

# NOTIFICATION OF ADDENDUM

## ADDENDUM NO. 3

**DATED 10/14/2008**

<b>Control</b>	<b>0095-02-100</b>
<b>Project</b>	<b>STP 2009(022)MM</b>
<b>Highway</b>	<b>US 80</b>
<b>County</b>	<b>DALLAS</b>

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: STP 2009(022)MM CONTROL: 0095-02-100  
COUNTY: DALLAS  
LETTING: 10/16/2008  
REFERENCE NO: 1014

**PROPOSAL ADDENDUMS**

- \_ PROPOSAL COVER  
X BID INSERTS (SH. NO.: 2-24 thru 24-24 )  
X GENERAL NOTES (SH. NO.: I, FF THRU HH )  
  
\_ SPEC LIST (SH. NO.: )  
\_ SPECIAL PROVISIONS: )  
\_ ADDED: )  
  
DELETED:  
  
\_ SPECIAL SPECIFICATIONS:  
\_ ADDED:  
  
DELETED:  
  
X OTHER: PLAN SHEETS 19D,19O,19P,20,20A-20E,253,255,258,260,263,529,542

DESCRIPTION OF ABOVE CHANGES  
(INCLUDING PLANS SHEET CHANGES)

BID INSERTS: SHEET 2-24: DELETED ITEM 164-2052.  
REVISD ITEM 192-2002 QUANTITY TO 11,347 EA.  
REVISD ITEM 192-2003 QUANTITY TO 384 EA.  
SHEETS 2-24 THRU 24-24: INFORMATION SHIFTED DUE TO ABOVE  
CHANGES.

GENERAL NOTES: SHEET I: REVISED NOTE TO ITEM 169.  
SHEET FF: ADDED NOTE FOR ITEM 5610.  
SHEETS FF THRU HH: INFORMATION SHIFTED DUE TO THE ABOVE  
CHANGES.

PLAN SHEETS: REPLACED SHEETS 19D,19O,19P,20,20A-20E,253,255,258,260,263,  
529,542

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	44.000	1
	104	2009		REMOVING CONC (RIPRAP)  DOLLARS and CENTS	SY	780.000	2
	104	2017		REMOVING CONC (DRIVEWAYS)  DOLLARS and CENTS	SY	1,797.000	3
	104	2022		REMOVING CONC (CURB AND GUTTER)  DOLLARS and CENTS	LF	802.000	4
	104	2023		REMOVING CONC (CTB)  DOLLARS and CENTS	LF	4,494.000	5
	104	2026		REMOVE CONC (GUTTER)  DOLLARS and CENTS	LF	172.000	6
	104	2027		REMOVING CONC (APPR SLAB)  DOLLARS and CENTS	SY	363.000	7
	105	2016		REMOVING STAB BASE & ASPH PAV(16")  DOLLARS and CENTS	SY	7,041.000	8
	105	2024		REMOVING STAB BASE AND ASPH PAV (21")  DOLLARS and CENTS	SY	15,462.000	9
	105	2072		REMOVING STAB BASE & ASPH PAV(26"-32")  DOLLARS and CENTS	SY	27,202.000	10
	110	2001		EXCAVATION (ROADWAY)  DOLLARS and CENTS	CY	71,284.000	11

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	132	2006		EMBANKMENT (FINAL)(DENS CONT)(TY C) DOLLARS and CENTS	CY	178,638.000	12
	161	2014	001	COMPOST MANUF TOPSOIL (BOS OR PB) (4") DOLLARS and CENTS	SY	101,930.000	13
	162	2002		BLOCK SODDING DOLLARS and CENTS	SY	102,998.000	14
	164	2009	002	BROADCAST SEED (TEMP) (WARM) DOLLARS and CENTS	SY	101,930.000	15
	164	2011	002	BROADCAST SEED (TEMP) (COOL) DOLLARS and CENTS	SY	101,930.000	16
	168	2001		VEGETATIVE WATERING DOLLARS and CENTS	MG	7,371.000	17
	169	2001		SOIL RETENTION BLANKETS (CL 1) (TY A) DOLLARS and CENTS	SY	14,584.000	18
	170	2001		IRRIGATION SYSTEM DOLLARS and CENTS	LS	1.000	19
	192	2002		PLANT MATERIAL (1-GAL) DOLLARS and CENTS	EA	11,347.000	20
	192	2003		PLANT MATERIAL (3-GAL) DOLLARS and CENTS	EA	384.000	21
	192	2004		PLANT MATERIAL (5-GAL) DOLLARS and CENTS	EA	205.000	22

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	ITEM NO	DESC CODE	S.P. NO.				
	192	2011		PLANT MATERIAL (GROUP III) DOLLARS and CENTS	EA	16.000	23
	192	2013		MULCH DOLLARS and CENTS	SY	2,717.000	24
	192	2016		PLANT BED PREPARATION DOLLARS and CENTS	SY	2,717.000	25
	192	2023		PLANT MATERIAL (15 GAL) (TREE) DOLLARS and CENTS	EA	49.000	26
	192	2030		PLANT MATERIAL (3 GAL) (SHRUB) DOLLARS and CENTS	EA	329.000	27
	192	2031		PLANT MATERIAL (5 GAL) (SHRUB) DOLLARS and CENTS	EA	205.000	28
	192	2032		PLANT MATERIAL (10 GAL) (SHRUB) DOLLARS and CENTS	EA	80.000	29
	192	2033		PLANT MATERIAL (15 GAL) (SHRUB) DOLLARS and CENTS	EA	28.000	30
	192	2037		PLANT MATERIAL (MIN 6' HT) (B&B) DOLLARS and CENTS	EA	20.000	31
	192	2045		PLANT MATERIAL (MIN 2 1/2" CAL) (B&B) DOLLARS and CENTS	EA	16.000	32
	192	2046		PLANT MATERIAL (MIN 3" CAL) (B&B) DOLLARS and CENTS	EA	4.000	33

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	ITEM NO	DESC CODE	S.P. NO.				
	192	2048		PLANT MATERIAL (MIN 4" CAL) (B&B) DOLLARS and CENTS	EA	16.000	34
	192	2072		PLANT MATERIAL (7-GAL) DOLLARS and CENTS	EA	80.000	35
	260	2003	001	LIME (COMMERCIAL LIME SLURRY) DOLLARS and CENTS	TON	2,863.000	36
	260	2008	001	LIME TRT(MIX EXST MATL & NEW BASE)(6") DOLLARS and CENTS	SY	30,409.000	37
	260	2049	001	LIME TRT(MIX EXST MATL & NEW BASE)(14") DOLLARS and CENTS	SY	15,314.000	38
	260	2050	001	LIME TRT(MIX EXST MATL & NEW BASE)(16") DOLLARS and CENTS	SY	21,450.000	39
	260	2062	001	LIME TRT(MIX EXST MATL & NEW BASE)(30") DOLLARS and CENTS	SY	14,933.000	40
	341	2011		D-GR HMA(QCQA) TY-B PG64-22 DOLLARS and CENTS	TON	39,753.000	41
	341	2050		D-GR HMA(QCQA) TY-C PG70-22 DOLLARS and CENTS	TON	11,210.000	42
	360	2003	003	CONC PVMT (CONT REINF-CRCP)(10") DOLLARS and CENTS	SY	13,693.000	43

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	ITEM NO	DESC CODE	S.P. NO.				
	360	2005	003	CONC PVMT (CONT REINF-CRCP)(12") DOLLARS and CENTS	SY	2,347.000	44
	400	2005		CEM STABIL BKFL DOLLARS and CENTS	CY	3.750	45
	402	2001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	4,032.900	46
	403	2001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	78,907.000	47
	416	2004	001	DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	2,206.000	48
	416	2006	001	DRILL SHAFT (48 IN) DOLLARS and CENTS	LF	1,212.000	49
	416	2018	001	DRILL SHAFT (SIGN MTS)(24 IN) DOLLARS and CENTS	LF	14.000	50
	416	2029	001	DRILL SHAFT (RDWY ILL POLE) (30 IN) DOLLARS and CENTS	LF	58.000	51
	416	2030	001	DRILL SHAFT (TRF SIG POLE) (24 IN) DOLLARS and CENTS	LF	12.000	52
	416	2032	001	DRILL SHAFT (TRF SIG POLE) (36 IN) DOLLARS and CENTS	LF	78.000	53
	420	2003	002	CL C CONC (ABUT) DOLLARS and CENTS	CY	166.400	54

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	ITEM NO	DESC CODE	S.P. NO.				
	420	2005	002	CL C CONC (FOOTING)  and  DOLLARS CENTS	CY	55.000	55
	420	2019	002	CL C CONC (CAP)  and  DOLLARS CENTS	CY	446.400	56
	420	2033	002	CL S CONC (APPR SLAB)  and  DOLLARS CENTS	CY	338.800	57
	420	2051	002	CL C CONC (COLUMN)  and  DOLLARS CENTS	CY	254.400	58
	422	2001		REINF CONC SLAB  and  DOLLARS CENTS	SF	43,022.000	59
	423	2001		RETAINING WALL (MSE)  and  DOLLARS CENTS	SF	25,502.000	60
	423	2027		RETAINING WALL (SPREAD FOOT)(ASHLAR)  and  DOLLARS CENTS	SF	3,700.000	61
	425	2019		PRESTR CONC U-BEAM (U54)  and  DOLLARS CENTS	LF	3,931.760	62
	427	2002		CONCRETE PAINT FINISH  and  DOLLARS CENTS	SF	400.000	63
	427	2003		OPAQUE SEALER FINISH  and  DOLLARS CENTS	SF	16,000.000	64
	428	2001		CONC SURF TREAT (CLASS I)  and  DOLLARS CENTS	SY	4,614.000	65

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	432	2001		RIPRAP (CONC)(4 IN)  and  DOLLARS CENTS	CY	10.000	66
	432	2039		RIPRAP (MOW STRIP)(4 IN)  and  DOLLARS CENTS	CY	27.000	67
	432	2040		RIPRAP (MOW STRIP)(5 IN)  and  DOLLARS CENTS	CY	6.000	68
	432	2048		RIPRAP (CONC)(FLUME)  and  DOLLARS CENTS	CY	12.000	69
	442	2005	005	STR STL (MISCELLANEOUS)  and  DOLLARS CENTS	LB	1,509.000	70
	450	2007		RAIL (TY T501)  and  DOLLARS CENTS	LF	1,796.000	71
	450	2147		RAIL (TY T414)(SPL)  and  DOLLARS CENTS	LF	480.000	72
	454	2001		SEALED EXPANSION JOINT (4 IN)(SEJ-A)  and  DOLLARS CENTS	LF	356.000	73
	459	2011		GABION MATTRESSES (GALV)(12 IN)  and  DOLLARS CENTS	SY	4,137.000	74
	459	2014		GABIONS (3' X 3')(GALV)  and  DOLLARS CENTS	CY	1,001.000	75
	462	2034		CONC BOX CULV (10 FT X 10 FT)  and  DOLLARS CENTS	LF	3,030.000	76

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	ITEM NO	DESC CODE	S.P. NO.				
	464	2001		RC PIPE (CL III)(12 IN)  and  DOLLARS CENTS	LF	131.000	77
	464	2003		RC PIPE (CL III)(18 IN)  and  DOLLARS CENTS	LF	1,336.100	78
	464	2005		RC PIPE (CL III)(24 IN)  and  DOLLARS CENTS	LF	1,683.600	79
	464	2007		RC PIPE (CL III)(30 IN)  and  DOLLARS CENTS	LF	909.400	80
	464	2009		RC PIPE (CL III)(36 IN)  and  DOLLARS CENTS	LF	423.800	81
	464	2011		RC PIPE (CL III)(48 IN)  and  DOLLARS CENTS	LF	1,182.500	82
	464	2021		RC PIPE (CL IV)(18 IN)  and  DOLLARS CENTS	LF	37.400	83
	465	2001	001	INLET (COMPL)(TY C)  and  DOLLARS CENTS	EA	17.000	84
	465	2003	001	INLET (COMPL)(TY H)  and  DOLLARS CENTS	EA	8.000	85
	465	2005	001	MANH (COMPL)(TY M)  and  DOLLARS CENTS	EA	9.000	86
	465	2008	001	INLET EXT (TY E)  and  DOLLARS CENTS	EA	21.000	87

