

INDEX OF SHEETS

SEE SHEET 2

STATE OF TEXAS DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT

PROJECT NO: IM 0351 (095)

CSJ:0017-08-083

IH 35 EAST FRONTAGE ROAD LA SALLE COUNTY

NET LENGTH OF ROADWAY= 71,216.00 FT. = 13.488 MI.

NET LENGTH OF BRIDGES= 495.00 FT. = 0.094 MI.

NET LENGTH OF PROJECT= 71,711.00 FT. = 13.582 MI.

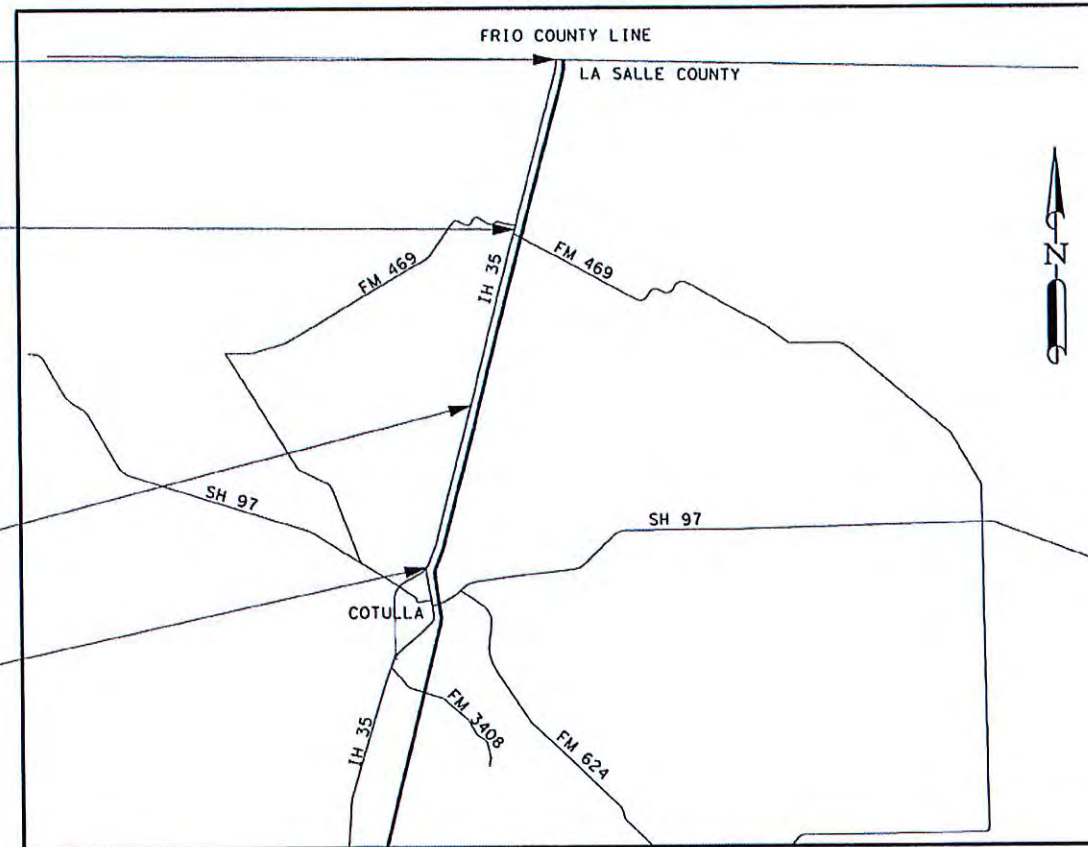
LIMITS: FROM BI 35 TO FRIO/LA SALLE COUNTY LINE
FOR THE CONSTRUCTION OF THE RESTORATION OF AN EXISTING ROAD
CONSISTING OF WIDENING, GRADING, BASE, STRUCTURES,
SURFACING, SIGNING, AND PAVEMENT MARKINGS

BEGIN PROJECT
STA 2001+13.00
MILE MARKER 68+0.586

EXCEPTION: STA 2246+52.50
TO STA 2251+79.00

EXCEPTION: STA 2472+06.50
TO STA 2483+94.50

END PROJECT
STA 2730+43.00
MILE MARKER 82+0.450



LOCATION MAP

EXCEPTIONS: STA 2246+52.50 TO STA 2251+79.00
STA 2472+06.50 TO STA 2483+94.50

EQUATIONS: N/A

RAILROAD CROSSINGS:

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SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF
TRANSPORTATION, JUNE 1, 2004 AND SPECIFICATION ITEMS
LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT: REQUIRED
CONTRACT PROVISIONS FOR ALL FEDERAL-AID CONSTRUCTION CONTRACTS
(FORM FHWA 1273, MAY 2012)

DESIGN SPEEDS
40 MPH FRONTAGE ROADS
DESIGN STANDARD: 3R

2015 ADT: 500
2035 ADT: 700

FUNCTIONAL CLASSIFICATION:
RURAL MAJOR COLLECTOR

FYMA TEXAS DIVISION &	FEDERAL AID PROJECT NO.		SHEET NO.
	IM 0351 (095)		1
STATE	DISTRICT	COUNTY	
TEXAS	22	LASALLE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0017	08	083	IH 35

FINAL PLANS

LETTING DATE: _____

DATE CONTRACTOR BEGAN WORK: _____

DATE WORK WAS COMPLETED & ACCEPTED: _____

FINAL CONTRACT COST: \$ _____

CONTRACTOR: _____

PREPARED AND SUBMITTED BY:

LJA Engineering, Inc. 
FRN - F-1386



Michael D. Keck
8/16/13



TEXAS DEPARTMENT OF TRANSPORTATION

SUBMITTED FOR LETTING: _____

PROJECT MANAGER
RECOMMENDED FOR LETTING: _____

AREA ENGINEER
RECOMMENDED FOR LETTING: _____

DISTRICT DIRECTOR OF TRANSPORTATION
PLANNING AND DEVELOPMENT
APPROVED FOR LETTING: _____

DISTRICT ADMINISTRATOR

FILE: j:\0957\1303\0017-08-903\GENERAL\TITLE.dgn
DATE: Aug. 16, 2013

COUNTY: _____ PROJ. NO.: _____
HWY. NO.: _____ LETTING DATE: _____
DATE ACCEPTED: _____

12:08:36 PM Aug. 16, 2013 J:\0951\1303\0017-08-003\GENERAL\INDEX\INDEX01.dgn

SHEET NO.	DESCRIPTION
	GENERAL
1	TITLE SHEET
2	INDEX OF SHEETS
3	GENERAL NOTES
4	ESTIMATE & QUANTITY
5	PROJECT LAYOUT
6	EXISTING TYPICAL SECTIONS
7	PROPOSED TYPICAL SECTIONS
8	SUMMARY OF ROADWAY QUANTITIES
9	SUMMARY OF DRIVEWAY QUANTITIES
10	SUMMARY OF MISCELLANEOUS QUANTITIES
11	SUMMARY OF DRAINAGE STRUCTURES
12	SUMMARY OF SIGNS TO BE REMOVED & RELOCATED
13	SUMMARY OF SMALL SIGNS
14	SUMMARY OF OBJECT MARKERS & DELINEATORS
15	SUMMARY OF PAVEMENT MARKINGS
16 - 17	SUMMARY OF SW3P AND SOIL STABILIZATION
	TRAFFIC CONTROL PLAN
18	TRAFFIC CONTROL PLAN GENERAL NOTES
19	TRAFFIC CONTROL PLAN SEQUENCE OF WORK
20	TRAFFIC CONTROL PLAN TYPICAL SECTIONS
21	TRAFFIC CONTROL PLAN DETAIL
22	TRAFFIC CONTROL PLAN RAC INSTALLATION DETAILS
	TRAFFIC CONTROL PLAN STANDARDS
23 - 34	* BC (1) - 13 TRHU BC (12) - 13
35	* TCP (2-2) - 12
36	* TCP (3-1) - 98
37	* TCP (3-3) - 13
38	* TCP (7-1) - 13
39	* REACT (N) - 13
40	* WZ (BRK) - 13
41	* WZ (STPM) - 13
42	* WZ (TD) - 13
43	* WZ (UL) - 13
	SURVEY CONTROL
44 - 47	HORIZONTAL AND VERTICAL CONTROL INDEX SHEET
48 - 51	HORIZONTAL AND VERTICAL CONTROL SKETCHES
	ROADWAY DETAILS
52 - 55	GEOMETRIC DATA SHEET
56 - 62	MBGF & TERMINAL REPLACEMENT DETAIL
63	OMITTED
64	MAILBOX TURNOUT DETAILS
	ROADWAY DETAILS STANDARDS
65	* GF (31) - 11
66	* GF (31) MS - 11
67	* GF (31) TR-13
68	* GF (31) T101-13
69	* SGT (7) 31 - 11
70	* SGT (8) 31 - 11
71 - 74	* MB-11 (1)

* THE STANDARD SHEETS SPECIFICALLY IDENTIFIED WITH AS ASTERISK (*) IN THE INDEX OF SHEETS HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

Michael D. Keck
MICHAEL D. KECK, P.E. (NO 93055)

8/16/13
DATE

SHEET NO.	DESCRIPTION
	DRAINAGE DETAILS
75	DRAINAGE DETAILS BRIDGE CLASS CULVERTS
76 - 77	DRAINAGE DETAILS MINOR CULVERTS
78	DRAINAGE DETAILS DRIVEWAY CULVERTS
79 - 80	DRAINAGE DETAILS INLETS
81	DRAINAGE DETAILS DITCH SPOT GRADING
82 - 83	RAIL ANCHORAGE CURB RETROFIT GUIDE RAC-R(MOD)
84 - 85	HORIZONTAL INLET WITH GRATE DETAIL
86	CONCRETE PIPE COLLAR
	DRAINAGE DETAILS STANDARDS
87	* SINGLE BOX CULVERTS PRECAST 3'-0" SPAN SCP-3
88	* SINGLE BOX CULVERTS PRECAST 5'-0" SPAN SCP-5
89	* CONCRETE HEADWALLS WITH PARALLEL WINGS FOR NON-SKEWED PIPE CULVERTS CH-PW-0
90 - 91	* SAFETY END TREATMENT TYPE I ~ CROSS DRAINAGE SETB-CD
92 - 93	* SAFETY END TREATMENT TYPE I ~ PARALLEL DRAINAGE SETB-PD
94 - 95	* SAFETY END TREATMENT TYPE II ~ CROSS DRAINAGE SETP-CD
96	* SAFETY END TREATMENT TYPE II ~ PARALLEL DRAINAGE SETP-PD
97 - 99	* SAFETY END TREATMENT TYPE II ~ CROSS DRAINAGE SETP-CD-A
100 - 101	* SAFETY END TREATMENT TYPE II ~ PARALLEL DRAINAGE SETP-PD-A
102	* PRECAST SAFETY END TREATMENT TYPE II ~ CROSS DRAINAGE PSET-SC
103	* PRECAST SAFETY END TREATMENT TYPE II PARALLEL DRAINAGE PSET-SP
104	* PRECAST SAFETY END TREATMENT TYPE II ~ CROSS DRAINAGE PSET-RC
105	* PRECAST SAFETY END TREATMENT TYPE II ~ PARALLEL DRAINAGE PSET-RP
106	* PRECAST SAFETY END TREATMENT TYPE II RIPRAP DETAILS PSET-RR
107	* SAFETY END TREATMENT RETROFIT DETAILS FOR EXISTING BOX CULVERTS SET BR
108	BOX CULVERT SUPPLEMENT WINGS AND END TREATMENTS BCS
109 - 111	* TRAFFIC RAIL TYPE T223
	SIGNING & DELINEATION STANDARDS
112	* TYPICAL SIGN REQUIREMENTS TSR(3)-08
113	* TYPICAL SIGN REQUIREMENTS TSR(4)-08
114	* TYPICAL SIGN REQUIREMENTS TSR(5)-08
115	* SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS SMD(GEN)-08
116	* SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM SMD(SLIP-1)-08
117	* SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM SMD(SLIP-2)-08
118	* SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM SMD(SLIP-3)-08
119	* DELINEATOR & OBJECT MARKER INSTALLATION AND MATERIAL DESCRIPTION D&OM(1)-10
120	* DELINEATOR & OBJECT MARKER PLACEMENT DETAILS D&OM(3)-04
121	* DELINEATOR & OBJECT MARKER PLACEMENT DETAILS D&OM(4)-04
122	* DELINEATOR & OBJECT MARKER PLACEMENT DETAILS D&OM(5)-04
	PAVEMENT MARKINGS
123	PAVEMENT MARKING DETAILS
	PAVEMENT MARKINGS STANDARDS
124	* TYPICAL STANDARD PAVEMENT MARKINGS PM(1)-12
125	* POSITION GUIDANCE USING RAISED MARKERS REFLECTORIZED PROFILE MARKINGS PM(2)-12
126	* PAVEMENT MARKINGS FOR TWO-WAY LEFT TURN LANES DIVIDED HIGHWAYS AND RURAL LEFT TURN BAYS PM(3)-12
127	* RAILROAD CROSSING PAVEMENT MARKING TYPICAL DETAILS RCPM-09
	ENVIROMENTAL ISSUES
128	SOIL STABILIZATION PLAN SHEET
129	STORM POLLUTION PREVENTION PLAN (SW3P)
130	EPIC
	ENVIROMENTAL ISSUES STANDARDS
131 - 132	* REVEGETATION NOTES AND SPECIFICATIONS
133	* TREE PROTECTION STANDARD NOTES
134	* EC(1)-09
135	* EC(2)-93
136	* EC(3)-93



Michael D. Keck
8/16/13

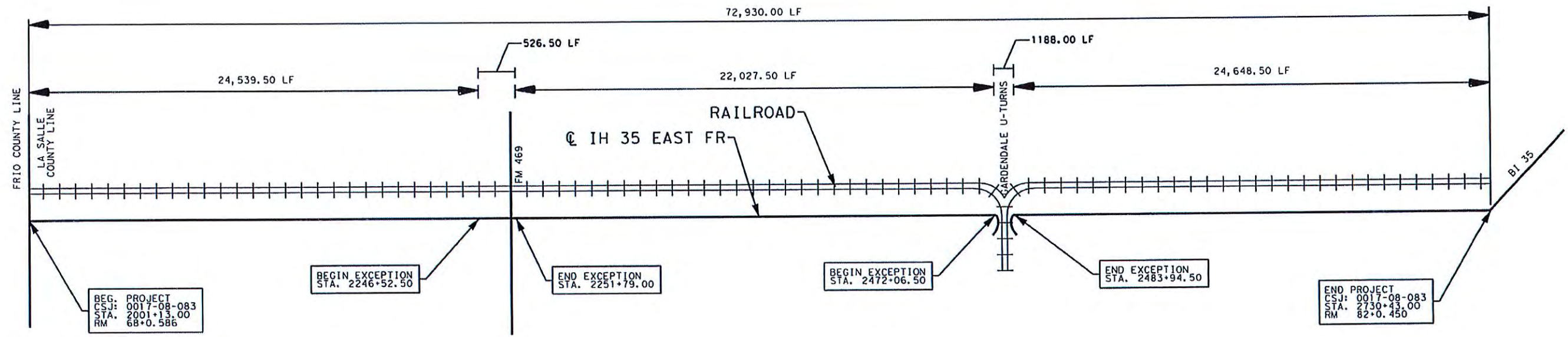
LJA Engineering, Inc. *LJA*
FRN - F-1386

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IH 35 EAST FRONTAGE ROAD

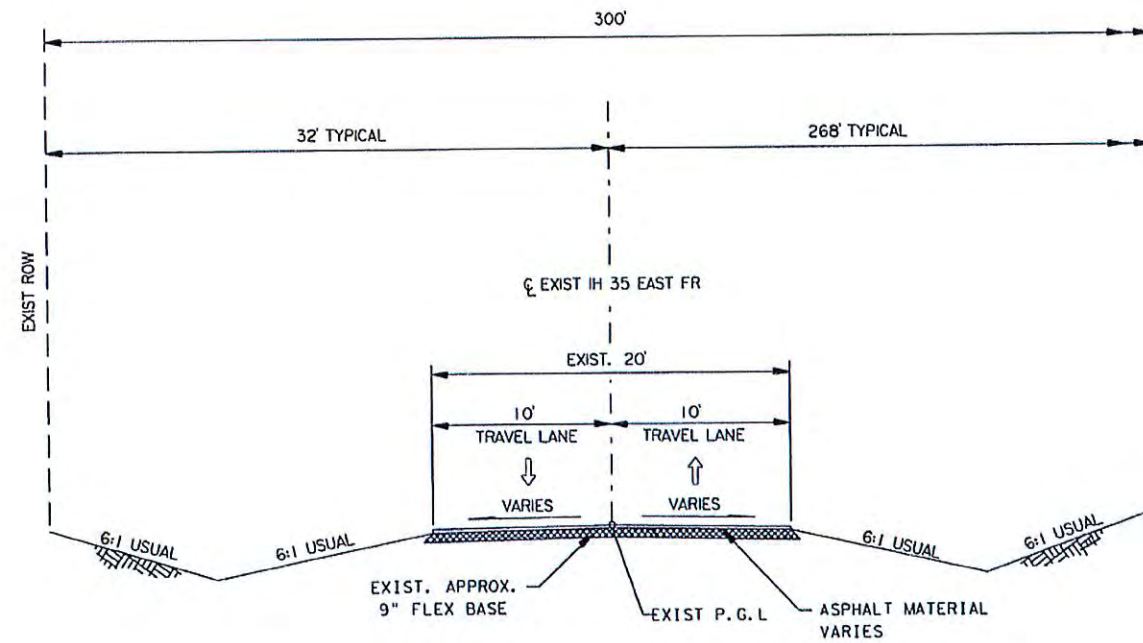
INDEX
OF
SHEETS

FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH35
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LASALLE
CONT.	SECT.	JOB
0017	08	083



MDK
8/16/13

LJA Engineering, Inc.			
<small>FRN - F-1386</small>			
IH 35 EAST FRONTAGE ROAD			
PROJECT LAYOUT			
SHEET 1 OF 1			
FED. RD. DIV. NO. 6	PROJECT NO. IM 0351 (095)		HIGHWAY NO. IH35
STATE TEXAS	STATE DIST. NO. LAREDO	COUNTY LASALLE	SHEET NO. 5
CONT. 0017	SECT. 08	JOB 083	

