

Received

Received

APR 25 2019

APR 29 2019

APR 23 2019

PSI

WILLIAMSON COUNTY, TEXAS
CHANGE ORDER NUMBER 1

HNTB Corporation
 Round Rock

1. CONTRACTOR: Cox Commercial Construction
2. Change Order Work Limits: Sta. 53+00 to Sta. 56+00
3. Type of Change (on federal-aid non-exempt projects): Minor (Major/Minor)
4. Reasons: 1A (3 Max. - In order of importance - Primary first)

Project:	<u>1805-232</u>
Roadway:	<u>CR200@SH29</u>
CSJ Number:	<u>0151-03-041</u>

5. Describe the work being revised:

1A: Design Error or Omission. Incorrect PSE. This change order adds quantities and new bid items for revisions to the water line utility installation and the traffic signal system that are omitted or calculated incorrectly in PS&E.

6. Work to be performed in accordance with Items: See attached.
7. New or revised plan sheet(s) are attached and numbered: Sheet 12 & 87
8. New Special Provisions/Specifications to the contract are attached: ☐ Yes ☒ 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 CONTRACTOR

Date 4/22/19

By

Typed/Printed Name

DARREN OKRUK

Typed/Printed Title

Sr. VP**The following information must be provided**Time Ext. #: N/A Days added on this CO: 0Amount added by this change order: \$32,028.08**RECOMMENDED FOR EXECUTION:**

James D. K. P.E. 4/23/19
 Project Manager Date

County Commissioner Precinct 1 Date
☐ APPROVED ☐ REQUEST APPROVAL

N/A
 Design Engineer Date

County Commissioner Precinct 2 Date
☐ APPROVED ☐ REQUEST APPROVAL

4/29/19
 Program Manager Date

County Commissioner Precinct 3 Date
☐ APPROVED ☐ REQUEST APPROVAL

Design Engineer's Seal:

County Commissioner Precinct 4 Date
☐ APPROVED ☐ REQUEST APPROVAL

County Judge Date
☐ APPROVED

WILLIAMSON COUNTY, TEXAS

CHANGE ORDER NUMBER: 1

Project # 1805-232

TABLE A: Force Account Work and Materials Placed into Stock

	LABOR	HOURLY RATE			HOURLY RATE

TABLE B: Contract Items:

				ORIGINAL + PREVIOUSLY REVISED		ADD or (DEDUCT)	NEW		
ITEM	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	ITEM COST	QUANTITY	QUANTITY	ITEM COST	OVERRUN/ UNDERRUN
618-6053	CONDT (PVC) (SCH 80) (3")	LF	\$17.23	0.00	\$0.00	258.00	258.00	\$4,445.34	\$4,445.34
618-6054	CONDT (PVC) (SCH 80) (3") (BORE)	LF	\$31.02	0.00	\$0.00	448.00	448.00	\$13,896.96	\$13,896.96
6025-6002	RADAR PRESENCE DETECTOR COMM CABLE	EA	\$3.50	1,433.00	\$5,015.50	88.00	1,521.00	\$5,323.50	\$308.00
510-LH01	WL SERVICE	EA	\$2,278.16	0.00	\$0.00	3.00	3.00	\$6,834.48	\$6,834.48
510-LH02	FITTING RESTRAINTS	LS	\$2,177.70	0.00	\$0.00	1.00	1.00	\$2,177.70	\$2,177.70
510-LH03	GLUED JOINT PVC	LS	\$4,365.60	0.00	\$0.00	1.00	1.00	\$4,365.60	\$4,365.60
TOTALS					\$5,015.50			\$37,043.58	\$32,028.08

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

**CR 200 at SH 29
Williamson County Project No. 1805-232**

Change Order No. 1

Reason for Change

This Change Order adds quantities and new bid items for revisions to the water line utility installation and the traffic signal system that were omitted or calculated incorrectly in the plans.

This Change Order adds pay items for installation of 3" electrical conduit that was called out on the plans but not included in the original bid tab and revises the quantity of radar detector cable that was calculated incorrectly in the original plans.