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	ITEM NO	DESC CODE	S.P. NO.				
	465	2414	001	INLET (COMPL)(MSE WALL)(2 GRATE) DOLLARS and CENTS	EA	7.000	88
	466	2056		WINGWALL (PW)(HW=12 FT) DOLLARS and CENTS	EA	1.000	89
	466	2057		WINGWALL (PW)(HW=13 FT) DOLLARS and CENTS	EA	1.000	90
	466	2071		HEADWALL (CH-FW-0)(DIA= 48 IN) DOLLARS and CENTS	EA	1.000	91
	467	2222		SET (TY II)(18 IN)(RCP)(4:1)(C) DOLLARS and CENTS	EA	1.000	92
	496	2002		REMOV STR (INLET) DOLLARS and CENTS	EA	3.000	93
	496	2006		REMOV STR (HEADWALL) DOLLARS and CENTS	EA	25.000	94
	496	2007		REMOV STR (PIPE) DOLLARS and CENTS	LF	917.000	95
	496	2008		REMOV STR (BOX CULVERT) DOLLARS and CENTS	LF	910.000	96
	496	2010		REMOV STR (BRIDGE 100-499 FT LENGTH) DOLLARS and CENTS	EA	3.000	97
	500	2001	005	MOBILIZATION DOLLARS and CENTS	LS	1.000	98

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	ITEM NO	DESC CODE	S.P. NO.				
	502	2001	033	BARRICADES, SIGNS AND TRAFFIC HAN- DLING  DOLLARS CENTS and	MO	24.000	99
	506	2001	010	ROCK FILTER DAMS (INSTALL) (TY 1) DOLLARS CENTS and	LF	210.000	100
	506	2003	010	ROCK FILTER DAMS (INSTALL) (TY 3) DOLLARS CENTS and	LF	60.000	101
	506	2009	010	ROCK FILTER DAMS (REMOVE) DOLLARS CENTS and	LF	270.000	102
	506	2016	010	CONSTRUCTION EXITS (INSTALL) (TY 1) DOLLARS CENTS and	SY	2,496.000	103
	506	2019	010	CONSTRUCTION EXITS (REMOVE) DOLLARS CENTS and	SY	2,496.000	104
	506	2034	010	TEMPORARY SEDIMENT CONTROL FENCE DOLLARS CENTS and	LF	800.000	105
	506	2035	010	BIODEGRADABLE EROSION CONTROL LOGS(18") DOLLARS CENTS and	LF	3,330.000	106
	506	2040	010	TEMP SEDIMENT CONTROL FENCE (REMOVE) DOLLARS CENTS and	LF	800.000	107
	508	2002		CONSTRUCTING DETOURS DOLLARS CENTS and	SY	28,456.000	108

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	ITEM NO	DESC CODE	S.P. NO.				
	512	2011	001	PORT CTB (DES SOURCE)(SAFETY SH)(TY 2) DOLLARS and CENTS	LF	5,030.000	109
	512	2017	001	PORT CTB (DES SOURCE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	5,100.000	110
	512	2018	001	PORT CTB (DES SOURCE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	380.000	111
	512	2020	001	PORT CTB (MOVE)(SAFETY SH)(TY 2) DOLLARS and CENTS	LF	21,810.000	112
	512	2026	001	PORT CTB (MOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	6,280.000	113
	512	2027	001	PORT CTB (MOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	1,080.000	114
	512	2029	001	PORT CTB (STKPL)(SAFETY SH)(TY 2) DOLLARS and CENTS	LF	10,300.000	115
	512	2035	001	PORT CTB (STKPL)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	5,100.000	116
	512	2036	001	PORT CTB (STKPL)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	380.000	117
	514	2015	001	PERM CONC TRF BARR (F-SHAPE)(TY 1) DOLLARS and CENTS	LF	5,267.000	118
	514	2017	001	PERM CONC TRF BARR (F-SHAPE)(TY 3) DOLLARS and CENTS	LF	560.000	119

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	ITEM NO	DESC CODE	S.P. NO.				
	528	2006		COLORED TEXTURED CONC (5") DOLLARS and CENTS	SY	3,109.000	120
	529	2004		CONC CURB & GUTTER (TY II) DOLLARS and CENTS	LF	10,225.000	121
	529	2006		CONC CURB (MONO) (TY II) DOLLARS and CENTS	LF	2,573.000	122
	529	2007		CONC CURB (DOWEL) DOLLARS and CENTS	LF	3,046.000	123
	531	2005		CURB RAMPS (TY 1) DOLLARS and CENTS	EA	8.000	124
	531	2014		CURB RAMPS (TY 22) DOLLARS and CENTS	EA	4.000	125
	531	2017		CURB RAMPS (TY 21) DOLLARS and CENTS	EA	2.000	126
	540	2001		MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS	LF	1,001.000	127
	540	2011		MTL BEAM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS	EA	5.000	128
	542	2001		REMOVING METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	3,301.000	129
	542	2002		REMOVING TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	13.000	130

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	ITEM NO	DESC CODE	S.P. NO.				
	544	2001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	4.000	131
	544	2003		GUARDRAIL END TREATMENT (REMOVE) DOLLARS and CENTS	EA	13.000	132
	545	2049		CRASH CUSH ATTEN (INSTL)(WORK ZONE) DOLLARS and CENTS	EA	7.000	133
	545	2050		CRASH CUSH ATTEN(MOV&RESET)(WORK ZONE) DOLLARS and CENTS	EA	3.000	134
	545	2051		CRASH CUSH ATTEN (REMOVE)(WORK ZONE) DOLLARS and CENTS	EA	7.000	135
	550	2003		CHAIN LINK FENCE (REMOVE) DOLLARS and CENTS	LF	2,061.000	136
	552	2004		WIRE FENCE (TY D) DOLLARS and CENTS	LF	2,515.000	137
	610	2025	006	INS RD IL AM (TY SA) 40T-8 (.25 KW)S DOLLARS and CENTS	EA	9.000	138
	610	2060	006	INS RD IL AM (U/P) (TY 1) (.15KW)S DOLLARS and CENTS	EA	12.000	139
	610	2068	006	REMOVE RD IL ASM (TRANS-BASE) DOLLARS and CENTS	EA	6.000	140

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	ITEM NO	DESC CODE	S.P. NO.				
	618	2012		CONDT (PVC) (SCHD 40) (1") and DOLLARS CENTS	LF	733.000	141
	618	2018		CONDT (PVC) (SCHD 40) ( 2") and DOLLARS CENTS	LF	2,856.000	142
	618	2022		CONDT (PVC) (SCHD 40) (3") and DOLLARS CENTS	LF	738.000	143
	618	2024		CONDT (PVC) (SCHD 40) (4") and DOLLARS CENTS	LF	146.000	144
	618	2034		CONDT (PVC) (SCHD 80) (2") and DOLLARS CENTS	LF	66.000	145
	618	2035		CONDT (PVC) (SCHD 80) (2") (BORE) and DOLLARS CENTS	LF	561.000	146
	618	2039		CONDT (PVC) (SCHD 80) (3") (BORE) and DOLLARS CENTS	LF	328.000	147
	618	2041		CONDT (PVC) (SCHD 80) (4") (BORE) and DOLLARS CENTS	LF	31.000	148
	618	2050		CONDT (RM) (1 1/2") and DOLLARS CENTS	LF	264.000	149
	620	2009	001	ELEC CONDR (NO. 6) BARE and DOLLARS CENTS	LF	1,693.000	150
	620	2010	001	ELEC CONDR (NO. 6) INSULATED and DOLLARS CENTS	LF	74.000	151

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	ITEM NO	DESC CODE	S.P. NO.				
	620	2011	001	ELEC CONDR (NO. 8) BARE  DOLLARS and CENTS	LF	4,223.000	152
	620	2012	001	ELEC CONDR (NO. 8) INSULATED  DOLLARS and CENTS	LF	14,368.000	153
	620	2015	001	ELEC CONDR (NO.12) BARE  DOLLARS and CENTS	LF	2,424.000	154
	620	2016	001	ELEC CONDR (NO.12) INSULATED  DOLLARS and CENTS	LF	4,842.000	155
	624	2007		GROUND BOX TY A (122311)  DOLLARS and CENTS	EA	9.000	156
	624	2008		GROUND BOX TY A (122311) W/APRON  DOLLARS and CENTS	EA	10.000	157
	624	2011		GROUND BOX TY C (162911)  DOLLARS and CENTS	EA	6.000	158
	624	2012		GROUND BOX TY C (162911) W/APRON  DOLLARS and CENTS	EA	2.000	159
	628	2014		ELC SRV TY A 240/480 060 (NS)SS(E)GC(O)  DOLLARS and CENTS	EA	3.000	160
	628	2099		ELC SRV TY D 120/240 070 (NS)SS(E)GC(O)  DOLLARS and CENTS	EA	1.000	161
	628	2158		REMOVE ELECTRICAL SERVICES  DOLLARS and CENTS	EA	1.000	162

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	634	2001		PLYWOOD SIGNS  and  DOLLARS CENTS	SF	47.000	163
	636	2001		ALUMINUM SIGNS (TY A)  and  DOLLARS CENTS	SF	41.000	164
	636	2002		ALUMINUM SIGNS (TY G)  and  DOLLARS CENTS	SF	128.250	165
	644	2001		INS SM RD SN SUP&AM TY 10BWG(1) SA(P)  and  DOLLARS CENTS	EA	40.000	166
	644	2004		INS SM RD SN SUP&AM TY 10BWG(1) SA(T)  and  DOLLARS CENTS	EA	4.000	167
	644	2027		INS SM RD SN SUP&AM TY S80(1) SA(U)  and  DOLLARS CENTS	EA	4.000	168
	644	2028		INS SM RD SN SUP&AM TY S80(1)SA(U-1EXT)  and  DOLLARS CENTS	EA	1.000	169
	644	2060		REMOVE SM RD SN SUP & AM  and  DOLLARS CENTS	EA	88.000	170
	644	2064		INS SM RD SN SUP&AM TY S80(1)SA(U- EXAL)  and  DOLLARS CENTS	EA	3.000	171
	647	2001		INSTALL LRSS (STRUCT STEEL)  and  DOLLARS CENTS	LB	673.000	172

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	647	2003		REMOVE LRSA  DOLLARS and CENTS	EA	1.000	173
	662	2064		WK ZN PAV MRK REMOV (W) 4" (BRK)  DOLLARS and CENTS	LF	11,711.000	174
	662	2065		WK ZN PAV MRK REMOV (W) 4" (DOT)  DOLLARS and CENTS	LF	237.000	175
	662	2066		WK ZN PAV MRK REMOV (W) 4" (LNDP)  DOLLARS and CENTS	LF	791.000	176
	662	2067		WK ZN PAV MRK REMOV (W) 4" (SLD)  DOLLARS and CENTS	LF	51,572.000	177
	662	2075		WK ZN PAV MRK REMOV (W) 8" (SLD)  DOLLARS and CENTS	LF	10,925.000	178
	662	2079		WK ZN PAV MRK REMOV (W) 24" (SLD)  DOLLARS and CENTS	LF	267.000	179
	662	2099		WK ZN PAV MRK REMOV (Y) 4" (SLD)  DOLLARS and CENTS	LF	58,027.000	180
	666	2002		REFL PAV MRK TY I (W) 4" (BRK)(090MIL)  DOLLARS and CENTS	LF	2,060.000	181
	666	2005		REFL PAV MRK TY I (W) 4" (DOT)(090MIL)  DOLLARS and CENTS	LF	180.000	182
	666	2011		REFL PAV MRK TY I (W) 4" (SLD)(090MIL)  DOLLARS and CENTS	LF	10,015.000	183