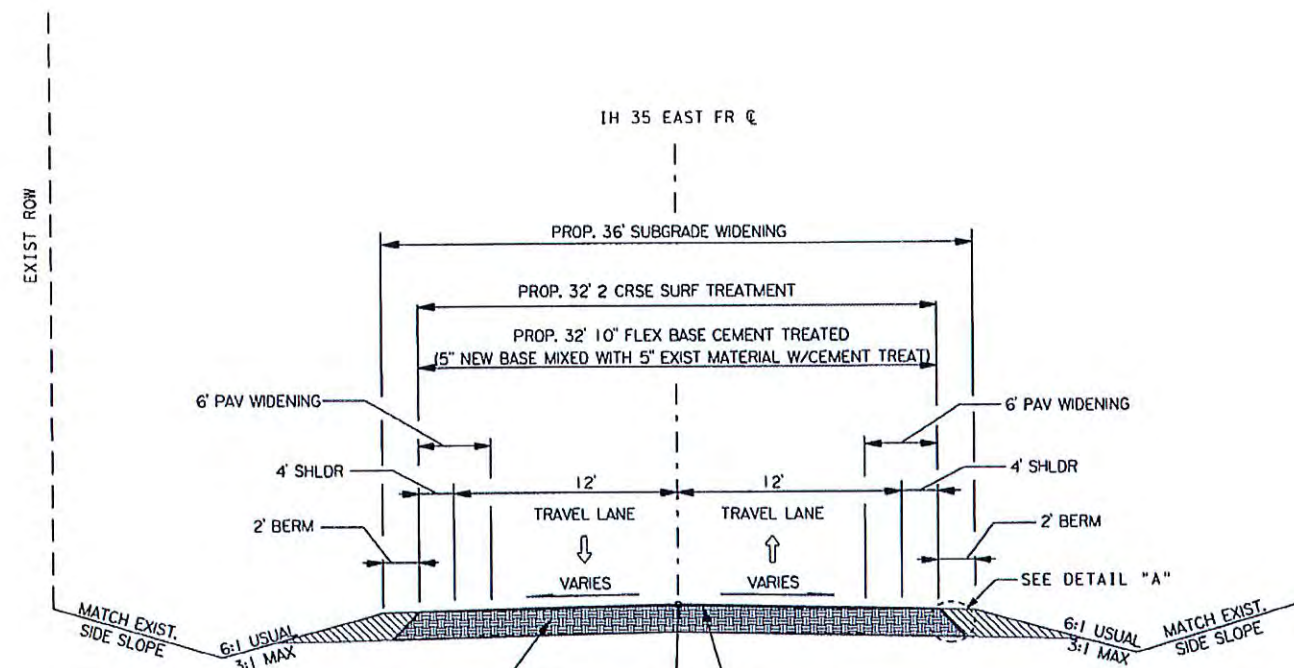


EXISTING TYPICAL SECTION
STA 2001+13.00 TO 2730+43.00



Michael D. Keck
8/16/13

LJA Engineering, Inc.			
<small>FRN - F-1386</small>			
IH 35 EAST FRONTAGE ROAD			
EXISTING TYPICAL SECTIONS			
SHEET 1 OF 1			
FED. RD. DIV. NO.	PROJECT NO.		HIGHWAY NO.
6	IM 0351 (095)		IH35
STATE	STATE DIST. NO.	COUNTY	SHEET NO.
TEXAS	LAREDO	LASALLE	
CONF.	SECT.	JOB	6
0017	08	083	



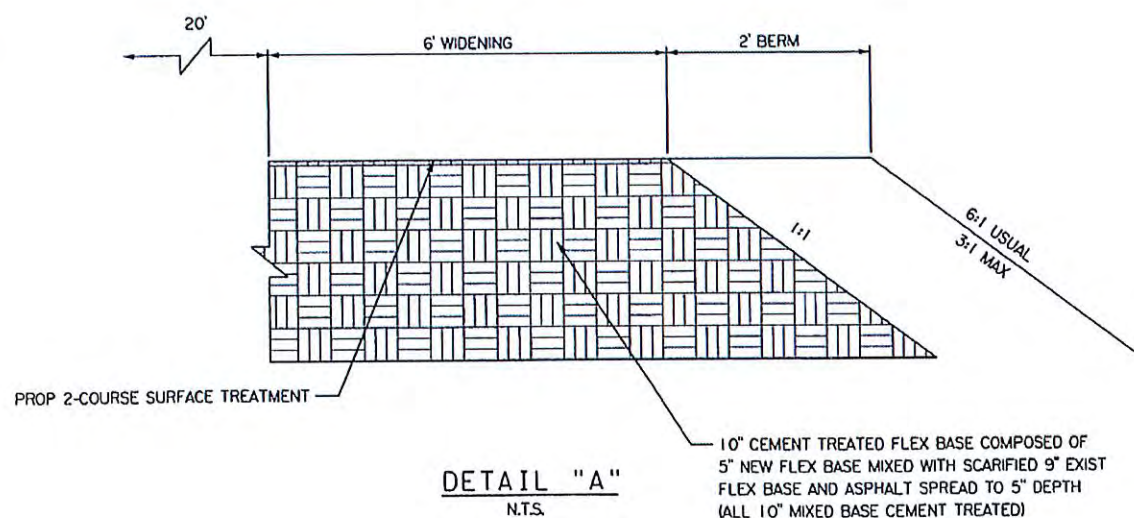
PROP 5" NEW FLEX BASE MIXED WITH 5" EXIST MATERIAL (ALL 10" CEMENT TREATED)
(SPREAD EXIST 9" FLEX BASE AND ASPHALT TO 5" DEPTH
BRING NEW 5" FLEX BASE AND MIX WITH EXIST MATERIAL)
CEMENT TREAT (3% CEMENT BY WEIGHT OF FLEX BASE @ 100 LB/CF)

PROP P.G.L.

2 COURSE SURFACE TREATMENT
(PRIME COAT RC-250 @ 0.2 GAL/SY & AGGR TY-PE GR 5 @ 120 SY/CY AND
ASPH AC-15P, CRS-2P, OR CRS-1P @ 0.35 GAL/SY & AGGR TY-E GR 3 SAC-B @
90 SY/CY)

* NO REHABILITATION ON EXIST BRIDGE
STA 2197+19.69 TO STA 2198+18.44

PROPOSED TYPICAL SECTION *STA 2001+13.00 TO 2730+43.00



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IH 35 EAST FRONTAGE ROAD

PROPOSED
TYPICAL SECTIONS

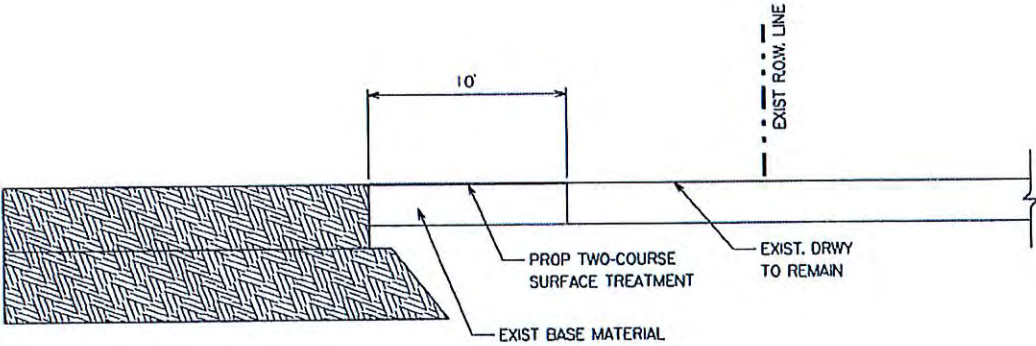
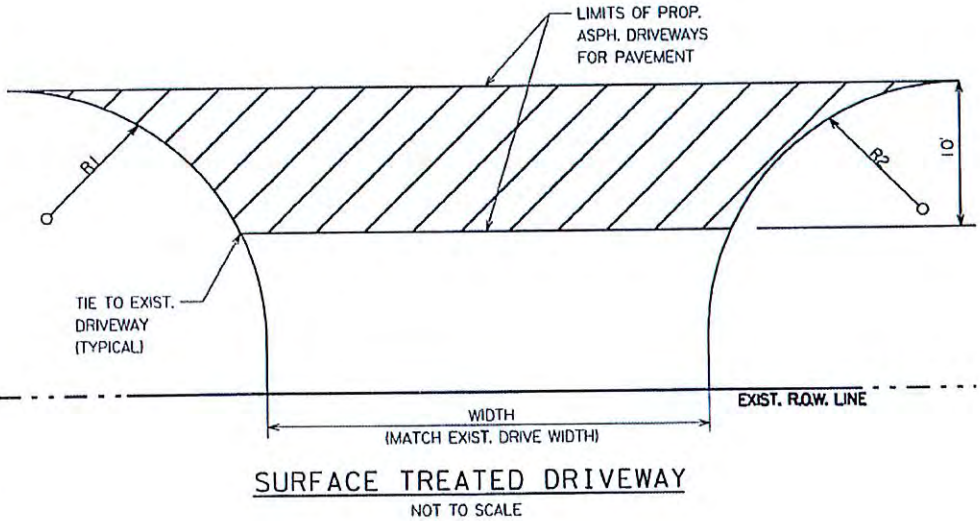
SHEET 1 OF 1

FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH35
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LASALLE
CONT.	SECT.	JOB
0017	08	083

7

SUMMARY OF DRIVEWAYS ITEMS

ITEM							530	INTERSECTION
DESC CODE							2012	
DRIVEWAY NO.	STATION	LT OR RT	PROP WIDTH	PROP LENGTH	RADIUS (FT)		DRIVEWAYS (SURF. TREAT)	
			FT	FT	R 1	R 2		
40	2025+84.23	LT	27	10	30	30		VERGARO RD
41	2055+58.10	LT	15	10	20	20		
42	2075+56.20	LT	26	10	15	15		MATTHEWS RD
43	2124+31.29	LT	27	10	20	20		
44	2157+86.65	LT	60	10	30	30		LEDWICK RD
45	2313+36.77	LT	13	10	10	10		
46	2330+69.84	LT	37	10	15	15		FERMINA RD
47	2386+87.83	LT	20	10	10	10		TAYLOR RD
48	2461+65.71	LT	36	10	15	15		INMAN ST
49	2537+39.49	LT	34	10	15	15		OXFORD ST
50	2604+04.30	LT	22	10	15	15		
51	2613+68.72	LT	19	10	20	20	--	
PROJECT TOTALS							---	



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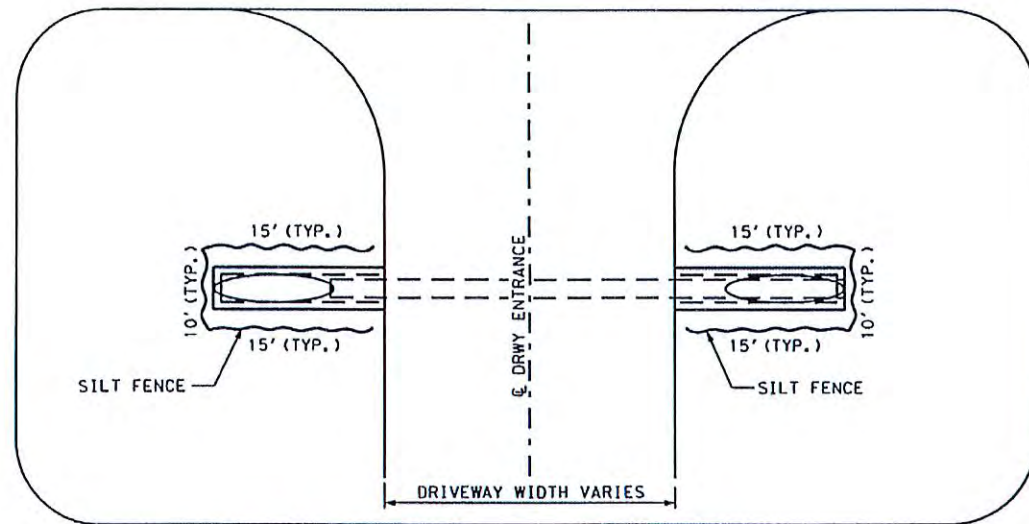
LJA Engineering, Inc.
FRN - F-1386

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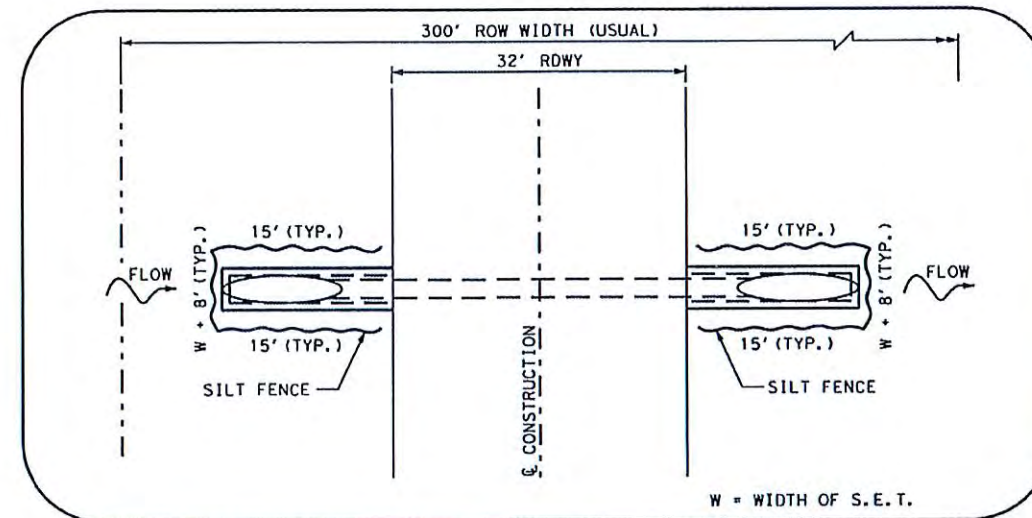
1H 35 EAST FRONTAGE ROAD

SUMMARY OF
DRIVEWAY
QUANTITIES

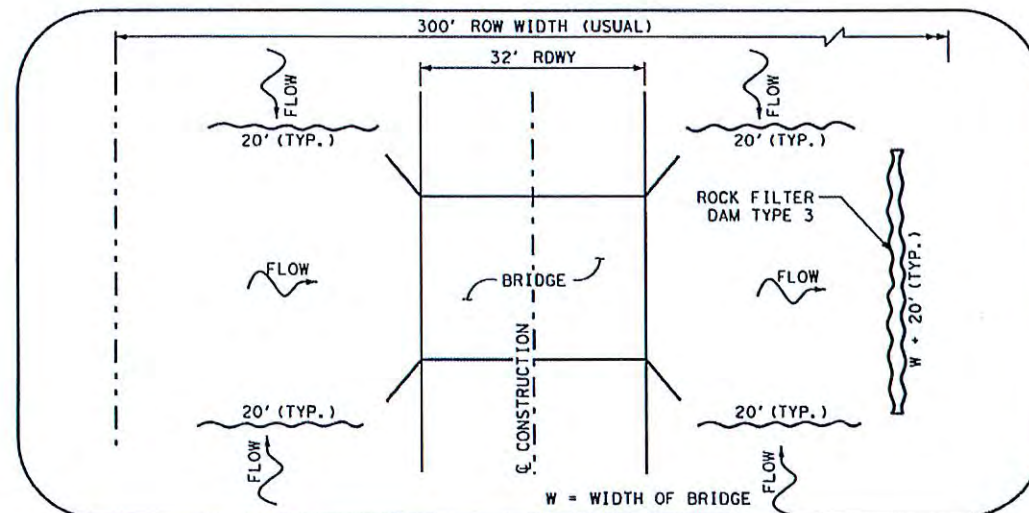
FED. RD. DIV. NO.	PROJECT NO.		HIGHWAY NO.
6	IM 0351 (095)		1H35
STATE	STATE DIST. NO.	COUNTY	SHEET NO.
TEXAS	LAREDO	LASALLE	9
CONT.	SECT.	JOB	
0017	08	083	



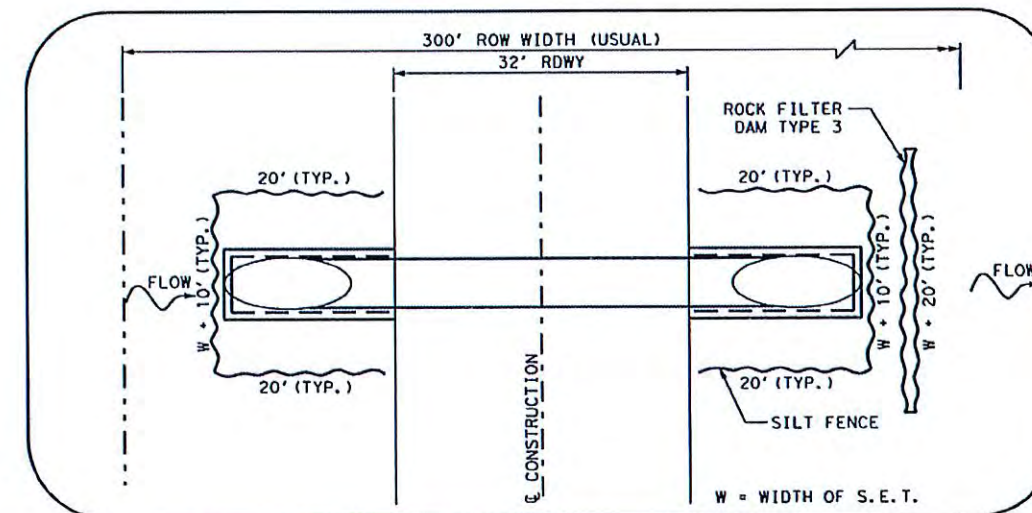
SILT FENCE DETAIL FOR PIPES
DRIVEWAYS



SILT FENCE DETAIL FOR MINOR PIPE CULVERTS
ROADWAY





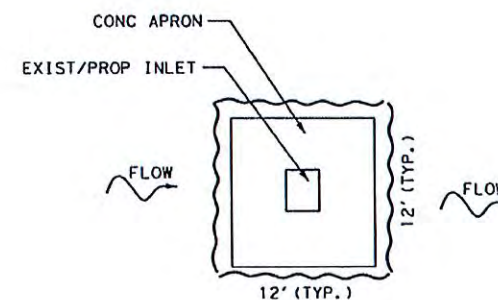
SILT FENCE DETAIL FOR BRIDGE
ROADWAY



SILT FENCE DETAIL FOR MINOR BOX CULVERTS
ROADWAY

SYMBOL LEGEND

-  Silt Fence
-  Rock Filter Dam Type 3



SILT FENCE DETAIL FOR INLET
ROADWAY



Seal 7/16/13

klotz & associates

1160 Dalry Ashford, Suite 500
Houston, Texas 77058
T 281.589.7257 F 281.589.7309
Texas PE Firm Reg. # F-929

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IH35 EAST FRONTAGE ROAD

SUMMARY OF SW3P AND
SOIL STABILIZATION

SHEET 2 OF 2

FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH 35 E FR
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LA SALLE
CONT.	SECT.	JOB
0017	08	083