This Change Order also compensates the Contractor for additional work and material in order to complete water line and waste water line construction per City of Liberty Hill requirements. The City requires pipe joints in encasement to be restrained. The plan encasement pipe was not large enough for mechanical joint restraints, so the pipe joints had to be glued in place during construction. The City also requires restraints at all pipe fittings. Additionally, there were 3 water line services added on the 8" water line being replaced that were not called for in the original plans.

Following is a summary of the new item required for this Change Order.

ITEM	DESCRIPTION	QTY	UNIT
618-6053	CONDT (PVC) (SCH 80) (3")	258	LF
618-6054	CONDT (PVC) (SCH 80) (3") (BORE)	448	LF
510-LH01	WL SERVICE	3	EA
510-LH02	FITTING RESTRAINTS	1	LS
510-LH03	GLUED JOINT PVC	1	LS

This Change Order results in an increase of \$32,028.08 to the Contract amount, for an adjusted Contract total of \$1,737,089.78. The original Contract amount was \$1,705,061.70. Because of this Change Order, \$32,028.08 has been added to the Contract, resulting in a 1.88% net increase in the Contract cost. No additional days will be added to or deducted from the Contract as a result of this Change Order.

HNTB Corporation
James Klotz, P.E.

PROJECT: SH 29 @ CR 200
ITEM NUMBER/DESC.: CONDT (PVC) (SCH 80) (3")
ESTIMATED QUANTITY: 258 LF
Date Prepared: 2/6/2019

ITEM DESCRIPTION	QTY	UNIT COSTS						TOTAL COSTS				
		UNIT	LABOR	EQUIP	MATERIAL	SUBCT.	O.T.Factor	LABOR	EQUIP	MATERIAL	SUBCT.	MISC.
LABOR	#											
MATERIAL												
EQUIPMENT												
SUBCONTRACT												
CONDT (PVC) (SCH 80) (3")	258.00	LF				\$ 16.25					\$ 4,192.50	
TOTALS								\$ -	\$ -	\$0.00	\$ 4,192.50	\$ -

TOTAL LABOR				\$ -
TOTAL MATERIAL				\$ -
TOTAL SUBCONTRACT				\$ 4,192.50
TOTAL EQUIPMENT				\$ -
MARKUPS				
LABOR BURDENS	\$ -	@	55%	\$ -
LABOR MARK-UP	\$ -	@	25%	\$ -
MATERIAL MARK-UP	\$ -	@	25%	\$ -
EQUIPMENT MARK-UP	\$ -	@	15%	\$ -
SUBCONTRACT MARK-UP	\$ 4,192.50	@	5%	\$ 209.63
PERFORMANCE BOND	\$ 4,402.13	@	1%	\$ 44.02
			TOTAL	\$ 4,446.15
			QUANTITY	258 LF
			UNIT COST	\$ 17.23 / LF

PROJECT: SH 29 @ CR 200
ITEM NUMBER/DESC.: CONDT (PVC) (SCH 80) (3") (BORE)
ESTIMATED QUANTITY: 448 LF
Date Prepared: 2/6/2019

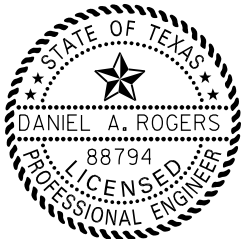
ITEM DESCRIPTION	QTY	UNIT COSTS						TOTAL COSTS				
		UNIT	LABOR	EQUIP	MATERIAL	SUBCT.	O.T.Factor	LABOR	EQUIP	MATERIAL	SUBCT.	MISC.
LABOR	#											
MATERIAL												
EQUIPMENT												
SUBCONTRACT												
CONDT (PVC) (SCH 80) (3") (BORE)	448.00	LF				\$ 29.25					\$ 13,104.00	
TOTALS								\$ -	\$ -	\$0.00	\$ 13,104.00	\$ -

TOTAL LABOR				\$ -
TOTAL MATERIAL				\$ -
TOTAL SUBCONTRACT				\$ 13,104.00
TOTAL EQUIPMENT				\$ -
MARKUPS				
LABOR BURDENS	\$ -	@	55%	\$ -
LABOR MARK-UP	\$ -	@	25%	\$ -
MATERIAL MARK-UP	\$ -	@	25%	\$ -
EQUIPMENT MARK-UP	\$ -	@	15%	\$ -
SUBCONTRACT MARK-UP	\$ 13,104.00	@	5%	\$ 655.20
PERFORMANCE BOND	\$ 13,759.20	@	1%	\$ 137.59
			TOTAL	\$ 13,896.79
			QUANTITY	448 LF
			UNIT COST	\$ 31.02 / LF