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	2014		REFL PAV MRK TY I (W) 6" (BRK)(090MIL) DOLLARS and CENTS	LF	2,730.000	184
	666	2023		REFL PAV MRK TY I (W) 6" (SLD)(090MIL) DOLLARS and CENTS	LF	11,285.000	185
	666	2035		REFL PAV MRK TY I (W) 8" (SLD)(090MIL) DOLLARS and CENTS	LF	4,075.000	186
	666	2041		REFL PAV MRK TY I (W) 12"(SLD)(090MIL) DOLLARS and CENTS	LF	240.000	187
	666	2047		REFL PAV MRK TY I (W) 24"(SLD)(090MIL) DOLLARS and CENTS	LF	3,020.000	188
	666	2110		REFL PAV MRK TY I (Y) 4" (SLD)(090MIL) DOLLARS and CENTS	LF	11,175.000	189
	666	2119		REFL PAV MRK TY I (Y) 6" (SLD)(090MIL) DOLLARS and CENTS	LF	12,030.000	190
	666	2122		REFL PAV MRK TY I (Y) 8" (SLD)(090MIL) DOLLARS and CENTS	LF	1,070.000	191
	666	2131		REFL PAV MRK TY I (Y) 24"(SLD)(090MIL) DOLLARS and CENTS	LF	1,620.000	192
	666	2142		REF PAV MRK TY II (W) 4" (BRK) DOLLARS and CENTS	LF	170.000	193
	666	2143		REF PAV MRK TY II (W) 4" (DOT) DOLLARS and CENTS	LF	180.000	194

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	2145		REF PAV MRK TY II (W) 4" (SLD) DOLLARS and CENTS	LF	1,050.000	195
	666	2146		REF PAV MRK TY II (W) 6" (BRK) DOLLARS and CENTS	LF	200.000	196
	666	2149		REF PAV MRK TY II (W) 6" (SLD) DOLLARS and CENTS	LF	790.000	197
	666	2153		REF PAV MRK TY II (W) 8" (SLD) DOLLARS and CENTS	LF	3,175.000	198
	666	2157		REF PAV MRK TY II (W) 24" (SLD) DOLLARS and CENTS	LF	1,720.000	199
	666	2178		REF PAV MRK TY II (Y) 4" (SLD) DOLLARS and CENTS	LF	2,440.000	200
	666	2181		REF PAV MRK TY II (Y) 6" (SLD) DOLLARS and CENTS	LF	790.000	201
	666	2182		REF PAV MRK TY II (Y) 8" (SLD) DOLLARS and CENTS	LF	430.000	202
	666	2185		REF PAV MRK TY II (Y) 24" (SLD) DOLLARS and CENTS	LF	755.000	203
	668	2103		PREFAB PAV MRK TY C (W) (12") (SLD) DOLLARS and CENTS	LF	730.000	204
	668	2105		PREFAB PAV MRK TY C (W) (24") (SLD) DOLLARS and CENTS	LF	186.000	205

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	668	2106		PREFAB PAV MRK TY C (W) (ARROW) DOLLARS and CENTS	EA	6.000	206
	668	2107		PREFAB PAV MRK TY C (W) (DBL ARROW) DOLLARS and CENTS	EA	2.000	207
	668	2116		PREFAB PAV MRK TY C (W) (WORD) DOLLARS and CENTS	EA	6.000	208
	668	2118		PREFAB PAV MRK TY C (W) (36")(YLD TRI) DOLLARS and CENTS	EA	23.000	209
	672	2010	019	REFL PAV MRKR TY I-A DOLLARS and CENTS	EA	25.000	210
	672	2012	019	REFL PAV MRKR TY I-C DOLLARS and CENTS	EA	146.000	211
	672	2017	019	REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	223.000	212
	677	2001		ELIM EXT PAV MRK & MRKS ( 4") DOLLARS and CENTS	LF	43,750.000	213
	677	2003		ELIM EXT PAV MRK & MRKS ( 8") DOLLARS and CENTS	LF	550.000	214
	677	2007		ELIM EXT PAV MRK & MRKS (24") DOLLARS and CENTS	LF	127.000	215
	677	2008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	2.000	216

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	678	2001		PAV SURF PREP FOR MRK ( 4") DOLLARS and CENTS	LF	3,840.000	217
	678	2002		PAV SURF PREP FOR MRK ( 6") DOLLARS and CENTS	LF	1,780.000	218
	678	2003		PAV SURF PREP FOR MRK ( 8") DOLLARS and CENTS	LF	3,605.000	219
	678	2006		PAV SURF PREP FOR MRK (24") DOLLARS and CENTS	LF	2,475.000	220
	680	2002		INSTALL HWY TRF SIG (ISOLATED) DOLLARS and CENTS	EA	1.000	221
	681	2001		TEMP TRAF SIGNALS DOLLARS and CENTS	EA	2.000	222
	682	2001	001	BACK PLATE (12 IN) (3 SEC) DOLLARS and CENTS	EA	16.000	223
	682	2003	001	BACK PLATE (12 IN) (5 SEC) DOLLARS and CENTS	EA	2.000	224
	682	2014	001	PED SIG SEC (12 IN) LED (2 INDICATIONS) DOLLARS and CENTS	EA	12.000	225
	682	2022	001	VEH SIG SEC (12 IN) LED (GRN ARW) DOLLARS and CENTS	EA	2.000	226
	682	2023	001	VEH SIG SEC (12 IN) LED (GRN) DOLLARS and CENTS	EA	18.000	227

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	682	2024	001	VEH SIG SEC (12 IN) LED (YEL ARW) DOLLARS and CENTS	EA	2.000	228
	682	2025	001	VEH SIG SEC (12 IN) LED (YEL) DOLLARS and CENTS	EA	18.000	229
	682	2027	001	VEH SIG SEC (12 IN) LED (RED) DOLLARS and CENTS	EA	18.000	230
	684	2010		TRF SIG CBL (TY A) (12 AWG) ( 5 CONDR) DOLLARS and CENTS	LF	1,824.000	231
	684	2012		TRF SIG CBL (TY A) (12 AWG) ( 7 CONDR) DOLLARS and CENTS	LF	126.000	232
	684	2021		TRF SIG CBL (TY A) (12 AWG) (16 CONDR) DOLLARS and CENTS	LF	2,991.000	233
	686	2041		INS TRF SIG PL AM(S) 1 ARM (40') LUM DOLLARS and CENTS	EA	2.000	234
	686	2049		INS TRF SIG PL AM(S) 1 ARM (48') LUM DOLLARS and CENTS	EA	4.000	235
	687	2001		PED POLE ASSEMBLY DOLLARS and CENTS	EA	2.000	236
	688	2001		PED DETECT (2 INCH PUSH BTN) DOLLARS and CENTS	EA	12.000	237
	5610	2001		PRECAST CONCRETE PYLONS DOLLARS and CENTS	EA	4.000	238

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	5611	2001		PRECAST CONCRETE MEDIAN PYLONS DOLLARS and CENTS	EA	2.000	239
	6006	2001		SPREAD SPECTRUM RADIO DOLLARS and CENTS	EA	1.000	240
	6006	2002		COAXIAL CABLE DOLLARS and CENTS	LF	233.000	241
	6006	2005		ANTENNA (UNI-DIRECTIONAL) DOLLARS and CENTS	EA	1.000	242
	6007	2001		REMOVING TRAFFIC SIGNALS DOLLARS and CENTS	EA	2.000	243
	6086	2004		JUNCTION BOX (INSTALL) DOLLARS and CENTS	EA	7.000	244
	6266	2001		VIVDS PROCESSOR SYSTEM DOLLARS and CENTS	EA	1.000	245
	6266	2002		VIVDS CAMERA ASSEMBLY DOLLARS and CENTS	EA	10.000	246
	6266	2003		VIVDS SET-UP SYSTEM DOLLARS and CENTS	EA	1.000	247
	6266	2005		VIVDS COMMUNICATION CABLE (COAXIAL) DOLLARS and CENTS	LF	5,315.000	248
	6834	2002		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	EA	3.000	249

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	8155	2001		BBU SYSTEM (EXTERNAL BATT CABINET) DOLLARS and CENTS	EA	1.000	250

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**General Notes:**

## **SW3P RESPONSIBILITIES**

### **TxDOT Area of Responsibility**

Responsible for the area defined by the limits of the subject project, except for those areas utilized and operated by the contractor. These areas include, though are not limited to, areas used for field offices, equipment and/or material storage, and concrete or asphalt plants.

### **TxDOT Operational Responsibility**

Responsible for seeking coverage under the TPDES Construction General Permit (CGP) and operating the project within the requirements of the CGP for discharging storm water from the subject project and to notify MS4 permit holders of the intent to discharge storm water.

File a Notice of Termination with TCEQ upon completion of the project when the exposed areas have been stabilized with a vegetative cover of at least 70%.

### **Contractor Area of Responsibility**

Responsible for all areas under their direct operational control which includes, though not limited to, areas used for field offices, equipment and/or material storage, and concrete or asphalt plants. These areas may be located on or off the subject project's R.O.W.

### **Contractor Operational Responsibility**

Responsible for seeking coverage under the TPDES Construction General Permit (CGP) and adhering to all requirements of the permit for discharging storm water from the areas under their operational control. Perform regular inspections, prepare a written report of deficiencies, and repair deficiencies within the time frame set forth by the permit. File a Notice of Termination with TCEQ upon completion of the project when the exposed areas have been stabilized with a vegetative cover of at least 70%.

Responsible under contractual obligations to TxDOT to install, clean, repair, replace or remove sediment and erosion control devices as indicated on TxDOT's Inspection Reports, or as required by daily construction practices, within the time frame set forth by the permit.

**Specification Data**

<b>Table 1: Soil Constants Requirements</b>				
Item	Description	Plasticity Index		Note
		Max	Min	
132	Embankment (density control) (Type C1)	40	8	2
132	Embankment (density control) (Type C2)	25	10	1

Note 1: Material excavated from the project must meet the PI requirements when used in the top 10 feet of embankment that supports the pavement structure or other locations shown in the plans. Do not use shale and obtain approval to incorporate shaley clay produced by the construction project.

Use as a non-select embankment backfill as defined under Item 423.2.C.1. Use as an embankment to backfill behind abutments to the extent of the approach slab or to backfill areas enclosed by an abutment and retaining walls or other locations as shown in the

Note 2: PI requirements for materials 10' below the subgrade.

<b>Table 2: Basis of Estimate for Permanent Construction</b>						
Item	Description	Thickness	Rate		Quantity	
162	Block Sod	N/A		SY	102,998	Sy
162	Mulch Sod	4"				Sy
164	Broadcast Seed	N/A			N/A	
166 *	Fertilizer (12-6-6)	N/A	850	Lbs/Ac	N/A	Ton
168	Vegetative Watering	N/A	35	Mg/Ac/Wk	7,371	Mg
204	Sprinkling (dust cont)	N/A		Mg/Sta	N/A	Mg
247	Flexible Base			Ton/Cy	N/A	Ton
260	Hydrated Lime (slurry)	6", 14", 16", AND 30"		6% by wt	2,863	Ton
260	Commercial Lime Slurry					Ton
260	Quick Lime (slurry)					Ton
310	Prime Coat (MS-2)	N/A	0.20	Gal/Sy	16,421	Gal
341	Hot Mix Asphalt (Ty B)	VARIES	110	Lbs/Sy/ln	39,753	Ton
341	Hot Mix Asphalt (Ty C)		110	Lbs/Sy/ln	11,210	Ton

* For contractor's information only	
** See Project Estimate and Quantity Sheets	
Note:	(1) Base material weight based on 1.50 Ton/Cy (dry- compacted)
	(2) Asphalt weight based on 110 Lbs/Sy/inch
	(3) Subgrade weight based on 1.5 Ton/Cy (dry- compacted)

<b>Table 3: Basis of Estimate for Temporary Erosion Control Items</b>					
Item	Description	Rate		Quantity	
166*	Fert (12-6-6)	850	Lbs /Ac	N/A	Ton
168	Vegetative Watering	35	Mg/Ac/Wk	N/A	Mg
<b>*For contractor's information only</b>					

<b>Table 4: Minimum Pavement Surface Temperatures</b>			
		Minimum Pavement Surface Temperatures in Degrees Fahrenheit	
Specification Item Number	High Temperature Binder Grade	Subsurface Layers or Night Paving Operations	Surface Layers Placed in Daylight Operations
Items 341	PG 64	45	50
	PG 70	55 <sup>1</sup>	60 <sup>1</sup>

Note 1: Contractors may pave at temperatures 10°F lower than the values shown in Table 1 when utilizing a paving process or equipment that eliminates thermal segregation. In which cases, the contractor must use either an infrared bar attached to the paver, or a hand held thermal camera, or a hand held infrared thermometer operated in accordance with Test Method 244-F to demonstrate to the satisfaction of the engineer that the uncompacted mat has no more than 10°F of thermal segregation.

