

NOTIFICATION OF ADDENDUM

ADDENDUM NO. 1

DATED 9/29/2022

Control	0009-12-220, ETC.
Project	C 9-12-220, ETC.
Highway	IH 30
County	ROCKWALL

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: C 9-12-220

CONTROL: 0009-12-220

COUNTY: ROCKWALL

LETTING: 10/07/2022

REFERENCE NO: 0927

PROPOSAL ADDENDUMS

PROPOSAL COVER

BID INSERTS (SH. NO.: ALL)

GENERAL NOTES (SH. NO.: ALL)

SPEC LIST (SH. NO.:)

SPECIAL PROVISIONS:)

ADDED:)

DELETED:

SPECIAL SPECIFICATIONS:

ADDED:

DELETED:

OTHER: SEE CHANGES OUTLINED BELOW

DESCRIPTION OF ABOVE CHANGES
(INCLUDING PLANS SHEET CHANGES)

**** BID INSERTS ****

REVISED QUANTITIES FOR THE FOLLOWING BID ITEMS:

416-6021, 416-6022, 416-6023, 502-6001, 545-6010, 636-6003
647-6003, 650-6038, 650-6045, 730-6107, 734-6002, 735-6001
735-6005, 738-6003, 738-6007, 3077-6075, 400-6006, 462-6007

GENERAL NOTES:REVISED ALL

PLAN SHEETS:

THE FOLLOWING SHEETS HAVE BEEN REPLACED

0018 - 0023, 0026, 0027, 0029, 0029A - 0029S, 0030, 0030A - 0030L,
0038, 0039, 0041, 0046, 0046A, 0046B, 0062, 0064, 0080, 0081, 0969 - 0971,
1018, 2070, 2074 - 2076, 2081

_____.

Printed Name of Authorized Signer: _____

Signature of Authorized Signer: _____ Date: _____

PROJECT C 9-12-220 , ETC.
 COUNTY ROCKWALL

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

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	100	6002		PREPARING ROW DOLLARS and CENTS	STA	243.740	1
	104	6001		REMOVING CONC (PAV) DOLLARS and CENTS	SY	69,336.000	2
	104	6009		REMOVING CONC (RIPRAP) DOLLARS and CENTS	SY	2,359.000	3
	104	6011		REMOVING CONC (MEDIANS) DOLLARS and CENTS	SY	560.000	4
	104	6015		REMOVING CONC (SIDEWALKS) DOLLARS and CENTS	SY	443.000	5
	104	6017		REMOVING CONC (DRIVEWAYS) DOLLARS and CENTS	SY	9,516.000	6
	104	6022		REMOVING CONC (CURB AND GUTTER) DOLLARS and CENTS	LF	14,323.000	7
	104	6023		REMOVING CONC (CTB) DOLLARS and CENTS	LF	28,234.000	8
	104	6024		REMOVING CONC (RETAINING WALLS) DOLLARS and CENTS	SY	4,537.000	9
	104	6025		REMOVE CONC (WINGWALL) DOLLARS and CENTS	CY	40.000	10

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	104	6034		REMOVING CONC (COPING) DOLLARS and CENTS	LF	1,799.000	11
	104	6037		REMOVE CONC (RAIL) DOLLARS and CENTS	LF	1,764.000	12
	104	6040		REMOVING CONC (PAVERS) DOLLARS and CENTS	SY	329.000	13
	104	6045		REMOVE CONC (MISC) DOLLARS and CENTS	EA	2.000	14
	105	6011		REMOVING STAB BASE AND ASPH PAV (2"- 6") DOLLARS and CENTS	SY	13,319.000	15
	105	6014		REMOVING STAB BASE & ASPH PAV (7"-12") DOLLARS and CENTS	SY	83,284.000	16
	105	6026		REMOVE STAB BASE & ASPH PAV (13"-18") DOLLARS and CENTS	SY	12,517.000	17
	110	6001		EXCAVATION (ROADWAY) DOLLARS and CENTS	CY	59,660.000	18
	132	6025		EMBANKMENT (FINAL) (DENS CONT) (TY C1) DOLLARS and CENTS	CY	107,199.000	19
	132	6026		EMBANKMENT (FINAL) (DENS CONT) (TY C2) DOLLARS and CENTS	CY	59,708.000	20
	132	6030		EMBANKMENT (FINAL)(DENS CONT)(TY C3) DOLLARS and CENTS	CY	638.000	21

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	161	6017		COMPOST MANUF TOPSOIL (4") DOLLARS and CENTS	SY	136,354.000	22
	162	6002		BLOCK SODDING DOLLARS and CENTS	SY	136,354.000	23
	164	6051		DRILL SEED (TEMP)(WARM OR COOL) DOLLARS and CENTS	SY	136,354.000	24
	168	6001		VEGETATIVE WATERING DOLLARS and CENTS	MG	40,567.000	25
	260	6002		LIME (HYDRATED LIME (SLURRY)) DOLLARS and CENTS	TON	3,789.000	26
	260	6011		LIME TRT (EXST MATL) (12") DOLLARS and CENTS	SY	85,892.000	27
	260	6027		LIME TRT (EXST MATL)(8") DOLLARS and CENTS	SY	98,777.000	28
	276	6181		CEM TRT(PLNT MX) (CL L)(TYD)(GR1-2)(6") DOLLARS and CENTS	SY	85,892.000	29
	351	6040		FLEX PAVEMNT STRUCT REPAIR (0" TO 12") DOLLARS and CENTS	SY	6,000.000	30
	360	6007		CONC PVMT (CONT REINF - CRCP) (13") DOLLARS and CENTS	SY	86,225.000	31
	360	6014		CONC PVMT (CONT REINF - CRCP) (11.5") DOLLARS and CENTS	SY	90,801.000	32
	360	6064		CONC PVMT (CONT REINF-CRCP)(HES)(15") DOLLARS and CENTS	SY	12,461.000	33

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	361	6067		FULL-DEPTH REPAIR CRCP (13"-15") DOLLARS and CENTS	SY	1,500.000	34
	400	6005		CEM STABIL BKFL DOLLARS and CENTS	CY	2,786.000	35
	400	6006		CUT & RESTORING PAV DOLLARS and CENTS	SY	181.000	36
	401	6001		FLOWABLE BACKFILL DOLLARS and CENTS	CY	201.900	37
	402	6001		TRENCH EXCAVATION PROTECTION DOLLARS and CENTS	LF	24,649.000	38
	403	6001		TEMPORARY SPL SHORING DOLLARS and CENTS	SF	45,511.000	39
	410	6001		SOIL NAIL ANCHORS DOLLARS and CENTS	LF	175.000	40
	416	6001		DRILL SHAFT (18 IN) DOLLARS and CENTS	LF	553.000	41
	416	6002		DRILL SHAFT (24 IN) DOLLARS and CENTS	LF	32,471.000	42
	416	6003		DRILL SHAFT (30 IN) DOLLARS and CENTS	LF	36,223.000	43
	416	6004		DRILL SHAFT (36 IN) DOLLARS and CENTS	LF	3,174.000	44
	416	6005		DRILL SHAFT (42 IN) DOLLARS and CENTS	LF	5,035.000	45

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	416	6006		DRILL SHAFT (48 IN) DOLLARS and CENTS	LF	70,201.000	46
	416	6007		DRILL SHAFT (54 IN) DOLLARS and CENTS	LF	946.000	47
	416	6008		DRILL SHAFT (60 IN) DOLLARS and CENTS	LF	399.000	48
	416	6009		DRILL SHAFT (66 IN) DOLLARS and CENTS	LF	170.000	49
	416	6010		DRILL SHAFT (72 IN) DOLLARS and CENTS	LF	572.000	50
	416	6011		DRILL SHAFT (78 IN) DOLLARS and CENTS	LF	336.000	51
	416	6019		DRILL SHAFT (SIGN MTS) (30 IN) DOLLARS and CENTS	LF	100.000	52
	416	6020		DRILL SHAFT (SIGN MTS) (36 IN) DOLLARS and CENTS	LF	44.000	53
	416	6021		DRILL SHAFT (SIGN MTS) (42 IN) DOLLARS and CENTS	LF	83.000	54
	416	6022		DRILL SHAFT (SIGN MTS) (48 IN) DOLLARS and CENTS	LF	307.000	55
	416	6023		DRILL SHAFT (SIGN MTS) (54 IN) DOLLARS and CENTS	LF	81.000	56
	416	6026		DRILL SHAFT (HIGH MAST POLE) (60 IN) DOLLARS and CENTS	LF	187.000	57

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	416	6029		DRILL SHAFT (RDWY ILL POLE) (30 IN) DOLLARS and CENTS	LF	174.000	58
	416	6031		DRILL SHAFT (TRF SIG POLE) (30 IN) DOLLARS and CENTS	LF	11.000	59
	416	6032		DRILL SHAFT (TRF SIG POLE) (36 IN) DOLLARS and CENTS	LF	98.000	60
	416	6034		DRILL SHAFT (TRF SIG POLE) (48 IN) DOLLARS and CENTS	LF	88.000	61
	420	6002	001	CL A CONC (MISC) DOLLARS and CENTS	CY	2.000	62
	420	6010	001	CL A CONC (PLUG) DOLLARS and CENTS	EA	10.000	63
	420	6011	001	CL B CONC (FLUME) DOLLARS and CENTS	CY	213.600	64
	420	6014	001	CL C CONC (ABUT)(HPC) DOLLARS and CENTS	CY	564.800	65
	420	6020	001	CL C CONC (ABUT)(HPC)(EXTEND) DOLLARS and CENTS	CY	55.100	66
	420	6029	001	CL C CONC (CAP) DOLLARS and CENTS	CY	307.400	67
	420	6030	001	CL C CONC (CAP)(HPC) DOLLARS and CENTS	CY	12,471.200	68
	420	6032	001	CL C CONC (CAP)(HPC)(MASS) DOLLARS and CENTS	CY	564.900	69

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	420	6038	001	CL C CONC (COLUMN)(HPC) DOLLARS and CENTS	CY	1,967.100	70
	420	6040	001	CL C CONC (COLUMN)(HPC)(MASS) DOLLARS and CENTS	CY	154.900	71
	420	6045	001	CL C CONC (FOOTING)(MASS) DOLLARS and CENTS	CY	29.600	72
	420	6062	001	CL C CONC (RETAINING WALL) DOLLARS and CENTS	CY	40.000	73
	420	6066	001	CL C CONC (RAIL FOUNDATION) DOLLARS and CENTS	CY	624.000	74
	420	6113	001	CL H CONC (PT CAP)(HPC)(MASS) DOLLARS and CENTS	CY	1,050.800	75
	420	6156	001	CL C CONC (WEBWALL) DOLLARS and CENTS	CY	1.200	76
	422	6002		REINF CONC SLAB (HPC) DOLLARS and CENTS	SF	1,455,444.00	77
	422	6004		REINF CONC SLAB (EXTEND SLAB)(HPC) DOLLARS and CENTS	SF	38,542.000	78
	422	6012		BRIDGE MEDIAN (HPC) DOLLARS and CENTS	SF	1,493.000	79
	422	6014		BRIDGE SIDEWALK (HPC) DOLLARS and CENTS	SF	4,006.000	80
	422	6016		APPROACH SLAB (HPC) DOLLARS and CENTS	CY	1,011.000	81

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	422	6040		REINF CONC SLAB(SLAB BEAM)(EXT SLAB)HPC DOLLARS and CENTS	SF	242,909.000	82
	423	6001		RETAINING WALL (MSE) DOLLARS and CENTS	SF	55,867.000	83
	423	6007		RETAINING WALL (DRILL SHAFT) (FACIA) DOLLARS and CENTS	SF	31,913.000	84
	423	6008		RETAINING WALL (CAST - IN - PLACE) DOLLARS and CENTS	SF	2,740.000	85
	425	6010	001	PRESTR CONC SLAB BEAM (5SB12) DOLLARS and CENTS	LF	44,386.080	86
	425	6036	001	PRESTR CONC GIRDER (TX34) DOLLARS and CENTS	LF	9,299.600	87
	425	6038	001	PRESTR CONC GIRDER (TX46) DOLLARS and CENTS	LF	3,105.270	88
	425	6039	001	PRESTR CONC GIRDER (TX54) DOLLARS and CENTS	LF	6,484.720	89
	425	6041	001	PRESTR CONC GIRDER (TX70) DOLLARS and CENTS	LF	137,283.540	90
	426	6007	005	PT FOR CAP DOLLARS and CENTS	EA	2.000	91
	427	6004	003	SILICONE RESIN PAINT FINISH DOLLARS and CENTS	SF	125,429.000	92
	432	6001		RIPRAP (CONC)(4 IN) DOLLARS and CENTS	CY	2,463.000	93

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	ITEM NO	DESC CODE	S.P. NO.				
	432	6002		RIPRAP (CONC)(5 IN) DOLLARS and CENTS	CY	526.000	94
	432	6033		RIPRAP (STONE PROTECTION)(18 IN) DOLLARS and CENTS	CY	7,787.000	95
	432	6045		RIPRAP (MOW STRIP)(4 IN) DOLLARS and CENTS	CY	201.000	96
	434	6002		ELASTOMERIC BEARING (LAMINATED) DOLLARS and CENTS	EA	246.000	97
	442	6007	001	STR STEEL (MISC NON - BRIDGE) DOLLARS and CENTS	LB	14,718.000	98
	450	6007	001	RAIL (TY T223)(HPC) DOLLARS and CENTS	LF	24,192.600	99
	450	6023	001	RAIL (TY SSTR) DOLLARS and CENTS	LF	17,259.400	100
	450	6024	001	RAIL (TY SSTR)(HPC) DOLLARS and CENTS	LF	39,882.500	101
	450	6030	001	RAIL (TY C221) DOLLARS and CENTS	LF	211.000	102
	450	6031	001	RAIL (TY C221)(HPC) DOLLARS and CENTS	LF	24,708.000	103
	450	6047	001	RAIL (HANDRAIL)(TY A) DOLLARS and CENTS	LF	35.000	104
	450	6051	001	RAIL (HANDRAIL)(TY E) DOLLARS and CENTS	LF	38.000	105

