

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 6/29/2022

Control	0215-01-044, ETC.
Project	F 2022(901), ETC.
Highway	SH 46
County	COMAL

Ladies/Gentlemen:

Attached please find an addendum on the above captioned project. Included in the attachment is an addendum notification which details the changes and the respective proposal pages which were added and/or changed.

Except for new bid insert pages, it is unnecessary to return any of the pages attached.

Bid insert pages must be returned with the bid proposal submitted to the Department, unless your firm is submitting a bid using a computer print out. The computer print out must be changed to reflect the new bid item information.

Contractors and material suppliers, etc. who have previously been furnished informational proposals are not being furnished a copy of the addendum. If you have a subcontractor on the above project, please advise them of this addendum. Acknowledgment of this addendum is not requested if your company has been issued a proposal stamped "This Proposal Issued for Informational Purposes."

You are required to acknowledge receipt of this addendum on the Addendum Acknowledgement form contained in your bid proposal by placing a mark in the box next to the respective addendum.

Failure to Acknowledge receipt of this addendum in your bid proposal will result in your bid not being read.

SUBJECT: PLANS AND PROPOSAL ADDENDUMS

PROJECT: F 2022(901)

CONTROL: 0215-01-044

COUNTY: COMAL

LETTING: 06/30/2022

REFERENCE NO: 0615

PROPOSAL ADDENDUMS

PROPOSAL COVER

BID INSERTS (SH. NO.: ALL)

GENERAL NOTES (SH. NO.: A)

SPEC LIST (SH. NO.: ALL)

SPECIAL PROVISIONS:

ADDED:

DELETED: 426---003

SPECIAL SPECIFICATIONS:

ADDED:

DELETED:

OTHER: PLAN SHEETS AND OTHER CHANGES

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

***** BID INSERTS *****

BID ITEMS AND QUANTITIES IN ICX PREVIOUSLY OUT OF SYNC WITH THE PROPOSAL
HAVE BEEN UPDATED TO MATCH.

REVISED QUANTITIES FOR THE FOLLOWING BID ITEMS:

105-6094,	110-6001,	462-6019,	529-6001,	400-6005,	402-6001
459-6007,	459-6013,	466-6166,	466-6181,	506-6002,	506-6003
506-6011,	506-6020,	506-6024,	506-6035,	506-6038,	506-6039
506-6042,	506-6043,	508-6001,	510-6001,	512-6009,	512-6010
512-6033,	512-6034,	512-6057,	512-6058,	529-6015,	529-6027
530-6004,	530-6005,	531-6001,	531-6003,	531-6004,	531-6010
531-6017,	536-6002,	536-6004,	540-6001,	540-6016,	542-6001
550-6003,	556-6008,	618-6046,	618-6047,	618-6053,	618-6054
620-6009,	620-6010,	621-6005,	624-6010,	628-6167,	636-6001
644-6007,	644-6023,	644-6025,	644-6056,	644-6057,	644-6076
644-6080,	658-6046,	662-6001,	662-6004,	662-6010,	662-6012
662-6016,	662-6017,	662-6026,	662-6029,	662-6032,	662-6034
662-6038,	662-6050,	662-6052,	662-6109,	662-6110,	662-6111
666-6006,	666-6036,	666-6048,	666-6054,	666-6063,	666-6072

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

(CONTINUED)

666-6078, 666-6105, 666-6111, 666-6224, 666-6226, 666-6230
666-6231, 666-6232, 666-6236, 666-6244, 666-6245, 666-6300
666-6303, 666-6315, 672-6010, 677-6001, 677-6003, 677-6007
677-6008, 677-6009, 677-6012, 680-6002, 680-6004, 681-6001
682-6001, 682-6002, 682-6003, 682-6004, 682-6005, 682-6006
682-6018, 682-6051, 682-6052, 682-6053, 684-6009, 684-6012
684-6080, 686-6039, 686-6059, 686-6063, 687-6001, 688-6001
688-6003, 6001-6001, 6001-6002, 6004-6031, 6010-6010, 6185-6002
6185-6003, 6292-6001, 6292-6002, 7202-6008, 7202-6019

ADDED THE FOLLOWING BID ITEMS:

316-6224, 316-6448, 354-6045, 512-6001, 512-6025, 512-6049
529-6018, 545-6005, 545-6013, 550-6008, 550-6010, 644-6066
680-6001, 682-6027, 686-6047, 686-6147, 686-6191, 686-6211
686-6271, 730-6107, 734-6002, 738-6003, 7202-6018

DELETED THE FOLLOWING BID ITEMS:

316-6126, 316-6410

BID INSERT SHEETS 1-24 OF 24 CHANGED AS A RESULT OF THE ABOVE REVISIONS.

***** GENERAL NOTES *****

SHEET A: REVISED BASIS OF ESTIMATE.

***** SPEC LIST *****

SHEET 1 OF 5: ADD ITEM 354 TO STANDARD SPECIFICATIONS.

SHEET 4 OF 5: DELETE SP426-003 FROM SPECIAL PROVISIONS.

SPEC LIST SHEETS 1-5 OF 5 CHANGED AS A RESULT OF THE ABOVE REVISION.

***** PLAN SHEETS *****

SHEET 20 (GENERAL NOTES): REVISED BASIS OF ESTIMATE.

SHEETS 21, 21A-21H (ESTIMATE AND QUANTITY): ALL SHEETS ARE REPLACED AS PART OF THIS ADDENDUM. REVISED SHEETS AS DESCRIBED ABOVE IN THE BID INSERTS.

SHEET 33: REVISED BID ITEM 105-6094.

SHEET 34: ADDED BID ITEMS 316-6224, 316-6448, 354-6045. DELETED BID ITEMS 316-6126, 316-6410.

SHEET 35: REVISED BID ITEM 529-6001. ADDED BID ITEMS 316-6224, 316-6448, 354-6045. DELETED BID ITEMS 316-6126, 316-6410.

SHEETS 361, 363, 378-380: REVISED BID ITEM 105-6094.

SHEET 381: ADDED BID ITEMS 316-6224, 316-6448, 354-6045. DELETED BID ITEMS 316-6126, 316-6410.

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

(CONTINUED)

SHEETS 382, 383, 385-396: ADDED BID ITEMS 316-6224, 316-6448. DELETED BID ITEMS 316-6126, 316-6410.

SHEET 397: ADDED BID ITEMS 316-6224, 316-6448, 354-6045. DELETED BID ITEMS 316-6126, 316-6410.

SHEETS 398-400: ADDED BID ITEMS 316-6224, 316-6448. DELETED BID ITEMS 316-6126, 316-6410.

SHEET 401: REVISED BID ITEM 529-6001. ADDED BID ITEMS 316-6224, 316-6448, 354-6045. DELETED BID ITEMS 316-6126, 316-6410.

Printed Name of Authorized Signer: _____

Signature of Authorized Signer: _____ Date: _____

PROJECT F 2022(901) , ETC.
 COUNTY COMAL

Proposal Sheet
 TxDOT
 FORM 234-B I-61-5M

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	6002		PREPARING ROW DOLLARS and CENTS	STA	174.000	1
	105	6048		REMOVING STAB BASE & ASPH PAV (4"-11") DOLLARS and CENTS	SY	7,946.000	2
	105	6094		REMOVING STAB BASE & ASPH PAV(12"-27") DOLLARS and CENTS	SY	107,226.000	3
	110	6001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	197,262.000	4
	132	6005		EMBANKMENT (FINAL)(ORD COMP)(TY C) DOLLARS and CENTS	CY	60,237.000	5
	161	6017		COMPOST MANUF TOPSOIL (4") DOLLARS and CENTS	SY	40,625.000	6
	162	6002		BLOCK SODDING DOLLARS and CENTS	SY	10,515.000	7
	164	6035		DRILL SEEDING (PERM) (RURAL) (CLAY) DOLLARS and CENTS	SY	30,110.000	8
	164	6051		DRILL SEED (TEMP)(WARM OR COOL) DOLLARS and CENTS	SY	62,000.000	9
	168	6001		VEGETATIVE WATERING DOLLARS and CENTS	MG	6.000	10

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	216	6001		PROOF ROLLING DOLLARS and CENTS	HR	600.000	11
	247	6475	003	FL BS (CIP)(TY D GR 1-2, OR 5)FINAL POS DOLLARS and CENTS	CY	43,598.000	12
	310	6027		PRIME COAT(MC-30 OR AE-P) DOLLARS and CENTS	GAL	47,088.000	13
	316	6224	002	AGGR(TY-PB GR-4 SAC-B) DOLLARS and CENTS	CY	1,552.000	14
	316	6448	002	ASPH (AC-15P OR AC-20-5TR) DOLLARS and CENTS	GAL	55,535.000	15
	354	6045		PLANE ASPH CONC PAV (2") DOLLARS and CENTS	SY	5,605.000	16
	400	6001		STRUCT EXCAV DOLLARS and CENTS	CY	28.300	17
	400	6005		CEM STABIL BKFL DOLLARS and CENTS	CY	1,494.000	18
	400	6008		CUT & RESTORE ASPH PAVING DOLLARS and CENTS	SY	190.000	19
	401	6001		FLOWABLE BACKFILL DOLLARS and CENTS	CY	1,193.000	20
	402	6001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	28,590.000	21
	403	6001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	14,324.000	22

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	403	6002		TEMPORARY SPL SHORING (SOIL NAIL) DOLLARS and CENTS	SF	10,834.000	23
	410	6001		SOIL NAIL ANCHORS DOLLARS and CENTS	LF	17,191.000	24
	416	6002		DRILL SHAFT (24 IN) DOLLARS and CENTS	LF	1,603.000	25
	416	6004		DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	2,792.000	26
	416	6005		DRILL SHAFT (42 IN) DOLLARS and CENTS	LF	6,670.000	27
	416	6031		DRILL SHAFT (TRF SIG POLE) (30 IN) DOLLARS and CENTS	LF	12.000	28
	416	6032		DRILL SHAFT (TRF SIG POLE) (36 IN) DOLLARS and CENTS	LF	173.000	29
	416	6034		DRILL SHAFT (TRF SIG POLE) (48 IN) DOLLARS and CENTS	LF	264.000	30
	420	6003		CL A CONC (MISC) DOLLARS and CENTS	SY	110.000	31
	420	6074		CL C CONC (MISC) DOLLARS and CENTS	CY	10.100	32
	423	6001		RETAINING WALL (MSE) DOLLARS and CENTS	SF	29,671.000	33
	423	6007		RETAINING WALL (DRILL SHAFT) (FACIA) DOLLARS and CENTS	SF	29,231.000	34

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	423	6022		RETAINING WALL (SOIL NAIL)(FACIA) DOLLARS and CENTS	SF	6,284.000	35
	432	6001		RIPRAP (CONC)(4 IN) DOLLARS and CENTS	CY	818.000	36
	432	6002		RIPRAP (CONC)(5 IN) DOLLARS and CENTS	CY	866.000	37
	432	6045		RIPRAP (MOW STRIP)(4 IN) DOLLARS and CENTS	CY	14.000	38
	450	6042	001	RAIL (TY PR1) DOLLARS and CENTS	LF	10,517.000	39
	459	6007		GABION MATTRESSES (GALV)(12 IN) DOLLARS and CENTS	SY	2,192.000	40
	459	6013		GABION (1.5' X 3')(GALV) DOLLARS and CENTS	CY	152.000	41
	460	6003		CMP (GAL STL 24 IN) DOLLARS and CENTS	LF	1,336.000	42
	460	6006		CMP (GAL STL 42 IN) DOLLARS and CENTS	LF	240.000	43
	462	6001	002	CONC BOX CULV (3 FT X 2 FT) DOLLARS and CENTS	LF	390.000	44
	462	6003	002	CONC BOX CULV (4 FT X 2 FT) DOLLARS and CENTS	LF	83.000	45
	462	6004	002	CONC BOX CULV (4 FT X 3 FT) DOLLARS and CENTS	LF	346.000	46

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	462	6005	002	CONC BOX CULV (4 FT X 4 FT) DOLLARS and CENTS	LF	388.000	47
	462	6006	002	CONC BOX CULV (5 FT X 2 FT) DOLLARS and CENTS	LF	99.000	48
	462	6007	002	CONC BOX CULV (5 FT X 3 FT) DOLLARS and CENTS	LF	393.000	49
	462	6011	002	CONC BOX CULV (6 FT X 4 FT) DOLLARS and CENTS	LF	1,827.000	50
	462	6015	002	CONC BOX CULV (7 FT X 4 FT) DOLLARS and CENTS	LF	282.000	51
	462	6019	002	CONC BOX CULV (8 FT X 4 FT) DOLLARS and CENTS	LF	2,584.000	52
	462	6055	002	CONC BOX CULV (6 FT X 4 FT)(EXTEND) DOLLARS and CENTS	LF	23.000	53
	464	6003	001	RC PIPE (CL III)(18 IN) DOLLARS and CENTS	LF	72.000	54
	464	6005	001	RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	17,446.000	55
	464	6007	001	RC PIPE (CL III)(30 IN) DOLLARS and CENTS	LF	1,694.000	56
	464	6008	001	RC PIPE (CL III)(36 IN) DOLLARS and CENTS	LF	953.000	57
	464	6009	001	RC PIPE (CL III)(42 IN) DOLLARS and CENTS	LF	191.000	58

