

Received

Received

AUG 26 2019

PST

AUG 30 2019

WILLIAMSON COUNTY, TEXAS

CHANGE ORDER NUMBER: 3

Round Rock

AUG 23 2019

HNTB Corporation
Round Rock

1. CONTRACTOR: M.A. Smith Contracting
2. Change Order Work Limits: Sta. 12+00 to Sta. 17+50
3. Type of Change(on federal-aid non-exempt projects): Minor (Major/Minor)
4. Reasons: 2C (3 Max. - In order of importance - Primary first)

Project:	<u>1809-259</u>
Roadway:	<u>Lakeline Right Turn Lane</u>
CSJ Number:	

5. Describe the work being revised:

2C: Differing Site Conditions (unforeseeable). New development (conditions changing after PS&E completed). This Change Order revises various items requested by Austin Energy after the project began. The conduit layout on the project was revised to include the relocation of the electrical service pole and foundation out of the sidewalk. Austin Energy also requested revisions to the callouts on the ground boxes for identification purposes and reduced the wiring for illumination poles. This Change Order adds a pay item to widen the 6' sidewalk to 8' wide to eliminate the need for a bike lane in the existing vehicle travel lane.

6. Work to be performed in accordance with Items: See attached
7. New or revised plan sheet(s) are attached and numbered: 27-29, 31, 34
8. New Special Provisions/Specifications to the contract are attached: No
9. New Special Provisions to Item N/A No. N/A, Special Specification Item N/A are attached.

Each signatory hereby warrants that each has the authority to execute this Change Order (CO).

The contractor must sign the Change Order and, by doing so, agrees to waive any and all claims for additional compensation due to any and all other expenses; additional changes for time, overhead and profit; or loss of compensation as a result of this change.

The following information must be provided

Time Ext. #: 1 Days added on this CO: 3Amount added by this change order: \$1,558.22

THE CONTRACTOR Date 8/23/19

By C. Lopez

Typed/Printed Name Christopher R. Lopez

Typed/Printed Title Project Manager

RECOMMENDED FOR EXECUTION:

[Signature] P.E. 8/26/19
Project Manager Date

N/A
Design Engineer Date

[Signature] 8/29/19
Program Manager Date

Design Engineer's Seal:

See attached plan sheets

County Commissioner Precinct 1 Date
|| APPROVED || REQUEST APPROVAL

County Commissioner Precinct 2 Date
|| APPROVED || REQUEST APPROVAL

County Commissioner Precinct 3 Date
|| APPROVED || REQUEST APPROVAL

County Commissioner Precinct 4 Date
☐ APPROVED ☐ REQUEST APPROVAL

County Judge Date
☐ APPROVED

Project # 1809-259

TABLE B: Contract Items:

[illegible]

CHANGE ORDER REASON(S) CODE CHART

1. Design Error or Omission	1A. Incorrect PS&E 1B. Other
2. Differing Site Conditions (unforeseeable)	2A. Dispute resolution (expense caused by conditions and/or resulting delay) 2B. Unavailable material 2C. New development (conditions changing after PS&E completed) 2D. Environmental remediation 2E. Miscellaneous difference in site conditions (unforeseeable)(Item 9) 2F. Site conditions altered by an act of nature 2G. Unadjusted utility (unforeseeable) 2H. Unacquired Right-of-Way (unforeseeable) 2I. Additional safety needs (unforeseeable) 2J. Other
3. County Convenience	3A. Dispute resolution (not resulting from error in plans or differing site conditions) 3B. Public relations improvement 3C. Implementation of a Value Engineering finding 3D. Achievement of an early project completion 3E. Reduction of future maintenance 3F. Additional work desired by the County 3G. Compliance requirements of new laws and/or policies 3H. Cost savings opportunity discovered during construction 3I. Implementation of improved technology or better process 3J. Price adjustment on finished work (price reduced in exchange for acceptance) 3K. Addition of stock account or material supplied by state provision 3L. Revising safety work/measures desired by the County 3M. Other
4. Third Party Accommodation	4A. Failure of a third party to meet commitment 4B. Third party requested work 4C. Compliance requirements of new laws and/or policies (impacting third party) 4D. Other
5. Contractor Convenience	5A. Contractor exercises option to change the traffic control plan 5B. Contractor requested change in the sequence and/or method of work 5C. Payment for Partnering workshop 5D. Additional safety work/measures desired by the contractor 5E. Other
6. Untimely ROW/Utilities	6A. Right-of-Way not clear (third party responsibility for ROW) 6B. Right-of-Way not clear (County responsibility for ROW) 6C. Utilities not clear 6D. Other

Williamson County Road Bond Program

**Lakeline Right Turn Lane
Williamson County Project No. 1809-259**

Change Order No. 3

Reason for Change

This Change Order revises various items at the request of Austin Energy (A/E). The conduit layout on the project was revised, which included the relocation of the electrical service pole and foundation away from the proposed sidewalk. A/E also requested revisions to the call-outs on the ground box for identification purposes and reduced the wiring for illumination poles. This Change Order also adds a pay item to widen the 6-foot sidewalk to 8 feet wide, to eliminate the need for a bike lane in the existing vehicle travel lane.

The sidewalk was previously constructed to a width of 6 feet, due to the proximity to the existing Austin Energy poles. The adjacent rain garden erosion control device was adjusted to provide space for the additional 2 feet required for the sidewalk.

The following summarizes the new Contract items required for this Change Order.

ITEM	DESCRIPTION	QTY	UNIT
999-WC04	SIDEWALK REVISION	464	SF

This Change Order results in a net increase of \$1,558.22 to the Contract amount, for an adjusted Contract total of \$591,552.89. The original Contract amount was \$567,792.55. As a result of this and all Change Orders to-date, \$23,760.34 has been added to the Contract, resulting in a 4.2% net increase in the Contract cost. Three (3) days will be added to the Contract as a result of this Change Order.

HNTB Corporation

James Klotz, P.E.