<b>Table 5: Hamburg Wheel Test Requirements</b>			
High-Temperature Binder Grade	Test Method	Laboratory Mixture Design or Trial Batch	Production and Placement Test <sup>1</sup>
		Minimum # of Passes @ 0.5" Rut Depth, Tested @122°F	Minimum # of Passes @ 0.5" Rut Depth, Tested @122°F
PG 70-22 or lower	Tex-242-F	10,000	10,000
PG 64-22	Tex-242-F	7,000	7,000

1. The Engineer may accept if no more than 1 of the 5 most recent Hamburg Wheel tests is below the specified number of passes and the failing test is no more than 2000 passes below the specified number of passes.

**General:**

Access will be provided to all business and residences at all times. Materials, labor and maintenance for these temporary accesses will not be paid for directly but will be considered subsidiary to the various bid items.

The construction, operation and maintenance of the proposed project will be consistent with the state implementation plan as prepared by the Texas Commission on Environmental Quality.

The disturbed area for this project, as shown on the plans is 46 acres. However, **the Total Disturbed Area** (TDA) will establish the required authorization for storm water discharges. The TDA of this project will be determined by the sum of the disturbed area in all project locations in the contract, and all disturbed area on all Project-Specific Locations (PSL) located in the project limits and/or within 1 mile of the project limits. The department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction site as shown on the plans, according to the TDA of the project. The contractor will obtain any required authorization from the TCEQ for the discharge of storm water from any PSL for construction support activities on or off of the project row according to the TDA of the project. When the TDA for the project exceeds 1 acre, provide a copy of the appropriate application of permit (NOI, or Construction Site Notice) to the engineer, for any PSL located in the project limits or within 1 mile of the project limits. Follow the directives and adhere to all requirements set forth in the TCEQ, Texas Pollution Discharge Elimination System, Construction General Permit (TPDES, CGP).

This project required formal consultation and/or permits with environmental resources agencies. There is a high probability that an environmentally sensitive area could be encountered on the contractor designated Project-Specific Locations (PSL) for this project (haul roads, equipment staging areas, borrow pits, disposal sites, field offices, storage areas, parking areas, etc.). Item 7.19.F, "Project-Specific Locations", will

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provide a listing of regulatory agencies that may need to be contacted regarding this project.

Prior to contract letting, bidders may obtain a free computer diskette or electronic files (from the engineer's office) that contains the earthwork information. If copies of the actual cross-sections, in addition to or instead of the diskette, are requested, they will be available at the engineer's office for borrowing by copying companies for the purpose of making copies for the bidder at the bidders expense. This data is for non-construction purposes only and it is the responsibility of the prospective bidder to validate the enclosed data with appropriate plans, specifications and estimate for the project(s).

Install traffic marking signs prior to sealcoat application and remove within three days after placement of traffic markings.

Leave all right of way areas undisturbed until actual construction is to be performed in said areas.

Place survey monuments, provided by the department, at points indicated and as detailed in the plans or as directed. Furnish surface coordinates and the elevation of the set monument and an azimuth from the monument to some prominent physical feature, preferably another survey monument on the project. This work will not be paid for directly, but will be considered subsidiary to the various bid items.

Use established industry and utility safety practices to erect poles, luminaries, signs or structures near any overhead or underground utility. Consult with the appropriate utility company prior to beginning such work.

Underground utilities owned by the Texas Department of Transportation may be present within the Right-Of-Way on this project. For signal, illumination, surveillance, and communication & control, call 1-800-DIG-TESS (1-800-344-8377), TxDOT Traffic Signal Office (214-320-6682), and TxDOT Freeway Management Office (214-320-4439) for locates a minimum of 48 hours in advance of excavation. For irrigation systems, call TxDOT Maintenance Landscape Office (214-320-6205) for locates a minimum of 48 hours in advance of excavation. If city or town owned irrigation facilities are present, call the appropriate department of the local city or town a minimum of 48 hours in advance of excavation.

For the project to be deemed complete, permanently stabilize all unpaved disturbed areas of the project with a vegetative cover at a minimum of 70% density for the control of erosion.

Repair or replace any structures and utilities that might have been damaged by negligence or a failure to have utility locates performed.

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

Consult with appropriate electric company representatives according to their respective area to coordinate electrical services installations.

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Meet weekly with the engineer to notify him or her of planned work for the upcoming week.

Provide the engineer with a daily work schedule of planned work.

Submit pre-letting questions by e-mail or fax as follows:

e-mail: gmoonsh@dot.state.tx.us

fax: (972) 225-9121.

The answers will be submitted in the same format in which they are received. A file containing these questions and answers will be available for review at the area engineer's office located at 505 S. IH 45, Hutchins, Texas 75141.

Submit questions prior to letting by e-mail, fax or phone. The questions will be answered in the same format in which they are received. e-mail:

1. [estoval@dot.state.tx.us](mailto:estoval@dot.state.tx.us)

fax: (972) 225-9121,

phone: (972) 225-2387.

2. [sdali@dot.state.tx.us](mailto:sdali@dot.state.tx.us)

Fax: (972) 225-9121

Phone: (972) 225-0462

A file containing these questions and answers will be available for review at the area engineer's office located at 505 S. IH 45, Hutchins, Texas 75141.

Material On Hand (MOH) will not be used in calculating partial payments for Mobilization.

Provide the Engineer with a copy of all DBE subcontractor agreements prior to commencing work.

Changes to work on this contract may require Third Party approval. See Contract Administrator.

Utility encroachments and proposed temporary easements that are not shown in the plans can be found on the right-Of-Way amp.

**Item 8:**

This Project will be a Five-Day Workweek in accordance with Article 8.3.A.1.

Nighttime is allowed in accordance with Article 8.3.C.1.

**Item 100:**

Remove and replace the existing roadway signs as shown on the plans, or as directed, during construction within the right of way.

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The limits of preparing right of way will be measured from Sta. 505+99.70 to Sta. 548+87.14 along the centerline of construction.

The existing RAP stockpile including CTB containment within the project limits shall be disposed of properly by the contractor as part of prep Right-of-Way.

**Item 104:**

In those areas where the pavement is not to be overlaid, provide a smooth surface after the curb removal. Planing or grinding is considered an acceptable method at these locations. Measurement and payment is in accordance with this item.

Sawing of concrete is not paid for directly, but is considered subsidiary to this item.

**Items 104 and 496:**

Concrete pavement removed as a result of removing the inlets will not be paid for directly but will be considered as subsidiary to Item 496.

Removal of all concrete and structures of the types specified in the plans will be paid for under the pertinent bid item. The removal of other types of obstructions encountered will be paid for under Item 100, if applicable.

**Items 105, 305, and 354:**

Saw existing asphalt along neat lines where portions are to be left in place temporarily or permanently. Sawing is not paid for directly, but is subsidiary to this item.

**Item 105:**

Properly dispose of unsalvageable material at your own expense.

**Items 110 and 132:**

Excavation and embankment for driveways, sleeper slabs, alleys and intersections will not be paid for directly, but will be considered subsidiary to this item.

**Items 110, and 132:**

Scarify and loosen the excavated areas, unpaved surface areas, except rock, to a depth of at least 8 inches and compact in accordance with the specifications.

Use an approved laboratory to perform tests for sulfate and plasticity index and provide results on sources outside the right of way at no additional expense to the department. Test soil for sulfate levels in accordance with Tex-145-E. Contact the engineer for a list of approved laboratories. Notify the engineer 72 hours before sampling and testing material. Perform split-sample verification testing with the engineer when directed. The engineer will sample and test material produced by the construction project for specification requirements or material sources specified in the plans.

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When lime treatment is allowed to reduce Plasticity Index, apply lime slurry in accordance with Item 260, "Lime Treatment (Road-Mixed)." Furnish material containing sulfate at or below the threshold of 5000 parts per million (ppm). For material with sulfate levels greater than 3000 ppm, allow the mixture to mellow for at least three days, or as directed. The engineer will test material placed or excavated to a depth of one foot below and laterally to one foot outside the proposed treatment limit. Notify the engineer 48 hours before lime treatment of the material.

Shale is not an acceptable material for embankment. Do not use shaley clays in embankment unless approved in writing.

**Items 110, 132 and 164**

Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring at least 12 inches in length by 2 to 4 inches in width by ½ to 2 inches in depth. Do not exceed 12 inches between track cleats. Install continuous linear track impressions where the minimum 12 inches in length impressions is perpendicular to the direction of water flow. This will not be paid for directly but considered subsidiary to this item.

**Items 110, 132 and 164**

Perform vertical tracking on slopes to temporarily stabilize soil. Provide equipment with a track undercarriage capable of producing a linear soil impression measuring at least 12 inches in length by 2 to 4 inches in width by ½ to 2 inches in depth. Do not exceed 12 inches between track cleats. Install continuous linear track impressions where the minimum 12 inches in length impressions is perpendicular to the direction of water flow. This will not be paid for directly but considered subsidiary to this item.

**Item 132:**

Earth embankment Type C, is mainly composed of material other than shale. Furnish material that is free from vegetation or other objectionable material and that conforms to the requirements of Table 1 (Sheet B). If necessary, add lime slurry in accordance with Item 260, "Lime Treatment (Road-Mixed)" in order to meet these requirements. Use Tex-121-E, figure 1, page 5 to calculate the amount of lime required. Furnish material containing sulfate at or below the threshold of 5000 parts per million (ppm). For material with sulfate levels greater than 3000 ppm, allow the mixture to mellow for at least three days, or as directed. Test soil for sulfate levels in accordance with Tex-145-E. Use an approved laboratory to perform tests for sulfate and plasticity index and provide results on sources outside the right of way to the department. Contact the engineer for a list of approved laboratories. Notify the engineer 48 hours before sampling and testing material. Perform split-sample verification testing with the engineer when directed. The engineer will sample and test material produced by the construction project for specification requirements or material sources specified in the plans. The engineer will test material placed or excavated to a depth of one foot below and laterally to one foot outside the proposed treatment limit. Lime treatment and testing of this material will not be paid for directly, but will be considered subsidiary to this item.

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Do not use shaley clays in embankment unless approved in writing.

**Item 134:**

Start backfilling pavement edges as soon as possible after the surface course is started.

Backfill and compact the pavement edges to produce a smooth surface adjacent to the pavement with no vertical edges.

Use Type "A" material to backfill pavement edges. Type "A" material shall consist of suitable material that when compacted will support the pavement edge. RAP is considered suitable Type "A" material.

The work described above is subsidiary.

**Item 160:**

Sequence construction operations to salvage topsoil from one location and spread on areas ready to receive topsoil. Keep stockpiling of topsoil to a minimum.

Use fertile clay or loam from the project site not more than two feet below natural grade.

**Item 169:**

Hydraulically apply Flexterra Flexible Growth Medium, FGM or CocoFlex ET-FGM, or install North American Green SC150 or Landlok CS2 for erosion control on the specified areas in the construction plans.

Use of (CL 1) (Ty A) product is approved for slopes 3:1 or flatter for this project.

Water for application, seeding, labor, equipment, tools, supplies, materials, fertilizer and incidentals will not be paid for directly, but will be considered subsidiary to this Item.

Apply as required per the manufacturer's recommendations.

