

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 2/25/2014

Control	0015-01-229, ETC.
Project	IM 0355(154), ETC.
Highway	IH 35
County	MCLENNAN

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: IM 0355(154)

CONTROL: 0015-01-229

COUNTY: MCLENNAN

LETTING: 03/06/2014

REFERENCE NO: 0221

PROPOSAL ADDENDUMS

- _ PROPOSAL COVER
- X BID INSERTS (SH. NO.: 2-23 THRU 23-23)
- X GENERAL NOTES (SH. NO.: SHEET A-C, M-O, R&S, Z, CC, WW, ZZ)
AND CC THRU BBB)
- _ SPEC LIST (SH. NO.:)
- _ SPECIAL PROVISIONS:)
ADDED:

DELETED:

- _ SPECIAL SPECIFICATIONS:
ADDED:

DELETED:

- _ OTHER:
PLAN SHEETS
DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

BID INSERTS

REVISED QUANTITIES FOR THE FOLLOWING BID ITEMS:
260-2012, 260-2027, 360-2002, 402-2001, 529-2006,
531-2015, 3268-2008

DELETED THE FOLLOWING BID ITEMS:
5945-2096

ADDED THE FOLLOWING BID ITEMS:
360-2052, 5945-2110

GENERAL NOTES:

BASIS OF ESTIMATE (SHEET A & B), ITEM 5 (SHEET C),
ITEM 8 (SHEET M), MILESTONES (SHEET N),
TABLE (SHEET O), ITEM 110 & 132 (SHEET R & S),
ITEM 400 (SHEET Z), ITEM 421 (SHEET CC),
ITEM 650 (SHEET WW), ITEM 3268 (SHEET ZZ),
GENERAL NOTES SHEETS CC THRU BBB WERE REVISED
DUE TO ADDITIONAL NOTES ADDED

PLAN SHEETS:
DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

(CONTINUED)

SHEETS 14 - 14Z: REVISED GENERAL NOTES AS INDICATED ABOVE
SHEETS 15 - 15D: REVISED QUANTITIES AS NOTED
SHEET 20: REVISED FORREST ST. PAVEMENT QUANTITIES
SHEET 28: ADDED ITEM 5945-2110, REVISED UNIT ITEM 5945-2020
SHEET 41: REVISED TCP NARRATIVE
SHEET 288: MOVED PLUG CLOSER TO PROPOSED TS&V
SHEET 289: ADDED LIMITS OF THRUST RESTRAINT
SHEET 292: ADDED LIMITS OF THRUST RESTRAINT
SHEET 293: ADDED LIMITS OF THRUST RESTRAINT
SHEET 293A: ADDED LIMITS OF THRUST RESTRAINT
SHEET 297: REMOVED CALLOUT

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	2002	002	PREPARING ROW DOLLARS and CENTS	STA	47.800	1
	104	2001		REMOVING CONC (PAV) DOLLARS and CENTS	SY	26,657.000	2
	110	2001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	22,922.000	3
	132	2006		EMBANKMENT (FINAL)(DENS CONT)(TY C) DOLLARS and CENTS	CY	244,151.000	4
	160	2003		FURNISHING AND PLACING TOPSOIL (4") DOLLARS and CENTS	SY	79,497.000	5
	162	2002		BLOCK SODDING DOLLARS and CENTS	SY	4,526.000	6
	164	2007	002	BROADCAST SEED (PERM) (URBAN) (CLAY) DOLLARS and CENTS	SY	7,497.000	7
	164	2009	002	BROADCAST SEED (TEMP) (WARM) DOLLARS and CENTS	SY	3,749.000	8
	164	2011	002	BROADCAST SEED (TEMP) (COOL) DOLLARS and CENTS	SY	3,749.000	9
	164	2039	002	DRILL SEEDING (PERM) (URBAN) (CLAY) DOLLARS and CENTS	SY	67,474.000	10
	164	2041	002	DRILL SEEDING (TEMP) (WARM) DOLLARS and CENTS	SY	33,739.000	11

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	164	2043	002	DRILL SEEDING (TEMP) (COOL) DOLLARS and CENTS	SY	33,739.000	12
	168	2001		VEGETATIVE WATERING DOLLARS and CENTS	MG	1,302.000	13
	169	2003	002	SOIL RETENTION BLANKETS (CL 1) (TY C) DOLLARS and CENTS	SY	79,497.000	14
	180	2001		WILDFLOWER SEEDING DOLLARS and CENTS	AC	16.430	15
	216	2001		PROOF ROLLING DOLLARS and CENTS	HR	8.000	16
	251	2035		REWORK BS MTL (TY D) (6") (DENS CONT) DOLLARS and CENTS	SY	2,703.000	17
	260	2012	003	LIME(HYD,COM OR QK)(SLRY)OR QK(DRY) DOLLARS and CENTS	TON	886.300	18
	260	2027	003	LIME TRT (EXST MATL)(8") DOLLARS and CENTS	SY	49,207.000	19
	360	2002	003	CONC PVMT (CONT REINF-CRCP)(9") DOLLARS and CENTS	SY	40,291.000	20
	360	2008	003	CONC PVMT (CONT REINF-CRCP)(15") DOLLARS and CENTS	SY	3,530.000	21
	360	2052	003	CONC PAV (CONT REINF CRCP)(9")(CL HES) DOLLARS and CENTS	SY	500.000	22

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	360	2067	003	SAWCUT (CONCRETE) DOLLARS and CENTS	LF	546.000	23
	400	2005		CEM STABIL BKFL DOLLARS and CENTS	CY	31,932.000	24
	400	2006		CUT & RESTORING PAV DOLLARS and CENTS	SY	501.000	25
	402	2001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	10,936.000	26
	403	2001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	18,932.000	27
	416	2001	001	DRILL SHAFT (18 IN) DOLLARS and CENTS	LF	232.000	28
	416	2004	001	DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	2,812.000	29
	416	2005	001	DRILL SHAFT (42 IN) DOLLARS and CENTS	LF	280.000	30
	416	2006	001	DRILL SHAFT (48 IN) DOLLARS and CENTS	LF	256.000	31
	416	2007	001	DRILL SHAFT (54 IN) DOLLARS and CENTS	LF	312.000	32
	416	2015		DRILL SHAFT (NON-REINFORCED)(12 IN) DOLLARS and CENTS	LF	8.000	33

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	416	2018		DRILL SHAFT (SIGN MTS)(24 IN) DOLLARS and CENTS	LF	37.900	34
	416	2023		DRILL SHAFT (SIGN MTS)(54 IN) DOLLARS and CENTS	LF	35.000	35
	416	2029		DRILL SHAFT (RDWY ILL POLE) (30 IN) DOLLARS and CENTS	LF	6.000	36
	420	2002	002	CL B CONC (FLUME) DOLLARS and CENTS	CY	77.000	37
	420	2003	002	CL C CONC (ABUT) DOLLARS and CENTS	CY	325.300	38
	420	2004	002	CL C CONC (BENT) DOLLARS and CENTS	CY	476.200	39
	420	2005	002	CL C CONC (FOOTING) DOLLARS and CENTS	CY	24.200	40
	420	2022	002	CL E CONC (SEAL) DOLLARS and CENTS	CY	2.800	41
	420	2033	002	CL S CONC (APPR SLAB) DOLLARS and CENTS	CY	490.000	42
	420	2034	002	CL S CONC (BRIDGE SDWLK) DOLLARS and CENTS	CY	124.300	43
	422	2001		REINF CONC SLAB DOLLARS and CENTS	SF	67,235.000	44

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	423	2001		RETAINING WALL (MSE) DOLLARS and CENTS	SF	109,876.000	45
	425	2019	001	PRESTR CONC U-BEAM (U54) DOLLARS and CENTS	LF	3,217.950	46
	425	2068	001	PRESTR CONC GIRDER (TX54) DOLLARS and CENTS	LF	1,926.500	47
	425	2069	001	PRESTR CONC GIRDER (TX62) DOLLARS and CENTS	LF	1,194.400	48
	431	2001		PNEUM PLAC CONC (ENCASE) DOLLARS and CENTS	SF	1,500.000	49
	432	2001		RIPRAP (CONC)(4 IN) DOLLARS and CENTS	CY	738.000	50
	432	2039		RIPRAP (MOW STRIP)(4 IN) DOLLARS and CENTS	CY	147.900	51
	434	2051	003	ELASTOMERIC BEAR (EE7) DOLLARS and CENTS	EA	7.000	52
	434	2059	003	ELASTOMERIC BEAR (EF7) DOLLARS and CENTS	EA	7.000	53
	442	2002	016	STR STL (PLATE GIRDER) DOLLARS and CENTS	LB	889,300.000	54
	442	2048	016	STRUCTURAL STEEL(MISC NON-BRIDGE) DOLLARS and CENTS	LB	2,456.000	55

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	450	2063	001	RAIL TYPE (TY T401) and DOLLARS CENTS	LF	1,421.000	56
	450	2071	001	RAIL (TY C402) and DOLLARS CENTS	LF	5,875.000	57
	450	2135	001	RAIL (TY T1F) and DOLLARS CENTS	LF	493.000	58
	450	2191	001	RAIL (TY T1F)(MOD) and DOLLARS CENTS	LF	1,172.000	59
	454	2001	003	SEALED EXPANSION JOINT (4 IN)(SEJ-A) and DOLLARS CENTS	LF	594.000	60
	462	2005	015	CONC BOX CULV (4 FT X 4 FT) and DOLLARS CENTS	LF	175.000	61
	462	2008	015	CONC BOX CULV (5 FT X 4 FT) and DOLLARS CENTS	LF	3,045.000	62
	462	2009	015	CONC BOX CULV (5 FT X 5 FT) and DOLLARS CENTS	LF	3,208.000	63
	464	2003	006	RC PIPE (CL III)(18 IN) and DOLLARS CENTS	LF	1,009.000	64
	464	2005	006	RC PIPE (CL III)(24 IN) and DOLLARS CENTS	LF	977.000	65
	464	2011	006	RC PIPE (CL III)(48 IN) and DOLLARS CENTS	LF	119.000	66

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	464	2021	006	RC PIPE (CL IV)(18 IN) and DOLLARS CENTS	LF	1,376.000	67
	464	2022	006	RC PIPE (CL IV)(24 IN) and DOLLARS CENTS	LF	524.000	68
	464	2028	006	RC PIPE (CL IV)(48 IN) and DOLLARS CENTS	LF	252.000	69
	464	2035	006	RC PIPE (CL V)(18 IN) and DOLLARS CENTS	LF	99.000	70
	464	2036	006	RC PIPE (CL V)(24 IN) and DOLLARS CENTS	LF	97.000	71
	464	2042	006	RC PIPE (CL V)(48 IN) and DOLLARS CENTS	LF	55.000	72
	465	2003	001	INLET (COMPL)(TY H) and DOLLARS CENTS	EA	17.000	73
	465	2005	001	MANH (COMPL)(TY M) and DOLLARS CENTS	EA	42.000	74
	465	2024	001	INLET (COMPL)(DROP)(TY XXI) and DOLLARS CENTS	EA	1.000	75
	465	2025	001	INLET (COMPL)(DROP)(TY XXII) and DOLLARS CENTS	EA	8.000	76
	465	2027	001	INLET (COMPL)(CURB)(TY II)(10') and DOLLARS CENTS	EA	32.000	77

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	2762	001	INLET (COMPL) RW (RI) (1 GRATE) DOLLARS and CENTS	EA	2.000	78
	465	2778	001	JUNCTION BOX (SPL)(TY 15) DOLLARS and CENTS	EA	3.000	79
	476	2099	003	JCK BOR OR TUN BOX CULV(5'X4')E-80 COOP DOLLARS and CENTS	LF	414.000	80
	476	2100	003	JCK BOR OR TN BOX CUL(4FTX4FT)E-80 COOP DOLLARS and CENTS	LF	399.000	81
	496	2010		REMOV STR (BRIDGE 100-499 FT LENGTH) DOLLARS and CENTS	EA	1.000	82
	497	2001		SALV MATRL (CREDIT ITEM) DOLLARS and CENTS	LS	1.000	83
	500	2001	011	MOBILIZATION DOLLARS and CENTS	LS	1.000	84
	502	2001	033	BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	18.000	85
	508	2002		CONSTRUCTING DETOURS DOLLARS and CENTS	SY	3,545.000	86
	512	2013	002	PORT CTB (DES SOURCE)(SNGL SLP)(TY 1) DOLLARS and CENTS	LF	2,730.000	87

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	512	2017	002	PORT CTB (DES SOURCE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	2,260.000	88
	512	2018	002	PORT CTB (DES SOURCE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	180.000	89
	512	2022	002	PORT CTB (MOVE)(SNGL SLP) (TY 1) DOLLARS and CENTS	LF	1,670.000	90
	512	2026	002	PORT CTB (MOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	760.000	91
	512	2027	002	PORT CTB (MOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	60.000	92
	512	2031	002	PORT CTB (STKPL)(SNGL SLP) (TY 1) DOLLARS and CENTS	LF	2,730.000	93
	512	2035	002	PORT CTB (STKPL)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	2,260.000	94
	512	2036	002	PORT CTB (STKPL)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	180.000	95
	528	2004		LANDSCAPE PAVERS DOLLARS and CENTS	SY	2,326.000	96
	529	2006		CONC CURB (MONO) (TY II) DOLLARS and CENTS	LF	19,889.000	97
	529	2010		CONC CURB AND GUTTER (TY II)(REINF) DOLLARS and CENTS	LF	2,474.000	98

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	530	2010	006	DRIVEWAYS (CONC) and DOLLARS CENTS	SY	1,635.000	99
	530	2011	006	DRIVEWAYS (ACP) and DOLLARS CENTS	SY	173.000	100
	531	2005		CURB RAMPS (TY 1) and DOLLARS CENTS	EA	8.000	101
	531	2008		CURB RAMPS (TY 4) and DOLLARS CENTS	EA	5.000	102
	531	2015		CONC SIDEWALKS (4") and DOLLARS CENTS	SY	5,276.000	103
	531	2017		CURB RAMPS (TY 21) and DOLLARS CENTS	EA	1.000	104
	531	2044		CURB RAMPS (TY 10) and DOLLARS CENTS	EA	8.000	105
	540	2002	031	MTL W-BEAM GD FEN (STEEL POST) and DOLLARS CENTS	LF	970.000	106
	540	2011	031	MTL BEAM GD FEN TRANS (THRIE-BEAM) and DOLLARS CENTS	EA	7.000	107
	542	2001		REMOVING METAL BEAM GUARD FENCE and DOLLARS CENTS	LF	2,159.000	108
	542	2002		REMOVING TERMINAL ANCHOR SECTION and DOLLARS CENTS	EA	9.000	109

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	544	2001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	9.000	110
	545	2001		CRASH CUSH ATTEN (INSTL) DOLLARS and CENTS	EA	3.000	111
	545	2002		CRASH CUSH ATTEN (MOVE & RESET) DOLLARS and CENTS	EA	3.000	112
	545	2003		CRASH CUSH ATTEN (REMOVE) DOLLARS and CENTS	EA	3.000	113
	556	2008		PIPE UNDERDRAINS (TY 8) (6") DOLLARS and CENTS	LF	780.000	114
	610	2025	015	INS RD IL AM (TY SA) 40T-8 (.25 KW)S DOLLARS and CENTS	EA	1.000	115
	610	2027	015	INS RD IL AM (TY SA) 50B-8 (.4 KW)S DOLLARS and CENTS	EA	2.000	116
	618	2018		CONDT (PVC) (SCHD 40) (2") DOLLARS and CENTS	LF	4,015.000	117
	618	2019		CONDT (PVC) (SCHD 40) (2") (BORE) DOLLARS and CENTS	LF	245.000	118
	618	2035		CONDT (PVC) (SCHD 80) (2") (BORE) DOLLARS and CENTS	LF	440.000	119
	618	2052		CONDT (RM) (2") DOLLARS and CENTS	LF	820.000	120

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	620	2009	001	ELEC CONDR (NO. 6) BARE DOLLARS and CENTS	LF	325.000	121
	620	2010	001	ELEC CONDR (NO. 6) INSULATED DOLLARS and CENTS	LF	2,370.000	122
	620	2011	001	ELEC CONDR (NO. 8) BARE DOLLARS and CENTS	LF	2,420.000	123
	620	2012	001	ELEC CONDR (NO. 8) INSULATED DOLLARS and CENTS	LF	5,080.000	124
	624	2008	014	GROUND BOX TY A (122311) W/APRON DOLLARS and CENTS	EA	7.000	125
	624	2012	014	GROUND BOX TY C (162911) W/APRON DOLLARS and CENTS	EA	7.000	126
	628	2018	003	ELC SRV TY A 240/480 060 (NS)SS(E)SP(U) DOLLARS and CENTS	EA	1.000	127
	636	2002	014	ALUMINUM SIGNS (TY G) DOLLARS and CENTS	SF	457.000	128
	636	2003	014	ALUMINUM SIGNS (TY O) DOLLARS and CENTS	SF	836.000	129
	644	2001		IN SM RD SN SUP&AM TY10BWG(1)SA(P) DOLLARS and CENTS	EA	7.000	130
	644	2004		IN SM RD SN SUP&AM TY10BWG(1)SA(T) DOLLARS and CENTS	EA	10.000	131