Dawn Haggard

From: Gutekunst, Jake <jake.gutekunst@kimley-horn.com>
Sent: Tuesday, March 05, 2019 3:33 PM
To: Eddie R. Church; Deshpande, Vivek; Neal, Trey
Cc: 62811_1809-259_LakelineRTL; Ryan Rivera; Clayton Weber; Christen Eschberger; James Klotz
Subject: RE: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)
Attachments: 1809-259_LakelineRTL-20190305 Revised Sheets.pdf; Draft_Quantities_Change_Order.pdf

Eddie,

Thanks for taking a look at these. I have replied in-line in the e-mail below to your questions and have attached a subsequent set of revised plans for clarifications and item list with quantity deltas from bid set based on comments below. The RFI responses sent previously remain unchanged.

Thank you,

Jake Gutekunst, P.E. (TX)

Kimley-Horn | 10814 Jollyville Rd, Bldg 4, Ste. 300, Austin, TX 78759

Direct: 512 418 4526 | Mobile: 214 684 0277

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From: Eddie R. Church <erchurch@HNTB.com>
Sent: Tuesday, March 5, 2019 9:55 AM
To: Gutekunst, Jake <jake.gutekunst@kimley-horn.com>; Deshpande, Vivek <vivek.deshpande@kimley-horn.com>; Neal, Trey <trey.neal@kimley-horn.com>
Cc: 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>; Ryan Rivera <rrivera@HNTB.com>; Clayton Weber <cweber@HNTB.com>; Christen Eschberger <ceschberger@HNTB.com>; James Klotz <jklotz@HNTB.com>
Subject: RE: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

Jake,

We did a review of the responses and revised sheets and wanted to clarify the following, before sending to the Contractor.

1. Which sheets go with which RFI response? **RFI #18 – sheets 29, 31, and 34 (conduit and wiring revisions, quantities revisions, and new electrical service location for signal & intersection lighting only); RFI #19 – sheets 27, 28, 29, 31 (clarification of existing and proposed ped signal / push buttons, revisions to conduit numbering scheme and removal of No. 6 conductors for roadway illumination after changes to electrical service location and conduit location for roadway illumination, quantities revisions). These were submitted as one set due to significant overlap on sheets 28 & 29.**
2. On the revised sheet 27, it is not clear what has actually changed. Since the wiring has changed, it is assumed that just the area of change has been bubbled. True? If not, please add call-outs to clarify changes. **Only changes were to ped head status as existing or proposed, conduit run numbers beyond run no. 14. Revision bubbles have been revised to be smaller / around the specific changes to clarify.**
3. On revised sheet 28, it appears that only the call-outs have been updated to say which Ped signals are existing. Correct? **Correct – this is to clarify that these are to remain. Revised to state “Existing to Remain” in callouts to be more clear.**
4. Revised sheet 29 shows that the conduit and wiring quantities have changed. **Correct, bubble has been revised to show specifically runs No. 14 and on as having changed. Run No. 15 in previous submittal removed after**

removal of city of Austin pull box between run No. 14 and 15. Numbering scheme altered as follows: No 14 and 15 combined (same conduit / wiring in each previously) and "Length of Run" updated to reflect by summing previous lengths. Previous runs 16, 17, 18, 19, and 19A are now respectively 15, 16, 17, 18, and 19. Run No. 20 truncated to be from pole A2 to new location of Austin Energy pull box to complete circuit rerouting and tie into existing roadway illumination circuit. Wiring for roadway illumination in previous conduit runs 14, 15, 18, 19, 19A, and 20 as it was stated by contractor that wiring will be provided by Austin Energy (using the project's conduit).

5. Revised sheet 31 has several quantity differences from the original plans that are not bubbled. Please update sheet and also provide a list of item numbers that have changed with their deltas. This will be used to create a draft Change Order. **Sheet updated and items with deltas provided in PDF attached.**
6. Since revised sheet 34 has poles and services, please update sheet table that shows stations and offsets for placement purposes. The revised sheet still shows the same numbers in the table as the original sheet, but the location has changed. **Previous sheet only showed roadway illumination Pole 1 station and offset (location unchanged from bid set). Pole 1 is the only new location roadway illumination pole. Station and Offset for Electrical Service No. 2 on sheet 34 has been added as a new table to clarify location of service pole.**

Please answer questions, make updates per above, QC revisions and send back today, so we can issue to the Contractor for construction.

Thank you,

Eddie R. Church, PE

Project Manager

Tel (512) 527-6723 Email erchurch@hntb.com

From: Gutekunst, Jake [<mailto:jake.gutekunst@kimley-horn.com>]

Sent: Monday, March 4, 2019 5:13 PM

To: Eddie R. Church <erchurch@HNTB.com>; Deshpande, Vivek <vivek.deshpande@kimley-horn.com>; Neal, Trey <trey.neal@kimley-horn.com>

Cc: 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>; Ryan Rivera <rrivera@HNTB.com>; Clayton Weber <cweber@HNTB.com>

Subject: RE: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

Eddie,

Please find the RFI Responses for RFI #18 and RFI #19 attached along with revised plan sheets (including revised quantities on Sheet 31 of the revised plan sheets).

Please let us know if further questions remain or if these are resolved.

Thank you,

Jake Gutekunst, P.E. (TX)

Kimley-Horn | 10814 Jollyville Rd, Bldg 4, Ste. 300, Austin, TX 78759

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From: Eddie R. Church <erchurch@HNTB.com>

Sent: Friday, March 1, 2019 12:16 PM

To: Gutekunst, Jake <jake.gutekunst@kimley-horn.com>; Deshpande, Vivek <vivek.deshpande@kimley-horn.com>; Neal, Trey <trey.neal@kimley-horn.com>

Cc: 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>; Ryan Rivera <rrivera@HNTB.com>; Clayton Weber

<cweber@HNTB.com>

Subject: RE: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

Sounds good. Thx for letting us know.