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	450	6054	001	RAIL (TY SSTR) (W/DRAIN SLOTS) DOLLARS and CENTS	LF	4,734.600	106
	450	6103	001	RAIL (TY PR11) DOLLARS and CENTS	LF	1,263.000	107
	450	6119	001	RAIL (CLF-RO) DOLLARS and CENTS	LF	1,685.300	108
	450	6125	001	RAIL (TY T80PP-TS) DOLLARS and CENTS	LF	686.000	109
	454	6018		SEALED EXPANSION JOINT (4 IN) (SEJ - M) DOLLARS and CENTS	LF	2,896.000	110
	454	6019		SEALED EXPANSION JOINT (5 IN) (SEJ - M) DOLLARS and CENTS	LF	1,472.000	111
	454	6021		TYPE A JOINT DOLLARS and CENTS	LF	2,703.000	112
	462	6001	002	CONC BOX CULV (3 FT X 2 FT) DOLLARS and CENTS	LF	339.000	113
	462	6003	002	CONC BOX CULV (4 FT X 2 FT) DOLLARS and CENTS	LF	1,622.000	114
	462	6006	002	CONC BOX CULV (5 FT X 2 FT) DOLLARS and CENTS	LF	913.000	115
	462	6007	002	CONC BOX CULV (5 FT X 3 FT) DOLLARS and CENTS	LF	574.000	116
	462	6010	002	CONC BOX CULV (6 FT X 3 FT) DOLLARS and CENTS	LF	273.000	117

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	462	6020	002	CONC BOX CULV (8 FT X 5 FT) DOLLARS and CENTS	LF	1,067.000	118
	464	6003	001	RC PIPE (CL III)(18 IN) DOLLARS and CENTS	LF	1,874.000	119
	464	6005	001	RC PIPE (CL III)(24 IN) DOLLARS and CENTS	LF	17,036.000	120
	464	6007	001	RC PIPE (CL III)(30 IN) DOLLARS and CENTS	LF	3,091.000	121
	464	6008	001	RC PIPE (CL III)(36 IN) DOLLARS and CENTS	LF	271.000	122
	464	6009	001	RC PIPE (CL III)(42 IN) DOLLARS and CENTS	LF	401.000	123
	464	6010	001	RC PIPE (CL III)(48 IN) DOLLARS and CENTS	LF	83.000	124
	464	6020	001	RC PIPE (CL IV)(36 IN) DOLLARS and CENTS	LF	70.000	125
	464	6025	001	RC PIPE (CL V)(18 IN) DOLLARS and CENTS	LF	696.000	126
	464	6026	001	RC PIPE (CL V)(24 IN) DOLLARS and CENTS	LF	1,829.000	127
	464	6027	001	RC PIPE (CL V)(36 IN) DOLLARS and CENTS	LF	8.000	128
	464	6059	001	RC PIPE (CL V)(30 IN) DOLLARS and CENTS	LF	382.000	129

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	6002	001	MANH (COMPL)(PRM)(48IN) DOLLARS and CENTS	EA	20.000	130
	465	6003	001	MANH (COMPL)(PRM)(60IN) DOLLARS and CENTS	EA	1.000	131
	465	6004	001	MANH (COMPL)(PRM)(72IN) DOLLARS and CENTS	EA	2.000	132
	465	6006	001	JCTBOX(COMPL)(PJB)(4FTX4FT) DOLLARS and CENTS	EA	4.000	133
	465	6007	001	JCTBOX(COMPL)(PJB)(3FTX5FT) DOLLARS and CENTS	EA	8.000	134
	465	6009	001	JCTBOX(COMPL)(PJB)(5FTX5FT) DOLLARS and CENTS	EA	2.000	135
	465	6011	001	JCTBOX(COMPL)(PJB)(6FTX6FT) DOLLARS and CENTS	EA	2.000	136
	465	6013	001	INLET (COMPL)(PCO)(3FT)(NONE) DOLLARS and CENTS	EA	11.000	137
	465	6014	001	INLET (COMPL)(PCO)(3FT)(LEFT) DOLLARS and CENTS	EA	4.000	138
	465	6015	001	INLET (COMPL)(PCO)(3FT)(RIGHT) DOLLARS and CENTS	EA	1.000	139
	465	6016	001	INLET (COMPL)(PCO)(3FT)(BOTH) DOLLARS and CENTS	EA	5.000	140
	465	6022	001	INLET (COMPL)(PCO)(5FT)(LEFT) DOLLARS and CENTS	EA	4.000	141

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	6023	001	INLET (COMPL)(PCO)(5FT)(RIGHT) DOLLARS and CENTS	EA	3.000	142
	465	6024	001	INLET (COMPL)(PCO)(5FT)(BOTH) DOLLARS and CENTS	EA	4.000	143
	465	6029	001	INLET (COMPL)(PCU)(3FT)(NONE) DOLLARS and CENTS	EA	8.000	144
	465	6030	001	INLET (COMPL)(PCU)(3FT)(LEFT) DOLLARS and CENTS	EA	18.000	145
	465	6031	001	INLET (COMPL)(PCU)(3FT)(RIGHT) DOLLARS and CENTS	EA	24.000	146
	465	6032	001	INLET (COMPL)(PCU)(3FT)(BOTH) DOLLARS and CENTS	EA	30.000	147
	465	6033	001	INLET (COMPL)(PCU)(4FT)(NONE) DOLLARS and CENTS	EA	1.000	148
	465	6036	001	INLET (COMPL)(PCU)(4FT)(BOTH) DOLLARS and CENTS	EA	5.000	149
	465	6037	001	INLET (COMPL)(PCU)(5FT)(NONE) DOLLARS and CENTS	EA	1.000	150
	465	6039	001	INLET (COMPL)(PCU)(5FT)(RIGHT) DOLLARS and CENTS	EA	1.000	151
	465	6040	001	INLET (COMPL)(PCU)(5FT)(BOTH) DOLLARS and CENTS	EA	2.000	152
	465	6045	001	INLET (COMPL)(PMBD)(4FT) DOLLARS and CENTS	EA	26.000	153

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	465	6046	001	INLET (COMPL)(PMBD)(5FT) DOLLARS and CENTS	EA	3.000	154
	465	6128	001	INLET (COMPL)(PSL)(FG)(4FTX4FT-4FTX- 4FT) DOLLARS and CENTS	EA	4.000	155
	465	6130	001	INLET (COMPL)(PSL)(FG)(3FTX5FT-3FTX- 5FT) DOLLARS and CENTS	EA	6.000	156
	465	6146	001	INLET(COMPL)(PSL)(SFG)(3FTX3FT-3FTX- 3FT) DOLLARS and CENTS	EA	1.000	157
	465	6147	001	INLET(COMPL)(PSL)(SFG)(4FTX4FT-4FTX- 4FT) DOLLARS and CENTS	EA	44.000	158
	465	6148	001	INLET(COMPL)(PSL)(SFG)(3FTX5FT-3FTX- 5FT) DOLLARS and CENTS	EA	22.000	159
	465	6179	001	INLET (COMPL)(TY MSE2) DOLLARS and CENTS	EA	8.000	160
	465	6225	001	JCT BOX (COMPL)(SPL) DOLLARS and CENTS	EA	2.000	161
	466	6005		HEADWALL (CH - FW - 0) (DIA= 24 IN) DOLLARS and CENTS	EA	1.000	162
	466	6095		HEADWALL (CH - PW - 0) (DIA= 18 IN) DOLLARS and CENTS	EA	4.000	163
	466	6097		HEADWALL (CH - PW - 0) (DIA= 24 IN) DOLLARS and CENTS	EA	1.000	164

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	ITEM NO	DESC CODE	S.P. NO.				
	466	6179		WINGWALL (PW - 1) (HW=4 FT) DOLLARS and CENTS	EA	1.000	165
	466	6180		WINGWALL (PW - 1) (HW=5 FT) DOLLARS and CENTS	EA	1.000	166
	467	6283		SET (TY I)(S= 8 FT)(HW= 7 FT)(3:1) (C) DOLLARS and CENTS	EA	1.000	167
	467	6387		SET (TY II) (24 IN) (RCP) (2: 1) (C) DOLLARS and CENTS	EA	1.000	168
	467	6390		SET (TY II) (24 IN) (RCP) (4: 1) (C) DOLLARS and CENTS	EA	1.000	169
	467	6448		SET (TY II) (36 IN) (RCP) (3: 1) (C) DOLLARS and CENTS	EA	1.000	170
	474	6005		SLOT DRAIN (GAL STL) (18 IN) DOLLARS and CENTS	LF	40.000	171
	476	6015		JACK BOR OR TUN PIPE(24 IN)(RC)(CL V) DOLLARS and CENTS	LF	154.000	172
	476	6021		JACK BOR OR TUN PIPE(30 IN)(RC)(CL V) DOLLARS and CENTS	LF	98.000	173
	476	6026		JACK BOR OR TUN PIPE(36 IN)(RC)(CL V) DOLLARS and CENTS	LF	60.000	174
	476	6077		JACK BOR TUN BOX CULV (6 FT X 3 FT) DOLLARS and CENTS	LF	116.000	175
	479	6003		ADJUSTING MANHOLES & INLETS DOLLARS and CENTS	EA	16.000	176

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	480	6001		CLEAN EXIST CULVERTS DOLLARS and CENTS	EA	2.000	177
	481	6013		PIPE (PVC) (SCH 40) (6 IN) DOLLARS and CENTS	LF	154.000	178
	496	6002		REMOV STR (INLET) DOLLARS and CENTS	EA	43.000	179
	496	6003		REMOV STR (MANHOLE) DOLLARS and CENTS	EA	3.000	180
	496	6004		REMOV STR (SET) DOLLARS and CENTS	EA	12.000	181
	496	6006		REMOV STR (HEADWALL) DOLLARS and CENTS	EA	25.000	182
	496	6007		REMOV STR (PIPE) DOLLARS and CENTS	LF	8,242.000	183
	496	6010		REMOV STR (BRIDGE 100 - 499 FT LENGTH) DOLLARS and CENTS	EA	1.000	184
	496	6025		REMOV STR (APPROACH SLAB) DOLLARS and CENTS	EA	2.000	185
	496	6040		REMOV STR (RET WALL) DOLLARS and CENTS	LF	423.000	186
	500	6001		MOBILIZATION DOLLARS and CENTS	LS	1.000	187
	502	6001	008	BARRICADES, SIGNS AND TRAFFIC HAN- DLING DOLLARS and CENTS	MO	54.000	188

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	506	6002	005	ROCK FILTER DAMS (INSTALL) (TY 2) DOLLARS and CENTS	LF	415.000	189
	506	6003	005	ROCK FILTER DAMS (INSTALL) (TY 3) DOLLARS and CENTS	LF	180.000	190
	506	6011	005	ROCK FILTER DAMS (REMOVE) DOLLARS and CENTS	LF	595.000	191
	506	6020	005	CONSTRUCTION EXITS (INSTALL) (TY 1) DOLLARS and CENTS	SY	6,150.000	192
	506	6024	005	CONSTRUCTION EXITS (REMOVE) DOLLARS and CENTS	SY	6,150.000	193
	506	6038	005	TEMP SEDMT CONT FENCE (INSTALL) DOLLARS and CENTS	LF	28,452.000	194
	506	6039	005	TEMP SEDMT CONT FENCE (REMOVE) DOLLARS and CENTS	LF	28,452.000	195
	506	6040	005	BIODEG EROSN CONT LOGS (INSTL) (8") DOLLARS and CENTS	LF	9,179.000	196
	506	6043	005	BIODEG EROSN CONT LOGS (REMOVE) DOLLARS and CENTS	LF	9,179.000	197
	508	6001		CONSTRUCTING DETOURS DOLLARS and CENTS	SY	51,836.000	198
	512	6005		PORT CTB (FUR & INST)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	35,820.000	199
	512	6009		PORT CTB (FUR & INST)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	15,280.000	200

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	512	6010		PORT CTB (FUR & INST)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	1,260.000	201
	512	6029		PORT CTB (MOVE)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	138,540.000	202
	512	6033		PORT CTB (MOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	57,760.000	203
	512	6034		PORT CTB (MOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	3,200.000	204
	512	6053		PORT CTB (REMOVE)(F-SHAPE)(TY 1) DOLLARS and CENTS	LF	36,720.000	205
	512	6057		PORT CTB (REMOVE)(LOW PROF)(TY 1) DOLLARS and CENTS	LF	15,280.000	206
	512	6058		PORT CTB (REMOVE)(LOW PROF)(TY 2) DOLLARS and CENTS	LF	1,260.000	207
	512	6100		PORT CTB(FUR & INSTL)(F-SHAPE)(TY T) DOLLARS and CENTS	LF	10.000	208
	512	6102		PORT CTB(MOVE)(F-SHAPE)(TY T) DOLLARS and CENTS	LF	10.000	209
	512	6103		PORT CTB(REMOVE)(F-SHAPE)(TY T) DOLLARS and CENTS	LF	10.000	210
	512	6105		PCTB MOVE&RESET(F-SHAPE OR SNGL SLPTY1 DOLLARS and CENTS	LF	898.000	211
	514	6001		PERM CTB (SGL SLOPE) (TY 1) (42) DOLLARS and CENTS	LF	16,156.100	212

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	514	6003		PERM CTB (SGL SLOPE) (TY 3) (42) DOLLARS and CENTS	LF	336.000	213
	529	6001		CONC CURB (TY I) DOLLARS and CENTS	LF	4,438.000	214
	529	6004		CONC CURB (MONO) (TY I) DOLLARS and CENTS	LF	607.000	215
	529	6005		CONC CURB (MONO) (TY II) DOLLARS and CENTS	LF	40,228.000	216
	529	6022		CONC CURB (DOWEL) (TY II) DOLLARS and CENTS	LF	1,599.000	217
	530	6004		DRIVEWAYS (CONC) DOLLARS and CENTS	SY	7,523.000	218
	531	6002		CONC SIDEWALKS (5") DOLLARS and CENTS	SY	14,518.000	219
	531	6004		CURB RAMPS (TY 1) DOLLARS and CENTS	EA	1.000	220
	531	6005		CURB RAMPS (TY 2) DOLLARS and CENTS	EA	16.000	221
	531	6010		CURB RAMPS (TY 7) DOLLARS and CENTS	EA	13.000	222
	531	6013		CURB RAMPS (TY 10) DOLLARS and CENTS	EA	5.000	223
	531	6016		CURB RAMPS (TY 21) DOLLARS and CENTS	EA	5.000	224

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	531	6017		CURB RAMPS (TY 22) DOLLARS and CENTS	EA	2.000	225
	531	6057		CONC SIDEWALK (SPECIAL)(RETAINING WALL) DOLLARS and CENTS	SF	679.000	226
	540	6001	001	MTL W-BEAM GD FEN (TIM POST) DOLLARS and CENTS	LF	902.000	227
	540	6002	001	MTL W-BEAM GD FEN (STEEL POST) DOLLARS and CENTS	LF	850.000	228
	540	6006	001	MTL BEAM GD FEN TRANS (THRIE-BEAM) DOLLARS and CENTS	EA	11.000	229
	540	6016	001	DOWNSTREAM ANCHOR TERMINAL SEC- TION DOLLARS and CENTS	EA	6.000	230
	542	6001		REMOVE METAL BEAM GUARD FENCE DOLLARS and CENTS	LF	4,685.000	231
	542	6002		REMOVE TERMINAL ANCHOR SECTION DOLLARS and CENTS	EA	4.000	232
	544	6001		GUARDRAIL END TREATMENT (INSTALL) DOLLARS and CENTS	EA	17.000	233
	544	6003		GUARDRAIL END TREATMENT (REMOVE) DOLLARS and CENTS	EA	14.000	234
	545	6003		CRASH CUSH ATTEN (MOVE & RESET) DOLLARS and CENTS	EA	76.000	235
	545	6005		CRASH CUSH ATTEN (REMOVE) DOLLARS and CENTS	EA	21.000	236