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	2006		IN SM RD SN SUP&AM TY10BWG(1)SA(U) DOLLARS and CENTS	EA	9.000	132
	644	2027		IN SM RD SN SUP&AM TYS80(1)SA(U) DOLLARS and CENTS	EA	2.000	133
	644	2042		IN SM RD SN SUP&AM TYS80(2)SA(P) DOLLARS and CENTS	EA	2.000	134
	644	2056		RELOCATE SM RD SN SUP & AM TY 10BWG DOLLARS and CENTS	EA	3.000	135
	644	2063		INS SM RD SN SUP&AM (RAIL MOUNT) DOLLARS and CENTS	EA	3.000	136
	644	2081		IN SM RD SN SUP&AM TYTWT(1)WS(P) DOLLARS and CENTS	EA	19.000	137
	647	2001		INSTALL LRSS (STRUCT STEEL) DOLLARS and CENTS	LB	1,818.200	138
	647	2003		REMOVE LRSA DOLLARS and CENTS	EA	1.000	139
	650	2028		INS OH SN SUP(30 FT CANT) DOLLARS and CENTS	EA	1.000	140
	662	2064		WK ZN PAV MRK REMOV (W) 4" (BRK) DOLLARS and CENTS	LF	2,990.000	141
	662	2067		WK ZN PAV MRK REMOV (W) 4" (SLD) DOLLARS and CENTS	LF	6,665.000	142

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	2075		WK ZN PAV MRK REMOV (W) 8" (SLD) DOLLARS and CENTS	LF	782.000	143
	662	2079		WK ZN PAV MRK REMOV (W) 24" (SLD) DOLLARS and CENTS	LF	311.000	144
	662	2084		WK ZN PAV MRK REMOV (W) (ARROW) DOLLARS and CENTS	EA	1.000	145
	662	2094		WK ZN PAV MRK REMOV (W) (WORD) DOLLARS and CENTS	EA	1.000	146
	662	2099		WK ZN PAV MRK REMOV (Y) 4" (SLD) DOLLARS and CENTS	LF	15,434.000	147
	662	2113		WK ZN PAV MRK SHT TERM (TAB) TY W DOLLARS and CENTS	EA	90.000	148
	662	2115		WK ZN PAV MRK SHT TERM (TAB) TY Y-2 DOLLARS and CENTS	EA	62.000	149
	666	2048		REFL PAV MRK TY I (W) 24"(SLD)(100MIL) DOLLARS and CENTS	LF	225.000	150
	666	2190		PAVEMENT SEALER 6" DOLLARS and CENTS	LF	1,350.000	151
	666	2219		PAVEMENT SEALER (ARROW) DOLLARS and CENTS	EA	4.000	152
	666	2220		PAVEMENT SEALER (WORD) 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.				
	666	2224		PAVEMENT SEALER (DBL ARROW) DOLLARS and CENTS	EA	2.000	154
	666	2257		PAVEMENT SEALER (YLD TRI) DOLLARS and CENTS	EA	8.000	155
	666	2297		PAVEMENT SEALER (NUMBER) DOLLARS and CENTS	EA	3.000	156
	668	2106		PREFAB PAV MRK TY C (W) (ARROW) DOLLARS and CENTS	EA	4.000	157
	668	2107		PREFAB PAV MRK TY C (W) (DBL ARROW) DOLLARS and CENTS	EA	2.000	158
	668	2116		PREFAB PAV MRK TY C (W) (WORD) DOLLARS and CENTS	EA	2.000	159
	668	2118		PREFAB PAV MRK TY C (W) (36")(YLD TRI) DOLLARS and CENTS	EA	8.000	160
	668	2145		PREFAB PAV MRK TY C (W) (NUMBER) DOLLARS and CENTS	EA	3.000	161
	672	2014	034	REFL PAV MRKR TY I-R DOLLARS and CENTS	EA	63.000	162
	672	2015	034	REFL PAV MRKR TY II-A-A DOLLARS and CENTS	EA	78.000	163
	672	2017	034	REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	1,128.000	164

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	677	2001		ELIM EXT PAV MRK & MRKS (4") DOLLARS and CENTS	LF	3,623.000	165
	677	2003		ELIM EXT PAV MRK & MRKS (8") DOLLARS and CENTS	LF	370.000	166
	678	2021		PAV SURF PREP FOR MRK (BLAST CLN)(4") DOLLARS and CENTS	LF	4,162.000	167
	678	2022		PAV SURF PREP FOR MRK (BLAST CLN)(6") DOLLARS and CENTS	LF	613.000	168
	678	2024		PAV SURF PREP FOR MRK (BLAST CLN)(24") DOLLARS and CENTS	LF	225.000	169
	678	2027		PAV SURF PREP FOR MRK (BLAST CLN)(8") DOLLARS and CENTS	LF	3,870.000	170
	678	2028		PAV SURF PREP FOR MRK (BLST CLN)(ARRWS) DOLLARS and CENTS	EA	4.000	171
	678	2029		PAV SURF PREP FOR MRK (BLST CLN)(WORDS) DOLLARS and CENTS	EA	2.000	172
	678	2031		PAV SURF PREP MRKS (BLAST CLN)(DBLARW) DOLLARS and CENTS	EA	2.000	173
	678	2034		PV SRF PREP FOR MRK(BLT CLN)36" YLD TRI DOLLARS and CENTS	EA	8.000	174

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	678	2044		PAV SURF PREP FOR MRK (NUMBER) DOLLARS and CENTS	EA	3.000	175
	730	2119	003	STRIP MOWING DOLLARS and CENTS	CYC	6.000	176
	734	2002		LITTER REMOVAL DOLLARS and CENTS	CYC	6.000	177
	738	2005		CLEANING/SWEEPING (FRONTAGE ROAD) DOLLARS and CENTS	CYC	36.000	178
	1122	2002	001	ROCK FILTER DAMS (INSTALL) (TY 2) DOLLARS and CENTS	LF	38.000	179
	1122	2009	001	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	38.000	180
	1122	2016	001	CONSTRUCTION EXITS (INSTALL) (TY 1) DOLLARS and CENTS	SY	1,665.000	181
	1122	2019	001	CONSTRUCTION EXITS (REMOVE) DOLLARS and CENTS	SY	1,665.000	182
	1122	2031	001	SANDBAGS FOR EROSION CONTROL DOLLARS and CENTS	EA	36.000	183
	1122	2037	001	TEMPORARY SEDIMENT CONTROL FENCE INSTLL DOLLARS and CENTS	LF	19,040.000	184

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	1122	2057	001	TEMPORARY SEDIMENT CONTROL FENCE REMOVE DOLLARS CENTS and	LF	19,040.000	185
	3268	2008		D-GR HMA TY-B PG64-22 DOLLARS CENTS and	TON	12,306.100	186
	3268	2028		D-GR HMA TY-C PG70-22 DOLLARS CENTS and	TON	423.500	187
	5945	2001		WTR(PIPE WTR MAIN)PVC C900 CL150(10") DOLLARS CENTS and	LF	2.000	188
	5945	2002		WTR(PIPE WTR MAIN)PVC C900 CL150(8") DOLLARS CENTS and	LF	766.000	189
	5945	2016		WTR(FIRE HYDRANT W/6" VALVE & BOX) DOLLARS CENTS and	EA	1.000	190
	5945	2020		WTR(TRENCH EXCAV PROTECT)(5' TO 10') DOLLARS CENTS and	LF	751.000	191
	5945	2074		TAPPING SLEEVE(GATE VALVE & BOX)(6") DOLLARS CENTS and	EA	6.000	192
	5945	2081		WTR(PIPE WTR MAIN)PVC 900 CL150(6") DOLLARS CENTS and	LF	55.000	193
	5945	2110		WTR (PIPE WTR MAIN)PVC C905 DR18 (16") DOLLARS CENTS and	LF	417.000	194

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	5945	2129		WTR(CASE PIPE,JACK,BOR OR TUNL)STL(24") DOLLARS CENTS and	LF	447.000	195
	5945	2133		16" DUCTILE IRON PIPE DOLLARS CENTS and	LF	18.000	196
	5945	2185		TAPPING SLEEVE & VALVE (2"X2") DOLLARS CENTS and	EA	2.000	197
	5946	2004		SWR(ABANDON PIPE)(6") DOLLARS CENTS and	LF	50.000	198
	5946	2005		SWR(ABANDON PIPE)(8") DOLLARS CENTS and	LF	640.000	199
	5946	2006		SWR(ABANDON PIPE)(10") DOLLARS CENTS and	LF	1,080.000	200
	5946	2010		SWR(CUT & REPLC ASPH PAVMNT W/ASPH) DOLLARS CENTS and	SY	35.000	201
	5946	2029		SWR(TRENCH EXCAV PRO)(10'TO 15') DOLLARS CENTS and	LF	1,399.000	202
	5946	2032		SWR(8")SDR 26 DOLLARS CENTS and	LF	445.000	203
	5946	2033		SWR(10")SDR 26 DOLLARS CENTS and	LF	938.000	204

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	5946	2156		SWR(MANHOLE 4'DIA)DEPTH 6'-8' DOLLARS and CENTS	EA	12.000	205
	5946	2163		SWR(RECONNECT EXIST SEWER SERVICES) DOLLARS and CENTS	EA	8.000	206
	5946	2202		SWR(CASING)OPEN CUT(STEEL)(24") DOLLARS and CENTS	LF	65.000	207
	5946	2215		REMOVE AND DISPOSE OF 8-INCH WW LINE DOLLARS and CENTS	LF	15.000	208
	5946	2229		REMOVE AND DISPOSE OF 10-INCH WW LINE DOLLARS and CENTS	LF	20.000	209
	5947	2001		CO CABLE AERIAL(TELE) DOLLARS and CENTS	LF	1,094.000	210
	5947	2012		CONDUIT 1-4" PVC-C DUCT(TELE) DOLLARS and CENTS	LF	1,094.000	211
	5947	2027		DIRECTIONAL BORE(TELE) DOLLARS and CENTS	LF	1,618.000	212
	5947	2043		AT&T PEDESTAL DOLLARS and CENTS	EA	2.000	213
	5947	2045		ANCHOR & GUY DOLLARS and CENTS	EA	7.000	214

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	5947	2051		REMOVE AT&T POWER POLE DOLLARS and CENTS	EA	4.000	215
	5947	2054		AT&T HH DOLLARS and CENTS	EA	3.000	216
	5947	2055		AT&T MH DOLLARS and CENTS	EA	3.000	217
	5947	2056		AT&T MH REBUILT DOLLARS and CENTS	EA	2.000	218
	5947	2058		20" HDPE CASING(TELE) DOLLARS and CENTS	LF	886.000	219
	5947	2060		COND 9-4" W/CSING HDPE(SDR11)DUCT(TELE) DOLLARS and CENTS	LF	886.000	220
	5947	2061		18" HDPE CASING (TELE) DOLLARS and CENTS	LF	670.000	221
	5947	2062		COND 6-4" W/CSING HDPE(SDR11)DUCT(TELE) DOLLARS and CENTS	LF	670.000	222
	5947	2063		OPEN CUT (TELE) DOLLARS and CENTS	LF	992.000	223
	5947	2064		1-4" CONDUIT PLUG (TELE) DOLLARS and CENTS	EA	5.000	224

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	5947	2065		4"-45 DEG CONDUIT FITTINGS (TELE) DOLLARS and CENTS	EA	8.000	225
	5947	2066		4"-22.5 DEG CONDUIT FITTINGS (TELE) DOLLARS and CENTS	EA	45.000	226
	5947	2067		4" LONG RADIUS COND 90 DEG SWEEPS(TELE) DOLLARS and CENTS	EA	14.000	227
	5947	2068		BURIED WARNING TAPE (5,000' ROLL)(TELE) DOLLARS and CENTS	EA	1.000	228
	5947	2069		CABLE MARKER SIGNS (TELE) DOLLARS and CENTS	EA	12.000	229
	5947	2070		4" HDPE CASING (TELE) DOLLARS and CENTS	LF	62.000	230
	5997	2001		VEHICLE REMOVAL(LARGE) DOLLARS and CENTS	EA	30.000	231
	5997	2002		VEHICLE REMOVAL(SMALL) DOLLARS and CENTS	EA	30.000	232
	6473	2002	001	MULTIPOLYMER PAV MRK (W)(4")(BRK) DOLLARS and CENTS	LF	3,218.000	233
	6473	2007	001	MULTIPOLYMER PAV MRK (W)(8")(SLD) DOLLARS and CENTS	LF	3,792.000	234

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6473	2011	001	MULTIPOLYMER PAV MRK (Y)(4")(SLD) DOLLARS and CENTS	LF	2,763.000	235
	6473	2023	001	MULTIPOLYMER PAV MRK (W)(8")(LNDP) DOLLARS and CENTS	LF	78.000	236
	6834	2001	002	PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	DAY	55.000	237
	6834	2002	002	PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	EA	2.000	238
	8730	2001		LED RDWY ILL ASSM (U/P)(.15KW) DOLLARS and CENTS	EA	20.000	239

GENERAL NOTES AND SPECIFICATION DATA

SPECIFICATION DATA

(PERCENT RETAINED-SIEVE)

DESCRIPTION	2 1/2"	1 3/4"	#4	#40	PI MAX	PI MIN
FLEXIBLE BASE (TYPE D, GRADE 4)	0	0-5	45-75	70-85	12	4

1. This material shall be produced from a source which, when tested in accordance with test method TEX-117-E, PART 1, shall meet the requirements of class 2.3 material.
2. This material shall be produced from a source which, when tested in accordance with test method TEX-116-E, the maximum wet ball mill value shall not exceed 45 and the maximum increase of material passing the No. 40 sieve shall not exceed 20 percent.
3. Job control samples for gradation and P.I. testing will be taken from the windrow after blade mixing.

BASIS OF ESTIMATE

ITEM	DESCRIPTION	RATE	BASIS	QUANTITIES
*166	FERTILIZER (20 10 10)			
	(PERMANENT SEEDING)	300 LB/AC	16.31 AC	2.5 TON
	(TEMPORARY SEEDING)	300 LB/AC	16.31 AC	2.5 TON
168	VEGETATIVE WATERING			
	(6 APPLICATIONS)	13,100 GAL/AC/APP	16.31 AC	1,293 MG
216	PROOF ROLLING			
	PROOF ROLLING	8.0 HRS/MILE	1 MILE	8 HRS
260	LIME TREATMENT (8")			
	LIME (HYD, COM, OR QK(SLURRY))	6.0 LBS/CF	49,207 SY	886.3 TON
730	STRIP MOWING			
		1 CYC / 3 MONTH	18 MONTH	6 CYC
734	LITTER REMOVAL			
		1 CYC / 3 MONTH	18 MONTH	6 CYC

738	CLEANING AND SWEEPING HIGHWAYS			
	(FRONTAGE ROADS)	2 CYC / MONTH	18 MONTH	36 CYC
3268	DENSE-GRADED HOT-MIX ASPHALT			
	TY-B PG 64-22	440 LBS/SY	55,937 SY	12,306.1 TON
	TY-B PG 64-22	660 LBS/SY	2,310 SY	762.3 TON
	TY-B PG 64-22	880 LBS/SY	2,310 SY	1,016.4 TON
	TY-C PG 70-22	220 LBS/SY	3,850 SY	423.5 TON

* FOR CONTRACTOR’S INFORMATION ONLY

GENERAL NOTES

LIST OF MODIFIED STANDARDS

- T1F (MOD)
- SCP-5 (MOD)
- BAS-C (MOD)
- CSAB (MOD)

ITEM 4: SCOPE OF WORK

All new and existing concrete adjacent to the roadway must be free of stains, dirt, tire marks, etc., at the time of final acceptance. These items include but are not limited to bridge rails, curb and gutter, inlets, sidewalk and riprap. Blast cleaning of these items will be required to achieve acceptance of the project and will be considered subsidiary to the applicable bid items.

Prior to final acceptance, all new structures and/or structures that have been extended shall be cleaned out by the contractor. This work will not be paid for directly but will be considered subsidiary to the applicable bid items.

During final clean-up the contractor will be required to remove any foreign material that has accumulated at all bridge abutments and bent caps. The removal of foreign material shall be performed in a manner approved by the Engineer. All work and equipment involved in the removal of this material will be subsidiary to the various bid items of the Contract.

Abandoned in place utility lines left from the utility work in this project requiring removal, due to unforeseen conflicts, shall be removed and this will be considered subsidiary to the placement of the new line.

ITEM 5: CONTROL OF THE WORK

All elevations are based on USC & GS datum.

HIGHWAY: IH 35

Prior to beginning work in the area of existing utilities, the contractor shall consult with the utility companies for exact locations to prevent any damage or interference with present facilities. This action shall in no way be interpreted as relieving the contractor of his responsibilities, under the terms of the contract and as set out in the plans and specifications. The contractor shall repair any damage caused by his operations at his own expense and shall restore facilities to service in a timely manner.

Contact the IH 35 Total Maintenance Contractor and Waco District Signal Shop five working days prior to commencing with any excavation to allow locating loop detectors, illumination cables, or other buried traffic facilities. The Contractor shall repair any damage caused by his operations at his own expense and shall restore facilities to service in a timely manner. The Engineer will provide the contact information for Maintenance Contractor. The Contractor shall coordinate with the Signal Shop any required relocations or adjustments.

The Contractor shall notify the Engineer at least 10 working days in advance of connection or disconnection of electrical service.

It is the intent of this Contract for the Contractor to protect and maintain existing illumination and signal systems until the replacement systems are in operation. When proposed utility, drainage, or earthwork operations are deemed in conflict with existing illumination and traffic signal systems, the Contractor must develop and install temporary adjustments of electrical service and electrical cables to maintain service as stated above. Any work and materials necessary to comply with this note are considered subsidiary to the various bid items unless shown elsewhere on the plans.