Thank you,

Eddie R. Church, PE

Project Manager

Tel (512) 527-6723 Email erchurch@hntb.com

From: Gutekunst, Jake [<mailto:jake.gutekunst@kimley-horn.com>]

Sent: Friday, March 1, 2019 9:16 AM

To: Deshpande, Vivek <vivek.deshpande@kimley-horn.com>; Eddie R. Church <erchurch@HNTB.com>; Neal, Trey <trey.neal@kimley-horn.com>

Cc: 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>; Ryan Rivera <rrivera@HNTB.com>; Clayton Weber <cweber@HNTB.com>

Subject: RE: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

Eddie,

We are working towards updating the sheet for illumination (34) and will also make some revisions to sheets 27-31 based on impacts to conduit / wiring charts and quantities tables. Because RFI #18 and RFI #19 are interrelated, we are going to submit both on Monday by COB with all the revised sheets to avoid confusion.

Thank you,

Jake Gutekunst, P.E. (TX)

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From: Deshpande, Vivek

Sent: Monday, February 25, 2019 9:22 AM

To: Eddie R. Church <erchurch@HNTB.com>; Neal, Trey <trey.neal@kimley-horn.com>

Cc: 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>; Ryan Rivera <rrivera@HNTB.com>; Clayton Weber <cweber@HNTB.com>; Gutekunst, Jake <jake.gutekunst@kimley-horn.com>

Subject: RE: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

Eddie,

Following up on our field meeting on Friday, below is the question that can be included in a new RFI from either Chris or internal RFI.

"Please clarify proposed wiring plan for the relocated street light pole, existing street lighting east of HEB driveway, and the existing traffic signal. Plans show wiring for street lighting to go through the proposed electrical service for the traffic signal."

We are working on updating the sheet and should be done by COB today. We will issue the sheets after the RFI is generated.

Thanks!

Vivek

Vivek Deshpande P.E. PTOE

Kimley-Horn | 10814 Jollyville, Avallon IV, Suite 300, Austin, TX 78759

Direct: 512 418 4536 | Mobile: 612 308 1524

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From: Eddie R. Church <erchurch@HNTB.com>

Sent: Wednesday, February 13, 2019 2:43 PM

To: Deshpande, Vivek <vivek.deshpande@kimley-horn.com>; Neal, Trey <trey.neal@kimley-horn.com>

Cc: 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>; Ryan Rivera <rrivera@HNTB.com>; Clayton Weber <cweber@HNTB.com>; Gutekunst, Jake <jake.gutekunst@kimley-horn.com>

Subject: RE: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

Vivek,

Yes, there is a site meeting tomorrow at 10am. Be sure to communicate with Trey, to see if he needs you to be out there. They will mainly be discussing AE's existing poles versus the proposed sidewalk location. They will also discuss wiring, power source and coordination with AE. Chris Lopez with Smith Contracting probably contacted Frank. It wasn't me, but it sounds like all the right people are in the loop now.

Thank you,

Eddie R. Church, PE

Project Manager

Tel (512) 527-6723 Email erchurch@hntb.com

From: Deshpande, Vivek [<mailto:vivek.deshpande@kimley-horn.com>]

Sent: Wednesday, February 13, 2019 12:30 PM

To: Neal, Trey <trey.neal@kimley-horn.com>; Eddie R. Church <erchurch@HNTB.com>

Cc: 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>; Ryan Rivera <rrivera@HNTB.com>; Clayton Weber <cweber@HNTB.com>; Gutekunst, Jake <jake.gutekunst@kimley-horn.com>

Subject: RE: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

All,

I just got off the phone with Frank Soliz with Austin Energy. I think he got his #s mixed up, he was trying to call John Bartleson with ATS but ended up calling me! He kept calling me John and it took us a few minutes to understand what was going on. I guess I had left them enough voicemails with a call back # that they got confused.

I believe John was trying to schedule a field meeting tomorrow (2/14) to discuss AE illumination wiring issues. Frank has confirmed he will meet up in the HEB parking lot tomorrow at 10 am.

Eddie – Frank mentioned he had an email/voicemail from you as well. Are you able to follow up and confirm the field meeting with John? I'm assuming you have an open email chain with John. Please let me know if you need me to reach out, I would be happy to call him. I didn't want to add more confusion.

Thanks,

Vivek

Vivek Deshpande P.E. PTOE

Kimley-Horn | 10814 Jollyville, Avallion IV, Suite 300, Austin, TX 78759

Direct: 512 418 4536 | Mobile: 612 308 1524

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From: Neal, Trey

Sent: Friday, February 1, 2019 12:32 PM

To: Eddie R. Church <erchurch@HNTB.com>

Cc: 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>; Ryan Rivera <rrivera@HNTB.com>; Clayton Weber <cweber@HNTB.com>; Gutekunst, Jake <jake.gutekunst@kimley-horn.com>; Deshpande, Vivek <vivek.deshpande@kimley-horn.com>

Subject: RE: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

Eddie,

Did you hear anything back from Sam? We have been looking into this as well and wanted to give you a quick update regarding RFI 9 and 12.

We have reviewed the RFI #9 and are currently coordinating with Austin Energy to determine any impacts to the existing illumination circuit related to RFI #12. As for the questions in RFI #9, our response pending coordination with Austin Energy are as follows. Regarding coordination of new service with Austin Energy and all associated applications (question 1), the general notes for Item 628 state that the contractor "shall make all arrangements for power", and thus the contractor should be coordinating the new service. The contact information at Austin Energy for this area is Ronald Solbach (P: 512-505-7145, E-mail: Ronald.solbach@austinenergy.com) As for the timing of the disconnect of existing power (question 2), the infrastructure required for the new electrical service should be in place prior to cutting off power to the two illumination poles being removed or relocated per sheet 34.

We are awaiting a return call from Austin Energy (Ronald Solbach) to understand the existing illumination / service circuits better and minimize disruption to the illumination circuits.

Thank you,

Trey

Trey Neal, P.E.

