWALLS WITH PARALLEL WINGS FOR NON-SKEWED PIPE CULVERTS

CH-PW-0

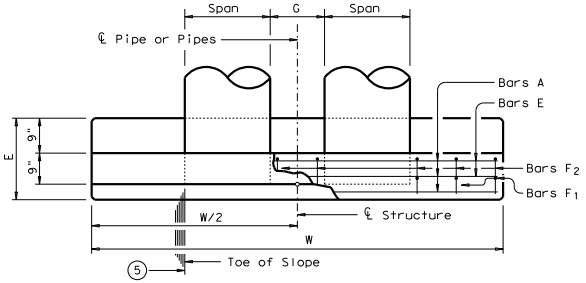
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REVISIONS				
	DIST.	COUNTY		SHEET NO.

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

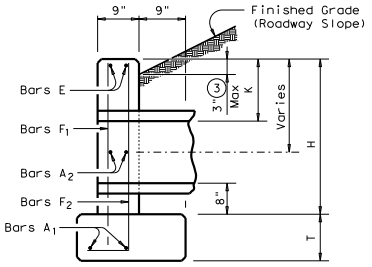
SLOPE	DESIGN	SIZE OF PIPE ARCH Span	SIZE OF PIPE ARCH Rise	Values for one Pipe W	Values for one Pipe Reinf (Lbs) (1)	Values for one Pipe Conc (CY) (2)	Values to be added for each addt'l Pipe W	Values to be added for each addt'l Pipe Reinf (Lbs) (1)	Values to be added for each addt'l Pipe Conc (CY) (2)
2:1	1	17"	13"	9'- 9"	130	1.1	2'- 5"	28	0.3
	2	21"	15"	10'- 9"	139	1.3	2'-11"	33	0.3
	3	28"	20"	13'- 0"	184	1.8	3'- 9"	43	0.5
	4	35"	24"	14'-11"	249	2.2	4'- 7"	50	0.6
	5	42"	29"	17'- 2"	311	3.2	5'- 5"	69	0.9
	6	49"	33"	19'- 1"	342	3.8	6'- 3"	77	1.1
	7	57"	38"	21'- 5"	438	4.7	7'- 2"	86	1.4
	8	64"	43"	23'- 8"	508	5.6	8'- 2"	110	1.6
	9	71"	47"	25'- 7"	577	6.5	9'- 1"	120	2.0
3:1	1	17"	13"	13'-11"	182	1.6	2'- 5"	28	0.3
	2	21"	15"	15'- 3"	196	1.8	2'-11"	33	0.3
	3	28"	20"	18'- 4"	270	2.6	3'- 9"	42	0.5
	4	35"	24"	20'-11"	356	3.2	4'- 7"	50	0.6
	5	42"	29"	24'- 0"	434	4.5	5'- 5"	70	0.9
	6	49"	33"	26'- 7"	499	5.4	6'- 3"	77	1.1
	7	57"	38"	29'- 9"	628	6.7	7'- 2"	87	1.4
	8	64"	43"	32'-10"	715	7.9	8'- 2"	111	1.6
	9	71"	47"	35'- 5"	798	9.2	9'- 1"	120	2.0
4:1	1	17"	13"	18'- 1"	236	2.1	2'- 5"	28	0.3
	2	21"	15"	19'- 9"	268	2.4	2'-11"	33	0.3
	3	28"	20"	23'- 8"	336	3.3	3'- 9"	42	0.5
	4	35"	24"	26'-11"	460	4.2	4'- 7"	50	0.6
	5	42"	29"	30'-10"	557	5.8	5'- 5"	69	0.9
	6	49"	33"	34'- 1"	653	6.9	6'- 3"	78	1.1
	7	57"	38"	38'- 1"	819	8.6	7'- 2"	87	1.4
	8	64"	43"	42'- 0"	950	10.2	8'- 2"	111	1.7
	9	71"	47"	45'- 3"	1053	11.9	9'- 1"	120	2.0
6:1	1	17"	13"	26'- 5"	343	3.1	2'- 5"	29	0.3
	2	21"	15"	28'- 9"	381	3.5	2'-11"	33	0.3
	3	28"	20"	34'- 4"	504	4.9	3'- 9"	42	0.5
	4	35"	24"	38'-11"	673	6.1	4'- 7"	50	0.6
	5	42"	29"	44'- 6"	823	8.5	5'- 5"	70	0.9
	6	49"	33"	49'- 1"	945	10.1	6'- 3"	78	1.1
	7	57"	38"	54'- 9"	1227	12.5	7'- 2"	87	1.4
	8	64"	43"	60'- 4"	1399	14.8	8'- 2"	110	1.7
	9	71"	47"	64'-11"	1563	17.3	9'- 1"	119	2.0



ELEVATION



PLAN



℄ SECTION

(1) Total quantities include one 15" lap for all bars over 60 ft in length.

(2) Quantities shown are for metal pipe and will decrease slightly for concrete pipe installations.

(3) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(4) Quantities shown are for one structure end only (one headwall).

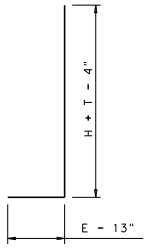
(5) Indicated slope is perpendicular to centerline Pipe or Pipes.

TABLE OF DIMENSIONS NOT VARIED WITH SLOPE

DESIGN	SIZE OF PIPE ARCH Span	SIZE OF PIPE ARCH Rise	G	K	H	T	E
1	17"	13"	1'- 0"	1'- 0"	2'- 7"	10"	1'- 6"
2	21"	15"	1'- 2"	1'- 0"	2'- 9"	10"	1'- 6"
3	28"	20"	1'- 5"	1'- 0"	3'- 2"	10"	1'-10"
4	35"	24"	1'- 8"	1'- 0"	3'- 6"	10"	2'- 0"
5	42"	29"	1'-11"	1'- 0"	3'-11"	1'- 0"	2'- 4"
6	49"	33"	2'- 2"	1'- 0"	4'- 3"	1'- 0"	2'- 6"
7	57"	38"	2'- 5"	1'- 0"	4'- 8"	1'- 0"	2'-10"
8	64"	43"	2'-10"	1'- 0"	5'- 1"	1'- 0"	3'- 0"
9	71"	47"	3'- 2"	1'- 0"	5'- 5"	1'- 0"	3'- 4"

TABLE OF REINFORCING STEEL (4)

Bar	Size	Spa	No.
A1	# 5	~	2
A2	# 5	1'-6"	~
E	# 5	~	2
F	# 5	1'-0"	~



BARS F_2

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

No bridge rails of any type may be mounted directly to these culvert headwalls.

Texas Department of Transportation — Bridge Division Standard

CONCRETE HEADWALLS WITH PARALLEL WINGS FOR NON-SKEWED ARCH PIPE CULVERTS

CH-PW-A-0

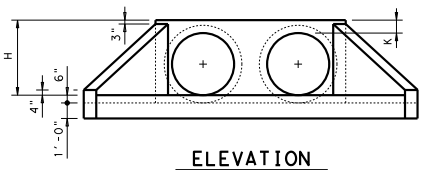
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REVISIONS 11-10: Removed Bars T.	DIST	COUNTY		SHEET NO.

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TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

SLOPE	DIA. OF PIPE, D	Values for one Pipe						Values to be added for each add'l Pipe		
		W	X	Y	L	Reinf (Lbs)	Conc (CY) (1)	X and W	Reinf (Lbs)	Conc (CY) (1)
2:1	12"	4'- 7 ½"	2'- 6"	2'-10"	3'- 3 ¼"	84	0.6	1'- 9"	20	0.2
	15"	5'- 5 ¾"	2'- 9 ½"	3'- 4"	3'-10 ¼"	99	0.7	2'- 2"	24	0.3
	18"	6'- 4 ¼"	3'- 1"	3'-10"	4'- 5"	120	0.9	2'- 8"	32	0.3
	21"	7'- 2 ¾"	3'- 4 ½"	4'- 4"	5'- 0"	137	1.1	3'- 1"	43	0.4
	24"	8'- 2 ½"	3'- 9 ½"	4'-10"	5'- 7"	158	1.3	3'- 7"	50	0.5
	27"	9'- 1"	4'- 1"	5'- 4"	6'- 2"	173	1.5	3'-11"	56	0.6
	30"	9'-11 ½"	4'- 4 ½"	5'-10"	6'- 8 ¾"	197	1.7	4'- 4"	65	0.8
	33"	10'-10"	4'- 8"	6'- 4"	7'- 3 ¾"	216	2.0	4'- 8"	71	0.9
	36"	11'- 8 ¼"	4'-11 ½"	6'-10"	7'-10 ¾"	241	2.2	5'- 1"	81	1.0
	42"	13'- 5 ¼"	5'- 6 ½"	7'-10"	9'- 0 ½"	290	2.8	5'-10"	97	1.3
	48"	15'- 9"	6'- 1 ½"	9'- 4"	10'- 9 ¼"	350	3.8	6'- 7"	117	1.7
	54"	17'- 5 ¾"	6'- 8 ½"	10'- 4"	11'-11 ¼"	415	4.5	7'- 6"	151	2.1
	60"	19'- 2 ¾"	7'- 3 ½"	11'- 4"	13'- 1"	469	5.3	8'- 3"	174	2.5
	66"	20'-11 ½"	7'-10 ½"	12'- 4"	14'- 3"	530	6.2	8'- 9"	194	2.9
	72"	22'- 8 ½"	8'- 5 ½"	13'- 4"	15'- 4 ¾"	587	7.1	9'- 4"	213	3.3
3:1	12"	6'- 3"	2'- 6"	4'- 3"	4'-11"	114	0.8	1'- 9"	22	0.2
	15"	7'- 5"	2'- 9 ½"	5'- 0"	5'- 9 ¼"	133	1.1	2'- 2"	28	0.3
	18"	8'- 6 ¾"	3'- 1"	5'- 9"	6'- 7 ¾"	166	1.3	2'- 8"	37	0.5
	21"	9'- 8 ¾"	3'- 4 ½"	6'- 6"	7'- 6"	189	1.6	3'- 1"	48	0.6
	24"	11'- 0"	3'- 9 ½"	7'- 3"	8'- 4 ½"	221	2.0	3'- 7"	58	0.7
	27"	12'- 2"	4'- 1"	8'- 0"	9'- 2 ¾"	245	2.3	3'-11"	67	0.8
	30"	13'- 4"	4'- 4 ½"	8'- 9"	10'- 1 ¼"	287	2.7	4'- 4"	77	1.0
	33"	14'- 5 ¾"	4'- 8"	9'- 6"	10'-11 ¾"	310	3.1	4'- 8"	84	1.2
	36"	15'- 7 ¾"	4'-11 ½"	10'- 3"	11'-10"	343	3.5	5'- 1"	96	1.4
	42"	17'-11 ½"	5'- 6 ½"	11'- 9"	13'- 6 ¾"	424	4.5	5'-10"	119	1.7
	48"	21'- 1 ¾"	6'- 1 ½"	14'- 0"	16'- 2"	527	6.1	6'- 7"	146	2.3
	54"	23'- 5 ½"	6'- 8 ½"	15'- 6"	17'-10 ¾"	618	7.3	7'- 6"	186	2.9
	60"	25'- 9 ¼"	7'- 3 ½"	17'- 0"	19'- 7 ½"	707	8.7	8'- 3"	219	3.4
	66"	28'- 1"	7'-10 ½"	18'- 6"	21'- 4 ¼"	797	10.1	8'- 9"	242	3.9
	72"	30'- 4 ¾"	8'- 5 ½"	20'- 0"	23'- 1 ¼"	910	11.7	9'- 4"	272	4.4
4:1	12"	7'-10 ¾"	2'- 6"	5'- 8"	6'- 6 ½"	144	1.1	1'- 9"	24	0.3
	15"	9'- 4"	2'- 9 ½"	6'- 8"	7'- 8 ½"	177	1.5	2'- 2"	32	0.4
	18"	10'- 9 ½"	3'- 1"	7'- 8"	8'-10 ¼"	217	1.9	2'- 8"	42	0.5
	21"	12'- 2 ¾"	3'- 4 ½"	8'- 8"	10'- 0"	254	2.3	3'- 1"	57	0.7
	24"	13'- 9 ½"	3'- 9 ½"	9'- 8"	11'- 2"	295	2.8	3'- 7"	67	0.9
	27"	15'- 3"	4'- 1"	10'- 8"	12'- 3 ¾"	328	3.3	3'-11"	77	1.0
	30"	16'- 8 ¼"	4'- 4 ½"	11'- 8"	13'- 5 ¾"	379	3.8	4'- 4"	89	1.3
	33"	18'- 1 ¾"	4'- 8"	12'- 8"	14'- 7 ½"	417	4.5	4'- 8"	101	1.4
	36"	19'- 7"	4'-11 ½"	13'- 8"	15'- 9 ¼"	464	5.1	5'-1"	115	1.7
	42"	22'- 5 ¾"	5'- 6 ½"	15'- 8"	18'- 1"	575	6.5	5'-10"	141	2.1
	48"	26'- 6 ¼"	6'- 1 ½"	18'- 8"	21'- 6 ¾"	720	8.9	6'- 7"	175	2.8
	54"	29'- 5"	6'- 8 ½"	20'- 8"	23'-10 ¼"	863	10.7	7'- 6"	226	3.6
	60"	32'- 3 ¾"	7'- 3 ½"	22'- 8"	26'- 2"	984	12.7	8'- 3"	264	4.3
	66"	35'- 2 ½"	7'-10 ½"	24'- 8"	28'- 5 ¾"	1126	14.9	8'- 9"	300	4.9
	72"	38'- 1 ¼"	8'- 5 ½"	26'- 8"	30'- 9 ½"	1283	17.3	9'- 4"	334	5.6
6:1	12"	11'- 2"	2'- 6"	8'- 6"	9'- 9 ¾"	220	1.9	1'- 9"	28	0.4
	15"	13'- 2 ¼"	2'- 9 ½"	10'- 0"	11'- 6 ½"	264	2.5	2'- 2"	37	0.5
	18"	15'- 2 ½"	3'- 1"	11'- 6"	13'- 3 ¼"	326	3.2	2'- 8"	50	0.7
	21"	17'- 2 ¾"	3'- 4 ½"	13'- 0"	15'- 0 ¼"	381	3.9	3'- 1"	69	0.9
	24"	19'- 4 ½"	3'- 9 ½"	14'- 6"	16'- 9"	447	4.8	3'- 7"	80	1.2
	27"	21'- 4 ¾"	4'- 1"	16'- 0"	18'- 5 ¾"	506	5.7	3'-11"	96	1.4
	30"	23'- 5 ¼"	4'- 4 ½"	17'- 6"	20'- 2 ½"	587	6.7	4'- 4"	110	1.7
	33"	25'- 5 ½"	4'- 8"	19'- 0"	21'-11 ¼"	667	7.8	4'- 8"	127	2.0
	36"	27'- 5 ¾"	4'-11 ½"	20'- 6"	23'- 8"	727	9.0	5'- 1"	144	2.3
	42"	31'- 6 ¼"	5'- 6 ½"	23'- 6"	27'- 1 ½"	914	11.5	5'-10"	179	3.0
	48"	37'- 3 ½"	6'- 1 ½"	28'- 0"	32'- 4"	1181	15.9	6'- 7"	231	4.0
	54"	41'- 4 ¼"	6'- 8 ½"	31'- 0"	35'- 9 ½"	1412	19.2	7'- 6"	300	5.0
	60"	45'- 4 ¾"	7'- 3 ½"	34'- 0"	39'- 3"	1619	22.9	8'- 3"	353	6.0



ELEVATION
Showing dimensions

(1) Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.

(2) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(3) Provide a 1'-0" footing as shown where required to maintain 4" Min cover for pipes.

(4) Quantities shown are for one structure end only (one headwall).

(5) Min Length = $6" + 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right)$

Max Length = $12 \times H - 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right) - 1"$

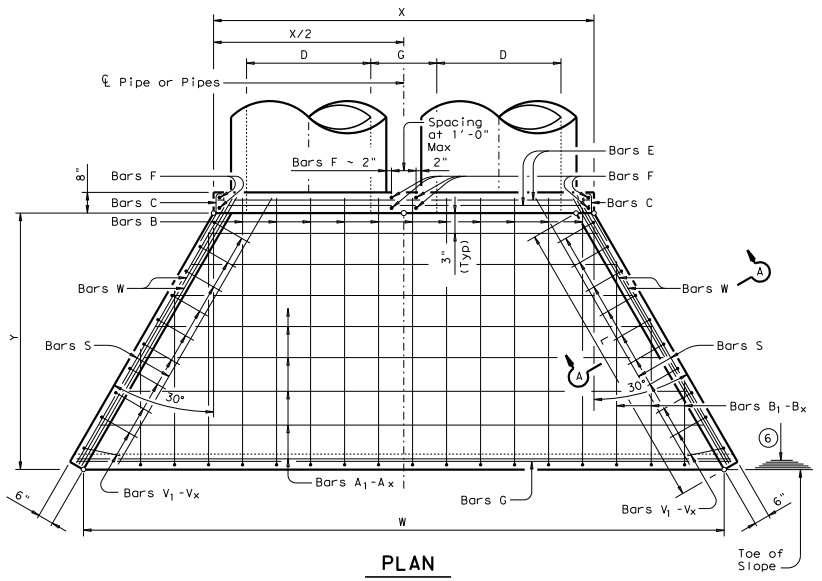
(6) Lengths of wings based on SL:1 Slope along this line.

TABLE OF REINFORCING STEEL (4)

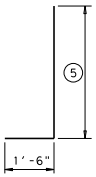
Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
C	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	~
G	# 3	~	2
S	# 4	~	6
V	# 4	1'-0"	~
W	# 5	~	4

TABLE OF CONSTANT DIMENSIONS

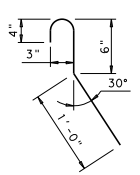
DIA OF PIPE, D	G	K	H
12"	9"	1'- 0"	2'- 0"
15"	11"	1'- 0"	2'- 3"
18"	1'- 2"	1'- 0"	2'- 6"
21"	1'- 4"	1'- 0"	2'- 9"
24"	1'- 7"	1'- 0"	3'- 0"
27"	1'- 8"	1'- 0"	3'- 3"
30"	1'-10"	1'- 0"	3'- 6"
33"	1'-11"	1'- 0"	3'- 9"
36"	2'- 1"	1'- 0"	4'- 0"
42"	2'- 4"	1'- 0"	4'- 6"
48"	2'- 7"	1'- 3"	5'- 3"
54"	3'- 0"	1'- 3"	5'- 9"
60"	3'- 3"	1'- 3"	6'- 3"
66"	3'- 3"	1'- 3"	6'- 9"
72"	3'- 4"	1'- 3"	7'- 3"



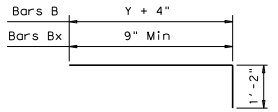
PLAN



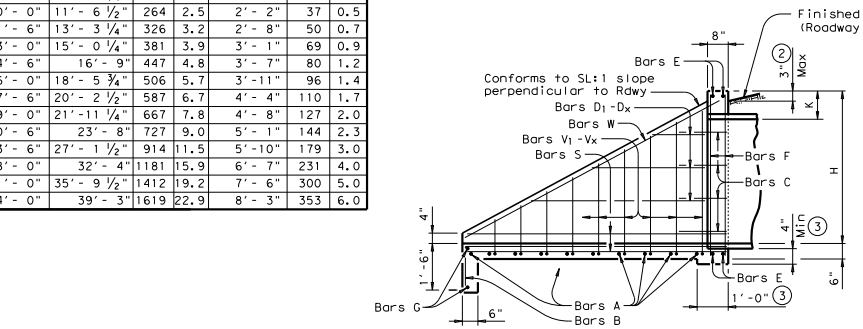
BARS V



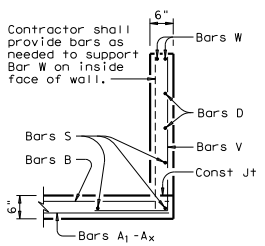
BARS C
(2'-0" long)



BARS B & B1-Bx



TYPICAL WING ELEVATION



SECTION A-A

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

No bridge rails of any type may be mounted directly to these culvert headwalls.

Texas Department of Transportation | Bridge Division Standard

CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS

CH-FW-0

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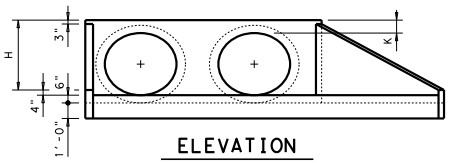
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2/13/2018 9:30 AM

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

SLOPE	DIA. OF PIPE, D	Values for one Pipe						Values to be added for each add'l Pipe		
		W	X	Y	L	Reinf (Lbs)	Conc (CY) (1)	X and W	Reinf (Lbs)	Conc (CY) (1)
2:1	12"	4'- 9"	3'- 1 ½"	2'-10"	4'- 0"	90	0.6	2'- 0 ¼"	22	0.2
	15"	5'- 6 ¾"	3'- 5 ¼"	3'- 4"	4'- 8 ½"	102	0.8	2'- 6"	28	0.3
	18"	6'- 4 ¾"	3'- 9 ¼"	3'-10"	5'- 5"	129	0.9	3'- 1"	41	0.4
	21"	7'- 2 ¾"	4'- 1 ¼"	4'- 4"	6'- 1 ½"	144	1.1	3'- 6 ¾"	47	0.5
	24"	8'- 2 ½"	4'- 7"	4'-10"	6'-10"	164	1.4	4'- 1 ¾"	57	0.6
	27"	9'- 0 ½"	4'-11"	5'- 4"	7'- 6 ½"	178	1.6	4'- 6 ¼"	62	0.7
	30"	9'-10 ½"	5'- 3"	5'-10"	8'- 3"	212	1.8	5'- 0"	72	0.9
	33"	10'- 8 ¾"	5'- 7"	6'- 4"	8'-11 ½"	225	2.1	5'- 4 ¾"	79	1.0
	36"	11'- 6 ¾"	5'-11 ¼"	6'-10"	9'- 8"	250	2.4	5'-10 ½"	90	1.2
	42"	13'- 2 ¾"	6'- 7 ¼"	7'-10"	11'- 1"	304	3.0	6'- 8 ¾"	109	1.5
	48"	15'- 4 ¾"	7'- 3 ¼"	9'- 4"	13'- 2 ½"	369	4.0	7'- 7 ¼"	142	2.0
	54"	17'- 1"	7'-11 ½"	10'- 4"	14'- 7 ¼"	429	4.7	8'- 8"	170	2.5
	60"	18'- 9"	8'- 7 ½"	11'- 4"	16'- 0 ¼"	484	5.6	9'- 6 ¼"	194	2.9
	66"	20'- 5"	9'- 3 ½"	12'- 4"	17'- 5 ¼"	550	6.5	10'- 1 ¼"	217	3.3
	72"	22'- 1 ¼"	9'-11 ¾"	13'- 4"	18'-10 ¼"	614	7.5	10'- 9 ¼"	239	3.7
3:1	12"	6'- 2"	3'- 1 ½"	4'- 3"	6'- 0"	118	0.9	2'- 0 ¼"	24	0.3
	15"	7'- 2 ¾"	3'- 5 ¼"	5'- 0"	7'- 0 ¾"	142	1.1	2'- 6"	31	0.4
	18"	8'- 3 ¾"	3'- 9 ¼"	5'- 9"	8'- 1 ½"	179	1.4	3'- 1"	46	0.5
	21"	9'- 4 ¾"	4'- 1 ¼"	6'- 6"	9'- 2 ¼"	197	1.7	3'- 6 ¾"	53	0.7
	24"	10'- 7 ½"	4'- 7"	7'- 3"	10'- 3"	227	2.1	4'- 1 ¾"	65	0.8
	27"	11'- 8 ½"	4'-11"	8'- 0"	11'- 3 ¾"	255	2.4	4'- 6 ¼"	75	1.0
	30"	12'- 9 ½"	5'- 3"	8'- 9"	12'- 4 ½"	298	2.8	5'- 0"	86	1.2
	33"	13'-10 ¾"	5'- 7"	9'- 6"	13'- 5 ¼"	322	3.2	5'- 4 ¾"	94	1.3
	36"	14'-11 ¾"	5'-11 ¼"	10'- 3"	14'- 6"	355	3.7	5'-10 ½"	108	1.5
	42"	17'- 1 ¾"	6'- 7 ¼"	11'- 9"	16'- 7 ½"	441	4.6	6'- 8 ¾"	133	2.0
	48"	20'- 0 ¾"	7'- 3 ¼"	14'- 0"	19'- 9 ½"	542	6.2	7'- 7 ¼"	176	2.7
	54"	22'- 3"	7'-11 ½"	15'- 6"	21'-11"	626	7.5	8'- 8"	211	3.3
	60"	24'- 5"	8'- 7 ½"	17'- 0"	24'- 0 ½"	725	8.9	9'- 6 ¼"	246	3.9
	66"	26'- 7"	9'- 3 ½"	18'- 6"	26'- 2"	821	10.4	10'- 1 ¼"	274	4.5
	72"	28'- 9 ¼"	9'-11 ¾"	20'- 0"	28'- 3 ½"	930	12.0	10'- 9 ¼"	309	5.1
4:1	12"	7'- 7"	3'- 1 ½"	5'- 8"	8'- 0 ¼"	156	1.2	2'- 0 ¼"	28	0.3
	15"	8'-10 ¾"	3'- 5 ¼"	6'- 8"	9'- 5 ¼"	183	1.5	2'- 6"	36	0.5
	18"	10'- 2 ¾"	3'- 9 ¼"	7'- 8"	10'-10"	228	1.9	3'- 1"	52	0.6
	21"	11'- 6 ¾"	4'- 1 ¼"	8'- 8"	12'- 3"	264	2.3	3'- 6 ¾"	63	0.8
	24"	13'- 0 ½"	4'- 7"	9'- 8"	13'- 8"	301	2.8	4'- 1 ¾"	75	1.0
	27"	14'- 4 ½"	4'-11"	10'- 8"	15'- 1"	339	3.4	4'- 6 ¼"	87	1.2
	30"	15'- 8 ½"	5'- 3"	11'- 8"	16'- 6"	394	3.9	5'- 0"	99	1.4
	33"	17'- 0 ¾"	5'- 7"	12'- 8"	17'-11"	432	4.5	5'- 4 ¾"	112	1.7
	36"	18'- 4 ¾"	5'-11 ¼"	13'- 8"	19'- 4"	479	5.2	5'-10 ½"	128	1.9
	42"	21'- 0 ¾"	6'- 7 ¼"	15'- 8"	22'- 1 ¾"	587	6.6	6'- 8 ¾"	158	2.5
	48"	24'- 8 ¾"	7'- 3 ¼"	18'- 8"	26'- 4 ¾"	738	8.9	7'- 7 ¼"	211	3.3
	54"	27'- 5"	7'-11 ½"	20'- 8"	29'- 2 ¾"	871	10.8	8'- 8"	257	4.1
	60"	30'- 1"	8'- 7 ½"	22'- 8"	32'- 0 ¾"	999	12.8	9'- 6 ¼"	297	4.9
	66"	32'- 9"	9'- 3 ½"	24'- 8"	34'-10 ½"	1139	14.9	10'- 1 ¼"	340	5.6
	72"	35'- 5 ¼"	9'-11 ¾"	26'- 8"	37'- 8 ½"	1290	17.3	10'- 9 ¼"	378	6.4
6:1	12"	10'- 5"	3'- 1 ½"	8'- 6"	12'- 0 ¼"	223	1.9	2'- 0 ¼"	32	0.4
	15"	12'- 2 ¾"	3'- 5 ¼"	10'- 0"	14'- 1 ¾"	273	2.5	2'- 6"	43	0.6
	18"	14'- 0 ¾"	3'- 9 ¼"	11'- 6"	16'- 3 ¼"	336	3.2	3'- 1"	61	0.8
	21"	15'-10 ¾"	4'- 1 ¼"	13'- 0"	18'- 4 ½"	396	3.9	3'- 6 ¾"	76	1.1
	24"	17'-10 ½"	4'- 7"	14'- 6"	20'- 6"	450	4.8	4'- 1 ¾"	91	1.4
	27"	19'- 8 ½"	4'-11"	16'- 0"	22'- 7 ½"	519	5.7	4'- 6 ¼"	108	1.6
	30"	21'- 6 ½"	5'- 3"	17'- 6"	24'- 9"	595	6.6	5'- 0"	124	2.0
	33"	23'- 4 ¾"	5'- 7"	19'- 0"	26'-10 ½"	674	7.7	5'- 4 ¾"	143	2.3
	36"	25'- 2 ¾"	5'-11 ¼"	20'- 6"	29'- 0"	737	8.8	5'-10 ½"	162	2.7
	42"	28'-10 ¾"	6'- 7 ¼"	23'- 6"	33'- 2 ¾"	920	11.3	6'- 8 ¾"	202	3.5
	48"	34'- 0 ¾"	7'- 3 ¼"	28'- 0"	39'- 7 ¼"	1189	15.5	7'- 7 ¼"	274	4.6



ELEVATION

Showing dimensions

(1) Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.

(2) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

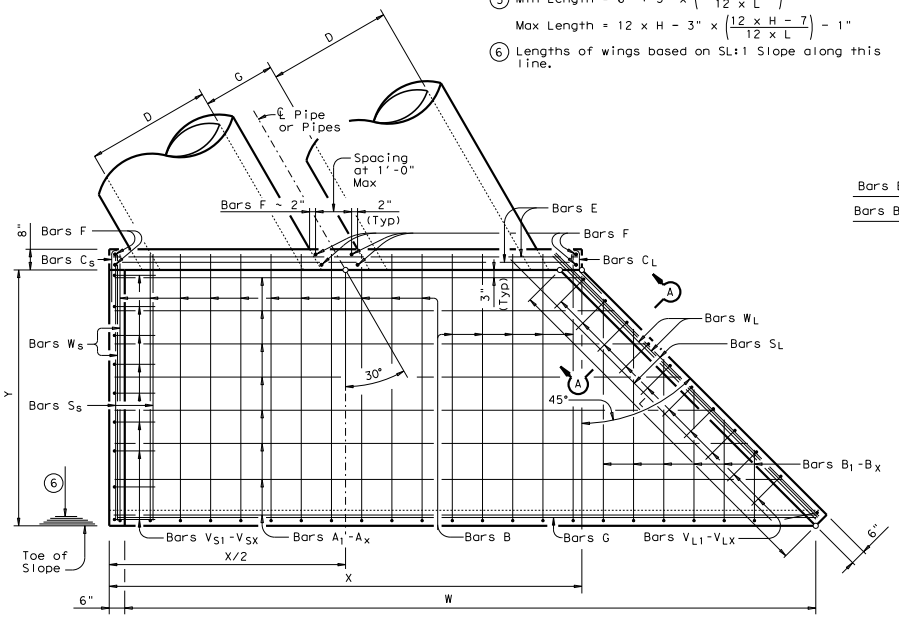
(3) Provide a 1'-0" footing as shown where required to maintain 4" Min cover for pipes.

(4) Quantities shown are for one structure end only (one headwall).

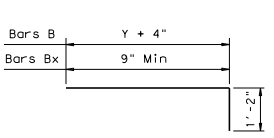
(5) Min Length = 6" + 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$

Max Length = 12 x H - 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$ - 1"

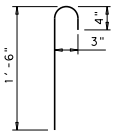
(6) Lengths of wings based on SL:1 Slope along this line.



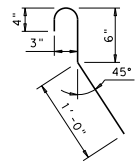
PLAN



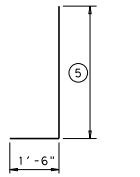
BARS B & B_1-B_X



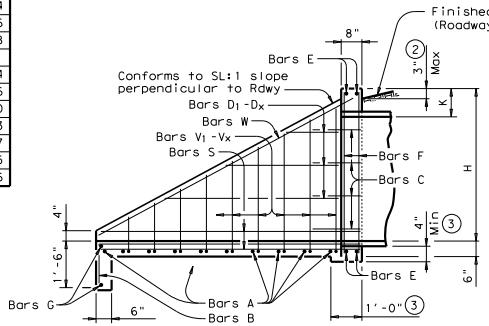
BARS C_S
(2'-0" long)



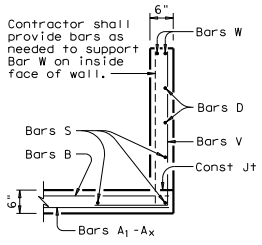
BARS C_L
(2'-0" long)



BARS V_S & V_L



TYPICAL WING ELEVATION



SECTION A-A

TABLE OF REINFORCING STEEL (4)

Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
CL	# 4	1'-0"	~
CS	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	2
G	# 3	~	2
SL	# 4	~	3
SS	# 4	~	3
V	# 4	1'-0"	~
WL	# 5	~	2
WS	# 5	~	2

TABLE OF CONSTANT DIMENSIONS

DIA OF PIPE, D	G	K	H
12"	9"	1'- 0"	2'- 0"
15"	11"	1'- 0"	2'- 3"
18"	1'- 2"	1'- 0"	2'- 6"
21"	1'- 4"	1'- 0"	2'- 9"
24"	1'- 7"	1'- 0"	3'- 0"
27"	1'- 8"	1'- 0"	3'- 3"
30"	1'-10"	1'- 0"	3'- 6"
33"	1'-11"	1'- 0"	3'- 9"
36"	2'- 1"	1'- 0"	4'- 0"
42"	2'- 4"	1'- 0"	4'- 6"
48"	2'- 7"	1'- 3"	5'- 3"
54"	3'- 0"	1'- 3"	5'- 9"
60"	3'- 3"	1'- 3"	6'- 3"
66"	3'- 3"	1'- 3"	6'- 9"
72"	3'- 4"	1'- 3"	7'- 3"

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

No bridge rails of any type may be mounted directly to these culvert headwalls.

Texas Department of Transportation

Bridge Division Standard

CONCRETE HEADWALLS WITH FLARED WINGS FOR 30° SKEW PIPE CULVERTS

CH-FW-30

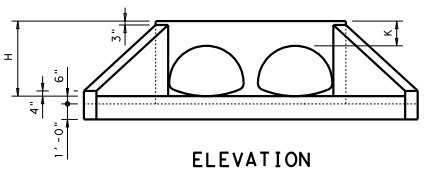
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©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

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TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

SLOPE	DESIGN	SIZE OF PIPE ARCH		Values for one Pipe						Values to be added for each addt'l Pipe		
		Span	Rise	W	X	Y	L	Reinf (Lbs)	Conc (CY) (1)	X and W	Reinf (Lbs)	Conc (CY) (1)
2:1	1	17"	13"	5'- 0 ½"	2'- 8 ¾"	3'- 0"	3'- 5 ½"	91	0.6	2'- 5"	35	0.3
	2	21"	15"	5'- 9 ¼"	3'- 0 ¾"	3'- 4"	3'-10 ¼"	107	0.8	2'-11"	42	0.4
	3	28"	20"	7'- 3 ¾"	3'- 7 ¾"	4'- 2"	4'- 9 ¾"	148	1.1	3'- 9"	57	0.6
	4	35"	24"	8'- 8"	4'- 2 ¾"	4'-10"	5'- 7"	174	1.4	4'- 7"	73	0.8
	5	42"	29"	10'- 2 ½"	4'- 9 ¾"	5'- 8"	6'- 6 ½"	204	1.8	5'- 5"	98	1.0
	6	49"	33"	11'- 6 ¾"	5'- 4 ¾"	6'- 4"	7'- 3 ¾"	243	2.2	6'- 3"	113	1.3
	7	57"	38"	13'- 2 ¼"	6'- 0 ¾"	7'- 2"	8'- 3 ¼"	279	2.7	7'- 2"	134	1.6
	8	64"	43"	14'- 8 ¾"	6'- 7 ¾"	8'- 0"	9'- 2 ¾"	327	3.2	8'- 2"	168	2.0
	9	71"	47"	16'- 1"	7'- 2 ¾"	8'- 8"	10'- 0"	371	3.7	9'- 1"	192	2.4
3:1	1	17"	13"	6'- 9 ¼"	2'- 8 ¾"	4'- 6"	5'- 2 ¼"	127	0.9	2'- 5"	38	0.4
	2	21"	15"	7'- 8 ¼"	3'- 0 ¾"	5'- 0"	5'- 9 ¼"	142	1.1	2'-11"	48	0.5
	3	28"	20"	9'- 8 ½"	3'- 7 ¾"	6'- 3"	7'- 2 ½"	201	1.6	3'- 9"	64	0.7
	4	35"	24"	11'- 5 ½"	4'- 2 ¾"	7'- 3"	8'- 4 ½"	237	2.1	4'- 7"	83	1.0
	5	42"	29"	13'- 5 ¾"	4'- 9 ¾"	8'- 6"	9'- 9 ¾"	295	2.7	5'- 5"	113	1.3
	6	49"	33"	15'- 2 ¾"	5'- 4 ¾"	9'- 6"	10'-11 ¾"	339	3.3	6'- 3"	130	1.7
	7	57"	38"	17'- 4"	6'- 0 ¾"	10'- 9"	12'- 5"	394	4.2	7'- 2"	159	2.1
	8	64"	43"	19'- 4 ¼"	6'- 7 ¾"	12'- 0"	13'-10 ¼"	471	5.1	8'- 2"	199	2.6
	9	71"	47"	21'- 1 ¼"	7'- 2 ¾"	13'- 0"	15'- 0 ¼"	523	5.9	9'- 1"	226	3.1
4:1	1	17"	13"	8'- 6 ¼"	2'- 8 ¾"	6'- 0"	6'-11"	165	1.3	2'- 5"	42	0.4
	2	21"	15"	9'- 7 ¼"	3'- 0 ¾"	6'- 8"	7'- 8 ½"	185	1.6	2'-11"	53	0.6
	3	28"	20"	12'- 1 ½"	3'- 7 ¾"	8'- 4"	9'- 7 ½"	253	2.3	3'- 9"	72	0.9
	4	35"	24"	14'- 3"	4'- 2 ¾"	9'- 8"	11'- 2"	311	2.9	4'- 7"	94	1.2
	5	42"	29"	16'- 9"	4'- 9 ¾"	11'- 4"	13'- 1"	375	3.9	5'- 5"	125	1.6
	6	49"	33"	18'-10 ½"	5'- 4 ¾"	12'- 8"	14'- 7 ½"	449	4.7	6'- 3"	152	2.0
	7	57"	38"	21'- 5 ½"	6'- 0 ¾"	14'- 4"	16'- 6 ¾"	526	5.9	7'- 2"	180	2.6
	8	64"	43"	23'-11 ¾"	6'- 7 ¾"	16'- 0"	18'- 5 ¾"	625	7.2	8'- 2"	229	3.2
	9	71"	47"	26'- 1 ¼"	7'- 2 ¾"	17'- 4"	20'- 0 ¼"	698	8.4	9'- 1"	261	3.9
6:1	1	17"	13"	11'-11 ¾"	2'- 8 ¾"	9'- 0"	10'- 4 ¾"	239	2.1	2'- 5"	49	0.6
	2	21"	15"	13'- 5 ½"	3'- 0 ¾"	10'- 0"	11'- 6 ½"	272	2.6	2'-11"	61	0.8
	3	28"	20"	16'-11 ¼"	3'- 7 ¾"	12'- 6"	14'- 5 ¼"	388	3.8	3'- 9"	87	1.2
	4	35"	24"	19'-10"	4'- 2 ¾"	14'- 6"	16'- 9"	464	5.0	4'- 7"	112	1.6
	5	42"	29"	23'- 3 ½"	4'- 9 ¾"	17'- 0"	19'- 7 ½"	581	6.6	5'- 5"	154	2.2
	6	49"	33"	26'- 2 ¼"	5'- 4 ¾"	19'- 0"	21'-11 ¼"	705	8.2	6'- 3"	187	2.8
	7	57"	38"	29'- 9"	6'- 0 ¾"	21'- 6"	24'-10"	846	10.3	7'- 2"	233	3.5
	8	64"	43"	33'- 2 ½"	6'- 7 ¾"	24'- 0"	27'- 8 ½"	990	12.6	8'- 2"	289	4.4
	9	71"	47"	36'- 1 ¼"	7'- 2 ¾"	26'- 0"	30'- 0 ¼"	1119	14.7	9'- 1"	336	5.3



ELEVATION

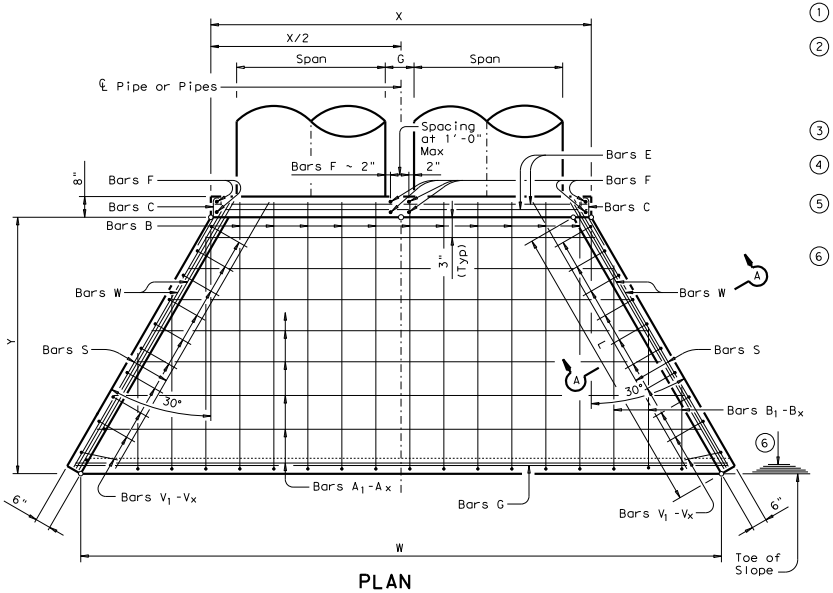
Showing dimensions

TABLE OF REINFORCING STEEL (4)

Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
C	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	~
G	# 3	~	2
S	# 4	~	6
V	# 4	1'-0"	~
W	# 5	~	4

TABLE OF DIMENSIONS NOT VARIED WITH SLOPE

DESIGN	SIZE OF PIPE ARCH		G	K	H
	Span	Rise			
1	17"	13"	1'- 0"	1'- 0"	2'- 1"
2	21"	15"	1'- 2"	1'- 0"	2'- 3"
3	28"	20"	1'- 5"	1'- 0"	2'- 8"
4	35"	24"	1'- 8"	1'- 0"	3'- 0"
5	42"	29"	1'-11"	1'- 0"	3'- 5"
6	49"	33"	2'- 2"	1'- 0"	3'- 9"
7	57"	38"	2'- 5"	1'- 0"	4'- 2"
8	64"	43"	2'-10"	1'- 0"	4'- 7"
9	71"	47"	3'- 2"	1'- 0"	4'-11"



PLAN

(1) Quantities shown are for metal pipe and will decrease slightly for concrete pipe installations.