The City of Waco entrance monument located next to the Forrest Avenue bridge will remain in place. The Contractor shall take care to work around the monument without damaging it. The Contractor shall repair any damage caused by his operations at his own expense. Materials and equipment will not be stored in front of the monument so that it remains visible to IH 35 traffic. The Contractor shall place orange construction fencing around the back side of the monument to keep workers and equipment away from the monument during construction. Any work and materials necessary to comply with this note are considered subsidiary to the various bid items.

ITEMS 5 & 7: JOINT CONTRACTOR/TXDOT PROJECT SAFETY PLAN

For this Contract, the Contractor and the Engineer shall work in joint cooperation to develop and implement, on a daily and continuous basis, a Project Safety Plan that requires all personnel on the project to work together, communicate on a daily basis in terms of safety, participate in joint safety activities, and watch out for each other to promote a goal of “No Accidents or Injuries Each Day.”

The requirements of this Plan are as follows:

1. As a part of the partnering meeting, the Contractor must develop, in conjunction with the Engineer, a Project Safety Plan where the following components are addressed:

- a. Develop and Conduct a process for mutually communicating daily work activities and associated safety practices through tailgate/toolbox meetings or other mutually agreeable daily briefings between Contractor and TxDOT personnel.
 - b. Conduct weekly safety meetings with Contractor and TxDOT personnel present.
 - c. Develop and Implement an Issue Escalation Ladder that is specifically for Safety Related Matters and is separate from construction related issues.
 - d. Develop and Implement a Peer Safety Review Team made up of leadership representatives from the Contractor and TxDOT to make periodic reviews of the project, focusing on both positive aspects and any aspects that require improvements concerning safety. Team shall also review all incidents including near miss incidents occurring on the project monthly.
2. Supervisors and Foremen/Lead Crew Workers (including subcontractors) on the project must have the 10 hour OSHA Construction Safety and Health training as part of their credentials coming onto the project.
 3. One person that is specially assigned to this Contract and responsible for the Contractor's Safety Program for this Contract must have the 30 hour OSHA Construction Safety and Health training credentials. This person, as a minimum, must be a part of the weekly project safety meetings and attend one of these meetings each month.
 4. The Safety Task Force Video must be viewed and made part of the safety orientation for every employee on the project.
 5. Safety Plan must have provisions showing how subcontractors and their employees will adhere to the Safety Plan. The Contractor shall provide an acceptable plan to the Engineer of how they will manage the subcontractors in this regard.
 6. Safety Plan shall address, as a minimum, the following areas of safety: fall protection, trench excavation, and confined work space procedures. This shall be outlined in the form of a job safety analysis or equivalent. The Engineer or Contractor may identify other areas for inclusion in the Plan throughout the course of the work.

All work, materials, and training associated with fulfilling this requirement for developing and implementing a Project Safety Plan is subsidiary to the various bid items of the Contract and no direct compensation will be made.

ITEM 6: CONTROL OF MATERIALS

Mixing of materials, storing of materials, storing of equipment, or repairing of equipment on top of concrete pavement or bridge decks will not be permitted unless specifically authorized by the Engineer. Permission will be granted to store materials on surfaces if, in the opinion of the Engineer, no damage or discoloration will result.

References to manufacturer's trade name or catalog numbers are for the purpose of identification only and the contractor will be permitted to furnish like materials of other manufacturers provided they are of equal quality and comply with specifications for this project and are approved by the Engineer.

Submit all fabrication and shop drawings to the Area Engineer for review and approval, unless otherwise directed.

ITEM 7: LEGAL RELATIONS AND RESPONSIBILITIES

UNION PACIFIC RAILROAD COMPANY

Protection of Fiber Optic Cable Systems

Fiber optic cable systems may be buried on the railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. The State and/or its Contractor shall telephone the railroad during normal business hours (7:00 A.M. to 9:00 P.M., Central time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, seven-day number for emergency calls) to determine if fiber optic cable is buried on the railroad's premises to be used by the State. If it is, the State and/or its Contractor will telephone the telecommunications company(ies) involved, arrange for a cable locator and make arrangements for relocation or other protection of the fiber optic cable prior to beginning any work on the railroad's premises.

Work in this Contract is required to be done on railroad property. Cooperate with the railroads and comply with all of their requirements including obtaining any training they require before performing work on railroad property.

The use of existing or new bridges for staging construction equipment or materials will not be permitted without written approval by the Engineer. To obtain this approval, submit a working plan to the Engineer including loading information, spacing, and dimensions. This working plan must be signed and sealed by a licensed or registered Professional Engineer.

HIGHWAY: IH 35

If utilizing private property for borrow sites, disposal sites for excess material, field office sites, equipment storage sites, or for any other purpose involved with this project, provide to the Engineer written proof of the property owner's approval of the use of this property. This proof may be in the form of a letter or agreement signed by the property owner or other documents acceptable to the Engineer.

The Contractor is alerted to the presence of swallows under the existing bridge(s) and/or box culverts. Because the Migratory Bird Treaty Act prohibits harm to swallows, their eggs or their nestlings, the Contractor shall not begin potentially disturbing activities on or near the bridge(s) or culverts until the birds have abandoned any occupied nests (approximately September 1). The Contractor shall not harm any birds or active nests regardless of the date.

Prior to the swallows returning to the nests (approximately March 1), abandoned nests shall be removed from the bridge(s) and/or box culverts. The Contractor shall prevent the establishment of new nests on any portion of the structure, including under the bridge(s) and around bridge columns and caps. Methods for preventing the establishment of new nests must be approved by the Project Engineer. Examples of acceptable nest prevention methods are bird-deterrent netting and bird-repelling sprays and/or gels to be applied to the structure. This work will not be paid directly, but will be subsidiary to the various bid items.

Where existing pavement adjoins new pavement, saw the existing pavement to a neat transverse and/or longitudinal line to permit adequate joining. This will not be paid directly, but will be considered subsidiary to the various bid items.

Protect all adjoining pavement sections during all phases of construction. Any damages incurred due to Contractor's operation shall be repaired and/or replaced at the Contractor's expense.

The Contractor shall restrict movement of construction equipment and haul trucks to all paved surfaces and will be prohibited from crossing the median, unless specifically authorized by the Engineer. Ingress and egress to the freeway mainlanes shall be through the use of entrance and exit ramps.

All materials, labor, and incidentals required for the Contractor to provide for traffic across the highway and for all-weather ingress and egress to public and private property in accordance with Item 7.7 of the Standard Specifications shall be considered as incidental to the various bid items. When construction is complete, the access roadways will be restored to their original condition, as approved by the Engineer.

Personal vehicles of the Contractor's employees shall not be parked within the right-of-way at any time including any section closed to public traffic, unless the vehicle is being utilized for construction procedures. However, the Contractor's employees may park on the right-of-way at the sites where the Contractor has his office, equipment, and materials storage yard.

COUNTY: MCLENNAN

CSJ: 0015-01-229, ETC.

HIGHWAY: IH 35

Follow all local ordinances when burning cleared trees or brush.

The Contractor shall not initiate activities in a project specific location (PSL) associated with a U.S. Army Corps of Engineers (USACE) permit area that has not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. *Associated*, defined here, means materials are delivered to or from the PSL. The permit area includes all Waters of the U.S. or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. The Contractor shall be responsible for any and all consultations with the USACE regarding activities, including project specific locations (PSLs), which have not been previously evaluated by the USACE. The Contractor shall provide the Department with a copy of all consultation(s) or approval(s) from the USACE prior to initiating activities.

The Contractor may proceed with activities in PSLs that do not affect a USACE permit area if a self-determination has been made that the PSL is non-jurisdictional or proper USACE clearances have been obtained in jurisdictional areas or have been previously evaluated by the USACE as part of the permit review of this project. The Contractor is solely responsible for documenting any determination(s) that their activities do not affect a USACE permit area. The Contractor shall maintain copies of their determination(s) for review by the Department or any regulatory agency.

The Contractor shall not dispose of or place demolished highway and bridge materials within any Waters of the US, wetland or within the Ordinary High Water Marks of any 404 stream, either on or off TxDOT property.

The Contractor shall maintain all PSLs in an acceptable manner by removing empty chemical containers / drums, disposal of trash and debris, cleanup and disposal of spills and the proper storage of fuels. PSLs shall not be used as a waste dumping area or for storage of removed trees or brush. Proper BMPs should be maintained for disturbed or stockpiled soils and seeding completed per permit requirements.

The Contractor must document and coordinate with the USACE, if required, prior to any excavation hauled from or embankment hauled into a USACE permit area by either (1) or (2) below.

(1.) Restricted Use of Materials for the Previously Evaluated Permit Areas. The Contractor will document both the project specific location (PSL) and their authorization. The Contractor will maintain copies for review by the Department or any regulatory agency, when an area within the project limits has been evaluated by the USACE as part of the permit process for this project:

- a. Suitable excavation of required material in the areas shown on the plans and cross sections as specified in Item 110 is used for permanent or temporary fill (Item 132, Embankment) within a USACE permit area;

- b. Suitable embankment (Item 132) from within the USACE permit area is used as fill within a USACE evaluated area; and,

- c. Unsuitable excavation or excess excavation “Waste” (Item 110) that is disposed at a location approved by the Engineer within a USACE evaluated area.**(2.) Contractor Materials from Areas Other than Previously Evaluated Areas.** The Contractor will provide the Department with a copy of all USACE coordination or approval(s) prior to initiating any activities for an area within the project limits that has not been evaluated by the USACE or for any off right of way locations used for the following, but not limited to, haul roads, equipment staging areas, borrow, and disposal sites:
 - a. Item 132, “Embankment,” used for temporary or permanent fill within a USACE permit area; and,

 - b. Unsuitable excavation or excess excavation “Waste” (Item 110, Excavation) that is disposed outside a USACE evaluated area.

The total area disturbed for this project is **30.16** acres. The disturbed area in this project, all project locations in the Contract, and the Contractor project specific locations (PSLs), within 1 mile of the project limits for the Contract, will further establish the authorization requirements for stormwater discharges. The Department will obtain an authorization to discharge stormwater from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization from the TCEQ for Contractor PSLs for construction support activities on or off the ROW. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI to the Engineer and to the local government that operates a separate storm sewer system.

General Notes for Work in Waters of the US

1. TxDOT will establish “limits of Waters of the United States” to designate stream banks (Ordinary High Water Marks) and wetland boundaries for the project with wood lathing and flagging. These areas have specific Corps of Engineer 404 permit requirements as stated in the following notes.

HIGHWAY: IH 35

2. For bridges, the Contractor shall provide and maintain orange plastic security fencing (called orange fencing) slightly above the Ordinary High Water Marks, on each side of the stream and from ROW line to ROW line. For *culverts*, the Contractor shall provide and maintain orange fencing slightly above the Ordinary High Water Marks, on each side of the stream on the upstream and downstream culvert ends outside the limits of permanent facilities to the ROW lines. No construction activities or access below the orange fencing shall be allowed, unless approved by TxDOT. The boundaries for wetland areas shall also be established with orange fencing and timber mats must be used to support heavy equipment. Orange fencing will not be paid separately, but will be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling".

3. The Contractor shall submit detailed site-specific plans for work in each "Water of the United States" designated on the EPIC sheet. These plans must be approved by the TxDOT Engineer prior to starting any work in these areas. The plans must also describe facilities and work activities adjacent the Ordinary High Water Marks. The plan must show actual dimensions and materials for:

- Proposed construction roads and work areas leading to or in close proximity to the Ordinary High Water Marks;
- Temporary material or equipment storage areas in close proximity to the Ordinary High Water Marks;
- Locations of proposed sediment and erosion control devices;
- Identification of construction equipment and construction techniques to accomplish the work.

Once this drawing and supporting information is reviewed and approved by TxDOT, all construction workers should be made aware of the limits designated on the drawings by the Contractor's supervision. Work in all Waters of the US will be limited to the minimum necessary required to construct the bridge, culvert, or roadway fills. Work shall also include all activities needed for bridge and culvert demolitions. Working or disturbing soil in the stream channel outside the limits of the work plan will not be allowed. Orange fencing shall be provided and maintained to establish the TxDOT approved boundaries in which work may be conducted between the Ordinary High Water Marks. Orange fencing will not be paid separately, but will be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling".

4. Either stormwater from disturbed soil areas draining towards wetlands shall be re-routed or adequate sediment control devices installed to protect the wetland.

HIGHWAY: IH 35

5. The Contractor shall select concrete bridge demolition methods that will meet all Section 404 requirements. Bridge demolition between Ordinary High Water Marks may typically include bridge slabs, girders, columns, and foundations. The use of jackhammers or crushing techniques shall be conducted over timber mats wide enough for the downed bridge and for access and use of construction equipment to remove fully the wrecked structure. Concrete structures requiring demolition shall not be fully processed into small pieces between the Ordinary High Water Marks. Large sections of the wrecked concrete structure shall be lifted or moved to an upland area for further processing with the processing area using appropriate sediment control devices. Demolitions should be avoided during high stream levels. Efforts shall be made to minimize bridge rubble, including fine concrete materials produced through the demolition process, water from saw cutting activities or soils moved during demolition activities from entering the stream.

6. The construction or demolition of culverts should take place in a manner that does not block the flow in a Section 404 stream. Removal or demolition of bridge class culverts should be accomplished similar to bridge demolitions, but timber mats are not required. Efforts shall be made to minimize culvert rubble, including fine concrete materials produced through the demolition process, concrete saw cutting water or soils moved during demolition activities from entering the stream. Minimal stream channel disturbance should occur both upstream and downstream of culverts between the Ordinary High Water Marks.

7. No excavated material, including spoils from drill shafts shall be deposited within the Ordinary High Water Marks at any time. Excavated material shall be immediately hauled to an approved temporary upland material storage area on TxDOT ROW. Excess material shall be hauled from the project site or spread above the stream bank limits as directed by the TxDOT engineer. Adequate stabilization and sediment control devices shall be provided for soil materials spread and graded above the stream bank limits on TxDOT ROW.

8. No equipment or chemicals shall be stored overnight within Waters of the US (between the Ordinary High Water Marks). Special care shall be taken to contain all sanitary waste, petroleum products, or chemicals from leaking or entering the stream. The Contractor shall make provisions to collect all construction related trash and debris each workday and to provide adequate containers for storage and removal.

9. Upon completion of work, all excess construction materials, construction debris, timber mats, shall be carefully removed from between the Ordinary High Water Marks of the stream while minimizing additional earth disturbance, protecting existing aquatic vegetation and limiting stream turbidity. Timber mats, located below the Ordinary High Water Marks shall be carefully removed by construction equipment located above the Ordinary High Water Marks. Stream shaping below the Ordinary High Water Marks, after removal of timber mats or other construction activities shall only be conducted when directed by TxDOT.

HIGHWAY: IH 35

10. Adequate sediment and erosion control devices shall be installed to preclude sediment from entering the stream and to the requirements of the stormwater permit. Continuous silt fences with angled end sections and/or rock filter dams shall be installed along the entire length of disturbed soils, slightly above and parallel the High Water Marks of the stream and upslope of orange fencing specified in Item 2. No rock filter dams or other controls shall be installed across Section 404 streams below the Ordinary High Water Marks for either bridge or culvert installations. Large diameter compost logs shall typically be used on the boundaries of timber mats located between the Ordinary High Water Marks. Vegetation shall be established as soon as possible, beginning immediately when areas are brought to the proper lines and grades. Soil retention blankets and channel liners are encouraged to minimize erosion and promote vegetation development.

11. During any construction or demolition operations, soil shall never be pushed from the high bank into the stream channel below the Ordinary High Water Marks. Soil may be removed and shaped as necessary along the stream bank slopes above the Ordinary High Water Marks to facilitate construction with excess material being moved to high ground.

12. Trees removed between the Ordinary High Water Marks shall be saw cut. No mobile construction equipment shall be used to remove vegetation between the Ordinary High Water Marks. Trees will be cut flush with the ground level and pulled above the Ordinary High Water Marks for further processing. Only trees designated by the TxDOT Engineer shall be removed. No chemicals or stump grinding shall be used between the Ordinary High Water Marks. Follow all local ordinances when burning cleared trees or brush.

13. No water shall be pumped from any Water of the US without a permit from the appropriate River Authority or the Texas Commission on Environmental Quality. Upland stock tanks are exempt from this requirement.

HIGHWAY: IH 35

14. Temporary construction roads or ramps, if approved by the Engineer, shall be constructed of material that will not erode and transport fine grain sediment downstream under high flows. Acceptable earthwork materials shall be rock material of 4-in. to 6-inch diameter. The use of rock and inert materials such as structural steel sections, wood mats, concrete mats, filter fabrics, and concrete barriers shall be acceptable to build roads and ramps. Fills consisting of clay, sands or other fine grain materials shall not be used between the Ordinary High Water Marks. Loose earth materials generated by excavation between the Ordinary High Water Marks shall be re-compacted or moved to a high bank area before the end of each day. Temporary construction roads and ramps shall be removed as soon as possible and the stream channel returned to a near original condition. Earth materials (clays and sand) that fall from construction equipment onto roads or ramps, between the Ordinary High Water Marks, shall be cleaned and removed daily. Heavy duty wood mats are required for the opening surface for all temporary stream crossings and equipment platforms between Ordinary High Water Marks. Heavy duty wood mats are also required for all temporary stream crossings including shallow stream channels and stream channels with solid rock bottoms. Mats used without rock fill and that does not block flow in the stream channel can be used without a temporary culvert. Mats should be sized to be structurally sound under all equipment loads.