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	464	6018	001	RC PIPE (CL IV)(24 IN) DOLLARS and CENTS	LF	607.000	59
	465	6001	001	INLET (COMPL)(TY S) DOLLARS and CENTS	EA	1.000	60
	465	6002	001	MANH (COMPL)(PRM)(48IN) DOLLARS and CENTS	EA	20.000	61
	465	6003	001	MANH (COMPL)(PRM)(60IN) DOLLARS and CENTS	EA	8.000	62
	465	6004	001	MANH (COMPL)(PRM)(72IN) DOLLARS and CENTS	EA	1.000	63
	465	6005	001	JCTBOX(COMPL)(PJB)(3FTX3FT) DOLLARS and CENTS	EA	18.000	64
	465	6006	001	JCTBOX(COMPL)(PJB)(4FTX4FT) DOLLARS and CENTS	EA	6.000	65
	465	6009	001	JCTBOX(COMPL)(PJB)(5FTX5FT) DOLLARS and CENTS	EA	3.000	66
	465	6014	001	INLET (COMPL)(PCO)(3FT)(LEFT) DOLLARS and CENTS	EA	22.000	67
	465	6015	001	INLET (COMPL)(PCO)(3FT)(RIGHT) DOLLARS and CENTS	EA	16.000	68
	465	6016	001	INLET (COMPL)(PCO)(3FT)(BOTH) DOLLARS and CENTS	EA	44.000	69
	465	6019	001	INLET (COMPL)(PCO)(4FT)(RIGHT) DOLLARS and CENTS	EA	1.000	70

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	6020	001	INLET (COMPL)(PCO)(4FT)(BOTH) DOLLARS and CENTS	EA	7.000	71
	465	6024	001	INLET (COMPL)(PCO)(5FT)(BOTH) DOLLARS and CENTS	EA	1.000	72
	465	6030	001	INLET (COMPL)(PCU)(3FT)(LEFT) DOLLARS and CENTS	EA	3.000	73
	465	6031	001	INLET (COMPL)(PCU)(3FT)(RIGHT) DOLLARS and CENTS	EA	1.000	74
	465	6032	001	INLET (COMPL)(PCU)(3FT)(BOTH) DOLLARS and CENTS	EA	10.000	75
	465	6034	001	INLET (COMPL)(PCU)(4FT)(LEFT) DOLLARS and CENTS	EA	1.000	76
	465	6049	001	INLET (COMPL)(POD)(FG)(4FTX4FT) DOLLARS and CENTS	EA	1.000	77
	465	6158	001	INLET(COMPL)(PAZD)(FG)(3FTX3FT-3FTX-3FT) DOLLARS and CENTS	EA	21.000	78
	465	6159	001	INLET(COMPL)(PAZD)(FG)(4FTX4FT-3FTX-3FT) DOLLARS and CENTS	EA	2.000	79
	465	6160	001	INLET(COMPL)(PAZD)(FG)(4FTX4FT-4FTX-4FT) DOLLARS and CENTS	EA	8.000	80
	465	6162	001	INLET(COMPL)(PAZD)(FG)(5FTX5FT-4FTX-4FT) DOLLARS and CENTS	EA	6.000	81

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	6233	001	INLET (COMP) (TY SIDEWALK BRIDGE) DOLLARS and CENTS	EA	2.000	82
	466	6153		WINGWALL (FW - 0) (HW=6 FT) DOLLARS and CENTS	EA	1.000	83
	466	6166		WINGWALL (FW - S) (HW=5 FT) DOLLARS and CENTS	EA	2.000	84
	466	6171		WINGWALL (PW - 1) (HW=10 FT) DOLLARS and CENTS	EA	1.000	85
	466	6180		WINGWALL (PW - 1) (HW=5 FT) DOLLARS and CENTS	EA	3.000	86
	466	6181		WINGWALL (PW - 1) (HW=6 FT) DOLLARS and CENTS	EA	5.000	87
	466	6183		WINGWALL (PW - 1) (HW=8 FT) DOLLARS and CENTS	EA	1.000	88
	467	6131		SET (TY I)(S= 4 FT)(HW= 2 FT)(3:1) (C) DOLLARS and CENTS	EA	1.000	89
	467	6149		SET (TY I)(S= 4 FT)(HW= 5 FT)(3:1) (P) DOLLARS and CENTS	EA	1.000	90
	467	6174		SET (TY I)(S= 5 FT)(HW= 3 FT)(6:1) (P) DOLLARS and CENTS	EA	1.000	91
	467	6356		SET (TY II) (18 IN) (RCP) (3: 1) (C) DOLLARS and CENTS	EA	3.000	92
	467	6363		SET (TY II) (18 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	1.000	93

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	467	6380		SET (TY II) (24 IN) (CMP) (6: 1) (P) DOLLARS and CENTS	EA	3.000	94
	467	6388		SET (TY II) (24 IN) (RCP) (3: 1) (C) DOLLARS and CENTS	EA	6.000	95
	467	6395		SET (TY II) (24 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	6.000	96
	467	6417		SET (TY II) (30 IN) (RCP) (3: 1) (C) DOLLARS and CENTS	EA	1.000	97
	467	6423		SET (TY II) (30 IN) (RCP) (6: 1) (P) DOLLARS and CENTS	EA	1.000	98
	467	6453		SET (TY II) (36 IN) (RCP) (6: 1) (C) DOLLARS and CENTS	EA	1.000	99
	480	6001		CLEAN EXIST CULVERTS DOLLARS and CENTS	EA	2.000	100
	481	6013		PIPE (PVC) (SCH 40) (6 IN) DOLLARS and CENTS	LF	106.000	101
	481	6026		PIPE (PVC) (SCH 80) (12 IN) DOLLARS and CENTS	LF	91.000	102
	496	6002		REMOV STR (INLET) DOLLARS and CENTS	EA	8.000	103
	496	6003		REMOV STR (MANHOLE) DOLLARS and CENTS	EA	4.000	104
	496	6004		REMOV STR (SET) DOLLARS and CENTS	EA	52.000	105

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	496	6005		REMOV STR (WINGWALL) DOLLARS and CENTS	EA	17.000	106
	496	6006		REMOV STR (HEADWALL) DOLLARS and CENTS	EA	11.000	107
	496	6007		REMOV STR (PIPE) DOLLARS and CENTS	LF	5,206.000	108
	496	6008		REMOV STR (BOX CULVERT) DOLLARS and CENTS	LF	303.000	109
	496	6040		REMOV STR (RET WALL) DOLLARS and CENTS	LF	21.000	110
	500	6001		MOBILIZATION DOLLARS and CENTS	LS	1.000	111
	502	6001	008	BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	48.000	112
	506	6001	005	ROCK FILTER DAMS (INSTALL) (TY 1) DOLLARS and CENTS	LF	170.000	113
	506	6002	005	ROCK FILTER DAMS (INSTALL) (TY 2) DOLLARS and CENTS	LF	276.000	114
	506	6003	005	ROCK FILTER DAMS (INSTALL) (TY 3) DOLLARS and CENTS	LF	135.000	115
	506	6011	005	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	581.000	116
	506	6020	005	CONSTRUCTION EXITS (INSTALL) (TY 1) DOLLARS and CENTS	SY	6,328.000	117

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	ITEM NO	DESC CODE	S.P. NO.				
	506	6024	005	CONSTRUCTION EXITS (REMOVE) DOLLARS and CENTS	SY	6,328.000	118
	506	6035	005	SANDBAGS FOR EROSION CONTROL DOLLARS and CENTS	EA	744.000	119
	506	6038	005	TEMP SEDMT CONT FENCE (INSTALL) DOLLARS and CENTS	LF	13,215.000	120
	506	6039	005	TEMP SEDMT CONT FENCE (REMOVE) DOLLARS and CENTS	LF	13,215.000	121
	506	6042	005	BIODEG EROSN CONT LOGS (INSTL) (18") DOLLARS and CENTS	LF	2,069.000	122
	506	6043	005	BIODEG EROSN CONT LOGS (REMOVE) DOLLARS and CENTS	LF	2,089.000	123
	508	6001		CONSTRUCTING DETOURS DOLLARS and CENTS	SY	43,730.000	124
	510	6001		ONE-WAY TRAF CONT (FLAGGER CONT) DOLLARS and CENTS	HR	64.000	125
	512	6001		PORT CTB (FUR & INST)(SGL SLOPE)(TY 1) DOLLARS and CENTS	LF	2,160.000	126
	512	6009		PORT CTB (FUR & INST)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	12,800.000	127
	512	6010		PORT CTB (FUR & INST)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	1,880.000	128
	512	6025		PORT CTB (MOVE)(SGL SLP)(TY 1) DOLLARS and CENTS	LF	80.000	129

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	512	6033		PORT CTB (MOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	34,240.000	130
	512	6034		PORT CTB (MOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	4,220.000	131
	512	6049		PORT CTB (REMOVE)(SGL SLP)(TY 1) DOLLARS and CENTS	LF	380.000	132
	512	6057		PORT CTB (REMOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	14,050.000	133
	512	6058		PORT CTB (REMOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	1,920.000	134
	529	6001		CONC CURB (TY I) DOLLARS and CENTS	LF	30,982.000	135
	529	6015		CONC CURB (TY C1) DOLLARS and CENTS	LF	453.000	136
	529	6018		CONC CURB (TY F3) DOLLARS and CENTS	LF	647.000	137
	529	6027		CONC CURB (TY C2) DOLLARS and CENTS	LF	613.000	138
	530	6004		DRIVEWAYS (CONC) DOLLARS and CENTS	SY	5,703.000	139
	530	6005		DRIVEWAYS (ACP) DOLLARS and CENTS	SY	4,558.000	140
	531	6001		CONC SIDEWALKS (4") DOLLARS and CENTS	SY	15,303.000	141

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	531	6003		CONC SIDEWALKS (6") DOLLARS and CENTS	SY	2,042.000	142
	531	6004		CURB RAMPS (TY 1) DOLLARS and CENTS	EA	9.000	143
	531	6010		CURB RAMPS (TY 7) DOLLARS and CENTS	EA	39.000	144
	531	6013		CURB RAMPS (TY 10) DOLLARS and CENTS	EA	1.000	145
	531	6017		CURB RAMPS (TY 22) DOLLARS and CENTS	EA	5.000	146
	536	6002		CONC MEDIAN DOLLARS and CENTS	SY	11,995.000	147
	536	6004		CONC DIRECTIONAL ISLAND DOLLARS and CENTS	SY	1,664.000	148
	540	6001	001	MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS	LF	1,248.000	149
	540	6014	001	SHORT RADIUS DOLLARS and CENTS	LF	30.000	150
	540	6016	001	DOWNSTREAM ANCHOR TERMINAL SEC- TION DOLLARS and CENTS	EA	3.000	151
	542	6001		REMOVE METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	3,390.000	152
	544	6001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	2.000	153

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	545	6005		CRASH CUSH ATTEN (REMOVE) DOLLARS and CENTS	EA	1.000	154
	545	6013		CRASH CUSH ATTEN (INSTL)(R)(N)(TL3) DOLLARS and CENTS	EA	1.000	155
	550	6003		CHAIN LINK FENCE (REMOVE) DOLLARS and CENTS	LF	2,581.000	156
	550	6006		GATE (REMOVE) DOLLARS and CENTS	EA	1.000	157
	550	6008		CHAIN LINK FENCE (INSTALL) (8') DOLLARS and CENTS	LF	410.000	158
	550	6010		GATE(INSTALL)(DBL)(6 X14)(BARB TOP) DOLLARS and CENTS	EA	1.000	159
	552	6004		WIRE FENCE (TY D) DOLLARS and CENTS	LF	300.000	160
	556	6008		PIPE UNDERDRAINS (TY 8) (6") DOLLARS and CENTS	LF	6,768.000	161
	618	6046		CONDT (PVC) (SCH 80) (2") DOLLARS and CENTS	LF	1,370.000	162
	618	6047		CONDT (PVC) (SCH 80) (2") (BORE) DOLLARS and CENTS	LF	2,970.000	163
	618	6053		CONDT (PVC) (SCH 80) (3") DOLLARS and CENTS	LF	1,520.000	164
	618	6054		CONDT (PVC) (SCH 80) (3") (BORE) DOLLARS and CENTS	LF	4,760.000	165