17

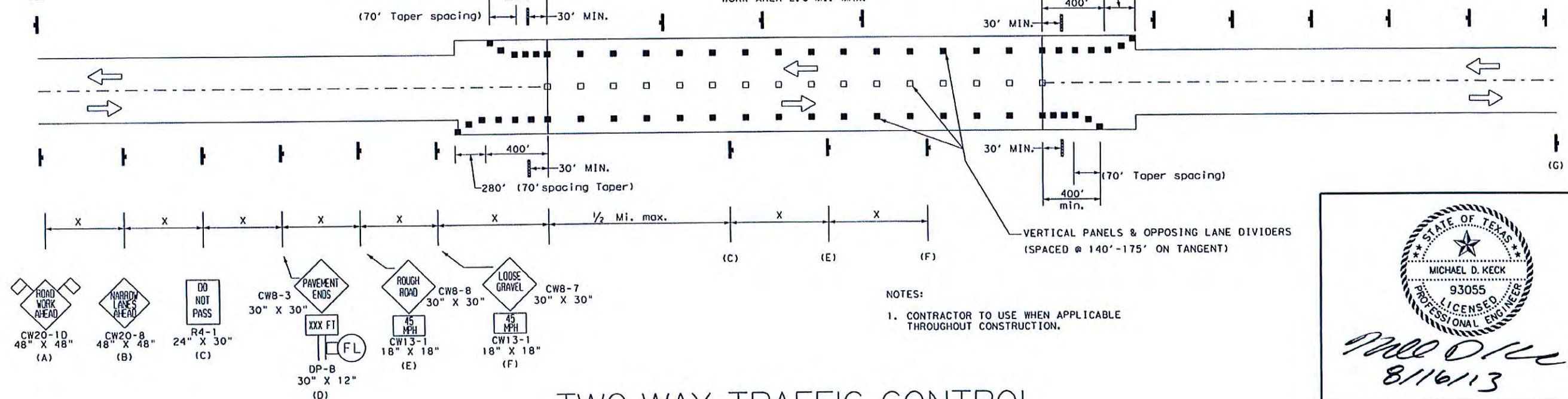
Posted Speed	Formula	Minimum Desirable Taper Lengths*			Suggested Maximum Spacing of Device		Minimum Sign Spacing X Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'-75'	120'
35		205'	225'	245'	35'	70'-90'	160'
40		265'	295'	320'	40'	80'-100'	240'
45	L=WS	450'	495'	540'	45'	90'-110'	320'
50		500'	550'	600'	50'	100'-125'	400'
55		550'	605'	660'	55'	110'-140'	500'
60		600'	660'	720'	60'	120'-150'	* 600'
65		650'	715'	780'	65'	130'-165'	* 700'
70		700'	770'	840'	70'	140'-175'	* 800'

* Conventional Roads Only

** Taper lengths have been rounded off.

L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

END ROAD WORK
G20-2A
48" X 24"
(G)



NOTES:

1. CONTRACTOR TO USE WHEN APPLICABLE THROUGHOUT CONSTRUCTION.

TWO-WAY TRAFFIC CONTROL (FOR NON-WORKING HOURS)

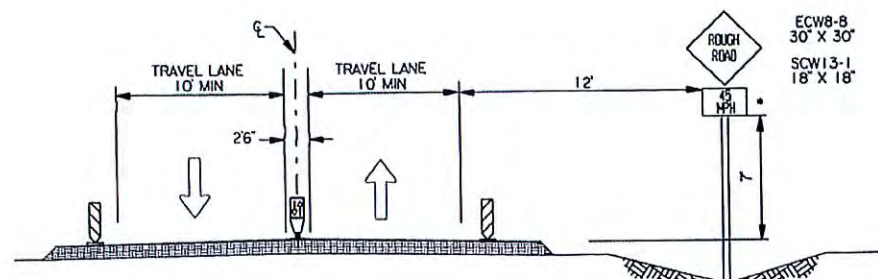
NOTES:

THE CONTRACTOR WILL PLACE THE SPACING OF ALL BARRICADES, SIGNS, AND CHANNELIZING DEVICES ACCORDING TO THE POSTED SPEED LIMIT AND WIDTH OF OFFSET.

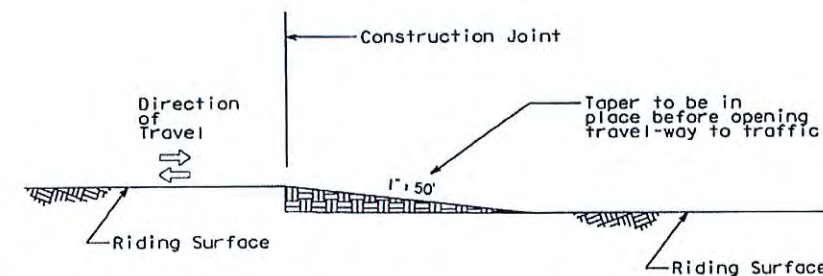
ALL SIGNS, BARRICADES, AND CHANNELIZING DEVICES WILL BE VISIBLE TO ALL MOTORISTS AT ALL TIMES.

THE CONTRACTOR WILL REFER TO "SEQUENCE OF WORK" AND "TCP GENERAL NOTES" FOR ADDITIONAL INFORMATION.

DISTANCE ALONG CURVE OF WORK AREA WILL BE ADEQUATE LENGTH FOR MOTORISTS TO IDENTIFY AND REACT TO FLAGGER SIGNALS.



* TO BE DETERMINED AT THE FIELD BY THE ENGINEER.



LEGEND



Michael D. Keck
8/16/13

LJA Engineering, Inc.
FRN-F-1386

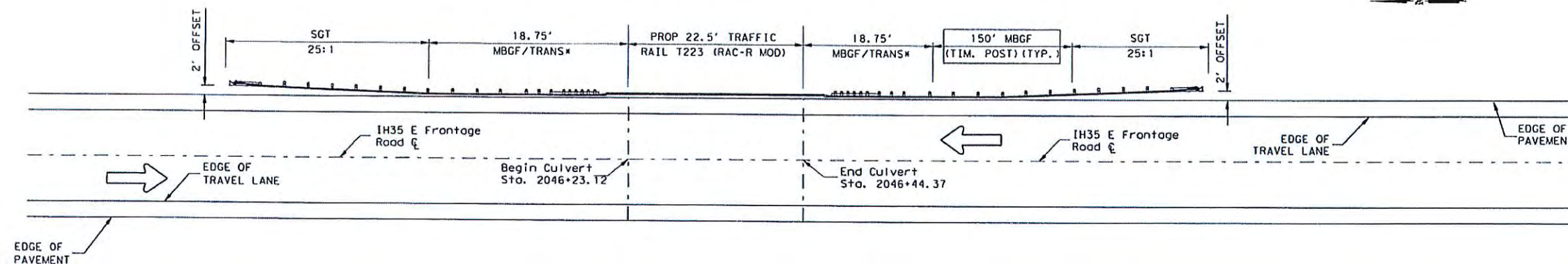
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IH 35 EAST FRONTAGE ROAD

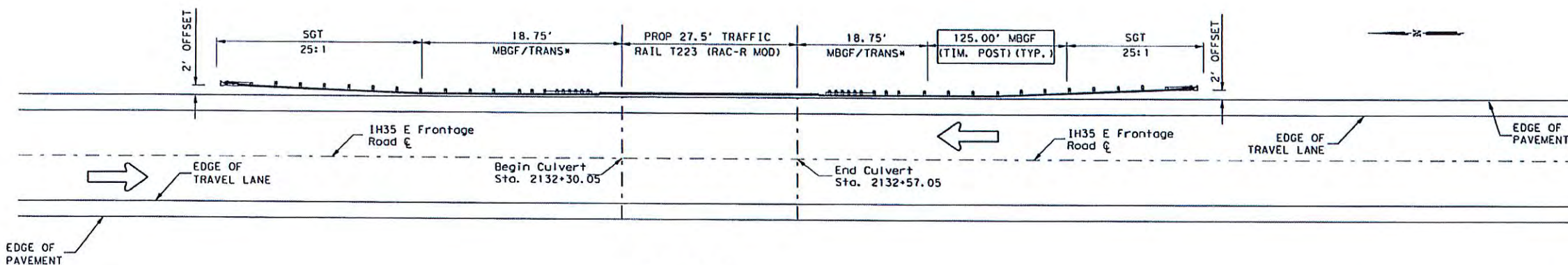
**TRAFFIC CONTROL
PLAN DETAIL**

SHEET 1 OF 1

FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH35
STATE	COUNTY	SHEET NO.
TEXAS	LAREDO	21
CON.	SECT.	JOB
0017	08	083



PROPOSED PLAN
CROSS CULVERT EB-1
PSN: 22-142-0017-08-141
STA.: 2046+23.12 TO 2046+44.37
* REFER TO THE "METAL BEAM GUARD FENCE TRANSITION
(THREE-BEAM TRANSITION)" FOR MORE INFORMATION



PROPOSED PLAN
CROSS CULVERT EB-2
PSN: 22-142-0017-08-142
STA.: 2132+30.05 TO 2132+57.05
* REFER TO THE "METAL BEAM GUARD FENCE TRANSITION
(THREE-BEAM TRANSITION)" FOR MORE INFORMATION

GENERAL NOTES:

1. MBGF AND SGT INSTALLATION TO BE DONE IN SECTIONS (APPROACH UPSTREAM TRAFFIC AND DEPARTURE DOWNSTREAM TRAFFIC). EACH SECTION WILL BE COMPLETED IN ONE DAY, UNLESS MORE SECTIONS CAN BE COMPLETED. WHERE EXISTING MBGF IS LOCATED, PROPOSED MBGF MUST BE CONNECTED TO THE REMAINING EXISTING MBGF AT THE END OF THE DAY. ALL EXPOSED MBGF ENDS WILL BE TIED DOWN AT THE END OF THE DAY AS STATED IN "TRAFFIC CONTROL PLAN GENERAL NOTES".
2. MBGF POSTS WILL BE PLACED IN ACCORDANCE TO THE MOW STRIP STANDARD GF(31)MS-11
3. REFER TO TXDOT STANDARDS TYPE GF(31)-11, GF(31)MS-11, GF(31)MS-11, SGT(7)31-11, AND SGT(8)31-11



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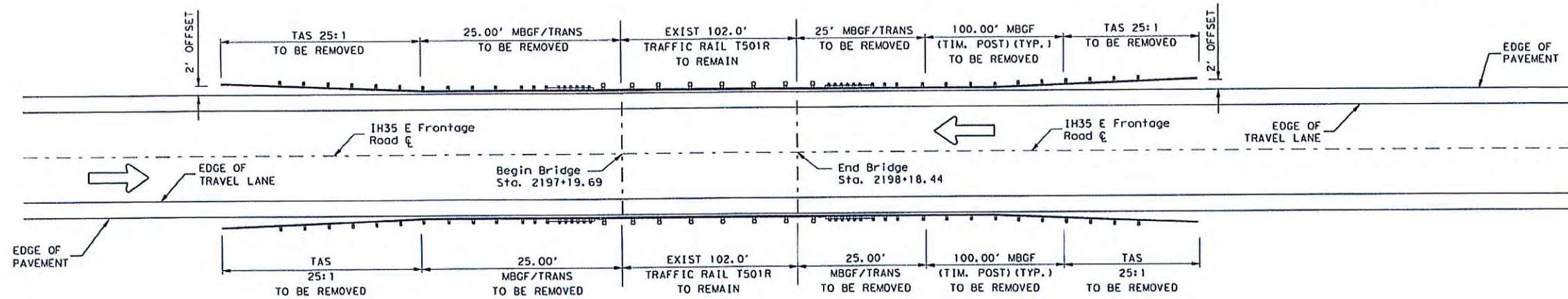
1H 35 EAST FRONTAGE ROAD

**MBGF & TERMINAL
REPLACEMENT DETAIL**

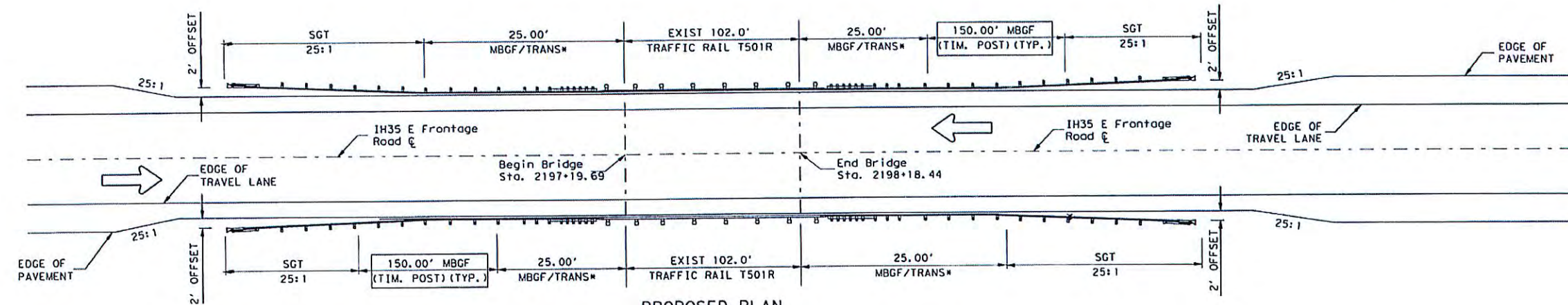
SHEET 1 OF 7

FED. RD. DIST. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	1H35
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LASALLE
CONT.	SECT.	JOB
0017	08	083

56



EXISTING PLAN
 BRIDGE AT CIBILO CREEK
 PSN: 22-142-0017-08-030
 STA.: 2197+19.69 TO 2198+18.44



PROPOSED PLAN
 BRIDGE AT CIBILO CREEK
 PSN: 22-142-0017-08-030
 STA.: 2197+19.69 TO 2198+18.44
 * REFER TO THE "METAL BEAM GUARD FENCE TRANSITION (T101)" FOR MORE INFORMATION

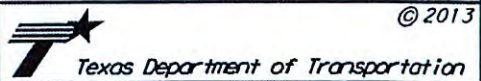
GENERAL NOTES:

1. MBGF AND SGT INSTALLATION TO BE DONE IN SECTIONS (APPROACH UPSTREAM TRAFFIC AND DEPARTURE DOWNSTREAM TRAFFIC). EACH SECTION WILL BE COMPLETED IN ONE DAY, UNLESS MORE SECTIONS CAN BE COMPLETED. WHERE EXISTING MBGF IS LOCATED, PROPOSED MBGF MUST BE CONNECTED TO THE REMAINING EXISTING MBGF AT THE END OF THE DAY. ALL EXPOSED MBGF ENDS WILL BE TIED DOWN AT THE END OF THE DAY AS STATED IN "TRAFFIC CONTROL PLAN GENERAL NOTES".
2. MBGF POSTS WILL BE PLACED IN ACCORDANCE TO THE MOW STRIP STANDARD GF(31)MS-11
3. REFER TO TXDOT STANDARDS TYPE GF(31)-11, GF(31)MS-11, GF(31)MS-11, GF(31) T101-13, SGT(7)31-11, AND SGT(8)31-11



Michael D. Keck
 8/16/13

LJA Engineering, Inc.
 FRN - F-1386

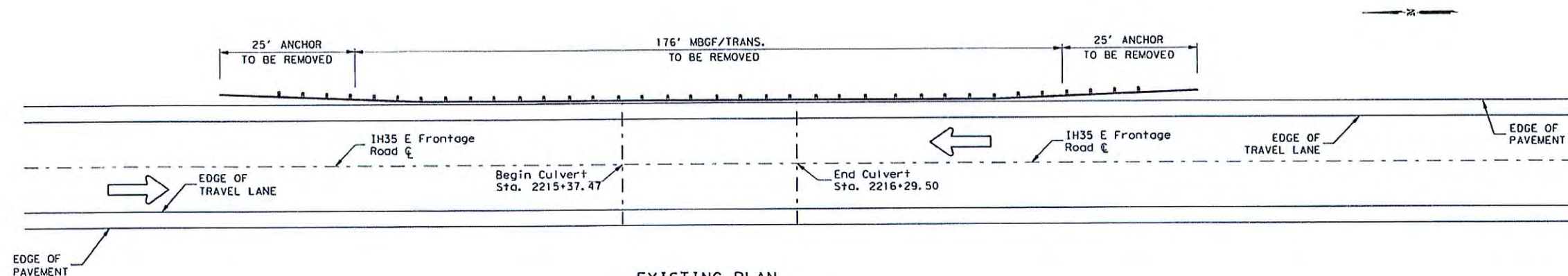


IH 35 EAST FRONTAGE ROAD

**MBGF & TERMINAL
 REPLACEMENT DETAIL**

SHEET 2 OF 7

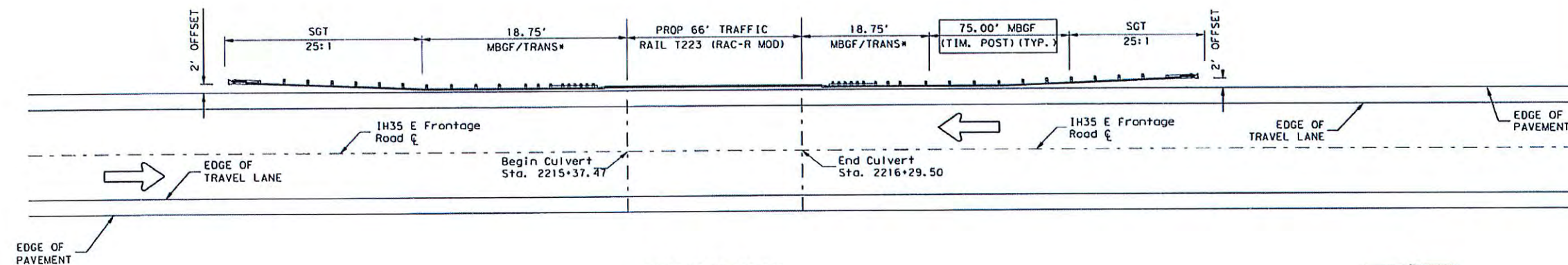
FED. RD. DIV. NO.	PROJECT NO.		HIGHWAY NO.
6	IM 0351 (095)		IH35
STATE	STATE DIST. NO.	COUNTY	SHEET NO.
TEXAS	LAREDO	LASALLE	57
CONT.	SECT.	JOB	
0017	08	083	