15. Temporary erosion control shall be provided by rock or gunnite/shotcrete and shall be provided to minimize erosion and limit sediment entering stream channels. The Contractor shall minimize the time duration for leaving steep cut or fill areas that concentrate storm water flows and promotes erosion near stream channels. Additionally, the Contractor shall not store or leave loose construction related soils located near or in stream channels.

16. Sediment found in 404 streams from the project, both on and off TxDOT property, shall be removed with equipment that will cause minimum disturbance to the stream channel. The Contractor is to remove the sediment to a location on the high bank outside of the Ordinary High Water Marks.

17. To facilitate culvert or bridge construction work, low stream flows may be temporarily pumped or routed around construction activities. Stream flow should not be stopped. To facilitate pumping or routing of low flows, whatever sumps or obstructions used to control the stream flow shall not be constructed of fine-grained clays or sands.

The Contractor shall be familiar with the right-of-way map and the location of all the right-of-way monumentation.

Care shall be taken by the Contractor and Subcontractors to protect and avoid disturbance to the right-of-way monumentation.

HIGHWAY: IH 35

If right-of-way monumentation is disturbed by the Contractor, or Subcontractor, the Contractor shall notify the Inspector. Monuments that are disturbed by the Contractor, or Subcontractor, shall be restored by a Registered Professional Land Surveyor designated by the Texas Department of Transportation District Surveyor at the expense of the Contractor.

The Contractor is expected to assist with incident management within the limits of the construction work zone. The Contractor may be required to set up/maintain/remove lane closures, flag traffic, and place message boards as necessary during incident management. The Contractor may also be required to utilize personnel and equipment to remove debris to clear the roadway to expedite reopening to traffic. The Contractor may also be required to assist with grass fires within the project limits utilizing water trucks, graders, loaders, dozers, etc. Flagging traffic will be subsidiary to Item 7 as part of ensuring the safe and free movement of traffic. Lane closure work and cleanup will be handled by Force Account as part of a damage claim.

ITEM 8: PROSECUTION AND PROGRESS

For this project Six-Day Workweek Charges will be charged in accordance with Section 8.3.A.2, "Six-Day Workweek".

For this project, the Critical Path Method will be required in accordance with Special Provision 008-086.

Prior to Contract letting, the conceptual construction schedule as developed for the Contract Time Determination will be made available by the Department at the Area Engineer's office for prospective Bidder's review. The Schedule will be in hard copy form and made available for copying by the Contractor. This supplied Schedule is for informational purposes, only. It is the responsibility of the prospective Bidder to determine a construction schedule for the work in this Contract.

The Contractor will be assessed a lane rental charge for each mainlane closed on IH 35 or for each mainlane obstructed on IH 35 during peak hours from the time of notice to proceed until substantial completion of all project work. The rental charge will be assessed for each lane or lane closed or obstructed for each direction of traffic on IH 35 mainlanes as follows:

PEAK HOURS		
NO. OF LANES	HOURLY RENTAL	CLOSURE HOURS CREDITED
1	\$12,000/HR.	0

HIGHWAY: IH 35

The hourly rental rate will be applied to the number of lanes closed for the time period. For example, if one lane is closed in the northbound mainlanes and one lane is closed in the southbound mainlanes, the hourly rental will apply to each lane closure for the length of time the lane is closed. The closing of one lane of traffic and then detouring that traffic to the frontage roads constitutes only one lane closure. Contractor will be charged for lane rental in excess of the maximum credited hours specified.

Class HES concrete will be used in the High Priority Areas as shown in the plans or as directed by the Engineer in the phased construction for the purpose of expediting the construction in these high traffic areas.

Following is a list of milestones intended to expedite construction in the shown areas. The Contractor shall submit a detailed sequence of work for each milestone for the Engineer’s approval at least one week prior to beginning each milestone construction. Failure to substantially complete the milestones within the duration shown below, plus any additional working days granted, will result in the shown daily road-user cost (RUC) being assessed for every working day in excess of the shown duration. If requested, the Engineer may allow the use of full-depth hot-mix (in lieu of other base layers) in order to expedite the work in these milestones.

Milestones for CSJ 0015-01-229, Etc.

NO.	MILESTONE DESCRIPTION	ROAD USER COST	PHASE	BEGINS	ENDS	DURATION
1	Construct Peach St. and west frontage road south	\$2,000 per working day	Phase 1 Step 2	Close Peach St. (west side)	Open Peach St. and west frontage road (south)	50 working days
2	Construct Forrest St. (east side) and east frontage road	\$4,000 per working day	Phase 1 Step 2A	Close Forrest St. and NB frontage road	Open frontage road and Forrest St. (east side)	40 working days
3	Construct Forrest St. (west side) and west frontage road	\$4,000 per working day	Phase 1 Step 3	Close west frontage road	Open Forrest St. (west side)	40 working days
4 ***	Construct southbound exist ramp to MLK Blvd.		Phase 1 Step 3	Start time charges	Open new SB exit ramp to MLK Blvd.	
5	Demo and construct Forrest St. bridge	\$4,000 per working day	Phase 2 Step 1	Demo Forrest St. bridge	Open Forrest Ave. over IH 35	150 working days

***For the noted milestones, a credit for early completion shall be paid when the milestone is completed under the incentive durations shown in the following table. Credits will be applied for each working day the work is completed before the incentive duration. These credits are “no excuse” credits and the durations will not be adjusted for any reason.

No.	EARLY COMPLETION CREDIT	INCENTIVE DURATION
4	\$5,000/working day	130 working days up to 40 days maximum

***The existing southbound exit ramp to MLK Blvd. shall not be closed before the new southbound exit ramp to MLK Blvd. is open.

The bridge demolition for Forrest St. shall be done on Monday, Tuesday, or Wednesday night. The Contractor has up to 12 hours to complete the demolition during low traffic hours (as defined below) and open all roadways by 7:00 AM. Should the Contractor complete the bridge demolition early, a credit for early completion will be paid. A credit equal to the hourly lane rental rate of \$1,200/hour for each complete hour up to a maximum of 6 hours per demolition will be paid for early completion and opening the roadway(s) to traffic.

Low Traffic Hours are as follows:

Sunday	10 PM	-	Monday	7 AM
Monday	7 PM	-	Tuesday	7 AM
Tuesday	7 PM	-	Wednesday	7 AM
Wednesday	7 PM	-	Thursday	7 AM
Thursday	9 PM	-	Friday	7 AM

Peak Hours are any time other than low traffic hours. In addition, no IH-35 mainlane closures will be allowed during the peak hours. The purpose of the peak hour lane rental rate is to apply a disincentive when operations during low traffic hours are not completed promptly requiring extending lane closures into peak hour times. The Contractor’s attention is called to the fact that work requiring lane closures will be restricted to the nights indicated above.

Supplemental lighting in addition to lighting on equipment and work vehicles will be required to insure adequate lighting for workers’ safety and inspection. All operations including planing, underseal, and HMAC placement must be adequately lighted. All lighting, both supplemental and for equipment, shall be of the “balloon type” that minimizes glare to traffic, unless the lighting is well out of the way of traffic as approved by the Engineer. This is subject to the approval of the Engineer. This is considered subsidiary to the various bid Items of the Contract.

IH-35 mainlane closures must be coordinated with other projects on IH 35 including maintenance operations requiring mainlane and frontage road closures in the Waco District with the Project Engineer and TxDOT’s IH 35 Mobility Coordinator. Provide one-week notice to the Engineer of any planned lane closures to allow coordination. The Project Engineer must approve all closures prior to implementing. No additional compensation will be provided due to rescheduling of requested lane closures caused by the need for coordination with adjoining projects.

HIGHWAY: IH 35

Placement of traffic control devices for night operations shall not commence until after the start time and all devices shall be removed from the roadway prior to the finish time. All other work not requiring lane closures can be done during daytime work hours.

Unless otherwise approved by the Engineer, no lane, ramp, or freeway closures will be allowed between 7 AM Friday and 10 PM Sunday. In addition, these closures will not be allowed:

On Thursday prior to Good Friday

- On Good Friday
- Until midnight Easter Sunday;
- Until midnight Sunday before and after each of the three weeks of Spring Break, which are typically the second, third, and fourth weeks of a March;
- Until midnight Sunday of Texas/Oklahoma football game weekend;
- After 7 AM Tuesday before Thanksgiving Day thru midnight Sunday after Thanksgiving;
- After 7 AM December 23 through 7 PM January 2;
- Or, on any other high traffic days or holidays as determined by the Engineer or, when in conflict with adjoining IH 35 projects as determined by the Engineer.

High impact closures as defined by the Engineer such as erection of bridge girders, bridge demolition operations, and other similar mainlane closures will not be permitted on days immediately in advance of above prohibited lane closure periods.

In the event utility lines needing unforeseen adjustments are encountered during construction operations, alter operations and continue to prosecute the Contract in such a manner that will allow utility adjustments to be made by others.

In addition, construction schedules provided by the Contractor shall include line items required to maintain compliance with the Stormwater Permit. Those line items shall include, but not be limited to installing/removing stormwater sediment controls, installing soil retention blankets/channel liners, top soil/compost placement, seeding (temporary and permanent), and placement of permanent erosion controls, earthwork, and grading.

For all subcontracts, physically attach all provisions listed in the "Contractor's Assurance" to the subcontract agreement. Provide a copy of subcontracts, with attachments, for all DBE Subcontractors. Submit the subcontracts to the Engineer when submitting the subcontract approval request.

ITEM 100: PREPARING RIGHT OF WAY

Prune trees designated for preservation as directed by the Engineer. All work required in preserving and pruning trees shall be included in the price bid for Item 100.

All trees and brush removed each day shall be disposed within the same day of removal, unless otherwise approved by the Engineer. If removed vegetation is burned, ashes from burned vegetation shall not be placed or allowed to be transported by stormwater into any stream. Burn locations, if approved, shall be no closer than 300 feet from a stream. Earth berms shall be used around burn areas to keep ash in place.

The Contractor is prohibited from removing grass vegetation throughout the entire project limits and then ceasing construction for long periods, typically over three weeks. The Contractor schedule shall be developed based on staged vegetation removal, limiting disturbed soil to no more than 25 percent at one time, unless otherwise approved by the Engineer. Should the Contractor not be able to control adequately the sediment and erosion for areas disturbed, TxDOT shall substantially reduce the size of areas that the Contractor may disturb soil. Should the project be evaluated to have sediment control problems as a result of the Contractor disturbing excessive amounts of soil, the Contractor shall be required to immediately re-vegetate (seed and water) those disturbed areas at no cost to TxDOT.

Item 100, "Preparing Right of Way" includes all areas on the ROW and easements, including those for utilities.

The removal of any of the following existing features will not be paid directly, but shall be considered subsidiary to the bid Item 100, "Preparing Right of Way": box culverts not designated elsewhere in the plans for payment, fence, riprap, sidewalk, ramp, driveway, curb, curb and gutter, pipe, inlet, manhole, junction box, SET, headwall, wingwall, small signs, cast-in-place barrier, traffic barrier foundations including drilled shafts, and other features as shown in the plans or as defined in Item 100, "Preparing Right of Way". Removal of box culverts shall be measured along the centerline of the complete structure and shall be paid per Item 497, "Removing Structures (Box Culvert)". Removal of pipe underdrains and temporary walls are not shown in the plans but shall be subsidiary to Item 100, "Preparing Right of Way".

Prior to starting bridge or culvert removals, the Contractor shall remove all public trash and dumped materials within the stream channel and property boundaries, with all work and disposal being subsidiary to Item 100, "Preparing Right of Way" and/or Item 496, "Removing Structures".

ITEM 110: EXCAVATION

In a cut section, when soils to be lime treated are encountered at subgrade depths that have a soluble sulfate level greater than 3000 parts per million (ppm), as determined by Test Method TEX-145-E or unstable for reason other than excess moisture, undercut this material for a minimum depth of 1.0 foot below the lime treated layer and maximum depth as determined by the Engineer and replace with a material having a plasticity index less than 25, a liquid limit of less than 50 and a soluble sulfate content of less than 3000 ppm. This required undercutting will be paid at the price bid for Item 110, "Excavation." Replacement of more suitable material will be paid at the price bid for Item 132, "Embankment."

Proof Roll the completed subgrade to locate unstable areas. Proof rolling shall be in accordance with Item 216, "Proof Rolling".

ITEMS 110 & 132: EXCAVATION & EMBANKMENT

Earthwork was calculated from top of existing subgrade in pavement areas to finished grade and subgrade. Removal of existing base, asphalt concrete, and concrete pavement quantities are not included in the excavation quantities.

Subgrade soils to be lime treated will be evaluated for the presence of soluble sulfates as determined by Test Method(s) TEX-145-E and/or TEX-146-E, as determined by the Engineer.

In those cases where fixed features require, the governing slopes indicated on the cross-sections may be varied between the limits and to the extent determined by the Engineer.

Prior to Contract letting, one copy of the earthwork cross-sections will be made available by the Department at the Area Engineer's office for prospective Bidder's review. Earthwork construction cross-section data is also available to the Contractor on a Department-furnished compact disc at the Area Engineer's office. This supplied cross-section plot or computer data is for non-construction purposes. It is the responsibility of the prospective Bidder to validate the supplied plot or data with the accompanying plans, specifications, and estimate for this Contract.

Design cross-sections and cross-section data will be provided to the Contractor by TxDOT post letting and shall be used to stake the lines and grades for the project, as directed by the Engineer.

In a cut section, where in the opinion of the Engineer the soil encountered in the subgrade is unstable for reason other than excess moisture, undercut this material for a minimum depth of 1-foot and maximum depth as determined by the Engineer and replace with a material having a PI of 5 to 25. This required undercutting will be paid for under Item 110, "Excavation." Replacement of more suitable material will be paid for under Item 132, "Embankment."

HIGHWAY: IH 35

When excavation is required to adjust stream flowlines at culvert ends, flatten the side slopes of channels and the back slopes of parallel ditches to the maximum extent possible within the existing right of way and channel easements.

All pavement and base on existing driveways and intersecting roadways within the limits of the proposed subgrade shall be removed including when proposed subgrade elevations are above the existing pavement. Existing subgrade in these areas shall be scarified and loosened to a depth of 12 inches before adding embankment or compacting excavation.

Embankment material (Type C) will be checked for the presence of soluble sulfates. Type C embankment shall consist of suitable earth material such as rock, loam, clay or other materials as approved by the Engineer that will form a stable embankment. In addition to the below requirements, the top 2 feet of embankment, including material used to complete front slopes after final surfacing, shall have a plasticity index less than 25, a liquid limit less than 50 and a soluble sulfate content of 3000 parts per million or less, as determined by Test Method TEX-145-E. Test Method TEX-146-E may be used to check for soluble salts in these materials. If results of this testing indicate a salt level in excess of 200 micro-Siemens, Test Method TEX-145-E must be performed on the material to determine if the salt present are sulfates and the concentration. Under no circumstance will materials possessing a soluble sulfate concentration greater than 7000 parts per million (ppm) be allowed in a layer within 1 foot of a lime treated layer or material possessing a soluble sulfate concentration greater than 3000 ppm be allowed in a lime treated layer.

Off-Site Borrow Sources:

Test off-site borrow sources for sulfate content, plasticity index, and liquid limit. Test soils for soluble sulfates in accordance with Test Method Tex-145-E and Tex-146-E. Provide test reports to the Engineer for the tests listed above for each borrow source. Tests should be performed on all types, colors, and/or textures of soil in the borrow source. The Engineer will perform additional testing for sulfates of this material upon delivery to the project.

Only borrow material that is placed within one-foot vertically or laterally of treated subgrades will require testing for sulfates.

Proof roll the completed subgrade to locate unstable areas. Proof rolling shall be in accordance with Item 216, "Proof Rolling."

Stormwater containing suspended sediment and turbidity needing to be removed from excavations or low areas shall be pumped or gravity drained through vegetated buffer strips (50-foot, minimum) or placed in ditches with temporary sediment controls, prior to the water being discharged into a stream.

ITEM 160: TOPSOIL

The Contractor shall salvage the existing topsoil from the cut/fill areas. The top 6-in. of soil from the newly acquired ROW is suitable for use under this Item. Stockpile the salvaged topsoil material at locations as approved by the Engineer. Topsoil shall not be used for general fill, unless there is an excess quantity of topsoil and use is approved by TxDOT. Topsoil stockpiles or topsoil placed along the ROW lines in windrows shall be temporarily seeded to meet stormwater permit requirements. Additional offsite topsoil will likely be required to complete work for this Item.

Additional topsoil shall come from approved sources outside of the ROW. Topsoil must come from a location within 6 inches of the natural ground surface to ensure it contains nutrients and is not sterile soil. Off ROW topsoil shall contain a minimum organic content of 3.5% based on soil test results (testing to be conducted at the Contractor's expense).

Topsoil not stored in small windrows shall be stockpiled in locations with heights no greater than 4 feet and dumped loose from Contractor equipment. The Contractor shall minimize topsoil compaction and limit equipment being driven over stockpiled topsoil. Dozers may be used for limited shaping. Weeds shall be periodically removed and grass vegetation established by broadcast seeding. For the best re-vegetation performance, stockpiled topsoil should be used within one year of stockpiling. Prior to stockpiled topsoil being re-distributed on the project, the soil shall be mixed and tilled at the stockpile location. Contractor shall adequately plan for the additional land requirements for topsoil storage. All stockpiled topsoil activities shall be subsidiary to Item 160, "Topsoil".