(2) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(3) Provide a 1'-0" footing as shown where required to maintain 4" Min cover for pipes.

(4) Quantities shown are for one structure end only (one headwall).

(5) Min Length = 6" + 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$

Max Length = 12 x H - 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$ - 1"

(6) Lengths of wings based on SL:1 Slope along this line.

GENERAL NOTES:

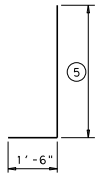
Designed according to AASHTO LRFD Specifications.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

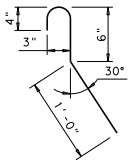
All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

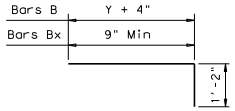
No bridge rails of any type may be mounted directly to these culvert headwalls.



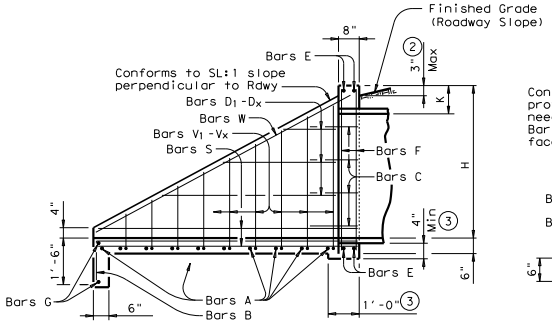
BARS V



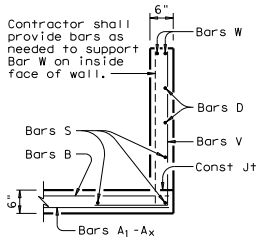
BARS C
(2'-0" long)



BARS B & B1 -Bx



TYPICAL WING ELEVATION



SECTION A-A

Texas Department of Transportation

Bridge Division Standard

CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW ARCH PIPE CULVERTS

CH-FW-A-0

FILE: chfa00se.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
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TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

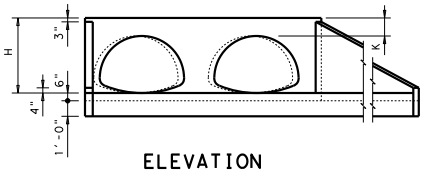
SLOPE DESIGN		SIZE OF PIPE ARCH		Values for one Pipe						Values to be added for each addt'l Pipe		
		Span	Rise	W	X	Y	L	Reinf (Lbs)	Conc (CY) (1)	X and W	Reinf (Lbs)	Conc (CY) (1)
2:1	1	17"	13"	5'- 4 ¾"	3'- 7 ¼"	3'- 0"	4'- 3"	105	0.7	2'- 9 ½"	39	0.4
	2	21"	15"	6'- 1 ¼"	3'-11 ¾"	3'- 4"	4'- 8 ½"	116	0.9	3'- 4 ½"	46	0.5
	3	28"	20"	7'- 7 ½"	4'- 8"	4'- 2"	5'-10 ¾"	154	1.2	4'- 4"	65	0.7
	4	35"	24"	8'-11 ½"	5'- 4"	4'-10"	6'-10"	186	1.5	5'- 3 ½"	88	0.9
	5	42"	29"	10'- 5 ½"	6'- 0"	5'- 8"	8'- 0 ¼"	224	2.0	6'- 3"	109	1.2
	6	49"	33"	11'- 9 ¾"	6'- 8 ¼"	6'- 4"	8'-11 ½"	255	2.4	7'- 2 ½"	124	1.5
	7	57"	38"	13'- 5"	7'- 5 ½"	7'- 2"	10'- 1 ¾"	300	2.9	8'- 3 ¼"	149	1.9
	8	64"	43"	14'-11"	8'- 1 ½"	8'- 0"	11'- 3 ¾"	347	3.5	9'- 5 ¼"	186	2.3
	9	71"	47"	16'- 3"	8'- 9 ½"	8'- 8"	12'- 3"	392	4.1	10'- 5 ¾"	215	2.8
3:1	1	17"	13"	6'-10 ¾"	3'- 7 ¼"	4'- 6"	6'- 4 ¼"	136	1.1	2'- 9 ½"	41	0.4
	2	21"	15"	7'- 9 ¼"	3'-11 ¾"	5'- 0"	7'- 0 ¾"	156	1.3	3'- 4 ½"	52	0.6
	3	28"	20"	9'- 8 ½"	4'- 8"	6'- 3"	8'-10"	207	1.8	4'- 4"	72	0.8
	4	35"	24"	11'- 4 ½"	5'- 4"	7'- 3"	10'- 3"	251	2.3	5'- 3 ½"	98	1.1
	5	42"	29"	13'- 3 ½"	6'- 0"	8'- 6"	12'- 0 ¼"	309	2.9	6'- 3"	126	1.5
	6	49"	33"	14'-11 ¾"	6'- 8 ¼"	9'- 6"	13'- 5 ¼"	355	3.6	7'- 2 ½"	145	1.9
	7	57"	38"	17'- 0"	7'- 5 ½"	10'- 9"	15'- 2 ½"	423	4.4	8'- 3 ¼"	178	2.4
	8	64"	43"	18'-11"	8'- 1 ½"	12'- 0"	16'-11 ¾"	492	5.4	9'- 5 ¼"	221	3.0
	9	71"	47"	20'- 7"	8'- 9 ½"	13'- 0"	18'- 4 ¾"	549	6.2	10'- 5 ¾"	255	3.6
4:1	1	17"	13"	8'- 4 ¾"	3'- 7 ¼"	6'- 0"	8'- 5 ¾"	175	1.4	2'- 9 ½"	46	0.5
	2	21"	15"	9'- 5 ¼"	3'-11 ¾"	6'- 8"	9'- 5 ¼"	198	1.7	3'- 4 ½"	58	0.7
	3	28"	20"	11'- 9 ½"	4'- 8"	8'- 4"	11'- 9 ½"	266	2.4	4'- 4"	81	1.0
	4	35"	24"	13'- 9 ½"	5'- 4"	9'- 8"	13'- 8"	328	3.1	5'- 3 ½"	112	1.4
	5	42"	29"	16'- 1 ½"	6'- 0"	11'- 4"	16'- 0 ¼"	390	4.1	6'- 3"	139	1.8
	6	49"	33"	18'- 1 ¾"	6'- 8 ¼"	12'- 8"	17'-11"	469	4.9	7'- 2 ½"	170	2.3
	7	57"	38"	20'- 7"	7'- 5 ½"	14'- 4"	20'- 3 ¼"	547	6.2	8'- 3 ¼"	204	3.0
	8	64"	43"	22'-11"	8'- 1 ½"	16'- 0"	22'- 7 ½"	650	7.5	9'- 5 ¼"	256	3.7
	9	71"	47"	24'-11"	8'- 9 ½"	17'- 4"	24'- 6 ¼"	723	8.7	10'- 5 ¾"	295	4.4
6:1	1	17"	13"	11'- 4 ¾"	3'- 7 ¼"	9'- 0"	12'- 8 ¾"	252	2.2	2'- 9 ½"	53	0.7
	2	21"	15"	12'- 9 ¼"	3'-11 ¾"	10'- 0"	14'- 1 ¾"	291	2.7	3'- 4 ½"	68	0.9
	3	28"	20"	15'-11 ½"	4'- 8"	12'- 6"	17'- 8 ¼"	397	3.9	4'- 4"	100	1.3
	4	35"	24"	18'- 7 ½"	5'- 4"	14'- 6"	20'- 6"	480	5.1	5'- 3 ½"	132	1.8
	5	42"	29"	21'- 9 ½"	6'- 0"	17'- 0"	24'- 0 ½"	596	6.7	6'- 3"	172	2.5
	6	49"	33"	24'- 5 ¾"	6'- 8 ¼"	19'- 0"	26'-10 ½"	717	8.2	7'- 2 ½"	212	3.2
	7	57"	38"	27'- 9"	7'- 5 ½"	21'- 6"	30'- 5"	853	10.4	8'- 3 ¼"	264	4.1
	8	64"	43"	30'-11"	8'- 1 ½"	24'- 0"	33'-11 ¼"	1009	12.6	9'- 5 ¼"	325	5.1
	9	71"	47"	33'- 7"	8'- 9 ½"	26'- 0"	36'- 9 ¼"	1139	14.7	10'- 5 ¾"	382	6.1

TABLE OF REINFORCING STEEL (4)

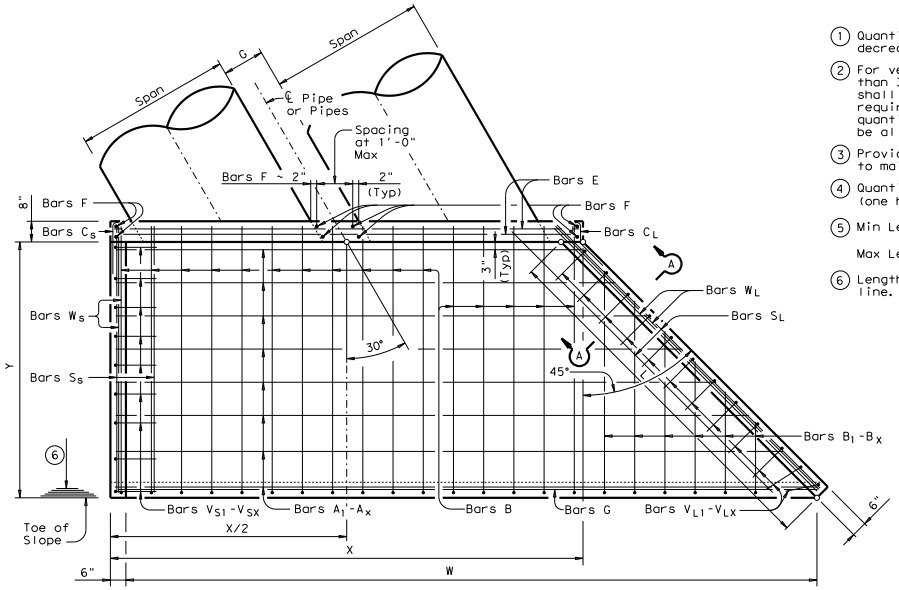
Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
C	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	~
G	# 3	~	2
S	# 4	~	6
V	# 4	1'-0"	~
W	# 5	~	4

TABLE OF DIMENSIONS NOT VARIED WITH SLOPE

DESIGN	SIZE OF PIPE ARCH Span	SIZE OF PIPE ARCH Rise	G	K	H
1	17"	13"	1'- 0"	1'- 0"	2'- 1"
2	21"	15"	1'- 2"	1'- 0"	2'- 3"
3	28"	20"	1'- 5"	1'- 0"	2'- 8"
4	35"	24"	1'- 8"	1'- 0"	3'- 0"
5	42"	29"	1'-11"	1'- 0"	3'- 5"
6	49"	33"	2'- 2"	1'- 0"	3'- 9"
7	57"	38"	2'- 5"	1'- 0"	4'- 2"
8	64"	43"	2'-10"	1'- 0"	4'- 7"
9	71"	47"	3'- 2"	1'- 0"	4'-11"



ELEVATION
Showing dimensions



PLAN

(1) Quantities shown are for metal pipe and will decrease slightly for concrete pipe installations.

(2) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

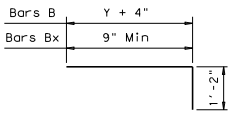
(3) Provide a 1'-0" footing as shown where required to maintain 4" Min cover for pipes.

(4) Quantities shown are for one structure end only (one headwall).

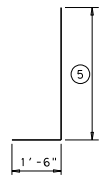
(5) Min Length = 6" + 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$

Max Length = 12 x H - 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$ - 1"

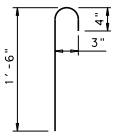
(6) Lengths of wings based on SL:1 Slope along this line.



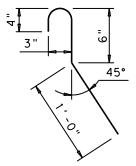
BARS B & B_1-B_X



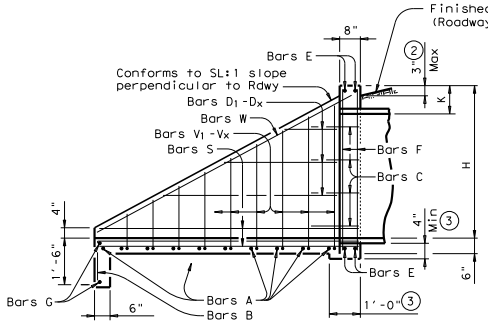
BARS V_S & V_L



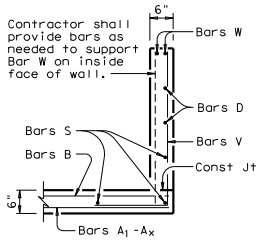
BARS C_S
(2'-0" long)



BARS C_L
(2'-0" long)



TYPICAL WING ELEVATION



SECTION A-A

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

No bridge rails of any type may be mounted directly to these culvert headwalls.

Texas Department of Transportation — Bridge Division Standard

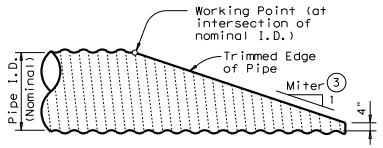
CONCRETE HEADWALLS WITH FLARED WINGS FOR 30° SKEW ARCH PIPE CULVERTS

CH-FW-A-30

FILE:	chfa30se.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: GAF
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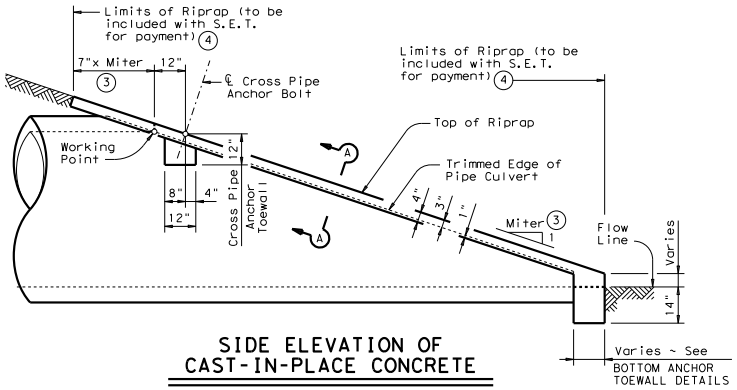
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NOTE: All Pipe Runners, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

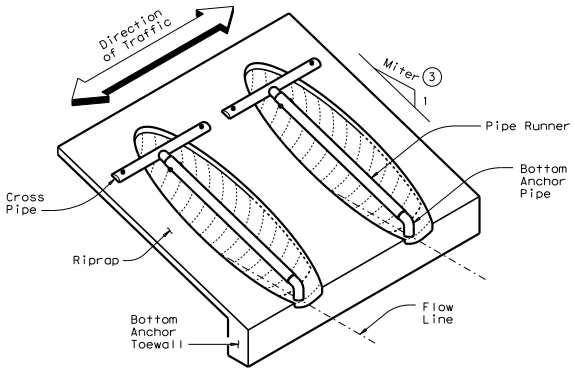
SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

(Showing Corrugated Metal Pipe Culvert. Details of Concrete Pipe Culvert are similar.)



SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing Concrete Pipe Culvert. Details of Corrugated Metal Pipe Culvert are similar. Pipe Runners not shown for clarity)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

(Showing installation with no skew.)

CROSS PIPE LENGTHS & PIPE RUNNER LENGTHS (1)(2)

Nominal Culvert I.D.	Pipe Culvert Spa ~ G	Cross Pipe Length	Pipe Runner Length											
			3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
			0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
24"	1'- 7"	3'- 5"	N/A	N/A	N/A	5'-10"	N/A	N/A	N/A	8'- 1"	N/A	N/A	N/A	12'- 9"
27"	1'- 8"	3'- 8"	N/A	N/A	5'- 5"	6'-11"	N/A	N/A	7'- 7"	9'- 7"	N/A	N/A	11'-11"	14'-11"
30"	1'-10"	3'-11"	N/A	N/A	6'- 4"	8'- 0"	N/A	N/A	8'- 9"	11'- 0"	N/A	N/A	13'- 8"	17'- 0"
33"	1'-11"	4'- 2"	6'- 2"	6'- 5"	7'- 3"	9'- 1"	8'- 6"	8'-10"	10'- 0"	12'- 5"	13'- 3"	13'- 9"	15'- 5"	19'- 2"
36"	2'- 1"	4'- 5"	6'-11"	7'- 3"	8'- 2"	10'- 2"	9'- 6"	9'-11"	11'- 2"	13'-10"	14'- 9"	15'- 3"	17'- 2"	21'- 3"
42"	2'- 4"	4'-11"	8'- 6"	8'-10"	9'-11"	12'- 4"	11'- 7"	12'- 0"	13'- 6"	16'- 8"	17'- 9"	18'- 5"	20'- 8"	25'- 7"
48"	2'- 7"	5'- 5"	10'- 1"	10'- 5"	11'- 9"	N/A	13'- 7"	14'- 2"	15'-10"	N/A	20'- 9"	21'- 6"	24'- 2"	N/A
54"	3'- 0"	5'-11"	11'- 8"	12'- 1"	N/A	N/A	15'- 8"	16'- 3"	N/A	N/A	23'-10"	24'- 8"	N/A	N/A
60"	3'- 3"	6'- 5"	13'- 3"	N/A	N/A	N/A	17'- 9"	N/A	N/A	N/A	26'-10"	N/A	N/A	N/A

TYPICAL PIPE CULVERT MITERS (3)

Side Slope	0° Skew	15° Skew	30° Skew	45° Skew
3:1	3:1	3.106:1	3.464:1	4.243:1
4:1	4:1	4.141:1	4.619:1	5.657:1
6:1	6:1	6.212:1	6.928:1	8.485:1

CONDITIONS WHERE PIPE RUNNERS ARE NOT REQUIRED (2)

Nominal Culvert I.D.	Single Pipe Culvert	Multiple Pipe Culverts
12" thru 21"	Skews thru 45°	Skews thru 45°
24"	Skews thru 45°	Skews thru 30°
27"	Skews thru 30°	Skews thru 15°
30"	Skews thru 15°	Skews thru 15°
33"	Skews thru 15°	Always required
36"	Normal (No Skew)	Always required
42" to 60"	Always required	Always required

STANDARD PIPE SIZES & MAX PIPE RUNNER LENGTHS (1)

Pipe Size	Pipe O.D.	Pipe I.D.	Max Pipe Runner Length
2" STD	2.375"	2.067"	N/A
3" STD	3.500"	3.068"	10'- 0"
4" STD	4.500"	4.026"	19'- 8"
5" STD	5.563"	5.047"	34'- 2"

ESTIMATED CONCRETE RIPRAP QUANTITIES (CY) (5)

Nominal Culvert I.D.	3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
12"	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.8
15"	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9
18"	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	1.0
21"	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	1.2
24"	0.6	0.7	0.7	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.1	1.3
27"	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.1	1.1	1.1	1.2	1.4
30"	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.2	1.2	1.2	1.3	1.6
33"	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.3	1.3	1.4	1.5	1.7
36"	0.9	0.9	0.9	1.1	1.1	1.1	1.2	1.4	1.4	1.5	1.6	1.8
42"	1.0	1.0	1.1	1.3	1.2	1.3	1.3	1.6	1.6	1.7	1.8	2.1
48"	1.1	1.1	1.2	N/A	1.4	1.4	1.5	N/A	1.9	1.9	2.1	N/A
54"	1.3	1.3	N/A	N/A	1.6	1.6	N/A	N/A	2.1	2.1	N/A	N/A
60"	1.4	N/A	N/A	N/A	1.7	N/A	N/A	N/A	2.3	N/A	N/A	N/A

(1) Size of Pipe Runner shall be as shown in the tables. Cross Pipe shall be the same size as the Pipe Runner. Cross Pipe Stub Out and Bottom Anchor Pipe shall be the next smaller size pipe as shown in the STANDARD PIPE SIZES table.

(2) This standard allows for the placement of only one pipe runner across each culvert pipe opening. In order to limit the clear opening to be traversed by an errant vehicle, the following conditions must be met:

For 60" culvert pipes, the skew must not exceed 0°.
For 54" culvert pipes, the skew must not exceed 15°.
For 48" culvert pipes, the skew must not exceed 30°.
For all culvert pipe sizes 42" and less, the skew must not exceed 45°.

If the above conditions cannot be met, the designer should consider using a safety end treatment with flared wings. For further information, refer to the TxDOT "Roadway Design Manual".

(3) Miter = Slope of Mitered Pipe Culvert End

(4) Riprap placed beyond the limits shown will be paid as Concrete Riprap in accordance with Item 432, "Riprap".

(5) Quantities shown are for one end of one reinforced Concrete Pipe Culvert. For multiple Pipe Culverts or for Corrugated Metal Pipe Culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.

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SHEET 1 OF 2

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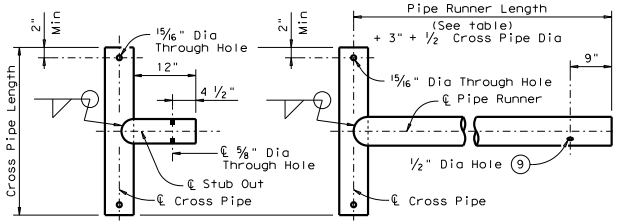
SAFETY END TREATMENT

FOR 12" DIA TO 60" DIA PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

SETP-CD

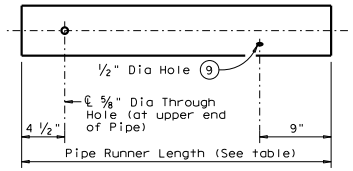
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11-10: Add note for synthetic fibers.	DIST	COUNTY		SHEET NO.

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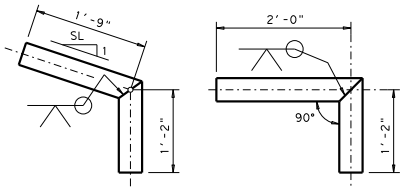
OPTION A1 OPTION A2

CROSS PIPE AND CONNECTIONS DETAILS



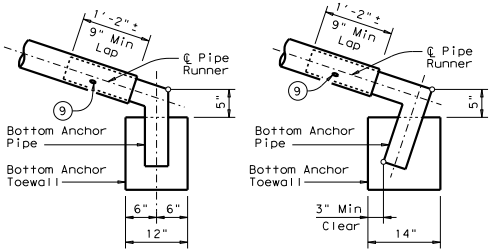
NOTE: The separate Pipe Runner shown is required when Cross Pipe Connection Option A1 is used.

PIPE RUNNER DETAILS



OPTION B1 OPTION B2

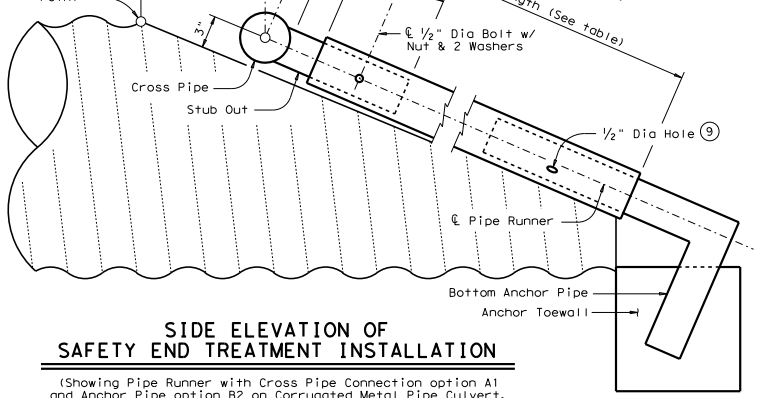
BOTTOM ANCHOR PIPE DETAILS (10)



OPTION B1 OPTION B2

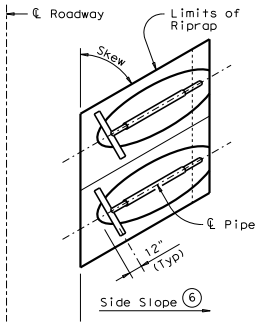
BOTTOM ANCHOR TOEWALL DETAILS

(Culvert & Riprap not shown for clarity)

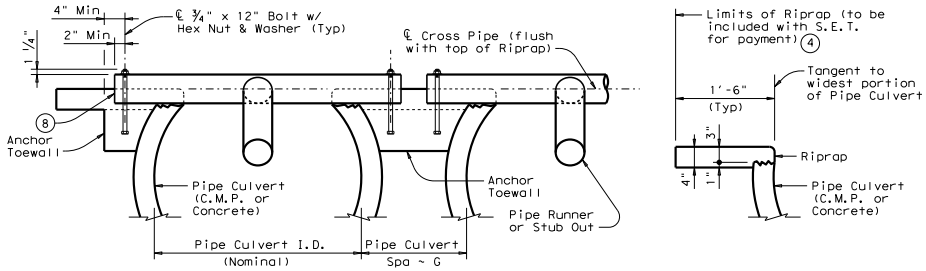


SIDE ELEVATION OF SAFETY END TREATMENT INSTALLATION

(Showing Pipe Runner with Cross Pipe Connection option A1 and Anchor Pipe option B2 on Corrugated Metal Pipe Culvert. Concrete Pipe Culvert details are similar. Riprap not shown for clarity)



PLAN OF SKEWED INSTALLATION



SHOWING CROSS PIPE & ANCHOR TOEWALL

SHOWING TYPICAL PIPE CULVERT & RIPRAP

SECTION A-A

(4) Riprap placed beyond the limits shown will be paid as Concrete Riprap in accordance with Item 432, "Riprap".

(6) Recommended values of side slope are 3:1, 4:1, & 6:1. All quantities, calculations, and dimensions shown herein are based on these recommended values. Slope of 3:1 or flatter is required for vehicle safety.

(7) Note that actual slope of Pipe Runner may vary slightly from Side Slope of Riprap and trimmed Culvert Pipe edge.

(8) Care shall be taken to ensure that Riprap concrete does not flow into the Cross Pipe so as to permit disassembly of the bolted connection to allow cleanout access.

(9) After installation, the 1/2" hole shall be inspected to ensure that the lap of the Pipe Runner with the Bottom Anchor Pipe is adequate.

(10) At fabricator's option, a heat bend to a smooth 5" radius or a manufactured elbow (of the same material as the Runner) may be substituted for the mitered and welded joint in the Bottom Anchor Pipe.

GENERAL NOTES:

Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

The Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Pipe Runners.

Riprap and all necessary inverts shall be Concrete Riprap conforming to the requirements of Item 432, "Riprap".

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.

Pipe Runners, Cross Pipes, and Anchor Pipes shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307.

All steel components, except concrete reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT

FOR 12" DIA TO 60" DIA
PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

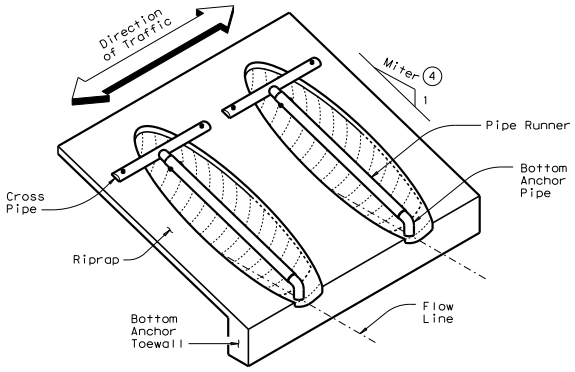
SETP-CD

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REVISIONS				
11-10: Add note for synthetic fibers.	DIST	COUNTY		SHEET NO.

DATE:
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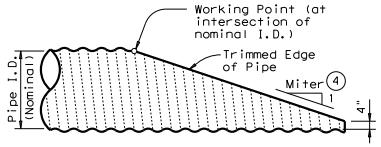
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ISOMETRIC VIEW OF TYPICAL INSTALLATION

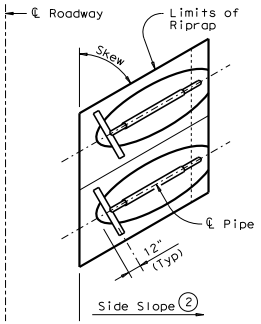
(Showing installation with no skew.)



NOTE: All Pipe Runners, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

(Showing Corrugated Metal Pipe Culvert. Details of Concrete Pipe Culvert are similar.)



PLAN OF SKEWED INSTALLATION

(1) (3)

CROSS PIPE LENGTHS, PIPE RUNNER LENGTHS, & REQUIRED PIPE SIZES

CORRUGATED METAL PIPE CULVERTS

Design	Pipe Culvert Span	Pipe Culvert Rise	Pipe Culvert Spa ~ G	Cross Pipe Length	Pipe Runner Length											
					3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
					0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
1	17"	13"	1'- 0"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	21"	15"	1'- 2"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	28"	20"	1'- 5"	3'- 9"	N/A	N/A	3'- 5"	4'- 7"	N/A	N/A	4'-11"	6'- 5"	N/A	N/A	7'-11"	10'- 2"
4	35"	24"	1'- 8"	4'- 4"	3'-10"	4'- 0"	4'- 7"	6'- 0"	5'- 5"	5'- 8"	6'- 6"	8'- 4"	8'- 8"	9'- 1"	10'- 3"	12'-11"
5	42"	29"	1'-11"	4'-11"	5'- 1"	5'- 4"	6'- 1"	7'-10"	7'- 2"	7'- 5"	8'- 6"	10'- 9"	11'- 2"	11'- 8"	13'- 2"	16'- 6"
6	49"	33"	2'- 2"	5'- 6"	6'- 2"	6'- 5"	7'- 4"	N/A	8'- 6"	8'-10"	10'- 0"	N/A	13'- 3"	13'- 9"	15'- 6"	N/A
7	57"	38"	2'- 5"	6'- 2"	7'- 6"	7'- 9"	N/A	N/A	10'- 2"	10'- 7"	N/A	N/A	15'- 9"	16'- 4"	N/A	N/A

CONCRETE PIPE CULVERTS

Design	Pipe Culvert Span	Pipe Culvert Rise	Pipe Culvert Spa ~ G	Cross Pipe Length	Pipe Runner Length											
					3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
					0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
1	22"	13 ½"	1'- 0"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	26"	15 ½"	1'- 2"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	28 ½"	18"	1'- 5"	3'-9 ½"	N/A	N/A	2'-10"	3'-10"	N/A	N/A	4'- 2"	5'- 5"	N/A	N/A	6'- 9"	8'- 9"
4	36 ¼"	22 ½"	1'- 8"	4'-5 ¼"	3'- 5"	3'- 7"	4'- 2"	5'- 6"	4'-11"	5'- 1"	5'-11"	7'- 7"	7'-11"	8'- 3"	9'- 5"	11'-11"
5	43 ¾"	26 ⅝"	1'-11"	5'-0 ¾"	4'- 6"	4'- 8"	5'- 5"	6'-11"	6'- 4"	6'- 7"	7'- 6"	9'- 7"	10'- 0"	10'- 5"	11'- 9"	14'-10"
6	51 ⅛"	31 ⅝"	2'- 2"	5'- 8"	5'- 9"	6'- 0"	6'-10"	N/A	7'-11"	8'- 3"	9'- 4"	N/A	12'- 4"	12'-10"	14'- 6"	N/A
7	58 ½"	36"	2'- 5"	6'-3 ½"	6'-11"	7'- 3"	N/A	N/A	9'- 6"	9'-11"	N/A	N/A	14'- 9"	15'- 4"	N/A	N/A

TYPICAL PIPE CULVERT MITERS (4)

Side Slope	0° Skew	15° Skew	30° Skew	45° Skew
3:1	3:1	3.106:1	3.464:1	4.243:1
4:1	4:1	4.141:1	4.619:1	5.657:1
6:1	6:1	6.212:1	6.928:1	8.485:1

STANDARD PIPE SIZES & MAX PIPE RUNNER LENGTHS (1)

Pipe Size	Pipe O.D.	Pipe I.D.	Max Pipe Runner Length
2" STD	2.375"	2.067"	N/A
3" STD	3.500"	3.068"	10'- 0"
4" STD	4.500"	4.026"	19'- 8"
5" STD	5.563"	5.047"	34'- 2"

CONDITIONS WHERE PIPE RUNNERS ARE NOT REQUIRED (3)

Design	Single Pipe Culvert	Multiple Pipe Culverts
1 & 2	Skews thru 45°	Skews thru 45°
3	Skews thru 30°	Skews thru 15°
4	Normal (No Skew)	Always required
5 thru 7	Always required	Always required

(1) Size of Pipe Runner shall be as shown in the tables. Cross Pipe shall be the same size as the Pipe Runner. Cross Pipe Stub Out and Bottom Anchor Pipe shall be the next smaller size pipe as shown in the STANDARD PIPE SIZES table.

(2) Recommended values of slope are 3:1, 4:1, & 6:1. All quantities, calculations, and dimensions shown herein are based on these recommended values. Slope of 3:1 or flatter is required for vehicle safety.

(3) This standard allows for the placement of only one pipe runner across each culvert pipe opening. In order to limit the clear opening to be traversed by an errant vehicle, the following conditions must be met:

For Design 1 through 5 culvert pipe sizes, the skew must not exceed 45°.
For Design 6 culvert pipes, the skew must not exceed 30°.
For Design 7 culvert pipes, the skew must not exceed 15°.

If the above conditions cannot be met, the designer should consider using a safety end treatment with flared wings. For further information, refer to the TxDOT "Roadway Design Manual".

(4) Miter = Slope of Mitered Pipe Culvert End

GENERAL NOTES:

Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

The Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Pipe Runners.

Riprap and all necessary inverts shall be Concrete Riprap conforming to the requirements of Item 432, "Riprap".

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.

Pipe Runners, Cross Pipes, and Anchor Pipes shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307.

All steel components, except concrete reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT

FOR DESIGN 1 TO 7
ARCH PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

SETP-CD-A

FILE: setpcase.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
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REVISIONS				
11-10: Add note for synthetic fibers.	DIST	COUNTY		SHEET NO.