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7/30/2018
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SUMMARY OF TRAFFIC SIGNAL QUANTITIES				
ITEM NO.	DESC CODE	DESCRIPTION	UNIT	QUANTITY
416	6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	LF	13
416	6034	DRILL SHAFT (TRF SIG POLE) (48 IN)	LF	44
618	6046	CONDT (PVC) (SCH 80) (2")	LF	145
618	6047	CONDT (PVC) (SCH 80) (3") (BORE)	LF	258
618	6054	CONDT (PVC) (SCH 80) (3") (BORE)	LF	448
620	6007	ELEC CONDR (NO. 8) BARE	LF	1235
620	6008	ELEC CONDR (NO. 8) INSULATED	LF	1984
624	6008	GROUND BOX TY C (162911) W/APRON	EA	3
680	6011	INSTALL HWY TRF SIG (UPGRADE)	EA	1
	**	SIGN "LEFT TURN YIELD ON FLASHING YELLOW ARROW" (R10-17T)(30"X30")	EA	2
	**	DAMPING PLATE	EA	3
	**	250 WATT EQUIVALENT LED LUMINAIRE	EA	3
680	6004	REMOVING TRAFFIC SIGNALS	EA	3
682	6001	VEH SIG SEC (12") LED (GRN)	EA	10
682	6002	VEH SIG SEC (12") LED (GRN ARW)	EA	6
682	6003	VEH SIG SEC (12") LED (YEL)	EA	10
682	6004	VEH SIG SEC (12") LED (YEL ARW)	EA	12
682	6005	VEH SIG SEC (12") LED (RED)	EA	10
682	6006	VEH SIG SEC (12") LED (RED ARW)	EA	6
682	6018	PED SIG SEC (LED) (COUNTDOWN)	EA	2
682	6023	BACK PLATE (12") (3 SEC)	EA	11
682	6024	BACK PLATE (12") (4 SEC)	EA	2
682	6025	BACK PLATE (12") (5 SEC)	EA	2
684	6031	TRF SIG CBL (TY A) (14 AWG) (5 CONDR)	LF	2873
684	6033	TRF SIG CBL (TY A) (14 AWG) (7 CONDR)	LF	1577
686	6051	INS TRF SIG PL AM(S)1 ARM(48')LUM	EA	1
686	6063	INS TRF SIG PL AM(S)1 ARM(60')LUM	EA	2
687	6001	PED POLE ASSEMBLY	EA	2
688	6001	PED DETECT PUSH BUTTON (APS)	EA	2
	**	SIGN, PEDESTRIAN PUSH BUTTON (9" X 15") (R10-3eL)	EA	1
	**	SIGN, PEDESTRIAN PUSH BUTTON (9" X 15") (R10-3eR)	EA	1
6025	6001	RADAR PRESENCE DETECTOR	EA	4
6025	6002	RADAR PRESENCE DETECTOR COMM CABLE	LF	1521
6027	6003	CONDUIT (PREPARE)	LF	491
6027	6008	GROUND BOX (PREPARE)	EA	5
6057	6001	RADAR ADVANCED DETECTION DEVICE	EA	2
	**	MATERIALS SUBSIDIARY TO PERTINENT ITEMS		