Kimley-Horn | 10814 Jollyville Road, Avallion IV, Suite 300, Austin, TX 78759

Direct: 512 418 4507 | Mobile: 512 818 7299

Celebrating 11 years as one of FORTUNE's 100 Best Companies to Work For

From: Eddie R. Church <erchurch@HNTB.com>

Sent: Friday, January 25, 2019 1:42 PM

To: Samuel West (<Samuel.West@austintexas.gov> <Samuel.West@austintexas.gov>

Cc: 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>; Neal, Trey <trey.neal@kimley-horn.com>; Ryan Rivera <rrivera@HNTB.com>; Clayton Weber <cweber@HNTB.com>

Subject: FW: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

Sam,

Could you please review the attached RFI #9 for the Lakeline RTL project? At your earliest convenience, please provide a response. I have attached the Excel form for your use.

Thank you,

Eddie R. Church, PE

Project Manager

Tel (512) 527-6723 Email erchurch@hntb.com

From: Chris Lopez [<mailto:chrislopez@smithcontinc.com>]

Sent: Friday, January 25, 2019 8:53 AM

To: Eddie R. Church <erchurch@HNTB.com>

Cc: Ryan Rivera <rrivera@HNTB.com>; Clayton Weber <cweber@HNTB.com>; coylechow@smithcontinc.com; 62811_1809-259_LakelineRTL <LakelineRTL_P331@hntb.com>

Subject: Lakeline RTL: RFI #9-Signal & Illumination Poles (Service)

Eddie,

Please see RFI#9 attached. I didn't allot the normal 14 days of turn around time on this one, because we would like to have this submitted to the City as soon as possible. I understand that the requested return date might not be met, but I just wanted to emphasize the importance of this particular RFI. Thanks.

Chris Lopez | Smith Contracting, Inc.

Project Manager

M. [512.350.1806](tel:512.350.1806) F. [512.990.7640](tel:512.990.7640)

E. chrislopez@smithcontinc.com

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NOTES:
1. REMOVE SIGNAL HARDWARE AS SHOWN ON THE PLANS AND SALVAGE BACK TO THE CITY OF AUSTIN TRAFFIC SIGNAL SHOP. SHALL BE SUBSIDIARY TO ITEM 840S.
2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT BACK OF CURB UNLESS OTHERWISE NOTED.
3. LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE. CONTRACTOR SHALL CALL "TEXAS ONE CALL" (800-245-4545) PRIOR TO EXCAVATION. TRENCHING OR DRILLING IN THE VICINITY OF UNDERGROUND UTILITIES SHALL BE HAND DUG TO AVOID DAMAGE.
4. REFER TO SIGNING & MARKING SHEETS FOR PAVEMENT MARKING AND OTHER SIGNING DETAILS.
5. CITY OF AUSTIN AND AUSTIN ENERGY PULL BOXES LOCATED NEXT TO POLE A2 TO BE PLACED OVER EXISTING ILLUMINATION CONDUIT. BREAK CONDUIT AND ADD SWEEPS INTO NEW PULL BOX FOR NEW CONDUCTORS TO EXISTING POLE IN RUN 20.
6. CONDUIT RUN 3 TO BE CONSTRUCTED AS TRENCHED CONDUIT DURING DRIVEWAY RECONSTRUCTION.

POLE LOCATIONS*			
POLE	STA	OFFSET (ft)	DIRECTION
A2	17+92.59	57.41	RIGHT
B2	EXISTING FOUNDATION		
C2	EXISTING POLE		
D2	17+02.79	63.00	RIGHT
E2	17+17.39	71.55	RIGHT
F2	EXISTING POLE		
G2	EXISTING POLE		
H2	EXISTING POLE		
I2	EXISTING POLE		