Use Table 4 of item 164 to determine the type of seeds to be used.

**Item 260:**

Furnish and distribute MS-2 smoothly and evenly at the rate of 0.20 gallons per square yard to cure lime, as directed.

Provide Commercial Lime Slurry and apply lime by slurry placement method.

**Item 301:**

Provide liquid antistripping agents unless otherwise directed. Provide manufacturer's instruction for liquid antistripping agent.

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Add the minimum percentage determined by the manufacturer and try subsequent trials at 0.25% increments, unless otherwise instructed by the manufacture.

**Items 305 and 354:**

Take possession of recycled asphalt pavement from the project and recycle the material.

Separate the asphalt pavement from the base material. Stockpile the asphalt pavement at US 80 @ SH 352\_. Place the asphalt pavement material in a stockpile that meets the dimensions and requirements designated by the engineer.

Stockpile materials in uniform piles up to 15 feet in height unless otherwise instructed. Furnish adequate equipment at the stockpile to keep and leave the materials in a neat and orderly manner.

Properly dispose of unsalvageable material at your own expense.

Slope longitudinal faces greater than 1 ¼" to a minimum of 1:1 slope at the end of the work period if traffic is able to traverse the joint. Slope transverse tapers to a minimum of 36:1 at the end of the workday. Remove the taper prior to continuing the milling.

For open shoulder sections, plane the asphalt so the flow of water is not impeded at the shoulder edge or across the surface. Added planing up to three feet in width outside the lines and grades of the plans, necessary to provide proper drainage, will be subsidiary to the bid item.

**Item 320:**

Material Transfer Device is required.

The use of windrow pick-up equipment is allowed except on the first course of roadway material placed over the subgrade.

**Items 340, 341:**

Place hot mix asphalt when the roadway surface temperature is equal to or higher than the temperatures listed in Table 4 unless otherwise approved. Measure the roadway surface temperature with a handheld infrared thermometer. The Engineer may allow mixture placement to begin prior to the roadway surface reaching the required temperature requirements if conditions are such that the roadway surface will reach the required temperature within 2 hrs. of beginning placement operations. Unless otherwise shown on the plans, place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable in the opinion of the Engineer.

**Item 341:**

Use aggregate that meets the Surface Aggregate Classification (SAC) requirement of Class B.

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The use of Recycled Asphalt Pavement (RAP) is allowed only in the base course and detour hot mix asphalt.

Minimum requirement for coarse aggregate 5 cycle magnesium sulfate soundness is 25%. Meet this requirement for type C hot mix only.

Provide the engineer the opportunity to witness all mixture design tests. The engineer may require a retest if not given the opportunity to witness.

Dilution of tack is not allowed.

Provide PG binder 64-22 in Type B mixture.

Provide PG binder 64-22 in Type C mixture and 70-22 or 76-22 for US 80 final course.

Hamburg Wheel test requirements for mixes with PG 64-22 shall meet Table 5. The use of RAP is permitted to meet these requirements.

**Item 354:**

Remove the loose material from the roadway before opening to traffic.

Patch pavement cut to excessive depth by equipment failure with an approved epoxy material. Re-plane patched area to an acceptable approved ride quality. Payment for these corrections is subsidiary to this item.

**Item 360:**

Use of multiple piece tiebars will be required. Provide chairs for multiple piece tiebars, threaded connectors or other adequate devices, used in concrete paving, or tie them to the pavement reinforcing steel. If approved by the engineer for specific areas, in lieu of multiple piece tiebars, drill holes into the pavement and grout straight tiebars in place with epoxy. Use a non-impact, rotary core drill to prevent damage to the pavement unless otherwise directed. Clean the drill holes and then completely fill with epoxy before inserting the tiebar. Do not bend the tiebars or insert them into plastic concrete without the approval of the engineer.

Provide curbs monolithically constructed with the concrete pavement. If continuous monolithic curb has to be temporarily omitted for any reason, provide dowelled curbs in the proposed areas, as detailed in the plans, and apply an approved epoxy resin to the pavement to receive the curb as directed. This work and materials will not be paid for directly, but is considered subsidiary to this item.

If asphalt curing is used, cure the concrete pavement with MS-2.

Stockpile the concrete aggregates at the plant site.

Provide pavement widening joints, as detailed in the plans, at all locations where concrete pavement is placed adjacent to existing concrete pavement. Installation of these joints is not paid for directly, but is considered subsidiary to this item.

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Payment for furnishing and installing the pre-molded expansion joint material between the retaining walls and concrete pavement is not paid for directly, but is considered subsidiary to this item.

Provide a curing machine equipped with rubber tires, or other acceptable arrangement, so that the machine will span the pavement and monolithic curb.

Curb transition is paid for as Type I and II curb.

The installation of curb openings is not paid for directly, but is considered subsidiary to this item.

Place construction, sawed and contraction joints in accordance with the pavement detail sheet 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.

If a traveling form paver is used, provide one equipped with an electronically operated horizontal control device.

Provide tiebars in longitudinal joints but do not place them within 15 inches of transverse joints.

Use "mechanical steel placing equipment" at the discretion of the engineer.

Provide Class HES concrete as directed. Design Class HES to meet the requirements of Class P and a minimum average flexural strength of 400 psi or minimum average compressive strength of 2600 psi in 24 hr.

**Item 360 and 421.**

Contractor personnel performing job-control testing on concrete must be ACI- Certified. Provide a copy of 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.

The engineer may allow the use of local commercial laboratories under contract to provide these services.

**Item 400:**

Structural Excavation is not paid for directly but is considered subsidiary to pertinent Items.

When placing concrete storm drain pipe on slopes of greater than 10 percent, provide cement stabilized backfill to a depth shown on the plans. The aggregate shall conform to the requirements of Article 421.2.E.2.

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**Item 416:**

Provide a smooth finish for all portions of drill shafts extending above proposed ground. Include cost for this work in the unit bid price for this item.

Provide a minimum of one core per bent, regardless of placement method.

Foundations will be paid for once regardless of extra work caused by obstructions.

Use concrete classified as "miscellaneous concrete" for ground mounted sign foundations, with the exception of large roadside signs.

Do not install PVC and/or rigid metal conduit in sign foundations for sign structures without sign lights.

**Item 420:**

Apply an ordinary surface finish to all concrete surfaces within 30 days after form removal.

***BENT NUMBERING:***

For bridges with four or more spans, number every third bent (counting the abutments) on the up-station and down-station faces of the outside column(s) at approximately the mid height of the column. For structures with three columns or less per bent, place numbers on column A. Where there are four or more columns per bent, place numbers on both outside columns. Bent numbers shall be as shown on the bridge layout.

Provide block numbers with a height of 6". Place numbers using appropriate die cut stencils and black paint.

All materials, labor and incidentals associated with placing bent numbers are subsidiary to the various bid items.

For bridges with aesthetic treatments, the numbering will be incorporated into the aesthetics package.

***NATIONAL BRIDGE INVENTORY NUMBERS:***

Place National Bridge Inventory numbers (NBI numbers) on the face of each abutment backwall using 3" block numbers.

Locate NBI numbers between the outside beams at opposite corners of the bridge. Use appropriate die cut stencils and black paint for placement.

All materials, labor and incidentals associated with placing NBI numbers are subsidiary to the various bid items.

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**Items 420, 422, 430 and 440:**

Provide bridge slab reinforcing steel with epoxy coating complying with Item 440 requirements.

R-bars (I and U-beams), Z-bars (boxes), H-bars (Slab beams), and C-bars (DT beams) are not required to be epoxy coated.

**Item 421:**

Furnish mix designs to the Engineer in a format compatible to the latest version of the Department's Construction Management System (Site Manager). Mix Design templates will be provided by the Engineer.

Provide sulfate resistant concrete for box culverts and drill shafts. High performance concrete meets the requirement for sulfate resistant concrete when Class C fly ash and Type I cement is not used in the mix design.

Strength evaluation using maturity testing, Tex-426-A, may be used for all concrete elements except drill shafts and mass concrete pours.

Maturity meters may be used for temperature gradient determination in mass concrete pours.

Provide a digital hydraulic compression testing Machine and accessories. The machine shall have a minimum testing range of 2500 pounds force to 250,000 pounds force with a hydraulic switching valve to allow for rapid advancing, hold, controlled advancing and rapid retracting. The machine shall have a load cell to measure compressive forces within the testing range and shall be calibrated and verified in accordance with ASTM latest version. The Machine can meet or exceed the following when approved by the Engineer:

ELE International ACCU-TEK250 Digital Compression Tester including accessories or Forney F-250EX Standard Compression Machine including accessories or TxDOT approved equal.

Air-entrain all concrete except for Class "B" and concrete used in drilled shafts. For structural concrete, if the air content is more than 1.5% below the required air, follow manufacturer recommendations to add the necessary approved air bags to increase the air content at the job site. Limit the adding of air bags in the field to one trial. Do not reject the load of concrete due to low air content; accept concrete based on strength tests.

**Item 423:**

For Mechanically Stabilized Earth (MSE) walls, provide a system from one of the following approved suppliers:

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Reinforced Earth Walls  
The Reinforced Earth Company  
1331 Airport Freeway, Suite 302  
Eules, Texas 76040-4150  
817-283-5503

Reinforced Soil Embankment Walls  
Texas Welded Wire, Inc.  
645 W. Hurst Blvd.  
Hurst, Texas 76053  
817-282-4560

Retained Earth Walls  
Foster Geotechnical  
901 North Highway 77  
Hillsboro, Texas 76645  
254-580-9100

Stabilized Earth Wall  
T&B Structural Systems, Inc.  
6800 Manhattan Blvd., Suite 303  
Fort Worth, Texas 76120  
817-280-9858

Strengthened Earth Walls  
Hanson Concrete Products  
3500 Maple Ave.  
Dallas, Texas 75219  
214-525-5877

Strengthened Soil Walls  
Shaw Technologies Inc.  
P.O. Box 271448  
Flower Mound, Texas 75027  
972-490-1924

Tensar Retaining Wall System  
Tensar Earth Technologies, Inc.  
5775-B Glenridge Drive  
Atlanta, Georgia 30328  
404-250-1290

Tricon Retained Soil Walls  
Tricon Precast, Inc.  
15055 Henry Rd.  
Houston, Texas 77060  
713-931-9832

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VP Wall System  
Valley Prestress Products, Inc.  
P.O. Box 1367  
Mission, Texas 78573  
956-584-5701

New System, currently on experimental status:

MSE Plus  
Ssl Construction Products  
4740 Scotts Valley Drive, Suite E  
Scotts Valley, California 95066  
831-430-9300

System must provide a uniform texture and appearance.

Unless otherwise noted in the plans, the top of the leveling pad is located 2 feet below the proposed ground.

Square foot surface area of retaining wall is measured from the top of retaining wall to the top of the leveling pad. Footing adjustments made to accommodate the available optional retaining walls are not measured.

Unless otherwise shown on the plans, provide Type A backfill as defined under this item for permanent MSE walls not subject to inundation. Unless otherwise shown on the plans, provide type D backfill as defined under this item for walls subject to inundation.

Supply drainage aggregate meeting the requirements of this item for use as filter material with the retaining wall.

Cement-Stabilized Backfill (CSB) is not permitted.

RAP is not acceptable as backfill for MSE retaining walls.

Unless otherwise noted on the plans, provide flowable backfill meeting the requirements of Item 401 between the back of panels and inlets or drainage pipes where the required compaction can not be achieved. Flowable backfill used for this purpose is subsidiary to this item.

Provide earth reinforcements with a length greater than or equal to 70 percent of the wall height or 8 feet whichever is greater.

Submit design calculations supporting the details necessary to incorporate coping, railing, inlets, drainage, electrical conduits and any additional necessary features.

The contractor has the option of constructing any of the types of retaining walls for which details and specifications are included in the plans. Footing adjustments made to accommodate the available optional retaining walls are not measured. Regardless of

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option or options chosen, use the same facia pattern throughout the entire project, including cast in place full height retaining walls or retaining wall type abutments.