EXISTING PLAN
CROSS CULVERT EB-3
PSN: 22-142-0017-08-145
STA.: 2215+37.47 TO 2216+29.50

GENERAL NOTES:

1. MBGF AND SGT INSTALLATION TO BE DONE IN SECTIONS (APPROACH UPSTREAM TRAFFIC AND DEPARTURE DOWNSTREAM TRAFFIC). EACH SECTION WILL BE COMPLETED IN ONE DAY, UNLESS MORE SECTIONS CAN BE COMPLETED. WHERE EXISTING MBGF IS LOCATED, PROPOSED MBGF MUST BE CONNECTED TO THE REMAINING EXISTING MBGF AT THE END OF THE DAY. ALL EXPOSED MBGF ENDS WILL BE TIED DOWN AT THE END OF THE DAY AS STATED IN "TRAFFIC CONTROL PLAN GENERAL NOTES".
2. MBGF POSTS WILL BE PLACED IN ACCORDANCE TO THE MOW STRIP STANDARD GF(31)MS-11
3. REFER TO TXDOT STANDARDS TYPE GF(31)-11, GF(31)MS-11, GF(31)MS-11, GF(31) T101-13, SGT(7)31-11, AND SGT(8)31-11



PROPOSED PLAN
CROSS CULVERT EB-3
PSN: 22-142-0017-08-145
STA.: 2215+37.47 TO 2216+29.50
*REFER TO THE "METAL BEAM GUARD FENCE TRANSITION (THREE-BEAM TRANSITION)" FOR MORE INFORMATION



Michael D. Keck
8/16/13

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FRN-F-1386

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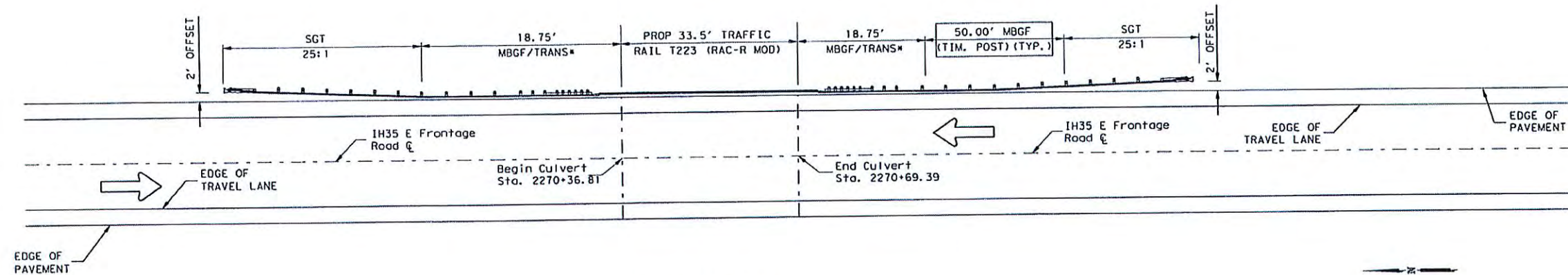
IH 35 EAST FRONTAGE ROAD

MBGF & TERMINAL
REPLACEMENT DETAIL

SHEET 3 OF 7

FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH35
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LASALLE
CONT.	SECT.	JOB
0017	08	083

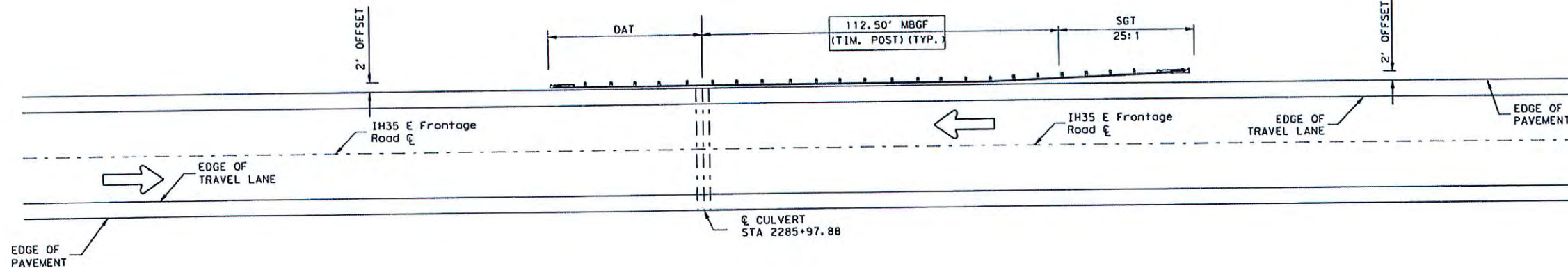
58



PROPOSED PLAN
CROSS CULVERT EB-4
 PSN: 22-142-0017-08-148
 STA.: 2270+36.81 TO 2270+69.39
 *REFER TO THE "METAL BEAM GUARD FENCE TRANSITION
 (THREE-BEAM TRANSITION)" FOR MORE INFORMATION

GENERAL NOTES:

1. MBGF AND SGT INSTALLATION TO BE DONE IN SECTIONS (APPROACH UPSTREAM TRAFFIC AND DEPARTURE DOWNSTREAM TRAFFIC). EACH SECTION WILL BE COMPLETED IN ONE DAY, UNLESS MORE SECTIONS CAN BE COMPLETED. WHERE EXISTING MBGF IS LOCATED, PROPOSED MBGF MUST BE CONNECTED TO THE REMAINING EXISTING MBGF AT THE END OF THE DAY. ALL EXPOSED MBGF ENDS WILL BE TIED DOWN AT THE END OF THE DAY AS STATED IN "TRAFFIC CONTROL PLAN GENERAL NOTES".
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3. REFER TO TXDOT STANDARDS TYPE GF(31)-11, GF(31)MS-11, GF(31)MS-11, GF(31) T101-13, SGT(7)31-11, AND SGT(8)31-11



PROPOSED PLAN
CROSS CULVERT EB-5
 STA.: 2285+97.88



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 8/16/13

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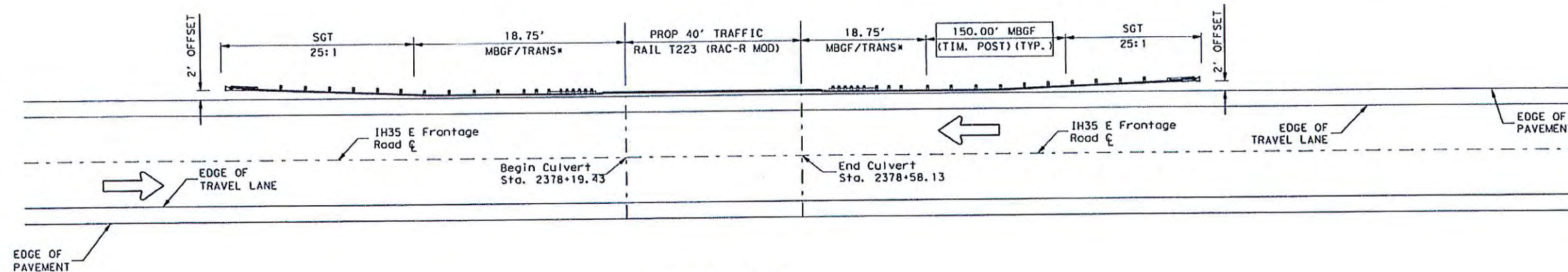
IH 35 EAST FRONTAGE ROAD

**MBGF & TERMINAL
 REPLACEMENT DETAIL**

SHEET 4 OF 7

FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH35
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LASALLE
CONT.	SECT.	JOB
0017	08	083

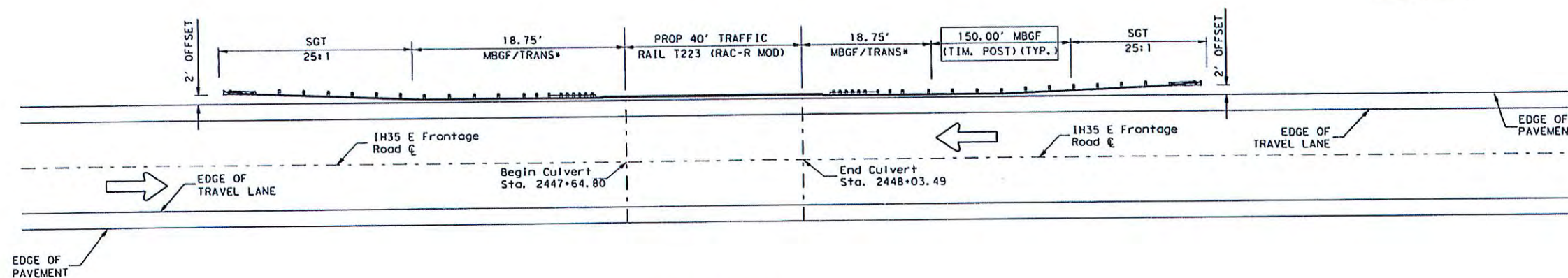
59



PROPOSED PLAN
CROSS CULVERT EB-6
 PSN: 22-142-0017-08-149
 STA.: 2378+19.43 TO 2378+58.13
 *REFER TO THE "METAL BEAM GUARD FENCE TRANSITION (THREE-BEAM TRANSITION)" FOR MORE INFORMATION

GENERAL NOTES:

1. MBGF AND SGT INSTALLATION TO BE DONE IN SECTIONS (APPROACH UPSTREAM TRAFFIC AND DEPARTURE DOWNSTREAM TRAFFIC). EACH SECTION WILL BE COMPLETED IN ONE DAY, UNLESS MORE SECTIONS CAN BE COMPLETED. WHERE EXISTING MBGF IS LOCATED, PROPOSED MBGF MUST BE CONNECTED TO THE REMAINING EXISTING MBGF AT THE END OF THE DAY. ALL EXPOSED MBGF ENDS WILL BE TIED DOWN AT THE END OF THE DAY AS STATED IN "TRAFFIC CONTROL PLAN GENERAL NOTES".
2. MBGF POSTS WILL BE PLACED IN ACCORDANCE TO THE MOW STRIP STANDARD GF(31)MS-11
3. REFER TO TxDOT STANDARDS TYPE GF(31)-11, GF(31)MS-11, GF(31)MS-11, GF(31) T101-13, SGT(7)31-11, AND SGT(8)31-11



PROPOSED PLAN
CROSS CULVERT EB-7
 PSN: 22-142-0017-08-150
 STA.: 2447+64.80 TO 2448+03.49
 *REFER TO THE "METAL BEAM GUARD FENCE TRANSITION (THREE-BEAM TRANSITION)" FOR MORE INFORMATION



Michael D. Keck
 8/16/13

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 FRN-F-1386

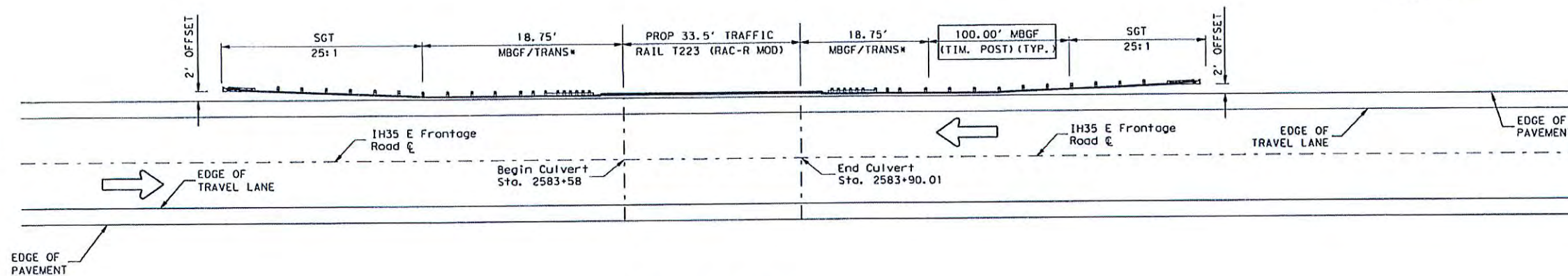
Texas Department of Transportation
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IH 35 EAST FRONTAGE ROAD

**MBGF & TERMINAL
 REPLACEMENT DETAIL**

SHEET 5 OF 7

FED. RD. DIV. NO.	PROJECT NO.		HIGHWAY NO.
6	IM 0351(095)		IH35
STATE	STATE DIST. NO.	COUNTY	SHEET NO.
TEXAS	LAREDO	LASALLE	60
CONT.	SECT.	JOB	
0017	08	083	



PROPOSED PLAN
CROSS CULVERT EB-8
 PSN: 22-142-0017-08-151
 STA.: 2583+57.50 TO 2583+90.01
 * REFER TO THE "METAL BEAM GUARD FENCE TRANSITION (THREE-BEAM TRANSITION)" FOR MORE INFORMATION

GENERAL NOTES:

1. MBGF AND SGT INSTALLATION TO BE DONE IN SECTIONS (APPROACH UPSTREAM TRAFFIC AND DEPARTURE DOWNSTREAM TRAFFIC). EACH SECTION WILL BE COMPLETED IN ONE DAY, UNLESS MORE SECTIONS CAN BE COMPLETED. WHERE EXISTING MBGF IS LOCATED, PROPOSED MBGF MUST BE CONNECTED TO THE REMAINING EXISTING MBGF AT THE END OF THE DAY. ALL EXPOSED MBGF ENDS WILL BE TIED DOWN AT THE END OF THE DAY AS STATED IN "TRAFFIC CONTROL PLAN GENERAL NOTES".
2. MBGF POSTS WILL BE PLACED IN ACCORDANCE TO THE MOW STRIP STANDARD GF(31)MS-11
3. REFER TO TxDOT STANDARDS TYPE GF(31)-11, GF(31)MS-11, GF(31)MS-11, GF(31)T101-13, SGT(7)31-11, AND SGT(8)31-11



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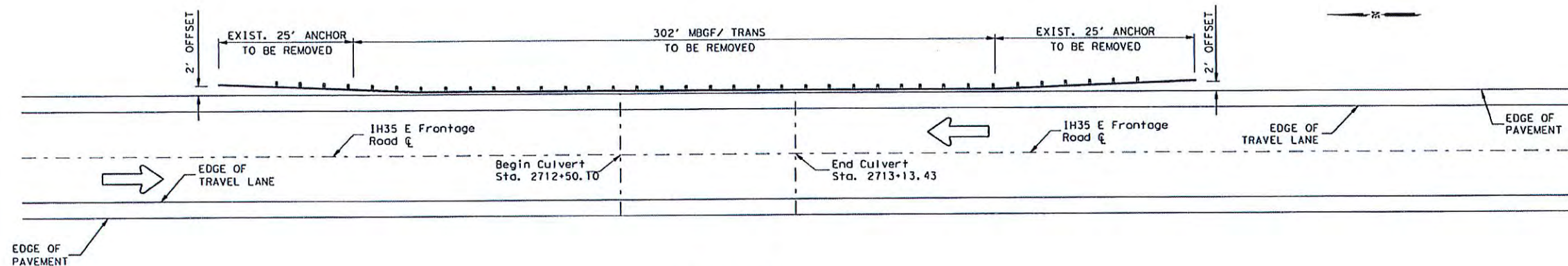
IH 35 EAST FRONTAGE ROAD

**MBGF & TERMINAL
 REPLACEMENT DETAIL**

SHEET 6 OF 7

FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH35
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LASALLE
CONT.	SECT.	JOB
0017	08	083

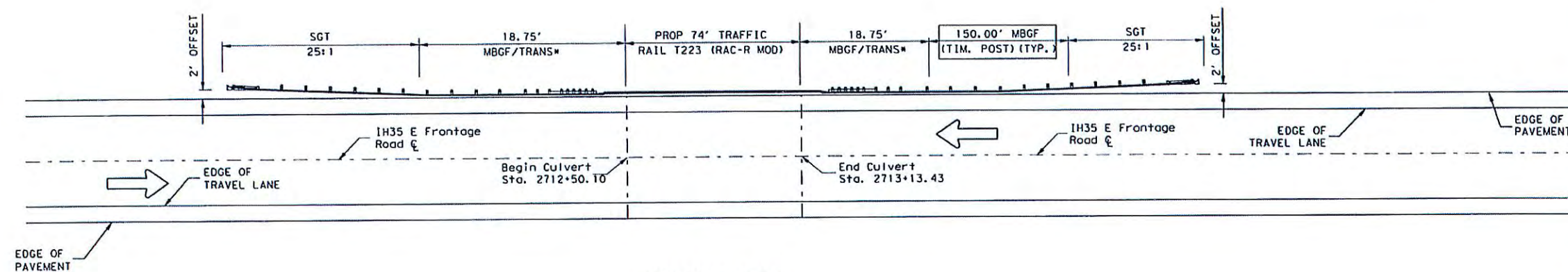
61



EXISTING PLAN
CROSS CULVERT EB-9
PSN: 22-142-0017-08-152
STA.: 2712+50.10 TO 2713+13.43

GENERAL NOTES:

1. MBGF AND SGT INSTALLATION TO BE DONE IN SECTIONS (APPROACH UPSTREAM TRAFFIC AND DEPARTURE DOWNSTREAM TRAFFIC). EACH SECTION WILL BE COMPLETED IN ONE DAY, UNLESS MORE SECTIONS CAN BE COMPLETED. WHERE EXISTING MBGF IS LOCATED, PROPOSED MBGF MUST BE CONNECTED TO THE REMAINING EXISTING MBGF AT THE END OF THE DAY. ALL EXPOSED MBGF ENDS WILL BE TIED DOWN AT THE END OF THE DAY AS STATED IN "TRAFFIC CONTROL PLAN GENERAL NOTES".
2. MBGF POSTS WILL BE PLACED IN ACCORDANCE TO THE MOW STRIP STANDARD GF(31)MS-11
3. REFER TO TXDOT STANDARDS TYPE GF(31)-11, GF(31)MS-11, GF(31)MS-11, GF(31) T101-13, SGT(7)31-11, AND SGT(8)31-11