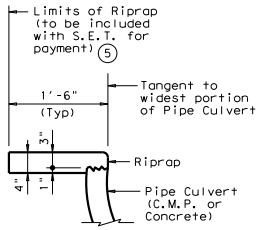
ESTIMATED CONCRETE RIPRAP QUANTITIES (CY) (6)
BOTH CORRUGATED METAL PIPE CULVERTS AND CONCRETE PIPE CULVERTS

Design	3:1 Side Slope				4:1 Side Slope				6:1 Side Slope			
	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew	0° Skew	15° Skew	30° Skew	45° Skew
1	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9
2	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	1.0
3	0.6	0.6	0.7	0.8	0.7	0.7	0.8	0.9	0.9	1.0	1.0	1.2
4	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.4
5	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.2	1.3	1.3	1.4	1.7
6	0.9	1.0	1.0	N/A	1.1	1.1	1.2	N/A	1.4	1.5	1.6	N/A
7	1.0	1.1	N/A	N/A	1.3	1.3	N/A	N/A	1.7	1.7	N/A	N/A

(4) Miter = Slope of Mitered Pipe Culvert End

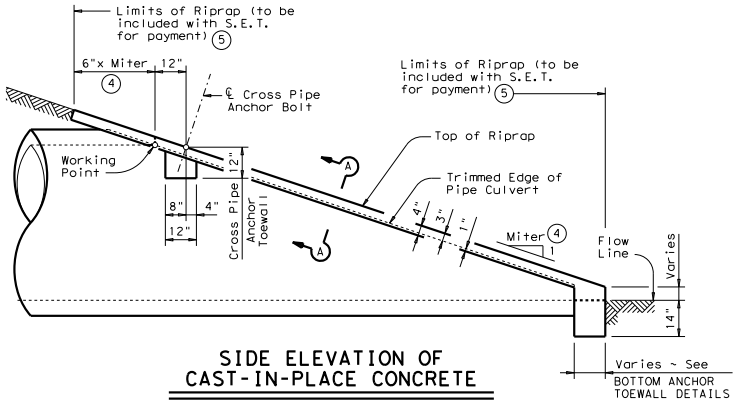
(5) Riprap placed beyond the limits shown will be paid as Concrete Riprap in accordance with Item 432, "Riprap".

(6) Quantities shown are for one end of one Pipe Culvert. For multiple Pipe Culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.



SHOWING TYPICAL PIPE CULVERT & RIPRAP

SECTION A-A



SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing Concrete Pipe Culvert.
Details of Corrugated Metal Pipe Culvert are similar.
Pipe Runners not shown for clarity)

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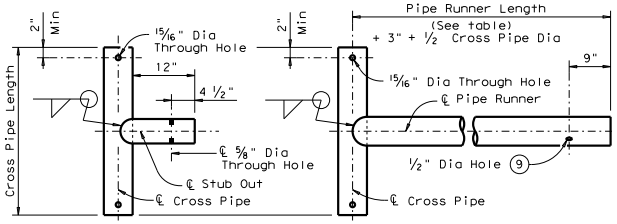
SHEET 2 OF 3

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT
FOR DESIGN 1 TO 7
ARCH PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

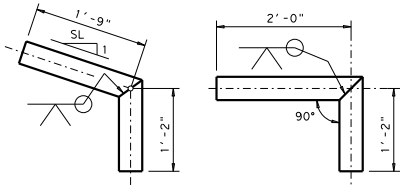
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REVISIONS				
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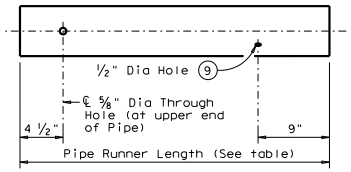
OPTION A1 OPTION A2

CROSS PIPE AND CONNECTIONS DETAILS



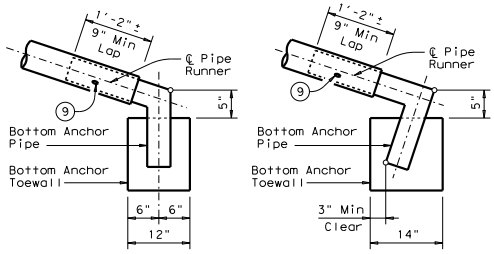
OPTION B1 OPTION B2

BOTTOM ANCHOR PIPE DETAILS (10)



NOTE: The separate Pipe Runner shown is required when Cross Pipe Connection Option A1 is used.

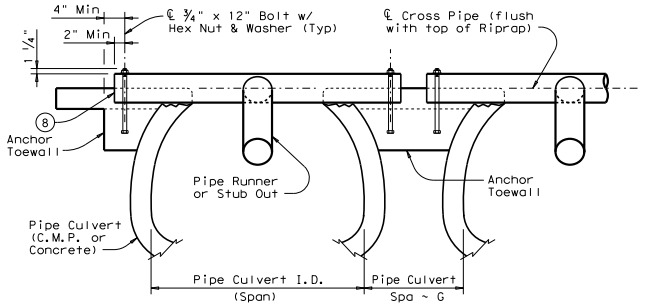
PIPE RUNNER DETAILS



OPTION B1 OPTION B2

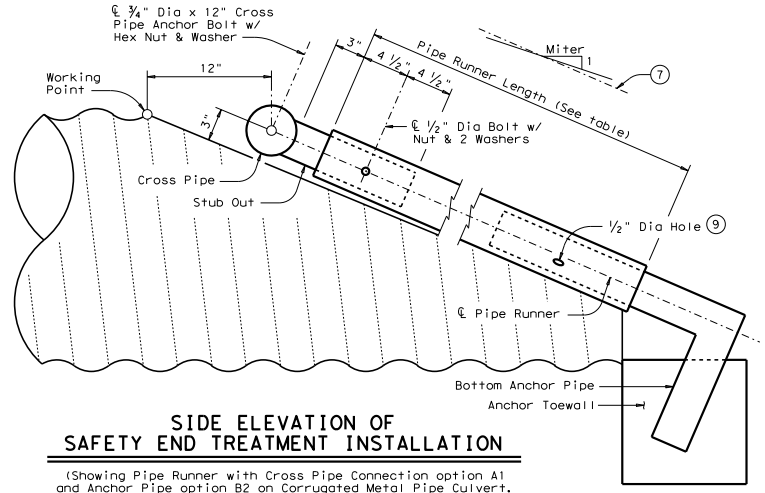
BOTTOM ANCHOR TOEWALL DETAILS

(Culvert & Riprap not shown for clarity)



SHOWING CROSS PIPE & ANCHOR TOEWALL

SECTION A-A



SIDE ELEVATION OF SAFETY END TREATMENT INSTALLATION

(Showing Pipe Runner with Cross Pipe Connection option A1 and Anchor Pipe option B2 on Corrugated Metal Pipe Culvert. Concrete Pipe Culvert details are similar. Riprap not shown for clarity)

(7) Note that actual slope of Pipe Runner may vary slightly from Side Slope of Riprap and trimmed Culvert Pipe edge.

(8) Care shall be taken to ensure that Riprap concrete does not flow into the Cross Pipe so as to permit disassembly of the bolted connection to allow cleanout access.

(9) After installation, the 1/2" hole shall be inspected to ensure that the lap of the Pipe Runner with the Bottom Anchor Pipe is adequate.

(10) At fabricator's option, a heat bend to a smooth 5" radius or a manufactured elbow (of the same material as the Runner) may be substituted for the mitered and welded joint in the Bottom Anchor Pipe.

SHEET 3 OF 3

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT

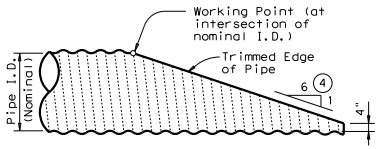
FOR DESIGN 1 TO 7
ARCH PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

SETP-CD-A

FILE: setpcase.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
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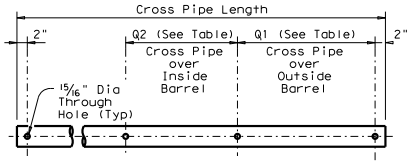
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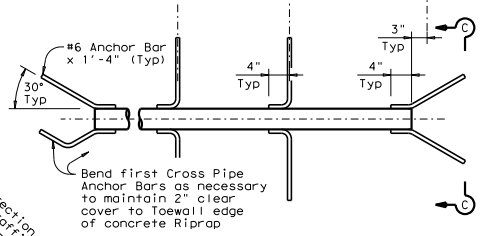
NOTE: All Cross Pipes, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

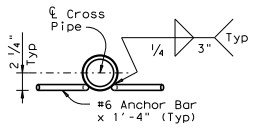
(Showing Corrugated Metal Pipe Culvert.)
(Details at Concrete Pipe Culvert are similar.)



PIPE W/ BOLTED ANCHOR

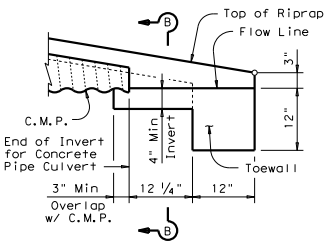


PIPE W/ ANCHOR BARS



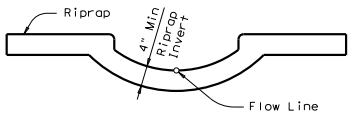
SECTION C-C

CROSS PIPE DETAILS



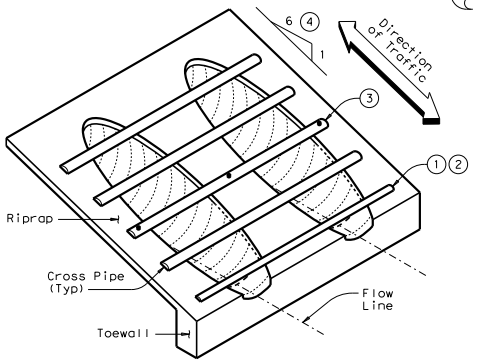
DETAIL "A"

(Showing Invert with Corrugated Metal Pipe Culvert. Concrete Pipe Culvert details are similar. Cross Pipes not shown for clarity.)



SECTION B-B

(Cross Pipes not shown for clarity.)

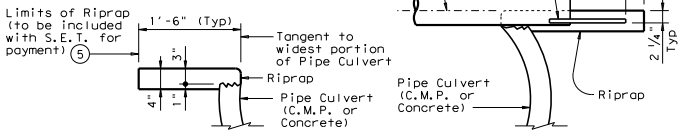


ISOMETRIC VIEW OF TYPICAL INSTALLATION

CROSS PIPE LENGTHS, REQUIRED PIPE SIZES, & RIPRAP QUANTITIES (2)

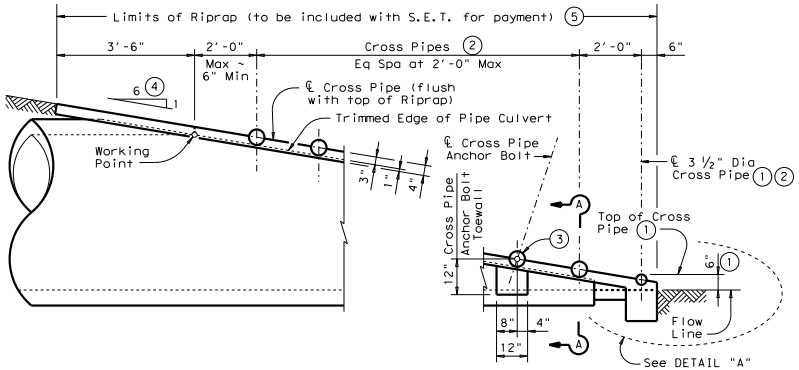
Nominal Culvert I.D.	Conc Riprap (CY) (6)	Pipe Culvert Spa ~ G	Single Barrel ~ Q1	Multi-Barrel ~ Q1	Q2	Conditions for use of Cross Pipes	Cross Pipe Size
12"	0.6	9"	N/A	2'- 1"	1'- 9"	3 or more Pipe Culverts	3" Std (3.500" O.D.)
15"	0.7	11"	N/A	2'- 5"	2'- 2"		
18"	0.8	1'- 2"	N/A	2'-10"	2'- 8"		
21"	0.9	1'- 4"	N/A	3'- 2"	3'- 1"		
24"	0.9	1'- 7"	N/A	3'- 6"	3'- 7"		
27"	1.0	1'- 8"	N/A	3'-10"	3'-11"	3 or more Pipe Culverts	3 1/2" Std (4.000" O.D.)
30"	1.1	1'-10"	N/A	4'- 2"	4'- 4"	2 or more Pipe Culverts	
33"	1.2	1'-11"	4'- 2"	4'- 5"	4'- 8"	All Pipe Culverts	
36"	1.3	2'- 1"	4'- 5"	4'- 9"	5'- 1"	All Pipe Culverts	4" Std (4.500" O.D.)
42"	1.5	2'- 4"	4'-11"	5'- 5"	5'-10"		
48"	1.7	2'- 7"	5'- 5"	6'- 0"	6'- 7"	All Pipe Culverts	5" Std (5.563" O.D.)
54"	2.0	3'- 0"	5'-11"	6'- 9"	7'- 6"		
60"	2.2	3'- 3"	6'- 5"	7'- 4"	8'- 3"		
66"	2.4	3'- 3"	6'-11"	7'-10"	8'- 9"		
72"	2.7	3'- 4"	7'- 5"	8'- 5"	9'- 4"		

1. The proper installation of the first Cross Pipe is critical for vehicle safety. The top of the first Cross Pipe must be placed at no more than 6" above the flow line.
2. Size of Cross Pipes, except the first bottom pipe, shall be as shown in the PIPE SIZE table. The first bottom pipe shall be 3 1/2" Standard Pipe (4" O.D.).
3. The third Cross Pipe from the bottom of the Culvert shall always be installed using a bolted connection. Care shall be taken to ensure that Riprap concrete does not flow into the Cross Pipe so as to permit disassembly of the bolted connection to allow cleanout access. At the Contractor's option, all other Cross Pipes may also be installed using the bolted connection details.
4. Match Cross Slope as shown elsewhere in the plans. Cross Slope of 6:1 or flatter is required for vehicle safety.
5. Riprap placed beyond the limits shown will be paid as Concrete Riprap in accordance with Item 432, "Riprap".
6. Quantities shown are for one end of one reinforced Concrete Pipe Culvert. For multiple pipe culverts or for Corrugated Metal Pipe Culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.



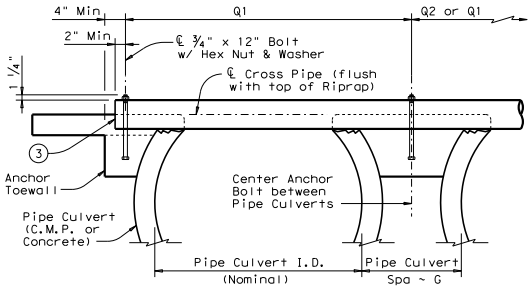
SHOWING TYPICAL PIPE CULVERT & RIPRAP

SHOWING CROSS PIPE WITH ANCHOR BAR



SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing Concrete Pipe Culvert.)
(Details at Corrugated Metal Pipe Culvert are similar.)



SHOWING CROSS PIPE WITH BOLTED ANCHOR

SECTION A-A

GENERAL NOTES:

Cross Pipes are designed for a traversing load of 10,000 pounds at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Cross Pipes.

Riprap and all necessary inverts shall be Concrete Riprap conforming to the requirements of Item 432, "Riprap".

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.

Cross Pipes shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307.

All steel components, except concrete reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT

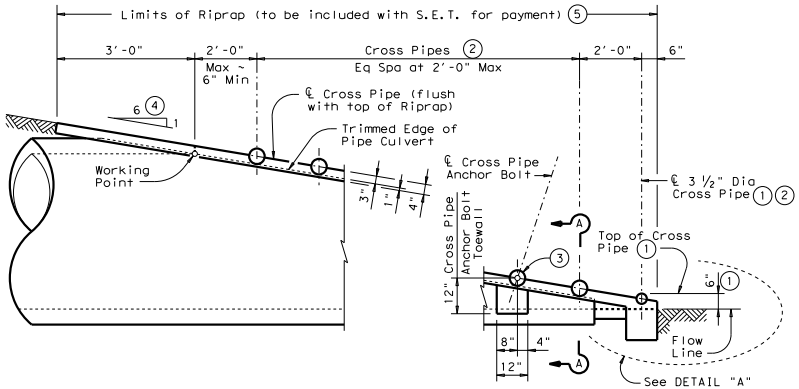
FOR 12" DIA TO 72" DIA PIPE CULVERTS
TYPE II ~ PARALLEL DRAINAGE

SETP-PD

FILE: setppdse.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
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11-10- Add note for synthetic fibers.	DIST	COUNTY		SHEET NO.

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SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing Concrete Pipe Culvert.)
(Details at Corrugated Metal Pipe Culvert are similar.)

CROSS PIPE LENGTHS & REQUIRED PIPE SIZES (2)

CORRUGATED METAL PIPE CULVERTS

Design	Conc Riprap (CY) (6)	Pipe Culvert Span	Pipe Culvert Rise	Pipe Culvert Spa ~ G	Single Barrel ~ Q1	Multi-Barrel ~ Q1	Q2	Conditions for use of Cross Pipes	Cross Pipe Size
1	0.6	17"	13"	1'- 0"	N/A	2'- 8"	2'- 5"	3 or more Pipe Culverts	3" Std (3.500" O.D.)
2	0.7	21"	15"	1'- 2"	N/A	3'- 1"	2'-11"		
3	0.9	28"	20"	1'- 5"	N/A	3'- 9"	3'- 9"	3 or more Pipe Culverts	3 ½" Std (4.000" O.D.)
4	1.0	35"	24"	1'- 8"	4'- 4"	4'- 6"	4'- 7"	All Pipe Culverts	4" Std (4.500" O.D.)
5	1.2	42"	29"	1'-11"	4'-11"	5'- 2"	5'- 5"		
6	1.4	49"	33"	2'- 2"	5'- 6"	5'-11"	6'- 3"	All Pipe Culverts	5" Std (5.563" O.D.)
7	1.6	57"	38"	2'- 5"	6'- 2"	6'- 8"	7'- 2"		
8	1.8	64"	43"	2'-10"	6'- 9"	7'- 6"	8'- 2"		
9	1.9	71"	47"	3'- 2"	7'- 4"	8'- 3"	9'- 1"		

CONCRETE PIPE CULVERTS

Design	Conc Riprap (CY) (6)	Pipe Culvert Span	Pipe Culvert Rise	Pipe Culvert Spa ~ G	Single Barrel ~ Q1	Multi-Barrel ~ Q1	Q2	Conditions for use of Cross Pipes	Cross Pipe Size
1	0.6	22"	13 ½"	1'- 0"	N/A	3'- 1"	2'-10"	3 or more Pipe Culverts	3" Std (3.500" O.D.)
2	0.7	26"	15 ½"	1'- 2"	N/A	3'- 6"	3'- 4"		
3	0.9	28 ½"	18"	1'- 5"	N/A	3'-10"	3'-9 ½"	3 or more Pipe Culverts	3 ½" Std (4.000" O.D.)
4	1.0	36 ¼"	22 ½"	1'- 8"	4'- 5"	4'- 7"	4'-8 ¼"	All Pipe Culverts	4" Std (4.500" O.D.)
5	1.2	43 ¾"	26 ⅝"	1'-11"	5'- 1"	5'- 4"	5'-6 ¾"		
6	1.4	51 ⅛"	31 ⅝"	2'- 2"	5'- 8"	6'- 1"	6'-5 ¼"	All Pipe Culverts	5" Std (5.563" O.D.)
7	1.6	58 ½"	36"	2'- 5"	6'- 4"	6'-10"	7'-3 ½"		
8	1.8	65"	40"	2'-10"	6'-10"	7'- 7"	8'- 3"		
9	1.9	73"	45"	3'- 2"	7'- 6"	8'- 5"	9'- 3"		

(1) The proper installation of the first Cross Pipe is critical for vehicle safety. The top of the first Cross Pipe must be placed at no more than 6" above the flow line.

(2) Size of Cross Pipes, except the first bottom pipe, shall be as shown in the PIPE SIZE table. The first bottom pipe shall be 3 ½" Standard Pipe (4" O.D.).

(3) The third Cross Pipe from the bottom of the Culvert shall always be installed using a bolted connection. Care shall be taken to ensure that Riprap concrete does not flow into the Cross Pipe so as to permit disassembly of the bolted connection to allow cleanout access. At the Contractor's option, all other Cross Pipes may also be installed using the bolted connection details.

(4) Match Cross Slope as shown elsewhere in the plans. Cross Slope of 6:1 or flatter is required for vehicle safety.

(5) Riprap placed beyond the limits shown will be paid as Concrete Riprap in accordance with Item 432, "Riprap".

(6) Quantities shown are for one end of one Pipe Culvert. For multiple Pipe Culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.

GENERAL NOTES:

Cross Pipes are designed for a traversing load of 10,000 pounds at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Cross Pipes.

Riprap and all necessary inverts shall be Concrete Riprap conforming to the requirements of Item 432, "Riprap".

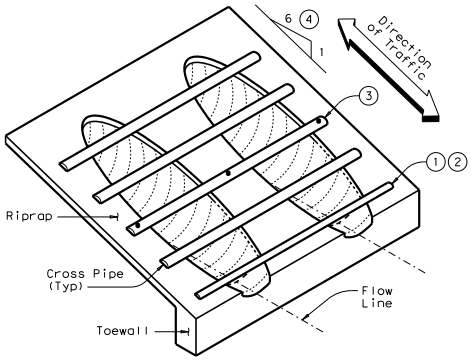
Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.

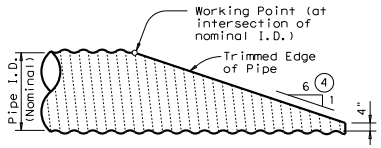
Cross Pipes shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307.

All steel components, except concrete reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.



ISOMETRIC VIEW OF TYPICAL INSTALLATION



NOTE: All Cross Pipes, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

(Showing Corrugated Metal Pipe Culvert.)
(Details at Concrete Pipe Culvert are similar.)

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SHEET 1 OF 2

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT

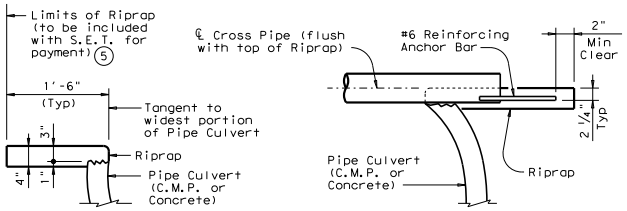
FOR DESIGN 1 TO 9
ARCH PIPE CULVERTS
TYPE II ~ PARALLEL DRAINAGE

SETP-PD-A

FILE: setppase.dgn	DN: GAF	CK: TxDOT	DW: JRP	CK: GAF
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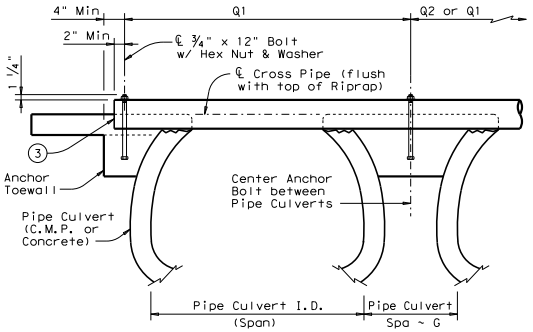
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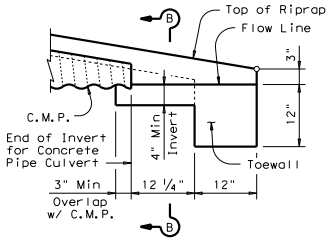
SHOWING TYPICAL PIPE CULVERT & RIPRAP

SHOWING CROSS PIPE WITH ANCHOR BAR



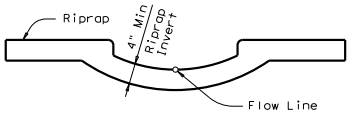
SHOWING CROSS PIPE WITH BOLTED ANCHOR

SECTION A-A



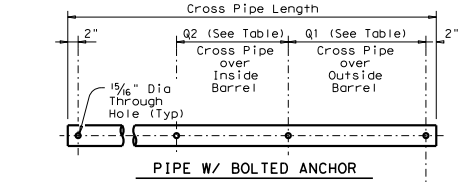
DETAIL "A"

(Showing Invert with Corrugated Metal Pipe Culvert. Concrete Pipe Culvert details are similar. Cross Pipes not shown for clarity.)

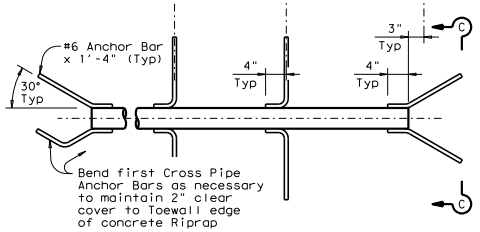


SECTION B-B

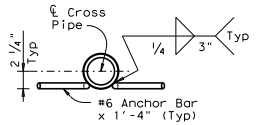
(Cross Pipes not shown for clarity.)



PIPE W/ BOLTED ANCHOR



PIPE W/ ANCHOR BARS



SECTION C-C

CROSS PIPE DETAILS

Texas Department of Transportation

Bridge Division Standard

SAFETY END TREATMENT

FOR DESIGN 1 TO 9
ARCH PIPE CULVERTS
TYPE II ~ PARALLEL DRAINAGE

SETP-PD-A

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TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

SLOPE	DIA. OF PIPE, D	Values for one pipe						Values to be added for each addt'l pipe		
		W	X	Y	L	Reinf (Lbs)	Conc (CY) (1)	X and W	Reinf (Lbs)	Conc (CY) (1)
3:1	33"	14'- 5 3/4"	4'- 8"	9'- 6"	10'-11 3/4"	310	3.4	4'- 8"	84	1.2
	36"	15'- 7 3/4"	4'-11 1/2"	10'- 3"	11'-10"	343	3.8	5'- 1"	96	1.4
	42"	17'-11 1/2"	5'- 6 1/2"	11'- 9"	13'- 6 3/4"	424	4.9	5'-10"	119	1.8
	48"	21'- 1 3/4"	6'- 1 1/2"	14'- 0"	16'- 2"	527	6.5	6'- 7"	146	2.4
	54"	23'- 5 1/2"	6'- 8 1/2"	15'- 6"	17'-10 3/4"	618	7.8	7'- 6"	186	3.0
	60"	25'- 9 1/4"	7'- 3 1/2"	17'- 0"	19'- 7 1/2"	707	9.2	8'- 3"	219	3.5
	66"	28'- 1"	7'-10 1/2"	18'- 6"	21'- 4 1/4"	797	10.7	8'- 9"	242	4.0
	72"	30'- 4 3/4"	8'- 5 1/2"	20'- 0"	23'- 1 1/4"	910	12.3	9'- 4"	272	4.6
4:1	33"	18'- 1 3/4"	4'- 8"	12'- 8"	14'- 7 1/2"	417	4.8	4'- 8"	101	1.5
	36"	19'- 7"	4'-11 1/2"	13'- 8"	15'- 9 1/4"	464	5.5	5'-1"	115	1.7
	42"	22'- 5 3/4"	5'- 6 1/2"	15'- 8"	18'- 1"	575	7.0	5'-10"	141	2.2
	48"	26'- 6 1/4"	6'- 1 1/2"	18'- 8"	21'- 6 3/4"	720	9.4	6'- 7"	175	3.0
	54"	29'- 5"	6'- 8 1/2"	20'- 8"	23'-10 1/4"	863	11.3	7'- 6"	226	3.7
	60"	32'- 3 3/4"	7'- 3 1/2"	22'- 8"	26'- 2"	984	13.4	8'- 3"	264	4.4
	66"	35'- 2 1/2"	7'-10 1/2"	24'- 8"	28'- 5 3/4"	1126	15.6	8'- 9"	300	5.0
	72"	38'- 1 1/4"	8'- 5 1/2"	26'- 8"	30'- 9 1/2"	1283	18.0	9'- 4"	334	5.7
6:1	33"	25'- 5 1/2"	4'- 8"	19'- 0"	21'-11 1/4"	667	8.3	4'- 8"	127	2.1
	36"	27'- 5 3/4"	4'-11 1/2"	20'- 6"	23'- 8"	727	9.5	5'- 1"	144	2.4
	42"	31'- 6 1/4"	5'- 6 1/2"	23'- 6"	27'- 1 1/2"	914	12.1	5'-10"	179	3.1
	48"	37'- 3 1/2"	6'- 1 1/2"	28'- 0"	32'- 4"	1181	16.6	6'- 7"	231	4.1
	54"	41'- 4 1/4"	6'- 8 1/2"	31'- 0"	35'- 9 1/2"	1412	20.0	7'- 6"	300	5.1
	60"	45'- 4 3/4"	7'- 3 1/2"	34'- 0"	39'- 3"	1619	23.8	8'- 3"	353	6.1

(1) Quantities shown are for concrete pipe and will increase slightly for Metal Pipe installation.

(2) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(3) Provide a 1'-0" footing as shown where required to maintain 4" minimum cover for pipes.

(4) Quantities shown are for one structure end. (One headwall)

(5) Min Length = $6" + 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right)$

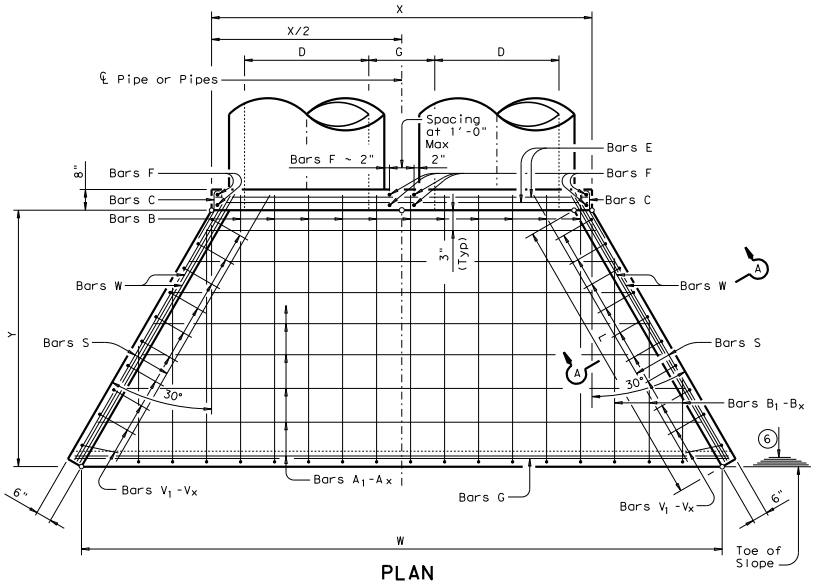
Max Length = $12 \times H - 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right) - 1"$

(6) Lengths of wings based on SL:1 Slope along this line.

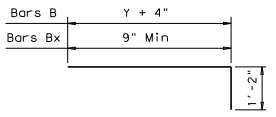


ELEVATION

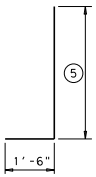
Showing dimensions



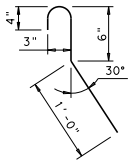
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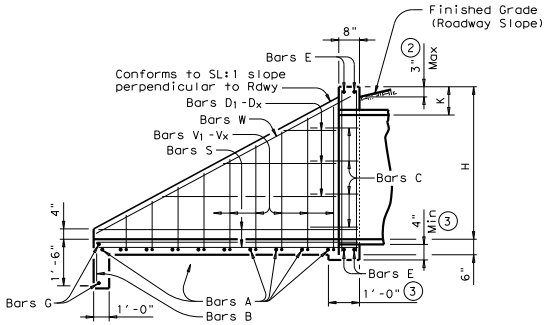
BARS B & B_1-B_x



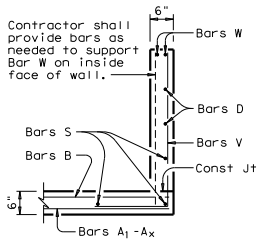
BARS V



BARS C
(2'-0" long)



TYPICAL WING ELEVATION



SECTION A-A

TABLE OF (4) REINFORCING STEEL

Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
C	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	~
G	# 3	~	2
S	# 4	~	6
V	# 4	1'-0"	~
W	# 5	~	4

TABLE OF CONSTANT DIMENSIONS

DIA. OF PIPE, D	G	K	H
33"	1'-11"	1'- 0"	3'- 9"
36"	2'- 1"	1'- 0"	4'- 0"
42"	2'- 4"	1'- 0"	4'- 6"
48"	2'- 7"	1'- 3"	5'- 3"
54"	3'- 0"	1'- 3"	5'- 9"
60"	3'- 3"	1'- 3"	6'- 3"
66"	3'- 3"	1'- 3"	6'- 9"
72"	3'- 4"	1'- 3"	7'- 3"

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

The Safety End Treatment shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the pipe runners.

The Safety Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

All bolts, nuts, washers, brackets, angles and pipe runners are considered parts of the Safety End Treatment for payment.

Pipe Runners shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307. Steel plates shall conform to ASTM A36. All steel components, except reinforcing, shall be galvanized. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

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SHEET 1 OF 3

Texas Department of Transportation — Bridge Division Standard

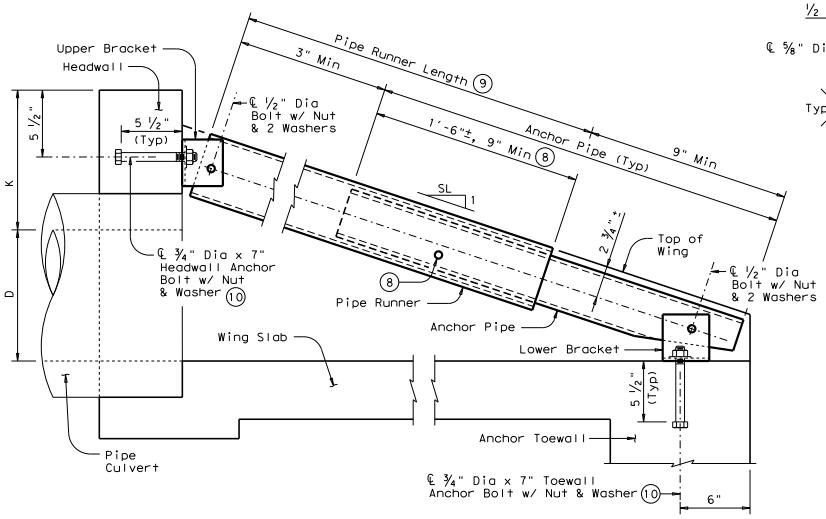
SAFETY END TREATMENT WITH FLARED WINGS

FOR 0 SKEW PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-0

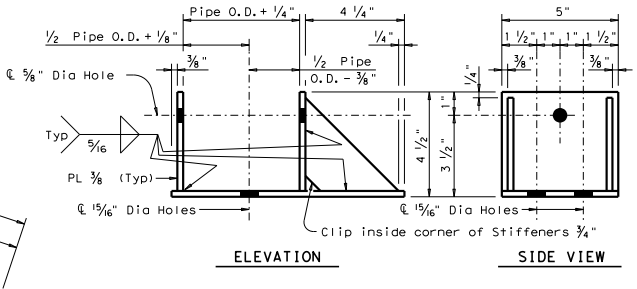
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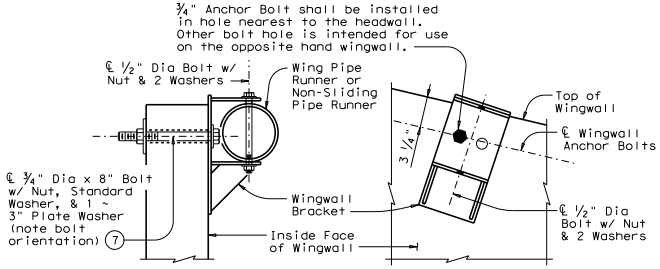


SECTION B-B

(Showing Headwall Pipe Runner. Except for upper bracket, Wingwall Pipe Runners are similar.)



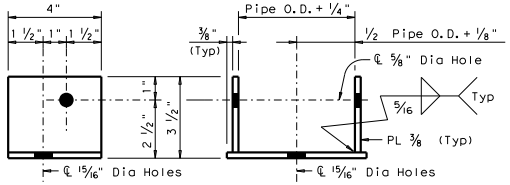
ELEVATION SIDE VIEW



SECTION C-C (Showing installed bracket.) ELEVATION (Showing installed bracket normal to Wall. Pipe not shown for clarity.)

NOTE: Wingwall Bracket shall match the Upper Bracket size.

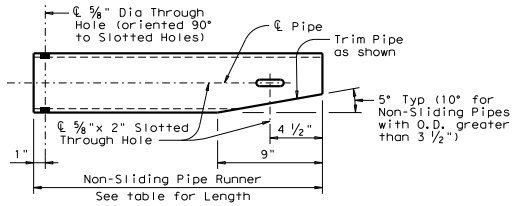
WINGWALL BRACKET DETAILS



SIDE VIEW ELEVATION

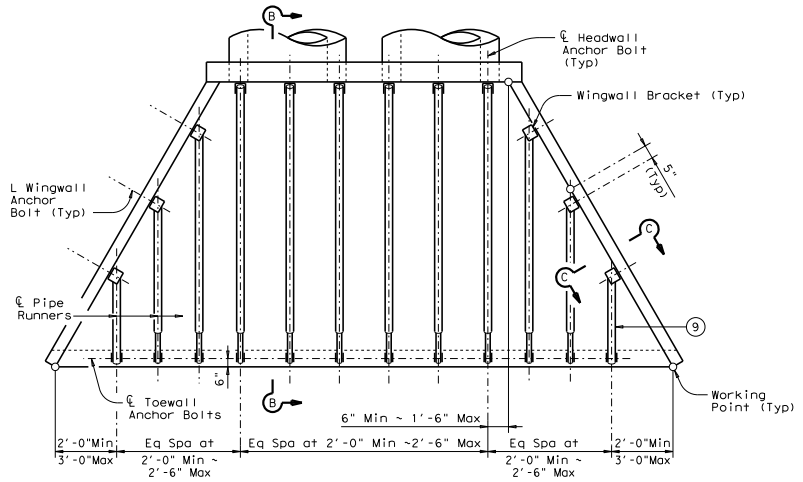
NOTE: Upper and Lower Brackets shall, except for the Brackets used with Non-Sliding Pipe Runners, match the required pipe diameters as shown in the table.

UPPER & LOWER BRACKET DETAILS



Note: Pipe size shall be same as required for headwall pipe runner. Adjust the corresponding Lower Bracket accordingly.

NON-SLIDING PIPE RUNNER DETAILS (9)



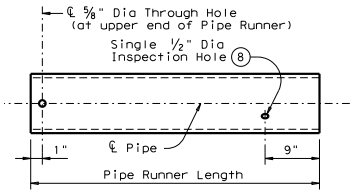
PIPE RUNNER PLAN

(7) At Contractor's option, ⅞" diameter hole may be formed or cored drilled. Percussion drilling is not permitted. Adjust placement of reinforcing steel as necessary to avoid bolt holes.

(8) After installation of the Pipe Runner, the ½" inspection hole shall be utilized to ensure that the lap of the Anchor Pipe with the Pipe Runner is adequate.

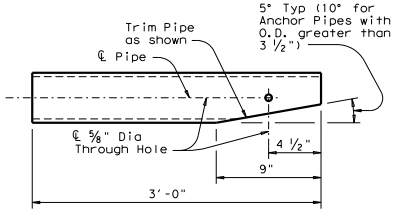
(9) Non-Sliding Pipe Runners are used for those installations that would require Pipe Runner lengths of 1'-9" or less. The Non-Sliding Pipe Runner, when required, replaces the outermost Pipe Runner and Anchor Pipe. See table on Sheet 3 of 3 to determine if the Non-Sliding Pipe Runner is required.