ITEM 162: SODDING FOR EROSION CONTROL

Block sod (Bermuda grass) shall be cynodon dactylon Bermuda grass cut to a minimum depth (thickness) of 1-inch. The sod shall have the following characteristics: (1) uniformity; (2) good color; (3) free of weeds, weed seed, insects, and disease; (4) healthy, virile root system of dense, thickly matted roots throughout the soil of the sod; (5) adequate moisture to prevent drying out by exposure to the air and sun to the extent as to damage sod.

Prior to laying the block sod, blade the area and rake smooth. Refer to the plans and details for areas to receive the sod. Remove 1-in. of soil along paved edges and curb lines before laying sod and dress the slope to match all exposed edges after placing the sod. Prior to installation of the sod, fertilize the ground with a slow release homogeneous coated fertilizer at a rate of one pound per square yard. Fertilizer shall be subsidiary to Item 162, "Sodding For Erosion Control".

ITEM 164: SEEDING FOR EROSION CONTROL

Final grading and stabilization (seeding) shall be achieved as soon as possible and not scheduled only for the end of the project. Final grading and stabilization should be initiated as the overall work progresses and should typically be scheduled in sequence with base course installation. Final grading and stabilization shall be included and updated as separate line items in the project schedule.

Install temporary seeding on topsoil stockpiles that are unused for more than 21 days.

Multiple mobilizations of the seeding crews will be expected to comply with the Construction General Permit of the Texas Pollution Elimination Discharge System requirements for re-vegetating disturbed soils.

Temporary seeding mixtures (cool and warm) shall also include 3.0 lbs. of Bermuda grass seed per acre, with all seeds being planted concurrently.

Temporary cool seed mixtures shall be as stated in the specification or at the option of TxDOT a direct substitution of wheat at 34 lbs per acre or oats at 24 lbs per acre. Tall fescue may be added to these applications and applied at a rate of 4.5 lbs per acre.

Contractor shall mow or disc wheat and or oats in spring prior to vegetation going to seed.

Drill seeding shall be used on temporary seeding at all times due to insects and birds, except in areas as directed by the Engineer.

Vegetative watering shall not be used with temporary warm and cool seeding, unless authorized by the Engineer. Vegetative watering shall not begin on permanent seeding until at least a half-inch rainfall is received or as directed by the Engineer.

For drill seeding installations, the pasture or rangeland type drill shall have a minimum of three seeding compartments to separate the fine and fluffy seeds and must be capable of being calibrated so the seed mixtures will be planted uniformly.

The Contractor has overall responsibility to initiate and implement site preparation, grading and seeding in a timely manner to meet the current TXR 150000 permit re-vegetation requirements. Contractor shall be required to expedite multiple seeding and re-vegetation activities shall be subsidiary throughout the duration of the project.

HIGHWAY: IH 35

Permanent and temporary seeding that does not produce uniform vegetation shall be redone by the Contractor at no cost to TxDOT when seed is planted outside of TxDOT specifications; specifically but not limited to, planting the seed too deep, using incorrect or damaged drill seeding equipment, providing defective seed or inconsistent seed distribution and/or starting equipment watering out of specifications/notes where the seed germinates and then dies.

Re-seeding over existing soil retention blanket shall be by broadcast seeding at twice the permanent or temporary seed rates (pounds per acre). Based on the increased seed quantity, the Contractor shall be paid for 2 acres of seeding for each one acre of seeding over soil retention blankets. Initial seeding under soil retention blankets shall be primarily by drill seeding, unless otherwise approved by the Engineer, utilized the current seasonal temporary or permanent seed types in the TxDOT Specifications and/or General Notes.

ITEM 166: FERTILIZER

Fertilizer shall be used for permanent and temporary seeding as well as block sod.

ITEM 168: VEGETATIVE WATERING

Watering between December 1 and February 1 can begin on seeded areas upon planting and before a natural rainfall. During other planting periods, unless approved by TxDOT, vegetation watering by means of water trucks shall not be started on newly planted seeds until a natural rain of 1/2-inch has occurred after planting.

ITEM 180: WILDFLOWER SEEDING

Wildflower seeding operations shall be separate from the permanent grass seeding operations and shall be performed in the fall between the months of September and November. Locations for wildflower seeding shall be between the main lanes and frontage roads as directed by the Engineer. Wildflower seed shall be sown at the recommended depth using a no-till drill seeder.

The species shall be a Texas mix including but not limited to: Texas Bluebonnet (*Lupinus texensis*) minimum 16½ pounds PLS per acre; Pink Evening Primrose (*Oenothera speciosa*) minimum 1 pound PLS per acre; Indian Paintbrush (*Castilleja indivisa*) minimum 1/4 pound PLS per acre; and Indian Blanket (*Gaillardia pulchella*) minimum 10 pounds PLS per acre.

Approved sources are:

Wildseed Farms
425 Wildflower Hills
Fredericksburg, TX 78624
800-848-0078

Native American Seed
127 N. 16th St.
Junction, TX 76849
800-728-4043

Applewood Seed Co.
5380 Vivian Street
Arvada, CO 80002
303-431-7333

ITEM 247: FLEXIBLE BASE

Recycled asphalt pavement (RAP) or crushed concrete generated on this project will be allowed to be blended in the Ty D Flex Base. Contractor owned or State stockpiled RAP and crushed concrete is permitted also. Do not exceed 20% RAP, by weight. If Contractor elects to utilize these materials as part of the flex base mixture, payment will be made for the total quantity of RAP/recycled concrete/flex base mixture. Any combination of new base and salvaged material shall meet the requirements shown on the specification data sheets.

Place the material in approximately equal courses not to exceed 6 inches in depth per course. During mixing and laying operations, sufficient water shall be added to the material to insure that the moisture content is not less than optimum moisture as determined by Test Method Tex-113-E.

ITEM 251: REWORKING BASE COURSES

Compact the reworked base material using Density Control method as directed in Item 251.

Some patches of cement or stabilized base may be encountered while reconditioning the existing base. If such material is encountered, it will be removed and disposed of as directed by the Engineer. This work will not be paid for directly but will be subsidiary to Item 251, "Reworking Base Courses".

ITEM 260: LIME TREATMENT (ROAD-MIXED)

Apply lime by the slurry placement method. Dry placement will not be allowed.

Ensure that all subgrade material to be treated with lime does not have a soluble sulfate content greater than 3000 parts per million, as determined by Test Method Tex-145-E. Mix the soil-lime mixture at a moisture content of at least 3% above the optimum moisture content as determined by Test Method Tex-121-E, Part II. Mellow the lime treated material a minimum of four (4) days for all applications. Sprinkle lime treated material during the mellowing to maintain the moisture content of at least 3% above the optimum moisture content. Cure lime treated material at or above optimum moisture content for a minimum of five (5) days.

HIGHWAY: IH 35

In soils with Plasticity Indexes greater than 50 and stabilization depths greater than 8 inches, the Contractor must satisfactorily demonstrate the ability to mix the materials adequately to obtain a homogeneous, friable mixture. If a mixture of this quality cannot be obtained, the Contractor will place this material utilizing a double application of lime. The double application will be applied at a rate of one-half (1/2) the rate specified on the plans or as determined by Test Method Tex-121-E, Part III on the first application. This material will be allowed to mellow at a moisture content of 3% above optimum moisture as established by Test Method Tex-121-E, Part II for a period of not less than 48 hours. The second application, consisting of the remaining lime specified on the plans shall be added after the initial 48-hour mellowing period. The second application will be applied and be allowed to mellow for a period of 48 hours under the same moisture considerations as the first application. The complete lime treated subgrade (both lime applications with mellowing completed) will be allowed to cure at or above optimum moisture content for a period of no less than 5 days.

Cure the lime treated material with an application of MS-2 or an emulsion approved by the Engineer at a rate of 0.2 GAL/SY. The application of this material will not be paid directly, but will be considered subsidiary to Item 260. The Engineer may waive this requirement if the Contractor demonstrates a way to maintain moisture prior to placing subsequent courses.

Proof roll lime treated subgrade in accordance with Item 216 "Proof Rolling." Soft spots detected should be reworked as outlined in Item 260.4. (F).

Lime spilled in ditches or outside the defined limits of application shall be excavated and removed the same day, to avoid contaminating streams.

ITEM 305: SALVAGING, HAULING AND STOCKPILING RECLAIMABLE ASPHALTIC PAVEMENT

RAP not incorporated into project work items shall be stockpiled at the TxDOT stockpile yard at the intersection of **LP 340/SH 6 Junction East of Waco, TX** or other locations within a 50 mile radius of the project at the locations to be determined by the Engineer.

Neatly shape stockpiles using a front-end loader or other similar equipment as directed by the Engineer. Stockpile material with crushed aggregate separately from material with siliceous aggregate.

Every month, provide to the Engineer a spreadsheet showing the total weight and/or volume of material stockpiled or reincorporated into new hot-mix to date. Include available supporting documentation such as weight tickets, truck measurements, etc. For RAP reincorporated into new hot-mix, weight tickets will be required (to ensure that the total amount of allowable RAP used in hot-mix is not exceeded).

ITEM 360: CONCRETE PAVEMENT

Contractor personnel performing job-control testing on concrete must be ACI-Certified. Provide a copy of the certification paper to the Engineer upon arrival and before testing at job site. Furnish hard copies of calibration reports for testing equipment when non-TxDOT approved equipment is used to test concrete.

Maintain on the job site sufficient polyethylene fabric, as directed by the Engineer, to cover a minimum area of concrete pavement 600 feet long and 25 feet wide.

The coarse aggregates used in the concrete paving mixture shall produce concrete with a coefficient of thermal expansion (COTE) not greater than 5.5×10^{-6} inch/inch/^F when tested in accordance with Test Method TEX-428-A. Specimens shall be made and cured in accordance with Test Method-TEX-447-A and be at least 7 days old before testing. The Construction Division will perform all testing for COTE for aggregate acceptance and test results shall be final.

When conventional paving methods are used (forms), a longitudinal finishing machine will be required. The longitudinal finishing machine shall be provided with a longitudinal float not less than 10 feet in length, adjusted to a true plane. It shall be power driven and mounted in a substantial frame equipped to ride on forms and shall be so designed and operated as to finish the required grade, in lieu of the longitudinal finishing machine, the Contractor may use a longitudinal trans-angular float which is adjustable to crown and grade. This type of float is also known by various trade names such as V Finisher, Lewis Trans-angular Finisher, C.M.I. Tube float, etc. The operation of the longitudinal trans-angular float shall be as approved by the Engineer.

Place sawed joints and construction joints in accordance with the pavement detail sheets and as directed. Joint locations, other than as shown on the plans, are subject to approval. Pavement leaveouts are required on this project as necessary to provide for traffic at driveways and side streets as shown in the plans or as directed. The cost of providing these leaveouts, including the construction of a suitable crossover connection at each site, is not paid for directly but is considered subsidiary to this item. All joint locations and leaveouts shall be shown on the submitted paving plan as required by this Item. The requirements of Item 585, "Ride Quality for Pavement Surfaces", will be enforced, regardless of the presence of construction joints. The maturity method may be used to estimate concrete strength for early opening of pavement to traffic.

Concrete curing compounds shall not be applied in a manner that the chemical will be spilled, dripped or be discharged into streams. Containers and rags used during application of curing compound shall be properly disposed of off project. Do not store curing compound containers and drums on TxDOT ROW.

Enter job-control testing data in Department-provided electronic testing template spreadsheets and submit electronically to the Engineer at the interval directed by the Engineer.

HIGHWAY: IH 35

Prior to concrete paving, attend a pre-concrete paving conference at the jobsite. All project supervisory personnel involved in the concrete paving are required to attend this conference. TxDOT personnel will include representatives of the Cement Council of Texas.

Class HES concrete will be used in the High Priority areas as shown in the traffic control and other areas as directed by the Engineer for the purpose of expediting construction. See General Notes to Item 8 for more information. The Contractor may use Class HES concrete in other locations, but only those shown in the plans or directed by the Engineer will be paid using the Class HES concrete bid item.

Provide aggregate meeting Grade 2 in accordance with Item 421 for Class HES concrete.

The maturity method may be used to estimate concrete strength for early opening of pavement to traffic.

ITEM 400: EXCAVATION AND BACKFILL FOR STRUCTURES

Aggregate for cement stabilized backfill shall be course aggregates, GRADE 3, 4 OR 5 and fine aggregate, as shown in Item 421, "Hydraulic Cement Concrete". The ratio of course aggregate to sand should not contain more than 60% sand unless otherwise approved by the Engineer.

CLASS B bedding is required if rock is encountered. This work shall be subsidiary to the various bid items.

For all RCP, use Class B bedding with compacted granular material below the pipe and up to half the depth of the pipe. See Item 400.3.B, Figure 1, Class B, compacted granular material (left-hand side) diagram for more details. This work shall be subsidiary to the various bid items.

Structural excavation is not paid directly, but is considered subsidiary to pertinent items.

ITEMS 416 & 420: DRILLED SHAFT FOUNDATIONS AND CONCRETE STRUCTURES

Column lengths shown on the plans shall be used to calculate the top of drilled shaft elevations for the determination of pay quantities. Pay quantity for bent concrete shall be plan quantity.

Include the cost for furnishing and installing anchor bolts mounted in the drilled shafts in the unit bid price for the various diameter drilled shafts.

The Department may test, using ultrasonic methods, the anchor bolts for illumination poles after they are installed. Replace faulty anchor bolts as directed. Do not weld the anchor bolts.

ITEM 420: CONCRETE STRUCTURES

The contractor's attention is called to the fact that conduit for illumination or other purposes may be required in the construction of the concrete barrier, bridge slabs, columns, caps or other parts of the bridge structure(s). Refer to the bridge and illumination layouts for details.

Reduce headwall heights, if necessary, to provide a maximum of 3 inches projection above the roadway slope. No increase or decrease will be made in plan quantities of concrete or reinforcing steel for this work.

Saw-cut grooving of the bridge deck and approach slab is not required for the Forrest Ave. bridges.

Paint the Control -Section - Structure (CSS) number on the right side of each approach end of finished bridges or culverts, using black exterior paint and stencils that result in two inch high numbers. All numbers should be legible and free of smears or drips. Unless otherwise directed by the Engineer, the nine digit CSS number shall be placed within two feet of the end of each bridge type as follows: concrete or steel girder bridge on outside of girder, slab type bridge on outside of slab, bridge class culverts on outside of headwall. The painting of these numbers will not be paid for directly but will be considered subsidiary to the various bid items.

All construction products used to construct concrete structures and bridges including but not limited to plastics, Styrofoam, grease, glues, caulking, adhesives, solvents, paints, cleaning agents and rubber shall be handled in a manner that the construction products or empty containers/tubes shall not be allowed into any stream. Construction debris developed from the cutting, grinding or sizing of solid construction products including plastics and Styrofoam shall not be allowed on the ground or to blow into a stream.

Concrete curing compounds shall not be applied in a manner that the chemical will be spilled, dripped or be discharged into streams. Containers and rags used during application of curing compound shall be properly disposed of off project. Do not store curing compound containers and drums on TxDOT ROW.

Ensure steel forms are free of rust immediately prior to placing concrete.

Refer to Item 427, "Surface Finishes for Concrete", for additional requirements for formwork, concrete curing, and form removal for off-the-form finishes.

Submit a written work plan to the Engineer including materials and construction methods that affect the quality of the concrete finish. Prior to construction of any cast-in-place concrete, construct mock-up elements for bridge and overhead sign columns, retaining wall panels, and retaining wall copings and pilasters as indicated to simulate the materials and methods intended for use and demonstrate the adequacy of the concrete surface.

HIGHWAY: IH 35

Mock-up construction is subsidiary to Item 420 and will not be paid directly. The mock-up shall include, at a minimum, at least 6-ft of column height. Construct the mock-ups using the proposed concrete mix, forming material, joint sealer (if used), form release agent, and all other construction procedures (including curing) listed in the work plan. Use the same surface finishes outlined in Item 427, "Surface Finishes for Concrete". Submit a written repair procedure with materials and methods used that is in accordance with these General Notes and Specification and Standard Specification Item 427. Apply this repair procedure to each mock-up for concurrence by the Engineer. Use this repair procedure for all "Surface Area I" concrete on the project, unless amended by the Engineer.

The finish quality of the mock-up concrete (including repairs) shall have a pleasing and uniform appearance, free of color variations, as described above prior to construction of any columns or caps. A new mock-up may be necessary if the finish, as determined by the Engineer, is not adequate or if other materials and procedures are intended for use or are changed during the course of construction. The mock-up shall remain on the job and serve as a benchmark for satisfactory appearance.

Prior to mock-up construction, attend a pre-concrete forming and finishing conference at the jobsite. All project supervisory and lead worker personnel involved in the construction of cast in-place concrete are required to attend this conference. This conference shall include discussion on the Contractor's plan for insuring that single concrete bridge structure elements placed in multiple placements are produced with identical concrete materials, without variations or changes in material amounts, and placed in a manner to provide a uniform color surface finish without variations between placements.

Do not use membrane curing.

Use an approved UV disappearing curing compound rather than the standard approved curing compounds for structures receiving opaque sealer coating/finish.

Waste water generated during the process of mechanical grooving or saw cutting of bridge decks or for any pavement, shall be collected and disposed of properly and not allowed to enter any stream channel.