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	620	6009		ELEC CONDR (NO.6) BARE DOLLARS and CENTS	LF	9,960.000	166
	620	6010		ELEC CONDR (NO.6) INSULATED DOLLARS and CENTS	LF	1,600.000	167
	621	6005		TRAY CABLE (4 CONDR) (12 AWG) DOLLARS and CENTS	LF	5,580.000	168
	624	6010		GROUND BOX TY D (162922)W/APRON DOLLARS and CENTS	EA	30.000	169
	628	6167		ELC SRV TY D 120/240 070(NS)AL(E)TP(O) DOLLARS and CENTS	EA	6.000	170
	636	6001	001	ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	119.000	171
	636	6003	001	ALUMINUM SIGNS (TY O) DOLLARS and CENTS	SF	88.000	172
	644	6007		IN SM RD SN SUP&AM TY10BWG(1)SA(U) DOLLARS and CENTS	EA	10.000	173
	644	6023		IN SM RD SN SUP&AM TYFRP(1)UA(P) DOLLARS and CENTS	EA	5.000	174
	644	6025		IN SM RD SN SUP&AM TYFRP(2)UA(P) DOLLARS and CENTS	EA	15.000	175
	644	6056		IN SM RD SN SUP&AM TYTWT(1)UA(P) DOLLARS and CENTS	EA	74.000	176
	644	6057		IN SM RD SN SUP&AM TYTWT(1)UA(T) DOLLARS and CENTS	EA	37.000	177

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	6064		IN BRIDGE MNT CLEARANCE SGN ASSM(TY N) DOLLARS and CENTS	EA	10.000	178
	644	6066		IN SM RD SN SUP&AM (RAIL MOUNT) DOLLARS and CENTS	EA	1.000	179
	644	6071		RELOCATE SM RD SN SUP&AM TY TWT DOLLARS and CENTS	EA	1.000	180
	644	6076		REMOVE SM RD SN SUP&AM DOLLARS and CENTS	EA	144.000	181
	644	6080		RELOCATE SM RD SN SUP & AM TY TEMP DOLLARS and CENTS	EA	9.000	182
	658	6046		INSTL OM ASSM (OM-2X)(WC)GND DOLLARS and CENTS	EA	24.000	183
	662	6001		WK ZN PAV MRK NON-REMOV (W)4"(BRK) DOLLARS and CENTS	LF	11,702.000	184
	662	6004		WK ZN PAV MRK NON-REMOV (W)4"(SLD) DOLLARS and CENTS	LF	189,062.000	185
	662	6010		WK ZN PAV MRK NON-REMOV (W)8"(DOT) DOLLARS and CENTS	LF	2,210.000	186
	662	6012		WK ZN PAV MRK NON-REMOV (W)8"(SLD) DOLLARS and CENTS	LF	25,347.000	187
	662	6016		WK ZN PAV MRK NON-REMOV (W)24"(SLD) DOLLARS and CENTS	LF	2,984.000	188
	662	6017		WK ZN PAV MRK NON-REMOV (W)(ARROW) DOLLARS and CENTS	EA	47.000	189

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	6026		WK ZN PAV MRK NON-REMOV (W)(UTURN ARW) DOLLARS and CENTS	EA	8.000	190
	662	6029		WK ZN PAV MRK NON-REMOV(W)(WORD) DOLLARS and CENTS	EA	40.000	191
	662	6032		WK ZN PAV MRK NON-REMOV (Y)4"(BRK) DOLLARS and CENTS	LF	11,639.000	192
	662	6034		WK ZN PAV MRK NON-REMOV (Y)4"(SLD) DOLLARS and CENTS	LF	160,065.000	193
	662	6038		WK ZN PAV MRK NON-REMOV (Y)8"(SLD) DOLLARS and CENTS	LF	920.000	194
	662	6050		WK ZN PAV MRK REMOV (REFL) TY II-A-A DOLLARS and CENTS	EA	927.000	195
	662	6052		WK ZN PAV MRK REMOV (REFL) TY II-C-R DOLLARS and CENTS	EA	876.000	196
	662	6109		WK ZN PAV MRK SHT TERM (TAB)TY W DOLLARS and CENTS	EA	6,035.000	197
	662	6110		WK ZN PAV MRK SHT TERM (TAB)TY Y DOLLARS and CENTS	EA	1,300.000	198
	662	6111		WK ZN PAV MRK SHT TERM (TAB)TY Y-2 DOLLARS and CENTS	EA	1,300.000	199
	666	6006	007	REFL PAV MRK TY I (W)4"(DOT)(100MIL) DOLLARS and CENTS	LF	1,312.000	200
	666	6036	007	REFL PAV MRK TY I (W)8"(SLD)(100MIL) DOLLARS and CENTS	LF	11,600.000	201

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6048	007	REFL PAV MRK TY I (W)24"(SLD)(100MIL) DOLLARS and CENTS	LF	4,674.000	202
	666	6054	007	REFL PAV MRK TY I (W)(ARROW)(100MIL) DOLLARS and CENTS	EA	105.000	203
	666	6063	007	REFL PAV MRK TY I(W)(UTURN ARW)(100MIL) DOLLARS and CENTS	EA	7.000	204
	666	6072	007	REFL PAV MRK TY I(W)(LNDP ARW)(100MIL) DOLLARS and CENTS	EA	6.000	205
	666	6078	007	REFL PAV MRK TY I (W)(WORD)(100MIL) DOLLARS and CENTS	EA	108.000	206
	666	6105	007	REFL PAV MRK TY I (W)(BIKE ARW)(100MIL) DOLLARS and CENTS	EA	14.000	207
	666	6111	007	REFL PAV MRK TY I(W)(BIKE SYML)(100MIL) DOLLARS and CENTS	EA	14.000	208
	666	6224	007	PAVEMENT SEALER 4" DOLLARS and CENTS	LF	100,199.000	209
	666	6226	007	PAVEMENT SEALER 8" DOLLARS and CENTS	LF	11,600.000	210
	666	6230	007	PAVEMENT SEALER 24" DOLLARS and CENTS	LF	4,674.000	211
	666	6231	007	PAVEMENT SEALER (ARROW) DOLLARS and CENTS	EA	105.000	212
	666	6232	007	PAVEMENT SEALER (WORD) DOLLARS and CENTS	EA	108.000	213

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6236	007	PAVEMENT SEALER (UTURN ARROW) DOLLARS and CENTS	EA	7.000	214
	666	6244	007	PAVEMENT SEALER (BIKE ARROW) DOLLARS and CENTS	EA	14.000	215
	666	6245	007	PAVEMENT SEALER (BIKE SYMBOL) DOLLARS and CENTS	EA	14.000	216
	666	6300	007	RE PM W/RET REQ TY I (W)4"(BRK)(100MIL) DOLLARS and CENTS	LF	13,277.000	217
	666	6303	007	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL) DOLLARS and CENTS	LF	54,053.000	218
	666	6312	007	RE PM W/RET REQ TY I (Y)4"(BRK)(100MIL) DOLLARS and CENTS	LF	420.000	219
	666	6315	007	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL) DOLLARS and CENTS	LF	31,137.000	220
	672	6010		REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	1,251.000	221
	677	6001		ELIM EXT PAV MRK & MRKS (4") DOLLARS and CENTS	LF	144,144.000	222
	677	6003		ELIM EXT PAV MRK & MRKS (8") DOLLARS and CENTS	LF	18,271.000	223
	677	6007		ELIM EXT PAV MRK & MRKS (24") DOLLARS and CENTS	LF	2,145.000	224
	677	6008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	28.000	225

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	677	6009		ELIM EXT PAV MRK & MRKS (DBL ARROW) DOLLARS and CENTS	EA	3.000	226
	677	6012		ELIM EXT PAV MRK & MRKS (WORD) DOLLARS and CENTS	EA	27.000	227
	677	6036		ELIM EXT PAV MRK & MRKS (UTURN ARROW) DOLLARS and CENTS	EA	2.000	228
	680	6001	006	INSTALL HWY TRF SIG (FLASH BEACON) DOLLARS and CENTS	EA	1.000	229
	680	6002	006	INSTALL HWY TRF SIG (ISOLATED) DOLLARS and CENTS	EA	5.000	230
	680	6004	006	REMOVING TRAFFIC SIGNALS DOLLARS and CENTS	EA	6.000	231
	681	6001		TEMP TRAF SIGNALS DOLLARS and CENTS	EA	5.000	232
	682	6001		VEH SIG SEC (12")LED(GRN) DOLLARS and CENTS	EA	65.000	233
	682	6002		VEH SIG SEC (12")LED(GRN ARW) DOLLARS and CENTS	EA	22.000	234
	682	6003		VEH SIG SEC (12")LED(YEL) DOLLARS and CENTS	EA	67.000	235
	682	6004		VEH SIG SEC (12")LED(YEL ARW) DOLLARS and CENTS	EA	30.000	236
	682	6005		VEH SIG SEC (12")LED(RED) DOLLARS and CENTS	EA	67.000	237

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	682	6006		VEH SIG SEC (12")LED(RED ARW) DOLLARS and CENTS	EA	17.000	238
	682	6018		PED SIG SEC (LED)(COUNTDOWN) DOLLARS and CENTS	EA	46.000	239
	682	6021		BACK PLATE (12")(1 SEC) DOLLARS and CENTS	EA	12.000	240
	682	6027		BACK PLATE (12")(1 SEC)ALUM DOLLARS and CENTS	EA	4.000	241
	682	6048		VEH SIG SEC (12")(LED)(YEL)(SOLAR) DOLLARS and CENTS	EA	12.000	242
	682	6051		BACKPLATE W/REFL BRDR(3 SEC)ALUM DOLLARS and CENTS	EA	59.000	243
	682	6052		BACKPLATE W/REFL BRDR(4 SEC)ALUM DOLLARS and CENTS	EA	16.000	244
	682	6053		BACKPLATE W/REFL BRDR(5 SEC)ALUM DOLLARS and CENTS	EA	4.000	245
	684	6008		TRF SIG CBL (TY A)(12 AWG)(3 CONDR) DOLLARS and CENTS	LF	280.000	246
	684	6009		TRF SIG CBL (TY A)(12 AWG)(4 CONDR) DOLLARS and CENTS	LF	11,780.000	247
	684	6012		TRF SIG CBL (TY A)(12 AWG)(7 CONDR) DOLLARS and CENTS	LF	11,010.000	248
	684	6080		TRF SIG CBL (TY C)(14 AWG)(2 CONDR) DOLLARS and CENTS	LF	10,650.000	249

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	685	6004		INSTL RDS D FLSH BCN ASSM (SOLAR PWRD) DOLLARS and CENTS	EA	1.000	250
	686	6035		INS TRF SIG PL AM(S)1 ARM(32')LUM DOLLARS and CENTS	EA	1.000	251
	686	6039		INS TRF SIG PL AM(S)1 ARM(36')LUM DOLLARS and CENTS	EA	2.000	252
	686	6041		INS TRF SIG PL AM(S)1 ARM(40') DOLLARS and CENTS	EA	4.000	253
	686	6043		INS TRF SIG PL AM(S)1 ARM(40')LUM DOLLARS and CENTS	EA	2.000	254
	686	6047		INS TRF SIG PL AM(S)1 ARM(44')LUM DOLLARS and CENTS	EA	1.000	255
	686	6051		INS TRF SIG PL AM(S)1 ARM(48')LUM DOLLARS and CENTS	EA	2.000	256
	686	6059		INS TRF SIG PL AM(S)1 ARM(55')LUM DOLLARS and CENTS	EA	4.000	257
	686	6063		INS TRF SIG PL AM(S)1 ARM(60')LUM DOLLARS and CENTS	EA	3.000	258
	686	6067		INS TRF SIG PL AM(S)1 ARM(65')LUM DOLLARS and CENTS	EA	2.000	259
	686	6147		INS TRF SIG PL AM(S)2 ARM(40-36')LUM DOLLARS and CENTS	EA	1.000	260
	686	6191		INS TRF SIG PL AM(S)2 ARM(50 - 40')LUM DOLLARS and CENTS	EA	1.000	261

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	686	6211		INS TRF SIG PL AM(S)2 ARM(55-32')LUM DOLLARS and CENTS	EA	1.000	262
	686	6271		INS TRF SIG PL AM(S)2 ARM(65-36')LUM DOLLARS and CENTS	EA	1.000	263
	687	6001		PED POLE ASSEMBLY DOLLARS and CENTS	EA	34.000	264
	688	6001		PED DETECT PUSH BUTTON (APS) DOLLARS and CENTS	EA	45.000	265
	688	6003		PED DETECTOR CONTROLLER UNIT DOLLARS and CENTS	EA	5.000	266
	730	6107		FULL - WIDTH MOWING DOLLARS and CENTS	CYC	16.000	267
	734	6002		LITTER REMOVAL DOLLARS and CENTS	CYC	48.000	268
	738	6003		CLEANING / SWEEPING (OUTSIDE MAIN LANE) DOLLARS and CENTS	CYC	48.000	269
	3076	6001		D-GR HMA TY-B PG64-22 DOLLARS and CENTS	TON	56,644.000	270
	3076	6043		D-GR HMA TY-D PG70-22 (LEVEL-UP) DOLLARS and CENTS	TON	230.000	271
	3076	6066		TACK COAT DOLLARS and CENTS	GAL	3,195.000	272
	3077	6023		SP MIXES SP-C SAC-B PG70-22 DOLLARS and CENTS	TON	20,695.000	273