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	545	6007		CRASH CUSH ATTEN (INSTL)(L)(N)(TL3) DOLLARS and CENTS	EA	3.000	237
	545	6010		CRASH CUSH ATTEN (INSTL)(L)(W)(TL3) DOLLARS and CENTS	EA	3.000	238
	545	6015		CRASH CUSH ATTEN (INSTL)(R)(W)(TL2) DOLLARS and CENTS	EA	1.000	239
	545	6019		CRASH CUSH ATTEN (INSTL)(S)(N)(TL3) DOLLARS and CENTS	EA	20.000	240
	550	6001		CHAIN LINK FENCE (INSTALL) (6') DOLLARS and CENTS	LF	1,853.000	241
	550	6003		CHAIN LINK FENCE (REMOVE) DOLLARS and CENTS	LF	2,221.000	242
	550	6006		GATE (REMOVE) DOLLARS and CENTS	EA	1.000	243
	550	6028		GATE (INSTALL)(DOUBLE)(6'X22') DOLLARS and CENTS	EA	3.000	244
	560	6025		RELOCATE EXISTING MAILBOX DOLLARS and CENTS	EA	1.000	245
	610	6009		REMOVE RD IL ASM (TRANS-BASE) DOLLARS and CENTS	EA	13.000	246
	610	6104		IN RD IL (U/P) (TY 1) (150W EQ) LED DOLLARS and CENTS	EA	19.000	247
	610	6106		IN RD IL (U/P) (TY 2) (150W EQ) LED DOLLARS and CENTS	EA	7.000	248

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	610	6190		IN RD IL (TY SP) 38S-8 (250W EQ) LED DOLLARS and CENTS	EA	1.000	249
	610	6198		IN RD IL (TY SA) 40B-8 (250W EQ) LED DOLLARS and CENTS	EA	6.000	250
	610	6214		IN RD IL (TY SA) 40T-8 (250W EQ) LED DOLLARS and CENTS	EA	19.000	251
	613	6005		HI MST IL POLE (150 FT)(80 MPH) DOLLARS and CENTS	EA	6.000	252
	614	6007		LED HI MST IL ASM (6 FIXT)(ASYM)(TY A) DOLLARS and CENTS	EA	6.000	253
	618	6023		CONDT (PVC) (SCH 40) (2") DOLLARS and CENTS	LF	35,670.000	254
	618	6024		CONDT (PVC) (SCH 40) (2") (BORE) DOLLARS and CENTS	LF	2,100.000	255
	618	6029		CONDT (PVC) (SCH 40) (3") DOLLARS and CENTS	LF	20,120.000	256
	618	6030		CONDT (PVC) (SCH 40) (3") (BORE) DOLLARS and CENTS	LF	8,445.000	257
	618	6033		CONDT (PVC) (SCH 40) (4") DOLLARS and CENTS	LF	105.000	258
	618	6034		CONDT (PVC) (SCH 40) (4") (BORE) DOLLARS and CENTS	LF	1,125.000	259
	618	6046		CONDT (PVC) (SCH 80) (2") DOLLARS and CENTS	LF	260.000	260

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	618	6062		CONDT (RM) (3/4") DOLLARS and CENTS	LF	1,445.000	261
	618	6064		CONDT (RM) (1") DOLLARS and CENTS	LF	55.000	262
	618	6070		CONDT (RM) (2") DOLLARS and CENTS	LF	1,000.000	263
	618	6078		CONDT (RM) (4") DOLLARS and CENTS	LF	305.000	264
	620	6003		ELEC CONDR (NO.12) BARE DOLLARS and CENTS	LF	1,590.000	265
	620	6004		ELEC CONDR (NO.12) INSULATED DOLLARS and CENTS	LF	4,190.000	266
	620	6007		ELEC CONDR (NO.8) BARE DOLLARS and CENTS	LF	7,535.000	267
	620	6008		ELEC CONDR (NO.8) INSULATED DOLLARS and CENTS	LF	31,200.000	268
	620	6009		ELEC CONDR (NO.6) BARE DOLLARS and CENTS	LF	11,755.000	269
	620	6010		ELEC CONDR (NO.6) INSULATED DOLLARS and CENTS	LF	23,790.000	270
	620	6011		ELEC CONDR (NO.4) BARE DOLLARS and CENTS	LF	1,100.000	271
	620	6012		ELEC CONDR (NO.4) INSULATED DOLLARS and CENTS	LF	5,260.000	272

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	621	6002		TRAY CABLE (3 CONDR) (12 AWG) DOLLARS and CENTS	LF	3,190.000	273
	624	6001		GROUND BOX TY A (122311) DOLLARS and CENTS	EA	7.000	274
	624	6002		GROUND BOX TY A (122311)W/APRON DOLLARS and CENTS	EA	23.000	275
	624	6007		GROUND BOX TY C (162911) DOLLARS and CENTS	EA	22.000	276
	624	6008		GROUND BOX TY C (162911)W/APRON DOLLARS and CENTS	EA	6.000	277
	624	6010		GROUND BOX TY D (162922)W/APRON DOLLARS and CENTS	EA	14.000	278
	624	6028		REMOVE GROUND BOX DOLLARS and CENTS	EA	21.000	279
	628	6002		REMOVE ELECTRICAL SERVICES DOLLARS and CENTS	EA	2.000	280
	628	6041		ELC SRV TY A 240/480 060(NS)SS(E)GC(O) DOLLARS and CENTS	EA	4.000	281
	628	6187		ELC SRV TY D 120/240 070(NS)SS(E)PS(U) DOLLARS and CENTS	EA	1.000	282
	628	6239		ELC SRV TY D 120/240 100(NS)SS(E)PS(U) DOLLARS and CENTS	EA	1.000	283
	636	6001	001	ALUMINUM SIGNS (TY A) DOLLARS and CENTS	SF	54.000	284

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	636	6003	001	ALUMINUM SIGNS (TY O) DOLLARS and CENTS	SF	3,410.000	285
	644	6001		IN SM RD SN SUP&AM TY10BWG(1)SA(P) DOLLARS and CENTS	EA	90.000	286
	644	6004		IN SM RD SN SUP&AM TY10BWG(1)SA(T) DOLLARS and CENTS	EA	141.000	287
	644	6005		IN SM RD SN SUP&AM TY10BWG(1)SA(T- 2EXT) DOLLARS and CENTS	EA	1.000	288
	644	6006		IN SM RD SN SUP&AM TY10BWG(1)SA(T- EXAL) DOLLARS and CENTS	EA	1.000	289
	644	6007		IN SM RD SN SUP&AM TY10BWG(1)SA(U) DOLLARS and CENTS	EA	4.000	290
	644	6012		IN SM RD SN SUP&AM TY10BWG(1)SB(T) DOLLARS and CENTS	EA	1.000	291
	644	6018		IN SM RD SN SUP&AM TY10BWG(2)SA(P- EXAL) DOLLARS and CENTS	EA	1.000	292
	644	6027		IN SM RD SN SUP&AM TYS80(1)SA(P) DOLLARS and CENTS	EA	7.000	293
	644	6030		IN SM RD SN SUP&AM TYS80(1)SA(T) DOLLARS and CENTS	EA	15.000	294
	644	6033		IN SM RD SN SUP&AM TYS80(1)SA(U) DOLLARS and CENTS	EA	5.000	295

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	644	6036		IN SM RD SN SUP&AM TYS80(1)SA(U-BM) DOLLARS and CENTS	EA	1.000	296
	644	6044		IN SM RD SN SUP&AM TYS80(1)SB(U) DOLLARS and CENTS	EA	3.000	297
	644	6045		IN SM RD SN SUP&AM TYS80(1)SB(U-1EXT) DOLLARS and CENTS	EA	3.000	298
	644	6047		IN SM RD SN SUP&AM TYS80(1)SB(U-BM) DOLLARS and CENTS	EA	1.000	299
	644	6051		IN SM RD SN SUP&AM TYS80(2)SA(P-EXAL) DOLLARS and CENTS	EA	3.000	300
	644	6054		IN SM RD SN SUP&AM TYS80(2)SB(P-EXAL) DOLLARS and CENTS	EA	2.000	301
	644	6065		IN BRIDGE MNT CLEARANCE SGN ASSM(TY S) DOLLARS and CENTS	EA	12.000	302
	644	6066		IN SM RD SN SUP&AM (RAIL MOUNT) DOLLARS and CENTS	EA	24.000	303
	644	6084		IN SRSS & AM (RAIL)(90 MPH)(T MOUNT) DOLLARS and CENTS	EA	1.000	304
	644	6089		IN SRSS & AM (RAIL)(130 MPH)(T MOUNT) DOLLARS and CENTS	EA	2.000	305
	647	6003		REMOVE LRSA DOLLARS and CENTS	EA	6.000	306
	650	6018	001	INS OH SN SUP(20 FT CANT) DOLLARS and CENTS	EA	2.000	307

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	650	6021	001	INS OH SN SUP(25 FT BAL TEE) DOLLARS and CENTS	EA	1.000	308
	650	6025	001	INS OH SN SUP(25 FT CANT) DOLLARS and CENTS	EA	3.000	309
	650	6032	001	INS OH SN SUP(30 FT CANT) DOLLARS and CENTS	EA	8.000	310
	650	6038	001	INS OH SN SUP(35 FT CANT) DOLLARS and CENTS	EA	6.000	311
	650	6045	001	INS OH SN SUP(40 FT CANT) DOLLARS and CENTS	EA	3.000	312
	650	6069	001	INS OH SN SUP(60 FT BRDG) DOLLARS and CENTS	EA	1.000	313
	650	6094	001	INS OH SN SUP(85 FT BRDG) DOLLARS and CENTS	EA	1.000	314
	650	6204	001	REMOVE OVERHD SIGN SUP DOLLARS and CENTS	EA	14.000	315
	650	6205	001	REMOVE OVERHD SIGN SUP (SIGN ONLY) DOLLARS and CENTS	EA	2.000	316
	658	6013		INSTL DEL ASSM (D-SW)SZ (BRF)CTB DOLLARS and CENTS	EA	487.000	317
	658	6026		INSTL DEL ASSM (D-SY)SZ (BRF)CTB DOLLARS and CENTS	EA	305.000	318
	658	6027		INSTL DEL ASSM (D-SY)SZ (BRF)CTB (BI) DOLLARS and CENTS	EA	204.000	319

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	658	6063		INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2(BR) DOLLARS and CENTS	EA	27.000	320
	658	6065		INSTL DEL ASSM (D-SY)SZ 1(BRF)GF2(BR) DOLLARS and CENTS	EA	6.000	321
	658	6069		INSTL DEL ASSM (D-SW)SZ (BRF)CTB (BR) DOLLARS and CENTS	EA	69.000	322
	658	6070		INSTL DEL ASSM (D-SY)SZ (BRF)CTB (BR) DOLLARS and CENTS	EA	8.000	323
	658	6083		INSTL DEL ASSM (D-SW)SZ 1(WFLX)SRF DOLLARS and CENTS	EA	15.000	324
	658	6085		INSTL DEL ASSM (D-SW)SZ 1(WFLX)SRF(BR) DOLLARS and CENTS	EA	16.000	325
	658	6092		INSTL DEL ASSM (D-DW)SZ 1(WFLX)GND DOLLARS and CENTS	EA	6.000	326
	658	6099		INSTL OM ASSM (OM-2Z)(WFLX)GND DOLLARS and CENTS	EA	8.000	327
	662	6001		WK ZN PAV MRK NON-REMOV (W)4"(BRK) DOLLARS and CENTS	LF	36,457.000	328
	662	6004		WK ZN PAV MRK NON-REMOV (W)4"(SLD) DOLLARS and CENTS	LF	94,559.000	329
	662	6011		WK ZN PAV MRK NON-REMOV (W)8"(LNDP) DOLLARS and CENTS	LF	1,582.000	330
	662	6012		WK ZN PAV MRK NON-REMOV (W)8"(SLD) DOLLARS and CENTS	LF	641.000	331

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	662	6034		WK ZN PAV MRK NON-REMOV (Y)4"(SLD) DOLLARS and CENTS	LF	83,631.000	332
	662	6052		WK ZN PAV MRK REMOV (REFL) TY II-C-R DOLLARS and CENTS	EA	2,670.000	333
	662	6060		WK ZN PAV MRK REMOV (W)4"(BRK) DOLLARS and CENTS	LF	12,009.000	334
	662	6061		WK ZN PAV MRK REMOV (W)4"(DOT) DOLLARS and CENTS	LF	1,430.000	335
	662	6063		WK ZN PAV MRK REMOV (W)4"(SLD) DOLLARS and CENTS	LF	72,694.000	336
	662	6075		WK ZN PAV MRK REMOV (W)24"(SLD) DOLLARS and CENTS	LF	652.000	337
	662	6080		WK ZN PAV MRK REMOV (W)(ARROW) DOLLARS and CENTS	EA	1.000	338
	662	6090		WK ZN PAV MRK REMOV (W)(WORD) DOLLARS and CENTS	EA	1.000	339
	662	6095		WK ZN PAV MRK REMOV (Y)4"(SLD) DOLLARS and CENTS	LF	75,923.000	340
	666	6006	007	REFL PAV MRK TY I (W)4"(DOT)(100MIL) DOLLARS and CENTS	LF	268.000	341
	666	6036	007	REFL PAV MRK TY I (W)8"(SLD)(100MIL) DOLLARS and CENTS	LF	20,142.000	342
	666	6039	007	REFL PAV MRK TY I (W)12"(LNDP)(100MIL) DOLLARS and CENTS	LF	788.000	343