* POLE LOCATIONS IN REFERENCE TO LAKELINE BLVD BASELINE

LEGEND

- EXIST WIRING TO REMAIN

EXIST WIRING TO BE ABANDONED

EXIST VIVDS TO REMAIN

EXIST VIVDS TO BE REMOVED

EXIST GAS LINE

EXIST OVERHEAD ELECTRIC

EXIST FIBER OPTIC CABLE

EXIST STORM DRAIN

EXIST FIRE MAIN

EXIST WATER LINE

EXIST WASTE WATER LINE

EXIST UNDERGROUND ELECTRIC

ABANDONED LINE
- PROP SIGNAL HEAD

PROP MAST ARM

PROP SIGNAL POLE

PROP PED-POLE

PROP PED-HEAD/PUSH-BUTTON

EXIST PED-HEAD/PUSH-BUTTON

VIVD CAMERA

PED RAMP

EXIST SIGNAL CABINET

CITY OF AUSTIN GROUND BOX

AUSTIN ENERGY GROUND BOX

EXIST GROUND BOX TO REMAIN

EXIST GROUND BOX TO ABANDON

PROP CONDUIT-TRENCH

PROP CONDUIT-BORE

MAST-ARM SIGN

POLE LABEL

CAMERA LABEL

CONDUIT LABEL

RIGHT OF WAY

EXIST SIGNAL POLE TO REMAIN

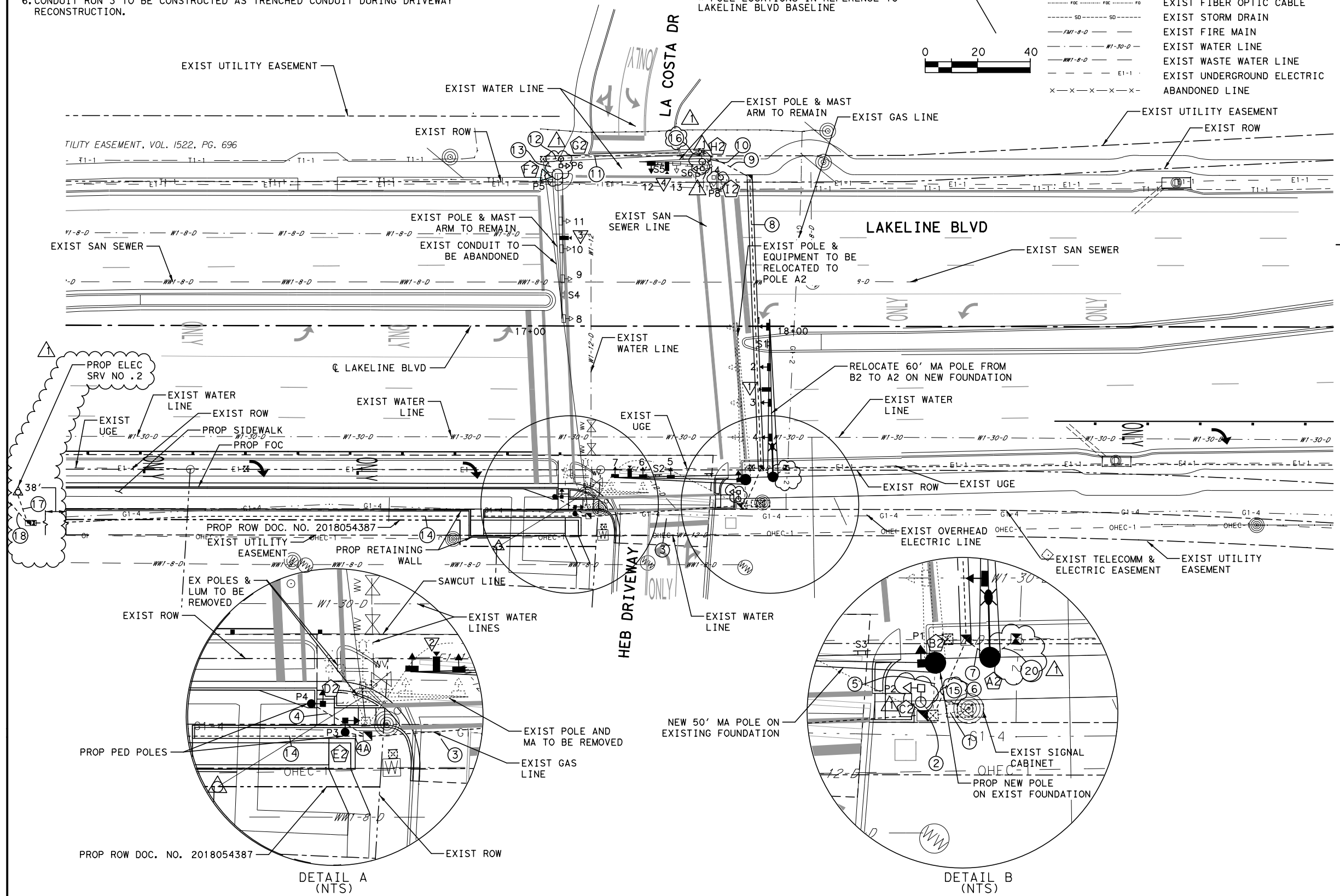
EXIST MAST-ARM TO REMAIN

EXIST SIGNAL HEAD TO REMAIN

EXIST SIGNAL POLE TO BE REMOVED

EXIST SIGNAL HEAD TO BE REMOVED

EXIST MAST-ARM TO BE REMOVED



3/5/19 PED SIGNAL/ILLUMINATION REVISIONS

Phone: (512)-418-1771
Address: 10814 Jollyville Rd
Avalon IV, Suite 300
Austin, TX 78759

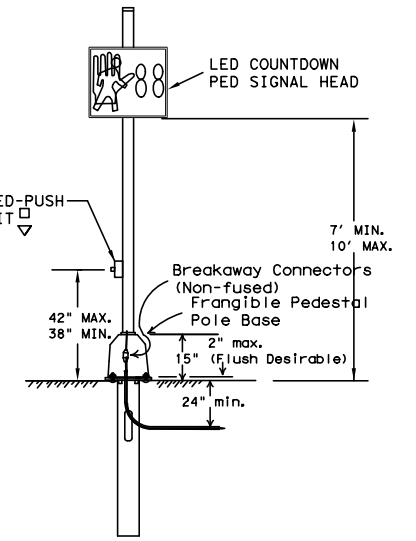
Kimley»Horn

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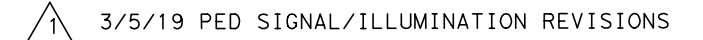
2851 1/2 S. LAKELINE BLVD.
LAKELINE TURN LANE
**PROPOSED SIGNAL LAYOUT -
LAKELINE/ HEB DRIVEWAY**

SHEET 2 OF 6

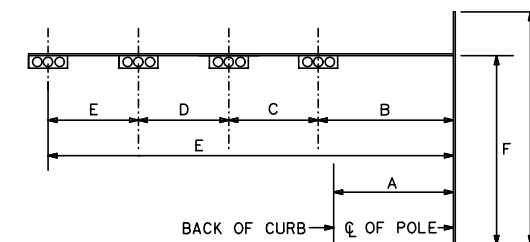
DES: GRM	WILLIAMSON COUNTY JOB NO. CASE# SP-2016-0491DS	SHEET NO.
CK: TAN		27

PEDESTRIAN POLE DETAILS
POLES E2 (P5), F2 (P6)

1. The foundation for the assembly shall be in accordance with COA standard 8315-2.
2. All breakaway electrical connectors for breakaway poles shall be non-fuse and water tight. (Buchannan, Bussmann HET, Littelfuse, Ferraz-Shawmut GEBN, HMC Industries, SDK-MDI or approved equal).
3. Threaded Connector, all T-Base threads must be engaged onto pipe or the pipe shall be fully seated into base as per manufacturer's recommendations. A pole and base collar assembly shall be used to add strength and prevent loosening of connection in high winds.