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	4171	6001		INSTALL BRIDGE IDENTIFICATION NUM- BERS DOLLARS and CENTS	EA	2.000	274
	6001	6001		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	DAY	75.000	275
	6001	6002		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	EA	4.000	276
	6004	6031		ITS COM CBL (ETHERNET) DOLLARS and CENTS	LF	1,120.000	277
	6010	6010		CCTV FIELD EQUIP (ANALOG) (INSTL ONLY) DOLLARS and CENTS	EA	6.000	278
	6185	6002	002	TMA (STATIONARY) DOLLARS and CENTS	DAY	24.000	279
	6185	6003	002	TMA (MOBILE OPERATION) DOLLARS and CENTS	HR	1,512.000	280
	6292	6001		RVDS(PRESENCE DETECTION ONLY) DOLLARS and CENTS	EA	22.000	281
	6292	6002		RVDS(ADVANCE DETECTION ONLY) DOLLARS and CENTS	EA	12.000	282
	7186	6003		NGP (MAIN) (6" PLASTIC W/TW) (OPEN CUT) DOLLARS and CENTS	LF	62.000	283
	7186	6004		NGP (MAIN) (4" PLASTIC W/TW) (OPEN CUT) DOLLARS and CENTS	LF	89.000	284
	7186	6008		NGP (MAIN)(2" PLASTIC W/TW)(OPEN CUT) DOLLARS and CENTS	LF	131.000	285

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	7186	6009		NGP (MAIN)(8" PLASTIC W/TW)(OPEN CUT) DOLLARS and CENTS	LF	5,535.000	286
	7186	6022		NGP (GROUT ABANDONED MAIN)(6") DOLLARS and CENTS	LF	268.000	287
	7186	6023		NGP (GROUT ABANDONED MAIN)(8") DOLLARS and CENTS	LF	5.000	288
	7186	6024		NGP (REMOVE ABANDONED MAIN)(2") DOLLARS and CENTS	LF	105.000	289
	7186	6025		NGP (REMOVE ABANDONED MAIN)(4") DOLLARS and CENTS	LF	112.000	290
	7186	6026		NGP (REMOVE ABANDONED MAIN)(6") DOLLARS and CENTS	LF	6,716.000	291
	7186	6027		NGP (REMOVE ABANDONED MAIN)(8") DOLLARS and CENTS	LF	25.000	292
	7186	6028		NGP (SERVICE)(SHORTEN TO NEW MAIN) DOLLARS and CENTS	EA	1.000	293
	7186	6029		NGP (SERVICE)(EXTEND TO NEW MAIN) DOLLARS and CENTS	EA	1.000	294
	7186	6050		NGP(BORING)(CASING)(12" STEEL) DOLLARS and CENTS	LF	818.000	295
	7186	6051		NGP(BORING)(CASING)(8" STEEL) DOLLARS and CENTS	LF	90.000	296
	7186	6052		NGP(BORING)(CASING)(4" STEEL) DOLLARS and CENTS	LF	60.000	297

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	7186	6053		NGP(BORING)(8" PLASTIC W/TW) DOLLARS and CENTS	LF	690.000	298
	7186	6054		NGP(INSERT)(8" PLASTIC W/TW) DOLLARS and CENTS	LF	818.000	299
	7186	6055		NGP(INSERT)(4" PLASTIC W/TW) DOLLARS and CENTS	LF	90.000	300
	7186	6056		NGP(INSERT)(2" PLASTIC W/TW) DOLLARS and CENTS	LF	60.000	301
	7202	6008		STRMWTR TREAT UNIT (96IN) (8 CAR- TRIDGE) DOLLARS and CENTS	EA	2.000	302
	7202	6018		STRMWTR TREAT UNIT (72 IN)(4 CAR- TRIDGE) DOLLARS and CENTS	EA	2.000	303
	7202	6019		STRMWTR TREAT UNIT (72IN) (5 CAR- TRIDGE) DOLLARS and CENTS	EA	8.000	304
	7299	6001		SPLIT STEEL CASING (42")(OPEN CUT) DOLLARS and CENTS	LF	37.000	305
	7299	6002		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	37.000	306

County: Comal

Highway: SH 46

*****GENERAL NOTES*****
2014 Specification Book

===== Basis of Estimate =====				
Item	Description	Rate/Area		Quant-Unit
168	Veg Watering	15.6 GAL/SY		6.00 MG
310	Prime Coat (MC-30)	0.3 Gal/190,607 SY		57,548 Gal
3076	Tack Coat	0.1 Gal/31,950 SY		3,195 Gal
Item	Description	Depth	Area	Quant-Unit
247	Flex Base	10"	190,607 SY	52,740 CY

===== Asphalt Concrete Pavement =====				
0215-07-027				
Type	Location	Depth	Rate/Area	Quant-Tons
B	SH 46	4.5"	110 lbs/90,909 SY	22,500 TON
B	SH 46	11.5"	110 lbs/2,569 SY	1,625 TON
B	US 281	11.5"	110 lbs/2,986 SY	1,889 TON
B	Cross Streets	4.5"	110 lbs/1,321 SY	327 TON
B	Cross Streets	11.5"	110 lbs/2,966 SY	1,876 TON
SP-C	SH 46	2"	115 lbs/95,739 SY	11,010 TON
SP-C	US 281	2"	115 lbs/3,888 SY	448 TON
0215-01-044				
Type	Location	Depth	Rate/Area	Quant-Tons
B	SH 46	4.5"	110 lbs/74,452 SY	18,427 TON
B	SH 46	11.5"	110 lbs/3,854 SY	2,438 TON
B	US 281	11.5"	110 lbs/7,862 SY	4,973 TON
B	Cross Streets	11.5"	110 lbs/5,510 SY	3,485 TON
SP-C	SH 46	2"	115 lbs/73,072 SY	8,404 TON
SP-C	US 281	2"	115 lbs/7,243 SY	833 TON

===== Surface Treatment Data =====			
Item	Description	Rate/Area	Quant-Unit
316	Asph (AC-15P or AC-20-5TR)	0.30 Gal/185,117 SY	55,535 Gal
316	Aggr (Ty PB Gr 4 SAC B)	120 SY/CY/185,117 SY	1,552 CY

County: Comal

Highway: SH 46

--General--

Contact the Engineer or the City when construction operations are within 400 feet of a signalized intersection to determine/verify the location of loop detectors, conduit, ground-boxes, etc. Repair or replace any signal equipment damaged by construction operations. The method of repair or replacement shall be pre-approved and inspected. Depending on the type and extent of the damage, the Engineer reserves the right to perform the repair or replacement work and the Contractor will be billed for this work.

Remove existing raised pavement markings as the work progresses or as approved. This work is subsidiary to the various bid items. Properly dispose materials removed.

To better fit field conditions, the cross sections may be varied when approved.

If there are waste areas or material source areas, follow the Texas Aggregate Quarry and Pit Safety Act requirements.

Any materials removed and not reused and determined to be salvageable shall be stored within the project limits at an approved location or delivered undamaged to the storage yard as directed. Properly dispose unsalvageable materials in accordance with local, state, and federal regulations. Deface traffic signs so that they will not reappear in public as signs.

Any sign panels that are adjusted or removed and replaced, shall be done the same workday unless otherwise approved. This work shall be considered subsidiary to Item 502.

Notify the Engineer at least two weeks prior to a proposed traffic pattern change(s) that will require a revision to traffic signals.

Locate and reference all manholes and valves within the construction area with station and offset. Each manhole and valve shall be identified by its owner (SAWS, CPS, etc.). No roadwork will begin until this list has been submitted. All valves and manhole covers have to be accessible at all times, therefore; temp. CTB, material stock piles, etc. cannot be placed over these valves or covers.

Adjust or construct all manholes and valves to final pavement elevations prior to the final mat of ACP. If, between the final elevation adjustment and the final mat of ACP, the manholes and valves are going to be exposed to traffic, place temporary asphalt around the manhole and valve to provide a +/- 50:1 taper. The cost of elevation adjustment and the concrete apron around the manhole and valve will be part of the manhole and valve work. The asphalt tapers are part of the ACP work.

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Hurricane Evacuation

Hurricane Season is from June 1 thru November 30. As the closest metropolitan city inland from the Texas Coast, the City of San Antonio is a major shelter destination during mandatory hurricane evacuations. As such, planned work zone lane or road closures may be restricted and/or suspended during mandatory hurricane evacuation operations. The District will coordinate these restrictions at a minimum H-120 from any projected impact to the Texas Coast.

No time charges will be made if the Engineer determines that work on the project was impacted by the hurricane.

The Engineer may order changes in the Traffic Control Plan to accommodate evacuation traffic, and may suspend the work, all or in part, to ensure timely completion of this work. All work to implement changes in the Traffic Control Plan will be paid through existing bid prices or through Item 9.5, Force Account. However, the Department will not entertain any request for delay damages, loss of efficiency that may be attributed to the restriction or suspension of road or lane closures, or to changes in the Traffic Control Plan.

The Contractor should be aware that the "City Public Service" (CPS) will be consulted by the Engineer in matters concerning the execution of the work, materials and testing related to the CPS work. As such; a CPS employee may be observing the construction and related operations as they progress.

If a sanitary sewer overflow (SSO) occurs:

1. Attempt to eliminate the source of the SSO.
2. Contain sewage from the SSO to the extent possible to prevent contamination of waterways.

The Contractor should be aware that GBRA, CLWSC and CPS Gas will be consulted by the Engineer in matters concerning the execution of the joint bid Water and/or Gas line work. This may include reviewing material submittals and testing related to this work, as well as inspection and observation of the actual work. As such, a GBRA, CLWSC or CPS employee may be reviewing submittals and test results as well as observing the construction and related operations as they progress.

Will Locket (Area Engineer)

Will.Locket@txdot.gov

All contractor questions will be reviewed by the Engineer. Once a response is developed, it will be posted to TxDOT's Public FTP at the following Address:

<https://ftp.dot.state.tx.us/pub/txdot-info/Pre-Letting%20Responses/>

All questions submitted that generate a response will be posted through this site. The site is organized by District, Project Type (Construction or Maintenance), Letting Date, CCSJ/Project Name.

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The Contractor must measure the vertical clearance at each structure after the final surface of the roadway is completed and provide the vertical clearance measurement to the Engineer.

--Item 5--

Reference all existing striping and other pavement markings to allow these markings to be re-established. Ensure the markings (lane lines, edge lines, ramp gores, etc.) are in line with signs, TMS arrows, etc. located on overhead sign supports.

Taper ACP placed at curb inlets, traffic inlets and slotted drains.

When a bridge deck is milled, seal coated and overlaid, remove excess material. Do not just broom to the sides of the bridge, under guardrail, etc. Cover or protect all sealed expansion joints and rails on bridges and all railroad tracks encountered as approved. Clean all of these features if they weren't properly protected. This work is subsidiary work to applicable bid items.

Prior to letting, bidders may obtain a free computer diskette or a computerized transfer of files (from the Engineer's office) that contains the earthwork information. If copies of the cross-sections in addition to, or instead of, the CD are requested, they will be available at the Engineer's office for borrowing by copying companies at the bidder's expense.

When working near aerial electrical lines or utility poles, comply with Federal, State and local regulations. A horizontal boom or equivalent equipment is required for construction in the vicinity of the PEC electric lines in order to provide vertical clearance of equipment during construction. Contact PEC Utility Coordination Group sixteen (16) weeks in anticipation of pole bracing. The estimated duration for pole bracing is 6 to 10 weeks (or longer if temporary construction easements are required) after invoice is paid. For de-energizing or sleeving of the overhead electrical lines depicted on the plans, please contact PEC Utility Coordination Group sixteen (16) weeks in anticipation of needed de-energization. The estimated duration for de-energizing is approximately 4 to 6 weeks (after invoice is paid) but could vary on system scenario and backfeed requirements. De-energizing may not be possible in all instances or may be restricted during specific periods of time due to load demand. Contractor will be reimbursed for the invoice cost for pole bracing and/or de-energizing or sleeving through force account.

Prevention of Migratory Bird Nesting

It is anticipated that migratory birds, a protected group of species, may try to nest on bridges, culverts, vegetation, or gravel substrate, at any time of the year. The preferred nesting season for migratory birds is from February 15 through October 1. When practicable, schedule construction operations outside of the preferred nesting season. Otherwise, nests containing migratory birds must be avoided and no work will be performed in the nesting areas until the young birds have fledged.