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6042	007	REFL PAV MRK TY I (W)12"(SLD)(100MIL) DOLLARS and CENTS	LF	4,827.000	344
	666	6048	007	REFL PAV MRK TY I (W)24"(SLD)(100MIL) DOLLARS and CENTS	LF	2,049.000	345
	666	6054	007	REFL PAV MRK TY I (W)(ARROW)(100MIL) DOLLARS and CENTS	EA	34.000	346
	666	6057	007	REFL PAV MRK TY I(W)(DBL ARROW)(100MIL) DOLLARS and CENTS	EA	8.000	347
	666	6063	007	REFL PAV MRK TY I(W)(UTURN ARW)(100MIL) DOLLARS and CENTS	EA	5.000	348
	666	6075	007	REFL PAV MRK TY I (W)(NUMBER)(100MIL) DOLLARS and CENTS	EA	2.000	349
	666	6078	007	REFL PAV MRK TY I (W)(WORD)(100MIL) DOLLARS and CENTS	EA	23.000	350
	666	6099	007	REF PAV MRK TY I(W)18"(YLD TRI)(100MIL) DOLLARS and CENTS	EA	33.000	351
	666	6162	007	RE PV MRK TY I(BLACK)6"(SHADOW)(100MIL) DOLLARS and CENTS	LF	43,080.000	352
	666	6167	007	REFL PAV MRK TY II (W) 4" (BRK) DOLLARS and CENTS	LF	19,244.000	353
	666	6168	007	REFL PAV MRK TY II (W) 4" (DOT) DOLLARS and CENTS	LF	268.000	354

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6170	007	REFL PAV MRK TY II (W) 4" (SLD) DOLLARS and CENTS	LF	107,370.000	355
	666	6171	007	REFL PAV MRK TY II (W) 6" (BRK) DOLLARS and CENTS	LF	43,080.000	356
	666	6178	007	REFL PAV MRK TY II (W) 8" (SLD) DOLLARS and CENTS	LF	20,142.000	357
	666	6179	007	REFL PAV MRK TY II (W) 12" (LNDP) DOLLARS and CENTS	LF	788.000	358
	666	6180	007	REFL PAV MRK TY II (W) 12" (SLD) DOLLARS and CENTS	LF	4,822.000	359
	666	6182	007	REFL PAV MRK TY II (W) 24" (SLD) DOLLARS and CENTS	LF	2,049.000	360
	666	6184	007	REFL PAV MRK TY II (W) (ARROW) DOLLARS and CENTS	EA	33.000	361
	666	6185	007	REFL PAV MRK TY II (W) (DBL ARROW) DOLLARS and CENTS	EA	8.000	362
	666	6187	007	REFL PAV MRK TY II (W) (UTURN ARROW) DOLLARS and CENTS	EA	5.000	363
	666	6191	007	REFL PAV MRK TY II (W) (NUMBER) DOLLARS and CENTS	EA	2.000	364
	666	6192	007	REFL PAV MRK TY II (W) (WORD) DOLLARS and CENTS	EA	23.000	365
	666	6198	007	REFL PAV MRK TY II (W) 18" (YLD TRI) DOLLARS and CENTS	EA	33.000	366

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	666	6207	007	REFL PAV MRK TY II (Y) 4" (SLD) DOLLARS and CENTS	LF	125,554.000	367
	666	6219	007	REFL PAV MRK TY II (BLACK) 6"(SHADOW) DOLLARS and CENTS	LF	43,080.000	368
	666	6300	007	RE PM W/RET REQ TY I (W)4"(BRK)(100MIL) DOLLARS and CENTS	LF	19,244.000	369
	666	6303	007	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL) DOLLARS and CENTS	LF	107,370.000	370
	666	6306	007	RE PM W/RET REQ TY I (W)6"(BRK)(100MIL) DOLLARS and CENTS	LF	43,080.000	371
	666	6315	007	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL) DOLLARS and CENTS	LF	125,854.000	372
	666	6350	007	REFL PAV MRK TY I (W)12"(DOT)(100MIL) DOLLARS and CENTS	LF	1,553.000	373
	666	6351	007	REFL PAV MRK TY II (W)12"(DOT) DOLLARS and CENTS	LF	1,553.000	374
	672	6007		REFL PAV MRKR TY I-C DOLLARS and CENTS	EA	173.000	375
	672	6008		REFL PAV MRKR TY I-R DOLLARS and CENTS	EA	56.000	376
	672	6010		REFL PAV MRKR TY II-C-R DOLLARS and CENTS	EA	4,424.000	377
	677	6001		ELIM EXT PAV MRK & MRKS (4") DOLLARS and CENTS	LF	156,876.000	378

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	677	6003		ELIM EXT PAV MRK & MRKS (8") DOLLARS and CENTS	LF	10,938.000	379
	677	6005		ELIM EXT PAV MRK & MRKS (12") DOLLARS and CENTS	LF	1,927.000	380
	677	6007		ELIM EXT PAV MRK & MRKS (24") DOLLARS and CENTS	LF	234.000	381
	677	6008		ELIM EXT PAV MRK & MRKS (ARROW) DOLLARS and CENTS	EA	29.000	382
	677	6012		ELIM EXT PAV MRK & MRKS (WORD) DOLLARS and CENTS	EA	7.000	383
	678	6001		PAV SURF PREP FOR MRK (4") DOLLARS and CENTS	LF	252,136.000	384
	678	6002		PAV SURF PREP FOR MRK (6") DOLLARS and CENTS	LF	85,860.000	385
	678	6004		PAV SURF PREP FOR MRK (8") DOLLARS and CENTS	LF	20,142.000	386
	678	6006		PAV SURF PREP FOR MRK (12") DOLLARS and CENTS	LF	7,170.000	387
	678	6008		PAV SURF PREP FOR MRK (24") DOLLARS and CENTS	LF	2,049.000	388
	678	6009		PAV SURF PREP FOR MRK (ARROW) DOLLARS and CENTS	EA	33.000	389
	678	6010		PAV SURF PREP FOR MRK (DBL ARROW) DOLLARS and CENTS	EA	8.000	390

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	678	6012		PAV SURF PREP FOR MRK (UTURN ARR) DOLLARS and CENTS	EA	5.000	391
	678	6015		PAV SURF PREP FOR MRK (NUMBER) DOLLARS and CENTS	EA	2.000	392
	678	6016		PAV SURF PREP FOR MRK (WORD) DOLLARS and CENTS	EA	23.000	393
	678	6022		PAV SURF PREP FOR MRK (18")(YLD TRI) DOLLARS and CENTS	EA	33.000	394
	678	6033		PAV SURF PREP FOR MRK (RPM) DOLLARS and CENTS	EA	1,559.000	395
	680	6002	006	INSTALL HWY TRF SIG (ISOLATED) DOLLARS and CENTS	EA	2.000	396
	680	6004	006	REMOVING TRAFFIC SIGNALS DOLLARS and CENTS	EA	4.000	397
	680	6012	006	REMOVING TRAFFIC SIGNALS (DIAMOND) DOLLARS and CENTS	EA	2.000	398
	681	6001		TEMP TRAF SIGNALS DOLLARS and CENTS	EA	2.000	399
	682	6001		VEH SIG SEC (12")LED(GRN) DOLLARS and CENTS	EA	27.000	400
	682	6002		VEH SIG SEC (12")LED(GRN ARW) DOLLARS and CENTS	EA	14.000	401
	682	6003		VEH SIG SEC (12")LED(YEL) DOLLARS and CENTS	EA	36.000	402

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	682	6004		VEH SIG SEC (12")LED(YEL ARW) DOLLARS and CENTS	EA	8.000	403
	682	6005		VEH SIG SEC (12")LED(RED) DOLLARS and CENTS	EA	36.000	404
	682	6006		VEH SIG SEC (12")LED(RED ARW) DOLLARS and CENTS	EA	10.000	405
	682	6018		PED SIG SEC (LED)(COUNTDOWN) DOLLARS and CENTS	EA	24.000	406
	682	6054		BACKPLATE W/REF BRDR(3 SEC)(VENT)ALUM DOLLARS and CENTS	EA	36.000	407
	682	6055		BACKPLATE W/REF BRDR(4 SEC)(VENT)ALUM DOLLARS and CENTS	EA	2.000	408
	682	6056		BACKPLATE W/REF BRDR(5 SEC)(VENT)ALUM DOLLARS and CENTS	EA	3.000	409
	684	6007		TRF SIG CBL (TY A)(12 AWG)(2 CONDR) DOLLARS and CENTS	LF	5,030.000	410
	684	6010		TRF SIG CBL (TY A)(12 AWG)(5 CONDR) DOLLARS and CENTS	LF	1,430.000	411
	684	6012		TRF SIG CBL (TY A)(12 AWG)(7 CONDR) DOLLARS and CENTS	LF	1,810.000	412
	684	6021		TRF SIG CBL (TY A)(12 AWG)(16 CONDR) DOLLARS and CENTS	LF	2,360.000	413

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	684	6031		TRF SIG CBL (TY A)(14 AWG)(5 CONDR) DOLLARS and CENTS	LF	2,990.000	414
	684	6033		TRF SIG CBL (TY A)(14 AWG)(7 CONDR) DOLLARS and CENTS	LF	390.000	415
	684	6042		TRF SIG CBL (TY A)(14 AWG)(16 CONDR) DOLLARS and CENTS	LF	1,220.000	416
	684	6079		TRF SIG CBL (TY C)(12 AWG)(2 CONDR) DOLLARS and CENTS	LF	3,050.000	417
	686	6032		INS TRF SIG PL AM(S)1 ARM(28')LUM&ILSN DOLLARS and CENTS	EA	1.000	418
	686	6044		INS TRF SIG PL AM(S)1 ARM(40')LUM&ILSN DOLLARS and CENTS	EA	2.000	419
	686	6048		INS TRF SIG PL AM(S)1 ARM(44')LUM&ILSN DOLLARS and CENTS	EA	2.000	420
	686	6051		INS TRF SIG PL AM(S)1 ARM(48')LUM DOLLARS and CENTS	EA	1.000	421
	686	6052		INS TRF SIG PL AM(S)1 ARM(48')LUM&ILSN DOLLARS and CENTS	EA	2.000	422
	686	6060		INS TRF SIG PL AM(S)1 ARM(55')LUM&ILSN DOLLARS and CENTS	EA	3.000	423
	686	6064		INS TRF SIG PL AM(S)1 ARM(60')LUM&ILSN DOLLARS and CENTS	EA	1.000	424
	687	6001		PED POLE ASSEMBLY DOLLARS and CENTS	EA	15.000	425

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	688	6001		PED DETECT PUSH BUTTON (APS) DOLLARS and CENTS	EA	24.000	426
	688	6003		PED DETECTOR CONTROLLER UNIT DOLLARS and CENTS	EA	4.000	427
	730	6107		FULL - WIDTH MOWING DOLLARS and CENTS	CYC	15.000	428
	734	6002		LITTER REMOVAL DOLLARS and CENTS	CYC	54.000	429
	735	6001		DEBRIS REMOVAL (CNTR MEDIANS/ MAINLANES) DOLLARS and CENTS	CYC	117.000	430
	735	6005		DEBRIS REMOVAL (ENTRANCE/EXIT RAMPS) DOLLARS and CENTS	CYC	108.000	431
	738	6003		CLEANING / SWEEPING (OUTSIDE MAIN LANE) DOLLARS and CENTS	CYC	54.000	432
	738	6007		CLEANING / SWEEPING(ENTRANCE/EXIT RAMP) DOLLARS and CENTS	CYC	54.000	433
	740	6005		ANTI - GRAFFITI COATNG(PERMNENT-TY III) DOLLARS and CENTS	SF	38,943.900	434
	774	6010		REPAIR (REACT) DOLLARS and CENTS	EA	20.000	435
	780	6002		CNC CRACK REPAIR (DISCRETE)(INJECT) DOLLARS and CENTS	LF	116.000	436

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	3077	6001		SP MIXES SP-B PG64-22 DOLLARS and CENTS	TON	21,912.000	437
	3077	6021		SP MIXES SP-C PG70-22 DOLLARS and CENTS	TON	306.000	438
	3077	6041		SP MIXES SP-D PG64-22 DOLLARS and CENTS	TON	7,924.000	439
	3077	6075		TACK COAT DOLLARS and CENTS	GAL	822.000	440
	4056	6001		INWATER COLUMN ENCAPSULATION DOLLARS and CENTS	LF	672.000	441
	5116	6001		AMPHIBIAN/REPTILE EXCLUSION FENCE INST DOLLARS and CENTS	LF	12,103.000	442
	5116	6002		AMPHIBIAN/REPTILE EXCLUSION FENCE REM DOLLARS and CENTS	LF	12,103.000	443
	5129	6001		INSTALL FTB DOLLARS and CENTS	LF	5,460.000	444
	5129	6002		REMOVE FTB DOLLARS and CENTS	LF	5,460.000	445
	6000	6098		INSTALL CIRCUIT BREAKER DOLLARS and CENTS	EA	2.000	446
	6001	6002		PORTABLE CHANGEABLE MESSAGE SIGN DOLLARS and CENTS	EA	15.000	447
	6004	6031		ITS COM CBL (ETHERNET) DOLLARS and CENTS	LF	420.000	448

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6007	6010		FIBER OPTIC CBL (SNGLE-MODE)(6 FIBER) DOLLARS and CENTS	LF	16,140.000	449
	6007	6013		FIBER OPTIC CBL (SNGLE-MODE)(36 FIBER) DOLLARS and CENTS	LF	25,160.000	450
	6007	6014		FIBER OPTIC CBL (SNGLE-MODE)(48 FIBER) DOLLARS and CENTS	LF	25,195.000	451
	6007	6095		FIBER OPTIC PATCH PANEL (6 POSITION) DOLLARS and CENTS	EA	8.000	452
	6007	6099		FIBER OPTIC PATCH PANEL (48 POSITION) DOLLARS and CENTS	EA	4.000	453
	6008	6027		ITS GRND MNT CAB (TY 4) (CONF 2) DOLLARS and CENTS	EA	2.000	454
	6008	6029		ITS GRND MNT CAB (TY 4) (CONF 2) (REL) DOLLARS and CENTS	EA	1.000	455
	6010	6004	001	CCTV MOUNT (POLE) DOLLARS and CENTS	EA	1.000	456
	6010	6012	001	RELOCATE CCTV FIELD EQUIPMENT DOLLARS and CENTS	EA	2.000	457
	6016	6006		ITS MULTI-DUCT CND (PVC-40) DOLLARS and CENTS	LF	9,375.000	458
	6016	6007		ITS MULTI-DUCT CND (PVC-40)(BORE) DOLLARS and CENTS	LF	3,225.000	459
	6027	6003		CONDUIT (PREPARE) DOLLARS and CENTS	LF	960.000	460

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6027	6008		GROUND BOX (PREPARE) DOLLARS and CENTS	EA	7.000	461
	6032	6001		SYSTEM INTEGRATION DOLLARS and CENTS	LS	1.000	462
	6058	6001		BBU SYSTEM (EXTERNAL BATT CABINET) DOLLARS and CENTS	EA	2.000	463
	6062	6042		RELOCATE ITS RADIO DOLLARS and CENTS	EA	12.000	464
	6062	6043		REMOVE ITS RADIO DOLLARS and CENTS	EA	12.000	465
	6064	6055	001	ITS POLE (60 FT)(90 MPH) DOLLARS and CENTS	EA	1.000	466
	6064	6062	001	ITS POLE (60 FT)(REL) DOLLARS and CENTS	EA	1.000	467
	6064	6084	001	ITS POLE MNT CAB (TY 2)(CONF 2) DOLLARS and CENTS	EA	1.000	468
	6064	6090	001	ITS POLE MNT CAB (TY 3)(CONF 1)(REL) DOLLARS and CENTS	EA	1.000	469
	6151	6001		REMOVE AND RELOCATE DMS SYSTEM DOLLARS and CENTS	EA	2.000	470
	6185	6002	002	TMA (STATIONARY) DOLLARS and CENTS	DAY	800.000	471
	6185	6003	002	TMA (MOBILE OPERATION) DOLLARS and CENTS	HR	2,000.000	472

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	6186	6006		ITS GND BOX(PCAST) TY 1 (243660)W/APRN DOLLARS and CENTS	EA	18.000	473
	6186	6007		ITS GND BOX(PCAST) TY 2 (366036) DOLLARS and CENTS	EA	1.000	474
	6186	6012		ITS GND BOX(PCAST) TY 2 (366060)W/APRN DOLLARS and CENTS	EA	1.000	475
	6292	6001		RVDS(PRESENCE DETECTION ONLY) DOLLARS and CENTS	EA	8.000	476
	6292	6003		RVDS(PRESENCE AND ADVANCE DET) DOLLARS and CENTS	EA	4.000	477
	6304	6006		ITS RVSD (DC & WWA) (RELOCATE) DOLLARS and CENTS	EA	3.000	478
	6306	6006		VIVDS TEMPORARY DOLLARS and CENTS	EA	2.000	479
	800	6001		NO. OF WORKING DAYS DAYS	\$/D	\$ 20,000.000	480

County: Rockwall

Highway: IH 30

Table 1: Soil Constants Requirements				
Item	Description	Plasticity Index		Note
		Max	Min	
132	EMBANKMENT (FINAL) (DC) (TY C1)	40	8	1
132	EMBANKMENT (FINAL) (DC) (TY C2)	25	8	2
132	EMBANKMENT (TY C3)	N/A	N/A	3

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.