Submit detailed drawings depicting the patterns and matching of precast with cast-in-place for approval.

At contractor's expense, repair all damage to the precast units (such as chips) as required to match the facia pattern.

**Item 427:**

Finish concrete structures surface area I with an opaque sealer of the color(s) shown elsewhere in the plans in accordance Item 427.

Ensure that surfaces are free of weak surface material, curing compounds and other surface contaminants prior to coating.

FORM LINER FINISHES: Place architectural concrete treatments as shown. Placement is subsidiary to this item.

Provide form liners that release without leaving pieces of liner material on the concrete and without pulling or breaking concrete from the textured surface. Provide form release agents as recommended by the manufacturer. Replace form liners as directed that have become damaged or worn. Replacement of form liners is considered incidental to the work and no additional compensation is provided.

No horizontal splices in the form liner are permitted. Vertical splices may occur only in valleys between fractured ribs.

Provide sample panels a minimum of ten days in advance of starting construction of the textured concrete surfaces. Construct sample panel(s) in accordance with Item 427.4.B.2.d "Form Liner Finish" using each type of approved form liner. Sample panels must meet the requirements of the plans and specifications and be approved before any construction form liners may be ordered, obtained or used. Provide panels having a textured portion at least 5'-0" by 5'-0" with a representative un-textured surrounding surface. If directed, construct and finish additional test panels until a satisfactory concrete surface texture is obtained.

The approved sample panel is the standard of comparison for the production concrete surface texture. If directed, build a new test panel to demonstrate acceptability of any proposed change in construction method.

Tool or replace areas requiring surface treatment that do not match their associated sample panels. Upon completion, tooled or replaced panels must match the associated sample panel. Tooling or replacement is at the contractor's expense.

For proper placement of the expansion joint behind the rail, omit surface finish from the top of T501 (RW) (DAL) rail to bottom of panel as directed.

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Joint reveal details and location may vary slightly from what is shown to match the adjacent MSE walls as directed. No additional compensation will be allowed.

**Items 427 and 446:**

Unless otherwise noted, it is the intent of these plans that all exposed surfaces (concrete or steel) of bridges, retaining walls, concrete traffic railing and concrete traffic barrier be given a tinted coating as shown or as directed. Such coating shall meet the applicable provisions of Item 427 or Item 446.

Use Federal Standard 595b colors with individual elements receiving the colors shown in the following table:

CTB		
Columns (Base Color)	Limestone	37769
Column Formliner Patterned Faces (Multi-stain Color 1)	Terra Cotta	30252
Column Formliner Patterned Faces (Multi-stain Color 2)	Buff	33711
Column Formliner Patterned Faces (Multi-stain Color 3)	Light Brown	30475
Bent Caps	Limestone	37769
MSE Retaining Wall (Base Color)	Limestone	37769
MSE Retaining Wall (Multi-stain Color 1)	Terra Cotta	30252
MSE Retaining Wall (Multi-stain Color 2)	Buff	33711
MSE Retaining Wall (Multi-stain Color 3)	Light Brown	30475
MSE Slip Joint Covers (Pilasters)	Limestone	37769
MSE Retaining Wall Coping	Limestone	37769
MSE Retaining Wall Corners	Limestone	37769
CIP Retaining Wall (Base Color)	Limestone	37769
CIP Retaining Wall (Multi-stain Color 1)	Terra Cotta	30252
CIP Retaining Wall (Multi-stain Color 2)	Buff	33711
CIP Retaining Wall (Multi-stain Color 3)	Light Brown	30475
Abutment Backwall	Limestone	37769
Abutment Cap	Limestone	37769
Prestressed Concrete U54 Beams	Limestone	37769
Slab Edge, Bottom of Slab Overhang, & Bottom of Slab between U54 Beams	Limestone	37769
Concrete Rails (T414 & T501)	Limestone	37769
Amenity Architectural Elements	See plans	See plans
Amenity Hardscape Elements	See plans	See plans

**Item 428:**

Provide a Class I surface treatment.

Do not treat the inside face of concrete rails.

**Item 442:**

Use temperature Zone 1 for CVN testing.

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**Item 449:**

Use Crouse Hinds TL-2, OZ/Gedney Stl, Thomas & Betts Kopr-Shield or other approved electrically conducting lubricant compound.

**Item 450 and 440:**

Provide epoxy coated reinforcing steel that embeds into the bridge slab.

**Items 452 and 496:**

Transport salvaged structural railing retained by TxDOT to 505 S. IH 45, Hutchins, Texas 75141.

**Item 453:**

Upon removal, retain possession of the temporary railing.

Furnish rail elements conforming to Item 540.

**Items 453 and 542:**

Rail elements for Item 453 may be obtained from the guard fence previously removed under Item 542. Upon the removal of the temporary railing, the rail elements used from Item 542 become the property of the contractor for disposal outside the limits of the right of way at his own expense.

**Item 464:**

The concrete collars and the connections of pipes to existing or proposed concrete boxes or pipe will not be paid for directly but will be considered subsidiary to the various bid items.

At locations where storm drains dead-end, plug with a concrete plug of a thickness equal to 1 ½ inches per foot of diameter of pipe with a minimum thickness of 3 inches. The cost of the plugs shall be included in the unit price bid per foot of the various storm drain pipes.

**Item 471:**

Tackweld all inlet grates and manhole covers to the frame with two 1-inch welds. Supply un-painted cast iron inlet grate and frame and/or cast iron manhole frame and cover.

**Item 479:**

Accept ownership of inlet grates and manhole covers and properly dispose of them outside the limits of the right of way in accordance with federal, state and local regulations.

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Submit a plan detailing proposed methods of handling phased construction at manholes and water valves.

Payment for the phase construction will be considered subsidiary to this item.

**Item 496:**

Inlet grates and manhole covers become the property of the contractor for disposal.

**Items 496 and 506:**

When demolishing a structure/s that span the Waters of Texas or a designated wetland, take all practicable precautions to prevent debris from being discharged into the water or within the boundaries of the wetland. Install Best Management Practices before demolition begins and maintain them during the demolition. Remove any debris or construction material that escapes containment devices and are discharged into the restricted areas, before the next rain event or within 24 hours of the discharge.

**Item 502:**

Provide written proposed lane closure information by 1:00 pm on the business day prior to the proposed closures. Do not close lanes when this requirement is not met.

When excavation is required next to a pavement lane carrying traffic and the widening is not completed by the end of the work day, backfill against the edge of the pavement with at least a 3:1 slope using an acceptable material to support vehicular traffic. Carefully remove and dispose of this material when work resumes. Backfilling pavement edges, and the materials required for the work will be subsidiary to this item.

Erect a Type III barricade immediately in front of or at each end of all stockpiles that are less than 30 feet from the edge of any traveled lane. Place one Type 2 Object Marker (OM-2Y) alongside the stockpile for every 100 feet of stockpile length.

Place barricades and signs in locations that do not obstruct the sight distance of drivers entering the highway from driveways or side streets.

Provide rectangular shape (CW12-2P) Temporary Clearance Signs on all bridges where the existing vertical clearance has changed. Install Signs to the satisfaction of the Engineer prior to opening to traffic. Plywood sign blanks will have minimum dimensions of 84" X 12". Work performed and materials are subsidiary to this item.

When moving unlicensed equipment on or across any pavement or public highways, protect the pavement from all damage using an acceptable method.

Provide two shadow vehicles equipped with truck mounted attenuators as shown on the traffic control plan.

If required, provide uniformed off duty police officers and squad cars during lane or ramp closures, night time work or other situations that indicate a need for additional traffic

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control to protect the traveling public or the construction workforce. Provide documentation such as payroll, log sheets with signatures and badge number, or invoices from the government entity providing the officers for reimbursement. Reimbursement will not be made for coordination fees charged by the police department.

<b>Freeway Lane Closures</b>				
<b>Category of Work</b>	<b>Number of Rdwy Lanes per direction</b>	<b>Peak Times</b> Monday-Friday 6:00 am - 9:00 am 3:30 pm - 7:00 pm Major Events and Major Holidays**	<b>Off Peak Times</b> Monday-Friday 9:00 am - 3:30pm 7:00 pm - 10:30 pm and Saturday	<b>Lowest Volume Time</b> Monday-Friday 10:30 pm to 6:00 am and Sunday
<b>Placement of CTB &amp; Bridge Beams, Pavement Markings, Full Depth Roadway Repair, Bridge or Similar Demolitions*</b>	5	None	2	3
	4	None	2	3
	3	None	1	2
	2	None	1	2
<b>Adjacent Construction, Lanes for Construction Traffic or Similar Operations</b>	5	None	1	2
	4	None	1	2
	3	None	1	1
	2	None	None	1
* Provide a traffic control plan where bridge demolition cannot be accomplished with lane closures. Freeway closures will only be done during Lowest Volume Times.				
** Major Holidays are defined under Item 1.82 and also include the Easter Weekend.				

Additional lanes may be closed during Off Peak Times or Lowest Times with written permission of the Engineer. Lane Closures during Off Peak Times may be started earlier or be extended later with written permission of the Engineer.

Traffic Control Plans with Lane Closures causing backups of 20 minutes or greater in duration will be modified by the Engineer.

**Item 504:**

Furnish one Field Office and a Laboratory (Type B) at the project site, one Field Laboratory (Type A) at the concrete batch plant and one Asphalt Mix Control Laboratory (Type D) at the asphalt mixing plant.

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Meet the dimensional requirements specified for a Field Laboratory (Type A) for the Asphalt Mix Control Laboratory (Type D).

Provide one local phone line to the field office. Supply one phone jack and one telephone per each room in the field office. The cost of the phone installation and various monthly phone service charges will be the contractor's responsibility.

Parking shall be provided for 4 vehicles, chain link fencing will be provided around the field office and parking areas.

Provide an all in one printer/scanner/fax/copier with software that is compatible with TxDOT equipment, cost not in excess of \$300. This is subsidiary to the bid item.

**Item 506:**

If temporary construction stream crossings are allowed under a Nationwide Permit, submit in writing for approval the type and location of each temporary stream crossing. Use temporary bridges, timber mats, or other structurally sound and non-eroding material for temporary stream crossings. A temporary culvert crossing will consist of storm sewer pipes and 4- to 8-inch nominal size rock. Temporary stream crossings must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality. Remove the temporary stream crossings in their entirety and return the affected areas to their pre-existing elevation. All work and materials use for temporary construction stream crossings will not be paid for directly but are subsidiary to pertinent Items.

SW3P Maintenance Reports are made every seven calendar days. Make corrections as soon as possible before the next anticipated rain event or within seven calendar days after being able to enter the site to work for each BMP. A BMP site being "Too Wet to Work" is the only acceptable reason for not accomplishing the corrections with the seven calendar day time limit and should be thoroughly documented on Form 2118. If maintenance corrections are not made within this time frame then all work will cease, time charges will continue until SW3P is brought into compliance and is documented on Form 2118 after TxDOT review.

This in no way releases the contractor of liability for noncompliance.

Obtain from the Engineer a copy of the project's TPDES Storm Water Program and Notice of Intent or Construction Site Notice. Laminate the sheets and bond with adhesive to 36" X 48" plywood sign blanks. Ensure the sheets remain dry. Apply Type C Blue reflective sheeting as the background and add the text "SW3P" in 5" white lettering, centered at the top. Attach the signs to approved temporary mounts and locate at each of the project limits or as directed by the Engineer. SW3P Signs, maintenance, and repostings will be subsidiary to Item 502.

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**Item 508:**

Testing of materials used in the construction of a temporary detour may be waived when approved by the Engineer.

**Item 512:**

Contact Deborah Hicks at (972) 225-2387 to pick-up and return concrete traffic barrier from the storage area located at SH 310 and IH 45. Number and repair concrete traffic barrier prior to returning to stockpile area. Provide necessary connection hardware for installation of concrete traffic barrier. Retain possession of connection hardware provided for this project. Remove damaged barrier from the project. This work is subsidiary to Item 512.