PROPOSED PLAN
CROSS CULVERT EB-9
PSN: 22-142-0017-08-152
STA.: 2712+50.10 TO 2713+13.43
 *REFER TO THE "METAL BEAM GUARD FENCE TRANSITION (THREE-BEAM TRANSITION)" FOR MORE INFORMATION



Mike D. Keck
 8/16/13

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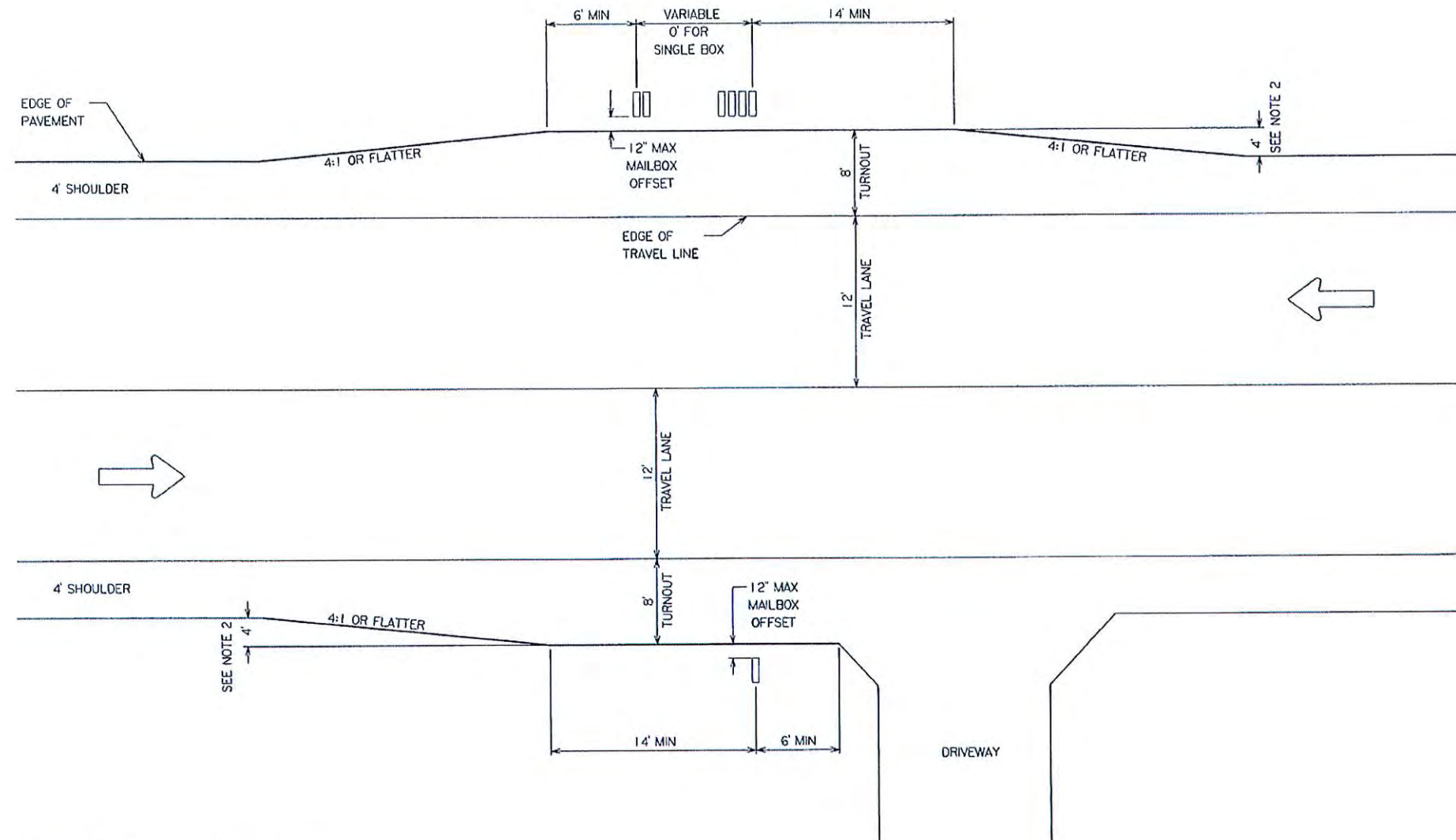
IH 35 EAST FRONTAGE ROAD

**MBGF & TERMINAL
 REPLACEMENT DETAIL**

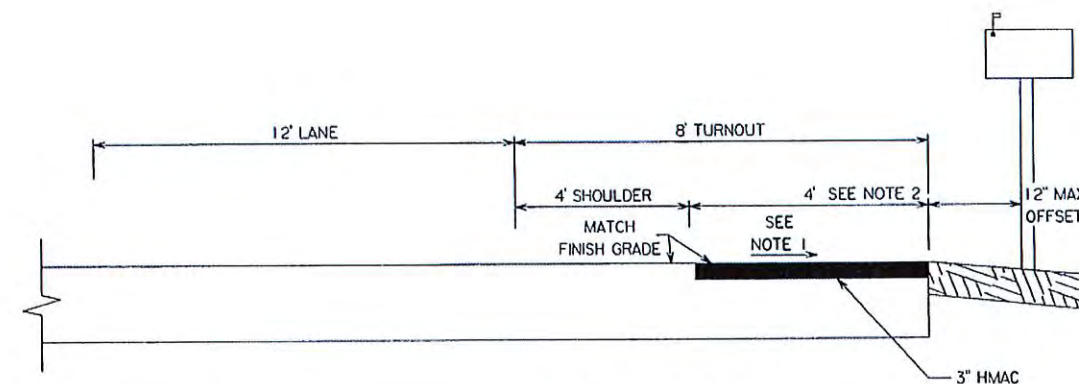
SHEET 7 OF 7

FED. RD. DIST. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH35
STATE DIST. NO.	COUNTY	SHEET NO.
TEXAS	LAREDO	LASALLE
CONT.	SECT.	JOB
0017	08	083

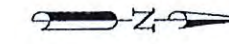
62



TYPICAL MAILBOX TURNOUT



TYPICAL SECTION



NOTES:


1. MATCH SHOULDER SLOPE.
2. ADDITIONAL SUBGRADE WIDENING WIDTH.
3. SEE MB-11(1) STANDARD FOR MORE DETAILS.



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IH 35 EAST FRONTAGE ROAD

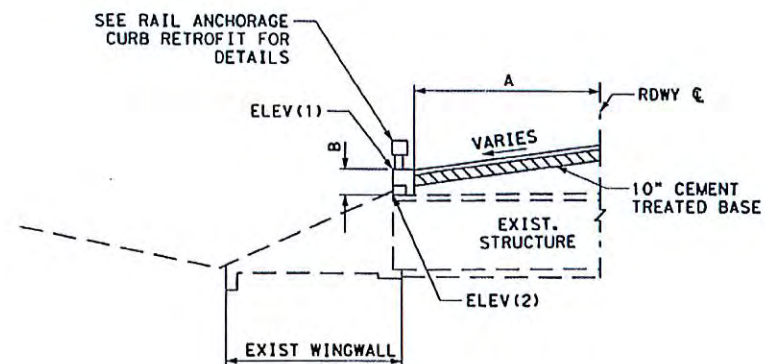
MAILBOX TURNOUT
DETAILS

FED. RD. DIST. NO.	PROJECT NO.		HIGHWAY NO.
6	IM 0351 (095)		IH35
STATE	STATE DIST. NO.	COUNTY	SHEET NO.
TEXAS	LAREDO	LASALLE	64
CONT.	SECT.	JOB	
0017	08	083	

APPROX. STATION LOCATION	BRIDGE PSN #	DESCRIPTION OF CULVERTS		TABLE OF DIMENSIONS				ELEV (1)	ELEV (2)	EXIST STRUCT THICKNESS (T)
		EXISTING STRUCTURE		A	B	C				
		PROPOSED STRUCTURE		FT	FT	FT	FT			
CSJ: 0017-08-083										
BRIDGE CLASS CULVERTS										
STA 2046+23.12 TO STA 2046+44.37	22-142-0017-08-141	4-5'x3' MBC		13.12	1.663		533.15	531.487	0.667	
		4-5'x3' MBC WITH 22.44' RAC-R (MOD)								
STA 2132+30.05 TO STA 2132+57.05	22-142-0017-08-142	5-5'x3' MBC		14.33	1.793		497.11	495.317	0.667	
		5-5'x3' MBC WITH 27.91' RAC-R (MOD)								
STA 2197+19.69 TO STA 2198+18.44	22-142-0017-08-235	3 SPAN GIRDER								
		3 SPAN GIRDER TO REMAIN AS IS								
STA 2215+37.47 TO STA 2216+29.50	22-142-0017-08-145	16-5'x5' MBC		13.54	0.943		470.45	469.507	0.667	
		16-5'x5' MBC WITH 115.60' RAC-R (MOD)								
STA 2270+36.81 TO STA 2270+69.39	22-142-0017-08-148	6-5'x3' MBC		15.56	0.503		486.22	485.717	0.667	
		6-5'x3' MBC WITH 48.05' RAC-R (MOD)								
STA 2378+19.43 TO STA 2378+58.13	22-142-0017-08-149	7-5'x5' MBC		10.84	0.943		554.04	553.097	0.667	
		7-5'x5' MBC WITH 39.56' RAC-R (MOD)								
STA 2447+64.80 TO STA 2448+03.49	22-142-0017-08-150	7-5'x5' MBC		10.95	1.523		569.04	567.517	0.667	
		7-5'x5' MBC WITH 39.45' RAC-R (MOD)								
STA 2583+57.50 TO STA 2583+90.01	22-142-0017-08-151	6-5'x3' MBC		14.65	2.033		488.03	485.997	0.667	
		6-5'x3' MBC WITH 33.34' RAC-R (MOD)								
STA 2712+50.10 TO STA 2713+13.43	22-142-0017-08-131	6-10'x8' MBC		14.65	2.057		422.6	420.543	0.833	
		6-10'x8' MBC WITH 64.50' RAC-R (MOD)								

NOTES:

CONTRACTOR WILL FIELD VERIFY THE SIZE OF ALL STRUCTURES TO BE EXTENDED BEFORE FABRICATING AND/OR ACQUIRING MATERIALS.



DETAIL FOR BRIDGE CLASS CULVERTS-RAC-R (MOD)



David Wymore
8-16-2013

klotz associates

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Texas PE Firm Reg. # F-929



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IH35 EAST FRONTAGE ROAD

DRAINAGE DETAILS BRIDGE CLASS CULVERTS

SHEET 1 OF 1

FED. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH 35 E FR
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LA SALLE
CONT.	SECT.	JOB
0017	08	083
		75

APPROX. STATION LOCATION	DETAIL TYPE	DESCRIPTION OF CULVERTS		TABLE OF DIMENSIONS								
		EXISTING STRUCTURE		A	B	C	D	E	F	SLOPE S1	SLOPE S2	OUTFALL F.L.
		PROPOSED STRUCTURE		FT	FT	FT	FT	FT	FT	%	%	FT
CSJ: 0017-08-083												
MINOR CULVERTS												
STA 2070+99.90	1	2-5' x3' MBC		18	4.15	20.52				0.47%	-4.48%	522.99
		2-5' x3' MBC WITH 4.15' EXTENSION AND (4:1) SET TY I LT										
STA 2222+86.43	2	1-36" RCP		22.18	0	15.08				0.22%	-0.33%	463.63
		1-36" RCP WITH (4:1) SET TY II LT										
STA 2285+97.88	4	1-30" RCP		22.3	0	0				0.20%	0.00%	493.51
		1-30" RCP WITH HEADWALL (CH-PW-0)										
STA 2327+76.61	1	1-3' x2' SBC		18	6.69	18.55				0.23%	-6.20%	539.94
		1-3' x2' SBC WITH 6.69' EXTENSION AND (4:1) SET TY I LT										
STA 2343+66.40	1	1-5' x3' SBC		18	3.74	20.73				1.63%	0.96%	549.02
		1-5' x3' SBC WITH 3.74' EXTENSION AND (4:1) SET TY I LT										
STA 2515+77.42	2	1-5' x3' SBC		18	0	18.95				1.60%	1.16%	546.56
		1-5' x3' SBC WITH (4:1) SET TY I LT										
STA 2536+01.81	1	1-3' x2' SBC		18	4.09	18.27				0.51%	6.51%	527.65
		1-3' x2' SBC WITH 4.09' EXTENSION AND (6:1) SET TY I LT										
STA 2670+01.76	1	1-5' x3' SBC		18	4.5	18.27				0.44%	2.13%	434.59
		1-5' x3' SBC WITH 4.5' EXTENSION AND (4:1) SET TY I LT										
STA 2690+99.58	1	1-30" RCP		18	2.5	13.29				0.12%	11.89%	430.93
		1-30" RCP WITH 2.5' EXTENSION AND (4:1) SET TY II LT										
STA 2717+43.74	2	1-18" RCP		21.38	0	20.72				-1.01%	5.41%	415.44
		1-18" RCP AND (4:1) SET TY II LT										
STA 2727+98.38	3	3-5' x2' MBC		18	3.9	17.57	22.19		13.92	-0.10%	-1.08%	411.31
		3-5' x2' MBC WITH 3.90' EXTENSION (LT ONLY) AND (4:1) SET TY I LT&RT										

NOTES:

CONTRACTOR WILL FIELD VERIFY THE SIZE OF ALL STRUCTURES TO BE EXTENDED BEFORE FABRICATING AND/OR ACQUIRING MATERIALS.

REMOVAL OF HEADWALL/WINGWALL WILL CONSIST OF REMOVING CURBWall, HEADWALLS, WINGWALLS & RIPRAP APRON, IF APPLICABLE.

ALL EXCAVATION, SHAPING, BEDDING, AND BACKFILLING REQUIRED FOR PROPER INSTALLATION OF S.E.T.'s ALONG WITH ANY WORK REQUIRED TO PROVIDE A SMOOTH DRAINAGE TRANSITION IN ADJACENT AREAS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO ITEM 467 "SAFETY END TREATMENT".

SEE SHEET "CONCRETE PIPE COLLAR" FOR CONNECTION DETAILS.

□ BREAK BACK DIMENSION WILL VARY FROM 2'-7' FROM THE EXIST. HEADWALL/WINGWALLS EDGE (REFER TO BREAK BACK TYPICAL DETAIL) AND WILL BE DETERMINED BY THE ENGINEER AS PER FIELD CONDITIONS. BREAK BACK WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO ITEM(S):
467 "SAFETY END TREATMENT"



Handwritten signature and date: 8/26/2013

klotz associates

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Texas PE Firm Reg. # F-929



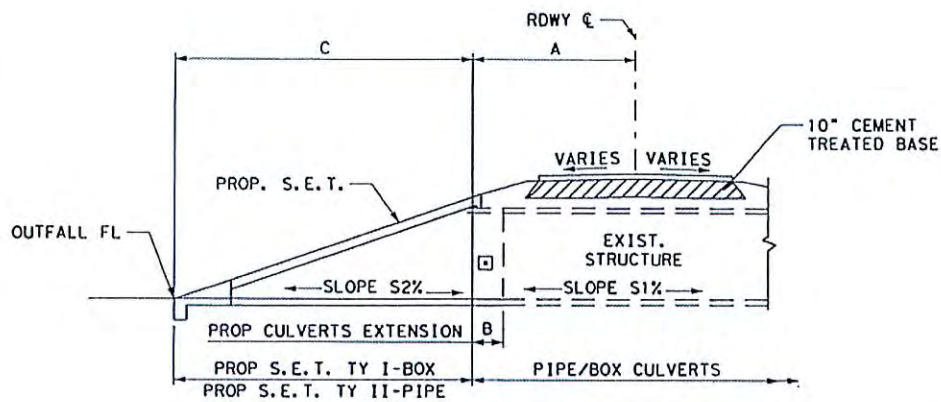
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IH35 EAST FRONTAGE ROAD

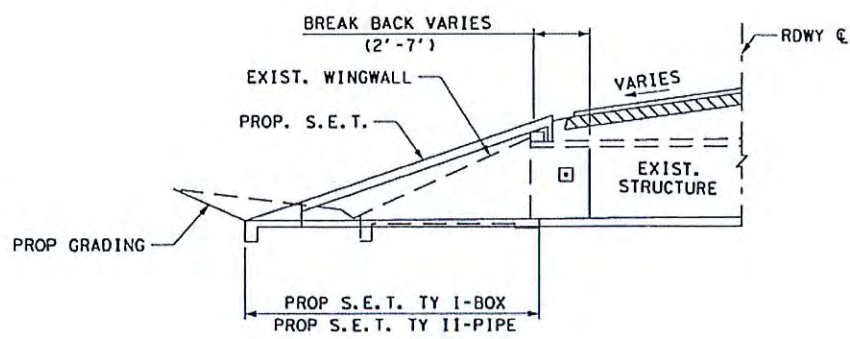
DRAINAGE DETAILS
MINOR CULVERTS

SHEET 1 OF 2

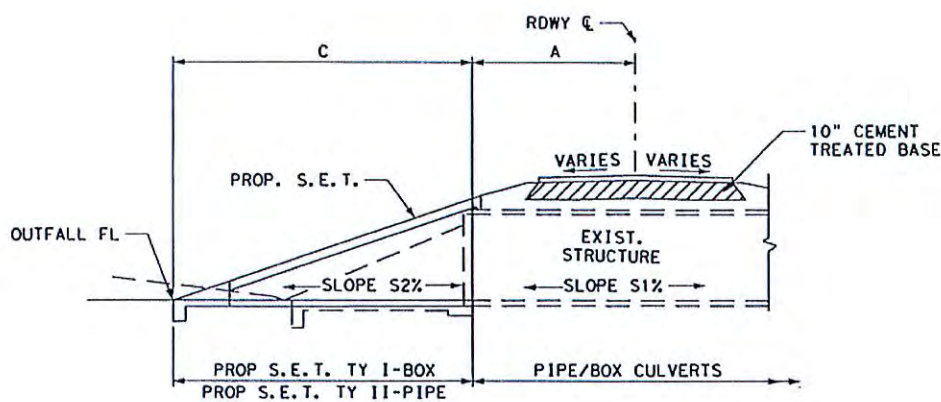
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6			IH 35 E FR
STATE	STATE DIST. NO.	COUNTY	SHEET NO.
TEXAS	LAREDO	LA SALLE	76
CONT.	SECT.	JOB	
0017	08	083	



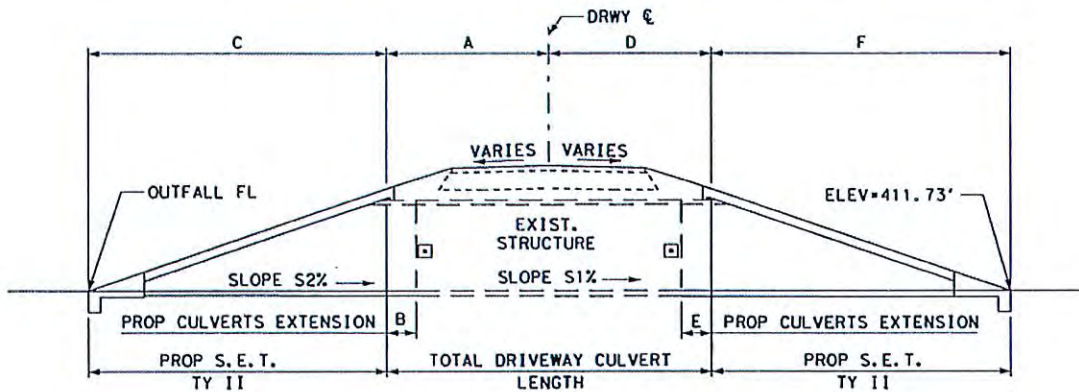
① DETAIL FOR CROSSING CULVERT(S) WITH EXTENSION
N. T. S.