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Structures

Bridge and culvert construction operations cannot begin until swallow nesting prevention is implemented, until after October 1 if it's determined that swallow nesting is actively occurring, or until it's determined swallow nests have been abandoned. If the State installed nesting deterrent on the bridges and culverts, maintain the existing nesting deterrent to prevent swallow nesting until October 1 or completion of the bridge and culvert work, whichever occurs earlier. If new nests are built and occupied after the beginning of the work, do not perform work that can interfere with or discourage swallows from returning to their nests. Prevention of swallow nesting can be performed by one of the following methods:

1. By February 15 begin the removal of any existing mud nests and all other mud placed by swallows for the construction of nests on any portion of the bridge and culverts. The Engineer will inspect the bridges and culverts for nest building activity. If swallows begin nest building, scrape or wash down all nest sites. Perform these activities daily unless the Engineer determines the need to do this work more frequently. Remove nests and mud through October 1 or until bridge and culvert construction operations are completed.
2. By February 15 place a nesting deterrent (which prevents access to the bridge and culvert by swallows) on the entire bridge (except deck and railing) and culverts.

No extension of time or compensation payment will be granted for a delay or suspension of work caused by nesting swallows. This work is subsidiary to the various bid items.

Provide a non-intrusive back-up alarm system on all heavy equipment used in close proximity to residential areas. This item is subsidiary to various bid items.

When a precast or cast-in-place concrete element is included in the plans, a precast concrete alternate may be submitted in accordance with "Standard Operating Procedure for Alternate Precast Proposal Submission" found online at <https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/publications/bridge.html#design> . Acceptance or denial of an alternate is at the sole discretion of the Engineer. Impacts to the project schedule and any additional costs resulting from the use of alternates are the sole responsibility of the Contractor.

--Item 6--

Show the stockpile lot and/or sub lot numbers on all tickets for all materials.

Steel Wrapped or Asbestos Utility Lines: N/A

Existing steel wrapped natural gas and/or asbestos cement (AC) water lines that will no longer be in service are usually abandoned in place (AIP). However, if any of these lines have to be removed for whatever reason (in the way of other construction, to make tie-ins, etc.), comply with Item 6.

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If removal of AC water lines is included in the construction contract, then notify the Engineer of proposed dates of removal of the AC water lines in accordance to Item 6. Excavate to the top of the AC water line to allow a separate contractor hired by the State to remove the AC water line. The excavation for the AC water line removal is subsidiary to the work that created the need for the removal (excavation for structures, roadway, a new line, tie-ins, etc.).

--Item 7--

The project's total disturbed area is 68.50 Acre. The disturbed area in all project locations and Contractor project specific locations (PSL's), within 1/4 mile of the project limits, will further establish the authorization requirements for storm water discharges. The department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. Obtain any required authorization from the TCEQ for any PSL's on or off the ROW. When the total area disturbed on the project and PSL's within 1/4 mile of the project exceeds 5 acres, provide a copy of the Contractor NOI for PSL's to the Engineer (to the appropriate MS4 operator when the project is on an off-state system route).

Notify the Engineer of the disturbed acreage within one (1) mile of the project limits. Obtain authorization from the TCEQ for Contractor PSL's for construction support activities on or off ROW.

No significant traffic generators events identified.

--Item 8--

Working days will be computed and charged in accordance with Article 8.3.1.4 Standard work week.

Create and maintain a Critical Path Method (CPM) schedule.

The CPM schedule shall be created and maintained using software fully compatible with version 6.1 of Primavera Project Planner.

Notes for Milestones

Substantial Completion of Work is defined in Special Provision to Item 8.

Milestone 1

SH 46 EB at US 281 Phase 2B Step 2. See the traffic control plans (TCP) for a detailed description of the work included in Milestone 1.

The daily road-user cost for incentive and disincentive for Milestone 1 will be \$15,000.00 per day.

The contractor will have 5 working days for Substantial Completion of Work for Milestone 1.

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Working day time charges for Milestone 1 will be computed and charged in accordance with Article 8.3.1.4 Standard work week.

The time charges for the purpose of computing incentive and disincentive for Milestone 1 will begin when traffic is moved to the lane arrangement shown in TCP Phase 2B Step 2 for Milestone 1.

The time charges for the purpose of computing incentive and disincentive for Milestone 1 will end with Substantial Completion of Work for Milestone 1, which consists of completion of work in TCP Phase 2B Step 2 and traffic control devices are in position as shown in Phase 2B Step 3.

The maximum number of working days for computing the incentive credit for Milestone 1 will be 1 day. The maximum credit allowable for early completion of Milestone 1 is \$ 15,000 .

Failure of Substantial Completion of Work for Milestone 1 within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day in excess of those allowed for Milestone 1.

Milestone 2

SH 46 EB at US 281 Phase 2B Step 3. See the traffic control plans (TCP) for a detailed description of the work included in Milestone 2.

The daily road-user cost for incentive and disincentive for Milestone 2 will be \$15,000.00 per day.

The contractor will have 5 working days for Substantial Completion of Work for Milestone 2.

Working day time charges for Milestone 2 will be computed and charged in accordance with Article 8.3.1.4 Standard work week.

The time charges for the purpose of computing incentive and disincentive for Milestone 2 will begin when traffic is moved to the lane arrangement shown in TCP Phase 2B Step 3 for Milestone 2.

The time charges for the purpose of computing incentive and disincentive for Milestone 2 will end with Substantial Completion of Work for Milestone 2, which consists of completion of work in TCP Phase 2B Step 3 and traffic control devices are in position as shown in Phase 2B Step 4.

The maximum number of working days for computing the incentive credit for Milestone 2 will be 1 day. The maximum credit allowable for early completion of Milestone 2 is \$ 15,000 .

Failure of Substantial Completion of Work for Milestone 2 within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day in excess of those allowed for Milestone 2.

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Milestone 3

SH 46 EB at US 281 Phase 2B Step 4. See the traffic control plans (TCP) for a detailed description of the work included in Milestone 3.

The daily road-user cost for incentive and disincentive for Milestone 3 will be \$15,000.00 per day.

The contractor will have 28 working days for Substantial Completion of Work for Milestone 3.

Working day time charges for Milestone 3 will be computed and charged in accordance with Article 8.3.1.4 Standard work week.

The time charges for the purpose of computing incentive and disincentive for Milestone 3 will begin when traffic is moved to the lane arrangement shown in TCP Phase 2B Step 4 for Milestone 3.

The time charges for the purpose of computing incentive and disincentive for Milestone 3 will end with Substantial Completion of Work for Milestone 1, which consists of completion of work in TCP Phase 2B Step 4 and traffic control devices are in position as shown in Phase 2B Step 5.

The maximum number of working days for computing the incentive credit for Milestone 3 will be 5 days. The maximum credit allowable for early completion of Milestone 3 is \$ 75,000 .

Failure of Substantial Completion of Work for Milestone 3 within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day in excess of those allowed for Milestone 3.

Milestone 4

SH 46 EB at US 281 Phase 2B Step 5. See the traffic control plans (TCP) for a detailed description of the work included in Milestone 4.

The daily road-user cost for incentive and disincentive for Milestone 4 will be \$15,000.00 per day.

The contractor will have 7 working days for Substantial Completion of Work for Milestone 4.

Working day time charges for Milestone 4 will be computed and charged in accordance with Article 8.3.1.4 Standard work week.

The time charges for the purpose of computing incentive and disincentive for Milestone 4 will begin when traffic is moved to the lane arrangement shown in TCP Phase 2B Step 5 for Milestone 3.

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The time charges for the purpose of computing incentive and disincentive for Milestone 4 will end with Substantial Completion of Work for Milestone 4, which consists of completion of work in TCP Phase 2B Step 5 and traffic control devices are in position as shown in Phase 2B Step 6.

The maximum number of working days for computing the incentive credit for Milestone 4 will be 1 days. The maximum credit allowable for early completion of Milestone 4 is \$ 15,000 .

Failure of Substantial Completion of Work for Milestone 4 within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day in excess of those allowed for Milestone 4.

Milestone 5

Bulverde Crossing Closure Phase 2C Step 1. See the traffic control plans (TCP) for a detailed description of the work included in Milestone 5.

The daily road-user cost for incentive and disincentive for Milestone 5 will be \$15,000.00 per day.

The contractor will have 13 working days for Substantial Completion of Work for Milestone 5.

Working day time charges for Milestone 5 will be computed and charged in accordance with Article 8.3.1.4 Standard work week.

The time charges for the purpose of computing incentive and disincentive for Milestone 5 will begin when traffic is moved to the lane arrangement shown in TCP Phase 2C Step 1 for Milestone 5.

The time charges for the purpose of computing incentive and disincentive for Milestone 5 will end with Substantial Completion of Work for Milestone 5, which consists of completion of work in TCP Phase 2C Step 1 and traffic control devices are in position on Bulverde Crossing as shown in TCP Phase 3A.

The maximum number of working days for computing the incentive credit for Milestone 5 will be 2 days. The maximum credit allowable for early completion of Milestone 5 is \$ 30,000 .

Failure of Substantial Completion of Work for Milestone 5 within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day in excess of those allowed for Milestone 5.

Milestone 6

Rainbow Drive Closure Phase 4 Step 2. See the traffic control plans (TCP) for a detailed description of the work included in Milestone 6.

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The daily road-user cost for incentive and disincentive for Milestone 6 will be \$15,000.00 per day.

The contractor will have 6 working days for Substantial Completion of Work for Milestone 6.

Working day time charges for Milestone 6 will be computed and charged in accordance with Article 8.3.1.4 Standard work week.

The time charges for the purpose of computing incentive and disincentive for Milestone 6 will begin when traffic is moved to the lane arrangement shown in TCP Two Way Roadway Intersection Phasing Rainbow Dr Phase 4 Step 2 for Milestone 6, which may not begin until all work on SH 46 in Phase 4 Step 1 is completed.

The time charges for the purpose of computing incentive and disincentive for Milestone 6 will end with Substantial Completion of Work for Milestone 6, which consists of completion of work in TCP Two Way Roadway Intersection Phasing Rainbow Dr Phase 4 Step 2 and traffic control devices are in position on Rainbow Drive as shown in TCP Phase 5.

The maximum number of working days for computing the incentive credit for Milestone 6 will be 1 day. The maximum credit allowable for early completion of Milestone 6 is \$ 15,000 .

Failure of Substantial Completion of Work for Milestone 6 within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day in excess of those allowed for Milestone 6.

Milestone 7

Forty Six Pkwy Closure at River Way Phase 4 Step 2. See the traffic control plans (TCP) for a detailed description of the work included in Milestone 7.

The daily road-user cost for incentive and disincentive for Milestone 7 will be \$15,000.00 per day.

The contractor will have 6 working days for Substantial Completion of Work for Milestone 7.

Working day time charges for Milestone 7 will be computed and charged in accordance with Article 8.3.1.4 Standard work week.

The time charges for the purpose of computing incentive and disincentive for Milestone 7 will begin when traffic is moved to the lane arrangement shown in TCP Two Way Roadway Intersection Phasing River Way Phase 4 Step 2 for Milestone 7, which may occur at any time during Phase 4 Step 1, except during Milestone 8 work, as approved by the State.

The time charges for the purpose of computing incentive and disincentive for Milestone 7 will end with Substantial Completion of Work for Milestone 7, which consists of completion of work

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in TCP Two Way Roadway Intersection Phasing River Way Phase 4 Step 2 and traffic control devices are in position on River Way as shown in TCP Two Way Roadway Intersection Phasing River Way Phase 4 Step 3.

The maximum number of working days for computing the incentive credit for Milestone 7 will be 1 day. The maximum credit allowable for early completion of Milestone 7 is \$ 15,000 .

Failure of Substantial Completion of Work for Milestone 7 within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day in excess of those allowed for Milestone 7.

Milestone 8

Bentwood Drive Closure Phase 4 Step 1. See the traffic control plans (TCP) for a detailed description of the work included in Milestone 8.

The daily road-user cost for incentive and disincentive for Milestone 8 will be \$15,000.00 per day.

The contractor will have 6 working days for Substantial Completion of Work for Milestone 8.

Working day time charges for Milestone 8 will be computed and charged in accordance with Article 8.3.1.4 Standard work week.

The time charges for the purpose of computing incentive and disincentive for Milestone 8 will begin when traffic is moved to the lane arrangement shown in TCP Detour Layout 4c Phase 4 Bentwood Dr for Milestone 8, which may occur at any time during Phase 4 Step 1, except during Milestone 7 work, as approved by the State.

The time charges for the purpose of computing incentive and disincentive for Milestone 8 will end with Substantial Completion of Work for Milestone 8, which consists of completion of work on Bentwood Dr and traffic control devices are in position on Bentwood Dr as shown in TCP Phase 5.

The maximum number of working days for computing the incentive credit for Milestone 8 will be 1 day. The maximum credit allowable for early completion of Milestone 8 is \$ 15,000 .

Failure of Substantial Completion of Work for Milestone 8 within the established number of working days shown above will result in the assessment of disincentives using the daily road-user costs shown above for each working day in excess of those allowed for Milestone 8.