Note 2: Use as a non-select embankment backfill as defined under Item 423.2.4.1. Use as an embankment to backfill behind abutments to the extent of the approach slab or to backfill areas enclosed by an abutment and / or retaining walls or other locations as shown in the plans.

Note 3: Use a course aggregate to meet select backfill type AS under item 423.

County: Rockwall

Highway: IH 30

Table 2: Basis of Estimate for Permanent Construction					
Item	Description	Thickness	Rate		Quantity
162	Block Sod	N/A	See Specifications		136,454 SY
166 *	Fertilizer (12-6-6)	N/A	500	Lbs./Ac	7.1 Ton
168	Vegetative Watering (Warm)**	N/A	12	MG/Ac/Day	20283.5 MG
260	Hydrated Lime (slurry)			5% by wt.	3,773 Ton
276 *	Cement			4.5% by wt.	967 Ton
3077	SP MIXES SP-B PG 64-22	See Plans	110	Lbs./SY/In	21,912 Ton
3077	SP MIXES SP-C PG 70-22				306 Ton
3077	SP MIXES SP-D PG 64-22				7,924 Ton
3077	Tack Coat (Undiluted Application Rate)	New HMA	0.06	Gal/SY	2,750 Gal
*For contractor's information only **Use Summer rate for calculation, adjust for actual field conditions/temperatures as necessary. See Vegetation Establishment Plan Sheet for estimated daily rates.					
Note: (1) Base material weight based on 1.50 Ton/CY (dry- compacted) (2) Asphalt weight based on 110 Lbs./SY/In (3) Subgrade weight based on 1.50 Ton/CY (dry-compacted)					

Table 3: Basis of Estimate for Temporary Erosion Control Items				
Item	Description	Rate		Quantity
164	Drill Seeding (Temp) (Warm or Cool)	See Specifications		136,454 SY
166*	Fertilizer (12-6-6)	500	Lb/Ac	7.1 Ton
168	Vegetative Watering (Warm)**	12	MG/Ac/Day	20,283.5 MG
*For Contractor's Information Only. **Use Summer rate for calculation, adjust for Actual Field Conditions/Temperatures as Necessary. See Vegetation Establishment Sheet for estimated daily rates.				

County: Rockwall

Highway: IH 30

Table 4: Basis of Estimate for Finish Colors (Items 427 & 446) ¹		
Element	Color	Specification Number ²
CTB	Sand	23722
Columns	Sand	23722
Bent caps	Sand	23722
Striated retaining wall surfaces	Sand	23722
Retaining wall coping and other components except striated surfaces	Sand	23722
Abutments (all parts)	Sand	23722
Prestressed concrete girders and structural steel	Sand	23722
Bottom of slab overhang & slab edge	Sand	23722
Concrete rail parts except outside lower 18"	Sand	23722
Lower outside 18" of concrete rails	Red brown	20109

1. 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.

2. Federal Standard 595 colors.

Paint colors shall be approved by area office and local municipality prior to painting.

County: Rockwall**Highway: IH 30**

GENERAL

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 155 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 permits with environmental resources agencies, as outlined in the plan sheet Environmental Permits, Issues, and Commitments (EPIC) Sheet. 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 7.6 "Project-Specific Locations", provides a listing of regulatory agencies that may need to be contacted regarding this project.

Contractor shall coordinate with Dallas Water Utilities (DWU) for obtaining construction and dredging permits in Lake Ray Hubbard, a DWU property. Dredging permits shall be required if dredging is required due to Contractor's means and methods of construction including removing temporary fill. Two separate construction permits shall be processed; one for constructing the bridges and other permanent infrastructures; and the other is for dredging if required. Contractor shall obtain temporary easements from DWU and other municipalities if needed for the project. Contractor can contact TxDOT for sample easement documents. Contractor must provide to TxDOT prior to construction, a SW3P Site Map meeting requirements for TXR150000 and the acreage of soil/sediment disturbance. Contractor shall also provide to TxDOT a copy of DWU and other environmental permits obtained for the dredging and its support activities.

Contractor shall coordinate with the Contractors for the adjacent construction projects, which will be ongoing at the same time. Contractor can contact TxDOT for the available plans and schedule at the time of letting. The project on the west side along IH 30 from Bass Pro Drive to Dalrock Road (CSJ 0009-11-241) was let on March 2021 and currently under construction. The project on the east side along IH 30 from SH 205 to County line (CSJ 0009-12-219) will be let on November, 2022. There shall be no additional payment for adjusting the work activities for this project and coordinating with the Contractors for the adjacent ongoing construction projects. All coordination between the Contractors shall be through TxDOT Engineer or through TxDOT authorized representative.

County: Rockwall

Highway: IH 30

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.

Contractor questions on this project are to be addressed to the following individual(s):

Lane Selman Lane.Selman@txdot.gov
Nicholas Wadington Nicholas.Wadington@txdot.gov

Contractor questions will be accepted through email, phone, and in person by the above individuals.

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

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

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

Provide as-built cable interconnection diagrams and communication network schematics at least 30 days prior to the start of data communications testing.

All materials and services not expressly called for in the specification or not shown in the plans, which may be necessary for complete and proper construction of the "ITS" Network, will be performed, furnished and installed at no cost to the Department.

The Contractor shall ensure that the existing Dallas District ITS System remains operational throughout the construction duration with a minimal lapse (48 hours maximum per outage) in video or data transmission unless otherwise approved by the Engineer.

To minimize "down time" to the Dallas District ITS System, the relocation of ITS poles, ITS cabinets, cameras, RVSD's, radios, antennas, and power conductors shall be performed during a single weekend (9:00 pm Friday through 5:00 am Monday).

Contact the TxDOT Freeway Management Office (214-320-6602) at least 48 hours in advance of performing any work on this project that disconnects or reconnects existing TxDOT "ITS" radios. TxDOT "ITS" personnel must be on-site while this work is performed.

Paper copies of cross-sections may be produced by using the provided .pdf file located on the above FTP Website at the bidders' expense and at copying companies. 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).

County: Rockwall

Highway: IH 30

The following standard detail sheets have been modified:

BRSM (MOD)
PSBEB (MOD)
RW MSE (DD) (MOD)

Item 2:

This project will use A+B bidding.

Item 5:

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.

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 communications & control maintained by TxDOT, call the TxDOT Traffic Signal Office (214-320-6682) for locates a minimum of 48 hours in advance of excavation. For irrigation systems, call TxDOT 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. The Contractor is liable for all damages when utilities are damaged due to Contractor's negligence including, but not limited to, repair or replacement at the Contractor's expense.

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.

Place construction stakes/station markings at intervals of no more than 100 feet or as directed by the Engineer. Place stakes and markings so as not to interfere with normal construction operations.

Submit all shop drawings, working drawings, or other documents which require review sufficiently in advance of scheduled construction to allow no less than thirty (30) calendar days for review and response.

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

Item 7:

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

County: Rockwall

Highway: IH 30

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.

Holiday restrictions – The Engineer may decide that no lane closures or construction operations shall be allowed during the restricted periods listed in the following holiday schedule. TxDOT has the right to lengthen, shorten, or otherwise modify these restricted periods as actual, or expected, traffic conditions may warrant. Working days will not be charged for these restricted periods. No additional compensation will be allowed for these closures (i.e., overhead, delays, stand-by, barricades or any other associated cost impacts).

- New Year's Eve and Day (5 am on December 31 thru 10:00 pm January 1)
- Easter Holiday weekend (5 am on Friday thru 10:00 pm Sunday)
- Memorial Day weekend (5 am on Friday thru 10:00pm Monday)
- Independence Day (5 am on July 3 thru 10:00 pm on July 5)
- Labor Day weekend (5 am on Friday thru 10:00 pm Monday)
- Thanksgiving Holiday (5 am on Wednesday thru 10:00 pm Sunday)
- Christmas Holiday (5 am on December 23 thru 10:00 pm December 26)

No significant traffic generator events identified.

Item 8:

This Project will be a Six-Day Workweek in accordance with Article 8.3.1.2.

Nighttime work is required in accordance with Article 8.3.3.2.1.

Work during Lowest Volume Times as described in table under Item 502 General Notes.

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.

This project will have a 90-day delay start for materials fabrication.

Critical Path Method (CPM) schedule in P6 format will be required for this project. Submit baseline schedule and obtain approval prior to beginning construction. The Estimate will be held if monthly schedule update is not submitted.

The minimum number of working days allowable for bid (B part) is 1092.

The maximum number of working days is 1404 days was calculated using a conceptual time determination schedule that assumed generic resources, production rates, sequence of construction and average weather conditions. The time determination schedule is provided for informational use only and is not intended for bidding or construction purposes.

County: Rockwall

Highway: IH 30

Substantial completion of the contract is defined as the point in time at which the roadway and the cross streets are in their final geometric configuration and traffic is following the lane arrangement as shown in the plans for the finished roadway. All pavement construction is complete with traffic control devices and pavement markings in their final position.

The daily road-user cost incentive/disincentive for substantial completion of the project is \$20,000 per day. The road user cost disincentive shall be limited to a maximum of 365 working days of damages charged to the contractor. The early substantial completion of work incentive shall be limited to a maximum of 120 calendar days. The road-user cost disincentive deductions will be in addition to any contract administration liquidated damages. The number of days for final completion, excluding vegetation and landscaping maintenance, will be 28 calendar days after the substantial completion of the project.

Item 100:

Remove the existing roadway small signs, delineators and object markers as shown on the plans, or as directed, during construction within the right of way. Small sign, delineator and object marker removals are subsidiary to this Item.

The limits of preparing right of way will be measured from Sta. 1+30 to Sta. 245+00 along the centerline of construction.

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 105:

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.

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

Properly dispose of unsalvageable material at your own expense.

Item 110:

Excavated shale is not an acceptable material for embankment.

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.

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

County: Rockwall

Highway: IH 30

Item 132:

Excavated material from the project site has not been determined to be suitable for embankment. The bidder assumes all risk for the use of excavated materials for embankment and is expected to meet all material requirements for embankment regardless of the source.

Perform Tex-106-E (Plasticity Index) by an approved laboratory on excavated soils from sources outside right of way when used in roadway embankment. Provide the test results at no expense to the department. The engineer will sample and test soils produced by the construction project for specification requirements or material sources specified in the plans.

Earth embankment Type C1, C2, and C3 are mainly composed of material other than shale. Furnish materials that are free from vegetation or other objectionable material and that conforms to the requirements of Table 1 (Sheet A). If necessary, treat material with lime slurry in accordance with Item 260, "Lime Treatment (Road-Mixed)" in order to meet these requirements. Use Tex-121-E, figure 1, page 4 to calculate the amount of lime required. When lime treated subgrade is specified, 3000 PPM is the maximum allowed sulfate content in the top 3 feet when material comes from borrow source. Follow recommendations of 260.4.4 for mixing and mellowing. 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 of this material will not be paid for directly, but will be considered subsidiary to this item.

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

Use embankment material Type C2 described in Table 1 "Soil Constants Requirements" for embankments behind bridge abutments to the extent of the bridge approach slabs, and other embankments enclosed by an abutment and / or retaining walls.

Use Type C3 fill material behind traffic rail as indicated in the plans.

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 six inches below natural grade as topsoil.

Item 161:

Provide tickets representing quantity of compost delivered to site.

Item 247:

Construct uniform layer thickness of 12 inches, or less with the required density and moisture content. Minimum PI is equal to three (3) for all grades.

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.

County: Rockwall

Highway: IH 30

Proposed storm sewer pipes encroach into the lime-treated subgrade layer for the mainlanes, frontage roads, and/or ramps for centerline IH 30 Sta 127+00 to Sta 133+00 and Sta 150+00 to 227+00 and other areas as shown in plans. For these locations, lime shall not be field mixed in place. Material within 5' of pipes shall be treated, per spec, in a different location, moved to the pipe areas, and placed per spec. Movement and placement of material is subsidiary. No additional compensation shall be provided.

Item 301:

Provide liquid antistripping agents unless otherwise directed. Add the minimum dosage determined by the manufacturer or higher dosage determined by design requirement and try subsequent trials at 0.25% increments.

Item 320:

Use a self-propelled wheel mounted MTV capable of receiving mix from the haul trucks, separate from the paver. It shall have a minimum storage capacity of approximately 25 tons. It shall be equipped with a pivoting discharge conveyor and shall completely and thoroughly remix the material prior to placement. The effectiveness of the MTV's remixing ability is subject to the approval of the Engineer. In addition, the paver shall have a surge storage insert with a minimum capacity of 20 tons.

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

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.

County: Rockwall**Highway: IH 30**

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 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 leave outs 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.

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

Provide Class HES concrete at the locations shown on the plans. Design Class HES to meet the requirements of Class P and a minimum average flexural strength of 450 psi or minimum average compressive strength of 3200 psi in 24 hr.