(10) At Contractor's option, an epoxy anchorage system may be used. Anchorage system chosen must be able to achieve an ultimate tensile resistance of 20 kips. Anchor diameter shall be ¾". The Contractor must provide evidence to the Engineer that this can be achieved. Evidence of adequate tensile resistance can be based on the manufacturer's published values of ultimate tensile strength (anchor spacing and edge distance must be accounted for). Anchor installation, including hole size, drilling, and clean-out, must be in accordance with the manufacturer's recommendations.



Note: Pipe diameter required for Headwall pipe runner shall also be used for wingwall pipe runner.

PIPE RUNNER DETAILS



ANCHOR PIPE DETAILS

SHEET 2 OF 3

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH FLARED WINGS

FOR 0 SKEW PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

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Side Slope	Pipe Culvert Dia (In)	L1 (Ft-In)	P1 (Ft-In)	Number of Spaces in L3	L3 Overall Dimension (Ft-In)	P2 (Ft-In)	Number of Spaces in L4	L4 Overall Dimension (Ft-In)	Headwall Pipe Runner Length (Ft-In)	No. of Wing Pipes (12)	Longest Wingwall Pipe Runner Length (Ft-In)	Shortest Wingwall Pipe Runner Length (Ft-In)	Non-Sliding Pipe Length (Ft-In)	Pipe Runner Size (13)	Total Length of Wingwall Pipe Runners (Ft-In) (12)
3:1	33"	9"	2'- 0"	2	4'- 2 3/4"	3'- 7"	1	4'- 2 3/4"	8'- 4"	4	5'- 5 1/2"	N/A	3'- 1"	3" STD	17'- 1"
	36"	9"	2'- 0"	2	4'- 8"	3'- 7"	1	4'- 8"	9'- 1 1/2"	4	5'-10 1/4"	N/A	3'- 1"	3" STD	17'-10 1/2"
	42"	1'- 0"	3'- 0"	2	4'- 9 1/2"	5'- 7"	1	4'- 9 1/2"	10'- 8 1/4"	4	7'- 9 1/2"	3'- 5"	N/A	4" STD	22'- 5"
	48"	1'- 3"	2'- 0"	3	7'- 4"	3'- 7"	2	9'- 9 1/4"	13'- 0 3/4"	6	10'- 6 1/4"	6'- 0 3/4"	3'- 1"	4" STD	39'- 4"
	54"	6"	2'- 0"	3	7'- 5 1/2"	3'- 7"	2	9'-11 1/4"	14'- 7 3/4"	6	10'- 8"	6'- 1 1/2"	3'- 1"	4" STD	39'- 9"
	60"	9"	2'- 0"	4	8'- 6 3/4"	3'- 7"	3	12'-10 1/4"	16'- 2 3/4"	8	13'- 3 3/4"	5'- 6"	3'- 1"	4" STD	62'- 7 1/4"
	66"	1'- 0"	2'- 0"	4	9'- 8 1/4"	3'- 7"	3	14'- 6 1/4"	17'- 9 3/4"	8	14'-10 1/4"	6'- 0"	3'- 1"	4" STD	68'- 8 3/4"
	72"	1'- 3"	3'- 0"	4	9'- 9 1/2"	5'- 7"	3	14'- 8 1/4"	19'- 4 3/4"	8	16'-10"	3'- 5"	N/A	5" STD	81'- 0"
4:1	33"	9"	2'- 0"	3	6'- 0 3/4"	3'- 7"	2	8'- 1"	11'- 4 1/2"	6	8'- 8 3/4"	5'- 1 1/4"	3'- 0"	4" STD	33'- 8"
	36"	9"	2'- 0"	3	6'- 7 3/4"	3'- 7"	2	8'-10 1/4"	12'- 4 3/4"	6	9'- 5"	5'- 5 1/2"	3'- 0"	4" STD	35'- 9"
	42"	1'- 0"	2'- 9"	3	7'- 3 1/2"	5'- 1"	2	9'- 8 3/4"	14'- 5 1/2"	6	11'- 6 1/4"	2'-10 1/4"	N/A	4" STD	43'- 1 1/2"
	48"	1'- 3"	2'- 3"	4	9'- 9 1/4"	4'- 1"	3	14'- 8"	17'- 6 3/4"	8	15'- 0 1/2"	1'-11 1/2"	N/A	4" STD	68'- 0"
	54"	6"	2'- 6"	4	9'-11 1/4"	4'- 7"	3	14'-10 3/4"	19'- 7 1/2"	8	15'- 8 1/4"	2'- 4 3/4"	N/A	5" STD	72'- 4"
	60"	9"	2'- 0"	5	11'-10"	3'- 7"	4	18'-11 1/4"	21'- 8 1/4"	10	18'- 5"	5'- 8 3/4"	3'- 0"	5" STD	102'- 7"
	66"	1'- 0"	2'- 9"	5	12'- 6"	5'- 1"	4	19'-11 3/4"	23'- 9"	10	20'- 8 1/4"	2'-10 1/4"	N/A	5" STD	117'- 8 1/2"
	72"	1'- 3"	2'- 0"	6	14'- 7 3/4"	3'- 7"	5	24'- 5"	25'- 9 3/4"	12	23'- 3 1/2"	5'-10 1/4"	3'- 0"	5" STD	151'- 8 3/4"
6:1	33"	9"	2'- 0"	4	9'- 8 3/4"	3'- 7"	3	14'- 7"	17'- 7"	8	14'- 3"	5'- 8 1/2"	2'-11 1/2"	4" STD	65'- 9 1/2"
	36"	9"	2'- 9"	4	9'-10"	5'- 1"	3	14'- 9"	19'- 1 1/4"	8	15'- 8 3/4"	2'- 9 1/4"	N/A	5" STD	74'- 0"
	42"	1'- 0"	2'- 3"	5	12'- 3 3/4"	4'- 1"	4	19'- 8 1/2"	22'- 1 3/4"	10	19'- 2 1/4"	1'-10 3/4"	N/A	5" STD	105'- 5"
	48"	1'- 3"	2'- 6"	6	14'-11"	4'- 7"	5	24'-10 1/4"	26'- 8 1/2"	12	24'- 1 3/4"	2'- 4"	N/A	5" STD	158'-10 1/2"
	54"	6"	2'- 0"	7	16'- 4 3/4"	3'- 7"	6	28'- 1 1/4"	29'- 9"	14	26'- 1 1/2"	5'- 6 3/4"	2'-11 1/2"	5" STD	196'- 0 1/2"
	60"	9"	3'- 0"	7	17'- 4 1/2"	5'- 7"	6	29'- 9 1/2"	32'- 9 1/2"	14	29'- 4 1/4"	3'- 2 1/2"	N/A	5" STD	227'-11 1/4"

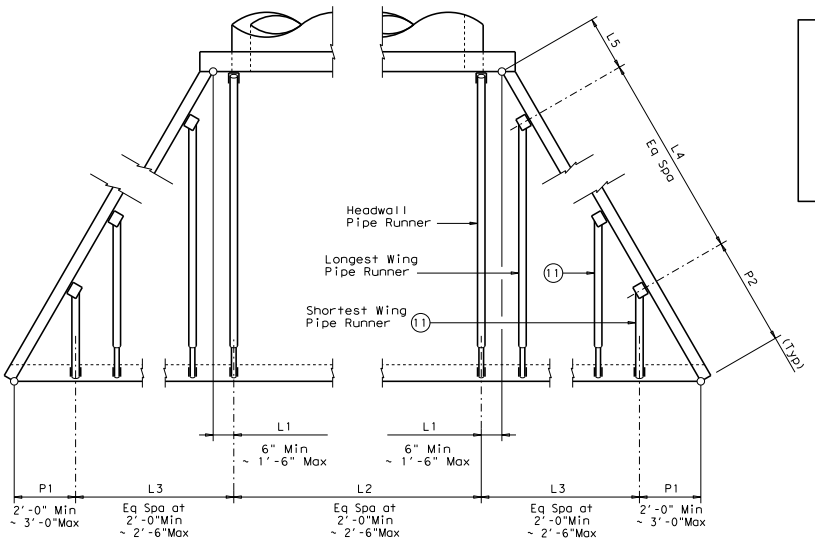
(11) If the outermost Wing Pipe Runner is a Non-Sliding Pipe Runner, the next outermost Wing Pipe Runner shall be considered the Shortest.

(12) Quantities shown include, if present, the Non-Sliding Pipes.

(13) Anchor Pipe size shall be the next smaller size than the Pipe Runner size.

STANDARD PIPE RUNNER AND ANCHOR PIPE SIZES (13)

Pipe Size	Pipe O.D.	Pipe I.D.
2" STD	2.375"	2.067"
3" STD	3.500"	3.068"
4" STD	4.500"	4.026"
5" STD	5.563"	5.047"



PIPE RUNNER LAYOUT

TOTAL PIPE LENGTHS FORMULAS:

$$\text{Total Length of All Pipe Runners} = \text{Total Length of Wingwall Pipe Runners} + \left(\text{No. of Headwall Pipe Runners}\right)\left(\text{Headwall Pipe Runner Length}\right)$$

$$\text{Total Length of All Anchor Pipes} = \left(3.000'\right)\left(\text{No. of Wing Pipe Runners} + \text{No. of Headwall Pipe Runners} - \text{No. of Non-Sliding Pipe Runners}\right)$$

SPECIAL NOTE:

Note that the tabular quantities are given for estimating purposes only. It is likely that these quantities will change due to field conditions. Therefore, all dimensions shall be verified by the Contractor in the field prior to fabrication of the Safety End Treatment components.

Pipe Culvert Dia (In)	Number of Pipe Culverts	No. of L2 Spaces	L2 Overall Dimension (Ft-In)	Number of Headwall Pipes
33"	1	1	2'- 0 1/4"	2
	2	3	6'- 8 1/4"	4
	3	5	11'- 4 1/4"	6
	4	7	16'- 0 1/4"	8
	5	9	20'- 8 1/4"	10
	6	11	25'- 4 1/4"	12
36"	1	1	2'- 3 3/4"	2
	2	3	7'- 4 3/4"	4
	3	5	12'- 5 3/4"	6
	4	7	17'- 6 3/4"	8
	5	10	22'- 7 3/4"	11
	6	12	27'- 8 3/4"	13
42"	1	1	2'- 4 3/4"	2
	2	4	8'- 2 3/4"	5
	3	6	14'- 0 3/4"	7
	4	8	19'-10 3/4"	9
	5	11	25'- 8 3/4"	12
	6	13	31'- 6 3/4"	14
48"	1	1	2'- 5 3/4"	2
	2	4	9'- 0 3/4"	5
	3	7	15'- 7 3/4"	8
	4	9	22'- 2 3/4"	10
	5	12	28'- 9 3/4"	13
	6	15	35'- 4 3/4"	16
54"	1	2	4'- 6 3/4"	3
	2	5	12'- 0 3/4"	6
	3	8	19'- 6 3/4"	9
	4	11	27'- 0 3/4"	12
	5	14	34'- 6 3/4"	15
	6	17	42'- 0 3/4"	18
60"	1	2	4'- 7 3/4"	3
	2	6	12'-10 3/4"	7
	3	9	21'- 1 3/4"	10
	4	12	29'- 4 3/4"	13
	5	16	37'- 7 3/4"	17
	6	19	45'-10 3/4"	20
66"	1	2	4'- 8 3/4"	3
	2	6	13'- 5 3/4"	7
	3	9	22'- 2 3/4"	10
	4	13	30'-11 3/4"	14
	5	16	39'- 8 3/4"	17
	6	20	48'- 5 3/4"	21
72"	1	2	4'- 9 3/4"	3
	2	6	14'- 1 3/4"	7
	3	10	23'- 5 3/4"	11
	4	14	32'- 9 3/4"	15
	5	17	42'- 1 3/4"	18
	6	21	51'- 5 3/4"	22

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SAFETY END TREATMENT WITH FLARED WINGS

FOR 0 SKEW PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-0

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TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

SLOPE	DIA. OF PIPE, D	Values for one pipe						Values to be added for each add'l pipe		
		W	X	Y	L	Reinf (Lbs)	Conc (CY) (1)	X and W	Reinf (Lbs)	Conc (CY) (1)
3:1	24"	10'- 7 1/2"	4'- 7"	7'- 3"	10'- 3"	227	2.3	4'- 1 3/4"	65	0.9
	27"	11'- 8 1/2"	4'-11"	8'- 0"	11'- 3 3/4"	255	2.7	4'- 6 1/4"	75	1.0
	30"	12'- 9 1/2"	5'- 3"	8'- 9"	12'- 4 1/2"	298	3.1	5'- 0"	86	1.2
	33"	13'-10 3/4"	5'- 7"	9'- 6"	13'- 5 1/4"	322	3.5	5'- 4 3/4"	94	1.4
	36"	14'-11 3/4"	5'-11 1/4"	10'- 3"	14'- 6"	355	4.0	5'-10 1/2"	108	1.6
	42"	17'- 1 3/4"	6'- 7 1/4"	11'- 9"	16'- 7 1/2"	441	5.0	6'- 8 3/4"	133	2.1
	48"	20'- 0 3/4"	7'- 3 1/4"	14'- 0"	19'- 9 1/2"	542	6.6	7'- 7 1/4"	176	2.8
	54"	22'- 3"	7'-11 1/2"	15'- 6"	21'-11"	626	7.9	8'- 8"	211	3.5
	60"	24'- 5"	8'- 7 1/2"	17'- 0"	24'- 0 1/2"	725	9.4	9'- 6 1/4"	246	4.1
	66"	26'- 7"	9'- 3 1/2"	18'- 6"	26'- 2"	821	10.9	10'- 1 1/4"	274	4.6
	72"	28'- 9 1/4"	9'-11 3/4"	20'- 0"	28'- 3 1/2"	930	12.5	10'- 9 1/4"	309	5.3
4:1	24"	13'- 0 1/2"	4'- 7"	9'- 8"	13'- 8"	301	3.1	4'- 1 3/4"	75	1.1
	27"	14'- 4 1/2"	4'-11"	10'- 8"	15'- 1"	339	3.7	4'- 6 1/4"	87	1.3
	30"	15'- 8 1/2"	5'- 3"	11'- 8"	16'-6"	394	4.2	5'- 0"	99	1.5
	33"	17'- 0 3/4"	5'- 7"	12'- 8"	17'-11"	432	4.9	5'- 4 3/4"	112	1.7
	36"	18'- 4 3/4"	5'-11 1/4"	13'- 8"	19'- 4"	479	5.5	5'-10 1/2"	128	2.0
	42"	21'- 0 3/4"	6'- 7 1/4"	15'- 8"	22'- 1 3/4"	587	7.0	6'- 8 3/4"	158	2.6
	48"	24'- 8 3/4"	7'- 3 1/4"	18'- 8"	26'- 4 3/4"	738	9.4	7'- 7 1/4"	211	3.4
	54"	27'- 5"	7'-11 1/2"	20'- 8"	29'- 2 3/4"	871	11.3	8'- 8"	257	4.3
	60"	30'- 1"	8'- 7 1/2"	22'- 8"	32'- 0 3/4"	999	13.3	9'- 6 1/4"	297	5.1
	66"	32'- 9"	9'- 3 1/2"	24'- 8"	34'-10 1/2"	1139	15.6	10'- 1 1/4"	340	5.8
	72"	35'- 5 1/4"	9'-11 3/4"	26'- 8"	37'- 8 1/2"	1290	18.0	10'- 9 1/4"	378	6.6
6:1	24"	17'-10 1/2"	4'- 7"	14'- 6"	20'- 6"	450	5.1	4'- 1 3/4"	91	1.5
	27"	19'- 8 1/2"	4'-11"	16'- 0"	22'- 7 1/2"	519	6.0	4'- 6 1/4"	108	1.7
	30"	21'- 6 1/2"	5'- 3"	17'- 6"	24'- 9"	595	7.1	5'- 0"	124	2.0
	33"	23'- 4 3/4"	5'- 7"	19'- 0"	26'-10 1/2"	674	8.2	5'- 4 3/4"	143	2.4
	36"	25'- 2 3/4"	5'-11 1/4"	20'- 6"	29'- 0"	737	9.3	5'-10 1/2"	162	2.8
	42"	28'-10 3/4"	6'- 7 1/4"	23'- 6"	33'- 2 3/4"	920	11.9	6'- 8 3/4"	202	3.6
	48"	34'- 0 3/4"	7'- 3 1/4"	28'- 0"	39'- 7 1/4"	1189	16.2	7'- 7 1/4"	274	4.7

(1) Quantities shown are for concrete pipe and will increase slightly for Metal Pipe installation.

(2) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

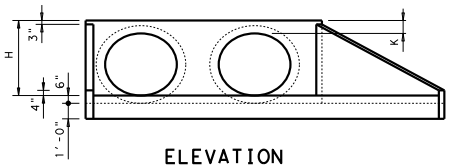
(3) Provide a 1'-0" footing as shown where required to maintain 4" minimum cover for pipes.

(4) Quantities shown are for one structure end. (One headwall)

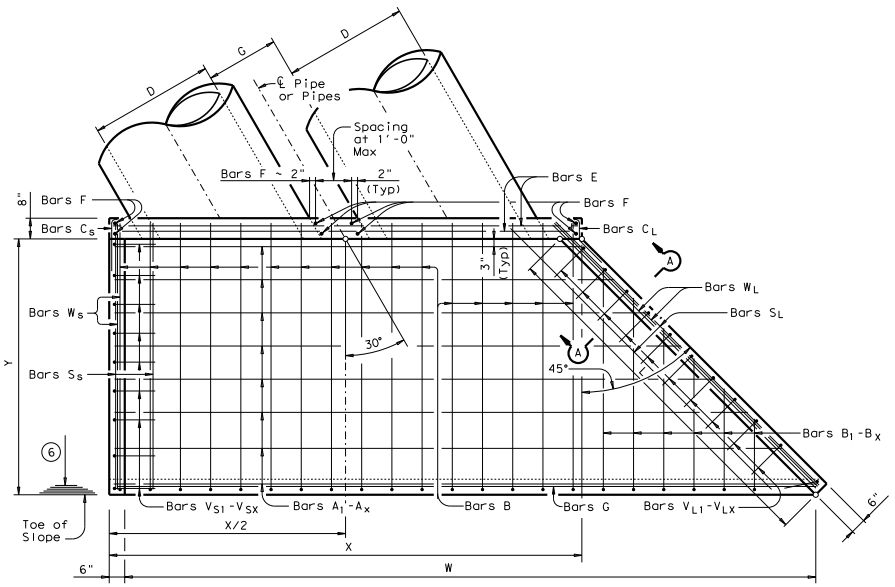
(5) Min Length = 6" + 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$

Max Length = 12 x H - 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$ - 1"

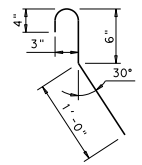
(6) Lengths of wings based on SL:1 Slope along this line.



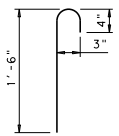
ELEVATION



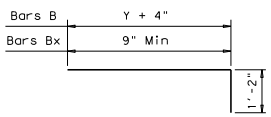
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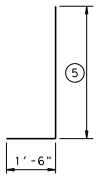
BARS C_L
(2'-0" long)



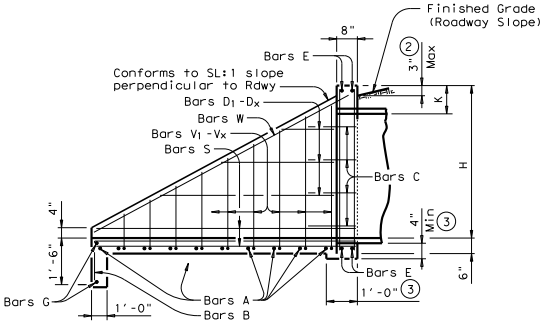
BARS C_S
(2'-0" long)



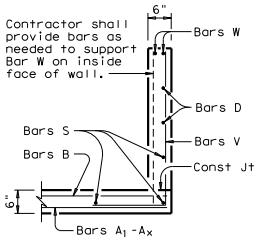
BARS B & B_1-B_X



BARS V_S & V_L



TYPICAL WING ELEVATION



SECTION A-A

TABLE OF (4) REINFORCING STEEL

Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
CL	# 4	1'-0"	~
CS	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	~
G	# 3	~	2
SL	# 4	~	3
SS	# 4	~	3
V	# 4	1'-0"	~
WL	# 5	~	2
WS	# 5	~	2

TABLE OF CONSTANT DIMENSIONS

DIA OF PIPE, D	G	K	H
24"	1'- 7"	1'- 0"	3'- 0"
27"	1'- 8"	1'- 0"	3'- 3"
30"	1'-10"	1'- 0"	3'- 6"
33"	1'-11"	1'- 0"	3'- 9"
36"	2'- 1"	1'- 0"	4'- 0"
42"	2'- 4"	1'- 0"	4'- 6"
48"	2'- 7"	1'- 3"	5'- 3"
54"	3'- 0"	1'- 3"	5'- 9"
60"	3'- 3"	1'- 3"	6'- 3"
66"	3'- 3"	1'- 3"	6'- 9"
72"	3'- 4"	1'- 3"	7'- 3"

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

The Safety End Treatment shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the pipe runners.

The Safety Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

All bolts, nuts, washers, brackets, angles and pipe runners are considered parts of the Safety End Treatment for payment.

Pipe Runners shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307. Steel plates shall conform to ASTM A36. All steel components, except reinforcing, shall be galvanized. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

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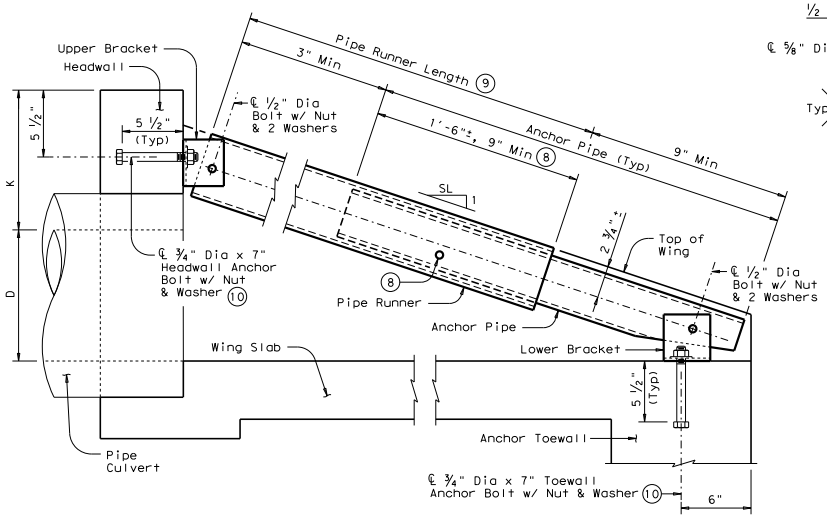
SAFETY END TREATMENT WITH FLARED WINGS

FOR 30° SKEW PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-30

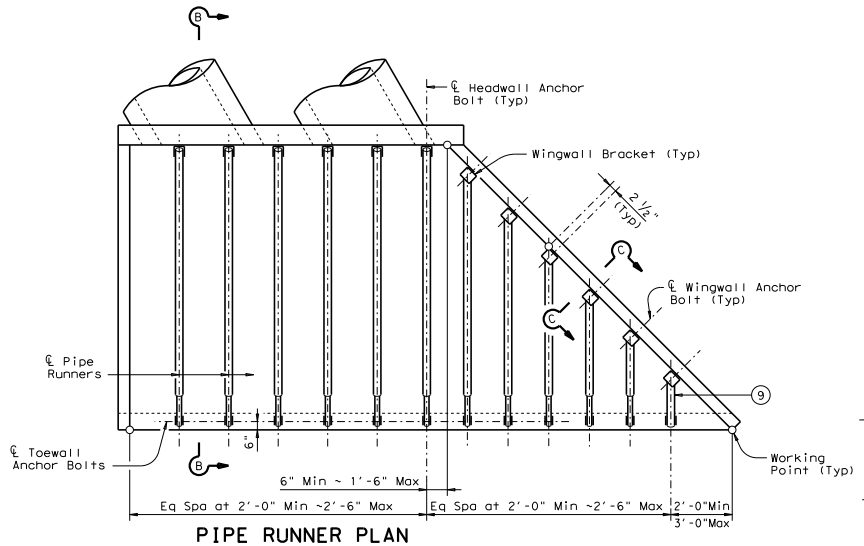
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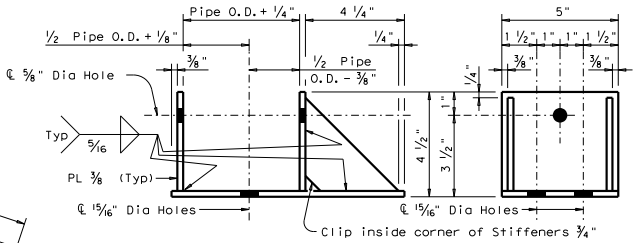


SECTION B-B

(Showing Headwall Pipe Runner. Except for upper bracket, Wingwall Pipe Runners are similar.)

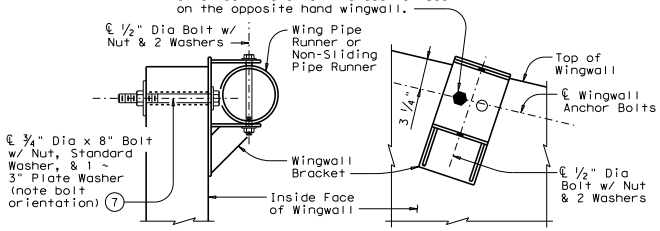


PIPE RUNNER PLAN



ELEVATION SIDE VIEW

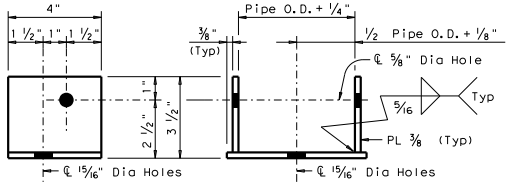
¾" Anchor Bolt shall be installed in hole nearest to the headwall. Other bolt hole is intended for use on the opposite hand wingwall.



SECTION C-C (Showing installed bracket.) ELEVATION (Showing installed bracket normal to Wall. Pipe not shown for clarity.)

NOTE: Wingwall Bracket shall match the Upper Bracket size.

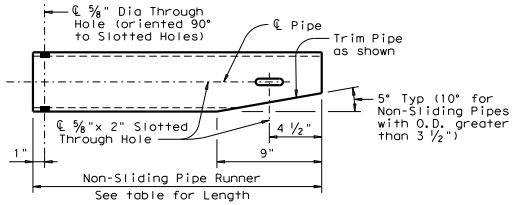
WINGWALL BRACKET DETAILS



SIDE VIEW ELEVATION

NOTE: Upper and Lower Brackets shall, except for the Brackets used with Non-Sliding Pipe Runners, match the required pipe diameters as shown in the table.

UPPER & LOWER BRACKET DETAILS



Note: Pipe size shall be same as required for headwall pipe runner. Adjust the corresponding Lower Bracket accordingly.

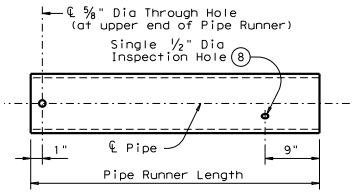
NON-SLIDING PIPE RUNNER DETAILS (9)

(7) At Contractor's option, ⅞" diameter hole may be formed or cored drilled. Percussion drilling is not permitted. Adjust placement of reinforcing steel as necessary to avoid bolt holes.

(8) After installation of the Pipe Runner, the ½" inspection hole shall be utilized to ensure that the lap of the Anchor Pipe with the Pipe Runner is adequate.

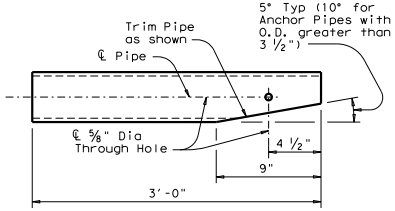
(9) Non-Sliding Pipe Runners are used for those installations that would require Pipe Runner lengths of 1'-9" or less. The Non-Sliding Pipe Runner, when required, replaces the outermost Pipe Runner and Anchor Pipe. See table on Sheet 3 of 3 to determine if the Non-Sliding Pipe Runner is required.

(10) At Contractor's option, an epoxy anchorage system may be used. Anchorage system chosen must be able to achieve an ultimate tensile resistance of 20 kips. Anchor diameter shall be ¾". The Contractor must provide evidence to the Engineer that this can be achieved. Evidence of adequate tensile resistance can be based on the manufacturer's published values of ultimate tensile strength (anchor spacing and edge distance must be accounted for). Anchor installation, including hole size, drilling, and clean-out, must be in accordance with the manufacturer's recommendations.



Note: Pipe diameter required for Headwall pipe runner shall also be used for wingwall pipe runner.

PIPE RUNNER DETAILS



ANCHOR PIPE DETAILS

SHEET 2 OF 3

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH FLARED WINGS

FOR 30° SKEW PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-30

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Pipe Culvert Dia (In)	Number of Pipe Culverts	No. of L2 Spaces	L2 Overall Dimension (Ft-In)	Number of Headwall Pipes
24"	1	1	2'- 4 ½"	1
	2	3	6'- 6 ¼"	3
	3	5	10'- 8"	5
	4	6	14'- 9 ¾"	6
	5	8	18'-11 ½"	8
	6	10	23'- 1 ¼"	10
27"	1	1	2'- 5 ½"	1
	2	3	6'-11 ¾"	3
	3	5	11'- 6"	5
	4	7	16'- 0 ¼"	7
	5	9	20'- 6 ½"	9
	6	10	25'- 0 ¾"	10
30"	1	1	2'- 6 ½"	1
	2	3	7'- 6 ½"	3
	3	5	12'- 6 ½"	5
	4	7	17'- 6 ½"	7
	5	9	22'- 6 ½"	9
	6	11	27'- 6 ½"	11
33"	1	2	3'-10 ½"	2
	2	4	9'- 3 ¼"	4
	3	6	14'- 8"	6
	4	9	20'- 0 ¾"	9
	5	11	25'- 5 ½"	11
	6	13	30'-10 ¼"	13
36"	1	2	3'-11 ¾"	2
	2	4	9'-10 ¼"	4
	3	7	15'- 8 ¾"	7
	4	9	21'- 7 ¼"	9
	5	11	27'- 5 ¾"	11
	6	14	33'- 4 ¼"	14
42"	1	2	4'-10 ¾"	2
	2	5	11'- 7 ½"	5
	3	8	18'- 4 ¼"	8
	4	11	25'- 1"	11
	5	13	31'- 9 ¾"	13
	6	16	38'- 6 ½"	16
48"	1	2	4'- 9 ¾"	2
	2	5	12'- 5"	5
	3	8	20'- 0 ¼"	8
	4	12	27'- 7 ½"	12
	5	15	35'- 2 ¾"	15
	6	18	42'-10"	18
54"	1	3	6'- 3"	3
	2	6	14'-11"	6
	3	10	23'- 7"	10
	4	13	32'- 3"	13
	5	17	40'-11"	17
	6	20	49'- 7"	20
60"	1	3	6'-11"	3
	2	7	16'- 5 ¼"	7
	3	11	25'-11 ½"	11
	4	15	35'- 5 ¾"	15
	5	19	45'- 0"	19
	6	22	54'- 6 ¼"	22
66"	1	3	7'- 4"	3
	2	7	17'- 5 ¼"	7
	3	11	27'- 6 ½"	11
	4	16	37'- 7 ¾"	16
	5	20	47'- 9"	20
	6	24	57'-10 ¼"	24
72"	1	3	7'- 3 ¼"	3
	2	8	18'- 0 ½"	8
	3	12	28'- 9 ¾"	12
	4	16	39'- 7"	16
	5	21	50'- 4 ¼"	21
	6	25	61'- 1 ½"	25

Side Slope	Pipe Culvert Dia (In)	L1 (Ft-In)	P1 (Ft-In)	Number of Spaces in L3	L3 Overall Dimension (Ft-In)	P2 (Ft-In)	Number of Spaces in L4	L4 Overall Dimension (Ft-In)	Headwall Pipe Runner Length (Ft-In)	No. of Wing Pipes (12)	Longest Wingwall Pipe Runner Length (Ft-In)	Shortest Wingwall Pipe Runner Length (Ft-In)	Non-Sliding Pipe Length (Ft-In)	Pipe Runner Size (13)	Total Length of Wingwall Pipe Runners (Ft-In) (12)
3:1	24"	1'- 0"	2'- 0"	3	6'- 3"	2'- 7 ½"	2	5'-10 ¾"	5'-11 ½"	3	4'- 5 ¼"	2'- 3"	1'- 6 ½"	3" STD	8'- 2 ¾"
	27"	1'- 3"	2'- 0"	3	7'- 3"	2'- 7 ½"	2	6'-10"	6'- 9"	3	5'- 1 ¾"	2'- 7"	1'- 6 ½"	3" STD	9'- 3 ¼"
	30"	1'- 6"	3'- 0"	3	7'- 3"	4'- 0 ½"	2	6'-10"	7'- 6 ½"	3	6'- 2 ¼"	3'- 7 ¾"	2'- 7 ¼"	3" STD	12'- 5 ¼"
	33"	6"	2'- 6"	3	7'- 6"	3'- 4"	2	7'- 0 ¾"	8'- 4"	3	5'-10"	3'- 2 ½"	2'- 0 ¾"	3" STD	11'- 1 ¼"
	36"	9"	2'- 0"	4	9'- 0"	2'- 7 ½"	3	9'- 6 ½"	9'- 1 ½"	4	7'- 2"	2'- 5"	1'- 6 ½"	4" STD	15'-11"
	42"	6"	2'- 3"	4	10'- 0"	2'-11 ¾"	3	10'- 7 ¼"	10'- 8 ¼"	4	8'- 2 ½"	2'-11 ¼"	1'- 9 ¾"	4" STD	18'- 6 ½"
	48"	1'- 3"	2'- 9"	5	12'- 6"	3'- 8 ¼"	4	14'- 1 ¾"	13'- 0 ¾"	5	11'- 4 ½"	3'- 5 ¾"	2'- 4"	4" STD	32'- 0 ½"
	54"	6"	2'- 0"	6	14'- 0"	2'- 7 ½"	5	16'- 6"	14'- 7 ¾"	6	12'- 4"	2'- 6"	1'- 6 ½"	4" STD	38'- 7 ½"
	60"	6"	2'- 6"	6	15'- 0"	3'- 4"	5	17'- 8"	16'- 2 ¾"	6	13'- 9"	3'- 2 ½"	2'- 0 ¾"	4" STD	44'- 5 ½"
	66"	9"	2'- 0"	7	17'- 3"	2'- 7 ½"	6	20'-11"	17'- 9 ¾"	7	15'- 7 ½"	2'- 7 ¾"	1'- 6 ½"	4" STD	56'- 4 ¼"
	72"	1'- 6"	2'- 0"	8	19'- 6"	2'- 7 ½"	7	24'- 1 ½"	19'- 4 ¾"	8	18'- 0 ¼"	2'- 7 ¼"	1'- 6 ½"	5" STD	73'- 8 ¾"
4:1	24"	1'- 0"	2'- 0"	4	8'- 8"	2'- 7 ½"	3	9'- 2 ¼"	8'- 3 ¼"	4	6'- 8 ½"	2'- 2 ¾"	1'- 6"	3" STD	14'-11"
	27"	1'- 3"	2'- 0"	4	9'-11"	2'- 7 ½"	3	10'- 6 ¼"	9'- 3 ¾"	4	7'- 8"	2'- 6 ¾"	1'- 6"	4" STD	16'-10 ¼"
	30"	1'- 6"	2'- 0"	5	11'- 2"	2'- 7 ½"	4	12'- 7 ½"	10'- 4"	5	9'- 2 ½"	2'- 3 ½"	1'- 6"	4" STD	24'- 6"
	33"	6"	2'- 0"	5	11'- 2"	2'- 7 ½"	4	12'- 7 ½"	11'- 4 ½"	5	9'- 2 ½"	2'- 3 ½"	1'- 6"	4" STD	24'- 6"
	36"	9"	2'- 0"	5	12'- 5"	2'- 7 ½"	4	14'- 0 ½"	12'- 4 ¾"	5	10'- 3"	2'- 6 ¾"	1'- 6"	4" STD	27'- 1 ½"
	42"	6"	2'- 0"	6	14'- 2"	2'- 7 ½"	5	16'- 8 ¼"	14'- 5 ½"	6	12'- 2"	2'- 5 ¼"	1'- 6"	4" STD	38'- 0 ¼"
	48"	1'- 3"	2'- 6"	7	17'- 5"	3'- 4"	6	21'- 1 ¼"	17'- 6 ¾"	7	15'-10 ¾"	3'- 1"	2'- 0 ¼"	4" STD	58'-11 ½"
	54"	6"	2'- 0"	8	19'- 2"	2'- 7 ½"	7	23'- 8 ½"	19'- 7 ½"	8	17'- 3 ½"	2'- 5 ¾"	1'- 6"	5" STD	70'- 8 ½"
	60"	6"	2'- 0"	9	21'- 2"	2'- 7 ½"	8	26'- 7 ¼"	21'- 8 ¼"	9	19'- 4 ¾"	2'- 5"	1'- 6"	5" STD	88'- 9"
	66"	9"	3'- 0"	9	22'- 5"	4'- 0 ½"	8	28'- 2"	23'- 9"	9	21'- 7"	3'- 7 ¼"	2'- 6 ¼"	5" STD	103'- 3 ¼"
	72"	1'- 6"	2'- 0"	11	26'- 2"	2'- 7 ½"	10	33'- 7 ¾"	25'- 9 ¾"	11	24'- 6 ¼"	2'- 5 ½"	1'- 6"	5" STD	136'- 4 ¾"
6:1	24"	1'- 0"	3'- 0"	5	12'- 6"	4'- 0 ½"	4	14'- 1 ¾"	13'- 0 ¼"	5	11'- 1 ½"	3'- 6 ¼"	2'- 5 ¾"	4" STD	31'- 9 ¼"
	27"	1'- 3"	2'- 3"	6	15'- 0"	2'-11 ¾"	5	17'- 8"	14'- 6½"	6	12'-10 ¾"	2'- 9"	1'- 8 ½"	4" STD	40'-10"
	30"	1'- 6"	2'- 0"	7	17'- 0"	2'- 7 ½"	6	20'- 7 ¼"	16'- 0 ¾"	7	14'- 9"	2'- 5 ½"	1'- 5 ½"	4" STD	53'- 0 ¼"
	33"	6"	2'- 0"	7	17'- 6"	2'- 7 ½"	6	21'- 2 ½"	17'- 7"	7	15'- 2"	2'- 6"	1'- 5 ½"	4" STD	54'- 5 ½"
	36"	9"	2'- 0"	8	19'- 3"	2'- 7 ½"	7	23'- 9 ¾"	19'- 1 ¼"	8	17'- 0 ½"	2'- 4 ¾"	1'- 5 ½"	5" STD	69'- 6"
	42"	6"	2'- 0"	9	22'- 0"	2'- 7 ½"	8	27'- 7 ¾"	22'- 1 ¾"	9	19'- 9 ½"	2'- 5 ¼"	1'- 5 ½"	5" STD	90'- 4 ½"
	48"	1'- 3"	2'- 0"	11	27'- 3"	2'- 7 ½"	10	35'- 0 ¼"	26'- 8 ½"	11	25'- 1"	2'- 5 ¾"	1'- 5 ½"	5" STD	139'- 3 ¼"

(11) If the outermost Wing Pipe Runner is a Non-Sliding Pipe Runner, the next outermost Wing Pipe Runner shall be considered the Shortest.