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--Item 100--

Begin clearing operations after trees and other areas of vegetation to be protected have been identified and approved. Install fencing around features to be protected as shown in the plans or directed. Coordinate all right of way clearing operations with the SW3P.

Trim and remove brush and trees within the stations noted in the plans and as needed for construction operations. Unless shown otherwise in the plans or a designated non-mow area, perform trimming or removal for areas to the ROW limits. Trim or remove to provide minimum of 5 ft. of horizontal clearance and 7 ft. of vertical clearance for the following: sidewalks, paths, guard fence, rails, signs, object markers, and structures. Trim to provide a minimum of 12 ft. vertical clearance under all trees. This work is subsidiary.

Obtain approval for proposed method of tree and brush trimming and removal. Vertical flailing equipment is not allowed. Treat damaged or cut branches, roots and/or stumps of all oak trees with a commercial tree wound dressing. Disinfect all pruning tools with a solution of 70% alcohol before moving from one tree to another. Unless otherwise approved remove all resulting vegetative debris from the ROW within 24 hours. The Engineer can stop all construction operations if the dressing, cut and removal requirements are not followed.

--Item 110--

Where excavation extends beyond a right of way fence, remove and replace the fence to a comparable condition. This work shall be considered subsidiary to the bid item.

--Item 132--

At no time shall the retaining wall backfill material exceed the adjacent embankment operation by more than one embankment lift. At no time will the embankment adjacent to the retaining wall backfill exceed the wall backfill by any elevation.

--Item 160--

Approximately 7942 CY of existing topsoil may be windrowed or stockpiled (as approved) for later use under this Item. Place erosion control measures for the stockpile and/or windrow.

--Item 164--

Drill seeding of permanent grasses requires the use of approved grass seeding equipment capable of properly storing and metering the release of small seeds (such as Bermuda grass) separately from fluffy type seeds (such as bluestems). Equipment manufactured for planting grain crops is acceptable for planting temporary cool season seeds, but not for planting the permanent seed mix.

If performing a permanent seeding in an area with established temporary grass cover and mowing is performed instead of tilling, seed and fertilizer may be distributed simultaneously during "Broadcast Seeding" operations, provided each component is applied at the specified rate.

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--Item 168--

Apply vegetative watering as needed to supplement natural rainfall during the vegetation establishment period. Plan quantity of irrigation water is based on the application of a total of 1.3 gal of water each week for each sq. yd. of area that is sodded or seeded. Establishment time is estimated to be 12 weeks for both sod and permanent seed mixes. Temporary seeding will require less time for establishment. Provide a schedule and coordinate watering cycles and rates per cycle with the Engineer. Obtain approval if the quantity of water to be applied is expected to exceed the plan quantity. Adjust the amount of water applied with each cycle and the number of cycles each wk. according to actual site conditions. Drought or other conditions, as determined by the Engineer, may require the application of supplemental irrigation during hours other than normal working hours.

--Item 247--

There is no minimum PI requirement for this project.

--Item 275--

The Engineer will designate a target cement content and optimum moisture content necessary to produce a stabilized mixture that meets the strength requirements and moisture susceptibility requirements shown in Table 1. The Contractor shall furnish the Engineer with representative samples of the materials to be used in production of the cement treated base.

Table 1
Requirements for Cement Treatment

Description	Minimum	Maximum
Cement Content (by dry weight of base)	2%	5%
	Procedure	Minimum
7-Day Unconfined Compressive Strength	Tex-120-E, Part I	150 psi
Retained Strength after Moisture Conditioning	Tex-120-E, Part I (Submerged in water for 24 hrs. after seven days of curing)	80% of 7—Day Unconfined Compressive Strength

Microcracking will be required in accordance with Item 275.4.7.

--Item 3076, 3077, 3079, 3080, 3081, & 3082 --

1. Table 10 in Item 3076 and Table 11 in Item 3077, Hamburg Wheel Test Requirements tested in accordance with Tex-242-F are changed for PG 64-22 or lower and PG 70-22. Minimum number of passes at 12.55 mm Rut Depth, Tested at 50 degrees C will be 5,000 and 10,000 respectively.

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2. Submit a copy of the Tex 233-F production charts on a weekly basis. At the end of the ACP work, provide all originals.
3. Crushing of aggregate for hot mix and immediate use for production of the mix is not allowed. Stockpile the aggregate until enough material is available for five days of production unless prior approval is provided
4. Hold a pre-paving meeting one month prior to the placement of the hot mix. The date and time of pre-paving meeting should be coordinated with the Engineer prior to scheduling.
5. Do not use diesel or solvents as asphalt release agents in production, transportation, or construction. A list of approved asphalt release agents is available from the District Laboratory.
6. No more than one hot mix lot will be open for any specific type of hot mix, unless authorized. After a lot is open and the Contractor gets approval to change plants, the previous lot will be closed and a new lot will be opened. The numbering for the lots produced at the new plant will start with No. 1. If allowed to switch back to the original or previous plant, the next lot from that plant will resume numbering sequentially from the last lot produced by that plant.

--Item 354--

Retain planed material.

Take precaution to avoid damage to existing bridge decks and armor joints. Repair any damage to the bridge decks and/or armor joints as approved. This work will not be paid directly, but will be performed at the Contractor's expense.

--Item 416--

Due to overhead power lines along the right-of-way adjacent to most of the drilled shaft retaining walls, the Contractor will need to use a low-profile drilling rig to install most of the drilled shafts. The reinforcement cages will also need to be split in halves or thirds and spliced due to the low overhead clearance. Refer to the Drill Shaft Work Zone plans in the Traffic Control Plan section for profiles along the walls, the vertical clearance window, benching and temporary special shoring needed to obtain vertical clearance in certain sections and additional notes and details. The cost for the low-profile drilling equipment and splicing reinforcement cages shall be included in the unit bid price for Item 416.

--Item 420--

Restrict large aggregate size to $\frac{3}{4}$ " maximum for class "C" concrete used in aesthetic details requiring form liners.

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--Item 423--

The backfill material for pre cast retaining walls shall be approved before placement. Build stockpile(s) in lifts not to exceed 2 feet and a minimum working face of not less than 10 feet, but not more than 20 feet.

Use the approved Concrete Block Retaining wall systems listed at:

<http://www.txdot.gov/business/resources/approved-systems/retaining-system.html>

Use the approved Mechanically Stabilized Earth (MSE) wall systems listed at:

<http://www.txdot.gov/business/resources/approved-systems/mse-wall.html>

TxDOT does not allow the use of experimental systems on projects with over 50,000 square feet walls over 25 ft. tall, or walls supporting or immediately adjacent to interstate highways. When proprietary wall systems are used, a qualified representative of the retaining wall manufacturer must be available upon request during wall construction. As requested, or required the manufacturer's representative must be on site to assist with the initial stages of wall construction, provide training to the Contractor wall crew and ensure proper interpretation of MSE wall shop drawings and details. Specific attention must be given to nonstandard wall installation details. The Contractor's wall crew foreman must be on site for the duration of wall construction. Any change to the wall crew foreman may require additional training by the wall supplier. The Contractor will ensure that the retaining walls are installed per the details presented in the construction drawings and as per the proprietary wall system requirements. The Engineer reserves the right to suspend wall construction activities due to any construction issue encountered.

Horizontal and vertical nail spacing on temp or permanent soil nail walls shall not exceed 4 ft.

Type DS material will be required on MSE walls in the area of the reinforcement mats.

--Item 432--

In all riprap slopes, provide 3 inch diameter weep holes at 10 foot maximum spacing and backed with loose graded gravel or crushed stone and galvanized hardware cloth.

In areas where guard fence posts are to be placed in riprap, the riprap shall have an 18 inch +/- blocked out area (round or square). After the posts are installed, the blocked out area shall be topped off with 4 inches of low strength grout/mortar consisting of about 1 sack of cement per cubic yard of mix.

Match the slope of the Riprap (Mow Strip) to the slope of the adjacent roadway.

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--Item 462--

Use lean concrete or 2 sack flowable backfill for fill between pre-cast boxes. Lean concrete and 2 sack flowable backfill shall be considered subsidiary to this bid item.

The following structures shall be cast-in-place:
Structure A1 and A2.

The following structures shall be pre-cast:
D1.

--Item 496--

The Contractor will submit a demolition plan for all structures to be replaced and/or removed in accordance with Item 496.

Provide for the safety and health of employees and abide by all OSHA Standards and Regulations. All costs incurred for proper management, shall be subsidiary to this Item.

--Item 502--

Place standard markings no later than 14 days after surface treatment operations are completed.

When advanced warning flashing arrow panels and/or changeable message sign is specified, have one standby unit in good condition at the job site. Standby time shall be considered subsidiary to the bid item.

Treat the pavement drop-offs as shown in the TCP.

After written notification, the time frame is provided on the Form 599 to provide properly maintained signs and barricades before considered in non-compliance. Failure to make corrections as noted may result in payment for this item being withheld.

There are traffic signals at the intersection of FM 2790, and NBFR and SBFR. Keep the signals in operation at all times except when necessary for specific installation operations, including any modifications to existing signal heads to maintain clear visibility at all times. Adjustment of any signal head will be subsidiary to Item 502. When it is necessary for a signal to be turned off, hire off duty police officers to control the traffic until the signals are back in satisfactory condition.

Moving an existing sign to a temporary location is subsidiary to this Item. Installations with permanent supports at permanent locations will be paid for under the applicable bid item (s).

Mount temporary mailboxes on plastic drum in accordance with Compliant Work Zone Traffic Control Devices, Section K. Mounting and moving the mailbox as needed for the various construction phases is subsidiary to this Item.

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Notify the Engineer in writing 10 business days in advance of any temporary or permanent lane, ramp, connector, etc. closures/detours, restrictions to lane widths, alterations to vertical clearances, or modifications to radii. Any other modifications to the roadway that may adversely affect the mobility of oversized/overweight trucks also require 10 business days advance written notice to the Engineer. Unless shown in the TCP, no lane, ramp, connector, etc. closures are allowed during special events. At least one lane has to remain open at all times. Lane closures will not be allowed if this reporting requirement is not met.

For closures not listed in the TCP; the lane closures are limited to between the hours of 8 am and 5 pm, and at least one lane has to remain open at all times.

Avoid placing stockpiles within the roadway's horizontal clear zone. If a stockpile is placed within the clear zone, address in accordance with the TMUTCD.

Do not place barricades, signs, or any other traffic control devices where they interfere with sight distance at driveways or side streets.

In addition to providing a Contractor's Responsible Person and a phone number for emergency contact, have an employee available to respond on the project for emergencies and for taking corrective measures within 2 hours or within a reasonable time frame as specified by the Engineer.

Temporary Rumble Strips are to be used according to WZ (RS)-16.

Use 4 number of rumble strip arrays.

If Nighttime work is required and work is not behind positive barrier then full TY 3 reflective gear is required to be worn by all workers, hard hat halos are required to be worn by the flaggers at flagging stations, TY III barricades are required to be spaced at 500 ft, and a mandatory night work meeting is required.

The Contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.

Moving or adjustment of traffic signal heads, VIVDS, and radar detection for the purpose of alignment with the shifting of lanes in conjunction with the traffic control plan will be subsidiary to various bid items.

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--Item 504--

For field office Type E Structure. Provide at least 1200 sq. ft. of gross floor area in rooms 8 ft. high. Partition the floor area into at least 4 interconnected rooms with doors, 2 exterior doors, and at least 2 windows in each room. Provide at least 10 parking spaces for pull-through parking.

Enclose the field office, laboratory and the parking area as shown in 504.2.1.1 and provide security lighting.

Provide high speed internet service with WIFI signal and a laser jet printer/scanner/copier as directed.

Provide essential supplies, including: toilet paper, hand soap, paper towels, printing paper, potable water, and printer ink.

Provide a Type E Structure for a Concrete Field Laboratory with at least 200 sq. ft. of gross floor area in a room 8 ft. high, furnished with an exterior door and at least 2 windows. Provide required equipment for testing (moist cabinet, moist room, or water storage tank in accordance with Tex-498-A, Table 32 and Concrete Compression Testing Machine in accordance with Tex-498-A, Table 18). Provide associated calibration documents, as outlined in Tex-498-A, for all contractor provided testing equipment.

A Type D Structure (Asphalt Mix Control Laboratory) is required for all projects that do not have a previously approved laboratory structure for TxDOT's exclusive use. The structure will include high speed internet service with WIFI signal, one desk, two chairs, and one file cabinet.

All labs and offices will include cleaning at least once a week. The cleaning will include sweeping and mopping of floors, cleaning the toilet and lavatory, and emptying wastebaskets. Space heaters are not considered adequate heating.

--Item 506--

An Inspector will perform a regularly scheduled SWP3 inspection every 7 calendar days.

Failure to address items noted on the SW3P inspection report within two report cycles may result in the Department stopping all construction operations, exclusive of time charges, or withholding that month's estimate until the SW3P deficiencies are corrected unless the Engineer determines that the area is too wet to correct SW3P deficiencies.