POLE	TYPE	MAST ARM	FDN	A	B	C	D	E
A2	60L-80	60 IV-80	48-A	6	15	13	14	15
B2	50L-80	50 III-80	48-A	7	39	11	--	--



NOTE:
1. POLES C2, F2, G2, H2, I2 ARE ALL EXISTING.



Phone: (512)-418-1771
Address: 10814 Jollyville Rd
Avalon IV, Suite 300
Austin, TX 78759

Kimley»Horn

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2851 1/2 S. LAKELINE BLVD.
LAKELINE TURN LANE
SIGNAL ELEVATION -
LAKELINE/ HEB DRIVEWAY

SHEET 3 OF 6

DES: GRM	WILLIAMSON COUNTY JOB NO. CASE# SP-2016-0491DS	SHEET NO.
CK: TAN		28

CONDUIT AND CABLE CHART																			
RUN NO	ACTION	ITEM 844S Trenching Behind		ITEM 835S Installing Traffic Signal Conduit				ACTION	ITEM TX620 ELECTRICAL CONDUCTORS				ITEM TX684 SIGNAL CABLE				ITEM 6002 VIVDS COAX	LENGTH OF RUN	RUN NO
		Class 2 (12" Width)	Class 3 (18" Width)	2" PVC (BORED)	3" PVC (BORED)	2" PVC (IN TRENCH)	3" PVC (IN TRENCH)		NO. 6 BARE	NO. 6 INSULATED	NO. 8 BARE	NO. 8 INSULATED	TYPE A		TYPE C				
													3 CNDR NO. 14	5 CNDR NO. 12	20 CNDR NO. 12	2 CNDR TWISTED NO. 18			
1	E						5	I	1	2	4		4	5	4	8	4	10	1
2	I		1			1	2	I	1	2	2	2		2	1	2		5	2
3	I		1			1	2	I	1	2	2	2		2	1	2		60	3
4	I	1				1		I			1			1		1		25	4
4A	I	1				1		I			1			1		1		10	4A
5	E					3		I			3		1		1	1	1	10	5
6	I		1			1	2	I	1	2	3	2	3	2	3	4	3	15	6
7	I		1			3		I			3	2	1	2	1		1	5	7
8	I		1	1	2			I			3		2	2	2	4	2	115	8
9	I		1	1	2			I			3		2	1	2	4	2	25	9
10	E					1		I			1			1		1		15	10
11	E					2	1	I			3		1	1	1	2	1	65	11
12	E					1		I			1			1		1		10	12
13	E					3		I			3		1		1	1	1	10	13
14	I	1				2		I	1	2	1	2				1		245	14
15	E					1		I			1			1		1		5	15
16	E					3		I			3		1	1	1	1	1	5	16
17	I	1				1		I	1	2	1	2						20	17
18	I	1				1		I										25	18
19	I	1				1		I										50	19
20	I	1				1		I										10	20
SUBTOTAL (IN FEET)		385	225	140	280	725	160		355	710	1250	760	579	675	525	1110	579		

I - INSTALL, E - EXISTING

1

INSIDE POLES (IN	18 AWG 2/C	14 AWG 5/C	LUM #8 INS	VIVDS	
A2		40	60	3/C	COAX
B2	10	50		20	20
C2	10	10			
D2	10	10			
E2	10	10			
F2	10	50		20	20
G2	10	10			
H2	10	50		20	20
I2	10	10			
TOTAL QTY	80	240	60	80	80

INSIDE ARMS (IN FEET)	14 AWG 5/C	VIVDS	
A2	99	34	34
B2	89	45	45
C2	PED POLE		
D2	PED POLE		
E2	PED POLE		
F2	95	25	25
G2	PED POLE		
H2	30	14	14
I2	PED POLE		
TOTAL QTY	313	118	118

CABLE TERMINATION CHART - SIGNAL POLES					
CNDR NO.	STATUS CONDUCTOR COLOR	INSTALL	INSTALL	INSTALL	INSTALL
		CABLE 1 20 CNDR	CABLE 2 20 CNDR	CABLE 3 20 CNDR	CABLE 4 20 CNDR
		FROM A2 TO CNTRL	FROM B2 TO CNTRL	FROM F2 TO CNTRL	FROM H2 TO CNTRL
1	RED/WHITE	SH 2, 3, 4 R PHASE 06	SH 6, 7 R PHASE 08	SH 9, 10, 11 R	SH 13, 14 R PHASE 04
2	BLACK/WHITE	SH 2, 3, 4 Y PHASE 06	SH 6, 7 Y PHASE 08	SH 9, 10, 11 Y	SH 13, 14 Y PHASE 04
3	GREEN/WHITE	SH 2, 3, 4 G PHASE 06	SH 6, 7 G PHASE 08	SH 9, 10, 11 G	SH 13, 14 G PHASE 04
4	RED	SH 1 R ARW OVL A (R)	SH 5 R ARW OVL D (R)	SH 8 R ARW OVL A (R)	SH 12 R ARW OVL C (R)
5	ORANGE	SH 1 Y ARW OVL A (Y)	SH 5 Y ARW OVL D (Y)	SH 8 Y ARW OVL A (Y)	SH 12 Y ARW OVL C (Y)
6	GREEN	SH 1 G ARW PHASE 01	SH 5 G ARW PHASE 07	SH 8 G ARW PHASE 05	SH 12 G ARW PHASE 03
7	BLUE	SH 1 Y FLASH ARW OVL A (G)	SH 5 Y FLASH ARW OVL D	SH 8 Y FLASH ARW OVL A	SH 12 Y FLASH ARW OVL C
8	RED/BLACK	P1 DW PHASE 04	SPARE	P5 DW PHASE 08	P7 DW PHASE 02
9	GREEN/BLACK	P1 W PHASE 04	SPARE	P5 W PHASE 08	P7 W PHASE 02
10	BLUE/BLACK	P2 DW PHASE 06	SPARE	P6 DW PHASE 02	P8 DW PHASE 04
11	ORANGE/BLACK	P2 W PHASE 06	SPARE	P6 W PHASE 02	P8 W PHASE 04
12	BLACK	SPARE	SPARE	SPARE	SPARE
13	WHITE	NEUTRAL	NEUTRAL	NEUTRAL	NEUTRAL
14	WHITE/BLACK	SPARE	SPARE	SPARE	SPARE
15	BLUE/BLACK	SPARE	SPARE	SPARE	SPARE
16	BLACK/RED	SPARE	SPARE	SPARE	SPARE
17	WHITE/RED	SPARE	SPARE	SPARE	SPARE
18	ORANGE/RED	SPARE	SPARE	SPARE	SPARE
19	BLUE/RED	SPARE	SPARE	SPARE	SPARE
20	RED/GREEN	SPARE	SPARE	SPARE	SPARE