(12) Quantities shown include, if present, the Non-Sliding Pipes.

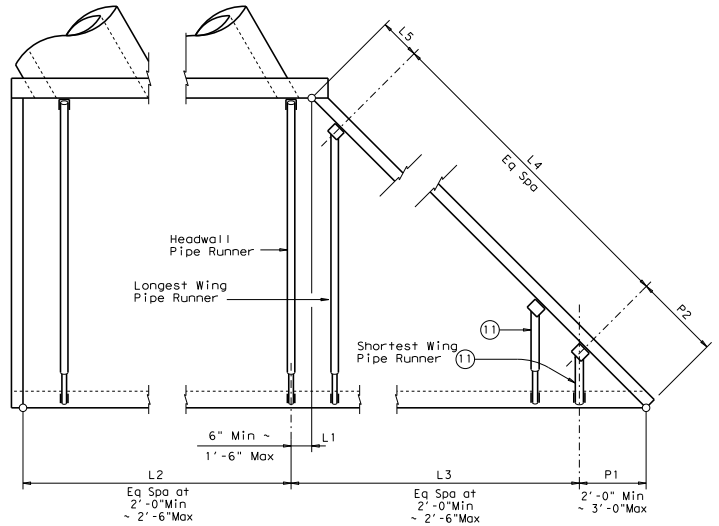
(13) Anchor Pipe size shall be the next smaller size than the Pipe Runner size.

SPECIAL NOTE:

Note that the tabular quantities are given for estimating purposes only. It is likely that these quantities will change due to field conditions. Therefore, all dimensions shall be verified by the Contractor in the field prior to fabrication of the Safety End Treatment components.

STANDARD PIPE RUNNER AND ANCHOR PIPE SIZES (13)

Pipe Size	Pipe O.D.	Pipe I.D.
2" STD	2.375"	2.067"
3" STD	3.500"	3.068"
4" STD	4.500"	4.026"
5" STD	5.563"	5.047"



PIPE RUNNER LAYOUT

Note: Left forward culvert skew shown, actual culvert skew may be opposite hand.

TOTAL PIPE LENGTHS FORMULAS:

$$\text{Total Length of All Pipe Runners} = \text{Total Length of Wingwall Pipe Runners} + \left(\text{No. of Headwall Pipe Runners}\right)\left(\text{Headwall Pipe Runner Length}\right)$$

$$\text{Total Length of All Anchor Pipes} = \left(3.000'\right)\left(\text{No. of Wing Pipe Runners} + \text{No. of Headwall Pipe Runners} - \text{No. of Non-Sliding Pipe Runners}\right)$$

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH FLARED WINGS

FOR 30° SKEW PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-30

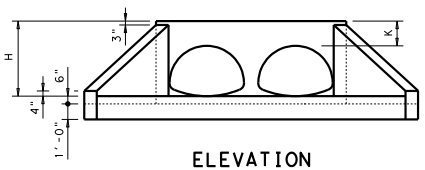
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TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

SLOPE	DESIGN	SIZE OF PIPE ARCH Span	SIZE OF PIPE ARCH Rise	Values for one Pipe W	X	Y	L	Reinf (Lbs)	Conc (CY) (1)	Values to be added for each addt'l Pipe X and W	Reinf (Lbs)	Conc (CY) (1)
3:1	4	35"	24"	11'- 5 ½"	4'- 2 ¾"	7'- 3"	8'- 4 ½"	237	2.1	4'- 7"	83	1.0
	5	42"	29"	13'- 5 ¾"	4'- 9 ¾"	8'- 6"	9'- 9 ¾"	295	2.7	5'- 5"	113	1.3
	6	49"	33"	15'- 2 ¾"	5'- 4 ¾"	9'- 6"	10'-11 ¾"	339	3.3	6'- 3"	130	1.7
	7	57"	38"	17'- 4"	6'- 0 ¾"	10'- 9"	12'- 5"	394	4.2	7'- 2"	159	2.1
	8	64"	43"	19'- 4 ¼"	6'- 7 ¾"	12'- 0"	13'-10 ¼"	471	5.1	8'- 2"	199	2.6
	9	71"	47"	21'- 1 ¼"	7'- 2 ¾"	13'- 0"	15'- 0 ¼"	523	5.9	9'- 1"	226	3.1
4:1	4	35"	24"	14'- 3"	4'- 2 ¾"	9'- 8"	11'- 2"	311	2.9	4'- 7"	94	1.2
	5	42"	29"	16'- 9"	4'- 9 ¾"	11'- 4"	13'- 1"	375	3.9	5'- 5"	125	1.6
	6	49"	33"	18'-10 ½"	5'- 4 ¾"	12'- 8"	14'- 7 ½"	449	4.7	6'- 3"	152	2.0
	7	57"	38"	21'- 5 ½"	6'- 0 ¾"	14'- 4"	16'- 6 ¾"	526	5.9	7'- 2"	180	2.6
	8	64"	43"	23'-11 ¾"	6'- 7 ¾"	16'- 0"	18'- 5 ¾"	625	7.2	8'- 2"	229	3.2
	9	71"	47"	26'- 1 ¼"	7'- 2 ¾"	17'- 4"	20'- 0 ¼"	698	8.4	9'- 1"	261	3.9
6:1	4	35"	24"	19'-10"	4'- 2 ¾"	14'- 6"	16'- 9"	464	5.0	4'- 7"	112	1.6
	5	42"	29"	23'- 3 ½"	4'- 9 ¾"	17'- 0"	19'- 7 ½"	581	6.6	5'- 5"	154	2.2
	6	49"	33"	26'- 2 ¼"	5'- 4 ¾"	19'- 0"	21'-11 ¼"	705	8.2	6'- 3"	187	2.8
	7	57"	38"	29'- 9"	6'- 0 ¾"	21'- 6"	24'-10"	846	10.3	7'- 2"	233	3.5
	8	64"	43"	33'- 2 ½"	6'- 7 ¾"	24'- 0"	27'- 8 ½"	990	12.6	8'- 2"	289	4.4
	9	71"	47"	36'- 1 ¼"	7'- 2 ¾"	26'- 0"	30'- 0 ¼"	1119	14.7	9'- 1"	336	5.3



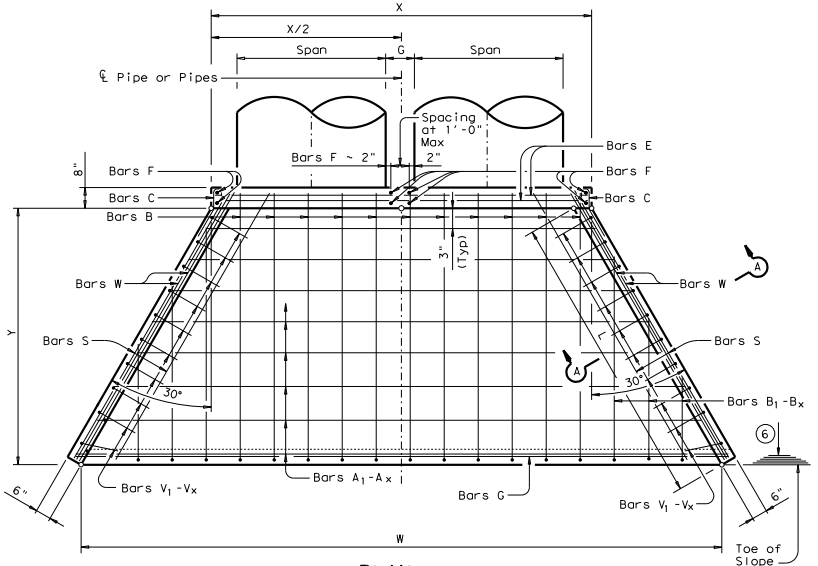
ELEVATION
Showing dimensions

TABLE OF (4) REINFORCING STEEL

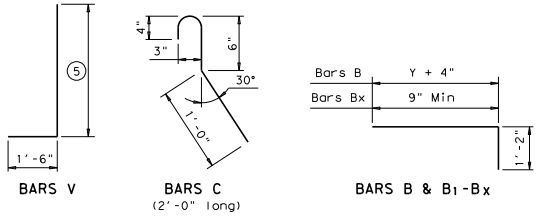
Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
C	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	~
G	# 3	~	2
S	# 4	~	6
V	# 4	1'-0"	~
W	# 5	~	4

TABLE OF DIMENSIONS NOT VARIED WITH SLOPE

DESIGN	SIZE OF PIPE ARCH Span	SIZE OF PIPE ARCH Rise	G	K	H
4	35"	24"	1'- 8"	1'- 0"	3'- 0"
5	42"	29"	1'-11"	1'- 0"	3'- 5"
6	49"	33"	2'- 2"	1'- 0"	3'- 9"
7	57"	38"	2'- 5"	1'- 0"	4'- 2"
8	64"	43"	2'-10"	1'- 0"	4'- 7"
9	71"	47"	3'- 2"	1'- 0"	4'-11"



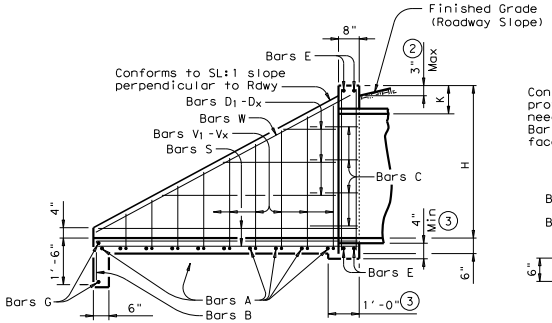
PLAN



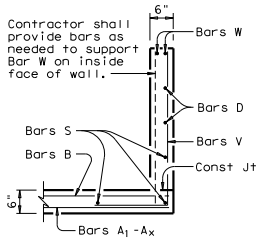
BARS V

BARS C
(2'-0" long)

BARS B & B1 -Bx



TYPICAL WING ELEVATION



SECTION A-B

(1) Quantities shown are for metal pipe and will decrease slightly for concrete pipe installations.

(2) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(3) Provide a 1'-0" footing as shown where required to maintain 4" Min cover for pipes.

(4) Quantities shown are for one structure end only (one headwall).

(5) Min Length = $6" + 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right)$

Max Length = $12 \times H - 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right) - 1"$

(6) Lengths of wings based on SL:1 Slope along this line.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

The Safety End Treatment shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the pipe runners.

The Safety Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

All bolts, nuts, washers, brackets, angles and pipe runners are considered parts of the Safety End Treatment for payment.

Pipe Runners shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307. Steel plates shall conform to ASTM A36. All steel components, except reinforcing, shall be galvanized. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

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Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH FLARED WINGS

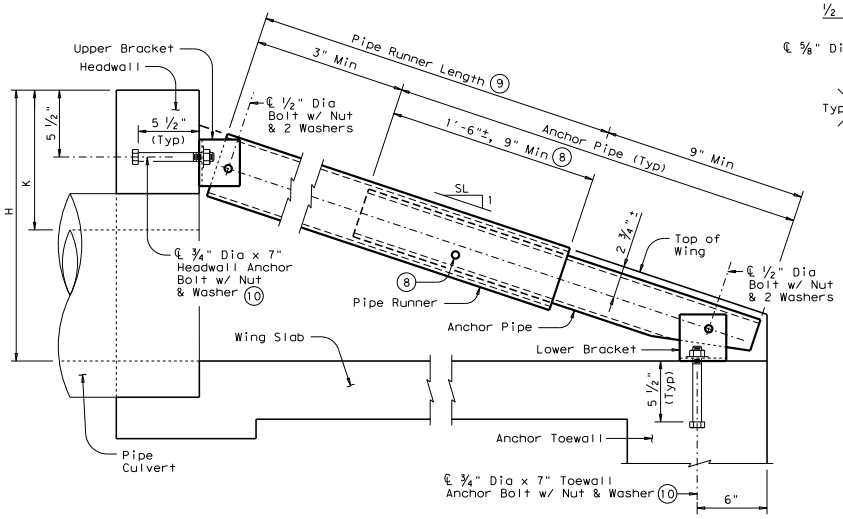
FOR 0° SKEW ARCH PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-A-0

FILE:	stpa00se.dgn	DN: GAF	CK: CAT	DW: BWH	CK: GAF
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REVISIONS					
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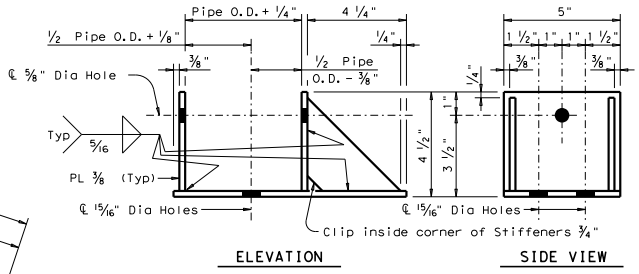
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DATE:
FILE:

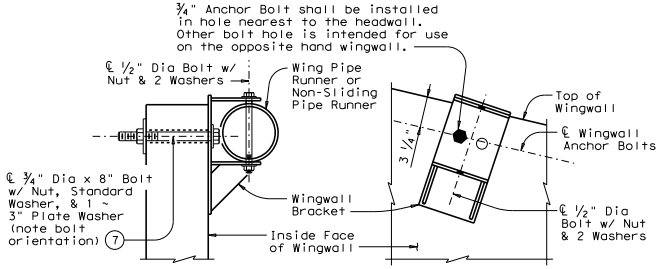


SECTION B-B

(Showing Headwall Pipe Runner. Except for upper bracket, Wingwall Pipe Runners are similar.)



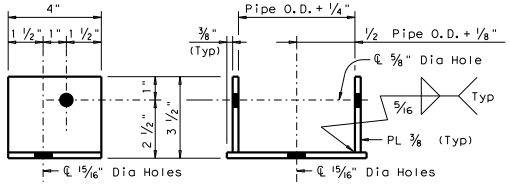
ELEVATION SIDE VIEW



SECTION C-C (Showing installed bracket.) ELEVATION (Showing installed bracket normal to Wall. Pipe not shown for clarity.)

NOTE: Wingwall Bracket shall match the Upper Bracket size.

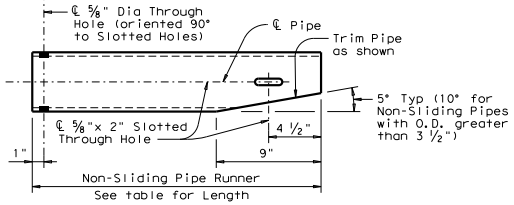
WINGWALL BRACKET DETAILS



SIDE VIEW ELEVATION

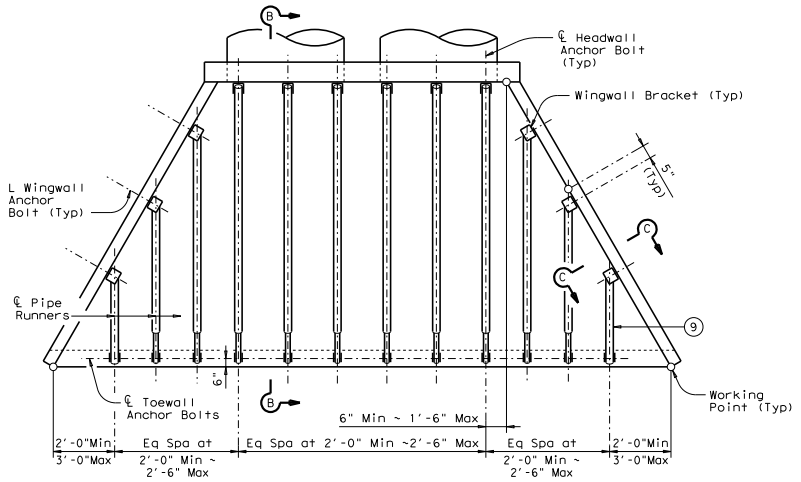
NOTE: Upper and Lower Brackets shall, except for the Brackets used with Non-Sliding Pipe Runners, match the required pipe diameters as shown in the table.

UPPER & LOWER BRACKET DETAILS



Note: Pipe size shall be same as required for headwall pipe runner. Adjust the corresponding Lower Bracket accordingly.

NON-SLIDING PIPE RUNNER DETAILS (9)



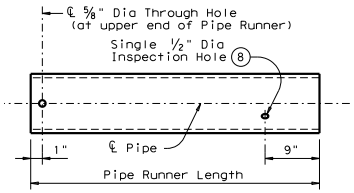
PIPE RUNNER PLAN

(7) At Contractor's option, ⅞" diameter hole may be formed or cored drilled. Percussion drilling is not permitted. Adjust placement of reinforcing steel as necessary to avoid bolt holes.

(8) After installation of the Pipe Runner, the ½" inspection hole shall be utilized to ensure that the lap of the Anchor Pipe with the Pipe Runner is adequate.

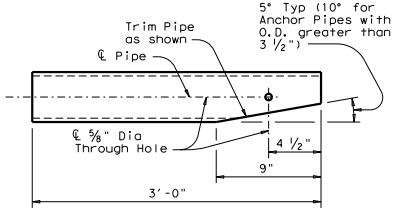
(9) Non-Sliding Pipe Runners are used for those installations that would require Pipe Runner lengths of 1'-9" or less. The Non-Sliding Pipe Runner, when required, replaces the outermost Pipe Runner and Anchor Pipe. See table on Sheet 3 of 3 to determine if the Non-Sliding Pipe Runner is required.

(10) At Contractor's option, an epoxy anchorage system may be used. Anchorage system chosen must be able to achieve an ultimate tensile resistance of 20 kips. Anchor diameter shall be ¾". The Contractor must provide evidence to the Engineer that this can be achieved. Evidence of adequate tensile resistance can be based on the manufacturer's published values of ultimate tensile strength (anchor spacing and edge distance must be accounted for). Anchor installation, including hole size, drilling, and clean-out, must be in accordance with the manufacturer's recommendations.



Note: Pipe diameter required for Headwall pipe runner shall also be used for wingwall pipe runner.

PIPE RUNNER DETAILS



ANCHOR PIPE DETAILS

SHEET 2 OF 3

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH FLARED WINGS

FOR 0° SKEW ARCH PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-A-0

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Side Slope	Arch Pipe Culvert Design	L1 (Ft-In)	P1 (Ft-In)	Number of Spaces in L3	L3 Overall Dimension (Ft-In)	P2 (Ft-In)	Number of Spaces in L4	L4 Overall Dimension (Ft-In)	Headwall Pipe Runner Length (Ft-In)	No. of Wing Pipes (12)	Longest Wingwall Pipe Runner Length (Ft-In)	Shortest Wingwall Pipe Runner Length (Ft-In)	Non-Sliding Pipe Length (Ft-In)	Pipe Runner Size (13)	Total Length of Wingwall Pipe Runners (Ft-In) (12)
3:1	4	6"	2'- 3"	1	2'- 5 1/4"	4'- 1"	0	N/A	5'-11 1/2"	2	2'- 0 1/2"	2'- 0 1/2"	N/A	3" STD	4'- 1"
	5	7"	3'- 0"	1	2'- 6"	5'- 7"	0	N/A	7'- 3 1/4"	2	3'- 5"	3'- 5"	N/A	3" STD	6'-10"
	6	1'- 0"	2'- 0"	2	4'- 5 3/4"	3'- 7"	1	4'- 5 3/4"	8'- 4"	4	5'- 8 1/4"	5'- 8 1/4"	3'- 1"	4" STD	17'- 6 1/2"
	7	1'- 3"	2'- 6"	2	4'-11 1/2"	4'- 7"	1	4'-11 1/2"	9'- 7 3/4"	4	7'- 0 1/4"	2'- 6"	N/A	4" STD	19'- 0 1/2"
	8	6"	2'- 6"	2	4'-11 1/4"	4'- 7"	1	4'-11 1/4"	10'-11 1/2"	4	7'- 0"	2'- 6"	N/A	4" STD	19'- 0"
	9	9"	2'- 0"	3	6'- 3"	3'- 7"	2	8'- 4"	12'- 0 1/4"	6	9'- 2 1/2"	5'- 4 3/4"	3'- 1"	4" STD	35'- 4 1/2"
4:1	4	6"	2'- 0"	2	4'- 1"	3'- 7"	1	4'- 1"	8'- 3 1/4"	4	5'- 1 3/4"	5'- 1 3/4"	3'- 0"	4" STD	16'- 3 1/2"
	5	7"	2'- 2"	2	4'-11 1/2"	3'-11"	1	4'-11 1/2"	10'- 0"	4	6'- 2 3/4"	1'- 9 3/4"	N/A	4" STD	16'- 1"
	6	1'- 0"	2'- 0"	3	6'- 3 3/4"	3'- 7"	2	8'- 5"	11'- 4 1/2"	6	9'- 0 1/4"	5'- 3 1/4"	3'- 0"	4" STD	34'- 7"
	7	1'- 3"	2'- 0"	3	7'- 6 1/4"	3'- 7"	2	10'- 0 1/2"	13'- 1"	6	10'- 5 1/2"	5'-11 3/4"	3'- 0"	4" STD	38'-10 1/2"
	8	6"	2'- 3"	3	7'- 5 3/4"	4'- 1"	2	9'-11 3/4"	14'- 9 3/4"	6	10'-10 1/4"	1'-11 1/2"	N/A	5" STD	38'- 5 1/4"
	9	9"	2'- 0"	4	8'- 9"	3'- 7"	3	13'- 1 3/4"	16'- 2 1/4"	8	13'- 2 3/4"	5'- 5"	3'- 0"	5" STD	61'-11 1/4"
6:1	4	6"	2'- 0"	3	6'-10 1/2"	3'- 7"	2	9'- 2"	13'- 0 1/4"	6	9'- 6"	5'- 5 3/4"	2'-11 1/2"	4" STD	35'-10 1/2"
	5	7"	3'- 0"	3	7'- 4 3/4"	5'- 7"	2	9'-10 1/4"	15'- 6 1/2"	6	11'-10 1/2"	3'- 2 1/2"	N/A	5" STD	45'- 3"
	6	1'- 0"	2'- 0"	4	9'-11 3/4"	3'- 7"	3	14'-11 1/2"	17'- 7"	8	14'- 7"	5'-10"	2'-11 1/2"	5" STD	67'- 2"
	7	1'- 3"	2'- 0"	5	11'- 8"	3'- 7"	4	18'- 8"	20'- 1 1/4"	10	17'-10"	5'- 6 1/2"	2'-11 1/2"	5" STD	99'- 5"
	8	6"	2'- 0"	5	12'- 4 1/4"	3'- 7"	4	19'- 9 1/4"	22'- 7 3/4"	10	18'- 9 3/4"	5'- 9 1/2"	2'-11 1/2"	5" STD	104'- 4"
	9	9"	2'- 0"	6	13'- 9 1/4"	3'- 7"	5	22'-11 1/4"	24'- 8"	12	21'- 7"	5'- 5 3/4"	2'-11 1/2"	5" STD	141'- 2 3/4"

(11) If the outermost Wing Pipe Runner is a Non-Sliding Pipe Runner, the next outermost Wing Pipe Runner shall be considered the Shortest.

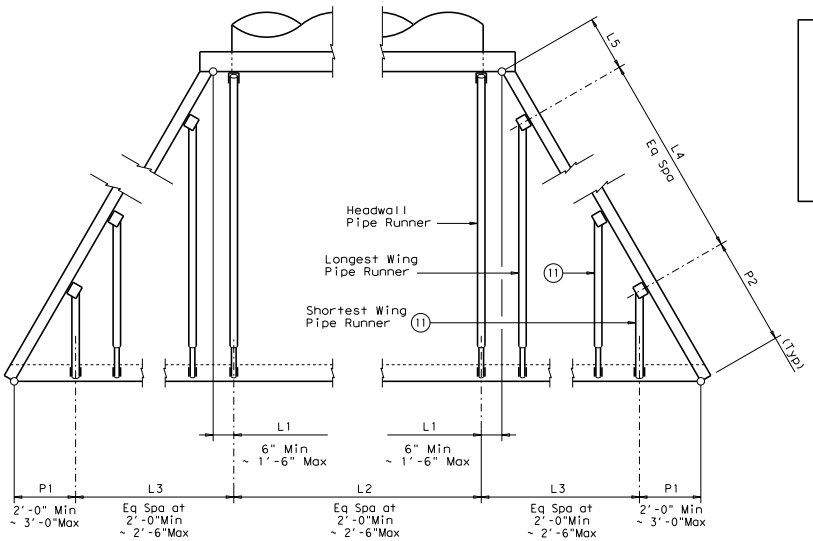
(12) Quantities shown include, if present, the Non-Sliding Pipes.

(13) Anchor Pipe size shall be the next smaller size than the Pipe Runner size.

Arch Pipe Culvert Design	Number of Pipe Culverts	No. of L2 Spaces	L2 Overall Dimension (Ft-In)	Number of Headwall Pipes
4	1	1	2'- 1"	2
	2	3	6'- 8"	4
	3	5	11'- 3"	6
	4	7	15'-10"	8
	5	9	20'- 5"	10
	6	10	25'- 0"	11
5	1	1	2'- 6"	2
	2	4	7'-11"	5
	3	6	13'- 4"	7
	4	8	18'- 9"	9
	5	10	24'- 2"	11
	6	12	29'- 7"	13
6	1	1	2'- 3"	2
	2	4	8'- 6"	5
	3	6	14'- 9"	7
	4	9	21'- 0"	10
	5	11	27'- 3"	12
	6	14	33'- 6"	15
7	1	1	2'- 5"	2
	2	4	9'- 7"	5
	3	7	16'- 9"	8
	4	10	23'-11"	11
	5	13	31'- 1"	14
	6	16	38'- 3"	17
8	1	2	4'- 6"	3
	2	6	12'- 8"	7
	3	9	20'-10"	10
	4	12	29'- 0"	13
	5	15	37'- 2"	16
	6	19	45'- 4"	20
9	1	2	4'- 7"	3
	2	6	13'- 8"	7
	3	10	22'- 9"	11
	4	13	31'-10"	14
	5	17	40'-11"	18
	6	20	50'- 0"	21

STANDARD PIPE RUNNER AND ANCHOR PIPE SIZES (13)

Pipe Size	Pipe O.D.	Pipe I.D.
2" STD	2.375"	2.067"
3" STD	3.500"	3.068"
4" STD	4.500"	4.026"
5" STD	5.563"	5.047"



PIPE RUNNER LAYOUT

TOTAL PIPE LENGTHS FORMULAS:

$$\text{Total Length of All Pipe Runners} = \text{Total Length of Wingwall Pipe Runners} + \left(\text{No. of Headwall Pipe Runners}\right)\left(\text{Headwall Pipe Runner Length}\right)$$

$$\text{Total Length of All Anchor Pipes} = \left(3.000'\right)\left(\text{No. of Wing Pipe Runners} + \text{No. of Headwall Pipe Runners} - \text{No. of Non-Sliding Pipe Runners}\right)$$

SPECIAL NOTE:

Note that the tabular quantities are given for estimating purposes only. It is likely that these quantities will change due to field conditions. Therefore, all dimensions shall be verified by the Contractor in the field prior to fabrication of the Safety End Treatment components.

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SAFETY END TREATMENT WITH FLARED WINGS

FOR 0° SKEW ARCH PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-A-0

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TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (4)

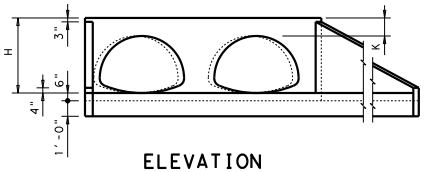
SLOPE DESIGN	SIZE OF PIPE ARCH Span	SIZE OF PIPE ARCH Rise	Values for one Pipe W	X	Y	L	Reinf (Lbs)	Conc (CY) (1)	Values to be added for each addt'l Pipe X and W	Reinf (Lbs)	Conc (CY) (1)
3:1 3	28"	20"	9'- 8 ½"	4'- 8"	6'- 3"	8'-10"	207	1.8	4'-4"	72	0.8
4	35"	24"	11'- 4 ½"	5'- 4"	7'- 3"	10'- 3"	251	2.3	5'- 3 ½"	98	1.1
5	42"	29"	13'- 3 ½"	6'- 0"	8'- 6"	12'- 0 ¼"	309	2.9	6'- 3"	126	1.5
6	49"	33"	14'-11 ¾"	6'- 8 ¼"	9'- 6"	13'- 5 ¼"	355	3.6	7'- 2 ½"	145	1.9
7	57"	38"	16'-12"	7'- 5 ½"	10'- 9"	15'- 2 ½"	423	4.4	8'- 3 ¼"	178	2.4
8	64"	43"	18'-11"	8'- 1 ½"	12'- 0"	16'-11 ¾"	492	5.4	9'- 5 ¼"	221	3.0
9	71"	47"	20'- 7"	8'- 9 ½"	13'- 0"	18'- 4 ¾"	549	6.2	10'- 5 ¾"	255	3.6
4:1 3	28"	20"	11'- 9 ½"	4'- 8"	8'- 4"	11'- 9 ½"	266	2.4	4'- 4"	81	1.0
4	35"	24"	13'- 9 ½"	5'- 4"	9'- 8"	13'- 8"	328	3.1	5'- 3 ½"	112	1.4
5	42"	29"	16'- 1 ½"	6'- 0"	11'- 4"	16'- 0 ¼"	390	4.1	6'- 3"	139	1.8
6	49"	33"	18'- 1 ¾"	6'- 8 ¼"	12'- 8"	17'-11"	469	4.9	7'- 2 ½"	170	2.3
7	57"	38"	20'- 7"	7'- 5 ½"	14'- 4"	20'- 3 ¼"	547	6.2	8'- 3 ¼"	204	3.0
8	64"	43"	22'-11"	8'- 1 ½"	16'- 0"	22'- 7 ½"	650	7.5	9'- 5 ¼"	256	3.7
9	71"	47"	24'-11"	8'- 9 ½"	17'- 4"	24'- 6 ¼"	723	8.7	10'- 5 ¾"	295	4.4
6:1 3	28"	20"	15'-11 ½"	4'- 8"	12'- 6"	17'- 8 ¼"	397	3.9	4'- 4"	100	1.3
4	35"	24"	18'- 7 ½"	5'- 4"	14'- 6"	20'- 6"	480	5.1	5'- 3 ½"	132	1.8
5	42"	29"	21'- 9 ½"	6'- 0"	17'- 0"	24'- 0 ½"	596	6.7	6'- 3"	172	2.5
6	49"	33"	24'- 5 ¾"	6'- 8 ¼"	19'- 0"	26'-10 ½"	717	8.2	7'- 2 ½"	212	3.2
7	57"	38"	27'- 9"	7'- 5 ½"	21'- 6"	30'- 5"	853	10.4	8'- 3 ¼"	264	4.1
8	64"	43"	30'-11"	8'- 1 ½"	24'- 0"	33'-11 ¼"	1009	12.6	9'- 5 ¼"	325	5.1
9	71"	47"	33'- 7"	8'- 9 ½"	26'- 0"	36'- 9 ¼"	1139	14.7	10'- 5 ¾"	382	6.1

TABLE OF (4) REINFORCING STEEL

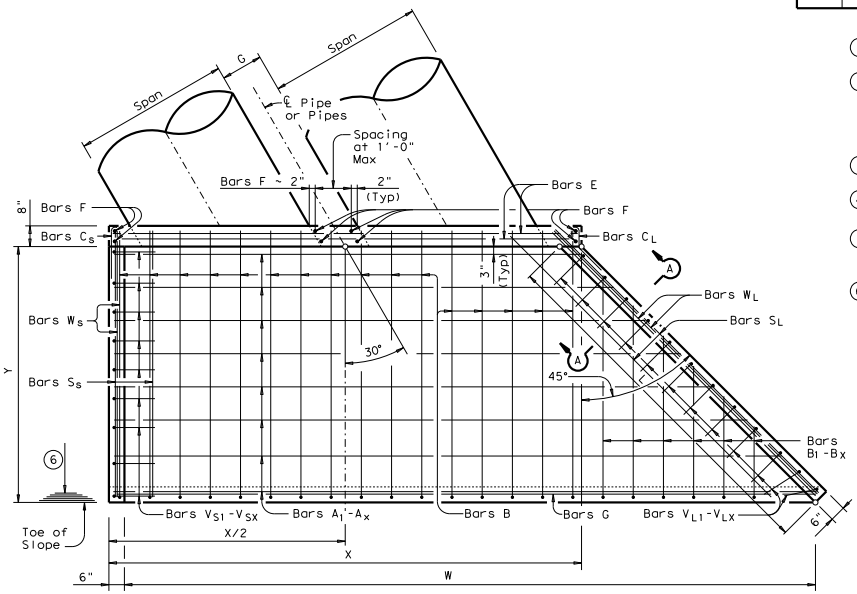
Bar	Size	Spa	No.
A	# 4	1'-0"	~
B	# 3	1'-6"	~
C	# 4	1'-0"	~
D	# 3	1'-0"	~
E	# 5	~	4
F	# 5	~	~
G	# 3	~	2
S	# 4	~	6
V	# 4	1'-0"	~
W	# 5	~	4

TABLE OF DIMENSIONS NOT VARIED WITH SLOPE

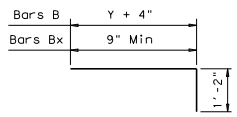
DESIGN	SIZE OF PIPE ARCH Span	SIZE OF PIPE ARCH Rise	G	K	H
3	28"	20"	1'- 5"	1'- 0"	2'- 8"
4	35"	24"	1'- 8"	1'- 0"	3'- 0"
5	42"	29"	1'-11"	1'- 0"	3'- 5"
6	49"	33"	2'- 2"	1'- 0"	3'- 9"
7	57"	38"	2'- 5"	1'- 0"	4'- 2"
8	64"	43"	2'-10"	1'- 0"	4'- 7"
9	71"	47"	3'- 2"	1'- 0"	4'-11"



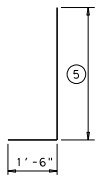
ELEVATION
Showing dimensions



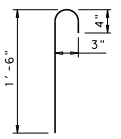
PLAN



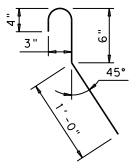
BARS B & B1-Bx



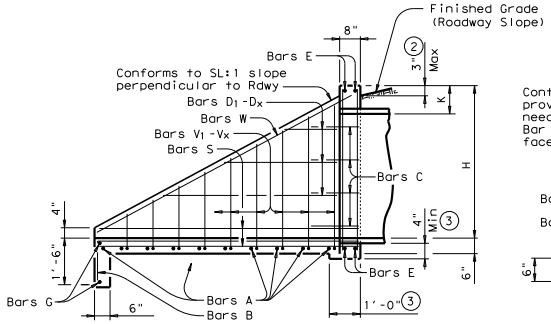
BARS Vs & VL



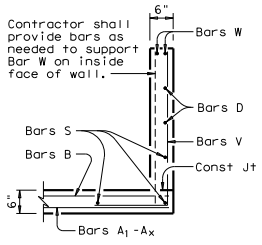
BARS Cs
(2'-0" long)



BARS CL
(2'-0" long)



TYPICAL WING ELEVATION



SECTION A-A

(1) Quantities shown are for metal pipe and will decrease slightly for concrete pipe installations.

(2) For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(3) Provide a 1'-0" footing as shown where required to maintain 4" Min cover for pipes.

(4) Quantities shown are for one structure end only (one headwall).

(5) Min Length = $6" + 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right)$

Max Length = $12 \times H - 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right) - 1"$

(6) Lengths of wings based on SL:1 Slope along this line.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

The Safety End Treatment shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the pipe runners.

The Safety Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.

Reinforcing steel shall be placed with the center of the outside layer of bars 2" from the surface of the concrete.

All reinforcing steel shall be Grade 60.

All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.

All bolts, nuts, washers, brackets, angles and pipe runners are considered parts of the Safety End Treatment for payment.

Pipe Runners shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Bolts and nuts shall conform to ASTM A307. Steel plates shall conform to ASTM A36. All steel components, except reinforcing, shall be galvanized. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

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SHEET 1 OF 3

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH FLARED WINGS

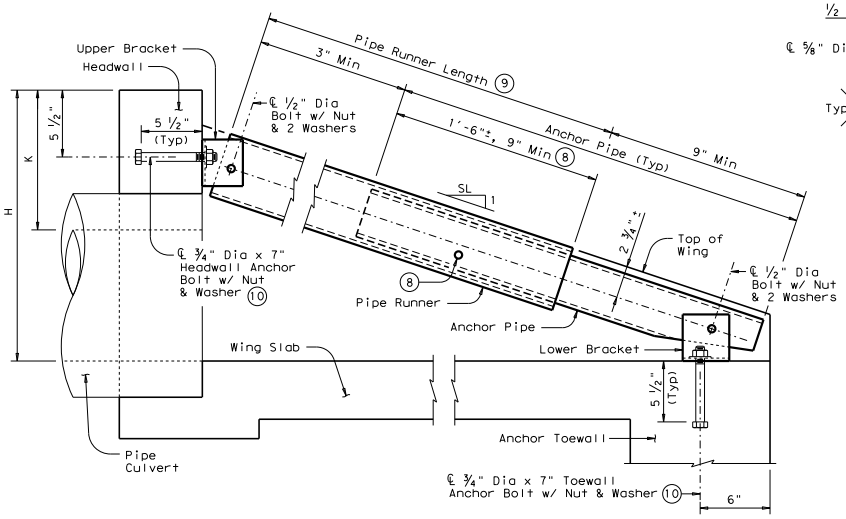
FOR 30° SKEW ARCH PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-A-30

FILE:	stpa30se.dgn	DN: GAF	CK: CAT	DW: BWH	CK: GAF
©TxDOT	February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS					
11-10: Removed Bars T.		DIST	COUNTY		SHEET NO.