Supply the Engineer with a list of certified personnel and copies of their current ACI certificates before beginning production and when personnel changes are made. Supply hard copies of calibration reports for testing equipment when required by the Engineer.

If more than 30% of an area in any 1000-Ft section of roadway requires grinding, action will be taken by the Contractor to make that 1000-Ft full width section uniform without changing ride quality, compromising quality of pavement and decreasing skid resistance. Approved blasting method or other method approved by the Engineer will be performed at the Contractor's expense.

Item 361:

Provide Class HES concrete designed to attain a minimum average flexural strength of 255 psi or a minimum average compressive strength of 1,800 psi within the allowed lane closure times.

All permanent pavement markings which are removed during the removal of the existing concrete pavement are to be replaced as directed by the Engineer. These pavement markings will not be paid for directly, but will be considered subsidiary to this bid item.

Tining will be required as described in Item 360.4.8.3 unless otherwise directed by the Engineer.

County: Rockwall

Highway: IH 30

Surface Test Type A utilizing a 10' straight edge as described under Item 585 will be required unless otherwise directed by the Engineer.

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.

Item 416:

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

Provide a formed 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.

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

Payment will be made only once for drilling the shaft regardless of the extra work caused by obstructions.

Concrete removal required for installation of drilled shafts will be subsidiary to Item 416.

Item 420:

Mass concrete is a plans quantity item.

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

Form columns to a point a minimum of one foot below the proposed future or existing bottom of channel elevation indicated on the bridge layouts by an acceptable method. This form work is not paid for directly, but is considered subsidiary to this item.

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.

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.

County: Rockwall

Highway: IH 30

NATIONAL BRIDGE INVENTORY NUMBERS:

Provide National Bridge Inventory (NBI) numbers on all bridge structures and bridge class culverts.

Where beam types allow access to the face of abutment backwall, place 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.

Where beam types do not allow access to the face of abutment backwall, place NBI numbers on the face of each abutment cap using 3" block numbers. Locate NBI numbers below the outside beams at opposite corners of the bridge.

Where a bridge begins, ends or contains a bent common to multiple structures, place NBI numbers on both faces near both ends of the common bent cap. The number placed at each of the four locations will correspond to the NBI number assigned to the bridge immediately above the number. Locate NBI numbers below the outside beam. Place using 3" Block Numbers.

For Bridge Class Culverts, place National Bridge Inventory numbers at the middle of the downstream headwall using 3" block letters.

For Bent Numbering and NBI Numbering, furnish materials that conform to the pertinent requirements of the following items:

- Stencil ink, black 11 oz., spray can (lead, CFC, and CFHC free). Black spray will be waterproof, weather resistance and dry instantly on all surfaces, without smearing, smudging or rippling and
- Die cut stencils or
- Brass stencil, 3 in., numbers and letters, adjustable interlocking stencil, set content 92 piece numbers and letters, legend height 3 in., symbol height 3 in. Stencils must be industrial grade and interlocking.

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

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 High Performance Concrete (HPC) of the class specified for the following bridge components: approach slabs, abutments, bents, columns, slabs, sidewalks and medians.

Provide High Performance Concrete (HPC) of the class specified for all railing and permanent concrete traffic barrier placed on bridges or approach slabs. HPC concrete is not required for portions of rail or concrete traffic barrier not located on a bridge.

County: Rockwall

Highway: IH 30

Provide sulfate resistant concrete for box culverts and all drilled shafts. At the contractor's option, a sulfate resistant high-performance concrete may be used; however, high performance concrete is not considered sulfate resistant concrete when Class C fly ash and Type I cement is used in the mix design.

Strength evaluation using maturity testing, Tex-426-A, may be used for all concrete elements except drilled shafts and 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 Fomey F-250EX Standard Compression Machine including accessories or TxDOT approved equal.

Supply the Engineer with a list of certified personnel and copies of their current ACI certificates before beginning production and when personnel changes are made. Supply hard copies of calibration reports for testing equipment when required by the Engineer.

Item 423:

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

Name	Manufacturer	Phone
Reinforced Earth Walls	The Reinforced Earth Company 1331 Airport Freeway, Suite 302 Euless, TX 76040-4150	(817) 283-5503
Vist-A-Wall Precast MSE Walls (Grid-Strip, Wide Mesh)	Contech Engineered Solutions LLC 650 Justice Lane Mansfield, TX 76063	(800) 338-1122
Strengthened Soil Walls	ROSCH Earth Technologies 18390 Wings Corporate Drive Chesterfield, MO 63005	(636) 519-7770
Structural Embankment MSE Walls	Structural Embankment, LLC P.O. Box 2200 Weatherford, TX 76086	(817) 599-5700

County: Rockwall

Highway: IH 30

Name	Manufacturer	Phone
Tricon Retained Soil Walls	Tricon Precast, Ltd. 15055 Henry Road Houston, TX 77060	(281) 931-9832
VP Wall System	Valley Prestress Products, Inc. 1520 Calhoun Road P.O. Box 309 Eagle Lake, TX 77434	(979) 234-7899
Jobe Wall System	Jobe Materials, L.P. 12123 Dyer Street El Paso, TX 79934	(915) 298-9900

All retaining walls will have 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 AS backfill as defined under this item for permanent MSE or concrete block (CB) walls not subject to inundation. Unless otherwise shown on the plans, provide type DS backfill as defined under this item for permanent MSE or CB 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.

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 minimum length of 8' or longer as required by RW(MSE)-DD. Earth reinforcement length is measured perpendicular to the wall. Adjust skewed earth reinforcements as necessary of obtain required length.

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

County: Rockwall

Highway: IH 30

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 option or options chosen, use the same fascia 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.

Unless otherwise shown on the plans, form the map of Texas emblem into a wall panel next to each bridge abutment. Engineer approval of the exact location of each emblem is required. The cost of forming emblems is considered subsidiary to this item. Inset the map of Texas a minimum of $\frac{3}{4}$ inch into the face of the panel, and provide a smooth finish with an engineer approved contrasting color.

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

Use Embankment Type C2 as non-select embankment backfill as defined under Item 423.2.4.1. For non-select embankment fill behind retaining walls provide and install fill in accordance with Item 132, Type C2.

For cut walls, the backfill between the select fill zone and the existing ground shall be either select material as required for the select fill zone or backfill meeting or exceeding the requirements of Item 132, type C2. Place material in accordance with Item 132, Type C2 requirements. If existing ground is laid back (i.e. not vertical), the lay back shall be done as a series of equal height benches so as to prevent the formation of a smooth surface at the material interface.

Avoid distinct vertical joints between select backfill and embankment (Non-Select) backfill as required by Section 423.3.4. This may be conveniently done by providing a zone of material behind the strap zone (1' min width) in which alternating lifts of select and non-select materials are interlaced.

Items 423 and 427:

The IH-30 corridor in Rockwall County uses Ashlar Stone Formliner on all retaining walls and retaining wall type bridge abutments. Supply form liners providing a finish similar to that derived from Pattern No. 16986 "Georgetown Ashlar", by Fitzgerald Formliners 1.5" deep, Pattern No.460 "Ashlar Cut Stone", by Greenstreak, Pattern "Ashlar Stone" 1.5" Deep, by Scott System or equal. Maximum depth of the striations is 1.5 inches.

For cast in place walls, cast the top two feet smooth.

Retaining wall colors are shown elsewhere in the plans.

County: Rockwall

Highway: IH 30

Items 424 and 425:

Where a precast or cast-in-place concrete element is shown in the plans, Contractor may submit a precast concrete alternate in accordance with the TxDOT Standard Operating Procedure found online here: <https://tntoday.dot.state.tx.us/BRG/Pages/Bridge%20Design.aspx>. Acceptance or denial of any precast alternate design proposal is at the sole discretion of the Engineer.

Item 425:

Vertical clearance is less than or equal to 20 feet, provide Bars C and CH for the full length of the girder per the IGD standard.

Repair "Safety Harness Pole Holes" in beams in accordance with Item 429 prior to placement of the Bridge Slab. This work is considered subsidiary to the various bid items.

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.

Apply a 4-SF sample of each color on the project surfaces for approval. Adjust color as required by Engineer to compensate for surroundings and natural lighting conditions on the project site.

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.

Where used, provide fractured fin/ribs/striations that are continuous with no apparent curves or discontinuities. Variations of the fractured ribs from true vertical exceeding $\frac{1}{4}$ " for each 4'-0" of panel height are not acceptable.

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 427.4.3.5 "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.

County: Rockwall

Highway: IH 30

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 RW(BTR) rail to bottom of panel as directed. 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.

Item 440:

Provide reinforcing steel with epoxy coating meeting the requirements of item 440 for the following bridge components: approach slab, slab, sidewalk, median, concrete traffic barrier, and rail.

Epoxy coated reinforcing is not required for portions of rail or concrete traffic barrier not located on a bridge.

Reinforcing for abutments, bents and columns are not required to be epoxy coated.

R-bars (I-beams, U-beams, X-Beams and TX Girders), Z-bars (boxes), and H-bars (Slab beams) are not required to be epoxy coated.

For bridge widening, existing uncoated reinforcing in the slab exposed during slab removal shall receive an abrasive blast cleaning followed closely by an application of BASF Emaco P25, Sika Armatec 110 EpoCem or Euclid Duralprep A.C. Perform all work in accordance with manufacturer's specifications. Cleaning and coating operations must be performed no more than 7 days prior to placement of the concrete. In the event more than 7 days is required between initial coating and slab placement, the contractor shall apply a second coat of the same material used initially to the bars approximately 1 day prior to placement of the concrete. This work is considered subsidiary to the various bid items.

All ties, chairs and other appurtenances used with epoxy coated reinforcing shall be epoxy coated or non-metallic.

Fiber Reinforced Concrete (FRC) can be used as a substitute for Non-Structural Class Reinforced Concrete in Mow-Strip and Rip Rap Items as approved. FRC may also be used for other Non-Structural Class Reinforced Concrete Items as approved.

Item 442:

Use temperature Zone 1 for CVN testing.

County: Rockwall

Highway: IH 30

Item 446:

Paint all structural steel using protective "System II" paint in accordance with Item 446. Paint colors are shown elsewhere in the plans.

After all concrete placement has been completed, remove any concrete or other contaminate from the beam by hand cleaning methods so as not to damage the primer and then water blast / wash with a minimum of 2,500 psi pressure.

Item 449:

Use Thomas & Betts Kopr-Shield, MG Chemicals #846, MG Chemicals #8463, NYOGEL #756G, Pro-Shield #7308, Cho-Lube #4220, or other approved electrically conducting lubricant compound.

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 465:

All manholes, junction boxes and inlets will require inverts unless otherwise directed.

Item 471:

Tackweld all inlet grates and manhole covers to the frame with two 1-inch welds. Supply unpainted 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.

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:

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.

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

Item 500:

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

County: Rockwall

Highway: IH 30

Item 502:

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

Access will be provided to all business and residences at all times. Where turning radii are limited during phased construction at intersections, provide all weather surfaces such as RAP or base in turning movements to accommodate and to protect the traffic from edge drop-offs. Materials, labor, maintenance and removal for these temporary accesses and radii will not be paid for directly but will be considered subsidiary to the various bid items.

Provide a person on the project at all times (24 hours/day, 7 days/week) to patrol, monitor, and maintain the traffic control devices and signs. The person must be knowledgeable of TxDOT Guidelines for traffic control devices and signs.

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.

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.

Do not operate or park any equipment/machinery closer than 30 feet from the traveled roadway after sunset unless authorized by the engineer.

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

As approved by the Engineer, 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 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. Complete the weekly tracking form provided by the department and submit invoices that agree with the tracking form for

County: Rockwall

Highway: IH 30

payment at the end of each month approved services were provided. Reimbursement will not be made for coordination fees charged by any party.

The lane closure disincentive fee is shown on the following table. The fee applies to the Contractor for closures that are outside the times specified above for each hour, regardless of the length of the lane closure or obstruction.

The Contractor may begin closing:

WBML: 1 *ML* starting at 9:00 PM with 2 or more *ML*'s closed at 10:00 PM.

WBML: Weekdays and Weekends; 2 or more *ML*'s open by 5 AM; All *ML*'s open by 6:00 AM on Weekdays and 9:30 AM on Weekends.

WBML: 1 *ML* may be closed between 9 AM and 3:30 PM on Weekdays Only, No daytime closures on the Weekend.

EBML: 1 *ML* starting at 9:00 PM with 2 or more *ML*'s closed at 10:00 PM.

EBML: Weekdays and Weekends; 2 or more *ML*'s open by 6 AM; All *ML*'s open by 6:30 AM on Weekdays and 9:30 AM on Weekends.

EBML: 1 *ML* may be closed between 9 AM and 3:30 PM on Weekdays Only, No daytime closures on the Weekend.

Full Freeway closures are not allowed unless otherwise approved in writing by the Engineer.

Lane Closure Disincentive

*No. of Lanes Closed	**Cost Deduction/Hr
1	\$ 1,000.00
2	\$ 2,000.00
3	\$ 3,000.00
4	\$ 4,000.00
5+	\$ 5,000.00

*Lanes include all Main lanes including HOV/Managed Lanes as well as short term frontage road through lane closures

**Deducted costs will be prorated by rounding up to the nearest 15-minute increment

Traffic Control Plans with Lane Closures causing backups of 20 minutes or greater in duration will be modified by the Engineer up to and including removal of the lane closure and adjustment of lane closure times.

Work in other areas of the project is not restricted to this time frame.

Additional lanes may be closed, started earlier, or extended later with written permission of the Engineer.

Item 504:

Furnish one Field Office (Type E) for this project. Provide 2300 sf of gross floor area in rooms 8 ft high. Partition the floor area into at least 7 interconnected rooms, with at least 2 exterior doors and at least 1 window in each room.

County: Rockwall

Highway: IH 30

Chain link fencing (6-ft. chain-link fence, a top-mounted 3-strand barbed wire, and separate 32-ft. entrance and exit gates to facilitate pull through maneuvers of the vehicles), area dimensioned as directed by the Engineer, will be provided around TxDOT field office/laboratory and parking areas separate from contractor areas. Keep Contractor and TxDOT parking separate. No Contractor vehicles, equipment, dumpsters, storage, etc. is allowed in TxDOT parking area.

Allow for space to accommodate a minimum of "10" pull through parking spaces.

All field office layouts must be approved by the Engineer prior to installation.

The Engineer reserves the right to modify the layout.

A 10 lb. ABC fire extinguisher with up-to-date inspection tag, working smoke detector, first aid kit and an eye wash station shall be installed in all facilities used by TxDOT personnel. They shall be mounted on a wall that is easily accessible and not blocked by any permanent furniture.

Inspect the fire extinguishers, smoke detectors, eye wash stations and first aid kits every month. Make necessary corrections or updates as needed or as directed within 7 calendar days.