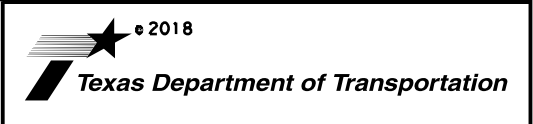
3



Daniel A. Rogers

7/30/2018

DATE	BY	REV	REVISION
7/30/18	DR	3	UPDATE CONDUIT QUANTITIES



WILLIAMSON
COUNTY
PRECINCT
#2



TBPE FIRM
14060



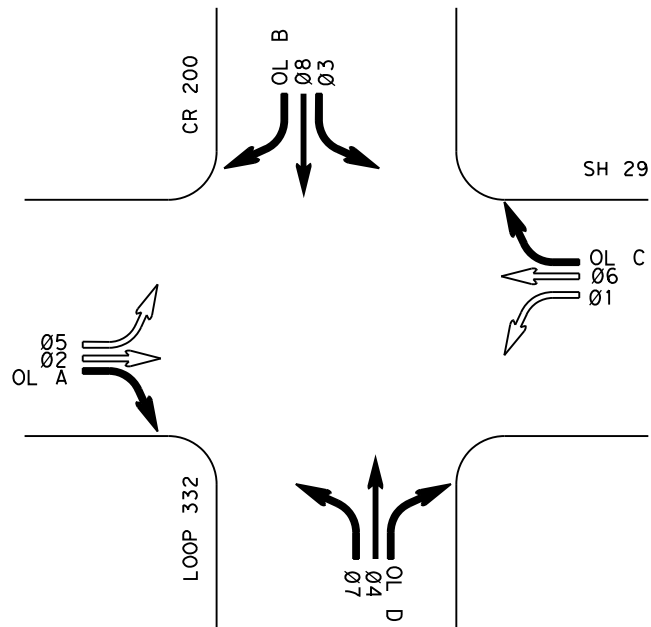
WSB & ASSOCIATES, INC.
FIRM # 16849

SH 29
AT CR 200/LOOP 332
SUMMARY OF SIGNAL
QUANTITIES

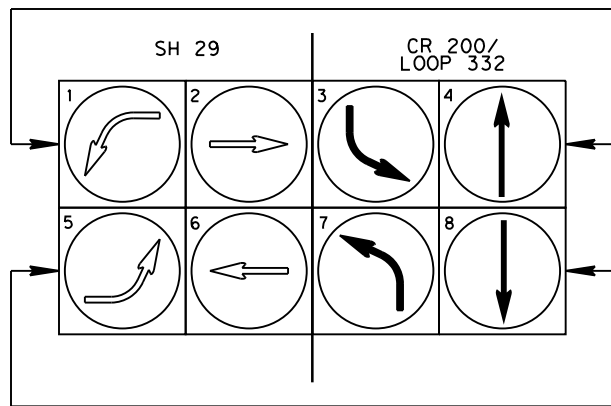
FED. RD. DIV. NO.	STATE PROJECT NO.		SHEET
6			12
STATE	DIST.	COUNTY	
TEXAS	AUS	WILLIAMSON	
CONT.	SECT.	JOB	HIGHWAY NO.
0151	03	041	SH 29

SUMMARY OF CONDUITS AND CABLES SH 29 AT CR200 / LOOP 332											
CONDUIT RUN	CONDUIT				NUMBER OF CABLES						
	TRENCH		BORE		LENGTH (FT)	#6 AWG (INS)	#6 AWG (BARE)	7/C #14 AWG	5/C #14 AWG	6/C RADAR	#8 AWG (INS)
	2	3	2	3							
R-1					25			6	11	6	8
R-2 *					147			3	4	3	2
R-3	1	2			37			1	3	1	2
R-4 *					166			2	1	2	2
R-5 *					10			2	1	2	2
R-6	1	2			41			2	2	2	3
R-7 *					168			1	3	1	2
R-8	1	2			23			1	3	1	2
R-9	1	2			28				2		3
R-10				2	109				2		2
R-11	1				10				1		1
R-12				2	115				1		2
R-13	1				6				1		1
R-14*					65						6
TOTAL	145	258	0	448		0	0	1253	2210	1253	1774