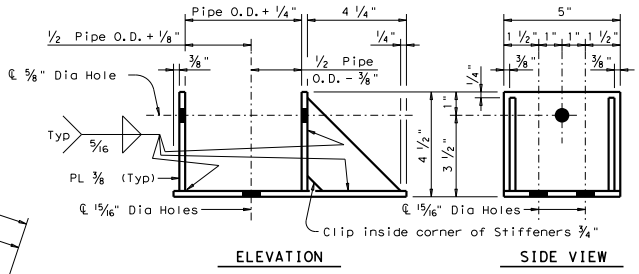
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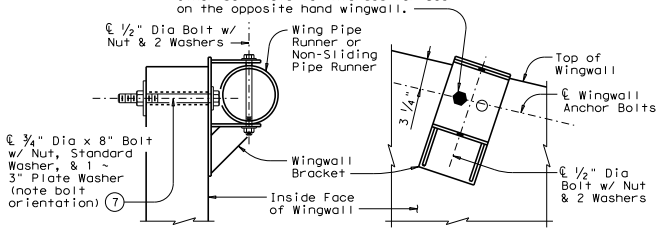
SECTION B-B

(Showing Headwall Pipe Runner. Except for upper bracket, Wingwall Pipe Runners are similar.)



ELEVATION SIDE VIEW

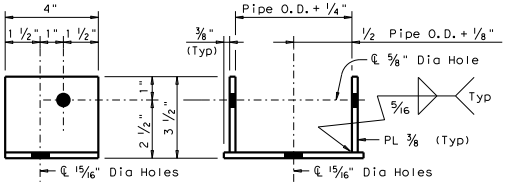
¾" Anchor Bolt shall be installed in hole nearest to the headwall. Other bolt hole is intended for use on the opposite hand wingwall.



SECTION C-C (Showing installed bracket.) ELEVATION (Showing installed bracket normal to Wall. Pipe not shown for clarity.)

NOTE: Wingwall Bracket shall match the Upper Bracket size.

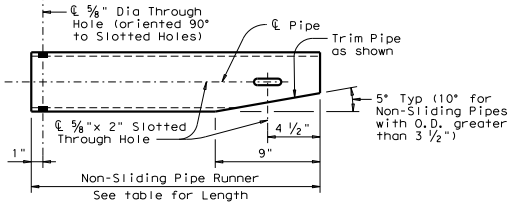
WINGWALL BRACKET DETAILS



SIDE VIEW ELEVATION

NOTE: Upper and Lower Brackets shall, except for the Brackets used with Non-Sliding Pipe Runners, match the required pipe diameters as shown in the table.

UPPER & LOWER BRACKET DETAILS



Note: Pipe size shall be same as required for headwall pipe runner. Adjust the corresponding Lower Bracket accordingly.

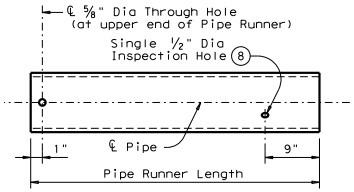
NON-SLIDING PIPE RUNNER DETAILS (9)

(7) At Contractor's option, ⅛" diameter hole may be formed or cored drilled. Percussion drilling is not permitted. Adjust placement of reinforcing steel as necessary to avoid bolt holes.

(8) After installation of the Pipe Runner, the ½" inspection hole shall be utilized to ensure that the lap of the Anchor Pipe with the Pipe Runner is adequate.

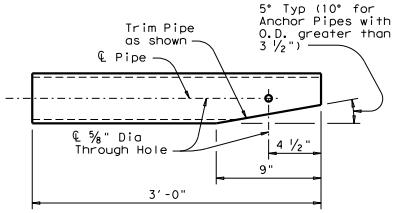
(9) Non-Sliding Pipe Runners are used for those installations that would require Pipe Runner lengths of 1'-9" or less. The Non-Sliding Pipe Runner, when required, replaces the outermost Pipe Runner and Anchor Pipe. See table on Sheet 3 of 3 to determine if the Non-Sliding Pipe Runner is required.

(10) At Contractor's option, an epoxy anchorage system may be used. Anchorage system chosen must be able to achieve an ultimate tensile resistance of 20 kips. Anchor diameter shall be ¾". The Contractor must provide evidence to the Engineer that this can be achieved. Evidence of adequate tensile resistance can be based on the manufacturer's published values of ultimate tensile strength (anchor spacing and edge distance must be accounted for). Anchor installation, including hole size, drilling, and clean-out, must be in accordance with the manufacturer's recommendations.

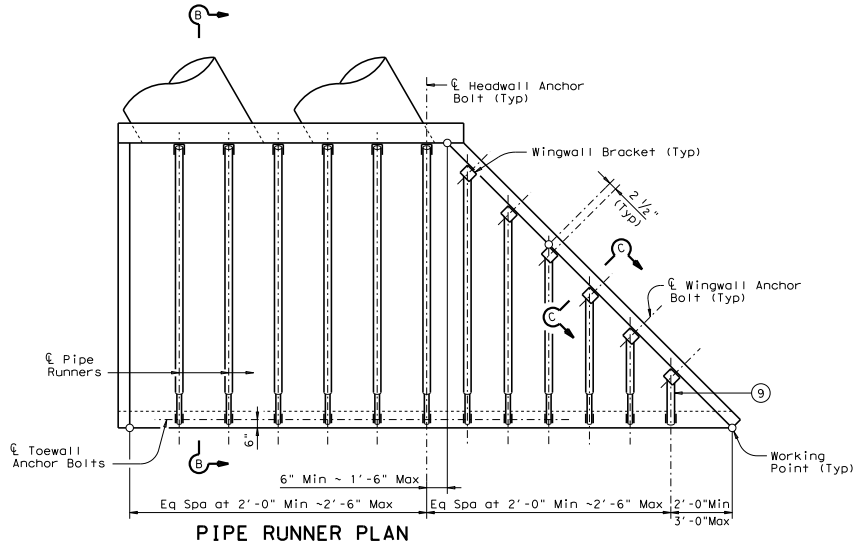


Note: Pipe diameter required for Headwall pipe runner shall also be used for wingwall pipe runner.

PIPE RUNNER DETAILS



ANCHOR PIPE DETAILS



PIPE RUNNER PLAN

SHEET 2 OF 3

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH FLARED WINGS

FOR 30° SKEW ARCH PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-A-30

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Arch Pipe Culvert Design	Number of Pipe Culverts	No. of L2 Spaces	L2 Overall Dimension (Ft-In)	Number of Headwall Pipes
3	1	1	2'- 5 ½"	1
	2	3	6'- 9 ½"	3
	3	5	11'- 1 ½"	5
	4	7	15'- 5 ½"	7
	5	8	19'- 9 ½"	8
	6	10	24'- 1 ½"	10
4	1	2	3'- 7 ½"	2
	2	4	8'-11"	4
	3	6	14'- 2 ½"	6
	4	8	19'- 6"	8
	5	10	24'- 9 ½"	10
	6	12	30'- 1"	12
5	1	2	4'- 3 ½"	2
	2	5	10'- 6 ½"	5
	3	7	16'- 9 ½"	7
	4	10	23'- 0 ½"	10
	5	12	29'- 3 ½"	12
	6	15	35'- 6 ½"	15
6	1	2	4'-10 ¼"	2
	2	5	12'- 0 ¾"	5
	3	8	19'- 3 ¼"	8
	4	11	26'- 5 ¾"	11
	5	14	33'- 8 ¼"	14
	6	17	40'-10 ¾"	17
7	1	2	5'- 0"	2
	2	6	13'- 3 ¼"	6
	3	9	21'- 6 ½"	9
	4	12	29'- 9 ¾"	12
	5	16	38'- 1"	16
	6	19	46'- 4 ¼"	19
8	1	3	6'- 5"	3
	2	7	15'-10 ¼"	7
	3	11	25'- 3 ½"	11
	4	14	34'- 8 ¾"	14
	5	18	44'- 2"	18
	6	22	53'- 7 ¼"	22
9	1	3	7'- 1"	3
	2	7	17'- 6 ¾"	7
	3	12	28'- 0 ½"	12
	4	16	38'- 6 ¼"	16
	5	20	49'- 0"	20
	6	24	59'- 5 ¾"	24

Side Slope	Arch Pipe Culvert Design	L1 (Ft-In)	P1 (Ft-In)	Number of Spaces in L3	L3 Overall Dimension (Ft-In)	P2 (Ft-In)	Number of Spaces in L4	L4 Overall Dimension (Ft-In)	Headwall Pipe Runner Length (Ft-In)	No. of Wing Pipes (12)	Longest Wingwall Pipe Runner Length (Ft-In)	Shortest Wingwall Pipe Runner Length (Ft-In)	Non-Sliding Pipe Length (Ft-In)	Pipe Runner Size (13)	Total Length of Wingwall Pipe Runners (Ft-In) (12)
3:1	3	1'- 0"	2'- 3"	2	5'- 0"	2'-11 ¾"	1	3'- 6 ½"	4'-10 ¾"	2	2'-11 ¼"	2'-11 ¼"	1'- 9 ¾"	3" STD	4'- 9"
	4	6"	2'- 9"	2	5'- 0"	3'- 8 ¼"	1	3'- 6 ½"	5'-11 ½"	2	3'- 5 ¾"	3'- 5 ¾"	2'- 4"	3" STD	5'- 9 ¾"
	5	6"	2'- 0"	3	7'- 0"	2'- 7 ½"	2	6'- 7 ¼"	7'- 3 ¼"	3	4'-11 ½"	2'- 6"	1'- 6 ½"	3" STD	9'- 0"
	6	7 ½"	2'- 9"	3	7'- 4 ½"	3'- 8 ¼"	2	6'-11 ½"	8'- 4"	3	6'- 0 ¼"	3'- 5"	2'- 4"	3" STD	11'- 9 ¼"
	7	1'- 3"	2'- 0"	4	10'- 0"	2'- 7 ½"	3	10'- 7 ¼"	9'- 7 ¾"	4	7'-11 ½"	2'- 8 ¼"	1'- 6 ½"	3" STD	17'- 6 ¼"
	8	6"	2'- 6"	4	10'- 0"	3'- 4"	3	10'- 7 ¼"	10'-11 ½"	4	8'- 5 ¾"	3'- 2 ½"	2'- 0 ¾"	4" STD	19'- 7 ¼"
	9	6"	2'- 0"	5	11'- 6"	2'- 7 ½"	4	13'- 0"	12'- 0 ¼"	5	9'- 9"	2'- 5 ¾"	1'- 6 ½"	4" STD	26'- 0"
4:1	3	1'- 0"	2'- 0"	3	7'- 4"	2'- 7 ½"	2	6'-11"	6'-10 ¾"	3	5'- 0 ½"	2'- 6 ¼"	1'- 6"	3" STD	9'- 0 ¾"
	4	6"	2'- 9"	3	7'- 5"	3'- 8 ¼"	2	7'- 0"	8'- 3 ¼"	3	5'-10 ½"	3'- 3 ¾"	2'- 3 ¼"	3" STD	11'- 5 ½"
	5	6"	2'- 0"	4	9'-10"	2'- 7 ½"	3	10'- 5 ¼"	10'- 0"	4	7'- 7 ¼"	2'- 6 ½"	1'- 6"	4" STD	16'- 8 ¾"
	6	7 ½"	2'- 0"	5	11'- 3 ½"	2'- 7 ½"	4	12'- 9 ¼"	11'- 4 ½"	5	9'- 3 ¾"	2'- 4"	1'- 6"	4" STD	24'- 9 ½"
	7	1'- 3"	2'- 0"	6	13'- 7"	2'- 7 ½"	5	16'- 0"	13'- 1"	6	11'- 8"	2'- 4"	1'- 6"	4" STD	36'- 6"
	8	6"	2'- 0"	6	14'- 6"	2'- 7 ½"	5	17'- 1"	14'- 9 ¾"	6	12'- 5 ½"	2'- 6"	1'- 6"	4" STD	38'-10 ¾"
	9	6"	3'- 0"	6	14'-10"	4'- 0 ½"	5	17'- 5 ¾"	16'- 2 ¼"	6	13'- 9 ¼"	3'- 7"	2'- 6 ¼"	4" STD	45'-11"
6:1	3	1'- 0"	2'- 0"	5	11'- 6"	2'- 7 ½"	4	13'- 0"	10'-11 ¾"	5	9'- 3 ½"	2'- 3 ½"	1'- 5 ½"	4" STD	24'- 7 ½"
	4	6"	3'- 0"	5	12'- 0"	4'- 0 ½"	4	13'- 7"	13'- 0 ¼"	5	10'- 8 ½"	3'- 5"	2'- 5 ¾"	4" STD	30'- 8 ¾"
	5	6"	2'- 6"	6	15'- 0"	3'- 4"	5	17'- 8"	15'- 6 ½"	6	13'- 1 ¾"	3'- 0"	1'-11 ¾"	4" STD	42'- 4 ¼"
	6	7 ½"	2'- 3"	7	17'- 4 ½"	2'-11 ¾"	6	21'- 0 ¾"	17'- 7"	7	15'- 3 ¾"	2'- 8 ¾"	1'- 8 ½"	4" STD	55'-10"
	7	1'- 3"	2'- 9"	8	20'- 0"	3'- 8 ¼"	7	24'- 9"	20'- 1 ¼"	8	18'- 5 ¾"	3'- 3 ¼"	2'- 2 ¾"	4" STD	78'- 4 ¼"
	8	6"	2'- 0"	9	22'- 6"	2'- 7 ½"	8	28'- 3 ¼"	22'- 7 ¾"	9	20'- 3"	2'- 6"	1'- 5 ½"	5" STD	92'- 5 ½"
	9	6"	2'- 0"	10	24'- 6"	2'- 7 ½"	9	31'- 2 ¼"	24'- 8"	10	22'- 4"	2'- 5 ½"	1'- 5 ½"	5" STD	113'- 0 ¼"

(11) If the outermost Wing Pipe Runner is a Non-Sliding Pipe Runner, the next outermost Wing Pipe Runner shall be considered the Shortest.

(12) Quantities shown include, if present, the Non-Sliding Pipes.

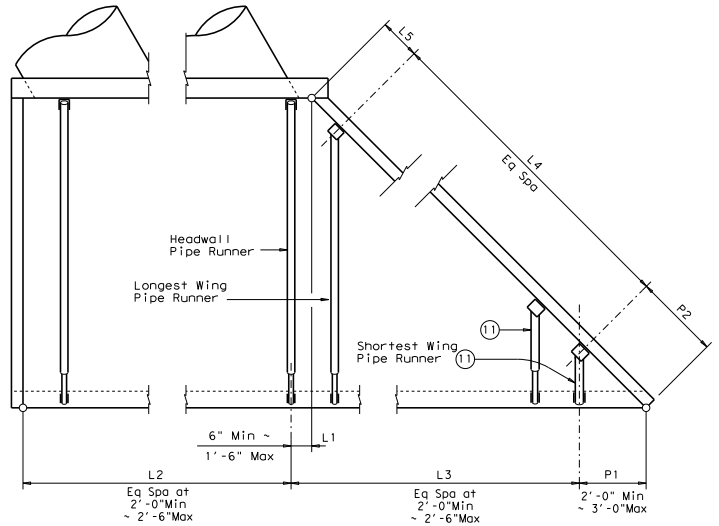
(13) Anchor Pipe size shall be the next smaller size than the Pipe Runner size.

SPECIAL NOTE:

Note that the tabular quantities are given for estimating purposes only. It is likely that these quantities will change due to field conditions. Therefore, all dimensions shall be verified by the Contractor in the field prior to fabrication of the Safety End Treatment components.

STANDARD PIPE RUNNER AND ANCHOR PIPE SIZES (13)

Pipe Size	Pipe O.D.	Pipe I.D.
2" STD	2.375"	2.067"
3" STD	3.500"	3.068"
4" STD	4.500"	4.026"
5" STD	5.563"	5.047"



PIPE RUNNER LAYOUT

Note: Left forward culvert skew shown, actual culvert skew may be opposite hand.

TOTAL PIPE LENGTHS FORMULAS:

$$\text{Total Length of All Pipe Runners} = \text{Total Length of Wingwall Pipe Runners} + \left(\text{No. of Headwall Pipe Runners}\right)\left(\text{Headwall Pipe Runner Length}\right)$$

$$\text{Total Length of All Anchor Pipes} = \left(3.000'\right)\left(\text{No. of Wing Pipe Runners} + \text{No. of Headwall Pipe Runners} - \text{No. of Non-Sliding Pipe Runners}\right)$$

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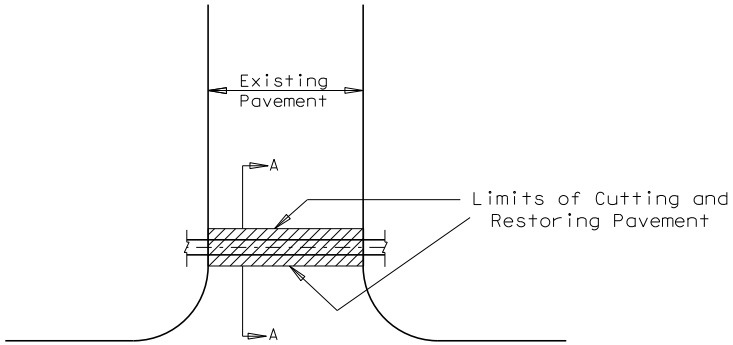
Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT WITH FLARED WINGS

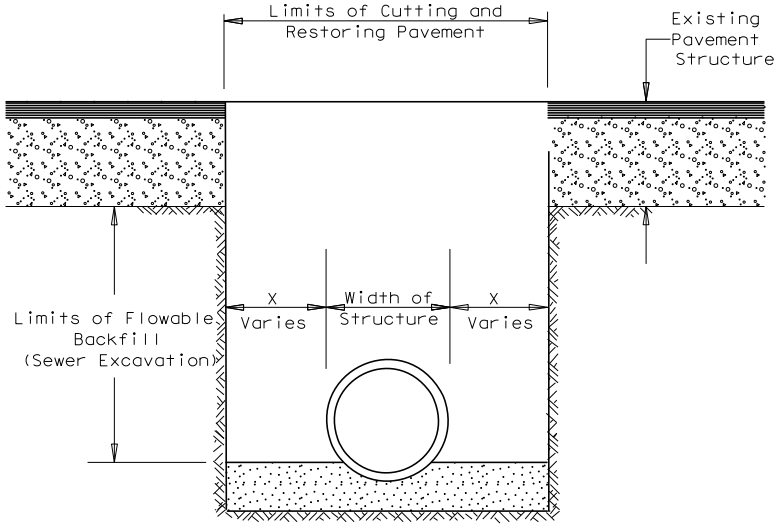
FOR 30° SKEW ARCH PIPE CULVERTS
TYPE I ~ CROSS DRAINAGE

SETP-FW-A-30

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PLAN VIEW
N.T.S.



SECTION A-A
N.T.S.

TABLE OF STANDARD EXCAVATION WIDTHS FOR RC PIPE			
PIPE		X	WIDTH OF CUTTING AND RESTORING PAVEMENT
ID	OD		
18"	22 ½"	1'	3.88'
24"	29 ½"	1'	4.46'
30"	37"	1'	5.08'
36"	44"	1'	5.67'
42"	51"	1'	6.25'
48"	58"	2'	8.83'
54"	65"	2'	9.42'
60"	72"	2'	10.00'
66"	79"	2'	10.58'
72"	86"	2'	11.17'
78"	93"	2'	11.75'
84"	100"	2'	12.33'
96"	114"	2'	13.50'

Provide width of Cutting and Restoring Pavement for installation of storm drain structures as the overall width of the structure plus:

- 2 feet for structures with and inside dimension of 42" or less, or,
- 4 feet for structures with and inside dimension greater than 42".

GENERAL NOTES:

Consider any work performed to repair damage to the existing pavement outside the limits shown subsidiary to the pertinent Items.

Replacement material will be an Asphalt Stabilized paving material, Flowable Backfill or Class A Concrete as required by existing conditions or an equivalent material as directed. Ensure that the thickness of the replacement material(s) is equivalent to the thickness of the existing pavement structure.

Payment for Cutting and Restoring Pavement as shown shall be made at the unit price bid for "Cutting and Restoring Pavement."

Texas Department of Transportation
Austin District Design

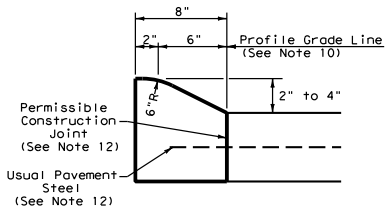
CUTTING AND RESTORING PAVEMENT DETAILS

Austin District Standard

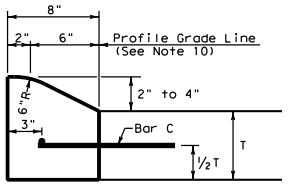
© TxDOT 2003	DIST	FED REG	FEDERAL AID PROJECT •	SHEET
REVISIONS	AUS	6		
3/03 District Update	COUNTY		CONTROL SECT JOB	HIGHWAY
9/04 2004 Update				

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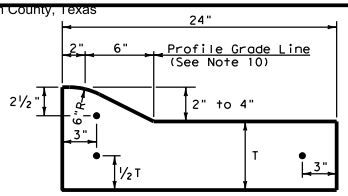
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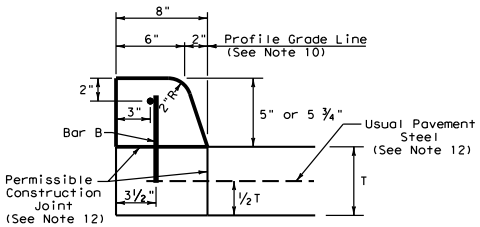
TYPE I CURB (MONOLITHIC)
2" - 4" HEIGHT



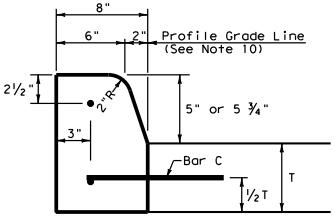
TYPE I CURB
2" - 4" HEIGHT



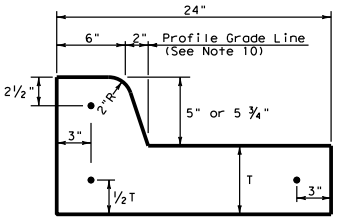
TYPE I CURB AND GUTTER
2" - 4" HEIGHT



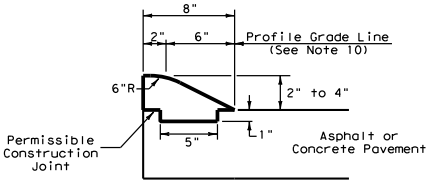
TYPE II CURB (MONOLITHIC)
5" - 5 ¾" HEIGHT



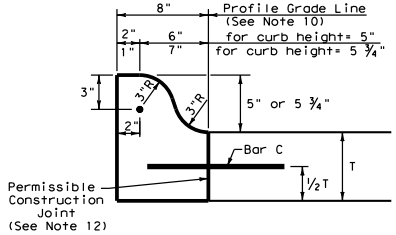
TYPE II CURB
5" - 5 ¾" HEIGHT



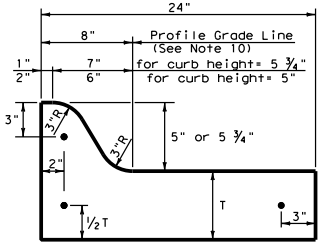
TYPE II CURB AND GUTTER
5" - 5 ¾" HEIGHT



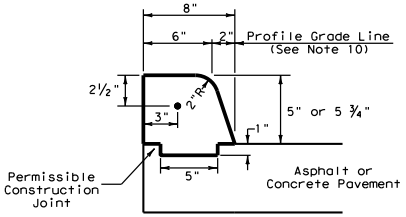
TYPE III CURB (KEYED)
2" - 4" HEIGHT



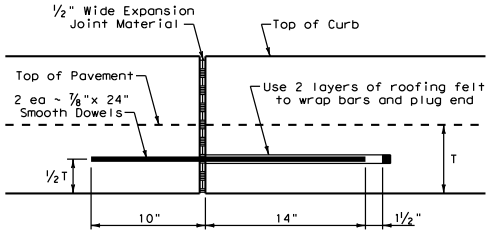
TYPE IIa CURB
5" - 5 ¾" HEIGHT



TYPE IIa CURB AND GUTTER
5" - 5 ¾" HEIGHT

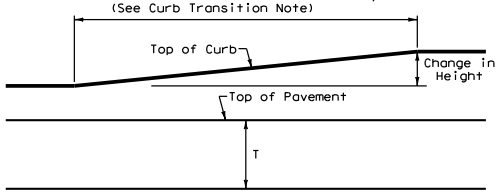


TYPE IV CURB (KEYED)
5" - 5 ¾" HEIGHT



EXPANSION JOINT DETAIL

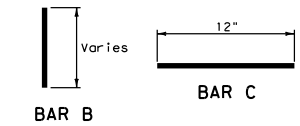
Curb Transition Note:
Field conditions may require a longer or shorter transition, and shall be shown elsewhere in the plans, or as directed by the Engineer.



CURB TRANSITION
Note: To be paid for as Highest Curb

General Notes

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of synthetic fiber in lieu of steel reinforcing is acceptable, provided the fiber producer is on the Department Producer List (MPL), maintained by TxDOT, Construction Division.
4. Round exposed sharp edges with a rounding tool, to a minimum radius of ¼inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is placed on existing concrete pavement, the pavement shall be drilled and the reinforcing bars grouted in place.
7. Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C~C.
9. Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. When vertical permissible construction joints are used, resulting in a longitudinal construction joint in the pavement, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans for longitudinal construction joints. Reinforcing steel for curb section shall then conform to that required for concrete curb.



BAR B BAR C

Texas Department of Transportation — Design Division Standard

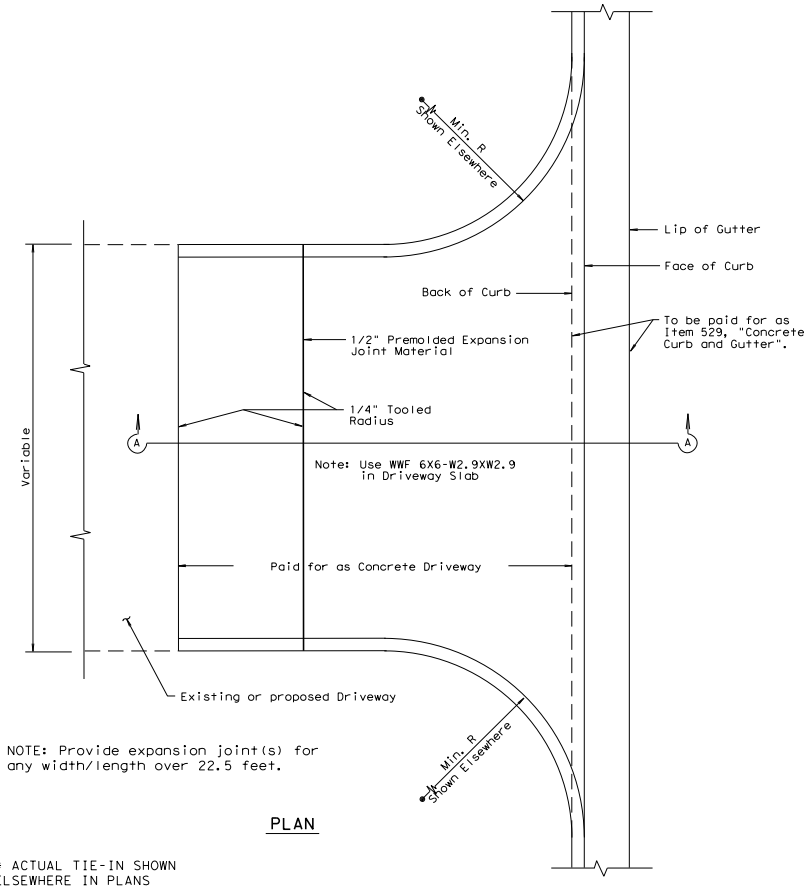
CONCRETE CURB AND CURB AND GUTTER

CCCG-12

FILE: cccg12.dgn	DN: TxDOT	CK: AM	DW: VP	CK: VP	
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REVISIONS UPDATED 2012 - VP					
	DIST	COUNTY		SHEET NO.	

DATE:
FILE:

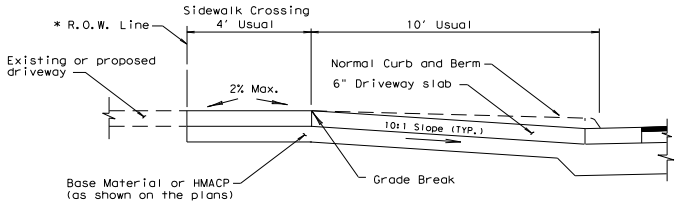
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NOTE: Provide expansion joint(s) for any width/length over 22.5 feet.

PLAN

* ACTUAL TIE-IN SHOWN ELSEWHERE IN PLANS OR AS DIRECTED.



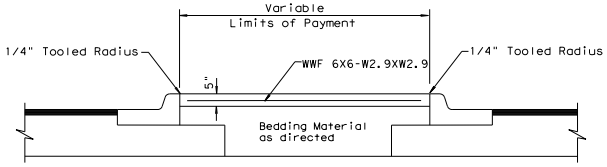
SECTION A-A

CONCRETE DRIVEWAY DETAILS

Payment for Driveways will be in accordance with Item 530, "Driveways".

Ensure grade break does not exceed 8% unless otherwise directed.

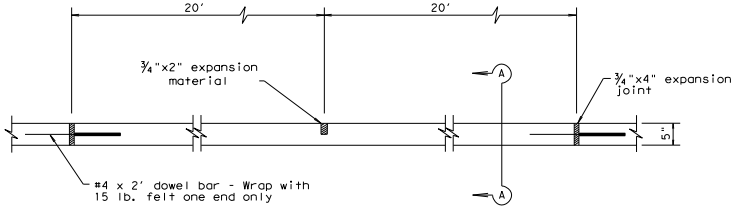
Provide absolute minimum sidewalk crossing width of 3' for driveway width of 20' or less.



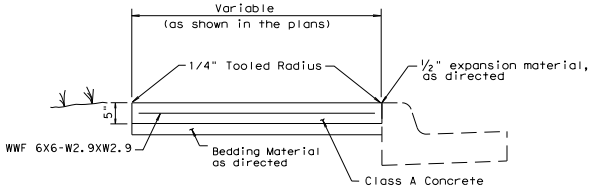
RIPRAP MEDIAN DETAIL

Use Class B Concrete for Riprap.

Payment of Riprap Median will be in accordance with Item 432, "Riprap".



ELEVATION



SECTION A-A

SIDEWALK DETAILS

Place a 3/4" expansion joint at 40' (max.) intervals and at sidewalk ends.

Expansion joints will be continuous with adjacent curb and gutter joints.

Place a 1/4" tooled radius at all joints.

Ensure the cross slope of the sidewalk does not exceed 2%.

Payment for sidewalk will be in accordance with Item 531, "Sidewalks".

See Statewide PED standard for additional pedestrian element criteria.

Texas Department of Transportation
Austin District Design

CONCRETE DRIVEWAYS, SIDEWALKS AND RIPRAP MEDIANS

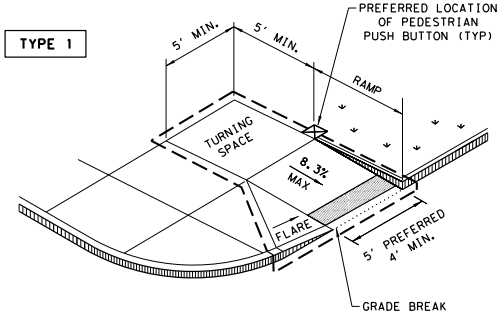
AUSTIN DISTRICT STANDARD

© TxDOT 2002	DIST	FED REG	FEDERAL AID PROJECT •	SHEET
REVISIONS 4/03 District Update 9/04 2004 Update	AUS	6		
	COUNTY	CONTROL	JOB	HIGHWAY
				p.73

FILE: CDSR-04.dgn

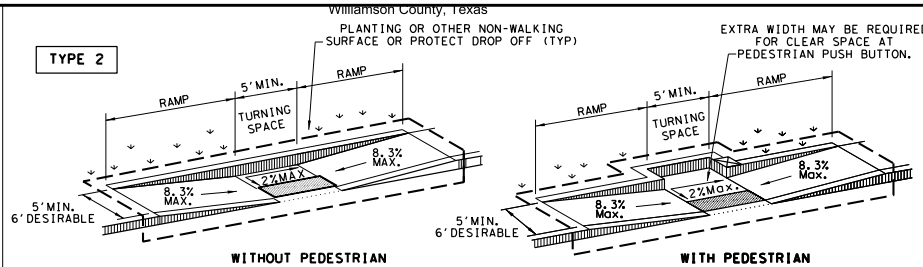
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TYPE 1



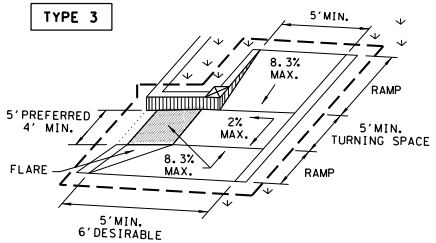
PERPENDICULAR CURB RAMP

TYPE 2

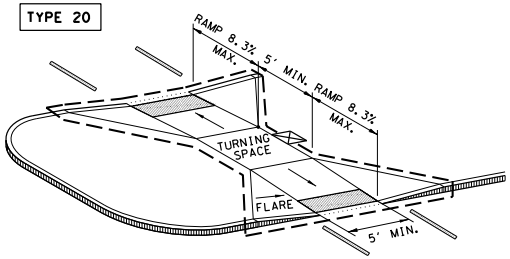


PARALLEL CURB RAMP

TYPE 3

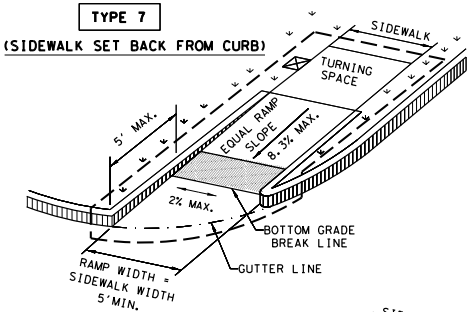


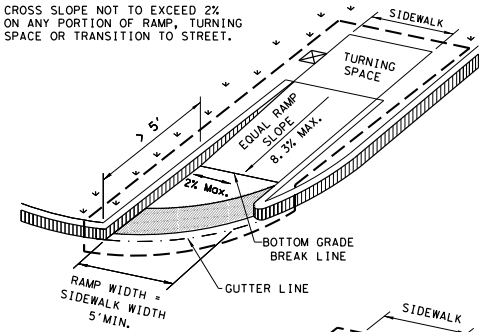
TYPE 20



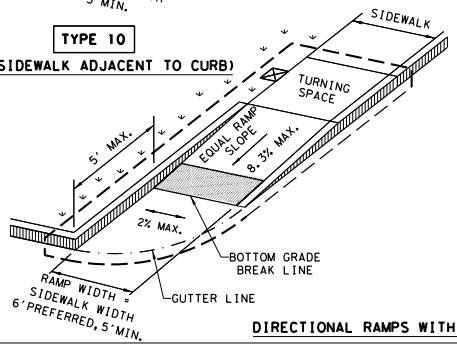
CURB RAMPS AT MEDIAN ISLANDS

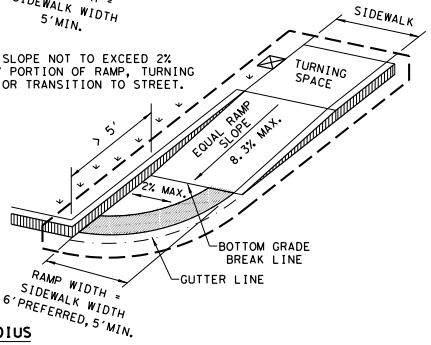
TYPE 7
(SIDEWALK SET BACK FROM CURB)





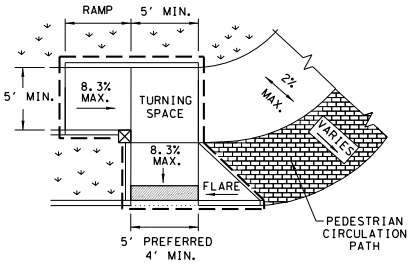
TYPE 10
(SIDEWALK ADJACENT TO CURB)





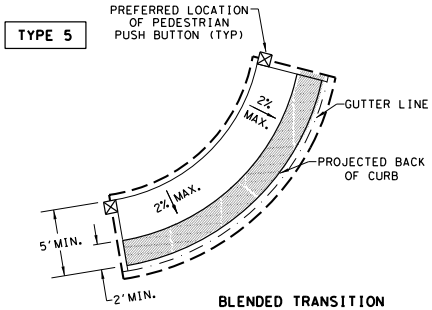
DIRECTIONAL RAMPS WITHIN RADIUS

TYPE 6



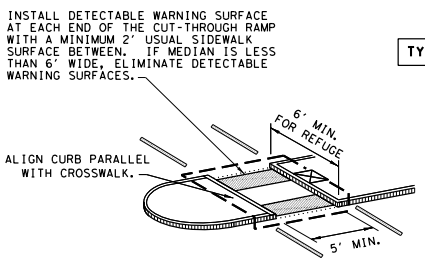
COMBINATION CURB RAMPS

TYPE 5



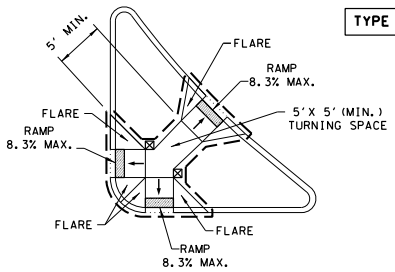
BLENDED TRANSITION
(FLUSH LANDING)

TYPE 21

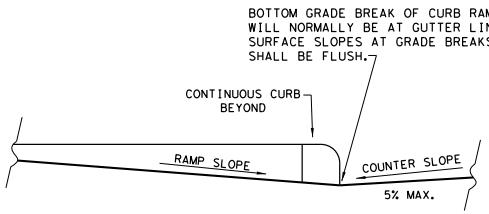


NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 22



COMBINATION ISLAND RAMPS



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

NOTES / LEGEND:

SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

DETECTABLE WARNING SURFACE

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.