CABLE TERMINATION CHART - PEDESTRIAN POLES						
CNDR NO.	STATUS CONDUCTOR COLOR	INSTALL	INSTALL	INSTALL	INSTALL	INSTALL
		CABLE 3 5 CNDR	CABLE 1 5 CNDR	CABLE 2 5 CNDR	CABLE 12 5 CNDR	CABLE 16 5 CNDR
		FROM C2 TO CNTRL	FROM D2 TO CNTRL	FROM E2 TO CNTRL	FROM G2 TO CNTRL	FROM I2 TO CNTRL
1	BLACK	P2 DW PHASE 06	P3 DW PHASE 06	P4 DW PHASE 08	P6 DW PHASE 02	P8 DW PHASE 04
2	WHITE	PED COM	PED COM	PED COM	PED COM	PED COM
3	RED	SPARE	SPARE	SPARE	SPARE	SPARE
4	GREEN	SPARE	SPARE	SPARE	SPARE	SPARE
5	ORANGE	P2 W PHASE 06	P3 W PHASE 06	P4 W PHASE 08	P6 W PHASE 02	P8 W PHASE 04

ELECTRICAL SERVICE DATA NO. 2												
SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION			SERVICE CONDUIT SIZE (RMC)	SERVICE CONDUCTORS NO/ SIZE	MAIN DISCONNECT CKT. BRK. POLE/AMP	TWO POLE CONTRACTOR AMPS	PANEL B. D/ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	BRANCH CKT. /BRK POLE AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	ELEC SERV TY D (120/240) 060 (NS) SS (E) SP (O)			1 1/4"	3/ #6	2P/60	30	100	SIGNAL	1P/40	30	8.0
									INTERSECTION LIGHTING	2P/15	10	

1 3/5/19 PED SIGNAL/ILLUMINATION REVISIONS



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F-928

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2851 1/2 S. LAKELINE BLVD.
LAKELINE TURN LANE
**ELECTRICAL WIRING -
LAKELINE/ HEB DRIVEWAY**

SHEET 4 OF 6

DES: GRM	WILLIAMSON COUNTY JOB NO. CASE# SP-2016-0491DS	SHEET NO.
CK: TAN		29

ESTIMATED QUANTITIES					
ITEM	CODE	DESCRIPTION	UNIT	REFERENCE	QUANTITY
0620	6007	ELEC CONDR (NO.8) BARE	LF	TXDOT	1,250
0620	6008	ELEC CONDR (NO.8) INSULATED	LF	TXDOT	760
0620	6009	ELEC CONDR (NO.6) BARE	LF	TXDOT	355
0620	6010	ELEC CONDR (NO.6) INSULATED	LF	TXDOT	710
0684	6029	TRF SIG CBL (TY A) (14 AWG) (3 CONDR)	LF	TXDOT	579
0684	6031	TRF SIG CBL (TY A) (14 AWG) (5 CONDR)	LF	TXDOT	675
0684	6046	TRF SIG CBL (TY A) (14 AWG) (20 CONDR)	LF	TXDOT	525
0684	6082	TRF SIG CBL (TY C) (18 AWG) (2 CONDR)	LF	TXDOT	1,110
0688	6001	PED DETECT PUSH BUTTON (APS)	EA	TXDOT	3
6002	6001	VIVDS PROCESSOR SYSTEM	EA	TXDOT	1
6002	6002	VIVDS CAMERA ASSEMBLY	EA	TXDOT	4
6002	6003	VIVDS SET-UP SYSTEM	EA	TXDOT	1
6002	6005	VIVDS COMMUNICATION CABLE (COAXIAL)	LF	TXDOT	579
831S	2	36 inch diameter Traffic Signal Drilled Shaft Foundations 10 ft Depth	EA	COA	1
831S	5	24 inch diameter Pedestrian Signal Foundation 4 ft Depth	EA	COA	2
832S	VSM-3	Vehicular Signal Installation, 3 Section, Complete in Place	EA	COA	7
832S	VSM-4	Vehicular Signal Installation, 4 Section, Complete in Place	EA	COA	3
834S	3	Type B Pull Box	EA	COA	5
834S	4	Ring and Lid for use with Type B Pull Boxes	EA	COA	5
835S	LT2	Installing Traffic Signal Conduit with Conduit 2 inch in diameter	LF	COA	865
835S	LT3	Installing Traffic Signal Conduit with Conduit 3 inch in diameter	LF	COA	440
838S	PSMP	Pedestrian Signal Installation: Metal Pole	EA	COA	2
838S	PSSA	Pedestrian Signal Installation: Stand Alone	EA	COA	1
839S	MAP3	Type 3 Mast Arm Pole	EA	COA	1
839S	MA50	50-foot Mast Arm	EA	COA	1
840S	TSI	Traffic Signal Installation	EA	COA	1
844S	2	Class 2 Trenching for Traffic Signal Conduit	LF	COA	385
844S	3	Class 3 Trenching for Traffic Signal Conduit Behind Curb	LF	COA	225
WC9036	1	Remove Pole	EA	SPECIAL	1
WC9036	2	Remove Pole Foundation	EA	SPECIAL	1
WC9036	3	Remove Ped Pole Foundation	EA	SPECIAL	1
WC9037	1	Relocate Illumination Pole *	EA	SPECIAL	1
628	WC01	Overhead Electrical Service-City Std. No Meter	EA	SPECIAL	1

*ITEM INCLUDES CITY OF AUSTIN STREETLIGHT FOUNDATION AND AUSTIN ENERGY STANDARD GROUND BOX.