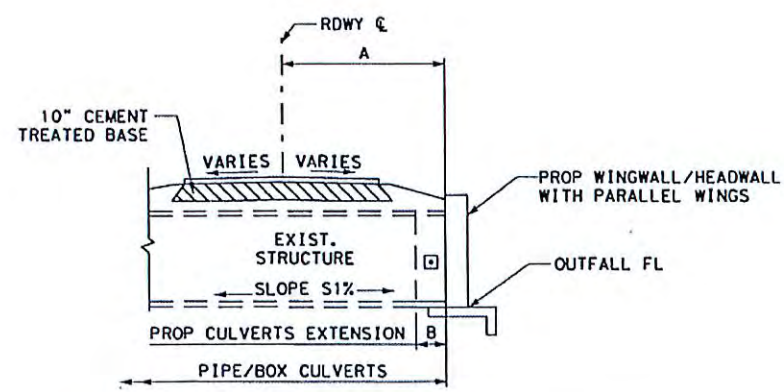
BREAK BACK TYPICAL DETAIL
N. T. S.



② DETAIL FOR CROSSING CULVERT(S)
N. T. S.



③ DETAIL FOR CROSSING CULVERT(S)
N. T. S.



④ DETAIL FOR CROSSING CULVERT(S)
N. T. S.

NOTES:

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SEE SHEET "CONCRETE PIPE COLLAR" FOR CONNECTION DETAILS.

□ BREAK BACK DIMENSION WILL VARY FROM 2'-7' FROM THE EXIST. HEADWALL/WINGWALLS EDGE (REFER TO BREAK BACK TYPICAL DETAIL) AND WILL BE DETERMINED BY THE ENGINEER AS PER FIELD CONDITIONS. BREAK BACK WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO ITEM(S): 467 "SAFETY END TREATMENT"

STATE OF TEXAS
DAVID WYMORE
99356
LICENSED PROFESSIONAL ENGINEER
8-16-2013

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IH35 EAST FRONTAGE ROAD

DRAINAGE DETAILS
MINOR CULVERTS

SHEET 2 OF 2

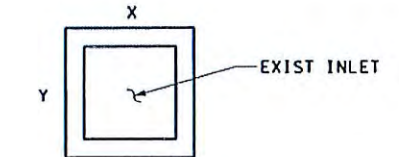
FED. RD. DIV. NO.	PROJECT NO.		HIGHWAY NO.
6	IM 0351 (095)		IH 35 E FR
STATE	STATE DIST. NO.	COUNTY	SHEET NO.
TEXAS	LAREDO	LA SALLE	77
CONT.	SECT.	JOB	
0017	08	083	

10/20/25 AM 8/16/2013 J:\9999_005_001\07_00 CAD\DCS\0017-08-082\CADD\SUMMARIES\0835TRSDA01.DGN

APPROX. STATION LOCATION	DESCRIPTION OF INLETS			TABLE OF DIMENSION															PROF 6" CONC RIPRAP SY
	EXIST O/S	DETAIL TYPE	EXISTING STRUCTURE	ELEV (1)	ELEV (2)	EXIST ELEV (3)	PROP ELEV (3)	EXIST ELEV (4)	PROP ELEV (4)	X	PROP SLOPE S1	PROP SLOPE S2	WIDTH (W)	EXIST DEPTH (D)	PROP DEPTH (D)	APRON	REMOVE EXIST 6" CONC RIPRAP		
	PROP O/S		PROPOSED STRUCTURE	FT	FT	FT	FT	FT	FT	FT	%	%	FT	FT	FT	FT	SY		
CSJ: 0017-08-083																			
STA 2046+36.66	24.2	1	A2	533.25	533.15	532.59	533.15	531.85	532.25	0.01	25%	24%	11.8	13.09	12.7	3.68	14.72	14.21	
			ADJ INLET TOP +0.40'																
STA 2070+96.76	24.1	1	A1	528.49	528.36	527.67	528.17	527.10		0.75	25%	25%	11.93	10.85	11	4.23	13.05	13.25	
STA 2132+43.67	24.03	1	A2	497.45	497.34	496.55	496.55	495.92		4.00	20%	16%	11.98	13.09	12.5	4	14.98	14.20	
	28.03		RELOCATE INLET																
STA 2192+01.72	23.92	2	B2	472.38	472.22	469.96	470.13	469.49	469.89	8.39	25%	9%	10.7	0	9.2	2.6	0.00	8.50	
	29.92		RELOCATE & ADJ INLET TOP +0.40'																
STA 2215+13.77	39.09	2	B1	470.45	470.31	469.30	469.30	468.95		19.16	5%	9%	12	0	11	4	0.00	13.34	
STA 2223+25.71	39.28	1	A1	469.10	468.95	468.16	468.16	467.97		15.40	5%	5%	10	0	11.5	4	0.00	11.45	
STA 2234+01.92	45.75	1	A1	471.87	471.66	470.60	470.33	470.02		5.33	25%	21%	7	0	7	1.5	0.00	4.11	
STA 2238+27.45	45.63	2	A1	471.99	471.86	471.35	471.35	471.12		21.79	2%	6%	12	0	12	4	0.00	14.67	
STA 2238+50.89	23.89		CURB INLET	472.25	472.14	472.03	472.03			4.40	2%						0.00	0.00	
STA 2261+52.18	31.49	1	A1	480.80	480.68	479.94	479.94	479.58		7.57	10%	9%	12	0	12	4	0.00	14.67	
STA 2270+82.87	40.02	2	B1	486.39	486.26	485.48	485.48	485.26		16.22	5%	6%	12	0	12	4	0.00	14.67	
STA 2285+97.94	23.84	2	B2	499.93	499.77	498.11	498.27	497.06	497.46	6.00	25%	23%	11.74	13.18	12.5	3.5	14.75	13.87	
	29.84		RELOCATE & ADJ INLET TOP +0.40'																
STA 2327+76.75	24.74	1	A2	544.86	544.72	544.23	544.63	544.10		0.38	25%	13%	11.85	13.07	13	3.96	14.77	14.68	
STA 2343+66.32	25.15	1	A1	554.55	554.42	553.35	554.01	552.95		1.65	25%	25%	11.37	10.8	11	4.17	12.31	12.57	
STA 2378+09.28	25.64	2	B2	554.34	554.25	552.92	553.47	552.71		3.12	25%	18%	11.59	13.25	13	4.16	14.62	14.30	
	27.64		RELOCATE INLET																
STA 2378+67.35	25.55	2	B2	554.19	554.07	553.10	553.84	552.79		0.92	25%	25%	11.95	13.22	13	4.19	15.11	14.82	
STA 2447+55.40	25.35	2	B2	568.02	567.83	567.12	567.65	566.94		0.73	25%	17%	11.54	13.34	13	4.1	14.66	14.23	
STA 2448+13.52	25.39	2	B2	568.27	568.08	567.09	567.89	566.84		0.73	25%	25%	11.82	12.98	13	4.19	14.61	14.63	
STA 2515+77.31	22.07	1	A2	551.28	551.11	550.33	550.11	549.71		4.00	25%	25%	11.36	13.11	10.5	1.6	14.11	10.81	
	26.07		RELOCATE INLET																

NOTES:

1. REMOVE INLET GRATE AND CAP EXIST INLET. THE BOTTOM SECTION TO BE REMAIN. SEE INLET CONNECTIONS DETAIL.



TYPE	X	Y
A1	4'	3'
A2	4'	5'-6"
B1	3'	4'
B2	5'-6"	4'



Signature 7/16/13

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Texas PE Firm Reg. # F-929



Texas Department of Transportation

IH35 EAST FRONTAGE ROAD

DRAINAGE DETAILS
INLETS

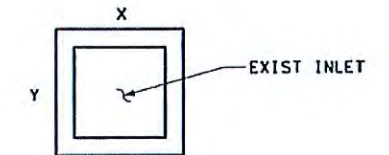
SHEET 1 OF 2

FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH 35 E FR
STATE	COUNTY	SHEET NO.
TEXAS	LA SALLE	79
CONT.	SECT.	JOB
0017	08	083

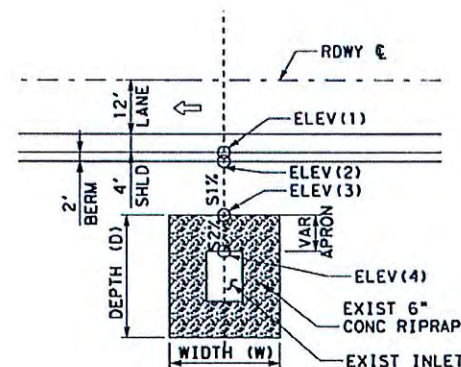
APPROX. STATION LOCATION	DESCRIPTION OF INLETS			TABLE OF DIMENSION														PROF 6" CONC RIPRAP
	EXIST O/S	DETAIL TYPE	EXISTING STRUCTURE	ELEV (1)	ELEV (2)	EXIST ELEV (3)	PROP ELEV (3)	EXIST ELEV (4)	PROP ELEV (4)	X	PROP SLOPE S1	PROP SLOPE S2	WIDTH (W)	EXIST DEPTH (D)	PROP DEPTH (D)	APRON	REMOVE EXIST 6" CONC RIPRAP	
	PROP O/S		PROPOSED STRUCTURE	FT	FT	FT	FT	FT	FT	FT	%	%	FT	FT	FT	FT	SY	
CSJ: 0017-08-083																		
STA 2536+01.59	23.13	1	A1	530.80	530.63	529.87	530.63	529.31	529.61	0.01	25%	25%	11.76	10.84	10.5	4.09	12.83	12.39
			ADJ INLET TOP +0.30'															
STA 2566+01.70	23.77	2	B2	504.37	504.23	503.45	503.48	502.90		3.00	25%	17%	11.49	13.03	12	3.37	14.19	12.88
	26.77																	
STA 2583+59.91	23.56	1	A1	487.93	487.77	487.01	487.21	486.41		2.24	25%	19%	11.52	10.2	10	4.29	11.73	11.47
	25.56		RELOCATE INLET															
STA 2603+96.95	24.68	1	A2	481.62	481.45	480.89	481.45	480.79		0.01	25%	16%	12.07	13.53	13	4.07	15.71	14.99
STA 2652+59.22	25.2	1	2-A2	445.28	445.14	444.31	445.07	443.75	444.00	0.30	25%	25%	16.84	13.51	13.5	4.25	22.84	22.82
			ADJ 2 INLET TOP +0.25'															
STA 2670+01.20	24.72	1	A1	440.00	439.91	438.66	438.85	438.07		4.24	25%	19%	11.71	10.7	10.7	4.18	12.59	12.59
	27.72		RELOCATE INLET															
STA 2690+99.00	24.51	2	B2	433.56	433.39	432.97	433.39	432.79		0.01	25%	15%	11.81	13.39	13	4	15.13	14.62

NOTES:

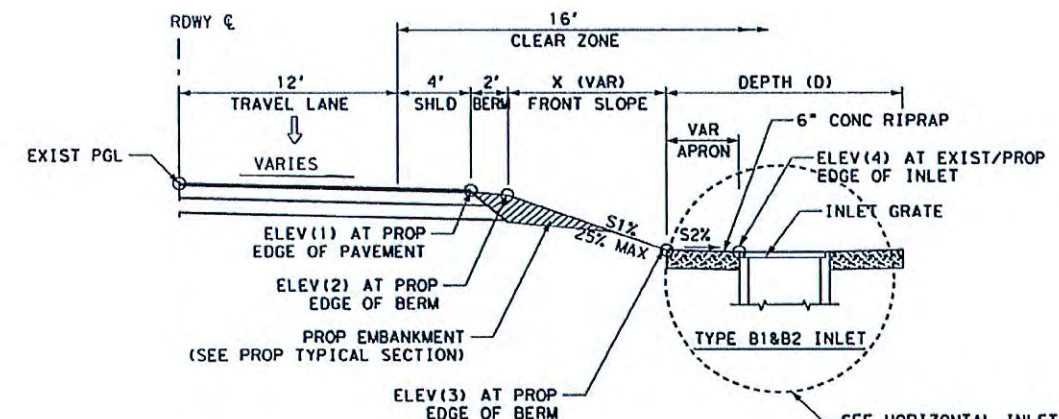
1. REMOVE INLET GRATE AND CAP EXIST INLET. THE BOTTOM SECTION TO BE REMAIN. SEE INLET CONNECTIONS DETAIL.



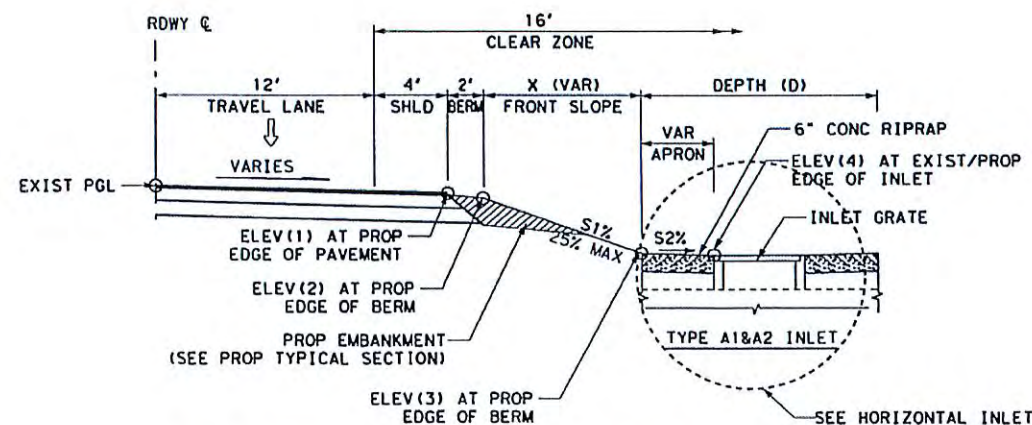
TYPE	X	Y
A1	4'	3'
A2	4'	5'-6"
B1	3'	4'
B2	5'-6"	4'



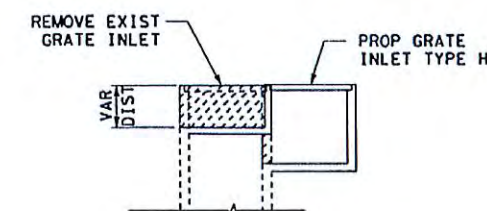
PLAN VIEW
NTS



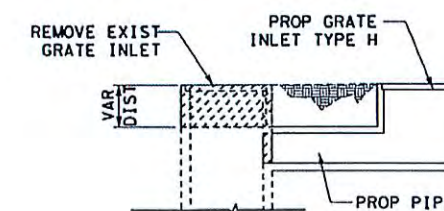
② DETAIL FOR INLET ADJUSTMENT
NTS



① DETAIL FOR INLET ADJUSTMENT
NTS



① INLET CONNECTION DETAIL
ELEVATION VIEW (NTS)



② INLET CONNECTION DETAIL
ELEVATION VIEW (NTS)



7/16/13

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IH35 EAST FRONTAGE ROAD

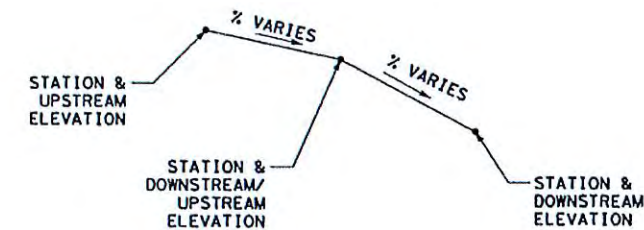
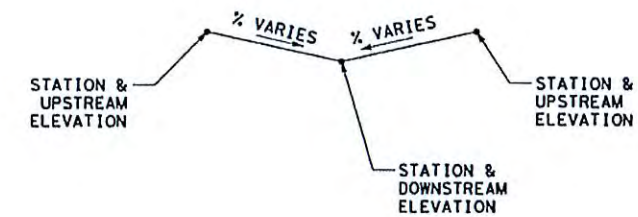
DRAINAGE DETAILS
INLETS

SHEET 2 OF 2

FED. RD. DIST. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH 35 E FR
STATE	COUNTY	SHEET NO.
TEXAS	LAREDO	LA SALLE
CON.	SECT.	JOB
0017	08	083

80

DITCH SPOT GRADING				
APPROX. STATION LOCATION	LT/RT	FLOWLINE ELEVATION		PROP DITCH FLOWLINE GRADE (%)
		UPSTREAM FT	DOWNSTREAM FT	
CSJ: 0017-08-083				
GRADE FOR INLET ADJUSTMENT				
STA 2045+00.00 TO STA 2046+36.66	RT	532.95	532.25	0.51%
STA 2046+36.66 TO STA 2047+00.00	RT	532.45	532.25	0.32%
STA 2192+01.72 TO STA 2193+00.00	RT	470.40	469.89	0.52%
STA 2285+00.00 TO STA 2285+97.94	RT	497.46	496.68	0.80%
STA 2285+97.94 TO STA 2288+00.00	RT	498.89	497.46	0.71%
STA 2535+00.00 TO STA 2536+01.59	RT	530.44	529.61	0.82%
STA 2536+01.59 TO STA 2537+00.00	RT	529.61	528.96	0.66%
STA 2652+00.00 TO STA 2652+59.22	RT	444.88	444.00	1.49%
STA 2652+59.22 TO STA 2653+00.00	RT	444.00	443.57	1.05%