GUTTER LINE

GRADE BREAK

RAMP LIMITS OF PAYMENT

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT	CK: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
REVISED 08,2005	DIST	COUNTY		SHEET NO.
REVISED 06,2012				
REVISED 01,2018				

DATE:
FILE:

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GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
6. Clear space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

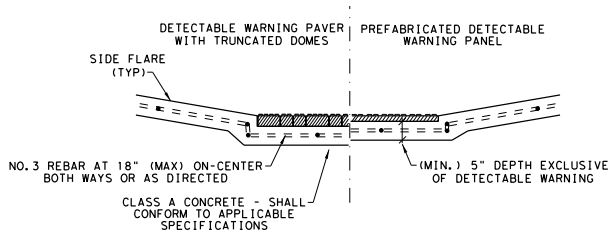
19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

DETECTABLE WARNING PAVERS (IF USED)

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

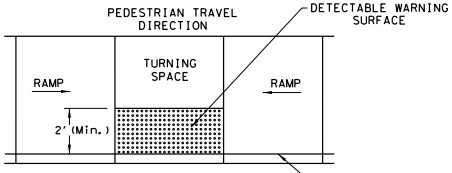
SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.

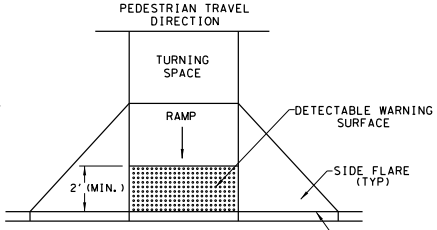


SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS

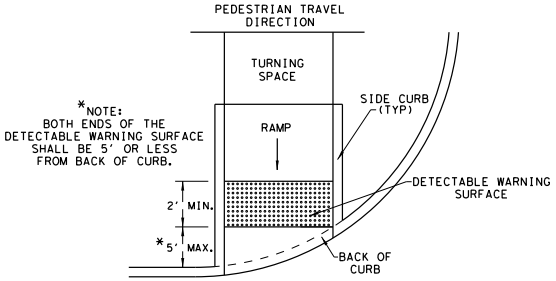
DETECTABLE WARNING SURFACE DETAILS



PARALLEL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



DIRECTIONAL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

SHEET 2 OF 4

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

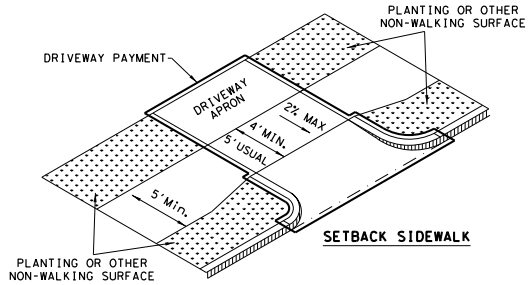
PED-18

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY		SHEET NO.

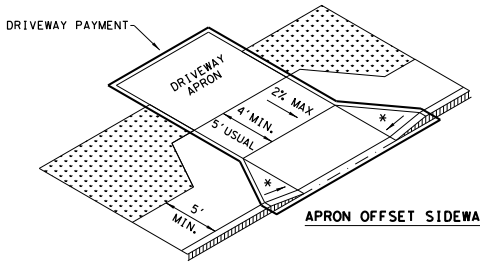
DATE:
FILE:

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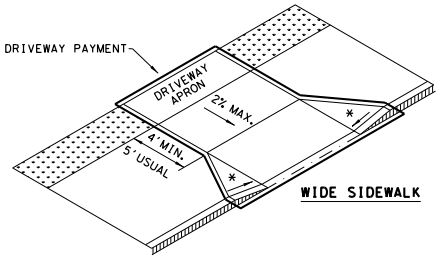
SIDEWALK TREATMENT AT DRIVEWAYS



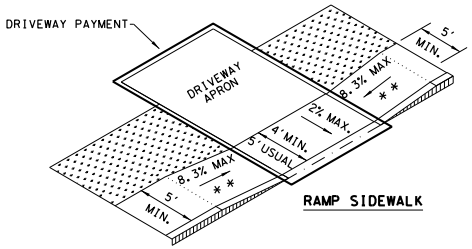
SETBACK SIDEWALK



APRON OFFSET SIDEWALK



WIDE SIDEWALK

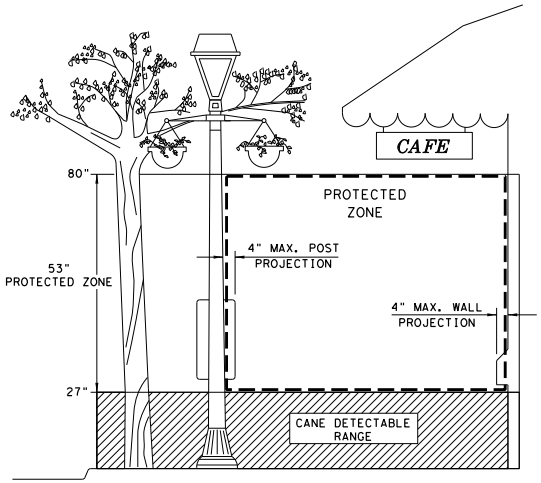


RAMP SIDEWALK

NOTES:

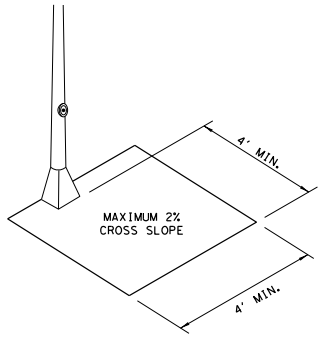
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

** IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.

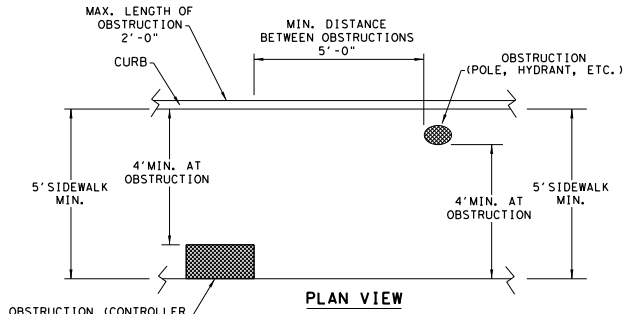


PROTECTED ZONE

NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



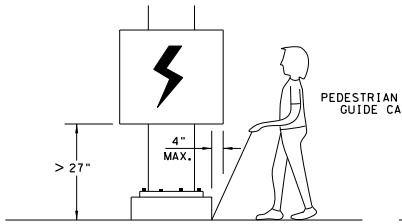
CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



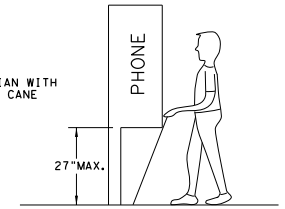
PLAN VIEW

PLACEMENT OF STREET FIXTURES

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.



PROTRUDING OBJECTS OF A HEIGHT ≤27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

SHEET 3 OF 4

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

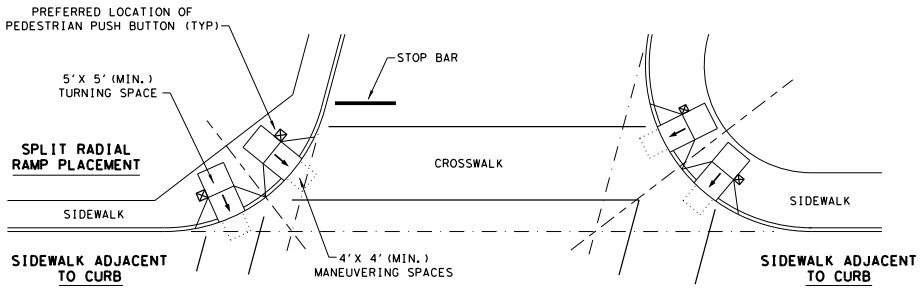
FILE: ped18	DN: TxDOT	CK: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY		SHEET NO.

DATE:
FILE:

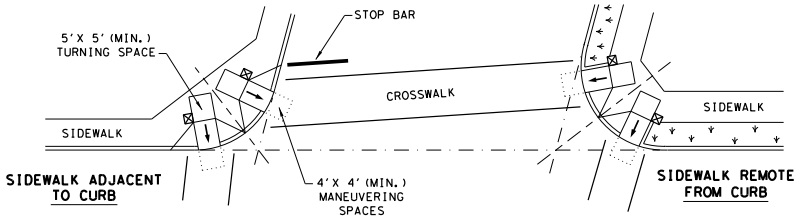
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TYPICAL CROSSING LAYOUTS

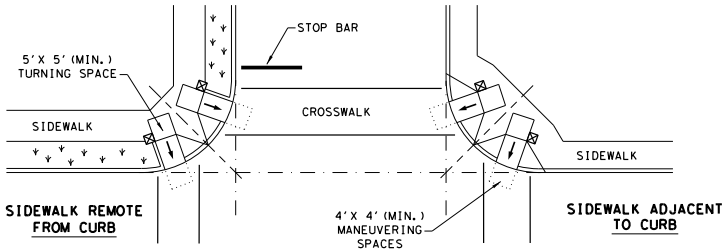
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



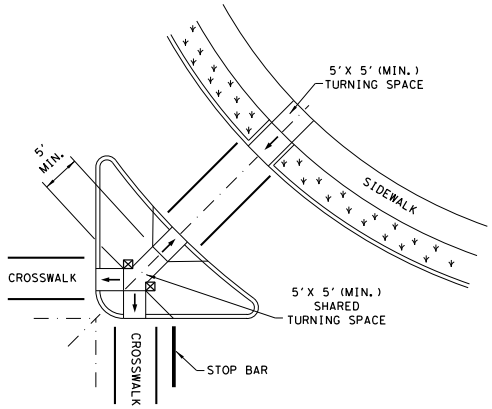
SKEWED INTERSECTION WITH "LARGE" RADIUS



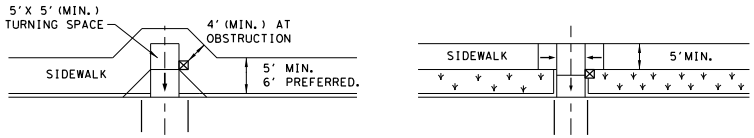
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS

LEGEND:

SHOWS DOWNWARD SLOPE. →

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE). ☒

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

Texas Department of Transportation — Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT	CK: VP	CK: KM	CK: PK & JG
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REVISIONS				
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY		SHEET NO.

DATE:
FILE:

GENERAL ROADWAY CAST IN PLACE CONCRETE BID TABULATION							
			COMPANY:				
BID ITEM	ITEM	NO.	DESCRIPTION	EST. QTY.	UNITS	UNIT PRICE	UNIT PRICE (LABOR ONLY)
1	104	6021	REMOVING CONC (CURB)	100	LF		N/A
2	104	6022	REMOVING CONC (CURB AND GUTTER)	50	LF		N/A
3	104	6036	REMOVING CONC (SIDEWALK OR RAMP)	50	SY		N/A
4	423	6005	RETAINING WALL (SPREAD FOOTING)	100	SF		
5	432	6002	RIPRAP (CONC)(5 IN)	120	CY		
6	465	2174	INLET (COMPL)(DROP)(TY I)	2	EA		
7	465	2168	INLET (COMPL)(DROP)(TY II)	2	EA		
8	466	2001	WINGWALL (SW-0)	100	SF		
9	466	2002	WINGWALL (FW-0)	100	SF		
10	466	2003	WINGWALL (FW-S)	50	SF		
11	466	2004	WINGWALL (PW)	100	SF		
12	466	6094	HEADWALL (CH-PW-0)(DIA= 15 IN)	2	EA		
13	466	6095	HEADWALL (CH-PW-0)(DIA= 18 IN)	2	EA		
14	466	6097	HEADWALL (CH-PW-0)(DIA= 24 IN)	2	EA		
15	466	6099	HEADWALL (CH-PW-0)(DIA= 30 IN)	2	EA		
16	466	6101	HEADWALL (CH-PW-0)(DIA= 36 IN)	2	EA		
17	466	6102	HEADWALL (CH-PW-0)(DIA= 42 IN)	2	EA		
18	466	6103	HEADWALL (CH-PW-0)(DIA= 48 IN)	2	EA		
19	466	6104	HEADWALL (CH-PW-0)(DIA= 54 IN)	2	EA		
20	466	6105	HEADWALL (CH-PW-0)(DIA= 60 IN)	2	EA		
21	466	6002	HEADWALL (CH-FW-0)(DIA= 15 IN)	2	EA		
22	466	6003	HEADWALL (CH-FW-0)(DIA= 18 IN)	2	EA		
23	466	6005	HEADWALL (CH-FW-0)(DIA= 24 IN)	2	EA		
24	466	6007	HEADWALL (CH-FW-0)(DIA= 30 IN)	2	EA		
25	466	6009	HEADWALL (CH-FW-0)(DIA= 36 IN)	2	EA		
26	466	6010	HEADWALL (CH-FW-0)(DIA= 42 IN)	2	EA		
27	466	6011	HEADWALL (CH-FW-0)(DIA= 48 IN)	2	EA		
28	466	6012	HEADWALL (CH-FW-0)(DIA= 54 IN)	2	EA		
29	466	6013	HEADWALL (CH-FW-0)(DIA= 60 IN)	2	EA		
30	466	6032	HEADWALL (CH-FW-30)(DIA= 15 IN)	2	EA		

31	466	6033	HEADWALL (CH-FW-30)(DIA= 18 IN)	2	EA		
32	466	6035	HEADWALL (CH-FW-30)(DIA= 24 IN)	2	EA		
33	466	6037	HEADWALL (CH-FW-30)(DIA= 30 IN)	2	EA		
34	466	6039	HEADWALL (CH-FW-30)(DIA= 36 IN)	2	EA		
35	466	6040	HEADWALL (CH-FW-30)(DIA= 42 IN)	2	EA		
36	466	6041	HEADWALL (CH-FW-30)(DIA= 48 IN)	2	EA		
37	466	6042	HEADWALL (CH-FW-30)(DIA= 54 IN)	2	EA		
38	466	6043	HEADWALL (CH-FW-30)(DIA= 60 IN)	2	EA		
39	467	6329	SET (TY II)(15 IN)(CMP)(3:1)(C)	2	EA		
40	467	6343	SET (TY II)(18 IN)(CMP)(3:1)(C)	2	EA		
41	467	6375	SET (TY II)(24 IN)(CMP)(3:1)(C)	2	EA		
42	467	6406	SET (TY II)(30 IN)(CMP)(3:1)(C)	2	EA		
43	467	6439	SET (TY II)(36 IN)(CMP)(3:1)(C)	2	EA		
44	467	6456	SET (TY II)(42 IN)(CMP)(3:1)(C)	2	EA		
45	467	6467	SET (TY II)(48 IN)(CMP)(3:1)(C)	2	EA		
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47	467	6491	SET (TY II)(60 IN)(CMP)(3:1)(C)	2	EA		
48	467	6330	SET (TY II)(15 IN)(CMP)(4:1)(C)	2	EA		
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57	467	6331	SET (TY II)(15 IN)(CMP)(4:1)(P)	2	EA		
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59	467	6378	SET (TY II)(24 IN)(CMP)(4:1)(P)	2	EA		
60	467	2397	SET (TY II)(30 IN)(CMP)(4:1)(P)	2	EA		
61	467	6442	SET (TY II)(36 IN)(CMP)(4:1)(P)	2	EA		
62	467	6458	SET (TY II)(42 IN)(CMP)(4:1)(P)	2	EA		
63	467	6469	SET (TY II)(48 IN)(CMP)(4:1)(P)	2	EA		
64	467	6333	SET (TY II)(15 IN)(CMP)(6:1)(P)	2	EA		
65	467	6348	SET (TY II)(18 IN)(CMP)(6:1)(P)	2	EA		
66	467	6380	SET (TY II)(24 IN)(CMP)(6:1)(P)	2	EA		
67	467	6410	SET (TY II)(30 IN)(CMP)(6:1)(P)	2	EA		

68	467	6444	SET (TY II)(36 IN)(CMP)(6:1)(P)	2	EA		
69	467	6460	SET (TY II)(42 IN)(CMP)(6:1)(P)	2	EA		
70	467	6471	SET (TY II)(48 IN)(CMP)(6:1)(P)	2	EA		
71	496	6002	REMOV STR (INLET)	2	EA		N/A
72	496	6042	REMOV STR (SMALL)	2	EA		N/A
73	496	6041	REMOV STR (LARGE)	1	EA		N/A
74	500	6001	MOBILIZATION	1	LS		N/A
75	529	6001	CONC CURB (TY I)	150	LF		
76	529	6002	CONC CURB (TY II)	150	LF		
77	529	6007	CONC CURB & GUTTER (TY I)	100	LF		
78	529	6008	CONC CURB & GUTTER (TY II)	100	LF		
79	531	6002	CONC SIDEWALKS (5")	100	SY		

BID AFFIDAVIT

This form must be completed, signed, notarized and returned with Bid package

The undersigned attests that the company named below, under the provisions of Subtitle F, Title 10, Texas Government Code Chapter 2270:

1. Does not boycott Israel currently; and
2. Will not boycott Israel during the term of the contract.

Pursuant to Section 2270.001, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and
2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

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.

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.

Bidder References

List the last (3) companies or governmental agencies, where the same or similar goods and/or services as contained in this IFB package, were recently provided by Bidder.

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:

Question and Answers for Bid #1802-216 - Cast in Place Concrete Materials and Labor

Overall Bid Questions
There are no questions associated with this bid.

Commissioners Court - Regular Session **45.**

Meeting Date: 02/20/2018

Bluefin Exclusivity Exemption

Submitted By: Kerstin Hancock, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on exempting Bluefin Payment Systems, LLC from the competitive bid/proposal requirements of the County Purchasing Act pursuant to the discretionary exemption as set forth under Tex. Loc. Gov't Code § 262.024(a)(7), as the exclusive provider for payment processing software, to Pethealth Services (USA), Inc., as per attached letter.

Background

The attached letter is provided at the request of Williamson County to adequately address the county's compliance with the Texas County Purchasing Act (Tex. Gov't Code Ch. 262). PetPoint exclusively uses Bluefin for payment processing software. While PetPoint has not made its relationship with Bluefin contractually binding, there are numerous factors that influence Bluefin's status as exclusive provider, including but not limited to costs and standardization of the product. There are no present plans to change the fact that Bluefin software remains PetPoint's exclusive provider at this time.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

exlusivity letter

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:20 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:53 AM
Form Started By: Kerstin Hancock		Started On: 02/14/2018 12:28 PM
Final Approval Date: 02/15/2018		

PetPoint
DATA MANAGEMENT SYSTEM

3315 Algonquin Road, Suite 450
Rolling Meadows, IL 60008
TEL: 1-866-630-7387
FAX: 1-866-409-8940

February 6, 2018

Randy Barker, CPPO, CPPB
Purchasing Agent/Director
Williamson County Purchasing Department
901 South Austin Ave.
Georgetown, TX 78626
Phone 512-943-1555
Fax 512-943-1575
Email randy.barker@wilco.org

Dear Mr. Barker,

This letter is provided at the request of Williamson County to adequately address the county's compliance with the Texas County Purchasing Act (Tex. Gov't Code Ch. 262). Specifically, please be informed that PetPoint exclusively uses Bluefin for payment processing software. While PetPoint has not made its relationship with Bluefin contractually binding, there are numerous factors that influence Bluefin's status as exclusive provider, including but not limited to costs and standardization of our product. There are no present plans to change the fact that Bluefin software remains our exclusive provider at this time. We request that Williamson County consider this fact for purposes of granting an exception to bidding pursuant to Tex. Gov't Code § 262.024(a)(7).

Sincerely,



Jordana Matsos
Vice President of Client Services, North America
Pethealth Inc - A Fairfax Company
Phone: 866.597.2424 ext. 5772
Mobile: 905.399.7322
Email: jordana.matsos@pethealthinc.com

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Commissioners Court - Regular Session **46.**

Meeting Date: 02/20/2018

Bluefin agreement

Submitted By: Kerstin Hancock, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on approving agreement between Bluefin Payment Systems, LLC and Williamson County for Payment Processing Services and the purchase of two (2) card swipers for $125/each, to support the operations of the Williamson County Regional Animal Shelter, and authorizing the execution of the agreement.

Background

This agreement is for Payment Processing to support daily transactions of the Animal Shelter. Bluefin is the exclusive payment processing provider for Pet Health's PetPoint software currently utilized by the Animal Shelter. Bluefin allows the credit card payments to be linked into PetPoint for receipt creation which will eliminate steps in the payment process. While there is no cost to the County for the service, there will be a 2% convenience fee for the public when utilizing Bluefin. However, the County will bear the cost of two (2) card swipers of $125/each. Funding source is 01.0545.0545.003011, FY2018 budget.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

application

equipment order

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:21 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:53 AM
Form Started By: Kerstin Hancock		Started On: 02/14/2018 10:19 AM
Final Approval Date: 02/15/2018		

NEW COMPANY APPLICATION - GOVERNMENT / INSTITUTIONAL

1 COMPANY INFORMATION

♦ DBA NAME: Williamson County Regional Animal Shelter

CORPORATE NAME (IF DIFFERENT THAN ABOVE): Williamson County Regional Animal Shelter

CONTACT NAME: Gunter, Linda

♦ DBA ADDRESS TYPE: ♦ DBA ADDRESS1 (NO PO BOX): 1855 SE Inner Loop

DBA ADDRESS 2:

♦ CITY: Georgetown | ♦ STATE: TX | ♦ ZIP CODE: 78626

♦ COUNTRY OF PRIMARY BUSINESS OPERATIONS: USA

♦ BUSINESS COUNTRY OF FORMATION: USA | ♦ DBA PHONE #: (512) 943-3567

▸ DOES COMPANY HAVE THE ABILITY TO ISSUE BEARER SHARES AS OWNERSHIP STAKE IN THE COMPANY? | DBA FAX #: (512) 930-8015

YEAR ESTABLISHED: 1900 | MOBILE PHONE #:

♦ LENGTH OF CURRENT OWNERSHIP: 118 YEARS, 0.0 MONTHS | ♦ EMAIL ADDRESS: lgunter@wilco.org

2 CORPORATE ADDRESS (IF DIFFERENT THAN ABOVE)

CORP ADDRESS TYPE: | CORP ADDRESS (NO PO BOX):

CITY: | STATE | ZIP CODE:

OTHER ADDRESS (IF DIFFERENT THAN ABOVE)

☐ MAILING ☐ SHIPPING ☐ SEE ALSO SPECIAL INSTRUCTIONS (MORE THAN ONE OPTION MAY BE SELECTED)

LOCATION NAME: Williamson County Regional Animal Shelter | PHONE #: (512) 943-3567

CONTACT: Gunter, Linda | FAX #: (512) 930-8015

ADDRESS: 1855 SE Inner Loop | CITY: Georgetown | STATE: TX | ZIP CODE: 78626

STATEMENTS/ RETRIEVALS /CHARGEBACKS

STATEMENTS: ■ DBA OR ☐ MAILING OR ☐ W-9 | AUTO SEND: ☒ YES ☐ NO (CHAIN COMPANIES ONLY – MUST INCLUDE CHAIN SET UP FORM)

RETRIEVALS: MAIL TO: ■ DBA ☐ MAILING OR FAX TO: ☐ DBA ☐ MAILING OR EMAIL TO: OR ☐ ONLINE CASE MANAGEMENT (OCM)

CHARGEBACKS: MAIL TO: ■ DBA ☐ MAILING AND FAX TO: ☐ DBA ☐ MAILING OR EMAIL TO: OR ☐ ONLINE CASE MANAGEMENT (OCM)

3 CONTACT INFORMATION (AUTHORIZED REP)

♦ ☐ OFFICER ☐ MANAGER ■ AUTHORIZED REPRESENTATIVE ☐ OTHER: _____

♦ FIRST NAME: Dan | MN: | ♦ LAST NAME: Gattis

♦ TITLE: County Judge | ♦ COUNTRY(S) OF CITIZENSHIP: USA

▸ CONTACT ADDRESS: 1855 SE Inner Loop | ▸ ADDRESS TYPE:

▸ CITY: Georgetown | ▸ STATE: TX | ▸ ZIP CODE: 78626 USA

▸ DOB: | CONTACT PHONE #:

INDIVIDUAL ID EXEMPTION CLASS: **GOVERNMENT** ☐ FEDERAL ☐ STATE ■ LOCAL (POLITICAL SUBDIVISION OF A US STATE)

OTHER COMPANY INFORMATION

♦ AVERAGE SALE AMOUNT: $ 30

♦ HIGH SALE AMOUNT: $

♦ NUMBER OF HIGH SALES (ABOVE) ANNUALLY:

♦ TOTAL **MONTHLY** VISA/MC/AMEX/DISC/UNIONPAY SALES: $ 3000

♦ ANNUAL REVENUE: $

♦ DESCRIPTION OF PRODUCT/SERVICES OFFERED: Pet Services

SPECIAL PROGRAM MCC ONLY:

WHEN DOES THE CUSTOMER RECEIVE THE PRODUCT OR SERVICE?
IF NOT SAME DAY, _____ # OF DAYS (INCLUDE SHIPPING TIME FRAME)

♦ CARD PRESENT 80 %

♦ CARD NOT PRESENT* 20 %

♦ INTERNET* 0.0 %

(MUST TOTAL 100%)

▸ INTERNET : PRODUCT WEBSITE:

▸ INTERNET: "CONTACT US" EMAIL:

*CUSTOMER SERVICE PHONE # AND PREVIOUS PROCESSOR REQUIRED BELOW

▸ CUSTOMER SERVICE PHONE #: (512) 943-3567

▸ PREVIOUS PROCESSOR:

IF SEASONAL, PLEASE CHECK MONTHS CLOSED BELOW. (CUSTOMER MUST CONTACT CUSTOMER SERVICE TO DEACTIVATE AND REACTIVATE ACCOUNT)

☐ JANUARY ☐ FEBRUARY ☐ MARCH ☐ APRIL ☐ MAY ☐ JUNE
☐ JULY ☐ AUGUST ☐ SEPTEMBER ☐ OCTOBER ☐ NOVEMBER ☐ DECEMBER

BANK ACCOUNT (CHECKING ACCOUNTS ONLY)

♦ DEPOSIT BANK NAME: Wells Fargo Bank	♦ ABA/ROUTING #: 121000248	♦ DDA ACCOUNT #: 4943951624
BILLING/CHARGEBACK BANK NAME (IF DIFFERENT):	ABA/ROUTING #:	DDA ACCOUNT #:
CHARGEBACK BANK NAME (IF DIFFERENT THAN BILLING):	ABA/ROUTING #:	DDA ACCOUNT #:

☐ FAST TRACK FUNDING

CARD ACCEPTANCE *(PLEASE CHECK EACH CARD YOU WISH TO ACCEPT.)*

☑ **ALL VISA/MASTERCARD/AMEX/UNIONPAY/ DISCOVER CARDS (JCB, DI, PAY PAL PAYMENT DEVICE)**

☐ VISA CREDIT ☐ VISA DEBIT ☐ MC CREDIT ☐ MC DEBIT ☐ DISCOVER (JCB, DI, PAY PAL PAYMENT DEVICE) ☐ UNIONPAY ☐ AMEX

PRICING CATEGORY

☐ RETAIL ☐ SUPERMARKET
☐ RESTAURANT ☐ MO/TO / INTERNET
☐ LODGING ☐ ARU

PRICING INFORMATION

PRICING PROGRAM: *(FIXED ONLY)*		VISA/MASTERCARD/UNIONPAY/ DISCOVER CARDS (JCB, DI, PAY PAL PAY DEVICE)		AMERICAN EXPRESS	
		RATE*	PER ITEM*	RATE	PER ITEM
TIERED	QUALIFIED	1.650 %	$	2.300 %	$ 0.20
	MID QUALIFIED	2.450 %	$	2.900 %	$ 0.20
	NON QUALIFIED	2.990 %	$	3.550 %	$ 0.20
	OPT. ☐ CHECK CARD ☐ SPRMKT ☐ QPS/SMALL TKT	%	$		
	OPT. REWARDS	0.000 %	$		
	OPT. COMMERCIAL CARD	0.000 %	$		
INTERCHANGE PLUS		%	$	%	$
ENHANCED IC PLUS	CHECK CARD QUALIFIED	%	$		
	QUALIFIED	%	$	%	$
	REWARDS QUALIFIED	%	$		
	MID QUALIFIED	%	$	%	$
	COMMERCIAL NON QUALIFIED	%	$		
	NON QUALIFIED	%	$	%	$
FIXED - PRICING PGM:		%	$	%	$

**RATES ARE FOR ALL CARD ACCEPTANCE TYPES SELECTED. ALL CARD BRAND ASSESSMENTS WILL BE PASSED THROUGH AT COST.*

PCI SECURITY PROGRAM/SAFE-T PACKAGE

SECURITY PROGRAM (PER MONTH): ▸PCI	$

OTHER CARD TYPES EXISTING

AMEX	SE # *(10 DIGITS)*:	PER AUTH: $
EBT	SE # *(7 DIGITS)*:	PER AUTH: $

FEES

APPLICATION	$
INSTALLATION/TRAINING	$
REPORTING & SUPPORT PACKAGE (PER MONTH)	$
MONTHLY MINIMUM	$ 20
CHARGEBACK (PER OCCURRENCE)	$ 15.00
RETURN ITEM/NSF (PER OCCURRENCE)	$ 25.00
STATEMENT: ☐ ELECTRONIC OR ☐ PAPER MONTHLY STATEMENT MAILING (PAPER STATEMENTS ONLY)	$ 10.00
RUSH SHIPMENT	$
VERIZON DATA PLAN (PER DEVICE): (PER MONTH)	$
VERIZON DATA PLAN OVERAGE (PER MB)	$
OTHER: Service Fee 6916	$ 10.00

AUTHORIZATIONS

VISA (PER AUTH)	$ 0.10	VOICE - ARU (PER AUTH)	$
MASTERCARD (PER AUTH)	$ 0.10	VOICE OPERATOR (PER AUTH)	$
DISCOVER (PER AUTH)	$ 0.10	VOICE - AVS (PER AUTH)	$
UNIONPAY (PER AUTH)	$ 0.10	VOICE BANK REF (PER AUTH)	$
AMEX (PER AUTH)	$ 0.10	DIAL COMMUNICATION (PER AUTH)	$

PIN DEBIT *(ALL DEBIT NETWORK FEES WILL BE PASSED THROUGH AT COST)*

PIN DEBIT MONTHLY FEE	$
IC PLUS (PER AUTH)	$

IC PLUS/ENH. IC PLUS MONT=ICPLS/AUTH =ASSOC). (TIERED/DIFFERENTIAL MONT=ICDIF/AUTH =ASSOC)

POINT OF SALE (EQUIPMENT OR SOFTWARE)

NETWORK: ☐ ELAVON ☐ OTHER | # OF TIDS: | ☐ A THIRD PARTY INTEGRATOR WILL BE USED FOR IMPLEMENTATION:

VAR SERVICE PROVIDER (HOSTED): | VAR (DISTRIBUTED): | VENDOR: | PRODUCT: | VERSION:

						PURCHASE/SETUP	LEASE**		SOFTWARE/WIRELESS		
QTY	POS DESCRIPTION	ITEM CODE	TERMINAL ENCRYPT	OWNS	REPROG FEE PER UNIT	PRICE PER UNIT	TERM MONTHLY	MONTHLY RATE PER UNIT	ANNUAL FEE PER UNIT	MONTHLY FEE PER UNIT	PER AUTH FEE
			☐	☐	$	$		$	$	$	$
			☐	☐	$	$		$	$	$	$
			☐	☐	$	$		$	$	$	$
			☐	☐	$	$		$	$	$	$
			☐	☐	$	$		$	$	$	$
			☐	☐	$	$		$	$	$	$
			☐	☐	$	$		$	$	$	$

**PLEASE NOTE THAT ALL LEASES MUST COMPLETE THE SECTION IMMEDIATELY BELOW. INITIALS ARE REQUIRED. | ALL APPLICABLE STATE AND LOCAL TAXES WILL BE APPLIED. ☐ SALES TAX EXEMPT

Elavon and Member have no responsibility for, and shall have no liability to Company in connection with, any hardware or software, or any related services, Company receives under a direct agreement (including any sale warranty or end-user license agreement) between Company and a third party, including any Value Added Servicer, even if Elavon collects fees or other amounts from Company with respect to such hardware, software or services.

ADDITIONAL POS SERVICES:	DESCRIPTION	SETUP FEE	ANNUAL FEE	MONTHLY FEE	PER AUTH FEE
		$	$	$	$
		$	$	$	$

TERMINAL PROGRAMING INSTRUCTIONS *(DO NOT USE FOR CONVERGE – THIS INFORMATION IS COVERED DURING TRAINING)*

☐ RETAIL (AUTO CLOSE DEFAULT) ☐ QUICK CLOSE ☐ STORE AND FORWARD ☐ NO SIGNATURE ☐ CONTACTLESS (+ NO SIGNATURE)

☐ RESTAURANT (QUICK CLOSE DEFAULT) TIP FUNCTION (DEFAULT) ☐ FINE DINING ☐ TAB FUNCTION

☐ CARD NOT PRESENT (AUTO CLOSE DEFAULT) ☐ QUICK CLOSE

☐ LODGING (QUICK CLOSE DEFAULT) ☐ QUICK STAY

CUSTOM PROMPTS: ☐ TERMINAL AUTO CLOSE (RTL, MOTO) TIME ZONE ☐ CASH BACK PIN DEBIT (RTL): $ (MAX) ☐ CUSTOM FOOTER:

☐ NO TIP (REST) ☐ NO SERVER PROMPT (REST) ☐ CLERK PROMPT (RTL) ☐ TIP FUNCTION WAITER (RTL) ☐ TIP FUNCTION CASHIER (RTL)

COMMUNICATION METHOD (IP DEFAULT): ☐ DIAL | TRAINING (DEFAULT = TRAINING REQUIRED): ☐ NO TRAINING | PHONE INFORMATION: ACCESS #:

ELECTRONIC CHECK SERVICE

▸ANNUAL CHECK VOLUME: $ | ▸AVERAGE CHECK AMOUNT: $ | ▸MAXIMUM CHECK AMOUNT: $ | ▸ECS MONTHLY MINIMUM: $

ECS – PAPER CHECK CONVERSION

PROCESSING OPTIONS:
☐ POP (POS IMAGE)
☐ ARC (POS IMAGE)
☐ BOC

☐ CONVERSION WITH GUARANTEE GUARANTEE RATE: % PER TRANSACTION: $

☐ CONVERSION W/ VERIFICATION OR ☐ CONVERSION ONLY PER TRANSACTION: $ PER RETURN TRANSACTION: $ ☐ COLLECTIONS

ACH CHECK – CHECK NOT PRESENT (CNP)

PROCESSING OPTIONS:
☐ CONCURRENT ENROLLMENT (INCLUDES: WEB, TEL, PPD AND CCD) = XNP
INDIVIDUAL ENROLLMENT - CHOOSE ONE (ONE PER MID)

☐ WEB – INTERNET INITIATED ☐ PPD – PREARRANGED PAYMENT

☐ TEL/IVR – TELEPHONE INITIATED ☐ CCD – CORPORATE TO CORPORATE

CONVERGE SETUPS WILL BE CONCURRENTLY ENROLLED IN ALL PRODUCT TYPES = XNP

☐ ACH-ECHECK WITH VERIFICATION PER TRANSACTION: $0 PER RETURN TRANSACTION: $_____

☐ ACH – ECHECK CONVERSION ONLY PER TRANSACTION: $_____ PER RETURN TRANSACTION: $_____

OTHER ECS CHECK CONVERSION SERVICE REQUESTS

☐ PROMPTS FOR DRIVER'S LICENSE (IF NOT SELECTED, INFORMATION MUST BE OBTAINED ON CHECK FOR GUARANTEE SERVICE)

☐ ENQUIRE REPORTING ACCESS: # OF USERS: @ $29.95 EACH PER

☐ NSF SERVICE FEE PROCESSING @ $2 PER NSF ITEM. NOT APPLICABLE FOR GUARANTEE SERVICE
NSF SERVICE FEE AMOUNT: ☐ MAX ALLOWED OR ☐ SPECIFIED SERVICE FEE AMOUNT $_____ (STATE MAX IS DEFAULT)
ACH ECHECK NSF SERVICE FEE AMOUNT: ☐ $15 (DEFAULT) OR ☐ SPECIFIED SERVICE FEE AMOUNT $_____
SPECIFY NSF RESUBMISSION ATTEMPTS: ☐ 0 OR ☐ 1 (2 IS THE DEFAULT)

ACH – ECHECK QUESTIONNAIRE

1. WHAT TYPES OF PAYMENTS WILL YOU ACCEPT USING ACH-ECHECK (E.G., UTILITY BILL PAYMENTS, MONTHLY RENT PAYMENTS, MONTHLY BILLING FOR GENERAL SERVICES)?
2. WILL YOU OBTAIN AUTHORIZATION FROM YOUR CUSTOMERS PRIOR TO ACCEPTING AN ACH ENTRY IN ACCORDANCE WITH THE ECS OPERATING GUIDE (E.G., ORALLY VIA TELEPHONE FOR TEL/IVR, OR IN WRITING FOR PPD)? ☐ YES ☐ NO
3. WILL YOU VERIFY AND AUTHENTICATE THE IDENTITY OF YOUR CUSTOMERS IN ACCORDANCE WITH THE ECS OPERATING GUIDE PRIOR TO INITIATING ACH ENTRIES FOR THOSE CUSTOMERS (E.G., BY OBTAINING A CUSTOMER'S NAME, ADDRESS AND TELEPHONE NUMBER OR USING A DATABASE TO VERIFY THE ACCURACY OF THE INFORMATION PROVIDED BY CUSTOMER)? ☐ YES ☐ NO
4. WILL YOU OFFER ACH-ECHECK TO EXISTING OR NEW CUSTOMERS? ☐ EXISTING ☐ NEW
5. WILL YOU MAINTAIN AND DISCLOSE TO YOUR CUSTOMERS PROCEDURES FOR CANCELLING AN AUTHORIZATION? ☐ YES ☐ NO
6. WILL YOU ENSURE THAT INFORMATION REGARDING EACH TRANSACTION AUTHORIZATION ENTERED BY A CUSTOMER AND/OR YOUR SERVICE REPRESENTATIVE IS ACCURATE AND NOT A DUPLICATE TRANSACTION? ☐ YES ☐ NO

REPORTING TOOLS

☐ MCP ONLY OR ☐ MCP WITH OCM ▸MONTHLY FEE $ ▸SET UP FEE $ ▸# USERS ▸SET UP TYPE (CHECK ONE) ☐ MID ☐ CHN

☐ ACS ▸MONTHLY FEE $ ▸SET UP FEE $ ▸REMOTE ID

CONVENIENCE FEE AND GOVERNMENT/PUBLIC INSTITUTION SERVICE FEES (GPISF)

CONVENIENCE FEE SERVICES PROGRAMS

CONVENIENCE FEE FUNDING MODEL (CHECK ONE):

☐ COMPANY MANAGED CONVENIENCE FEE[1]

☐ ELAVON MANAGED CONVENIENCE FEE[2]

PAYMENT TRANSACTION TYPES

☐ CREDIT (CHECK ALL THAT APPLY):

☐ VISA ☐ MASTERCARD ☐ DISCOVER

☐ SIGNATURE DEBIT (CHECK ALL THAT APPLY):

☐ VISA ☐ MASTERCARD ☐ DISCOVER

☐ PIN-BASED DEBIT

☐ ACH (VIA ELECTRONIC CHECK SERVICES)

ELAVON PRODUCT SUPPORTING ELAVON-MANAGED CONVENIENCE FEE ASSESSMENT TO BE USED BY COMPANY (CHECK ALL THAT APPLY):

☐ COMPANY PROPRIETARY SOLUTION OR SERVICE PROVIDER

☐ OTHER:

CONVENIENCE FEE PRICING:

CONVENIENCE FLAT FEE AMOUNT: $

CONVENIENCE FEE %: (MASTERCARD, DISCOVER & ACH PROGRAMS ONLY)

IMPLEMENTATION FEE (IF APPLICABLE): $

GPISF SERVICES PROGRAMS

(CHECK ALL THAT APPLY, BUT ONLY IF COMPANY ELECTS GPISF ASSESSMENTS:

☐ COMPANY-MANAGED SERVICE FEE[3]

☐ COMPANY-MANAGED WITH ELAVON POS DEVICES/SERVICE FEE TERMINALS[4]

☐ ELAVON-MANAGED SERVICE FEE[5]

CARD ACCEPTANCE (CHECK ALL THAT APPLY):

☐ POINT OF SALE ☐ INTERNET

☐ IVR ☐ OTHER:

GPISF SERVICES PROGRAMS (CHECK ALL THAT APPLY, BUT ONLY IF COMPANY ELECTS GPISF ASSESSMENTS:

☐ MASTERCARD GOVERNMENT AND EDUCATION PAYMENT PROGRAM

☐ VISA GOVERNMENT AND EDUCATION PAYMENT PROGRAM

TRANSACTION TYPES:

☐ FEDERAL INCOME TAX ☐ BUSINESS TAX

☐ GOVERNMENT FEES ☐ OTHER TAX

☐ STATE INCOME TAX ☐ TUITION

☐ REAL ESTATE PROPERTY TAX ☐ OTHER EDUCATION EXPENSES

PAYMENT TYPES FOR GPISF ASSESSMENT (NOT ALL PAYMENT TYPES ARE SUPPORTED FOR ALL PROGRAMS)(CHECK ALL THAT APPLY, BUT ONLY IF COMPANY ELECTS GPISF ASSESSMENT):

☐ CREDIT – (CHECK ALL THAT APPLY):

☐ VISA – ELIGIBLE MCCS: 8211, 8220, 8244, 8249, 9211, 9222, 9311, 9399

☐ MASTERCARD – ELIGIBLE MCCS: 8211, 8220, 8299, 9211, 9222, 9223, 9311, 9399, 9402

☐ DISCOVER (AVAILABLE IF ELAVON-ACQUIRED)

☐ SIGNATURE DEBIT – (CHECK ALL THAT APPLY)

☐ VISA – ELIGIBLE MCCS: 8211, 8220, 8244, 8249, 9211, 9222, 9311, 9399

☐ MASTERCARD – ELIGIBLE MCCS: 8211, 8220, 8299, 9211, 9222, 9223, 9311, 9399, 9402

☐ DISCOVER (AVAILABLE IF ELAVON-ACQUIRED)

☐ ACH (VIA ELECTRONIC CHECK SERVICES)

ELAVON PRODUCT SUPPORTING GPISF ASSESSMENT TO BE USED BY COMPANY (CHECK ALL THAT APPLY):

☐ SERVICE FEE TERMINAL

☐ COMPANY PROPRIETARY SOLUTION OR SERVICE PROVIDER

☐ SAFE-T SERVICES ***(ADDITIONAL ENROLLMENT FORM REQUIRED)***

☐ OTHER:

GPISF PRICING:

CREDIT CARD SERVICE FEE: % OR $

SIGNATURE DEBIT SERVICE FEE: % OR $

ACH (VIA ELECTRONIC CHECK SERVICES): $

IMPLEMENTATION FEE (IF APPLICABLE): $

[1] "Company-Managed" Convenience Fee means that Company establishes the amount of the Convenience Fee (subject to the requirements of the Agreement and applicable Payment Network Regulations) and retains the Convenience Fee. Company pays Elavon the per transaction fees as set forth in this application to the Agreement for all Convenience Fee Transactions.