ITEMS 420, 423 & 450: RAILING

White hydraulic cement will be required for all traffic rails, bridge rails, retaining wall copings, retaining wall pilasters, and permanent traffic barriers, unless the optional finish specified under Item 427 is used.

When white cement is used, blast clean all railing and barrier wall in accordance with Item 427 prior to final acceptance of the project. This work will be considered subsidiary to Item 420, "Concrete Structures", Item 423, "Retaining Walls", and Item 450, "Railing".

Ensure slip-formed barrier and cast-in-place barrier will be uniform in color and texture.

When supplying aggregates from a source that is excluded from using Option 7 for ASR mitigation, substitute fly ash for the Portland cement at a rate of 20-percent of the cement. No changes to the aggregate sources or fly ash source will be allowed, unless approved by the Engineer in writing.

Use an approved UV disappearing curing compound rather than the standard approved curing compounds for structures receiving opaque sealer coating/finish.

ITEM 421: HYDRAULIC CEMENT CONCRETE

Entrained air is required in all slipformed concrete (bridge rail, concrete traffic barrier, pavement, etc.), but is not required for other concrete. The entrained air is required for workability purposes. Provide coarse aggregate with a 5-cycle Magnesium Sulfate Soundness of not more than 25%, when tested in accordance with Tex-411-A. Adjust dosage of air entraining agent for low air content as directed or allowed by the Engineer. If entrained air is provided where not required, only the upper limits of the Special Provision will be enforced.

Class HES concrete shall be designed to achieve a minimum compressive strength of 2200 psi in 24 hours. Only a course aggregate grade of 2 or 3 may be used.

The Contractor will provide compressive strength testing equipment with a laser printer including all interface software and accessories.

ITEM 423: RETAINING WALLS

Use Type D backfill when constructing MSE retaining walls unless otherwise shown in the plans.

See MSE Retaining Wall Aesthetics sheets for textures of panels. See Item 427 General Notes below for surface finishes and coatings related to retaining walls.

Retaining wall panels facing the *frontage roads* and *right of way* shall have a rectangular Ashlar Stone finish in accordance with the plan details using a formliner approved for this project by the District Landscape Architect and the Engineer. The Contractor will cast sample panels for approval by the Engineer and the Landscape Architect prior to whole scale casting.

Retaining wall panels facing the IH 35 *mainlanes* shall have a Cut Stone finish in accordance with the plan details and as approved for this project by the District Landscape Architect. Employ at least three different unique formliner finishes as approved by the District Landscape Architect. Provide sample panels for approval by the Engineer and District Landscape Architect prior to wholesale casting.

Mow strip along Mechanically Stabilized Earth walls are required and shall be subsidiary to Item 423, "Retaining Walls".

Six-inch (6") perforated pipe underdrain, as per MSE Wall Standard sheet, will be required. Pipe outfall should be terminated into wall of drainage structures, as approved by the Engineer. Pipe underdrain for retaining walls shall be subsidiary to Item 423, "Retaining Walls". Pipe underdrain for outfalls located outside of retaining walls will be paid under Item 556, "Pipe Underdrains".

The Texas Emblem inset shown on the Standard sheets for inclusion on retaining walls shall be placed at locations approved by the District Landscape Architect and shall be verified at the time of shop drawing review and approval. In addition, the inset area shall receive a concrete paint finish in accordance with Item 427. The Contractor shall provide color samples to the District Landscape Architect for approval. The painted finish of the Texas Emblem shall then receive a Type III Anti-Graffiti Coating similar to the retaining wall formliner area. Painting of the inset area and anti-graffiti coating will not be paid directly, but shall be subsidiary to Item 423, "Retaining Walls".

Obtain Approved MSE Panel Systems from the suppliers list located at:

http://www.txdot.gov/business/contractors_consultants/bridge/mse_wall.htm

Utilities placed prior to the construction of the MSE walls should be located such that the excavation for the utility is a horizontal distance away from the wall greater than the following: beginning from the outer edge of the bottom of the MSE retaining wall leveling pad, project an imaginary line out and down at a 1H:1V slope. All backfill should be placed in accordance with current TxDOT Standard Specifications.

Prior to excavating within a distance equal to the height of the MSE wall plus abutment height where present and/or within the distance set forth in the previous paragraph, a licensed Engineer in the State of Texas should analyze the specific conditions on a case-by-case basis.

To aid in reducing the level of settlement as well as improve bearing capacity, Proof Roll the retained fill behind and the embankment fill below proposed walls to locate and identify unstable areas and identify any loose, soft, or unsuitable materials. Proof rolling should be set at a maximum rut depth of 1-in. per pass of pneumatic tire roller. Material not meeting this maximum rut depth criteria should continue to be rolled or removed and replaced with material deemed suitable by the Engineer in accordance with Item 216 "Proof Rolling".

ITEM 427: SURFACE FINISHES FOR CONCRETE

All concrete surfaces listed under Surface Area Finish I shall receive a Rub Finish as per Item 427 unless specified below.

HIGHWAY: IH 35

The following elements shall have both an off the form finish and rub finish: bridge or roadway traffic rail, permanent CTB, bridge columns and caps, pilasters and retaining wall copings.

The following elements shall receive a form liner finish: retaining wall panels with pattern as shown in general note for Item 423.

For all retaining wall copings, pilasters, railings and permanent concrete traffic barrier, opaque sealer coating with anti-graffiti coating is allowed in lieu of white cement, as long as it is placed in accordance with the "Special Application Requirements" listed below.

Special Application Requirements (for Opaque Sealer used in lieu of white cement)

The below requirements are supplemental to Item 427. All requirements specified and under Item 427 to achieve the required finish are not paid directly, but are subsidiary to the pertinent concrete structure items. These requirements apply only to opaque sealer used in lieu of white cement.

- Do not apply any coatings until 60 days after completion of the required curing period.
- Use an approved UV disappearing curing compound rather than the standard approved curing compounds.
- Perform PH tests as directed by the Engineer and in accordance with standards from the Society of Protective Coatings until a PH of 9 or lower is achieved to insure the concrete is sufficiently cured so as to not reject the coating materials.
- Sandblast concrete surfaces to produce a Level 3 surface texture measured by using the International Concrete Restoration Institute (ICRI) standard gauge CSP-3 rubber chart that depicts the level of sandblasting achieved.
- Water blast concrete surfaces at 3000 psi to remove all dust and debris.
- Wait a minimum of 24 hours after sand and water blast cleaning to allow thorough drying of prepared concrete surface.
- Apply a water repellent concrete sealer containing 40% silane at 100 sq. ft. per gallon when air temperature is 40 degrees and rising and is no greater than 95 degrees.
- Wait a minimum of 12 hours to start opaque sealer application after concrete sealer application.
- Color shall be Sherwin Williams "Waco White."
- Apply two coats of opaque sealer for a total maximum application rate of 200 sq. ft. per gallon when air temperature is 50 degrees and rising and is no greater than 95 degrees.
- Apply Anti-Graffiti Coating Type II (Permanent) after opaque sealer coating has thoroughly dried. Follow requirements specified by Item 740 as well as manufacturer's recommendations for additional application requirements.

Off-the-Form and Rub Finish Notes

Off-the-Form Surface Finish is supplemented by the following and shall apply to Readily-Visible Concrete Surfaces only:

Off-the-Form Finish shall have a pleasing appearance with minimal color and texture variations and minimal surface defects when observed at a distance of approximately 20 feet. Provide this finish by using non-staining, non-porous, high-quality forming materials as specified under Item 427.3.E. Use the same type of forming materials for like elements for the entire structure.

Engineer shall determine acceptability of finished surfaces.

For repaired and patched members: Perform required repairs as soon as forms are removed. For a uniform surface finish, contractor shall apply an adhesive grout consisting of a high quality, non-shrink sand grout. Remove the water from the mixture and replace it with a latex or epoxy bonding agent. Apply coating on a moistened concrete surface and spray uniformly with an acoustic hopper. The Contractor shall provide a test area to be approved by the Engineer to ensure appearance, adhesion, and durability. Repaired and patched areas may require refinishing the entire structural element as described above and as determined by the Engineer in order to achieve a uniform appearance free of color variations. This additional work if required will be subsidiary.

For a uniform surface finish, all concrete elements receiving an off-the-form finish shall also receive a rub finish. This work shall be done as directed by the Engineer as soon as practical following form removal. This work shall be considered subsidiary to Item 427, "Surface Finishes for Concrete".

Refurbish or replace forms if they discolor or cause a variation from the finish established in the mock-up as determined by the Engineer.

Avoid "pinking" of concrete due to reddening of young overlaid plywood. Treat plywood or use a release agent that prevents pinking. If pinking occurs, clean the green concrete surface as soon as the forms are removed. If pinking is still not removed by washing or does not disappear with time, clean the plywood after submitting a written cleaning procedure approved by the Engineer.

Use similar curing times for a particular type of element (e.g. bent, rail), if possible. Do not allow more than 3 days difference in curing duration for form curing, wet mat curing, or a combination of the two.

Once form removal commences on a particular continuous surface, continue work uninterrupted until all forms are removed to prevent discoloration due to differing form-curing times.

HIGHWAY: IH 35

Contractor shall provide a system such as VisqueenTM plastic sheeting for covering and/or protecting bent and abutment concrete from staining until the slab is placed. Sufficient protection should remain after slab placement at the base of bent columns until vegetation is sufficiently established to prevent staining. This system shall be reviewed and approved by the Engineer prior to bridge construction. If for any reason the approved system fails to perform properly, the system will be rejected and a new system must be approved by the Engineer. Work and materials necessary for protecting concrete shall be considered subsidiary to Item 420, "Concrete Structures" and Item 427, "Surface Finishes for Concrete".

Drip pans shall be removed from visible sight as directed by the Engineer after the bridge deck(s) are completed.

Special Surface Finishes listed above will not be paid directly and are considered subsidiary to the various items.

ITEMS 432 & 529: RIPRAP & CONCRETE CURB, GUTTER & COMBINED CURB AND GUTTER

Blast clean all concrete curb, curb and gutter and riprap in accordance with Item 427 as part of the final clean-up and acceptance process. Other methods may be approved to obtain a uniform clean appearance, free of marks, stains, etc., at the time of final acceptance. This shall be subsidiary to Item 432, "Riprap" and Item 529, "Concrete Curb, Gutter and Combined Curb and Gutter".

ITEM 432: RIPRAP

Locations and quantities may be varied as directed by the Engineer to accommodate field conditions.

Weep holes and granular material, are required and locations shall be determined prior to placement of concrete riprap at bridge abutments.

ITEM 440: REINFORCING STEEL

Uncoated steel reinforcement storage on the ground shall be supported by nominal dimension 4 inch by 4 inch solid lumber or round posts spaced closely where any portion of the steel does not touch the ground. Larger timber is acceptable. As an alternate, new or used sound wooden pallets may be used. Broken supports shall be replaced.

Prior to concrete placement, all dried mortar and splashed concrete, in addition to any other contaminates, shall be removed from all steel reinforcement.

ITEMS 450: RAILING

The elliptical tube shall be used for all T401 & C402 railing. All metal railing elements shall have a Galvanized Steel Exposed metal finish.

White Hydraulic cement will be required for all bridge rail, traffic rail, and permanent barrier. In lieu of white cement, opaque sealer coating with anti-graffiti coating is allowed following special application requirements under Item 427.

Blast clean all railing and barrier wall in accordance with Item 427 prior to final acceptance of the project. This work will be considered subsidiary to Item 450, "Railing" and Item 514, "Permanent Concrete Traffic Barrier".

Insure slip formed barrier and cast-in-place barrier will be uniform in color and texture.

Use an approved UV disappearing curing compound rather than the standard approved curing compounds for railings receiving opaque sealer coating finish.

ITEMS 452, 496 AND 497: REMOVING RAILING, REMOVING STRUCTURES, & SALE OF SALVAGEABLE MATERIAL

For this contract, structural steel railing and posts are to be removed and are to become the property of the contractor in accordance with Item 452, "Removing Railing", Item 496, "Removing Structures" and Item 497, "Sale of Salvageable Material".

ITEM 462: CONCRETE BOX CULVERTS AND STORM DRAINS

Joints between pre-cast concrete box culvert shall be pre-formed flexible joint sealants as described in Item 464.3C, "Jointing".

Reshape embankment side slopes, provide embankment as required, and add topsoil to achieve a smooth uniform finish around the installation of the safety end treatments and culvert extensions as directed by the Engineer. Finishing and reshaping work will be subsidiary to Items 132, "Embankment", Item 162, "Sodding for Erosion Control" and Item 467, "Safety End Treatment".

Any sediment controls removed by the Contractor at culverts or adjoining channels must be re-installed before the next rainfall event or by the end of day, as approved in advance by the Engineer.

For this contract provide pre-cast concrete box culverts.

Provide and install gunnite/shotcrete on the ditch bottom and side slopes between temporary terminations between old and new culverts. Gunnite/shotcrete shall be placed to the height of the

HIGHWAY: IH 35

largest culvert on the ditch side slopes; and to a limit 10 feet outside the location of BMPs along the ditch bottom. Cement stabilized sand may be substituted for gunnite/shotcrete, in areas where installation works and at the option of TxDOT.

ITEM 464: REINFORCED CONCRETE PIPE

Install all reinforced concrete pipe on this project using pre-formed flexible joint sealant. See Item 400 for RCP bedding requirements.

ITEM 465: MANHOLES AND INLETS

The Manholes and Inlets used on this project and paid for under Item 465-2003, Inlet (Compl) (Ty H) and Item 465-2005, Manh (Compl) Ty H shall be precast, as indicated by the standards listed on the Index of Sheets.

ITEM 496: REMOVING STRUCTURES

Submit to the Engineer for approval a detailed plan for bridge removal including methods, equipment and sequencing.

Plans of the existing bridges are available at the office of the Area Engineer for the purpose of making copies for the prospective bidders.

All pipe culverts removed under this contract shall become the property of the contractor to be disposed of off the right of way unless otherwise directed by Engineer.

Remove and salvage all dedication medallions and/ or plaques found attached to any existing bridge structure being replaced. Each medallion and plaque shall be cleaned free of all concrete and foreign matter, and shall be turned over to the Engineer in a timely manner. All work performed in the removal, salvaging and cleaning of the medallions and plaques will not be paid for directly but shall be subsidiary to the various bid items.

The Engineer shall collect the medallions and plaques, tagging each of them with its respective highway number, name of creek or stream crossing and date of removal, and send them to the Waco District Environmental Coordinator for further handling.

Steel bridge rail to be removed may contain lead paint. Submit a proposed demolition plan for approval by the Engineer at least 21 days prior to the desired demolition date. Demolition plan should limit disturbing where lead paint is located, when possible.

The Contractor shall comply with any notification(s) dates made by TxDOT to the Texas Department of Health, for asbestos abatement and bridge demolitions.

HIGHWAY: IH 35

For painted structural steel installed in the 1980s or earlier, hazardous lead paint is likely to be present. Any quantity of lead in paint including low parts per million concentrations is considered hazardous. Unless TxDOT provides paint test data, the Contractor may assume painted steel to contain lead or is encouraged to field test for lead paint in critical work areas. Steel structures may contain lead paint layers underlying other coating systems. Paint layers may be of varying consistency, color, adherence, thickness and lead composition. To minimize personnel exposure to lead, TxDOT expects that structural steel be unbolted whenever possible, especially for hand and guard rail on bridge structures. Should saw or flame cutting be necessary, TxDOT shall provide a separate Contractor to remove the lead paint prior to cutting. It is required that the Contractor provide marked up bridge drawings or digital pictures (to scale) showing all proposed cut locations. TxDOT will require eight weeks from receipt of the proposed cut location drawings to coordinate and complete lead paint removal with a separate Lead Abatement Contractor. TxDOT will not remove lead paint from any steel member already removed from the bridge. The Contractor is required to provide all necessary traffic control to assist with the lead paint removal process.

ITEM 497: SALE OF SALVAGEABLE MATERIAL

Structural steel railing and beams are to be removed and are to become the property of the contractor. Payment for the salvaged material will be deducted from the Contractor's monthly estimate in accordance with this item.

ITEM 502: BARRICADES, SIGNS AND TRAFFIC HANDLING

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.

A meeting between the contractor and Engineer to discuss upcoming changes in construction phasing and traffic switches is required at least 14 days prior to the phase change. Items to be discussed at this meeting include temporary signing, traffic control, pavement markings, the processes necessary for the phase change and subcontractor scheduling.

At no time shall two consecutive entrance ramps be closed in the same direction or two consecutive exit ramps be closed in the same direction. Also, at no time shall ramp traffic be required to travel more than two miles on the frontage roads, unless otherwise authorized by the Engineer.

Coordinate, at least 5 working days in advance, all lane closures with both the Engineer and the IH-35 Corridor Mobility Coordinator. In addition, the Contractor, in coordination with the Engineer and the IH-35 Mobility Coordinator, will work cooperatively with Contractors on adjoining IH-35 construction segments to insure construction activities effecting traffic flow are scheduled in a

HIGHWAY: IH 35

manner that only one two-mile lane closure is occurring every 10 miles, unless otherwise authorized by the Engineer. No additional compensation will be considered to achieve this requirement throughout the duration of the project.

For lane closures in the vicinity of exit ramps, the maximum device spacing on a tangent along mainlane traffic, shall equal one half of the taper spacing as shown on the TCP Standards for a distance of 1500 feet upstream and 500 feet downstream of the exit ramp. Maximum device spacing for exit ramp delineation shall be 50 feet +/-.