Provide a broadband internet connection with a minimum speed of 50 Mbps download and 50 Mbps upload, unless otherwise approved.

Provide an all in one color printer/scanner/copier that will print, scan and copy 11"x17" and 8.5"x11" sheets with software that is compatible with TxDOT equipment. This is subsidiary to the various bid items.

Item 506:

Take all practicable precautions to prevent debris from being discharged into the Waters of Texas or a designated 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.

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.

Provide SW3P Signs. Obtain from the Engineer a copy of the project's completed TPDES Storm Water Program Construction Site Notice and Contractor Site Notice. Laminate the sheets and

County: Rockwall

Highway: IH 30

bond with adhesive to 36" X 36" 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 just inside the right of way line at a readable height or as directed by the Engineer. If the sign cannot be placed outside the clear zone, it must adhere to the TMUTCD. SW3P signs, maintenance, and reposting (for replacement or as needed to ensure readability) will be subsidiary to Item 502.

Concrete Washouts are required per the CGP. The Concrete Washout Area(s) structural controls must consist of temporary berms, temporary shallow pits, and/or temporary storage tanks to prevent contaminated runoff and must be lined as to prevent contamination of underlying soil. Ensure pits properly maintained including removal of concrete as not to allow over flow. The location(s) of washout area will be approved by the Engineer. When washout pits are no longer needed, they will be removed and area will be restored to original condition. This work, materials and labor will not be measured or paid for directly but will be subsidiary to Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls."

Item 508:

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

Item 512:

The contractor will furnish pre-cast F Shape Barriers for traffic control, and remove and retain possession of non-permanent barriers at the end of the project. Pre-cast F Shape Barriers must have drainage slots as detailed on the Concrete Safety Barrier Standards. Submit for approval the type of barrier joint connection proposed for the project.

Item 514:

Provide High Performance Concrete (HPC) and epoxy coated reinforcing for all Permanent Concrete Traffic Barrier located on bridge approaches or bridge slabs.

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.

Item 530:

Provide Class "HES" concrete for concrete intersections and driveways listed or shown on the plans.

County: Rockwall

Highway: IH 30

Item 531:

Joint sealant is required when shown in the plans. This work will not be paid for directly but will be considered subsidiary to this Item.

Item 536:

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

Item 540:

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

Item 556:

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 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.

Item 610:

Complete lighting as early as feasible. Make every effort to keep the jobsite lit for the duration of the project. Do not de-energize existing lighting before new lighting is operational without prior approval.

Use 480 volt electronic LED drivers for luminaires on this project.

Existing illumination circuits may be located within or adjacent to the project limits. Either verify with the Engineer or supply a video survey to the Engineer of all the lighting in and adjacent to the project limits before beginning work. Ensure that all assemblies operational at the beginning of construction are operational at the completion of the project. This work will be done at the contractor's expense.

Item 613:

Ground sleeves are required for all high mast poles.

Notify the District Transportation Operations Office immediately after new High Mast Poles have been erected.

Item 614:

Aircraft obstruction lights are not required for this project.

County: Rockwall

Highway: IH 30

Item 618, 6016:

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

Secure permission and approval from the proper authority prior to cutting into or removing any sidewalks or curbs for installation of this Item. After the work is completed, the Contractor shall restore any curbs or walkways, which have been removed, to their original condition and to the satisfaction of the engineer.

Where a trench is cut through the surfaced parking shoulder, median or driveways for laying conduit, the base and surfacing will be replaced with similar materials equal in appearance and quality to the original construction.

Structurally mount junction boxes as shown on the plans. When used for traffic signal installations, use boxes 12"x12"x8", or as approved.

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

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 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 mule tape in conduit runs in excess of 50 feet. Also furnish and install non-metallic mule tape in conduit installed for future use and cap using standard weather-tight conduit caps, as approved. Furnish Garvin # PT-1250-3K, ComStar PUL 1250P3K, Ideal Part No. 31-315 or equal as approved by the Engineer. This work will not be paid for directly, but is subsidiary to this Item.

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.

Existing conduit is proposed for reuse in this project. Conduit prep will be paid for under Item 6027 as directed by the Engineer.

When using existing conduit, ensure that all conduits have bushings and are cleaned of mud and debris. Restrap conduit that is being relocated to new timber poles as if it were a new installation. This work will not be paid for directly, but is subsidiary to this Item.

2" Schedule 80 PVC will be used at the power pole to supply electricity to underground services.

County: Rockwall

Highway: IH 30

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

Install "ITS" conduits in stages to accommodate phased construction. Cap the ends of conduits to prevent obstructions.

"ITS" conduit shall be installed a minimum of 42 inches deep, when trenching methods are used, and a minimum of 60 inches deep when bored under existing pavement, unless shown otherwise in the plans.

When trenching through rocky soil, place "ITS" conduit on a two-inch sand cushion and backfill with a minimum of six inches of sand.

The minimum bending radius for all "ITS" conduits supplied on this project shall be 18 inches, or as approved.

Install a permanent non-metallic pull cord, with a minimum tensile strength of 600 pounds, in all new "ITS" conduits. For conduits installed for future use, plug conduits using a mechanical conduit plug. Ensure that the mechanical plug creates a water and airtight seal. This work will not be paid for directly but will be subsidiary to this item.

If the Contractor chooses to combine multiple conduits into one bore, the Contractor will install a casing around the conduits. The casing will not be paid for directly, but will be considered subsidiary to this item.

Install, for each "ITS" conduit run, a metallic underground warning tape, as detailed in the plans. This warning tape will be imprinted with "CAUTION BURIED FIBER OPTIC CABLE." This will not be paid for directly, but will be considered subsidiary to Item 618: Conduit. The warning tape does not need to be installed when conduit is bored under a roadway section or landscaped area. At locations where the Contractor chooses to bore conduit underground, in areas where trenching methods can be used, the Contractor will install the metallic underground warning tape.

Item 620, 6004:

The equipment grounding conductor shall be identified by a continuous green colored jacket insulation or bare wire. Grounded conductors (Neutral) shall be identified by a continuous white colored jacket. Ungrounded conductors (Hot) in a 120/240v or 240/480v system shall be identified by each pole or leg. For 240-volt branch circuit fed from 120/240 source and 480-volt branch circuit fed from 240/480 source, ensure one leg is identified by a continuous black colored jacket and the other leg by a continuous red colored jacket. White phasing tape is not allowed to be used to signify a neutral on any conductor 6 AWG and smaller as per TxDOT specifications and the NEC.

All communication cables will be color-coded consistently, or permanently labeled, between all connections and splices, to ensure immediate identification. The Contractor will submit a chart or list identifying all cables, in a logical and sequential manner prior to installation, for the Engineer's approval.

County: Rockwall

Highway: IH 30

Insulated tracer wire shall have Orange colored insulation and shall be labeled as a "Tracer Wire". For fiber duct banks with multi-duct conduits, tracer wire shall be installed in one innerduct.

For both transformer and shoe-base type illumination poles, provide double-pole breakaway fuse holder as shown on the Texas Department of Transportation (TxDOT) - Construction Division's (CST) materials producers list. Category is "Roadway Illumination and Electrical Supplies." Fuse holder is shown on list under Items 610 & 620. Provide 10 amp time delay fuses.

Item 624:

Slack conductors required by Standard Sheet ED(3)-14 will be subsidiary to Item 624.

Concrete removal required for installation of ground boxes will be subsidiary to Item 624.

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. Except for supplemental nearside signal heads, all signal heads must be installed at least 40' from the stop line. If field adjustments result in the nearest signal head being more than 180' from the stop line, install a supplemental nearside signal head as directed by the engineer. 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.

Item 628:

Contact the appropriate utility company during the first three weeks of the project lead-time period to allow adequate time for any necessary utility adjustments, transformer installation, etc.

Granite concrete service pole embedment depth shall be 10' and shall be a minimum of 25' above grade.

Backfill Granite Concrete service poles with a Class A concrete in accordance with Item 421, "Hydraulic Cement Concrete", except consider the concrete subsidiary to Item 628 for payment purposes.

The Meter Base or Transocket shall be mounted facing the roadway and the service enclosure shall be mounted on the opposite side of the service pole or pedestal.

The Contractor shall obtain the street address of the new electrical service directly from the applicable City.

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.

County: Rockwall

Highway: IH 30

Contractor shall submit an online request at ONCOR.com by following the steps below:
Select Construction and Development tab at top of screen.
Scroll down to New Construction and select Learn More.
Select the Start Request icon under the Commercial and Industrial project type.
Select the One Single Building Facility tab and fill in all required information.
Submit the request. An ONCOR representative will contact you within a few days.

A Licensed Master Electrician shall oversee the installation of all electrical services.

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

On the outside lower front of each electrical service meter base cover, install a 12 gauge minimum thickness stainless steel, aluminum or brass placard. The placard shall be engraved or stamped with the numeric portion of the street address and permanently affixed to the cover with exterior rated adhesive so as not to interfere with the operation of the latch. This work will not be paid for directly, but is subsidiary to this Item.

Install a 5/8x10' copper clad ground rod at the proposed secondary electrical service pedestal unit location.

Item 636:

Leave the advance guide sign and/or the exit direction sign for an interchange in place at all times unless prior written approval is given. Replace signs removed by the Contractor before the end of the workday.

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 current standard sheets for all route markers (including interstate shields) and "Exit Only" panel information. Letter, arrow, and number heights shall all conform to the latest edition of the Standard Highway Sign Design Manual.

Provide two (2) sets of shop drawings for signs. The shop drawings shall conform to the details shown on the plans. The shop drawings shall show the details of the panels, wind beams, stiffeners, joint backing plates, splices, fasteners, brackets, and sign support connections. The shop drawings shall show letter types and sizes, interline spacing and message arrangements.

Affix a sign identification decal to the back of all signs and mark out the installation date in accordance with Item 643.

Attach sheeting applied to extruded aluminum panels to each individual extrusion.

All new and or replaced sign panels shall be mounted flush (0°) on all sign structures. Furnish and obtain approval of all shop drawings detailing the method to accomplish this installation. All material and labor required for this installation is considered subsidiary to Item 636.

County: Rockwall**Highway: IH 30**

Ensure the minimum vertical clearance, as shown in the plans, at the highpoint of the roadway after the installation of all overhead signs. Mount new overhead signs with 46% of the sign height positioned below the centerline of the truss. If new signs are mounted on a truss with existing signs, all signs shall be bottom justified using the 46% of the tallest sign to determine placement.

Place new guide signs on existing overhead sign structures and bridge rail supports. Existing attachment hardware may be reused if position of sign meets the 46% mounting criteria and if the existing hardware is large enough to accommodate the new sign. Sign support brackets may be cut or removed as directed; however, do not extend or lengthen existing brackets. Furnish any additional sign attachment hardware, support brackets, etc. as required. Payment will not be made for the additional brackets but is considered subsidiary to this item.

All additional hat signs and plaques mounted to the top of signs shall be supported with wind beams 2.5 times the height of the sign and/or plaque.

Logo signs may be affected within the limits of this project. The statewide Logo sign program is managed for TxDOT by Lonestar Logos (www.lonestarlogos.com) under a separate contract. If Logo signs need to be relocated or removed during construction, plans (traffic control plans and signing layouts) will clarify if the contractor is to do this or if the signs are to be relocated or removed by Lonestar Logos. In some cases, smaller replacement signs may be noted. All Logo signs are property of TxDOT.

The telephone number for Lonestar Logos is (512)462-1310 and the email address for the operations manager, Tyler Starr, is tstarr@lonestarlogos.com. Contact Lonestar Logos at least 2 weeks in advance of any needed removal or replacement of Logo signs.

Signs to be relocated during construction by the contractor will be paid under a separate pay item and in accordance with the Temporary Large Roadside Signs (TLRS) standard sheets in the plans.

Items 644, 647, and 650:

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

All sign mounts shall have a clamp base system for all small roadside sign assemblies.

A 3-inch strip of red reflective sheeting shall be placed on all Do Not Enter sign assemblies. This sheeting shall be placed directly below the Do Not Enter sign for the entire length of the signpost facing wrong way traffic. This work will be considered subsidiary to Item 644.

The post lengths shown on the Summary of Large Signs are approximations only. After the "X" dimensions are determined, submit actual post lengths to the Engineer for approval. Post lengths and size shall be approved by the Engineer before fabrication.

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

County: Rockwall

Highway: IH 30

Item 650:

All towers and trusses will be match marked, by the fabricator, for erection. Use the tower heights shown in the sign summaries and on the plans for bidding purposes only. Prior to fabrication, take finished grade elevations at the tower locations and determine their exact heights for fabrication in accordance with the details shown on the plans.

Item 656:

Before placing the concrete for the controller foundation, ensure that the anchor bolt spacing will match the anchor bolts and cabinet supplied.

Form a 3/4-inch chamfer on the top edge of each pedestal 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 677:

A water blasting method approved by the Engineer will be the only method allowed for the removal of permanent and temporary pavement markings except on a sealcoat surface. A 2 foot wide sealcoat will be required on sealcoat surfaces to eliminate permanent and temporary pavement markings.

Item 680:

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

1. Notify the Traffic Projects Office at DAL_TPO@txdot.gov one week before beginning any work involving traffic signals. Supplement email correspondence with the District Signal Maintenance Office at (214)320-6682 and Construction Office at (214)319-6406.
2. Provide submittal literature for all traffic signal equipment before installation.
3. Furnish and install a new controller (eight phase NEMA TS 2 Type 1) and cabinet (NEMA TS 2 Size 6, 16 position load bay), meeting the requirements of Departmental Materials Specifications DMS-11170. Provide detector panel toggle switches that additionally permit the user to disconnect the detector. Provide new MMU with Ethernet port. For a pole-mount controller, provide three mounting brackets and install a 5' x 5' x 4" Class A concrete pad under the cabinet in accordance with Items 420 and 421.
4. Deliver the cabinet, controller, and accessories (with all cabinet components completely connected and securely strapped down) to the District Signal Shop, 4777 E Hwy 80, Mesquite, for testing. Notify the District Signal Shop two working days before delivery at (214)320-6682.
5. Install the controller cabinet in an orientation as directed.
6. Connect all field wiring to the controller assembly into the. The District will assist in determining how the detection cables are to be connected, and will also program the controller for operation, hook up the malfunction management unit (MMU) or conflict monitor, detector units, and other equipment, and turn on the controller. 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.