Failure to correctly maintain daily monitoring reports and submitting to TxDOT on a daily/weekly basis may result in the monthly estimate being withheld.

--Item 510--

The length of the one-way traffic control section is limited to 1 miles.

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--Item 512--

Portable concrete traffic barrier (PCTB), LPCTB Type 1 & Type 2 will be furnished by the Contractor.

Portable traffic barrier manufactured after December 31, 2019 must have been successfully tested to the 2016 edition of MASH and will be manufactured in accordance with the Standard Sheets in the plans. Portable traffic barrier manufactured on or before this date, and successfully tested to NCHRP Report 350 or the 2009 edition of MASH may continue to be used throughout their normal service lives, but must be the same shape type as shown in the plans.

Only Single Slope shape CTB may be furnished on the inside shoulder/inside median of the Interstate or Freeway Main Lanes.

More than one shape type of CTB may be furnished on a project, although no mixing of CTB shape types will be permitted along a continuous segment of CTB.

--Item 529--

Class "C" concrete is required for machine extruded curb.

Curb inlets and extensions are based on an exposed curb height of 7 inches. The roadway curb height and shape will be transitioned to the inlet's curb with a 40: 1 taper.

--Item 531--

The curb ramp locations shown in the plans have taken into account the geometric features of the intersection, traffic signals, and the pavement markings. If anything changes during construction, the location of curb ramps must be adjusted to ensure they meet TAS requirements. Sidewalks locations may be adjusted in field to avoid utilities but ADA requirements must be maintained.

--Item 540--

MBGF posts shall be round with domed tops, and not painted. If 10 or less timber posts are needed, they may be purchased locally and will be accepted by visual inspection.

Guard fence posts placed in proposed and/or existing areas of riprap, sidewalks or other concrete shall have an 18 inch +/- (square or round) block out in the concrete. After the posts are installed, the blocked out area shall be topped off with 4 inches of low strength grout/mortar consisting of about 1 sack of cement per cubic yard of mix.

When connecting a Thrie-Beam to a concrete wingwall, bridge rail, CTB, etc., drill the holes for bolt placement using rotary or core type equipment. Use a core type drill when reinforcing steel is encountered. Do not use percussion or impact drilling. Repair damage to the concrete and spalls exceeding 1/2" from the edge of the hole.

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--Item 556--

Coarse Aggregate Grade 3 meeting requirements of Item 421, Table 4, is acceptable for Filter Material.

--Item 585--

Use Surface Test Type B, pay adjustment schedule 1 to evaluate ride quality of travel lanes.

--Item 618--

It might be necessary to cut concrete for placement of conduit. Saw cut existing concrete, remove the concrete from the steel reinforcement (bars or fabric) and bend the steel to install the conduit. After the conduit has been placed, bend the steel back to its original position and back-fill the trench with an approved concrete. This work is subsidiary to this Item.

The conduit depth for illumination under the City of San Antonio streets is 36 inches.

Use materials from Material Producers list as shown on the Construction Division's (CST) web site. Category is "Roadway Illumination and Electrical Supplies."

--Item 620--

For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holder as shown on the Construction Division's (CST) materials producers list Category is "Roadway Illumination and Electrical Supplies." Fuse holder is shown on list under Items 610 & 620.

Provide 10 amp time delay fuses.

--Item 644--

The wedge anchor system shown on State Standard Sheet SMD (TWT) is not allowed.

The set screw type for Triangular Slipbase Systems is not allowed. Use the following products for the Triangular Slipbase System.

Triangular Slip Base Systems
(For use with 10 BWG and Schedule 80 Round Posts)

Southern Plains Fabrication	SPF Triangular Slipbase Housing	Info@SouthernPlainsFabrication.com http://SouthernPlainsFabrication.com (806) 241-0060
Structural and Steel Products	Triangular Slipbase Breakaway Support	CustServ@s-steel.com http://s-steel.com (800) 782-5804

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--Item 662--

Raised reflective pavement markings are required when using work zone reflective pavement markings for lane lines as shown in the standards. The raised reflective pavement markings must be placed during the same operation for installation of the work zone reflective pavement markings and placed before the roadway is open to traffic. These raised reflective pavement markings will be subsidiary to work zone pavement markings.

--Item 666--

Use TY II material (vs. an acrylic or epoxy) as the sealer for the TY I markings, place the TY II a minimum of 14 calendar days (to provide adequate curing) before placing the TY I markings.

Failure to provide the retroreflectometer testing data within the time specified in the specifications will result in non-payment of the bid item.

--Item 672--

Place all adhesive material directly from the heated dispenser to the pavement. Do not use portable or non-heated containers. Use adhesive of sufficient thickness so that when the marker is pressed into the adhesive, 1/8" or more adhesive will remain under 100% of the marker. The adhesive should extend not less than 1/2" but not more than 1 1/2" beyond the perimeter of the marker.

--Item 677--

Obtain approval before using the mechanical method for the elimination of existing thermoplastic pavement markings.

--Item 680--

Furnish and install all required materials and equipment necessary for the complete and operating traffic signal installation at the following intersections:

SH 46 at Windmill Ranch Rd
SH 46 at Bulverde Crossing
SH 46 at Old Boerne Rd/ Singing Oaks
SH 46 at US 281 SBFR
SH 46 at US 281 NBFR
SH 46 at Rainbow Dr (Flashing Beacon)
SH 46 at Stahl Ln / River Way

All workers installing electrical materials, including conduit in trenches, service poles and all other system electrical apparatus, will be directly supervised by persons who have completed a TxDOT approved course in electrical underground installations. Furnish evidence of satisfactory completion of the underground electrical installation for roadway illumination and signal control course for all personnel responsible for direct supervision of electrical installation work.

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The locations shown on the plans for signal pole foundations, controller foundations, conduit and other items may be adjusted to better fit field conditions as approved.

Furnish and install a new Henke Enterprises or Mobotrex eight-phase NEMA TS2 Type 2 controller and cabinet, meeting the requirements of Departmental Materials Specifications DMS-11170. Provide detector panel toggle switches that additionally permit the user to disconnect the detector. For both ground and pole-mount cabinets, provide cabinet configuration with 16 position load bay.

Deliver TS type 2 controller cabinet and assembly to the TxDOT San Antonio district signal shop for programming and testing two weeks in advance prior to contractor installing equipment in the field. Coordinate drop off and pick up with Craig Williams (210) 731-5143. Connect all field wiring to the controller assembly into the polyphaser. The Signal Shop representative will assist in determining how the detection cables are to be connected, and will also program the controller for operation, hook up the malfunction management unit (MMU) or conflict monitor, detector units, and other equipment, and turn on the controller. Have a qualified technician on the project site to place the traffic signals in operation.

Once final punch list is complete, contractor is allowed to begin flashing signal operations. Signal shall flash for a minimum of 7 days prior to full operation, unless otherwise approved by the Engineer.

Use LED lamps from the prequalified material producer lists as shown on the Texas Department of Transportation (TxDOT) – Construction Division’s (CST) material producer list. Category is “Roadway Illumination and Electrical Supplies.” under item 610. No substitutions will be allowed for materials found on this list.

Demonstrate that the field wiring is properly installed, install the controller assembly, connect the wiring and turn on the controller.

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The following wiring sequence shall be used when connecting signal sections to the cabinet:

Conductor No.	Base Color	Tracer Color	Signal Face
1	Black		Yellow Ball
2	White		Neutral
3	Red		Red Ball
4	Green		Green Ball
5	Orange		Yellow Arrow
6	Blue		Green Arrow
7	White	Black	Spare

All existing signal equipment with the exception of the signal controller and related equipment become the property of the Contractor. Deliver the controller and related equipment to the Signal shop, located at 4615 NW Loop 410 (corner of IH 410 and Callaghan Road) in San Antonio, Texas or to the Area Office as directed.

Use qualified personnel to respond to and diagnose all trouble calls during the thirty-day test period. Repair any malfunction to Contractor-supplied signal equipment. Provide to the Engineer a local telephone number, not subject to frequent changes and available on a 24-hour basis, for reporting trouble calls. Response time to reported calls must be less than 2 hours. Make appropriate repairs within 24 hours. Place a logbook in the controller cabinet and keep a record of each trouble call reported. Notify the Engineer of each trouble call. Do not clear the error log in the conflict monitor or MMU during the thirty-day test period without approval.

Integrate the proposed traffic signal(s) into the existing Advanced Traffic Management System (ATMS) as shown on the plans. Centrac's ATMS software, which utilizes Econolite controllers, is currently in use in the San Antonio District. Provide controllers on this project that fully communicate with the existing ATMS software. For use when signal controller is furnished by contractor.

This project includes the installation of at least one cellular modem at the location(s) specified in the plans. Cellular modem(s) and power supply(s) will be furnished by the department. Provide all materials not supplied by the department necessary for the cellular modem installation. All materials provided by the contractor must be new unless otherwise shown on the plans. Equipment provided by the department shall be stored by the department for pick up at the TxDOT San Antonio district office, 4615 NW Loop 410 San Antonio, TX 78229. Prevent damage to all cellular modem components supplied by the department. Replace any component that is damaged or lost during transportation or installation at the contractor's expense. Verify

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operation of the cellular modem(s) together with operation of its links; demonstrate that data can be transmitted at a satisfactory rate from the field location to the central location. Demonstrate that the cellular modem(s) data packets are being received at the central site via a networked computer. Transportation, installation and incidentals for installation of the cellular modem(s) shall be considered subsidiary to item 680. For use when a cellular communication link will be established to Transguide.

Provide a submittal compliance matrix with all traffic signal submittals.

Contractor shall be responsible for field verifying the depths of the drill shafts to meet the minimum clearances specified in the plans before ordering materials.

Damage to existing facilities such as traffic signal equipment, conduit, cables, etc. caused by the contractor during construction will be replaced by the contractor at no cost to TxDOT with equipment as approved by the engineer. Replace all pavements, sidewalk, curb, rip-rap or any item damaged during construction subsidiary to various bid items with no direct payment. Any damage that was not caused by the contractor during operations will be reimbursed for repair of damage caused by: motor vehicle, watercraft, aircraft, or railroad-train incident, vandalism or acts of God, such as earthquake, tidal wave, tornado, hurricane, or other cataclysmic phenomena of nature.

Ensure that all TMS (Traffic Management System) equipment furnished and installed is completely compatible with the existing hardware and software located within the Transguide operations center (i.e. Transguide central software). The contractor shall contact the traffic management engineer for details on the system network architecture.

Contractor shall be responsible for integrating and testing all new TMS equipment and any existing TMS equipment that is relocated into the existing network management system, subsidiary to the various bid items.

Security against theft and vandalism of all traffic signal equipment is the full responsibility of the contractor until the date of final acceptance of the project by the engineer.

Maintenance of all TMS equipment furnished and installed on this project is the full responsibility of the contractor until date of final acceptance of this project by the engineer. All required documentation must be turned in before TxDOT will accept project for maintenance.

Perform all electrical work in accordance with the National Electrical Code and Texas Department of Transportation Specifications.

In accordance with the Underground Facility Damage Prevention Act (One Call Bill) the phone number for a utility locator is 1-800-545-6005. It is the Contractor's responsibility to make arrangements for utility locators as needed.

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Underground utilities owned by the Texas Department of Transportation may be present within the Right-Of-Way. Call the TxDOT offices listed below for locates a minimum of 48 hours in advance of excavation. If city or town owned irrigation facilities are present, call the appropriate department of the local city or town a minimum of 48 hours in advance of excavation. The Contractor is liable for all damages incurred to the above mentioned utilities when working without having the utilities located prior to excavation.

--Item 684--

Provide an extra 10' for each cable terminating in the controller cabinet. All cables shall be continuous without splices from terminal point to terminal point. All proposed signal cable shall be #12 AWG stranded copper.

--Item 686 & 687--

Provide all signal poles from the same manufacturer. Pedestrian poles may be from a different manufacturer.

Materials to put the Overhead School Zone Signs online, including clock, cabinet, batteries, panel, etc., are covered under Force Account. Contractor's cost to install the materials in force account shall be subsidiary to Item 686.

--Item 730--

Mow full-width and hand trim the right of way, including newly seeded or sodded areas, when vegetation reaches a height of 16" or when directed. Removal of brush sprouts growing within guardrail, concrete barriers or at other locations where mowing or hand trimming is done within the limits of construction is required and subsidiary to this item. Mowing may be required more often in newly sodded or seeded areas than in other parts of the project because of the supplemental irrigation these areas receive and the resulting weed growth. Coordinate mowing to avoid rutting or compaction of the soil when mowing where supplemental irrigation is being used. Use mowing equipment that will not adversely affect soil retention blankets or mulches that have been applied. Work performed under this item does not replace the mowing required when placing permanent seeding in an area that has established temporary seeding as described in Article 164.3, Construction.