* UTILIZE EXISTING CONDUIT



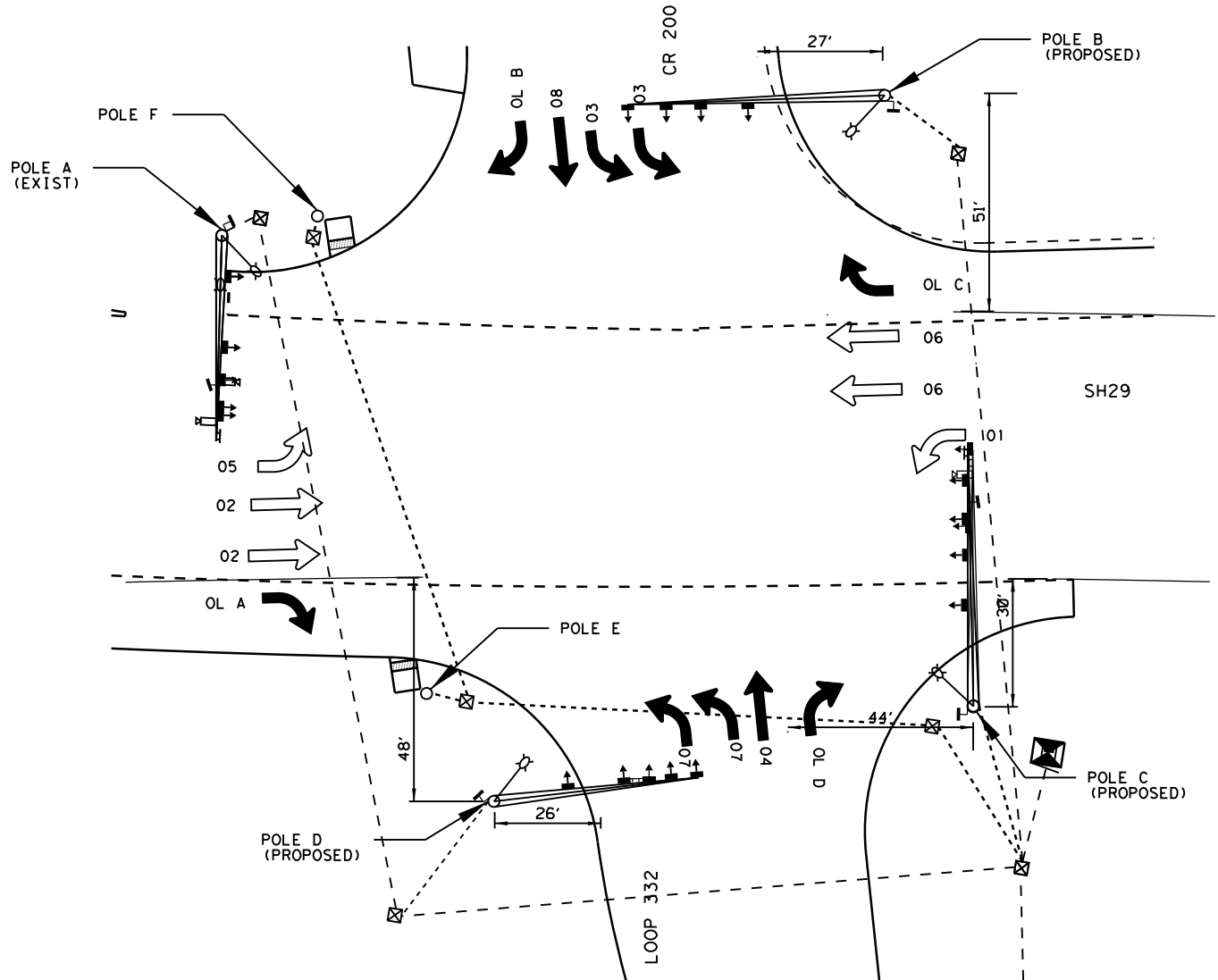
ORIENTATION VIEW



PHASING DIAGRAM

OL A = 02+07
OL B = 08+05
OL C = 06+03
OL D = 04+01

CABLE TERMINATION CHART																	
CNDR. COLOR	CABLE1 POLE A TO CNTRL 7 CNDR	CABLE2 POLE A TO CNTRL 5 CNDR	CABLE3 POLE A TO CNTRL 5 CNDR	CABLE1 POLE B TO CNTRL 5 CNDR	CABLE2 POLE B TO CNTRL 5 CNDR	CABLE3 POLE B TO CNTRL 5 CNDR	CABLE4 POLE B TO CNTRL 7 CNDR	CABLE1 POLE C TO CNTRL 7 CNDR	CABLE2 POLE C TO CNTRL 5 CNDR	CABLE3 POLE C TO CNTRL 5 CNDR	CABLE4 POLE C TO CNTRL 5 CNDR	CABLE1 POLE D TO CNTRL 5 CNDR	CABLE2 POLE D TO CNTRL 5 CNDR	CABLE3 POLE D TO CNTRL 5 CNDR	CABLE4 POLE D TO CNTRL 7 CNDR	CABLE5 POLE D TO CNTRL 5 CNDR	CABLE1 POLE E TO CNTRL 5 CNDR
BLACK	SH 14 Y PHASE 01	SH 15 Y PHASE 06	SH 1 Y ARW OL C	SH 2 Y ARW PHASE 07	SH 3 Y ARW PHASE 07	SH 4 Y PHASE 04	SH 5 Y PHASE 04	SH 6 Y PHASE 05	SH 16 Y PHASE 02	SH 7 Y PHASE 02	SH 8 Y ARW OL A	SH 9 Y ARW PHASE 03	SH 10 Y ARW PHASE 03	SH 11 Y PHASE 08	SH 12 Y PHASE 08	SH 13 Y PHASE 02	SPARE
WHITE	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON	SIGNAL COMMON
RED	SH 14 R PHASE 01	SH 15 R PHASE 06	SH 1 R ARW OL C	SH 2 R PHASE 07	SH 3 R PHASE 07	SH 4 R PHASE 04	SH 5 R PHASE 04	SH 6 R PHASE 05	SH 16 R PHASE 02	SH 7 R PHASE 02	SH 8 R ARW OL A	SH 9 R PHASE 03	SH 10 R PHASE 03	SH 11 R PHASE 08	SH 12 R PHASE 08	SH 13 R PHASE 02	SH W1 R PHASE 04