[2] "Elavon- Managed" Convenience Fee means that Elavon establishes the amount of the Convenience Fee and retains the Convenience Fee in lieu of Company's obligation to pay Elavon the per transaction fees as set forth in this application to the Agreement for Convenience Fee Transactions. The Convenience Fee is still charged by Company and included in the overall transaction amount charged to the Cardholder.

[3] "Company-Managed" Service Fee means that Company establishes the amount of the GPISF, programs its POS Devices to assess the GPISF, and retains the GPISF (subject to the requirements of the Agreement and applicable Payment Network Regulations). Company pays Elavon the per transaction fees as set forth in this application for all GPISF Transactions.

[4] "Company-Managed with Elavon POS Devices/Service Fee Terminals" means that Elavon programs the POS Devices to assess the GPISF established by Company and Company retains the GPISF. Company pays Elavon the per transaction fees as set forth in this application to the Agreement for all GPISF Transactions.

[5] "Elavon-Managed" Service Fee means that Elavon establishes the amount of the GPISF, and Elavon charges and retains the GPISF in lieu of Company's obligation to pay Elavon the per transaction fees and Safe-T Services fees (if Safe-T is chosen above) for GPISF Transactions.

SUBSTITUTE FORM W-9

■ GOVERNMENT

☐ NON-PROFIT CHARITABLE OR SOCIAL (INCLUDE DOCUMENTS THAT SUPPORT TAX EXEMPT STATUS)

☐ OTHER

♦ NAME*: Williamson County Regional Animal Shelter

NAME (OF BUSINESS) AS SHOWN ON YOUR BUSINESS INCOME TAX RETURNS. FOR SOLE PROPRIETORS, THIS SHOULD ALWAYS BE THE OWNER'S NAME.

♦ ADDRESS: 1855 SE Inner Loop			OR	▸TIN (EMPLOYER ID #): 746000978
♦ CITY: Georgetown	♦ STATE: TX	♦ ZIP CODE: 78626		▸TIN (SOCIAL SECURITY #):

5 COMPANY REPRESENTATIONS AND CERTIFICATIONS

Company Representations and Certifications. By signing below, the applicant company ("Company") and its representative(s) represent and warrant to Elavon, Inc. ("Elavon" or "member" as applicable), with offices at 7300 Chapman Highway, Knoxville, TN 37920 (collectively, "we" or "us") that (i) all information provided in this company application ("Company Application") is true and complete and properly reflects the business and financial condition of Company; and (ii) the persons signing this Company Application are duly authorized to bind Company to all provisions of this Company Application and the Agreement. The signature by an authorized representative of Company on the Company Application, or the transmission of a Transaction Receipt or other evidence of a Transaction to us, shall be the Company's acceptance of and agreement to the terms and conditions contained in the Agreement including, without limitation, this Company Application, the Terms of Service ("TOS"), the Addendum to the Terms of Service for Government/Institutional Companies attached hereto, and the Operating Guide incorporated herein by this reference and located at our website at https://www.merchantconnect.com/CWRWeb/pdf/TOS_ENG.pdf and https://www.merchantconnect.com/CWRWeb/pdf/OPERATING GUIDE_Eng.pdf, respectively. If you are accepting electronic payments through Transend Pay you also agree to the Terms and Conditions set out under the Resources tab at www.elavon.com/transendpay, and as subsequently amended in the Operating Guide in the Transend Pay Services Chapter. If Company does not have access to view the TOS or Operating Guide at our website please contact our customer service center. Notwithstanding any such non-receipt of the TOS or Operating Guide, Company agrees to comply with the Agreement, and all applicable laws, rules, and regulations including the rules and regulations of the Payment Networks, and understands that failure to comply will result in termination of processing services. Capitalized terms shall, unless otherwise defined in this Company Application, have the same meaning ascribed to them in the TOS and Operating Guide.

Company must obtain an Authorization Code via electronic terminal or similar device before completing any transaction. Company understands that an AUTHORIZATION CODE IS NOT A GUARANTEE OF ACCEPTANCE OR PAYMENT OF A TRANSACTION. RECEIPT OF AN AUTHORIZATION CODE DOES NOT MEAN THAT COMPANY WILL NOT RECEIVE A CHARGEBACK FOR THAT TRANSACTION.

Company and its representative(s) authorize us prior to our acceptance of this Company Application and from time to time thereafter, to investigate the business history and background of Company and to obtain credit reports or other background investigation reports on Company that we consider necessary to review the acceptance and continuation of this Company Application. Company also authorizes any person or credit reporting agency to compile information to answer those credit inquiries and to furnish that information to us.

IMPORTANT INFORMATION ABOUT PROCEDURES FOR OPENING A NEW ACCOUNT. To help the government fight the funding of terrorism and money laundering activities, Federal law requires all financial institutions to obtain, verify, and record information that identifies each person who opens an account. This means we will ask for certain information and identifying documents to allow us to identify you.

This Company Application may be signed in one or more counterparts, each of which shall constitute an original and all of which, taken together, shall constitute one and the same Company Application. Delivery of executed counterparts of this Company Application may be accomplished by a facsimile transmission, and a signed facsimile or copy of this Company Application shall constitute a signed original.

All companies must comply with the requirements of the Payment Card Industry Data Security Standards ("PCI DSS"). Elavon requires Level 4 companies (determined based on Transaction volume) to validate PCI DSS compliance on an annual basis, with initial validation to occur no later than ninety (90) days after account approval. Any company that has not validated PCI DSS compliance within ninety (90) days of account approval, or in subsequent years on or before the anniversary date of account approval, will be charged a monthly non-compliance fee of $59.99 until Elavon is provided with validation of PCI DSS compliance. Company may be eligible for Data Breach Financial Assistance Coverage following account approval and PCI DSS compliance validation. See the PCI Compliance Program Overview for assistance details and conditions.

American Express Acceptance Program (Acceptance Program). If Company has elected to accept American Express® Transactions (as indicated in the Card Acceptance section of this Company Application), in addition to all other terms of this Agreement, Company agrees to the Acceptance Program terms of the TOS. By signing below or by accepting a Transaction initiated with an American Express® Payment Device, Company expressly authorizes Elavon to submit American Express® Transactions to, and to receive settlement funds from, American Express on Company's behalf. Company further authorizes Elavon to provide Company's contact information to American Express, and Company agrees that American Express may use and share such contact information for its business purposes and as permitted by applicable Laws, including to communicate with Company regarding products, services, and resources available to Company's business. American Express's use of the email address and mobile phone number provided above is subject to the consent to such use as indicated in Section 1 of this Company Application. Consent to American Express's use of contact information for such communications may be withdrawn at any time by contacting our customer service center. Even if consent is withdrawn, Company may still receive messages related to important information about Company's account from American Express. Company or Elavon may terminate Company's acceptance of American Express® Payment Devices at any time, with or without cause, without affecting Company's rights and obligations pursuant to the remainder of this Agreement. Company acknowledges that, if at any time Company is no longer qualified to participate in the Acceptance Program, Company may be enrolled in the standard American Express® card acceptance program, which may have different terms and conditions than the Acceptance Program, and Company's acceptance of American Express® Payment Devices pursuant to this Agreement will be terminated. Company acknowledges that American Express is an intended third-party beneficiary of this Agreement, solely with respect to the terms and conditions applicable to Company's acceptance of American Express® Payment Devices, and that American Express has the right to enforce such terms and conditions directly against Company.

♦ SIGNATURE: X	♦ PRINTED NAME: Dan Gattis	♦ TITLE: County Judge	♦ DATE:
SIGNATURE: X	PRINTED NAME:	TITLE:	DATE:

SUBMITTED BY (INTERNAL USE ONLY)

To the best of my knowledge, I certify that the information provided in this Company Application was provided by the Company and is true, complete and accurate. I further certify that the signatures were provided by the Company's authorized representative.

♦ PRINTED NAME: Kelvin Reid		♦ REP ID #: 38096	♦ DATE:
♦ REP PHONE #: (770) 709-7802	♦ REP EMAIL: kreid@bluefin.com		USA-GOV-ELVMSP-1017

ADDENDUM TO THE TERMS OF SERVICE FOR GOVERNMENT/INSTITUTIONAL COMPANIES

The following provisions hereby replace the like-numbered provisions of the Terms of Service ("**TOS**") or are hereby inserted or deleted from the TOS, as indicated, for Companies operating under the Agreement.

1) **Section 10.1Audit** is revised to read as follows:

"**Audit.** If Elavon or Member reasonably suspects that they are subject to a financial or reputational risk due to Company's actions or omissions, Company authorizes Elavon and its agents to perform an audit or inspection of Company's operations and records to confirm Company's compliance with the Agreement upon reasonable advance notice, during normal business hours, and at Elavon's expense (unless Elavon reasonably determines based on such audit that Company is not in compliance with the Agreement, in which case Company will bear the cost). Company will obtain and submit a copy of an audit from a third party acceptable to Elavon of the financial, physical security, information security, and operational facets of Company's business at its expense when requested by Elavon. Further, Company acknowledges and agrees that the Payment Networks have the right to audit Company's business to confirm compliance with the Payment Network Regulations. Company will maintain complete and accurate records of its performance under the Agreement. Company will execute and deliver to Elavon all documents Elavon reasonably deems necessary to verify Company's compliance with Section 8.1."

2) **Section 13 Indemnification** is deleted and replaced with the following two sections:

"**13(a). Company Responsibilities.** As between Company, Elavon and Member, Company will be responsible for, and at its own expense, defend itself against any suits, claims, losses, demands or damages arising out of or in connection with (A) any dispute with a Customer, Cardholder or any third party relating to any Transaction, (B) any action taken by Elavon or Member with respect to the DDA or Reserve Account in accordance with the Agreement, or (C) any breach by Company of any obligation under this Agreement. Company will not make any claims against Elavon or Member for any liabilities, claims losses, costs, expenses and demands of any kind or nature, arising out of or in connection with any of the foregoing suits, claims, losses, demands or damages.

13(b). Elavon Responsibilities. Elavon will be responsible for and will at its own expense defend itself against any suits, claims, losses, demands or damages arising out of (A) Elavon's breach of the Agreement, or (B) Elavon's negligence, gross negligence or willful misconduct."

3) **Section 16 Personal Guaranty** is deleted.

4) **Section 18.2 Governing Law in the United States** is deleted.

5) **Section 18.3 Exclusivity** is deleted.

6) **Section 18.5 Assignability** is revised as follows:

"**Assignability.** Company will not assign the Agreement, directly, by operation of law, or by change of control of Company, without Elavon's prior written consent. If Company nevertheless assigns the Agreement without Elavon's consent, the Agreement will be binding on both the assignee and Company. Elavon will not transfer or assign the Agreement without the prior written consent of Company, provided that such consent will not be required for (i) the assignment or delegation to an affiliate of Elavon, or (ii) the assignment or delegation to any Person into or with which Elavon will merge or consolidate, or who may acquire substantially all of Elavon's stock or assets."

7) **Section 18.6Arbitration** is deleted.

8) **Section 18.9 Attorney's Fees** is deleted.

9) **Section 18.12 Amendments** is revised as follows:

"**Amendments.** Except as otherwise provided in the Agreement, amendments to the Agreement will be in writing and signed by the parties. Notwithstanding the foregoing, Elavon and Member may amend or modify the Agreement, to the extent such changes are required by or attributable to changes in the Payment Network Regulations or other Laws, upon written notice to Company. Elavon or Member will inform Company of such a change in a periodic statement or other written notice, and such change will become effective not less than thirty (30) days following the issuance of the notice. Notwithstanding the previous sentence, changes to fees authorized by the Agreement will be effective upon notice to Company, unless a later effective date is provided."

10) **Schedule A, Section 1.8 Title; Quiet Enjoyment** is replaced as follows:

"**Title; Quiet Enjoyment.** Lessor will at all times retain title to the Leased Equipment. All documents of title and evidence of delivery will be delivered to Lessor. Lessee hereby authorizes Lessor, at Lessee's expense, to cause the lease or any statement or other instrument in respect to the lease showing the interest of Lessor in the Leased Equipment including Uniform Commercial Code Financing Statements, to be filed or recorded and/or refiled and rerecorded, and grants Lessor the right to execute Lessee's name thereto. Lessee agrees to execute and deliver any statement or instrument requested by Lessor for such purpose, and agrees to pay or reimburse Lessor for any filing, recording or stamp fees or taxes arising from the filing or recording of any such instrument or statement. Lessee will at its expense, protect and defend Lessor's title against all persons claiming against or through Lessee, at all times keep the Leased Equipment free from legal process or encumbrance whatsoever and, will give Lessor immediate notice thereof and will be responsible for any loss caused thereby. Lessee agrees to procure for Lessor, such estoppel certificates, landlord's or mortgagees' waiver or other similar documents as Lessor may reasonably request. Provided Lessee is not in default hereunder, Lessee will quietly use and enjoy the Leased Equipment subject to the terms hereof."

11) **Schedule A, Section 1.10 Net Lease; Taxes** is replaced as follows:

"**Net Lease; Taxes.** Lessee intends the rental payments hereunder to be net to Lessor, and Lessee agrees to pay any applicable sales, use, excise, personal equipment, stamp, documentary and ad valorem taxes, license and registration fees, assessment, fines, penalties and similar charges imposed on the ownership, possession or use of the Leased Equipment during the term of the lease. Lessee will pay all applicable taxes (except Lessor's federal or state net income taxes) which may be imposed on Lessor or Lessee with respect to the lease payments hereunder or the ownership of the Leased Equipment. Lessee will pay as additional rent, any applicable taxes documented as paid or advanced by Lessor on behalf of Lessee. Lessee will file personal equipment tax returns with respect to the Leased Equipment."

12) **Schedule A, Section 1.11 Indemnity** is replaced as follows:

"**Responsibility of Lessor.** As between Lessor and Lessee, Lessee will be responsible for, and at its own expense, defend itself against any and all liability, damage or loss, arising out of the ownership, selection, possession, leasing, operation, control, use, condition, maintenance, delivery and return of the Leased Equipment. The obligations herein provided will continue in full force and effect notwithstanding the termination of the lease."

13) **Schedule A, Section 1.16 Remedies** is replaced as follows:

"**Remedies.** If an Event of Default will occur, Lessor may, at its option, at any time (i) declare immediately due and payable and recover from Lessee, as liquidated damages for the loss of a bargain and not as a penalty, an amount equal to all accrued and unpaid rental payments and late charges, taxes, and other fees, plus the Loss Amount; provided, however, that if an Event of Default will occur as described in Section 1.15(iv) through (vi) above, Lessor without any notice or action will be deemed to have made such a declaration; (ii) automatically charge the DDA for all money amounts owed; (iii) to the extent permitted by applicable Law, without demand or legal process, enter into the premises where the Leased Equipment may be found and take possession of and remove the Leased Equipment, without liability for such retaking; (iv) Lessor may hold, sell or otherwise dispose of any such Leased Equipment at a private or public sale; or (v) exercise any other remedies available under applicable Law. If Lessor takes possession of the Leased Equipment, Lessor will give Lessee credit for any sums received by Lessor from the sale or rental of the Leased Equipment after deduction of the expenses of sale or rental and Lessee will remain liable to Lessor for any deficiency. Notwithstanding the foregoing, to the extent any software included with the Leased Equipment is nontransferable or its transfer restricted, Lessee agrees that Lessor and/or the licensor of such software will have no duty to remarket or otherwise mitigate any damages relating to such software.

Lessee will also be responsible for all expenses incurred by Lessor in connection with the enforcement of any of Lessor's remedies including all expenses of repossessing, storing, shipping, repairing and selling the Leased Equipment. Lessor and Lessee acknowledge the difficulty in establishing a value for the unexpired lease term and, owing to such difficulty, agree that the provisions of this Section represent an agreed measure of damages and are not to be deemed a forfeiture or penalty. All remedies of Lessor hereunder are cumulative, are in addition to any other remedies provided for by Law, and may, to the extent permitted by Law, be exercised concurrently or separately. The exercise of any one remedy will not be deemed to be an election of such remedy or to preclude the exercise of any other remedy. No failure on the part of the Lessor to exercise and no delay in exercising any right to remedy will operate as a waiver thereof or modify the terms of the lease."

14) **Schedule A, Section 1.19 Miscellaneous** is replaced as follows:

"**Miscellaneous.** If Lessee fails to pay any rent or other amount required herein to be paid to Lessor within five (5) days of when due, Lessee agrees to pay Lessor, in addition to the payment, a late charge of 15% of the amount past due (but at least $7.50) for each late payment. Each month the past due payment remains unpaid, an additional late fee in the amount defined will be assessed. Payments are applied to late fees and service charges first and then to the lease obligation. Amounts will be payable in addition to all amounts payable by Lessee to Lessor as a result of exercise of any of the remedies herein provided. If Lessee requests any services not provided for herein, Lessee agrees to pay an applicable fee

for delivery of such services. Lessee will inform Lessor of any change in Lessee's name, address, billing address, telephone numbers, location of the Leased Equipment, or DDA. If Lessee fails to comply with any provision of the lease, Lessor will have the right, but not be obligated, to affect such compliance on behalf of Lessee upon ten (10) days prior written notice to Lessee. In such event, all monies expended by, and all expenses of Lessor in effecting such compliance, will be deemed to be additional rental, and will be paid by Lessee at the time of the next monthly payment of rent. All notices under the lease will be sufficient if given personally or mailed postage prepaid to the party intended at the respective address set forth herein, or at such other address as said party may provide in writing from time to time. The lease inures to the benefit of and is binding upon the personal representatives, successors and assigns of the parties hereto. Time is of the essence of the lease. Lessor and Lessee intend the lease to be a valid and subsisting legal instrument, and agree that no provision of the lease that may be deemed unenforceable will in any way invalidate any other provision or provisions of the lease, all of which will remain in full force and effect. The lease will be binding when accepted in writing by Lessor and will be governed by the laws of the state where the Leased Equipment is located."

15) **Schedule A, Section 1.20 Important Information about Credit Reporting** is deleted.

16) **Schedule B, Section 1.5 Personal Guaranty** is deleted.

17) **Schedule B, Section 1.6 Jurisdiction and Venue; Governing Law** is deleted.

18) **Schedule B, Section 1.7 Arbitration** is deleted.

Bluefin Payment Systems LLC
Master Order Form

Bluefin Payment Systems LLC ("Bluefin") 8200 Roberts Drive, Suite 150 Atlanta, Georgia 30350 Contact: Kelvin Reid Telephone: (770) 709-7802 Fax: Email: kreid@bluefin.com	Company ("Client") Williamson County Regional Anima Address 1855 SE Inner Loop Georgetown TX 78626 Contact: Gunter, Linda Telephone: (512) 943-3567 Fax: (512) 930-8015 Email: lgunter@wilco.org

This **Master Order Form** between Bluefin and Client (each a "Party" and collectively the "Parties"), together with the **Equipment Purchase and Services Agreement**, and any other appendices, addenda, schedules or other attachments hereto or thereto, constitute the Equipment Purchase Agreement between Bluefin and Client (the "Agreement") pursuant to which Client engages Bluefin to provide certain service or equipment (collectively, the "Equipment") specified below, to Client and in certain instances for further use by Client's customers.

The **Fee Schedule** attached hereto sets forth the Fees, Equipment Costs, and other charges Client shall pay Bluefin and a description of the Equipment being purchased by Client under this Master Order Form.

The **Shipping Schedule** attached hereto sets forth the locations to which Equipment is to be shipped. Client hereby contracts for, and Bluefin agrees to provide, the Services and Equipment identified below.

This Agreement may be amended and/or supplemented from time to time by a Supplemental Order Form, Supplemental Fee Schedule, or Supplemental Service Specific Addendum, signed by both Parties.

Service Selections	
☐	PayConex™ Gateway Service
☐	QuickSwipe
☐	PayConex™ Plus (World Net)
☒	Equipment

IN WITNESS WHEREOF, the parties have caused this Master Order Form to be executed by their duly authorized representatives as of _____ (the "Effective Date").

Bluefin Payment Systems LLC

By: Kelvin Reid

Name: Kelvin Reid

Title: _____

Williamson County Regional Anima ("Client")

By: _____

Name: Dan Gattis

Title: County Judge

SCHEDULE A

EQUIPMENT ORDER AND FEE SCHEDULE

Client shall pay Bluefin in accordance with the following Equipment Order:

1. **Equipment Costs and Non-Recurring Key Injection Fees:** The Equipment Costs and any applicable Key Injection Fees under this Equipment Order are as follows:

Equipment Supplier	*Equipment/ Additional Component Description*	*Price Per Unit*	*Quantity*	*Other Charges*
IDTech Secure Key M130 Swiper		125	2 1 LG 1-31-18	

2. *PayConex*™ **Service Fees:**

PayConex™ Gateway Set-up Fee	*PayConex™ Gateway Monthly Service Fee*	*PayConex™ Gateway Service Cost per Transaction*	*Tokenization Fee Reuse of Tokens*	*Monthly Device Monitor/Management Cost per Device, per Month, commencing with the month in which such P2PE Device is delivered to Client from the KIF*	*PayConex™ P2PE Transaction Fee*
$____per gateway	$__	$___	$___	(#devices x $__) $__ per device	$__

***PayConex™ may include any services for PayConex™ Gateway Service, QuickSwipe, or PayConex™ Plus (World Net).*

Commissioners Court - Regular Session **47.**

Meeting Date: 02/20/2018

PetPoint agreement

Submitted By: Kerstin Hancock, Purchasing

Department: Purchasing

Agenda Category: Regular Agenda Items

Information

Agenda Item

Discuss, consider, and take appropriate action on approving Advanced Productivity agreement between Pethealth and Williamson County for additional services, to support the operations of the Williamson County Regional Animal Shelter, in the amount of $2,500 annually and authorizing the execution of the agreement.

Background

This advanced productivity agreement is to add additional features to the PetPoint software the Animal Shelter is currently utilizing. PetPoint is an Application Service Provider developed for the animal welfare industry to support shelter and animal care operations. This software is delivered over the internet instead of being installed on a local computer or server. All WCRAS animal and customer records as well as monetary receipting is currently facilitated by shelter staff through Petpoint. This service also auto-uploads all animal photos to the shelter website allowing public viewing for adoption and lost pet retrieval. This added upgrade will allow file storage onto each animal record with external documents (rabies certificates, x-rays, external vet or trainer notes). It also includes enhanced calendar and foster scheduling capabilities with automatic emailed reminders. Funding source is 01.0545.003011, FY2018 budget.

Fiscal Impact

From/To	Acct No.	Description	Amount

Attachments

agreement

Form Review

Inbox	Reviewed By	Date
Purchasing (Originator)	Randy Barker	02/15/2018 09:23 AM
County Judge Exec Asst.	Wendy Coco	02/15/2018 09:53 AM
Form Started By: Kerstin Hancock		Started On: 02/14/2018 11:29 AM
Final Approval Date: 02/15/2018		

STATEMENT OF WORK AGREEMENT

This Statement of Work Agreement (this "**SOW Agreement**") is made and entered into as of , (the "**Effective Date**") by and between:

Pethealth Services (USA) Inc.,
3315 Algonquin Road, Suite 450
Rolling Meadows, IL 60008
("**Pethealth**")

-and-

Williamson County Regional Animal Shelter
1855 SE Inner Loop
Georgetown, TX 78626
(the "**Client**")

This SOW Agreement is entered into for Pethealth to provide the Client with additional services (the "**Services**") in exchange for a fee (if applicable) in relation to the Application Service Provider Agreement entered into by both Parties and dated as of (the "**Agreement**"). The Services to be provided by Pethealth to the Client, including any applicable fees, shall be as outlined in Section 1. Services of this SOW Agreement.

In consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, both parties agree to as follows:

1. SERVICES

The Services to be provided by Pethealth to the Client are as outlined below:

1.1 MISCELLANEOUS SERVICES

☐ **Basic Data Conversion:**
- Includes animal, person, and visit information.
- Twenty (20) hours of support from Engagement Team in mapping and troubleshooting.
- Three (3) complete test runs of data.

FEE: $15,000, one time fee

☐ **Online Assessment:**
- One and a half (1 ½) hour virtual meeting to evaluate operations and software use, including:
  - Current features of product used (modules in PetPoint).
  - Software configuration review (PetPoint or Vestafy) (stages, operation subtypes, etc.).
  - Processes tracked with tools other than PetPoint or Vestafy (what's tracked on a spreadsheet, post-it notes, etc.).
- Written proposal of improvements.
- Project plan to include client priorities and timeline.

FEE: $1,000 per assessment

☒ **Advanced Productivity;** Includes:
- Mobile inventory
- Advanced scheduling
- Email signature
- 1 TB of file storage

FEE: $ 2,500 per annum

☐ **Advanced Data Conversion:**
- Includes Basic Data Conversion plus any additional modules beyond intakes/outcomes.
- Thirty (30) hours of support from Engagement Team in mapping and troubleshooting.
- Three (3) complete test runs of data.

FEE: $30,000, one time fee

☐ **Online Engagement Services:**
- Onboarding support.
- Admin Training: PetPoint/Vestafy.
- User Training: PetPoint/Vestafy.
- Custom Report Configuration: PetPoint Enterprise/Vestafy.
- Workflows or Dashboard Configuration: Vestafy.
- Custom Integration Development: Vestafy.
- Data Import: Vestafy.

FEE: ☐ $150 per hour, one time
☐ $1,250 (10-pack), one time
☐ $,2000 (20-pack), one time

☐ **Constituent Services Suite;** Includes:
- Advanced pet licensing
- Online licensing
- Contract management/agency invoicing

FEE: $4,500 per annum

☐ **Builders**
- Custom solutions tailored to Client's specifications.

FEE: $4,500 per build, per annum

☐ **E-Signature**
- Provides the ability to electronically sign documents, including intake and outcome contracts.

FEE: $1,500 per annum

☐ **Onsite Engagement Services:** Includes preparation time to utilize onsite time effectively.
- Onboarding support.
- Assessments.
- Admin Training: PetPoint/Vestafy.
- User Training: PetPoint/Vestafy.
- Custom Report Configuration: PetPoint+/Vestafy.
- Workflows or Dashboard Configuration: Vestafy.

FEE: $5,000 (2 days), $1,500 for each additional day, one time

☐ **File Storage:**
- Additional file storage may be purchased in 1TB increments.

FEE: ☐ 1TB; $200, per annum
☐ 2TB; $400, per annum
☐ 3TB; $600, per annum
☐ 4TB; $800, per annum

2. MILESTONE DELIVERABLES

2.1 **Pethealth Schedule.** The Parties agree to the following schedule and details (if applicable) for the Services to be completed by Pethealth for the Client. The payment frequency shall be as specified in Section 1. Services.

Service	Initial Delivery Date	Additional Details	Total Amount
OtherAdvanced Productivity		-Full payment is due in advance of each annual term	$2,500 per annum
Choose an item.	Click or tap to enter a date.	-	-
Choose an item.	Click or tap to enter a date.	-	-
Choose an item.	Click or tap to enter a date.	-	-
Choose an item.	Click or tap to enter a date.	-	-

2.2 **Client Schedule.** The Parties agree to the following schedule and details (if applicable) for the completion of the below mentioned items by the Client to support Pethealth in their work and completion on any Services to be provided.

Service	Initial Delivery Date	Additional Details
Choose an item.	Click or tap to enter a date.	-

Choose an item.	Click or tap to enter a date.	-
Choose an item.	Click or tap to enter a date.	-
Choose an item.	Click or tap to enter a date.	-
Choose an item.	Click or tap to enter a date.	-

[Remainder of page is intentionally left blank]

PetPoint
DATA MANAGEMENT SYSTEM

2. No Other Change

Except as provided in this Amending Agreement, all of the terms and conditions of the Agreement remain unchanged and in full force and effect and will be read with this Amending Agreement.

3. Terminology

Capitalized terms not defined in this Amending Agreement shall have the meaning as described in the Agreement.

By signing this Amending Agreement, both parties are entering into the Amending Agreement as of the Effective Date and agree to the terms and conditions outlined within.

PETHEALTH:
Pethealth Services (USA) Inc.

Address:
3315 Algonquin Road Suite 450
Rolling Meadows, IL 60008

Telephone:
1-866-630-7387

Email:
info@PetPoint.com

Name of Signer:
Jordana Matsos

Signer's Title:
VP Client Services

Signature:

Signer's Telephone:
1-866-630-7387 ext. 5772

Signer's Email:
jordana.matsos@pethealthinc.com

Date:
Feb. 13, 2018

CLIENT:

Billing Address:

Telephone:

Email:

Name of Signer:

Signer's Title:

Signature:

Signer's Telephone:

Signer's Email:

Date:

PetPoint
DATA MANAGEMENT SYSTEM

PETPOINT APPLICATION SERVICE PROVIDER AMENDING AGREEMENT

This Amending Agreement (the "**Amending Agreement**") is made and entered into as of (the "**Effective Date**"), by and between:

Pethealth Services (USA) Inc.,
3315 Algonquin Road, Suite 450
Rolling Meadows, IL 60008
("**Pethealth**")

-and-

Williamson County Regional Animal Shelter
1855 S.E. Inner Loop,
Georgetown, TX 78626
(the "**Client**")

Both Parties entering into the PetPoint Application Service Provider Agreement dated as of January 20, 2009 (the "**Agreement**") wish to amend the Agreement on the terms and conditions described in this Amending Agreement.

In consideration of the Parties agreeing to amend their obligation in the existing Agreement and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, both parties agree as follows:

1. Amendments

Original Provision	Amended Provision
	16. 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.
	17. Mediation: The parties agree to use mediation for dispute resolution prior to and formal legal action being taken on this Contract.
	18. Right to Audit: Pethealth agrees that licensee or its duly authorized representatives shall, until the expiration of three (3) years after final payment under this Agreement, have access to and the right to examine and photocopy any and all books, documents, papers and records of Pethealth which are directly pertinent to the services to be performed under this Agreement for the purposes of making audits, examinations, excerpts, and transcriptions. Pethealth agrees that licensee shall have access during normal working hours to all necessary Pethealth facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. Licensee shall give Pethealth reasonable advance notice of intended audits.

3. GENERAL

3.1 **Individual Products.** Individual products and services may be subject to additional terms and conditions. Any applicable individual product and service terms and conditions shall be provided to Client for review prior to the execution of this SOW Agreement.

3.2 **Entire Agreement.** This SOW Agreement, together with the Agreement, any amending agreement, if applicable, and any individual product and service terms and conditions, if applicable, set forth the entire agreement between the parties with respect to the subject matter hereof and fully supersedes any and all prior agreements, or understandings between the parties relating to the subject matter hereof.

By signing this Agreement, both parties are entering into the Agreement as of the Effective Date and agree to the terms and conditions outlined within.

PETHEALTH:
Pethealth Services (USA) Inc.

Address:
3315 Algonquin Road, Suite 450
Rolling Meadows, IL 60008

Telephone:
1-866-630-7387

Email:
info@vestafy.com
software-solutions@petpoint.com

Name of Signer:
Jordana Matsos

Signer's Title:
VP, Client Services.

Signature:

Signer's Telephone:
1-866-630-7387 ext. 5772.

Signer's Email:
jordana.matsos@pethealthinc.com.

Date:
Feb. 13, 2018.

CLIENT:

Billing Address:

Telephone:

Email:

Name of Signer:

Signer's Title:

Signature:

Signer's Telephone:

Signer's Email:

Date:

Commissioners Court - Regular Session **48.**

Meeting Date: 02/20/2018

Park Donations 2-20-18

Submitted For: Melanie Denny **Submitted By:** Melanie Denny, 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 Park Donations.

Background

Donations include $1,000.00 donation for trails and $382.00 in donations for firewood from various patrons.

Fiscal Impact

From/To	Acct No.	Description	Amount
	0100.0000.367403	Park Donations	$1,382.00

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/12/2018 12:34 PM
Form Started By: Melanie Denny		Started On: 02/12/2018 11:17 AM
Final Approval Date: 02/12/2018		

Commissioners Court - Regular Session **49.**

Meeting Date: 02/20/2018

Park Donations 2-20-18

Submitted For: Melanie Denny **Submitted By:** Melanie Denny, 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 Park Donations.

Background

Donations include $1,000.00 donation for trails and $382.00 in donations for firewood from various patrons.

Fiscal Impact

From/To	Acct No.	Description	Amount
	0100.0510.003670	Use of Donations	$1,382.00

Attachments

No file(s) attached.

Form Review

Inbox	Reviewed By	Date
County Judge Exec Asst.	Wendy Coco	02/12/2018 12:34 PM
Form Started By: Melanie Denny		Started On: 02/12/2018 11:17 AM
Final Approval Date: 02/12/2018		

Commissioners Court - Regular Session **50.**

Meeting Date: 02/20/2018

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 North Woods Road District.
c) Project Amazon
d) Wolf Lakes

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	02/15/2018 08:33 AM
Form Started By: Charlie Crossfield		Started On: 02/15/2018 08:30 AM
Final Approval Date: 02/15/2018		

Commissioners Court - Regular Session **51.**

Meeting Date: 02/20/2018

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 N. 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: CR 101

e) Discuss the acquisition of real property: CR 200

f) Discuss the acquisition of real property for CR 278 at Bagdad Rd.

g) Discuss the acquisition of real property for proposed CR 110 project. (All sections)

h) Discuss the acquisition of real property for County Facilities.

i) Discuss the acquisition of Easement interests for the Brushy Creek Trail Project.

j) Discuss the acquisition of real property and easements from San Gabriel River Ranch Subdivision.

k) Discuss the acquisition of real property for CR 278 @ Bagdad Rd.

l) Discuss the acquisition of real property for Seward Junction SE Loop.

m) Discuss the acquisition of real property for SH 29 @ DB Wood.

n) Discuss the acquisition of real property for Hairy Man Rd.

o) Discuss the acquisition of real property for SW Bypass.

p) Discuss Somerset Road Districts No. 3 & 4 reimbursements for acquisition & construction of Reagan Blvd.

q) Discuss Cedar Hollow low water crossings and Lost River.

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 wastewater easements in Berry Springs Park

c) Discuss sale of County property on Ronald Reagan Blvd.

d) Discuss possible sale of +/- 10 acres located on Chandler Road near the County Sheriff's Office Training Facility

e) Potential governmental uses for 8th Street downtown parking lot

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

D. Discuss the possible placement of agricultural-related monuments at the Williamson County Exposition Center with the participation of third parties.

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	02/15/2018 08:33 AM
Form Started By: Charlie Crossfield		Started On: 02/15/2018 08:30 AM
Final Approval Date: 02/15/2018		