County: Rockwall**Highway: IH 30**

7. 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.
8. Provide 250W Equivalent LED Fixtures with 240-volt electronic LED drivers as shown on the Material Producers List.
9. Have a qualified technician on the project site to place the traffic signal in operation.
10. Use qualified personnel to respond to and diagnose all trouble calls during the thirty-day test period. Repair any malfunction to Contractor-supplied signal equipment. Provide to the Engineer a local telephone number, not subject to frequent changes and available on a 24-hour basis, for reporting trouble calls. Response time to reported calls must be less than 2 hours. Make appropriate repairs within 24 hours. Place a logbook in the controller cabinet and keep a record of each trouble call reported. Notify the Engineer of each trouble call. Do not clear the error log in the conflict monitor or MMU during the thirty-day test period without approval.
11. Furnish a spare controller (eight-phase NEMA TS 2 Type 1) and base-mount (or pole-mount) cabinet (NEMA TS 2 Size 6, 16 position load bay), meeting the requirements of Departmental Materials Specifications DMS-11170. Provide detector panel toggle switches that additionally permit the user to disconnect the detector. Provide new MMU with Ethernet port. Provide three mounting brackets for a pole-mount controller cabinet.
12. When the work required by this contract has been satisfactorily completed on any individual or inter-connected system of signalized intersections, final clean-up has been performed, and the traffic signal equipment supplied has operated continuously and satisfactorily for at least 30 days, release from further maintenance on that particular intersection is authorized. This partial acceptance, made in writing, does not void or alter any of the terms of the contract.
13. Prevent any damage to property owner's poles, fences, shrubs, mailboxes, etc. Protect all underground and overhead utilities and repair any damage. Provide access to all driveways during construction.
14. The concrete foundation for the controller as shown on standard TS-CF is diagrammatic and the dimensions will be adjusted in the field to fit existing conditions.
15. A 3 inch strip of red prismatic conformable sheeting shall be placed on all Do Not Enter sign assemblies. This sheeting shall be placed directly below the Do Not Enter sign for the entire length of the sign post facing wrong way traffic.
16. Salvage the existing traffic signals at IH-30 @ Ridge Rd and Horizon Rd, etc. 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. The material listed above is to be stockpiled at the TxDOT District Signal Shop, 4777 E Hwy 80, Building N, Mesquite, TX 75150, as directed. Contact the District Signal Shop at 214-320-6682 48 hours in advance of delivery. All other material removed in this project will become the property of the Contractor. Dispose of material off the right of way in accordance with federal, state, and local regulations. Maintain the operation of the existing traffic signal until directed to remove it.
17. Completely remove timber poles not set in concrete without cutting off the pole. Timber poles set in concrete are considered unsalvageable.
18. ILSN and mounting hardware to be supplied by the City of Rockwall Street Department, 972-771-7730, 1600 Airport Rd.
19. Opticom to be supplied by the City of Rockwall, Fire Department, 972-771-7770, 305 E Boydston Ave. The Contractor shall install Opticom's per Manufacturer's Recommendations.

County: Rockwall

Highway: IH 30

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 be required.
3. Provide submittal literature for all traffic signal equipment before installation.
4. Furnish and install a controller (eight phase NEMA TS 2 Type 1) and cabinet (NEMA TS 2 Size 6, 16 position load bay), meeting the requirements of Departmental Materials Specifications DMS-11170. Provide detector panel toggle switches that additionally permit the user to disconnect the detector. Provide new MMU with Ethernet port. Provide a pole-mounted cabinet that has three brackets for pole mounting and install a 5' x 5' x 4" Class A concrete pad under the cabinet in accordance to Items 420 and 421. .
5. Operate and maintain the temporary signal. Provide a telephone number to the District for trouble calls. Check the signal equipment at least monthly, and within 24 hours in response to complaints, and immediately repair or replace any malfunctioning Contractor-supplied equipment. Notify the Department immediately upon finding malfunctioning Department-supplied equipment or a problem with the signal timing. If the controller is supplied by the Contractor, provide a reliable technical support person and phone number for the manufacturer of the controller. If the vehicle detection is Department-supplied, notify the TxDOT Dallas District Signal Shop one week prior to traffic switches to reprogram and re-aim the detectors.
6. Relocate existing emergency vehicle preemption equipment to temporary signals.
7. Install pole-mounted BBU on the opposite side of the pole from the controller cabinet.
8. Opticom to be supplied by the City of Rockwall, Fire Department, 972-771-7770, 305 E Boydston Ave. The Contractor shall install Opticom's per Manufacturer's Recommendations.

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 pedestrian and vehicle signal heads in the following color: Federal Yellow #13538 of Federal Standard 595. Provide non-painted aluminum tubing. Provide back plates, louvers, and the inside of visors with a flat black finish. Provide aluminum vented back plates with retroreflective border for all traffic signal heads.

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 aim as directed.

County: Rockwall

Highway: IH 30

Item 684:

Provide stranded 14 AWG Type A signal cables for LED signal heads and stranded 12 AWG Type C cables for APS units.

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. The conductors for the line and load side of the terminal strip shall be identified with a plastic label with two straps per tag. The load side shall have each signal head and ped head identified on the tag.

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.

For mast arm poles designated with an ILSN bid code, the ILSN arm, claps, bolts, and washers will be considered part of the complete pole assembly. The ILSN signs and mounting hardware will be furnished by the applicable City.

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.

Provide vertical clearance of 17 to 19 feet from the roadway to the lowest point of the signal head or mast arm. Except for supplemental nearside signal heads, all signal heads must be installed at least 40' from the stop line. If field adjustments result in the nearest signal head being more than 180' from the stop line, install a supplemental nearside signal head as directed by the engineer. 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 to 48 feet in length. Install as shown on MA-DPD.

Item 687:

Provide 12 circuit Buchanan Type 112SN, Kulka Type 985-GP-10 CU, or equal terminal strip in the pedestal pole base. The conductors for the line and load side of the terminal strip shall be identified with a plastic label with two straps per tag. The load side shall have each signal head and ped head identified on the tag.

County: Rockwall

Highway: IH 30

Item 688:

Verify the location of the APS units and the direction of the arrows on the signs prior to installation.

Item 730:

At the discretion of the Engineer, mow non-paved areas within the project prior to placement of permanent vegetation. Mow up to three (3) cycles per growing season.

Item 3077:

Superpave Mixtures used as concrete pavement underlayment is deemed as "Exempt Production".

Provide PG binder 64-22 in Type B mixture.
Provide PG binder 70-22 in Type C mixture.
Provide PG binder 64-22 in Type D mixture.

Item 6000:

New circuit breakers for existing electrical services shall be furnished by the Contractor and shall be compatible with the existing service equipment. A Licensed Master Electrician or Unrestricted Journeyman shall be required to make modifications to existing services.

Item 6007: Fiber Optic Cable

The single mode fiber optic cable will be installed continuous, without splices, from the communications hub to hub, as indicated in the plans, or as directed. No splicing of fiber optic cable will be permitted in ground boxes unless shown in the plans.

All fiber optic trunk cables and the insulated tracer wires will be installed in multiduct conduit. Electrical conductors will be installed in one 3 inch conduit (or 2 inch conduit if shown on plans) and any non-fiber communications cables are to be installed in the second 3 inch conduit (or 2 inch conduit if shown on plans).

All fiber optic pigtails and patch cords shall have ST connectors, will not be paid for separately, and shall be considered subsidiary to Item 6007.

Extra cable length will be included in each run, to provide adequate slack, at each ground box, camera pole, communications hub, dynamic message sign, or radar vehicle sensing device, as determined or shown in the plans.

County: Rockwall

Highway: IH 30

Item 6010: CCTV Field Equipment

The cables and harnesses will enter at the bottom of the CCTV housing. The CCTV will have gaskets, at entry points, to prevent moisture entry.

Item 6027: Preparation of Existing Conduits, Ground Boxes, or Manholes:

The Contractor is responsible for damage done to existing cable during the preparation of existing conduit. The Contractor will repair or replace damage done to existing cables. The repairing or replacing of damage to existing cables will be done at the expense of the Contractor, and to the satisfaction of the Engineer.

Item 6032: ITS System Integration:

Any system integration work required for the temporary ITS system will not be paid for separately, but will be considered subsidiary to this item.

Item 6058:

The BBU will be installed with the controller on the concrete pad paid for under Item 680. If a larger pad is needed to accommodate the BBU, the additional labor and material will be subsidiary to this item.

Item 6151: Dynamic Message Sign System

New foundation for ground mounted DMS controller cabinet shall be considered subsidiary to this item.

Item 6185:

The total number of truck mounted attenuators (TMAs) or trailer attenuators (TAs) required when utilizing the traffic control standards are shown in the tables below.

TCP 1 Series	Scenario	Required TMA/TA
(1-2)-18		1

TCP 2 Series	Scenario		Required TMA/TA	
(2-1)-18 / (2-2)-18 / (2-4)-18 / (2-5)-18 / (2-6)-18	All		1	
(2-3)-18	A	B	1	2

County: Rockwall

Highway: IH 30

TCP 3 Series	Scenario			Required TMA/TA
(3-1)-13	All			2
(3-2)-13	All			3
(3-3)-14	A	B	D	2
	C			3
(3-4)-13	All			1, unless working inside a twtfl, then 2.

TCP 5 Series	Scenario		Required TMA/TA
(5-1)-18	A	B	1

TCP 6 Series	Scenario		Required TMA/TA	
(6-1)-12	A	B	1	2
(6-2)-12 / (6-3)-12	All		1	
(6-4)-12	A	B	1	2
(6-5)-12	A	B	1	2
(6-6)-12 / (6-7)-12	All		1 Per Lane	
(6-8)-14	All		1	

WZ (BTS) Series	Scenario	Required TMA/TA
(BTS-1)-13	Near Side Lane Closure	1

The contractor will be responsible for determining if one or more of these operations will be ongoing at the same time to determine the total number of TMAs/TAs needed for the project. Additional TMAs/TAs used that are not specified in the plans in which the contractor expects compensation will require prior approval from the Engineer.

Item 6186: ITS Ground Box:

The Contractor shall provide a total of 4 keyed sockets for the locking security bolts for the project. This work will not be paid for directly, but is subsidiary to this Item.

Item 6292:

All additional items such as poles, conduit, cable, etc. required to achieve the detection specified in the plans will not be paid for separately, but will be considered subsidiary to this item.

County: Rockwall

Highway: IH 30

Item 6306:

Install the Video Processor System so that it interfaces with the traffic controller unit (CU) via the detector rack. If the manufacturer does not have a product to interface via the detector rack, interface via SDLC.

Provide spare VIVDS equipment consisting of one additional camera, paid for by bid item, and one additional VIVDS detector rack card, subsidiary to the Video Processor System bid item, to be delivered to the District Signal Shop at 4777 E Hwy 80, Mesquite, Tx, 75150.

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 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
5/8" X 10' COPPERCLAD GROUND ROD W/CLAMP	EA	1
250W EQ LED LUMINAIRE	EA	12
8 PHASE NEMA CONTROLLER COMPLETE W/ CABINET AND ACCESSORIES	EA	3
TRAFFIC SIGNAL CONTROLLER BASE	EA	3
REGULATORY SIGN PANEL (R10-12,ETC)	EA	48
INSTALL SINGLE STREET NAME SIGN PANEL (ILSN)	EA	10
INSTALL DUAL STREET NAME SIGN PANEL (ILSN)	EA	2
CONCRETE FOUNDATION (8' X 9' X 6", CLASS B)	CY	2.6
INSTALL OPTICOM EQUIPMENT	LS	1.00

County: Rockwall

Highway: IH 30

LIST OF MATERIAL/LABOR
FURNISHED BY THE CITY OF ROCKWALL FOR ITEM 680

DESCRIPTION	UNIT	QUANTITY
OPTICOM CABLE	LF	4145
OPTICOM DETECTOR W/MOUNTING BRACKET	EA	12
OPTICOM MODULES (2-CHANNEL)	EA	4
OPTICOM CARD RACK AND HARNESS	EA	4
OPTICOM CONTROLLER ASSEMBLY COMPLETE WITH CABINET AND ACCESSORIES	EA	4
ILLUMINATED STREET NAME SIGNS (ILSNS)	EA	12

LIST OF MATERIAL/LABOR
SUBSIDIARY TO ITEM 681

DESCRIPTION	UNIT	QUANTITY
40 FT TIMBER POLE (CLASS 2)	EA	10
8 FT LUMINAIRE MAST ARM FOR WOOD POLE MOUNTING W/ 250W EQ LED LUMINAIRE	EA	8
CONDT (PVC) (SCH 40) (1/2")	LF	25
CONDT (PVC) (SCH 40) (2")	LF	485
CONDT (RM) (2")	LF	245
CONDT (RM) (4")	LF	45
GROUND BOX TY C (162911) W/APRON	EA	1
CABLE STRAPS	EA	1081
1/4 INCH ZINC-COATED STRANDED STEEL CABLE	LF	1081
3/8 INCH ZINC-COATED STRANDED STEEL CABLE	LF	3650
GROUND ANCHORS	EA	20

County: Rockwall

Highway: IH 30

YELLOW PLASTIC GUY GUARD	EA	20
DOUBLE EYE ANCHOR ROD	EA	20
5/8" X 8' COPPERCLAD GROUND ROD W/CLAMP	EA	4
2 INCH WEATHERHEAD	EA	15
4 INCH WEATHERHEAD	EA	2
8 PHASE NEMA CONTROLLER COMPLETE W/ CABINET AND ACCESSORIES	EA	2
ELC CONDR (NO. 6) BARE	LF	30
ELC CONDR (NO. 4) INSULATED	LF	485
ELC CONDR (NO. 6) INSULATED	LF	1470
ELC CONDR (NO. 8) INSULATED	LF	2365
VEH SIG SEC (12") LED (GRN)	EA	7
VEH SIG SEC (12") LED (GRN ARW)	EA	7
VEH SIG SEC (12") LED (YEL)	EA	12
VEH SIG SEC (12") LED (YEL ARW)	EA	2
VEH SIG SEC (12") LED (RED)	EA	14
BACK PLATE (12") (3 SEC) ALUM	EA	11
BACK PLATE (12") (4 SEC) ALUM	EA	1
BACK PLATE (12") (5 SEC) ALUM	EA	1
TRF SIG CBL (TY A) (14 AWG) (12 CONDR)	LF	1000
REGULATORY SIGNS (R10-10)	EA	1
BATTERY BACKUP SYSTEM (EXTERNAL BATT CABINET)	EA	2
INSTALL OPTICOM EQUIPMENT	LS	1.00

County: Rockwall

Highway: IH 30

LIST OF MATERIAL/LABOR
FURNISHED BY THE CITY OF ROCKWALL FOR ITEM 681

DESCRIPTION	UNIT	QUANTITY
OPTICOM CABLE	LF	930
OPTICOM DETECTOR W/MOUNTING BRACKET	EA	6
OPTICOM MODULES (2-CHANNEL)	EA	2
OPTICOM CARD RACK AND HARNESS	EA	2
OPTICOM CONTROLLER ASSEMBLY COMPLETE WITH CABINET AND ACCESSORIES	EA	2

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