GREEN	SH 14 G PHASE 01	SH 15 G PHASE 06	SH 1 G ARW OL C	SH 2 G ARW PHASE 07	SH 3 G ARW PHASE 07	SH 4 G PHASE 04	SH 5 G PHASE 04	SH 6 G PHASE 05	SH 16 G PHASE 02	SH 7 G PHASE 02	SH 8 G ARW OL A	SH 9 G ARW PHASE 03	SH 10 G ARW PHASE 03	SH 11 G PHASE 08	SH 12 G PHASE 08	SH 13 G PHASE 02	SPARE
ORANGE	SH 14 Y ARW PHASE 01	SPARE	SPARE	SPARE	SPARE	SPARE	SH 5 Y ARW OL D	SH 6 Y ARW PHASE 05	SPARE	SPARE	SPARE	SPARE	SPARE	SPARE	SH 12 Y ARW OL B	SPARE	SH W1 G PHASE 04
BLUE	SPARE						SH 5 G ARW OL D	SPARE							SH 12 G ARW OL B		
WHITE/BLACK	SPARE						SPARE	SPARE							SPARE		



NOTES:

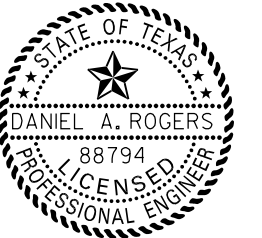
- UTILITIES ARE NOT SHOWN. VERIFY THAT NONE ARE IN THE VICINITY OF WORK.
- FOUNDATIONS WILL BE ADJUSTED IN THE FIELD IN ORDER TO MEET CLEARANCE.

DATE	BY	REV	REVISION
7/30/18	DR	3	UPDATE CONDUIT QUANTITIES

INSIDE CABINET	14 AWG 2/C	14 AWG 5/C	14 AWG 7/C	#6 AWG (INS)	#6 AWG (BARE)	RADAR 6/C
TOTAL	10	55	30	10	5	30

INSIDE POLES	14 AWG 2/C	14 AWG 5/C	14 AWG 7/C	#8 AWG (INS)	RADAR 6/C
A		40	40		50
B		40	20	70	30
C		40	40	70	50
D		90	20	70	30
E	5	10			
F	5	10			
TOTAL	10	230	120	210	160

INSIDE ARMS	14 AWG 5/C	14 AWG 7/C	RADAR 6/C
POLE HEAD			
A	1	9	
14		40	
15	30		
R1-A			30
B	2	59	
3	51		
4	43		
5		30	
C	6	51	
16	45		
C	7	33	48
8		21	
D	9	47	
10	39		
11	31		
12		23	
TOTAL	378	174	78