Adjust the location of the construction speed zone throughout the duration of the project as necessary and as approved by the Engineer. The speed zone will only be applicable for the length of roadway section physically being constructed.

All signs, delineators, object markers, and route markers shall be in place prior to opening each phase of construction to traffic. Existing signs may be used and relocated to temporary mounts in this situation when permanent signs cannot be placed and prior approval of the Engineer is given.

When a culvert extension, inlet construction and/or safety end treatment and open excavation, etc. is within 30 feet of a travel lane then delineate these areas as shown on the BC standard sheets. In addition a 4 foot high plastic construction fence shall be required at or around any structure or obstruction that would be a hazard to pedestrians unless otherwise approved by the Engineer. This fence shall be erected in a manner acceptable to the Engineer. Construction fencing will not be paid for separately, but will be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling".

During construction, erect and maintain accurate clearance signs (W12-2 or W12-3), in accordance with the "Texas Manual on Uniform Traffic Control Devices for Streets and Highways", on all underpass structures. The mounting method for the temporary clearance signs is subject to approval of the Engineer. Temporary clearance signs will not be paid for directly but will be considered subsidiary to the various bid items.

Law enforcement assistance will be required for this project and is expected to be required for major traffic control changes and lane closures. Coordinate with local law enforcement and arrange for law enforcement as directed or agreed by the Engineer. These peace officers and vehicles will be paid for by force account. Complete the weekly tracking form provided by the department and submit invoices that agree with the tracking form for payment at the end of each month approved services were provided.

Provide full-time off-duty uniformed certified peace officers in officially marked vehicles with highly visible LED-type light bars as part of traffic control operations unless other agreements are put in place during the progress of the project that addresses this requirement. The peace officers shall be able to show proof of certification by the Texas Commission on Law Enforcement Officer Standards. It is intended that two marked vehicles be utilized for each lane closure, with one

HIGHWAY: IH 35

vehicle positioned near the beginning of the lane taper and the other vehicle proceed moving to position itself to be in advance of the traffic queue to sufficiently warn approach vehicles of slowed or stopped traffic.

Provide uniformed, certified peace officers, with officially marked vehicles with LED-type light bars for traffic control during construction operations at and/or near high volume intersection(s), unless other traffic control measures are approved by the Engineer.

The Contractor Responsible Person (CRP) shall be certified by TEEX, ATSSA, the National Safety Council or other approved organization. Certifications shall be submitted to the Engineer at the pre-construction meeting.

The Contractor Responsible Person (CRP) shall inspect and insure any deficiencies are corrected each and every day throughout the duration of this contract. Any misaligned or damaged traffic control devices shall be repaired as soon as practical after deficiency is discovered.

In addition to providing a Contractor's Responsible Person and a phone number for emergency contact, have an employee(s) available to respond on the project for emergencies and for taking corrective measures within 30 minutes, including removal of debris in roadway such as tire treads or dead animals. The work and materials necessary for these emergency responses to address immediate safety issues will be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling".

Place advisory speed plates (CW13-1) in accordance with the TMUTCD and as directed by the Engineer. Signs (CW13-1) shall not be used with any signs other than a warning sign, nor shall it be used alone. Sign mounting height shall be seven (7) feet minimum to the bottom of the speed plate.

Any work being done above travel lanes on the overhead sign bridge will require the lanes to be closed for traffic safety.

The **shadow vehicle** with truck mounted attenuator (TMA) will not be optional but will be required as shown on the appropriate traffic control plan sheets. Truck mounted attenuators shall meet the requirements of the Compliant Work Zone Traffic Control Device List. The use of truck mounted attenuators shall not be paid for directly, but shall be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling".

Remove all material stockpiles, equipment left overnight or any obstruction within 30 feet of a travel way or clearly mark by warning lights and barricades, as approved by the Engineer.

Unless otherwise shown on plans, where there is excavation adjacent to the pavement edge, provide adequate warning signs, vertical panels, drums and reflectors at the pavement edge, as directed by

HIGHWAY: IH 35

the Engineer. Treat pavement drop-offs created by ACP operations in a similar manner and in accordance with the details shown in the plans.

When excavation is required next to a travel lane carrying traffic and widening is not completed by the end of the day's operation, and unless otherwise permitted in the plans, place sufficient backfill against the edge of the travel lane in order to provide a 3:1 slope. The backfill used shall be durable crushed stone type of flexible base or other materials approved by the Engineer. When work is resumed on this excavated area this backfill material shall be incorporated into the road work or disposed of as approved by the Engineer. Materials and labor for this work will not be paid for directly but will be subsidiary to the various bid items.

Prior to beginning work, the Contractor and Engineer shall agree on the allowable length of lane closure.

Place Type III barricades and road closed signs as shown on BC standard sheets across the closed roadway or the new location at each road, street and/or closed bridge and along the closed roadway or new location at 1/2 mile intervals.

Equip all construction equipment involved in roadway work with a permanently mounted warning light with amber lens as approved by the Engineer.

When operations require a sidewalk closure, use traffic control devices controlling pedestrian flows as necessary to route pedestrians around the closed sidewalk.

All nighttime operations including planing, underseal, HMAC placement, concrete paving, etc. must be adequately lighted using balloon-type lights (GloBug by Multiquip, Sirocco by Air Star, or equivalent).

For nighttime flagging operations, each flagger station shall be lighted with portable light plants using balloon-type fixtures approved by the Engineer. The flagger shall wear Class 3 reflective garments. Lights shall be positioned as to not blind motorists.

Large signs knocked down shall be removed to the ROW line or off the ROW, upon discovery, and shall be repaired and replaced within 14 days.

Damaged "Stop", "Yield", "Do Not Enter", "One Way", and "Wrong Way" signs shall be replaced within two hours of discovery or notification.

ITEM 504: FACILITIES FOR FIELD OFFICE AND LABORATORY

For this project, furnish one field office TYPE E structure. Provide at least 600 sq. ft. of gross floor area in rooms 8 ft. high. Partition the floor area into at least 3 interconnected rooms with doors, 2

HIGHWAY: IH 35

exterior doors, and at least 2 windows in each room. One room shall be suitable for holding meetings.

The field office structure(s) shall be for the sole use of TXDOT employees unless otherwise directed by the Engineer. Any hazardous materials stored or utilized in the structures shall be with the approval of the Engineer; any unauthorized hazardous materials in the structure when it arrives at the site shall be removed by the contractor or his agents before work begins and TXDOT employees utilize the facility.

The field office structure shall be furnished prior to the beginning of work. In addition to the other requirements, a minimum of 4 desks, 4 desk chairs, 3 file cabinets, 1 meeting tables with four chairs each, and 2 equipment storage closets shall be provided. Each closet shall provide a minimum of 3 feet by 3 feet of floor space or equivalent and shall have provisions for locking securely. Provide locks and keys for exterior doors.

The parking lot shall be a minimum of 4500 square feet with an all-weather surface and enclosed by a chain link fence with at least one vehicle gate. The Contractor shall provide a plan layout showing parking area and location of field office, gate(s), etc, for approval by the Engineer prior to set-up.

The furnishings shall include the following electronic equipment and appliances:

A telephone shall be installed in the field office at the Contractor's expense. One phone line and one data line shall be provided for the telephone. The monthly charges shall be the responsibility of the Contractor. This will not be paid directly, but will be considered subsidiary to various bid items.

Provide wireless, high-speed Internet connection and necessary components capable of servicing at least six computers (computers provided by the Department). This will not be paid directly, but will be considered subsidiary to various bid items.

Provide a high speed internet connection or broadband with a minimum speed of 20 Mbps download, unless otherwise approved.

Furnish water fountain or bottled water fountain able to supply cold water. Bottled water shall be provided by the contractor.

Provide a structure (beam house) for use as a curing location, tank room and test area for concrete beams and cylinders made for this project. The contractor must supply all of the curing tanks and adequate space for storage. The structure shall include a water faucet.

Furnish for the Engineer's exclusive use a laboratory meeting the specified Type D structure. The building shall be located at the contractor's hot mix plant site and be separate from the contractor's laboratory.

HIGHWAY: IH 35

The use of space heaters for the purpose of heating the structure is unacceptable. The building must be structurally sound and pose no safety hazards. The laboratory must meet all the above requirements within two (2) weeks prior to beginning of work.

Clean the field office once a week and stock with toilet paper, paper towels, and hand soap throughout the duration of the project.

ITEM 508: CONSTRUCTING DETOURS

Any widening that is not protected by a positive barrier and any drop-offs greater than 2 inches, must be sloped at no steeper than a 3:1 slope at the end of each work day.

Installation and removal of all temporary drainage structures, to include pipes, manholes, inlets, headwalls, and end treatments, associated with traffic control phasing shall be considered subsidiary to Item 508, "Constructing Detours".

When no longer in service, remove all detours by milling. The resulting RAP shall be incorporated into the project as allowed elsewhere in these Notes or stockpiled as described in the Item 305 notes. This work shall be subsidiary to Item 508, "Constructing Detours".

ITEM 512: PORTABLE CONCRETE TRAFFIC BARRIER

Department-furnished concrete traffic barrier units are at the TxDOT yard in Bellmead or other locations within 50 miles of the project as directed by the Engineer. Barrier provided by TxDOT may be single slope or F-shape barrier. Single slope and F-shape barrier will be paid by the single slope barrier item. The contractor will furnish equipment necessary to load the units at the stockpile locations.

Provide necessary hardware for connecting the portable concrete traffic barrier.

Upon completion of the project, all barrier will remain property of the Department and stockpiled at a TxDOT yard near the project location or other locations within 50 miles of the project as directed by the Engineer. The Contractor will furnish equipment necessary to load and unload the units at the stockpile locations. When stockpiling, separate damaged barriers from salvaged barriers as directed by the Engineer.

Portable concrete traffic barrier that is determined unusable by the Engineer shall become property of contractor and shall not be returned to TxDOT stockpile location. This work will be considered subsidiary to this Item.

All hardware shall become the property of the Department and shall be returned to the TxDOT Maintenance yard in Bellmead or other locations within 50 miles of the project as directed by the Engineer. Place hardware in 55-gallon barrels with holes in bottom to allow drainage.

Delineate barriers by a minimum of 2 CLASS A reflectors per section. Reflectors mounted on the top and the traffic side of the barrier shall match the color of the nearest edge line. These reflectors will not be paid for directly, but will be considered subsidiary to the various bid items.

ITEM 529: CONCRETE CURB, GUTTER AND COMBINED CURB AND GUTTER

Attach machine laid curb to pavement with a two compound epoxy adhesive. Epoxy shall be applied to that area of pavement under the machine laid curb and must be a minimum of 6 inches in width and 0.2 inches (20 mils) thick. The epoxy shall be applied uniformly by some method approved by the Engineer.

ITEM 540: METAL BEAM GUARD FENCE

In the event a guard post falls on top of an inlet, cut the post to the proper length and bolt it to the inlet top as shown on the plans.

Steel posts may be driven with approval from the Engineer.

The block-outs used on the Metal Beam Guard Fence will be made of a composite material from a source on the Department approved list of suppliers. The use of wooden block-outs will not be allowed.

ITEMS 542 & 544: REMOVING METAL BEAM GUARD FENCE & GUARDRAIL END TREATMENTS

W-Beam elements, steel posts and composite material blockouts deemed salvageable by the Engineer will remain the property of the Department and shall be dismantled and returned to a TxDOT Maintenance yard at Bellmead on US 84. All other guard fence, and SGT's deemed non-salvageable will become the property of the Contractor.

ITEM 544: GUARDRAIL END TREATMENTS

The block-outs used on the Single Guardrail Terminals will be made of a composite material from a source on the Department approved list of suppliers. The use of wooden block-outs will not be allowed.

ITEM 545: GUARDRAIL END TREATMENTS

Object markers (OM-3L and OM-3R) as shown on the standard "BC(7)-13" and "D&OM(VIA)-04" shall be furnished by the Contractor for all crash cushion attenuators and shall be subsidiary to this Item.

HIGHWAY: IH 35

Upon completion of the project, all crash cushion attenuators shall be returned to the TxDOT yard in Bellmead or other locations within 50 miles of the project as directed by the Engineer. The Contractor will furnish equipment necessary to load and unload the units at the stockpile locations. Stockpile the units as directed by the Engineer.

All hardware shall become the property of the Department and shall be returned to the TxDOT Maintenance yard in Bellmead or other locations within 50 miles of the project as directed by the Engineer. Place hardware in a separate crate for each crash cushion attenuator, as directed by the Engineer.

Crash cushion attenuators that are not re-usable shall become property of Contractor for disposal. The Engineer will make the determination of what is re-usable or not re-usable.

Replace, at the Contractor's own expense, units or hardware that are damaged by the Contractor's own operations.

ITEM 556: PIPE UNDERDRAINS

Final location of underdrains to be determined by the Engineer.

ITEM 585: RIDE QUALITY FOR PAVEMENT SURFACES

The ride quality for the pavement surface shall be surface test TYPE B along the finished riding surface of all travel lanes as defined below:

Frontage Road and Ramp Concrete Pavement Surfaces - Schedule 2

All other roads (cross streets) shall be Surface Test Type A

The contractor shall take care to ensure satisfactory profile results in the intermediate paving layers (mixture) to eliminate corrective action for excessive deviations in the final surface layers.

Milling will not be allowed as a corrective action for excessive deviations in the surface layer of hot mix.

ITEM 610: ROADWAY ILLUMINATION ASSEMBLIES

The contractor's attention is called to the fact that conduit for illumination or other purposes may be required in the construction of the bridge slabs, columns, caps or other parts of the bridge structure(s). Refer to the bridge and illumination layouts for details.

HIGHWAY: IH 35

General

Roadway Illumination Poles do not need to be pre-qualified when TxDOT RIP-11 (Roadway Illumination Pole - 2011) standard sheets are included in the plan set. Poles fabricated according to RIP-11 require no shop drawings.

Construction

Perform work in accordance with the details shown on the plans, and the requirements of Item 610 and applicable Special Provisions to Item 610.

Fabricate steel roadway illumination poles in accordance with TxDOT standards RIP (Roadway Illumination Pole). Poles fabricated according to RIP-11 standard sheets require no shop drawings.

Alternate designs to RIP-11 or the use of aluminum to fabricate poles will require the submission of shop drawings electronically.

For instructions on submitting shop drawings electronically go to: http://www.dot.state.tx.us/business/contractors_consultants/bridge/shop_drawings.htm
Click on "Electronic Submission of Shop Drawings"
File is titled: Guide to Electronic Shop Drawing Submittal.

Limitations on Use of the RIP-11 Standard

The Roadway Illumination Pole (RIP-11) standard details were developed for installations in locations where the 3-second gust basic maximum wind speed is 110 mph, and where the elevation of the base of the pole is less than (i.e. not more than) 25' above the elevation of surrounding terrain, in accordance with the "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals," 4th Edition (2001) (AASHTO Design Specifications). For poles to be installed in regions where the maximum basic wind speed exceeds 110 mph or to be mounted more than 25' above the surrounding terrain, the contractor shall provide poles meeting the following requirements:

- A. Submittals. Following the electronic shop drawing submittal process (see ftp://ftp.dot.state.tx.us/pub/txdot-info/library/pubs/bus/bridge/e_submit_guide.pdf), the contractor shall submit to the Engineer, for approval, fabrication drawings and calculations for the poles. The drawings and calculations shall be sealed by a Texas registered or licensed professional engineer (P.E.).
- B. Luminaire Structural Support Requirements. Lighting poles, arms, and anchor bolt assemblies shall have a 25 year design life to safely resist dead loads, ice loads and the required basic wind speeds at the location of installation in accordance with the current edition of the AASHTO Design Specifications. For transformer base poles, the fabricator shall include transformer base and connecting hardware in calculations and shop drawing submittals. All transformer bases shall have been structurally tested to resist the theoretical plastic moment capacity of the pole. Certification of the plastic moment load test and FHWA breakaway requirement test of the model of base being furnished shall be submitted

with the shop drawings. Shop drawings shall show breakaway base model number, and manufacturer's name and logo. Manufacturer's shop drawings shall include the ASTM designations for all materials to be used.

ITEM 618: CONDUIT

The locations of conduit as shown are for diagrammatic purposes only and may be varied to meet local conditions, subject to approval.

The contractor's attention is called to the fact that conduit for illumination or other purposes may be required in the construction of the permanent concrete traffic barriers, bridge slabs, columns, caps or other parts of the bridge structure(s). Refer to the bridge and illumination layouts for details. Place red caution tape 12 inches above conduit in all trenches.

When back filling bore pits, ensure that the conduit does not become damaged during installation or due to any settling of the back fill material. Compact select back fill in three equal lifts to the bottom of the conduit or if sand is used, place to a point 2 inches above the conduit. Back fill density shall be equal to the existing soil. Be careful to prevent any material from entering the conduit.

Temporarily cap all exposed conduit at the end of each day.

Back fill all open trenches before the end of the workday and do not leave any trench open overnight.

Casing will be incidental to the conduit if it is required for placing a bored conduit.

Remove all abandoned conductor and conduit to 1 foot below ground level. This work will not be paid for directly, but will be subsidiary to the pertinent Items.

Conduit construction underneath freeway on ramps and exit ramps is to coincide with ramp construction. Refer to TCP phasing for appropriate time to install conduit underneath ramps. Conduit to be trenched prior to ramp construction and be placed a minimum 36" below grade.