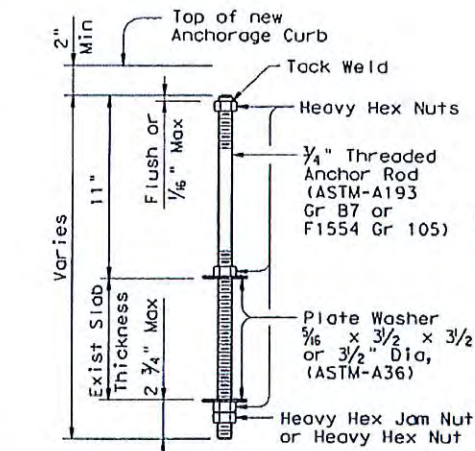


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IH35 EAST FRONTAGE ROAD			
DRAINAGE DETAILS DITCH SPOT GRADING			
SHEET 1 OF 1			
FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.	
6	IM 0351 (095)	IH 35 E FR	
STATE	STATE DIST. NO.	COUNTY	SHEET NO.
TEXAS	LAREDO	LA SALLE	81
CONT.	SECT.	JOB	
0017	08	083	

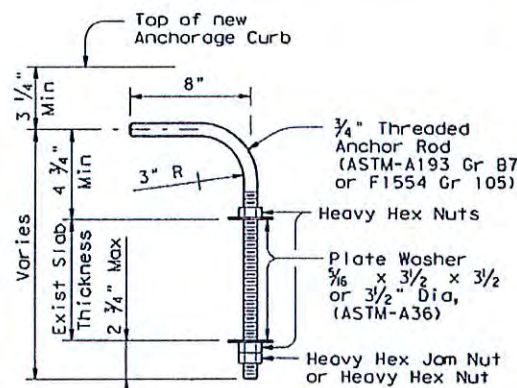
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ACC:

LEVELS DISPLAYED

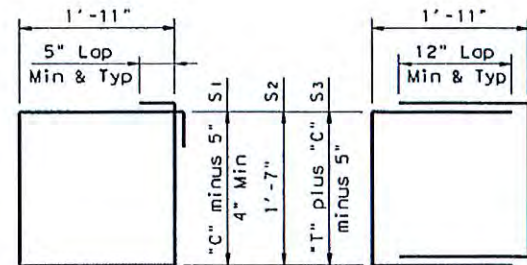


STRAIGHT ANCHOR ⑨



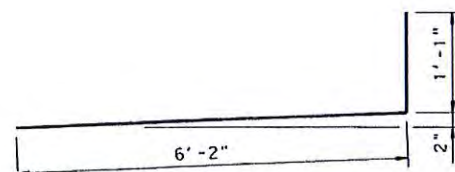
HOOKED ANCHOR ⑨

ANCHOR DETAILS

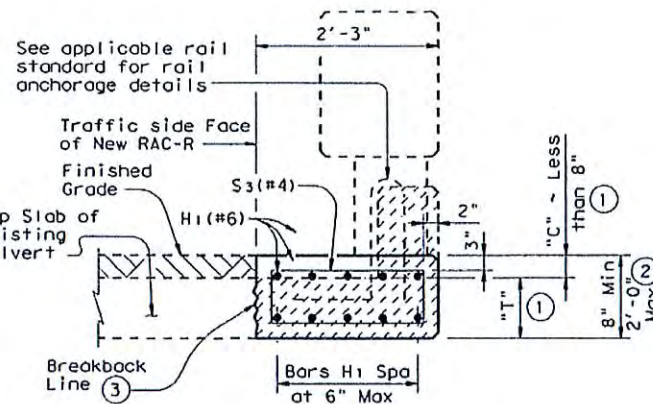


BARS S (#4)

OPTIONAL BARS S (#4)



BARS L (#5)

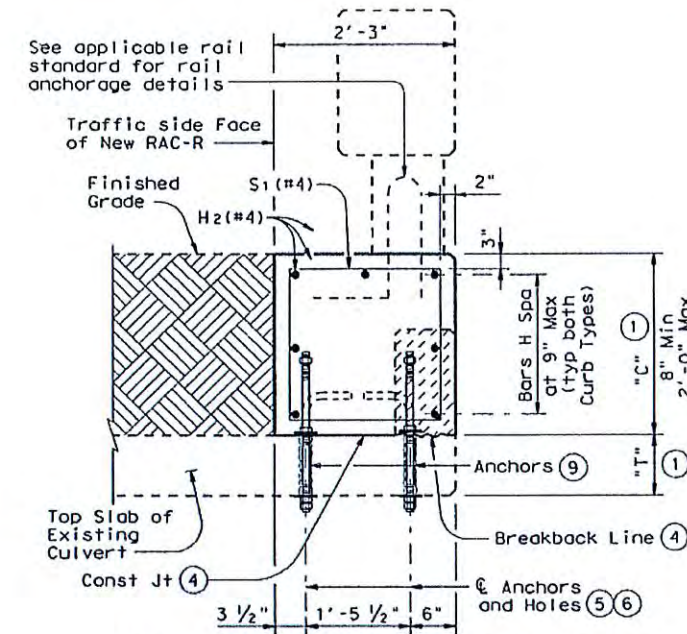


TYPICAL SECTION ~ TYPE 1

Used when the top of the Retrofit Curb is less than 8" above existing slab. Showing T223 Rail other rails similar. (Bars L on T223 are not used for this structure). Bars H as shown and required on standards T80HT and T80SS are not required. See Bridge PSN # for location application.

BRIDGE PSN # FOR TYPE 1
22-142-0017-08-148

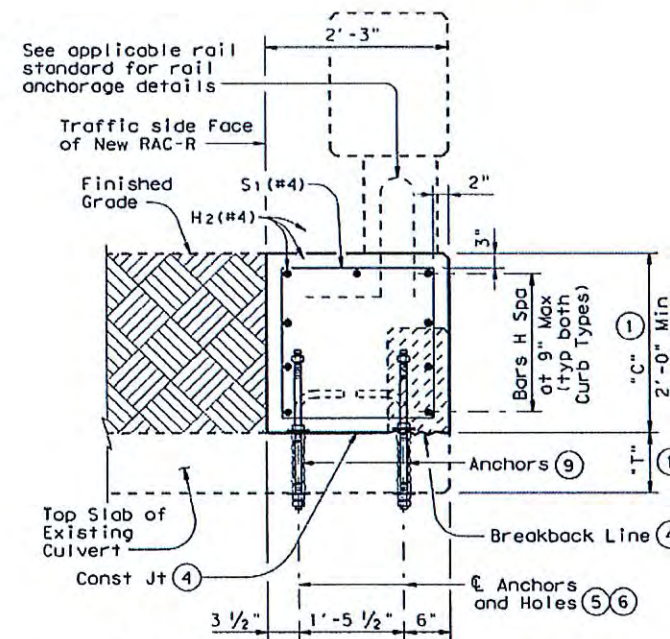
- ① "T" is equal to the existing culvert top slab thickness. If "T" is less than 6", a special design will be required. "C" is equal to the Retrofit Rail Anchorage Curb thickness.
- ② The total thickness ("T" plus "C") must be 8" minimum in order to properly install the railing anchorage reinforcing.
- ③ Remove shaded portion of existing concrete to Breakback Line shown. Core must be taken so as to not damage existing reinforcing. Replace damaged reinforcing with new, like reinforcing. Clean existing reinforcing and incorporate into new concrete construction.
- ④ Saw cut (score) 1" deep flush with top of existing culvert slab, on the field side face of existing curb, if present. After scoring, remove shaded portion of existing concrete to Breakback Line shown. Do not damage existing reinforcing. Clean, bend and incorporate existing reinforcing into new concrete construction. Note that new anchors, as shown in the detail, are required even when existing reinforcing remains in use. Remove existing overlay and/or base material to flush with top of culvert in areas of new construction. Core must be taken to not damage the existing slab. In order to prevent existing asphalt remnants from acting as a bond breaker between the exposed, existing concrete and the retrofitted concrete curb, clean the newly exposed concrete with abrasive blasting or shot blasting. Remove all loose debris prior to placing new anchorage curb.
- ⑤ Core drill 1" diameter holes through existing slab. Percussion drilling is not permitted. Patch spalls, when directed by the Engineer, in accordance with Item 429, "Concrete Structure Repair", at the Contractor's expense. Tighten nuts snug tight.
- ⑥ Space field side anchors at 36" maximum. Space traffic side anchors at 11" maximum. Do not align field side and traffic side anchors transversely.
- ⑦ Retrofit Wingwall Anchorage Curb must always be 2'-0" in height. Breakback existing wingwall as needed in order to properly align the wingwall Anchorage Curb with that placed on the existing culvert. Saw cut (score) 1" deep on field side face of the existing wingwall prior to breakback. Core must be taken so as to not damage existing reinforcing. Clean and extend existing reinforcing into new construction. Note that new Bars D (#6), as shown in the detail, are required even when existing reinforcing remains in use.
- ⑧ Drill and grout Bars D (#6) 1'-0" Min into existing wingwall. If existing parallel wingwall thickness is less than 8", a special design will be required. Holes must be core drilled. Percussion drilling is not permitted.
- ⑨ Use straight anchors if retrofit anchorage curb is 1'-2" or greater in thickness. Use hooked anchors for retrofit anchorage curb less than 1'-2" thick.



TYPICAL SECTION ~ TYPE 2

Used when the Retrofit Curb is between 8" in height and 2'-0". Showing T223 Rail, other rails similar. (Bars L on T223 are not used for this structure). Bars H as shown and required on standards T80HT and T80SS are not required. See Bridge PSN # for location application.

BRIDGE PSN # FOR TYPE 2
22-142-0017-08-141
22-142-0017-08-142
22-142-0017-08-145
22-142-0017-08-149
22-142-0017-08-150



TYPICAL SECTION ~ TYPE 3

Used when the Retrofit Curb is between 2' and 2'-6" in height. Showing T223 Rail, other rails similar. (Bars L on T223 are not used for this structure). Bars H as shown and required on standards T80HT and T80SS are not required. See Bridge PSN # for location application.

BRIDGE PSN # FOR TYPE 3
22-142-0017-08-151
22-142-0017-08-131

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications. The rail anchorage curb details have sufficient strength for use with all standard rail types. See appropriate rail standard for approved design speed restrictions, notes and details not shown. All reinforcing steel must be Grade 60. All concrete must be Class "C" with a minimum compressive strength of 3,600 psi. Chamfer all exposed corners 3/4" unless shown otherwise. For vehicle safety, the top of the new curb must be flush with the finished grade. These details are for use with curbs with a maximum height of 2'-6" only. Curb heights greater than 2'-6" will require special design. Cost of furnishing and installing anchorage curb (including Wingwall Curb Slab) for rails must be included in unit price bid for "Railing". Galvanize all steel components except reinforcing, unless otherwise shown on plans. Not all possible combinations of existing box culverts, curbs, wingwalls etc. have been shown on this sheet. Other combinations and reinforcement arrangements are permissible if they meet the same strength requirements as indicated on this sheet.

SHEET 1 OF 2

Texas Department of Transportation
Bridge Division

RAIL ANCHORAGE CURB RETROFIT GUIDE (MOD)

BOX CULVERT RAIL MOUNTING DETAILS
(CURBS 2'-6" TALL AND LESS ONLY)

RAC-R (MOD)

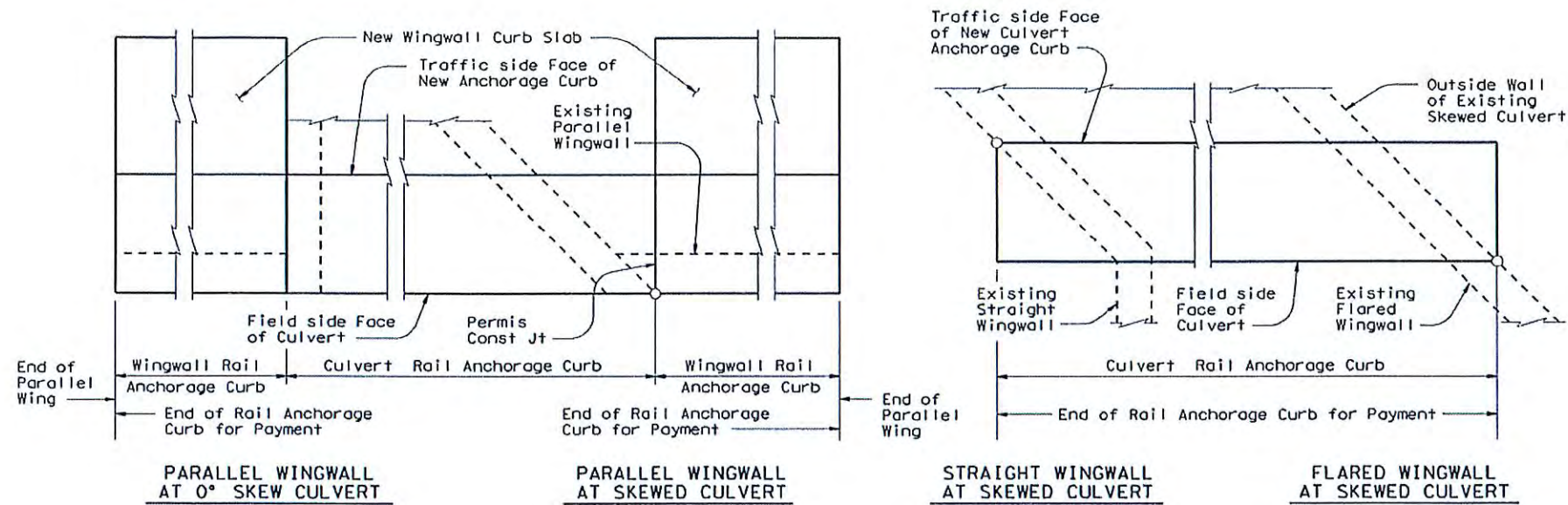
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© TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT	SHEET	
REVISIONS	LAREDO	IM 0351 (015)	82	
05-111 Gen Notes, 1101 Anchor PL, 07-121 10th.	COUNTY	CONTROL SECT	JOB	HIGHWAY
	LA SALLE	0017	08	083 IH 35 E FR



Joe Frank Potter, P.E.
07/16/13

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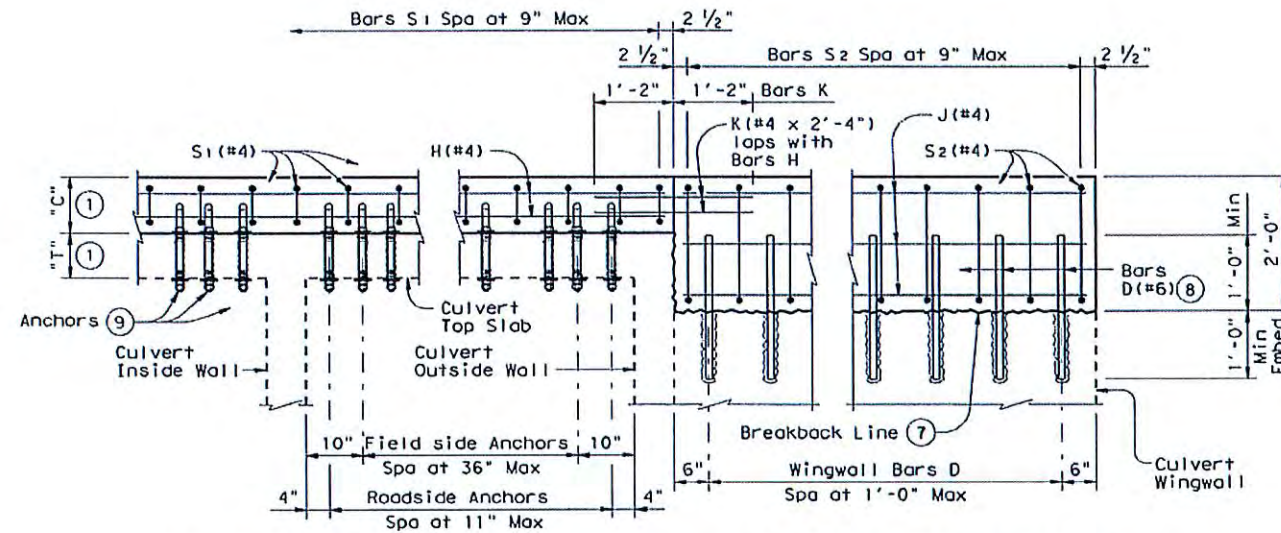
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Note that Wingwall Rail Anchorage Curb is used only at culverts with parallel wingwalls.

TYPICAL CURB PLANS

Showing Geometry only. Reinforcing, Curb Anchors, and Railing not shown for clarity.



Showing Anchorage Curb Type 2. Anchor and Bars S spacing are the same for Anchorage Type 1.

Curb Slab and Slab reinforcing not shown for clarity.

TYPICAL ELEVATIONS OF INSTALLATION

- "T" is equal to the existing culvert top slab thickness. If "T" is less than 6", a special design will be required. "C" is equal to the Retrofit Rail Anchorage Curb thickness.
- Retrofit Wingwall Anchorage Curb must always be 2'-0" in height. Breakback existing wingwall as needed in order to properly align the wingwall Anchorage Curb with that placed on the existing culvert. Saw cut (score) 1" deep on field side face of the existing wingwall prior to breakback. Care must be taken so as to not damage existing reinforcing. Clean and extend existing reinforcing into new construction. Note that new Bars D(#6), as shown in the detail, are required even when existing reinforcing remains in use.
- Drill and grout Bars D(#6) 1'-0" Min into existing wingwall. If existing parallel wingwall thickness is less than 8", a special design will be required. Holes must be core drilled. Percussion drilling is not permitted.
- Use straight anchors if retrofit anchorage curb is 1'-2" or greater in thickness. Use hooked anchors for retrofit anchorage curb less than 1'-2" thick.