Daniel A. Rogers

7/30/2018



WILLIAMSON COUNTY PRECINCT #2



TBPE FIRM # 14060



WSB & ASSOCIATES, INC. FIRM # 16849

SH 29 AT CR 200/LOOP 332 ELECTRICAL WIRING AND PHASING

SCALE = N.T.S. SHEET 1 OF 1

FED. RD. DIV. NO.	STATE PROJECT NO.	SHEET
6		87
STATE	DIST.	COUNTY
TEXAS	AUS	WILLIAMSON
CONT.	SECT.	JOB
0151	03	041
HIGHWAY NO.		
SH 29		

PROJECT: SH 29 @ CR 200
ITEM NUMBER/DESC.: WL SERVICE
ESTIMATED QUANTITY: 1 EA
Date Prepared: 1/16/2019

ITEM DESCRIPTION	QTY	UNIT	UNIT COSTS					TOTAL COSTS				
			LABOR	EQUIP	MATERIAL	SUBCT.	O.T.Factor	LABOR	EQUIP	MATERIAL	SUBCT.	MISC.
LABOR	#											
FOREMAN	1	HR	\$ 30.00				1.00	\$ 90.00				
EXCAVATOR OPERATOR	1	HR	\$ 19.50				1.00	\$ 58.50				
LOADER OPERATOR	1	HR	\$ 19.00				1.00	\$ 57.00				
PIPELAYER	1	HR	\$ 18.00				1.00	\$ 54.00				
LABORER	2	HR	\$ 16.50				1.00	\$ 99.00				
MATERIAL												
SADDLE	1.00	EA			\$ 57.41					\$ 57.41		
BALL CORPORATION	1.00	EA			\$ 79.54					\$ 79.54		
TY K COPPER	1.00	ROLL			\$ 434.03					\$ 434.03		
ANGLE VALVE	1.00	EA			\$ 42.40					\$ 42.40		
METER BOX	1.00	EA			\$ 107.47					\$ 107.47		
EQUIPMENT												
VOLVO 140 EXC.	3.00	HR	\$ 69.12						\$ 207.36			
JD 544 LOADER	3.00	HR	\$ 59.07						\$ 177.21			
PICKUP TRUCK	3.00	HR	\$ 27.17						\$ 81.51			
SUBCONTRACT												
TANDEM	3.00	HR				\$ 55.00					\$ 165.00	
TOTALS								\$ 358.50	\$ 466.08	\$ 720.85	\$ 165.00	\$ -

TOTAL LABOR				\$ 358.50
TOTAL MATERIAL				\$ 720.85
TOTAL SUBCONTRACT				\$ 165.00
TOTAL EQUIPMENT				\$ 466.08
MARKUPS				
LABOR BURDENS	\$ 358.50	@	55%	\$ 197.18
LABOR MARK-UP	\$ 358.50	@	25%	\$ 89.63
MATERIAL MARK-UP	\$ 720.85	@	25%	\$ 180.21
EQUIPMENT MARK-UP	\$ 466.08	@	15%	\$ 69.91
SUBCONTRACT MARK-UP	\$ 165.00	@	5%	\$ 8.25
PERFORMANCE BOND	\$ 2,255.60	@	1%	\$ 22.56
TOTAL				\$ 2,278.16
QUANTITY	1		EA	
UNIT COST				\$ 2,278.16 / EA

PROJECT: SH 29 @ CR 200
ITEM NUMBER/DESC.: RESTRAINTS FOR FITTINGS
ESTIMATED QUANTITY: 1 LS
Date Prepared: 1/16/2019

ITEM DESCRIPTION	QTY	UNIT	UNIT COSTS					TOTAL COSTS				
			LABOR	EQUIP	MATERIAL	SUBCT.	O.T.Factor	LABOR	EQUIP	MATERIAL	SUBCT.	MISC.
LABOR	#											
FOREMAN	1	3.00	HR	\$ 30.00			1.00	\$ 90.00				
PIPELAYER	1	3.00	HR	\$ 18.00			1.00	\$ 54.00				
LABORER	2	3.00	HR	\$ 16.50			1.00	\$ 99.00				
MATERIAL												
3" MEGALUG	8.00	EA			\$ 31.00					\$ 248.00		
6" MEGALUG	1.00	EA			\$ 44.00					\$ 44.00		
8" MEGALUG	18.00	EA			\$ 56.00					\$ 1,008.00		
EQUIPMENT												
PICKUP TRUCK	3.00	HR		\$ 27.17					\$ 81.51			
SUBCONTRACT												
TOTALS								\$ 243.00	\$ 81.51	\$1,300.00	\$ -	\$ -