Furnish pre-cast F Shape Barrier with drainage slots as detailed on the Concrete Safety Barrier Standards. Submit for approval the type of barrier joint connection proposed for the project. Retain possession of the barrier at the end of the project.

The contractor may obtain portable CTB to be used on the project from the existing CTB stockpile within the project limits. Any CTB not used shall be moved to the TxDOT stockpile at SH 310 and IH45. At the end of the project all non-permanent CTB shall be moved to the same stockpile.

CSB (1) to T501 rail transition will not be paid for separately, but will be paid for under T501 pay item.

T414 (SPL) to T501 rail transition will not be paid for separately, but will be paid for under T501 pay item.

**Item 529:**

Provide grooved joints at 10-foot intervals and  $\frac{3}{4}$  inch expansion joint material for doweled curb at the same locations as on the existing pavement.

For Curb and Gutter sections, provide grooved joints at 10-foot intervals and  $\frac{3}{4}$  inch expansion joint material at a maximum of 50-foot centers and at all radius points and inlets.

Curb and Gutter transitions will be paid for by the foot at the unit price for the corresponding curb or curb and gutter section.

Saw joints at the same location as on the existing pavement.

Curb and Gutter (Dowel) (Ty 2) will be used on this project.

**Item 536:**

Use Class "B" concrete for concrete medians and directional islands.

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**Item 540:**

Furnish one type of post throughout the project except as specifically noted in the plans.

**Item 542:**

Salvage metal beam guard fence removed from this project and haul to and stockpile at 505 S. IH 45, Hutchins, Texas 75141. The work involved in hauling this material will not be paid for directly, but will be considered subsidiary to this item.

Remove or cut off existing anchor bolts and fill holes with grout in bridge slabs as directed.

**Item 545:**

The contractor has the option of providing FASTRACC (N) or FASTRACC (W), or REACT (N) 350 HS – S or REACT (W) W 60 where the plan set calls for "TRACC" or "WIDE TRACC.

Stockpile crash cushion attenuators at 505 S. IH 45, Hutchins, Texas 75141. The work involved in hauling and handling this material will not be paid for directly, but will be considered subsidiary to this item.

**Item 556:**

The unit price bid per linear foot of "pipe underdrain" shall include the cost of making connections to storm sewer lines.

Place bell and spigot type pipe with an open joint of approximately  $\frac{3}{4}$  inch.

In the event that Type 5 Underdrain Pipe is bid, make the connection as shown in the plans. The cost of making the connection will be considered subsidiary to this item.

The requirements for decantation of filter material are deleted for this project.

**Item 585:**

Use Surface Test Type A on all intersections and driveways.

Use Surface Test Type B pay adjustment schedule 2 on the rigid pavements travel lanes.

Use Surface Test Type B pay adjustment schedule 1 on the flexible pavements travel lanes.

Use Surface Test Type B pay adjustment schedule 3 on the service roads.

Use Surface Test Type B pay adjustment schedule 2 on the ramps.

Project Description			Recommended Pay Adjustment Schedule	
New Construction or Major Rehabilitation (IH, US, Multilane Divided Highways)	Rigid Pavements	CRCP (Main lanes)	2	
		CPCD or CRCP (Frontage Roads)	3	
	Flexible Pavements with a total HMA thickness > 1.5"		1	
Overlays or Minor Rehabilitation	Rigid Pavements (bonded and unbonded concrete overlay)		3	
	Flexible Pavements with total HMA thickness < 1.5" such as an overlay with a Permeable Friction Course (PFC). Note that in some cases Surface Test Type "A" may be more appropriate for this application.		3*	
	Flexible Pavements Total HMA thickness > 1.5"	All roads with posted speed < 45 mph		3*
		When there are 2 or more smoothness opportunities	All highway classifications other than 2-lane undivided	1*
			2-lane undivided highways	2*
		When there is only 1 smoothness opportunities	All highway classifications other than 2-lane undivided	2*
			2-lane undivided highways	3*

**Item 610:**

Provide to the Engineer, in addition to any submittals required by the specifications and elsewhere in the general notes, a list of pre-qualified material to be used on the project.

Complete lighting in the initial stages of construction. Make every effort to keep the jobsite lit for the duration of the project

Use luminaire ballasts rated for operation at 480 volts for Roadway Illumination.

The luminaires to be removed under this item contain capacitors that may use polychlorinated biphenyl (PCB) as an insulating oil. PCB has been declared a hazardous substance by the EPA. Place all luminaires to be removed on the right of way. The Department will remove all capacitors from the luminaires. Assume all unlabeled capacitors to contain PCB. Take measures to prevent capacitor enclosures from being punctured or otherwise damaged. If PCB capacitors are ruptured, use proper procedures and personnel protective equipment, in accordance with federal and state guidelines.

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**Item 618:**

The location of conduits and ground boxes are diagrammatic only and may be shifted to accommodate field conditions as directed.

Place conduit under existing pavement by an approved boring method. Do not place boring pits closer than 2 feet from the edge of the pavement unless otherwise directed. Do not use water jetting. When boring is used for under pavement conduit installations, the maximum allowable over-cut is 1" in diameter. When conduits are bored, do not exceed 18 inches in the vertical and horizontal tolerances as measured from the intended target point.

Do not use a pneumatically driven device for punching holes beneath the pavement (commonly known as a "missile").

Furnish and install a non-metallic pull rope in conduit runs in excess of 50 feet.

Use a colored cleaner-primer on all PVC to PVC joints before application of PVC cement.

Seal all conduit ends with a permanently soft, non-toxic duct seal. Use a duct seal that does not adversely affect other plastic materials or corrode metals.

When holes are drilled through concrete structures, use a coring device. Do not use masonry or concrete drills.

Structurally mount junction boxes as shown on the plans. When used for traffic signal installations, use boxes 12"x12"x8", or as approved. The boxes shall not be paid for directly, but are subsidiary to this Item.

Use conduit hangers for 3 inch and larger conduit when hanging conduit from structures.

Install non-metallic pull ropes in conduit installed for future use and cap using standard weather-tight conduit caps, as approved. This work will not be paid for directly, but is subsidiary to this Item.

**Item 627:**

Use the timber pole heights, as shown on the plans and in the material summary, for bidding purposes only. Coordinate pole locations, and make field measurements before construction to ensure a vertical clearance of 17 to 19 feet from the highest point on the roadway surface to the span. In addition, place the signal heads a minimum of 40 feet and a maximum of 180 feet from the stop line. If the nearest signal must be more than 180 feet from the stop line, place a supplemental near-side signal head. Determine the field measurements and elevations from the actual field location of the poles, considering all above and below ground utilities and existing roadway elevations.

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**Item 628:**

Coordinate with the appropriate utility company during the first three weeks of the project lead-time period allowing adequate time for any necessary utility adjustments, transformer installation, etc. Consider this work subsidiary to Item 628.

Blast clean the service pole pedestals in conformance with Class "A" blast cleaning as defined in standard specification Item 446.

Label the service enclosures indicating service address as well as all required information as shown on the Electrical Detail (ED) standard sheets. Labeling shall be silk screening or other acceptable method. This work will not be paid for directly, but is subsidiary to this Item.

When concrete for service pole foundations is required, use Class A in accordance with Item 421, "Concrete for Structures", except consider the concrete subsidiary to Item 628 for payment purposes. When reinforcing steel for service pole foundations is required, it will be in accordance with Item 440, "Reinforcing Steel", except consider the steel subsidiary to Item 628 for payment purposes.

Use only white insulated wire for neutral wire.

Bill the electrical service power usage to the Texas Department of Transportation.

**Item 636:**

Manufacture all white legends using Clearview font on overhead and large ground-mounted guide signs. This includes destinations, cardinal directions, exit information and exit numbers. Use the font shown on the existing standard sheets for all route markers (including interstate shields) and "Exit Only" panel information.

Use Type D Super High Specific Intensity (non-fluorescent Prismatic) sheeting for legends and borders on large ground-mounted guide signs, conforming to DMS-8300, Flat Reflective Sheeting. Use ASTM Type VIII and Type IX. Use Type C High Specific Intensity sheeting for the background on large ground-mounted guide signs, conforming to DMS-8300, Flat Surface Reflective Sheeting.

Affix a sign identification decal to the back of all signs in accordance with Item 643.

Attach sheeting applied to extruded aluminum panels to each individual extrusion. Lap each extrusion's horizontal edge with sheeting and do not bridge horizontal gaps between extrusions.

**Item 644:**

Install all small sign assemblies with the "Triangular Slipbase System" as shown on the Dallas District standard sheet SMD(SLIP-1)-02(DAL).

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**Items 644 and 647:**

Prior to taking elevations to determine lengths for fabrication of sign posts and/or sign support towers, obtain verification of all proposed locations.

Provide field galvanizing and metallizing equipment, as per Item 445, at all times and make repairs to galvanized surfaces according to the above specification item at intervals as directed.

Base all sign support quantities for pipe and structural steel on the dimensions shown on the approved shop drawings or as approved in writing. Make calculations for measurement of the sign support quantities from the approved shop drawing in accordance with Article 9.1 of the standard specifications. Measure increases or decreases in quantities caused by changes in design after the shop drawings are approved as specified and revised quantities will be the basis for payment.

After sign supports with signs attached have been erected, wash individual units requiring cleaning with an approved cleaning solution to remove all grease, oil, dirt, smears, streaks, and other foreign particles.

Torque the anchor bolts for only the Exit Gore signs to 60 foot-pounds.

**Item 656:**

Form a 3/4-inch chamfer on the top edge of each signal pole foundation.

Probe for utilities and underground structures prior to drilling foundations. Foundations shall be paid for once regardless of extra work caused by obstructions.

**Item 666:**

Provide Type III Glass Traffic Beads that meet the requirements of Departmental Materials Specifications DMS-8290.

**Item 672:**

Black adhesive will be used on asphalt pavements. White adhesive will be used on concrete pavements.

**Item 677:**

Grinding of pavements is not allowed to eliminate pavement markings.

Placement of paint or thermo is not allowed to eliminate pavement markings.

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**Item 680:**

Requirements for this Item include the following work, all of which are subsidiary to this Item:

1. Furnish and install all sign panels for mounting on signal poles, mast arms, and span wires. Fabricate the sign panels in accordance with Item 636, and mount with Astro-Sign Brac, Signfix aluminum channel, or equal as approved by the Engineer. Submit five (5) sets of shop drawings for street name signs.  
Furnish and install all other signs in accordance to Item 636. Furnish all mounting hardware for all signs. Mount signs with Astro-Sign Brac, Signfix aluminum channel, or equal as approved by the Engineer.
2. Provide submittal literature for all traffic signal equipment before installation.
3. Have a qualified technician on the project site to place the traffic signal in operation.
4. Use qualified personnel to respond to and diagnose all trouble calls during the thirty-day test period. Repair any malfunction to Contractor-supplied signal equipment. Provide to the Engineer a local telephone number, not subject to frequent changes and available on a 24-hour basis, for reporting trouble calls. Response time to reported calls must be less than 2 hours. Make appropriate repairs within 24 hours. Place a logbook in the controller cabinet and keep a record of each trouble call reported. Notify the Engineer of each trouble call. Do not clear the error log in the conflict monitor during the thirty-day test period without approval.
5. Install the supplied traffic signal controller and cabinet.
6. Connect all field wiring to the controller assembly. The District will also program the controller for operation, hook up the conflict monitor, detector units, and other equipment, and turn on the controller. Pick up the signal cabinet from the District Signal Shop.
7. Install the controller cabinet in an orientation as directed.  
Notify the District Signal Maintenance Office at (214)320-6682 and Construction Office at (214)320-6694 one week before beginning any work involving traffic signals.

**Item 681:**

Requirements for this Item include the following work, all of which are subsidiary to this Item:

1. Re-guy signal heads and re-strap the cable after making adjustments to head locations. Accomplish relocation of signal heads for a phase change during the same day.
2. Bottom tether cable for signal heads and signs will not be required.