Do not use cast iron junction boxes in concrete traffic barriers and single slope traffic barriers. Use polymer concrete junction boxes instead of the cast iron junction boxes shown on standard sheets CTBI (3), CTBI (4), AND SSCB (4). Mount the junction boxes flush (+ 0", - 1/2") with concrete surface of concrete barrier.

Use materials from prequalified material producers list as shown on the Texas Department of Transportation (TxDOT) materials producers list. Category is "Roadway Illumination and Electrical Supplies."

HIGHWAY: IH 35

The polymer concrete barrier box will not be paid for separately, but will be considered subsidiary to Item 618, "Conduit".

ITEM 620: ELECTRICAL CONDUCTORS

Place the communications and/or coaxial cables in a separate conduit from the electrical conductors with 120, 240, or 480 volts.

Any damage to any wire or any cable is cause for immediate rejection of the entire cable being tested. Remove and replace the entire cable at the Contractor's expense.

Electrical certification for this project will be as per Item 7 of the current Texas Standard Specifications and any special provisions to Item 7.

For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holder as shown on the Texas Department of Transportation (TxDOT) materials producers list. Category is "Roadway Illumination and Electrical Supplies". Fuse holder is shown on list under Item 610, "Roadway Illumination Assemblies" & Item 620, "Electrical Cables".

Provide 10 amp time delay fuses.

ITEM 624: GROUND BOXES

Ground box locations shown on the plans are approximate locations. Actual locations are as directed.

Place concrete aprons around all ground boxes installed in sodded areas or as directed/approved by the Engineer.

Complete installation of ground boxes within 48 hours after beginning construction from that ground box.

ITEM 628: ELECTRICAL SERVICES

Before the UL508-A shop begins to fabricate, contact the Electric Utility Company to make all necessary arrangements to provide electrical service shown on the plans in accordance with ARTICLE 628.5 and the Electrical Details, except that TxDOT will make application to the Electric Utility Company for service (See note below).

NOTE:

Before fabricating the electrical service, contact the Waco District Traffic Signal Service Supervisor (Phone (254) 867-2807), to make application (billing arrangements) for service with the Electric Utility Company.

Furnish and install a lock on all electrical services. The lock is to be a Master-Lock number 175LH (four digit combination).

Pedestal foundation will be modified from ED 8-(03) to extend 2 feet above and 2 feet below the ground.

ITEM 636 ALUMINUM SIGNS

Verify all dimensions at the actual proposed sign location in order to maintain dimensions as shown on the Sign Mounting Details.

The sign locations as shown on the plans are for diagrammatic purposes and show the approximate location of the signs. Stake the location of the new signs to be approved.

For freeway sections, keep the advance guide sign or the exit direction sign for an exit in place at all times, unless written approval is given. Replace any signs that have been removed before the end of the work day, unless written approval is given.

ITEM 644: SMALL ROADSIDE SIGN SUPPORTS AND ASSEMBLIES

Measure all dimensions in the field at the actual locations.

Place signs in accordance with lateral and vertical clearances as shown in Sign Mounting Details for Small Roadside Signs and in the Sign Crew Field Book.

Sign placement heights are a minimum of seven (7) feet and a maximum of seven feet six inches (7ft.-6in.) to the bottom of the sign or plaque. Mounting heights are measured as follows:

1. When the base of the sign is below the edge of the travel lane, the sign height is measured from the edge of the travel lane to the bottom of the sign.
2. When the base of the sign is above the edge of the travel lane, the sign height is measured from natural ground to the bottom of the sign.
3. When a supplemental plaque or secondary sign is used, the sign height is measured to the bottom of the supplemental plaque or secondary sign.
4. When a sign has two or more posts, all posts must be a minimum height above natural ground to the bottom of the sign. The sign also must be a minimum height above the edge of the travel lane.

Leave the existing sign assemblies in place until the proposed foundation, post and sign are in installed, and then remove the old sign assemblies.

Do not leave any sign foundation holes open overnight. Ensure all holes drilled are at least the minimum required depth with no loose material remaining in the hole.

Stake proposed sign locations and receive approval before installation of sign foundations. Determine each post length after the stub has been placed.

For sign assemblies using the "TEXAS UNIVERSAL TRIANGULAR SLIPBASE SYSTEM MOUNTS" furnish and install a #4 rebar at least 7 inches long through the 3/4-inch diameter hole in the stub to prevent the stub from rotating in the foundation as detailed on the Sign Mounting Details for Small Roadside Signs.

Furnish and install a 5/16-inch x 1 1/2-inch double roll pin between the slip base casting and the sign support post to prevent the sign assembly from rotating on the stub as detailed on the Sign Mounting Details for Small Roadside Signs.

Concrete for sign foundations is designated as "MISCELLANEOUS CONCRETE". It will be accepted based on a minimum 7-day flexural strength of 280 PSI. The slump is to be no greater than 4 inches.

Use trowel to finish all foundations for a neat appearance. Remove all excess material.

Expanded foam foundations are not permitted.

Tighten the slip base and the locking collar as shown on standard Sign Mounting Details for Small Signs. Do not tighten bolts greater than 80 foot pounds except to clean threads. Over-torque bolts to clean the threads of any galvanization that might cause an incorrect torque reading. Then loosen the nuts and tighten to the required torque of 80 foot pounds. Tighten bolts incrementally in a sequential manner such that the load is applied uniformly to the locking collar.

For splices in small signs, use bolts as shown on details A and B on the Sign Mounting Details for Small Roadside Signs.

Cut the bottom of all posts level.

For sign types which design details are not shown on these plans, fabricate according to the "STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS".

Removed material that is deemed salvageable (signs and posts) will be the property of TxDOT. Deliver salvageable material to the TxDOT Maintenance Office. Remove unsalvageable material.

Existing signs remain in place until the proposed sign post assembly is completed and ready for sign installation.

Maintain existing roadside signs within this project's limits during this contract. In order to accommodate the grading or other operations, relocate these signs and assemblies onto temporary supports in accordance with the TMUTCD and as directed by the Engineer. This work will be paid

HIGHWAY: IH 35

for as “Relocate Small Roadside Sign Supports and Assemblies”. Moving the temporary supports for accommodating work and relocating for subsequent phases will not be paid for directly. The existing sign assemblies requiring relocation to a temporary support must be approved by the Engineer.

ITEM 647: LARGE ROADSIDE SIGN ASSEMBLIES

Stake proposed sign locations and receive approval before installation of sign foundations. Determine each post length after the stub has been placed. Ensure that sign installations fully comply with desirable offset requirements from mainlane pavement edge as shown on Standard sheet.

Concrete for sign foundations is designated as “Miscellaneous Concrete.” It will be accepted based on a minimum 7-day flexural strength of 280 PSI. The slump is to be no greater than 4 inches.

ITEM 650: OVERHEAD SIGN SUPPORTS

Lengths of trusses, tower heights and posts shown in the summaries are for bidding purposes, only. Verify these dimensions upon substantial completion of the subgrade section at the location shown on the plans or as relocated by the Engineer. Notify the Engineer, prior to shop drawing production, concerning any discrepancies found, which may reduce established ground clearance requirements.

Provide information for alternate designs conforming to the requirements of Item 5, “Control of the Work.” Furnish shop drawings for this item indicating the weight of structure and all equipment supported by the structure to verify the design of the structure.

ITEM 658: DELINEATOR AND OBJECT MARKER ASSEMBLIES

The delineator assembly type C Class A (D-SW) and (D-SY) are to be single delineators (Class I) attached to a flat, plastic bracket to facilitate the mounting of the delineator on top of the bridge rail at the locations shown on the plans. Submit a sample for approval before ordering materials.

For all delineators and object markers, furnish a tubular post minimum of 2 inches diameter with a flat surface at least 3 inches wide and 15 inches long for delineator mounting meeting the requirements of DMS-4400. Use the Wedge Anchor Plastic System for ground mounted delineators set in concrete as shown on the D&OM (1)-10 standard. Submit one assembly or a material cut sheet to the Engineer for approval prior to installation.

ITEM 662: WORK ZONE PAVEMENT MARKINGS

Lane lines for transitions and detours will consist of raised pavement markers as shown for solid lines on the Barricade and Construction Standards Work Zone Pavement Marking Details.

Paint and beads may be used for non-removable pavement markings.

ITEM 666: REFLECTORIZED PAVEMENT MARKINGS

Make all stop lines twenty-four (24) inches wide.

Remove markings at own expense that are not in alignment or sequence, as shown on the standard sheets or as stated in the specifications, or do not meet the specification and/or approval of the Project Manager. Removal shall be in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers", except for measurement and payment.

ITEM 668: PREFABRICATED PAVEMENT MARKINGS

Use Type C prefabricated pavement markings (TxDOT Spec DMS-8240) for all Word, Arrow and RR Crossing markings.

Lanelines and edgelines under this Item shall be Type B prefabricated markings for use on the mainlanes as a work zone pavement marking on concrete pavement. Removal of this Item will be subsidiary.

ITEM 672: RAISED PAVEMENT MARKINGS

Before the application of pavement markers, sufficiently clean pavement surfaces to remove all forms of contamination and loose materials, in accordance with Item 678, "Pavement Surface Preparation for Markings". This work will not be paid for directly, but will be subsidiary to Item 672, "Raised Pavement Markers".

Remove at own expense markings placed that are not in alignment or sequence, as shown on the standard sheets or as stated in the specifications, or do not meet the specification and/or approval of the Project Manager. Removal shall be in accordance with Item 677, "Eliminating Existing Pavement Markings and Markers", except for measurement and payment.

Mount all raised pavement markers placed on concrete surfaces using an epoxy adhesive, in accordance with Article 672.3.

ITEM 730: ROADSIDE MOWING

Throughout the course of the project, when in the opinion of the Engineer, tall grass and weeds affect the safety of the public by restricting visibility, interfere with normal traffic flow or appear unsightly, the contractor shall be required to mow same. Final cleanup will include mowing of grass and weeds. This work will be paid by the cycle.

HIGHWAY: IH 35

Mowing cycles shall coincide with adjoining construction projects and adjoining segments maintained by contacted maintenance. The Contractor shall plan and schedule to perform the full width mowing cycle work under this Item as follows:

URBAN AREAS

- At least 3 times per year
- Mid May to mid June, August and late October to late November

The Engineer shall approve the actual beginning time of work for each cycle of work performed. The Contractor shall provide the Engineer two weeks advance notice before beginning actual work for each cycle.

ITEM 738: CLEANING AND SWEEPING HIGHWAYS

For sweeping operations, a vacuum pickup type broom shall be utilized.

Regular sweeping of dirt or mud due to construction operations from the travel ways will not be paid for directly but will be subsidiary to the various bid items.

ITEM 1122: TEMPORARY EROSION, SEDIMENTATION AND ENVIRONMENTAL CONTROLS

No soil disturbing activities shall begin on any section of TxDOT ROW without adequate sedimentation controls first being installed and functioning at adjacent drainage outfalls. Begin and continuously prosecute the repairs, additions and maintenance of erosion and sedimentation control devices within seven days after the Contractor receives each Form 2118, Field Inspection and Maintenance Report, from the Engineer. Failure of the Contractor to fulfill either of the above requirements places TxDOT in potential non-compliance with permit requirements and may result in withholding estimates or stopping work or both until all environmental permit requirements are fulfilled.

Furnish one SW3P permit posting sign and sign support as detailed in the plans. Install this sign in a location selected by the Engineer. The sign and support should be removed upon completion of the project and is the property of the Contractor. The purchase of the sign and support, installation, relocation(s) if determined necessary by the Engineer and removal at project end shall be subsidiary to Item 1122, "Temporary Erosion, Sedimentation and Environmental Controls".

The SW3P for this contract shall consist of using, as directed by the Engineer, any erosion or water pollution control measure deemed necessary by the Engineer. Any erosion or water pollution control measure deemed necessary by the engineer shall be implemented by the Contractor as prescribed by this item and in accordance with the applicable specification. Payment for erosion control measures for which applicable pay items are not included in the contract shall be made in accordance with article 9.5, "Force Account."

ITEM 3268: DENSE-GRADED HOT-MIX ASPHALT

The Contractor may request approval from TxDOT to clean equipment located on TxDOT ROW which is engaged in asphalt work such as trucks, lay down machines, and distributors. TxDOT may allow cleaning of asphalt equipment on TxDOT ROW only when all of the following conditions are met on a continuous basis:

1. Cleanup activities must take place no closer than 300 feet from an off ROW drainage discharge.
2. No diesel or fuel is used for cleaning.
3. The names of all cleaning agents have been previously submitted to TxDOT and the Contractor has submitted both a Spill Prevention and Cleanup Plan for the cleaning chemicals being used.
4. All excess cleaning liquid must be captured on plastic or tarps and disposed properly off ROW.
5. Excess asphaltic products originally planned to be used for road construction but deposited along the roadway edge due to having too much material, or due to equipment start/stops and minor equipment upsets shall be properly removed off ROW or to a location approved by TxDOT within 48 hours.

The contractor shall provide a ticket writer during hot mix operations.

RAP will be allowed in all types of hot-mix. The RAP can be obtained from the asphalt pavement on this project. RAP shall not contain siliceous aggregates as verified by the Contractor and approved by the Engineer.

RAP from Contractor-owned sources may be used if the RAP is fractionated. The coarse fraction of contractor owned RAP will not be allowed if it consists primarily of siliceous aggregates.

Hydrated lime shall be added to the hot-mix asphalt as an additive to improve quality of the mixture. The lime shall be added at a rate of 1.0% by weight of the total aggregate. The lime shall meet the requirements of TYPE A, hydrated lime, or TYPE B, commercial lime slurry, that meets the requirements of DMS-6350, "Lime and Lime Slurry". The lime shall be added to the fine aggregate, pug mill mixed and stockpiled a minimum of 24 hours prior to introduction to mixing plant. Other methods of adding lime that produce comparable results and that are acceptable to the Engineer may be considered. Lime shall not be paid for directly, but will be considered as subsidiary to various bid items.

Provide methods and proposed documentation acceptable to the Engineer before beginning production that verifies the addition of lime as required above in the various mixes. Necessary equipment and additions to the plant to document and verify lime quantity in the mix will be subsidiary to the HMAC items.

Evaluate the mixture proposed for use for moisture susceptibility in the mixture design and production stages by test method TEX-530-C, unless otherwise directed by the Engineer.

HIGHWAY: IH 35

Maximum stripping of 0% is required. If more than 0% stripping occurs, additional anti-stripping agent may be required.

The placement pay factors for shoulders placed separately from the travel lanes, shall be based on in-place air void determinations.

For this contract, provide a continuous flow of material to the paver by means of a self-propelled MATERIAL TRANSFER VEHICLE (MTV). The (MTV) shall consist of a mobile hopper with a sufficient storage capacity and conveyor that will provide a non-stop placement of the hot-mix asphalt pavement for all courses on the traffic lanes, ramps and shoulders, including frontage roads. The MTV shall have a system of augers or other approved systems to remix the mixture during the transfer process. The Engineer shall approve the MTV before use. This is required to minimize segregation and improve the ride quality.

If Contractor elects to use the Pave-IR system, an MTV is not required.

Utilize a paver ski or mobile string line at least 40 ft. long during placement of all hot mix placed with an asphalt paver unless otherwise approved by the Engineer.

Any Truck Bed Releasing Agent shall be approved by the Engineer.

For hot-mix overlay tie-ins to existing hot-mix pavement, provide a butt joint by milling a 2-in. to 0-in. taper over a minimum of 100 feet. This work will not be paid, but shall be considered subsidiary to the various bid items.

For tests specified by the Engineer, enter testing data in Department-provided electronic testing template spreadsheets. Submit electronically to the Engineer at the interval directed by the Engineer.

Target laboratory-molded density shall be 97.0%, if the Texas Gyrotory Compactor is used for design and production control.

ITEM 5997: VEHICLE REMOVAL

Disabled vehicles interfering with traffic flow shall be removed in accordance with this Item. Direct instruction from law enforcement personnel for vehicle removal shall take precedence over this Specification.

ITEM 6473: MULTIPOLYMER PAVEMENT MARKINGS

Remove markings at own expense that are not in alignment or sequence, as shown on the standard sheets or as stated in the specifications, or do not meet the specification and/or approval of the Project Manager. Removal shall be in accordance with Item 677, "Eliminating Existing Pavement

Markings and Markers”, except for measurement and payment.

For long line markings, provide glass beads that meet the requirements of Department Materials Specification D-9-8920, Glass Traffic Beads; however, the gradation and application will meet the following as a minimum:

- A. Beads will be applied using a double drop application process. The first drop will be Type III or High Performance Type III beads applied at a minimum of 6 LBS/100 SF of pavement marking material.
- B. Follow immediately with Type II beads applied at a minimum rate of 8 LBS/100 SF of pavement marking material.

ITEM 6834: PORTABLE CHANGEABLE MESSAGE SIGN

This project shall require “full matrix” type portable changeable message signs.

Ensure that the Contractor’s Responsible Person for traffic control can revise messages within 30 minutes of notification.

Furnish 2 portable changeable message signs for the duration of the project for traffic control use. The portable changeable message sign(s) shall be used for all lane closures and freeway closures as shown on the Traffic Control Plan sheets and Standard sheets and as directed by the Engineer.

The total of 2 portable changeable message signs will be paid by the each. If more than 2 portable changeable message signs are needed at one time, payment for additional message signs will be paid by the Day.

Supply portable changeable message sign(s) in accordance with the Traffic Control Plan Standard sheets and Section 6F.55 of the *Texas Manual on Uniform Traffic Control Devices*, Part VI.