--Item 734 & 738--

Perform Litter Removal and Cleaning and Sweeping Highways once a month or as directed.

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--Item 3085--

The minimum application rates are listed in Table UC. The Engineer may adjust the application rates taking into consideration the existing pavement surface conditions.

Table UC

Material	Minimum Application Rate (gal. per square yard)
TRAIL – Hot Asphalt	0.15
Spray Applied Underseal Membrane	0.20
Seal Coat – Emulsion (CHFRS-2P, CRS-2P)	0.25
Seal Coat – Asphalt (AC-15P, AC-20-5TR, AC-20XP, AC10-2TR)	0.23
Aggregate for Seal Coat Options TY PB GR 4(AC) or TY B GR 4(Emulsion)	1 CY:120 SY

--Item 4171--

Install bridge identification numbers shown below for each of the following listed bridges in accordance to the special specification and San Antonio District Standard. Install the bridge identification number on two locations as shown on the plans, or as directed. For bridges in a two-way condition, install the bridge identification number on each outside beam on the upstream side of traffic. For bridges in a one-way condition, install the bridge identification number on each side, opposite corners on each outside beam. For culverts less than 5 ft. in height, install the bridge identification number on the headwall on upstream and downstream location. For culverts greater than 5 ft. in height, install the bridge identification number inside the first barrel on the upstream side of traffic and inside the last barrel on the opposite corner in the direction of traffic.

Bridge Class Culvert I – NBI #: 15-046-0-0215-01-237

--Item 6185--

2 shadow vehicles with TMA will be required for this project. The TMA’s will be measured and paid for by the DAY for each TMA/TA set up and operational on the worksite. The contractor will be responsible for determining if one or more of these operations will be ongoing at the same time to determine the total number of TMA’s needed for the project. See TMA and TA Summary sheet in the plans.

--Item 6292--

Radar presence detection device must utilize true-presence detection. Systems using locking algorithms to attempt presence detection will not be accepted. In addition, radar systems will not be allowed to use extensions/delays or place the controller on locking detection to aid in presence detection.

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Radar presence detection device must be able to detect up to 10 lanes with a minimum offset of 6' and have at least 16 zones and channels per unit.

Radar presence detection device must be mounted on the same side of the intersection as the lanes it is set to detect.

Final placement of radar devices shall be approved by the engineer.

Furnish and install new Wavetronix SmartSensor Matrix, or approved equivalent, for radar presence detectors and Wavetronix SmartSensor Advance, or approved equivalent, for radar advanced detection devices.

--Item 7186--

Contractor used for the CPS ENERGY gas pipeline work must meet certain requirements and provide evidence of qualifications as noted in Special Specification Item 7186. Contractor may contact CPS ENERGY prior to letting of this project to determine if their previous experience meets this requirement. Refer to CPS ENERGY joint-bid plans for contact information.

CONTROL : 0215-01-044, ETC
PROJECT : F 2022(901), ETC
HIGHWAY : SH 46
COUNTY : COMAL

TEXAS DEPARTMENT OF TRANSPORTATION

GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF
----- TRANSPORTATION NOVEMBER 1, 2014.
STANDARD SPECIFICATIONS ARE INCORPORATED
INTO THE CONTRACT BY REFERENCE.

ITEMS 1 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS
ITEM 100 PREPARING RIGHT OF WAY (103)
ITEM 105 REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT
ITEM 110 EXCAVATION (132)
ITEM 132 EMBANKMENT (100) (160) (204) (210) (216) (260) (400)
ITEM 161 COMPOST (160)
ITEM 162 SODDING FOR EROSION CONTROL (166) (168)
ITEM 164 SEEDING FOR EROSION CONTROL (162) (166) (168)
ITEM 168 VEGETATIVE WATERING
ITEM 216 PROOF ROLLING (210)
ITEM 247 FLEXIBLE BASE (105) (204) (210) (216) (520)
ITEM 310 PRIME COAT (300) (316) <3096>
ITEM 316 SEAL COAT (210) (300) (302) <3096>
ITEM 340 DENSE-GRADED HOT-MIX ASPHALT (SMALL QUANTITY) (300) (301)
(320) (520) (585) <3096>
ITEM 354 PLANING AND TEXTURING PAVEMENT
ITEM 400 EXCAVATION AND BACKFILL FOR STRUCTURES (110) (132) (401)
(402) (403) (416) (420) (421) (423)
ITEM 401 FLOWABLE BACKFILL (421)
ITEM 402 TRENCH EXCAVATION PROTECTION
ITEM 403 TEMPORARY SPECIAL SHORING (410) (411) (423)
ITEM 410 SOIL NAIL ANCHORS (421) (431) (440)
ITEM 416 DRILLED SHAFT FOUNDATIONS (405) (420) (421) (423) (440) (448)
ITEM 420 CONCRETE SUBSTRUCTURES (400) (404) (421) (422) (426) (427)
(440) (441) (448)
ITEM 423 RETAINING WALLS (110) (132) (216) (400) (416) (420) (421) (424)
(440) (445)
ITEM 432 RIPRAP (247) (420) (421) (431) (440)
ITEM 450 RAILING (420) (421) (422) (424) (440) (441) (442) (445) (446)
(448)

ITEM 459 GABIONS AND GABION MATTRESSES
 ITEM 460 CORRUGATED METAL PIPE (400) (402) (403) (445) (467) (476)
 ITEM 462 CONCRETE BOX CULVERTS AND DRAINS (400) (402) (403) (420)
 (421) (422) (424) (440) (464) (476)
 ITEM 464 REINFORCED CONCRETE PIPE (400) (402) (403) (467) (476)
 ITEM 465 JUNCTION BOXES, MANHOLES, AND INLETS (400) (420) (421) (424)
 (440) (471)
 ITEM 466 HEADWALLS AND WINGWALLS (400) (420) (421) (432) (440) (464)
 ITEM 467 SAFETY END TREATMENT (400) (420) (421) (432) (440) (442) (445)
 (460) (464)
 ITEM 480 CLEANING EXISTING CULVERTS
 ITEM 481 PIPE FOR DRAINS (400)
 ITEM 496 REMOVING STRUCTURES
 ITEM 500 MOBILIZATION
 ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING
 ITEM 504 FIELD OFFICE AND LABORATORY
 ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL
 CONTROLS (161) (432) (556)
 ITEM 508 CONSTRUCTING DETOURS
 ITEM 510 ONE-WAY TRAFFIC CONTROL (502)
 ITEM 512 PORTABLE TRAFFIC BARRIER (420) (421) (424) (440) (442)
 ITEM 529 CONCRETE CURB, GUTTER, AND COMBINED CURB AND GUTTER (360)
 (420) (421) (440)
 ITEM 530 INTERSECTIONS, DRIVEWAYS, AND TURNOUTS (247) (260) (263)
 (275) (276) (292) (316) (330) (334) (340) <341> (360) (421) (440)
 <3076>
 ITEM 531 SIDEWALKS (104) (360) (420) (421) (440) (530)
 ITEM 536 CONCRETE MEDIANS AND DIRECTIONIONAL ISLANDS (420) (421)
 (427) (440) (529)
 ITEM 540 METAL BEAM GUARD FENCE (421) (441) (445) (529)
 ITEM 542 REMOVING METAL BEAM GUARD FENCE
 ITEM 544 GUARDRAIL END TREATMENTS
 ITEM 545 CRASH CUSHION ATTENUATORS (421)
 ITEM 550 CHAIN LINK FENCE (421) (445)
 ITEM 552 WIRE FENCE (445) (492)
 ITEM 556 PIPE UNDERDRAINS (402) (432)
 ITEM 618 CONDUIT (400) (476)
 ITEM 620 ELECTRICAL CONDUCTORS (610) (628)
 ITEM 621 TRAY CABLE (620)
 ITEM 624 GROUND BOXES (420) (421) (432) (440) (618) (620)
 ITEM 628 ELECTRICAL SERVICES (441) (445) (449) (618) (620) (627) (656)
 ITEM 636 SIGNS (643)
 ITEM 644 SMALL ROADSIDE SIGN ASSEMBLIES (421) (440) (441) (442) (445)
 (636) (643) (656)
 ITEM 658 DELINEATOR AND OBJECT MARKER ASSEMBLIES (445)
 ITEM 662 WORK ZONE PAVEMENT MARKINGS (666) (668) (672) (677)
 ITEM 666 RETROREFLECTORIZED PAVEMENT MARKINGS (316) (502) (662) (677)
 (678) <6438>
 ITEM 672 RAISED PAVEMENT MARKERS (677) (678)
 ITEM 677 ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS (300)
 (302) (316) <3096>
 ITEM 680 HIGHWAY TRAFFIC SIGNALS (416) (610) (618) (620) (624) (625)
 (627) (628) (636) (656) (682) (684) (686) (688)
 ITEM 681 TEMPORARY TRAFFIC SIGNALS (416) (610) (618) (620) (621) (622)

(624) (625) (627) (628) (636) (656) (680) (682) (684) (686) (687)
(688)

ITEM 682 VEHICLE AND PEDESTRIAN SIGNAL HEADS
ITEM 684 TRAFFIC SIGNAL CABLES
ITEM 685 ROADSIDE FLASHING BEACON ASSEMBLIES (441) (442) (445) (449)
(610) (618) (620) (621) (622) (624) (628) (656) (682) (684) (687)
ITEM 686 TRAFFIC SIGNAL POLE ASSEMBLIES (STEEL) (416) (421) (441)
(442) (445) (449)
ITEM 687 PEDESTAL POLE ASSEMBLIES (445) (449) (656) (682)
ITEM 688 PEDESTRIAN DETECTORS AND VEHICLE LOOP DETECTORS (618)
(624) (682) (684)
ITEM 730 ROADSIDE MOWING
ITEM 734 LITTER REMOVAL
ITEM 738 CLEANING AND SWEEPING HIGHWAYS

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE
----- PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED
HEREON WHEREVER IN CONFLICT THEREWITH.

REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS
(FORM FHWA 1273, MAY, 2012)

WAGE RATES

SPECIAL PROVISION "NONDISCRIMINATION" (000---002)
SPECIAL PROVISION "CERTIFICATION OF NONDISCRIMINATION IN EMPLOYMENT"
(000---003)
SPECIAL PROVISION "NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO
ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE
ORDER 11246" (000---004)
SPECIAL PROVISION "STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS" (000---005)
SPECIAL PROVISION "ONTHEJOB TRAINING PROGRAM" (000---006)
SPECIAL PROVISION "AMERICANS WITH DISABILITIES ACT CURB RAMP WORKSHOP
" (000---025)
SPECIAL PROVISION "CERTIFICATE OF INTERESTED PARTIES (FORM 1295)"
(000--1019)
SPECIAL PROVISION "IMPORTANT NOTICE TO CONTRACTORS" (000--1251)
SPECIAL PROVISION "CARGO PREFERENCE ACT REQUIREMENTS IN FEDERAL AID
CONTRACTS" (000---241)
SPECIAL PROVISION "DISADVANTAGED BUSINESS ENTERPRISE IN FEDERAL AID
CONTRACTS" (000---394)
SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000---658)
SPECIAL PROVISION "NOTICE OF CONTRACTOR PERFORMANCE EVALUATIONS"
(000---659)
SPECIAL PROVISIONS TO ITEM 2 (002---009) (002---011) (002---013)
SPECIAL PROVISIONS TO ITEM 3 (003---011) (003---013)
SPECIAL PROVISIONS TO ITEM 5 (005---002) (005---003)
SPECIAL PROVISIONS TO ITEM 6 (006---001) (006---012)
SPECIAL PROVISIONS TO ITEM 7 (007---004) (007---008) (007---010)
(007---011)
SPECIAL PROVISIONS TO ITEM 8 (008---006) (008---030) (008---033)
SPECIAL PROVISIONS TO ITEM 9 (009---010) (009---011)
SPECIAL PROVISION TO ITEM 247 (247---003)

ITEM 6005 TESTING, TRAINING, DOCUMENTATION, FINAL ACCEPTANCE, AND
WARRANTY
ITEM 6006 ELECTRONIC COMPONENTS
ITEM 6010 CCTV FIELD EQUIPMENT (6005) (6006)
ITEM 6185 TRUCK MOUNTED ATTENUATOR (TMA) AND TRAILER ATTENUATOR (TA)
ITEM 6292 RADAR VEHICLE DETECTION SYSTEM FOR SIGNALIZED INTERSECTION
CONTROL
ITEM 6438 MOBILE RETROREFLECTIVITY DATA COLLECTION FOR PAVEMENT
MARKINGS
ITEM 7186 NATURAL GAS PIPELINE
ITEM 7202 STORMWATER TREATMENT UNIT - MEMBRANE FILTER
ITEM 7299 WATER LINE SPLIT STEEL CASINGS <400><401><402><552>

GENERAL: THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH
----- PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER
PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-
LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL
PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFI-
CATIONS FOR THIS PROJECT.