3. Provide submittal literature for all traffic signal equipment before installation. Install the contractor supplied traffic signal controller and cabinet. Connect all field-wiring to the controller assembly. The District will program the controller for operation, hook up the conflict monitor, hook up detector units and other equipment, and turn on the controller. Pick up the signal cabinet from the District Signal Shop. Have a qualified technician and a representative from the controller supplier on the project site to place the traffic signals in operation.
4. Furnish and install a new eight-phase NEMA controller, meeting the requirements of Departmental Materials Specifications DMS-11170, in a pole-mounted cabinet. Provide a pole-mounted cabinet that is 38 inches wide, 54 inches high, 26 inches deep, and that has three brackets for pole mounting. Install the traffic signal controller and cabinet. Connect all field-wiring to the controller assembly. The District will program the controller for operation, hook up the conflict monitor, detector units, and other equipment, and turn on the controller. Have a qualified technician and a representative from the controller supplier on the project site to place the traffic signals in operation.
5. Operation and maintenance of the temporary signal includes repair of Contractor-supplied equipment, providing of telephone number to the District for trouble calls, adjustment of timing, and the generation and implementation of traffic signal timing during all phases of the project. Make traffic turning movement volume counts on weekdays between 6 AM and 9 AM, between 11 AM and 1 PM, and between 4 PM and 7 PM and on Saturday and Sunday between 10 AM and 4 PM to generate the signal timing. Signal may be required to operate fixed-time. Use the timing plan generation software known as "Synchro" to generate the timing cycle lengths and splits. Prepare the timing plan under the supervision of a registered Traffic Engineer, and submit for approval. Load the approved timing plan into the controller and fine-tune the timing with field observations. Make timing adjustments for capacity and roadway alignment changes.
6. Salvage controller and cabinet to TxDOT when permanent signal is operational.

**Item 682:**

Install signal head attachments so that the wiring to each signal head passes from the mast arm through the attachment hardware to the signal head. Do not leave cable or wiring exposed.

Provide signal head attachments that allow for adjustment about the horizontal and vertical axis.

Provide aluminum signal heads and aluminum tubing in the following color: Federal Yellow #13538 of Federal Standard 595. Provide back plates, louvers, and the inside of visors with a flat black finish. Provide polycarbonate back plates for all traffic signal heads.

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Turn down signal heads or cover with burlap or other material, as approved, until traffic signal is placed in operation.

Mount signal heads level and plumb and aimed as directed.

**Item 684:**

Provide stranded 14 AWG Type A signal cables

Provide a separate multi-conductor signal cable (14 AWG) inside pedestal poles and signal poles from the terminal strip to each signal head as shown on the plans.

Identify each cable as shown on the plans (cable 1, etc.) with permanent marking labels (Panduit Type PLM standard single marker tie, Thomas&Betts Type 548M, or equal) at each ground box, pole base, and controller.

**Item 686:**

Provide 12 circuit Buchanan Type 112SN, Kulka Type 985-GP-12 CU, or equal terminal strips in the signal pole access compartment. Provide additional terminal strips of 8 circuits each when more than 12 circuits are required.

Mark pole shafts and mast arms with the identification numbers from the plans to facilitate field-assembly. Identify pole shafts and mast arms by intersection for projects with multiple intersections.

Provide nuts on top and bottom (double nuts) of the base plate as shown on the plans.

Set anchor bolts for mast arm signal poles and strain poles so that two are in tension and two are in compression. Obtain approval of anchor bolt placement before placing concrete.

Use the traffic signal pole heights and mast arm lengths shown on the plans and in the material summary for bidding purposes only. Make field measurements to determine the actual pole height and mast arm length required. Provide vertical clearance of 17 to 19 feet from the roadway to the lowest point of the signal head or mast arm. Place signal heads 40 feet minimum and 180 feet maximum from the stop line. If the nearest signal is more than 180 feet from the stop line, place a supplemental near-side signal head. Determine the field measurements and elevations from the actual field location of the poles, considering all above and below ground utilities and existing roadway elevations.

Provide vibration dampers for mast arms 28 feet long and longer. Use dampers 18"x48" for arms up to 48 feet long, and 16"x66" for longer mast arms. Install using Astro-sign Brac, Signfix aluminum channel, or equal, at a maximum of 3 feet from the end of the mast arm.

Provide 3 pipe plugs for wiring access on strain poles.

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The Contractor shall provide state standard galvanized traffic signal poles to the Town of Sunnyvale at least 6 weeks before installation for powder coating. Upon completing the powder coating process, the Town of Sunnyvale will be responsible for delivery of the poles back the Contractor. The Contractor shall coordinate all activities with Mr. Ronnie Cox of the Town of Sunnyvale (972-203-4188).

**Item 687:**

Use a 24 inch drilled shaft foundation for all pedestal pole assemblies.

**Item 688:**

Provide pedestrian push button assemblies that have permanent-type signs within the detector unit which indicates which crosswalk signal is actuated. Provide push buttons with a minimum 2 inch convex plunger. Provide a protective shroud encircling the plunger to deter vandalism that is cast as part of the housing cover. Use a plunger that protrudes beyond the shroud a distance adequate to accommodate the switch travel. Verify the location of the push button assemblies and the direction of the arrows on the signs prior to installation.

**Item 730:**

Mow non-paved areas within the project prior to placement of permanent vegetation. Mow up to eight (8) cycles per growing season. The cost of mowing will be considered subsidiary to item 164.

**Item 5610:**

Landscape bollards around the pylons will be subsidiary to this item.

**Item 6006:**

Supply one spare uni-directional antenna, and two spare spread spectrum radios. Deliver to the District Signal Shop at 4777 E. Hwy 80, Mesquite.

Install the coaxial cable so that it is not exposed to the outdoor environment.

Provide the latest version of the applicable SSR diagnostic software to the District on 3.5 inch disks, and ensure that it will operate under DOS 6.2 or Windows 98 operating systems.

**Item 6007:**

Salvage the existing traffic signals at SH 352 & US 80 as shown on the plans. Salvage poles, cabinets, service poles and equipment, exposed conduit, and any other equipment as directed. This equipment remains the property of the Texas Department of Transportation, and is to be stockpiled at a TxDOT maintenance yard as directed. Maintain the operation of the existing traffic signal until directed to remove it.

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Completely remove timber poles not set in concrete without cutting off the pole. Timber poles set in concrete are considered unsalvageable.

**Item 6266:**

Provide a Video Processor System (VPS) that can provide up to thirty-two (32) detector outputs to the controller from up to eight (8) camera/video processor units (C/VPU). Route the detector outputs through the detector panel and the detector test switches. For each C/VPU, provide a field of view with a minimum of thirty-two (32) virtual detection zones for vehicle detection.

(Note: Use one processor system per intersection)

Wire the outputs as follows:

Card1		Card2	
Output	Detector	Output	Detector
1	1-1	17	3-1
2	6-1	18	8-1
3	6-2	19	8-2
4	6-3	20	8-3
5	6-4	21	8-4
6	Spare	22	Spare
7	SD1	23	SD5
8	SD2	24	SD6
9	5-1	25	7-1
10	2-1	26	4-1
11	2-2	27	4-2
12	2-3	28	4-3
13	2-4	29	4-4
14	Spare	30	Spare
15	SD3	31	SD7
16	SD4	32	SD8

\*SD: System Detector

Provide ten (10) cameras for this project, including one (1) spare camera.

Central control will be located at the District Signal Shop. The District will provide a workstation computer (IBM 300PL), telephone line and modem at the central location. Provide all software and other necessary equipment. Transmit video to the central computer. Codec or other equipment to enhance the video performance is not required.

Provide a set-up system. Load required set-up software onto all of the District Signal Shop's notebook computers and provide all necessary licensing. The Contractor does not provide computers as part of the set-up system.

Provide phase red and green load switch outputs from up to eight (8) phases of a NEMA TS2 Type 2 controller as inputs to the VPU for use with internal detector extend/delay

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timing functions. Ensure the C/VPU is able to condition the detector outputs and detection zones based on the state of the associated phase number and color.

Supply a package that will operate with Windows 98 and NT and provide the functionality defined in both sections 7.0 and 9.0 in both a direct connect and remote communications mode. Ensure the software resident in the C/VPU and the personal computer is capable of transmitting and receiving all information needed for zone set up, monitoring vehicle detection by viewing flashing detection zone overlays, and uploading/downloading and interrogating all stored data within the C/VPU. Ensure remote communications with the C/VPU is possible with the addition of external communication devices (modem, Codec, etc.) using the RS-232 and video output ports on the front of the VPU.

Ensure the C/VPU operational software is stored internally in flash memory and capable of being updated without the removal and replacement of memory devices.

Provide a camera interface panel mounted to the wall of the cabinet for protecting the camera video and power inputs/outputs. The panel shall contain as a minimum; an EDCO ACP-340 for the camera and VIVDS Processor unit power, with an on/off switch, a convenience outlet protected by the ACP-340, a 10-amp circuit breaker, and a terminal strip with a minimum of six (6) 8-32 binder head screws. The AC connections shall be protected using a piece of 1/8-inch plexi-glass.

Install the VIVDS detection zones as directed. Have qualified personnel on site at the time of the signal turn-on to assist with the installation of detection zones.

If the camera locations shown in the plans do not allow for proper sight of the proposed detection zones, relocate the cameras as needed and as directed. This labor and material cost will not be paid separately, but is subsidiary to this item.

The Video Processor Unit (VPU) may reside inside the camera housing. Use video output from the C/VPU in color or black/white with active detection zones overlaid on full motion video.

Provide Field Communications Link required by the manufacturer of the video detection system. These cables will be paid for as the type shown in the plans regardless of actual type of cable.

**Required Items, Item 6266:**

Spec. Item	Description	<u>Required</u>	<u>Not Required</u>	State
	<u>Supplied</u>			
	CONFIGURATION			
	Cameras (each)	11		
	Processor System (each)	1		
1.3	REMOTE COMMUNICATIONS LINK	X		
3.5	VIVDS TRAFFIC DATA PARAMETERS		X	
4.3.4.1	NEMA TS1 DETECTOR INTERFACE			
	16 Detector Outputs		X	
	32 Detector Outputs	X		
6.0	FIELD COMMUNICATIONS LINK	X		
7.0	FIELD SET-UP SYSTEM	X		
8.0	TEMPORARY USE AND RETESTING		X	
9.0	OPERATION FROM CENTRAL			
	Workstation Computer & Peripherals		X	
	Central Control Software	X		
10.3	INSTALLATION AND TRAINING			
	Eight (8) Hours		X	
	Sixteen (16) Hours	X		

The list of material below is for the Contractor's information only.  
 It is the responsibility of the Contractor to verify  
 all items and quantities listed below.

**LIST OF MATERIAL/LABOR  
SUBSIDIARY TO ITEM 680**

DESCRIPTION	UNIT	QUANTITY
250W HPS LUMINAIRE	EA	6
TRAFFIC SIGNAL CONTROLLER FOUNDATION	EA	1
INTERSECTION DISPLAY BOARD	EA	1
REGULATORY SIGN PANEL (R10-12,ETC)	EA	23
SINGLE STREET NAME SIGN PANEL	EA	4

**LIST OF MATERIAL/LABOR  
SUBSIDIARY TO ITEM 681**

DESCRIPTION	UNIT	QUANTITY
SEE TEMPORARY SIGNAL LAYOUTS FOR SOME QUANTITIES NOT SHOWN HERE		
CABLE STRAPS	EA	1530
GROUND ANCHORS	EA	6
YELLOW PLASTIC GUY GUARD	EA	12
DOUBLE EYE ANCHOR ROD	EA	6
5/8" X 8' COPPERCLAD GROUND ROD W/CLAMP	EA	2
2 INCH WEATHERHEAD	EA	8
8 PHASE NEMA CONTROLLER COMPLETE W/ CABINET AND ACCESSORIES (TEMPORARY)	EA	2

**LIST OF MATERIAL  
FURNISHED BY THE DISTRICT**

DESCRIPTION	UNIT	QUANTITY
8 PHASE NEMA CONTROLLER COMPLETE W/ CABINET AND ACCESSORIES (PERMANENT)	EA	1