1 3/5/19 PED SIGNAL/ILLUMINATION REVISIONS

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LAKELINE TURN LANE

QUANTITIES/ HEB DRIVEWAY

SHEET 6 OF 6

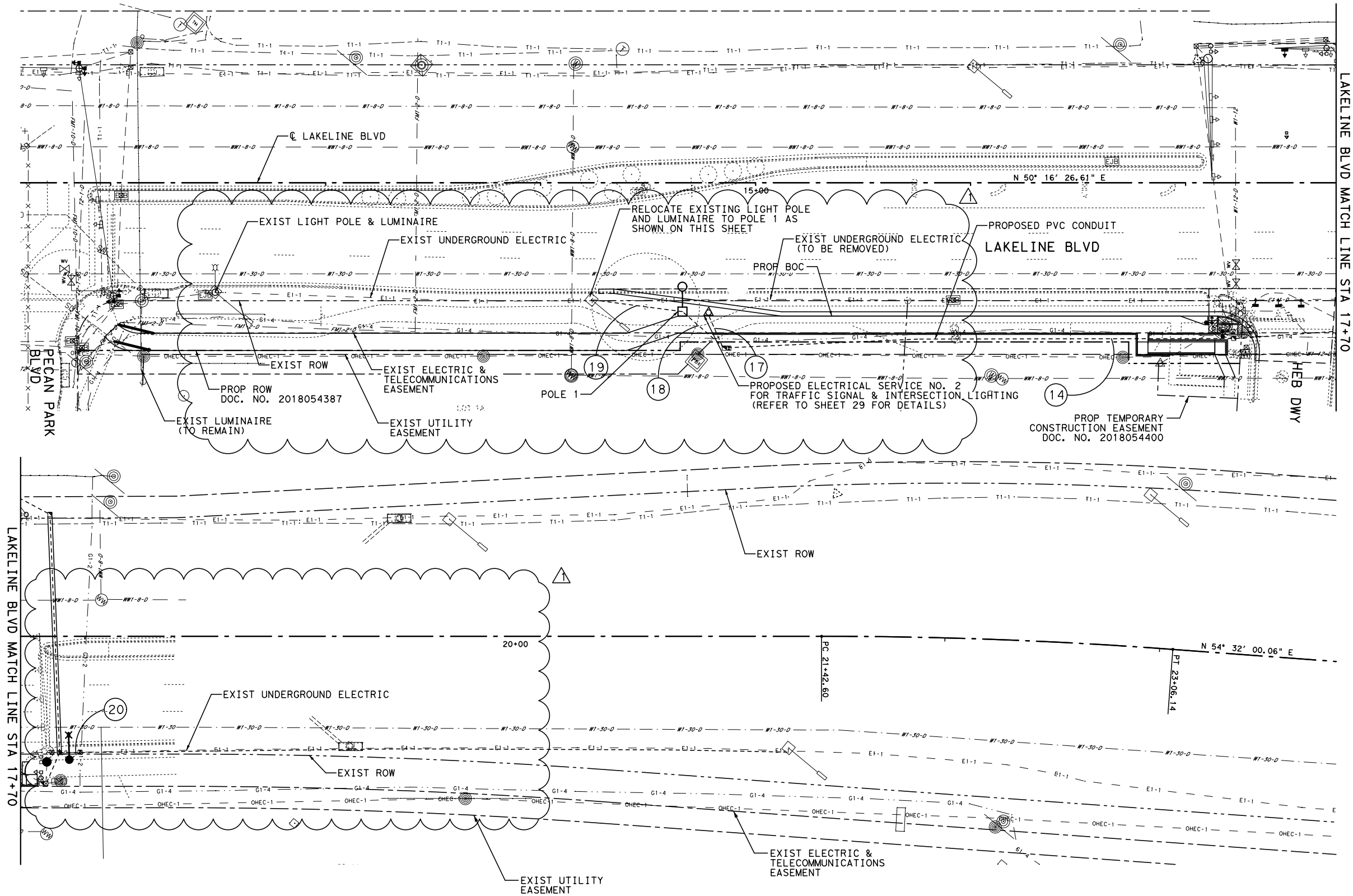
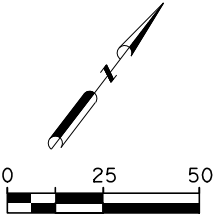
DES: GRM	WILLIAMSON COUNTY JOB NO. CASE# SP-2016-0491DS	SHEET NO.
CK: TAN		31

- NOTES:
- ILLUMINATION POLE TO BE RELOCATED AS SHOWN ON THE PLANS ON STANDARD AUSTIN ENERGY FOUNDATIONS.
 - REFER TO SHEET 29 FOR ELECTRICAL WIRING DETAILS.
 - REFER TO SHEET 31 FOR ILLUMINATION QUANTITIES.

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SUMMARY OF ROADWAY ILLUMINATION ASSEMBLIES				
POLE	ALIGN	STATION	OFFSET	DIRECTION
1	LAKELINE	14+66.00	60'	RIGHT

ELECTRICAL SERVICE LOCATION				
POLE	ALIGN	STATION	OFFSET	DIRECTION
2	LAKELINE	14+78.00	60'	RIGHT



3/5/19 PED SIGNAL/ILLUMINATION REVISIONS



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03/05/2019

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2851 1/2 S. LAKELINE BLVD.
LAKELINE TURN LANE
ILLUMINATION LAYOUT

SHEET 1 OF 1

DES: GRM	WILLIAMSON COUNTY JOB NO. CASE# SP-2016-0491DS	SHEET NO.
CK: TAN		34