TOTAL LABOR				\$ 243.00
TOTAL MATERIAL				\$ 1,300.00
TOTAL SUBCONTRACT				\$ -
TOTAL EQUIPMENT				\$ 81.51
MARKUPS				
LABOR BURDENS	\$ 243.00	@	55%	\$ 133.65
LABOR MARK-UP	\$ 243.00	@	25%	\$ 60.75
MATERIAL MARK-UP	\$ 1,300.00	@	25%	\$ 325.00
EQUIPMENT MARK-UP	\$ 81.51	@	15%	\$ 12.23
SUBCONTRACT MARK-UP	\$ -	@	5%	\$ -
PERFORMANCE BOND	\$ 2,156.14	@	1%	\$ 21.56
			TOTAL	\$ 2,177.70
			QUANTITY	1 LS
			UNIT COST	\$ 2,177.70 /LS

	3" MEGALUG	6" MEGALUG	8" MEGALUG
3" FM	4		
8" WL			10
3" WC	4		
8" WC			4
FH		1	
8" GV			4
TOTAL	8	1	18

PROJECT: SH 29 @ CR 200
ITEM NUMBER/DESC.: 3" SCH 40 & 8" SCH 80 GLUE JOINT PVC
ESTIMATED QUANTITY: 1 LS
Date Prepared: 1/21/2019

ITEM DESCRIPTION	QTY	UNIT	UNIT COSTS					TOTAL COSTS				
			LABOR	EQUIP	MATERIAL	SUBCT.	O.T.Factor	LABOR	EQUIP	MATERIAL	SUBCT.	MISC.
LABOR	#											
FOREMAN	1	HR	\$ 30.00				1.00	\$ 150.00				
LOADER OPERATOR	1	HR	\$ 19.00				1.00	\$ 95.00				
LABORER	2	HR	\$ 16.50				1.00	\$ 165.00				
MATERIAL												
3" SCH 40 PVC	120.00	LF			\$ 2.50					\$ 300.00		
8" SCH 80 PVC	120.00	LF			\$ 18.20					\$ 2,184.00		
PRIMER	2.00	EA			\$ 9.00					\$ 18.00		
CEMENT	3.00	EA			\$ 28.00					\$ 84.00		
3" COUPLING	2.00	EA			\$ 158.00					\$ 316.00		
8" COUPLING	2.00	EA			\$ 280.00					\$ 560.00		
3" SDR 21 PVC	-120.00	LF			\$ 0.99					\$ (118.80)		
8" C900 PVC	-120.00	LF			\$ 7.27					\$ (872.40)		
EQUIPMENT												
JD 544 LOADER	5.00	HR		\$ 59.07					\$ 295.35			
PICKUP TRUCK	5.00	HR		\$ 27.17					\$ 135.85			
SUBCONTRACT												
TOTALS								\$ 410.00	\$ 431.20	\$ 2,470.80	\$ -	\$ -

TOTAL LABOR				\$ 410.00	
TOTAL MATERIAL				\$ 2,470.80	
TOTAL SUBCONTRACT				\$ -	
TOTAL EQUIPMENT				\$ 431.20	
MARKUPS					
LABOR BURDENS	\$ 410.00	@	55%	\$ 225.50	
LABOR MARK-UP	\$ 410.00	@	25%	\$ 102.50	
MATERIAL MARK-UP	\$ 2,470.80	@	25%	\$ 617.70	
EQUIPMENT MARK-UP	\$ 431.20	@	15%	\$ 64.68	
SUBCONTRACT MARK-UP	\$ -	@	5%	\$ -	
PERFORMANCE BOND	\$ 4,322.38	@	1%	\$ 43.22	
			TOTAL	\$ 4,365.60	
			QUANTITY	1	LS
			UNIT COST	\$ 4,365.60	/LS