SHEET 2 OF 2

Texas Department of Transportation
Bridge Division

RAIL ANCHORAGE CURB RETROFIT GUIDE (MOD)

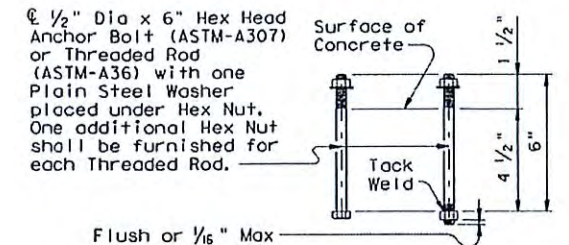
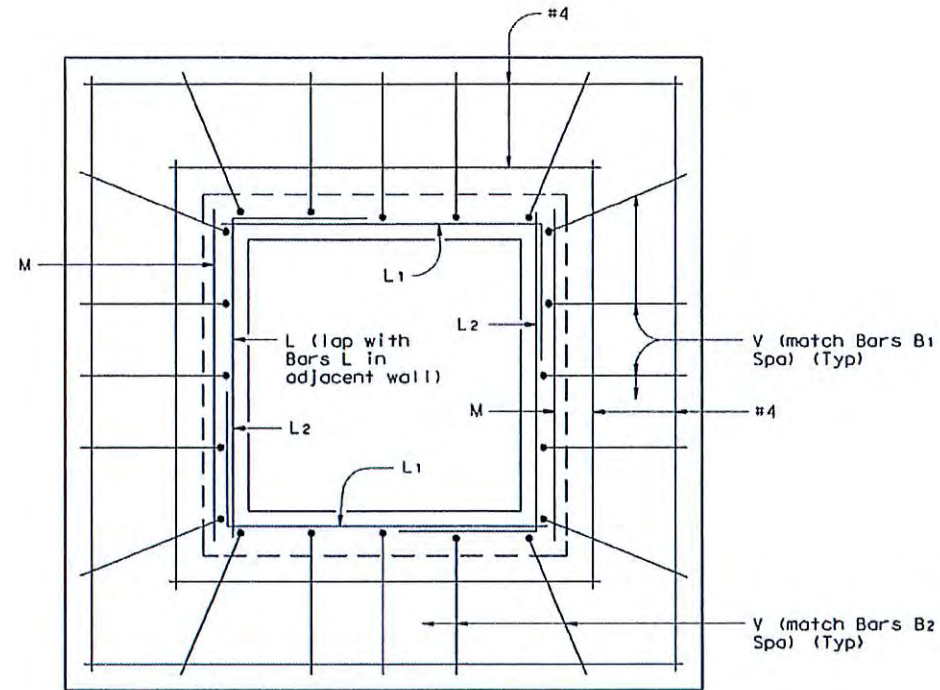
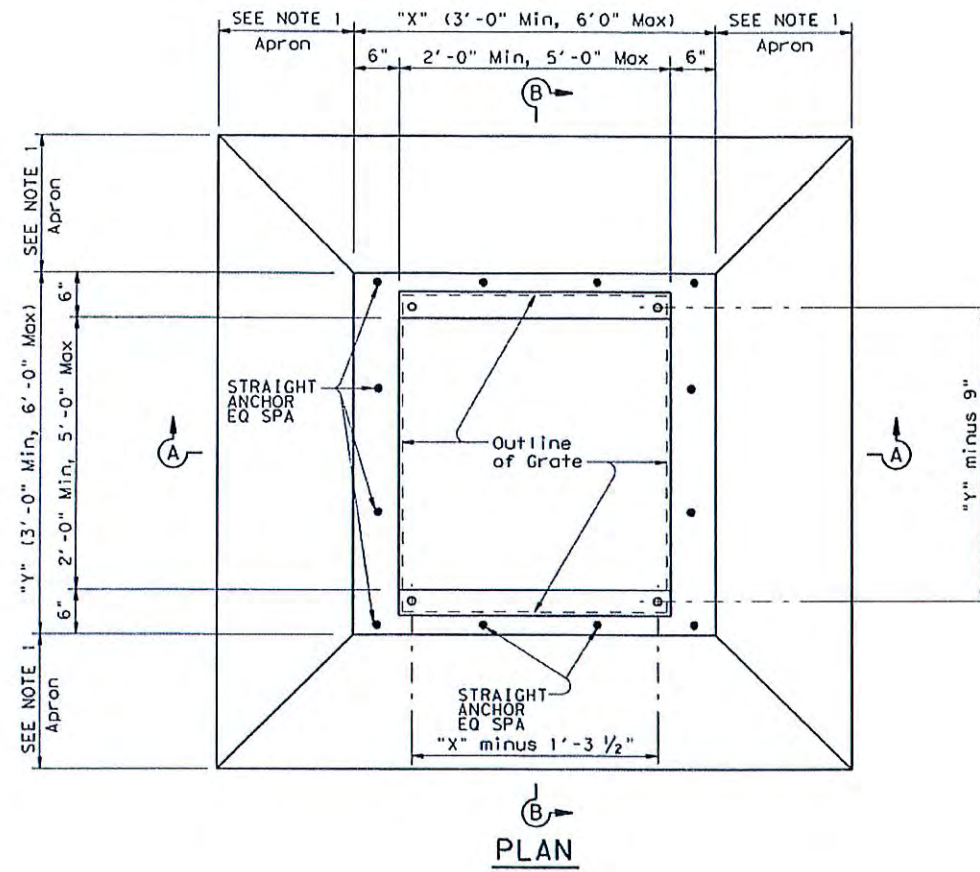
BOX CULVERT RAIL MOUNTING DETAILS
(CURBS 2'-6" TALL AND LESS ONLY)

RAC-R (MOD)

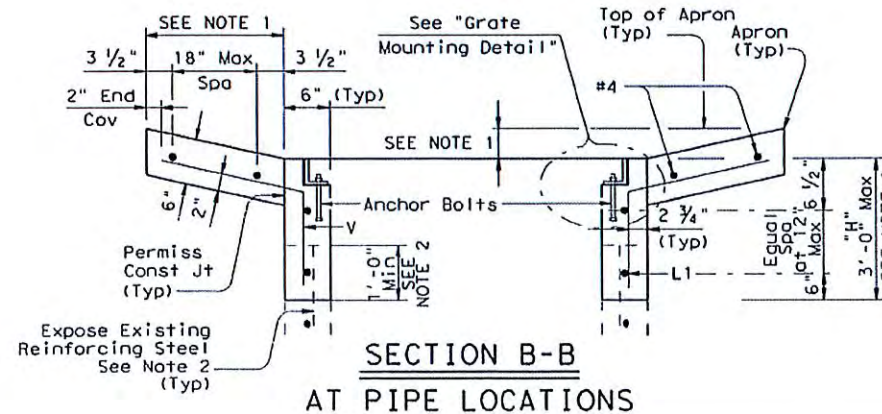
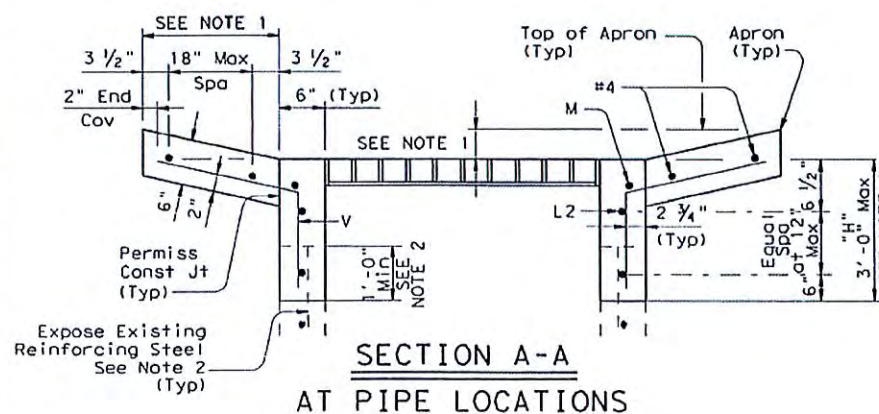
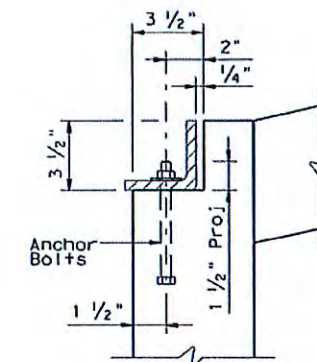
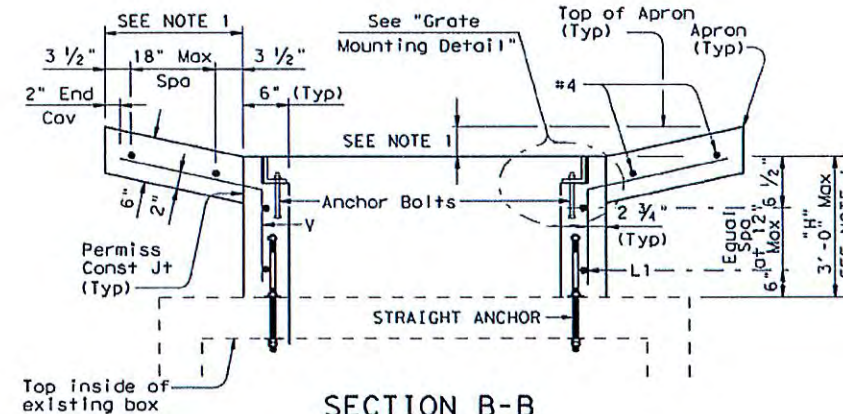
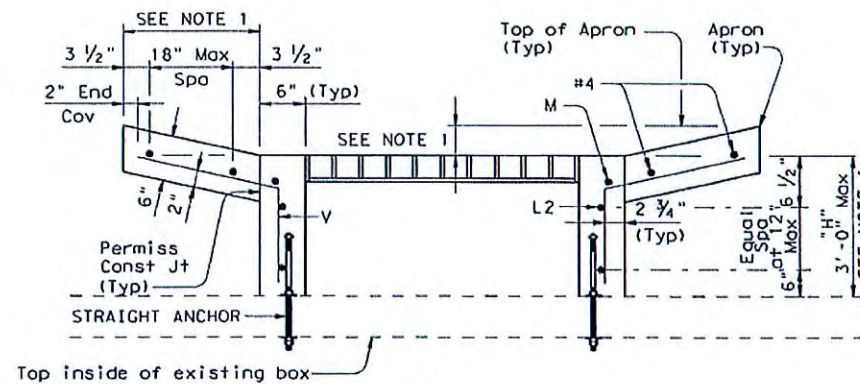
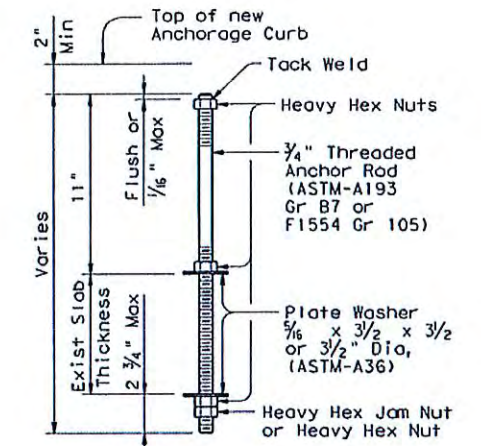
FILE: racste02.dgn	DN: TxDOT	CR: TxDOT	EN: TxDOT	CR: TxDOT
© TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT	SHEET	
REVISIONS	LAREDO	IM 035	0095	83
05-11: Gen Notes, T101: Anchor PL, 07-12: Width.	COUNTY	CONTROL SECT	JOB	HIGHWAY
	LA SALLE	0017	08	083 IH 35 E FR



Joe F. Potter, P.E.
07/16/13



ANCHOR BOLT OPTIONS



NOTES:

1. DIMENSION SHOWN ON SHEET "DRAINAGE DETAILS".
2. SAW CUT AND REMOVE 1'-0" MIN CONCRETE. EXPOSE EXISTING REINFORCING STEEL TO EXPOSED EXISTING

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Texas Department of Transportation

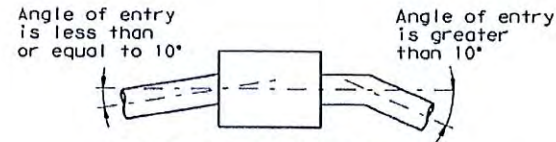
IH35 EAST FRONTAGE ROAD

HORIZONTAL INLET WITH GRATE DETAIL

SHEET 1 OF 2

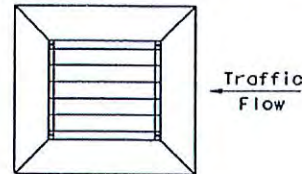
FED. RD. DIST. NO.	PROJECT NO.	HIGHWAY NO.
6	TM 0351 (095)	IH 35 E FR
STATE	COUNTY	SHEET NO.
TEXAS	LAREDO	LA SALLE
CONT.	SECT.	JOB
0017	08	083

84



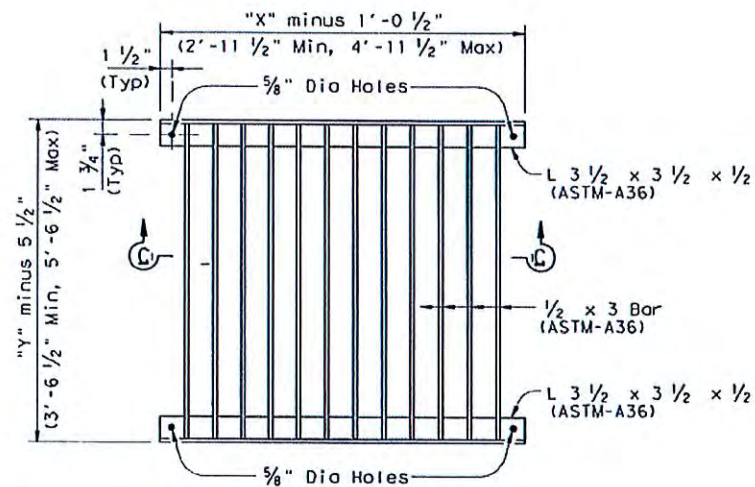
PIPE CONNECTION DETAIL

Connecting pipes should enter within 10° of normal to inlet wall. If necessary, pipe elbow or curved approach alignment should be used to stay within this limit.

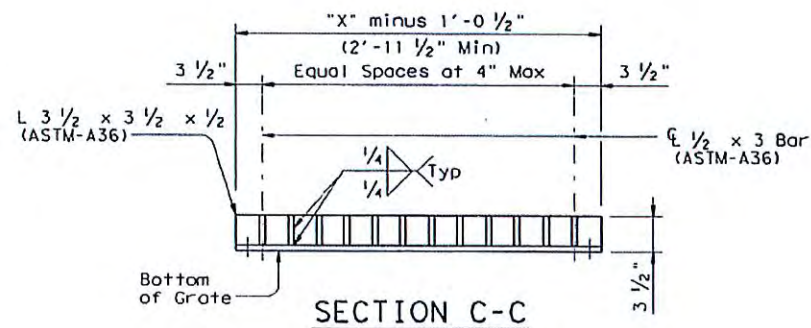


GRATE ORIENTATION DETAIL

If possible, horizontal grate inlet should be oriented such that both traffic and ditch water approach parallel to bars on grate. If this is not possible, orientation must favor traffic flow. Grate is not to be used under direct traffic, rather it is to be used in ditches and medians away from the roadway.



TYPICAL GRATE PLAN



SECTION C-C

GENERAL NOTES:

When approved, precast inlets with equivalent structural capacity may be furnished. Sealed engineering calculations and drawings shall be submitted for approval prior to construction. Shop drawings will not be required.

Apron shall be cast-in-place. In areas of conflict between reinforcing steel, blockouts, pipes, anchor bolts or other reinforcing steel, the reinforcement shall be bent or adjusted to clear as directed by the Engineer.

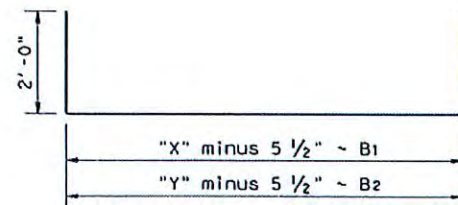
Anchor Bolts are 1/2" Dia ASTM A307 Grade A bolts (or A36 threaded rods with one tack welded hex head nut each) with one hex head nut and one plain steel washer.

Structural Steel for grates shall conform to the requirements of ASTM Designation A-36 or AISI Designation M1010-M1020.

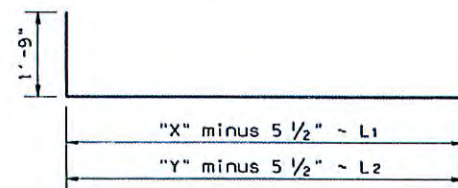
All reinforcing steel shall be Grade 60 unless otherwise noted.

All steel components except reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

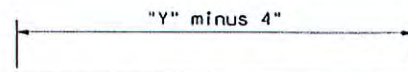
All concrete shall be Class "A" (f'c = 3,000 psi).



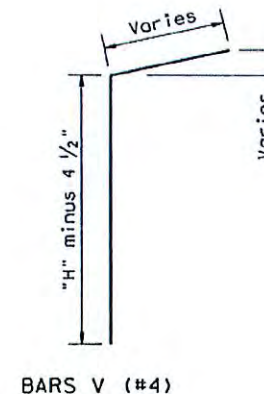
BARS B (#4)



BARS L (#4)



BARS M (#4)



BARS V (#4)



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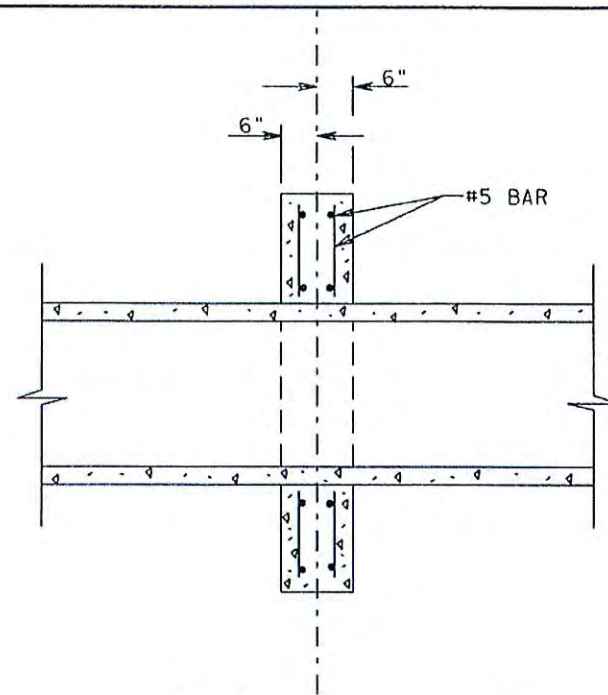
IH35 EAST FRONTAGE ROAD

HORIZONTAL INLET
WITH GRATE DETAIL

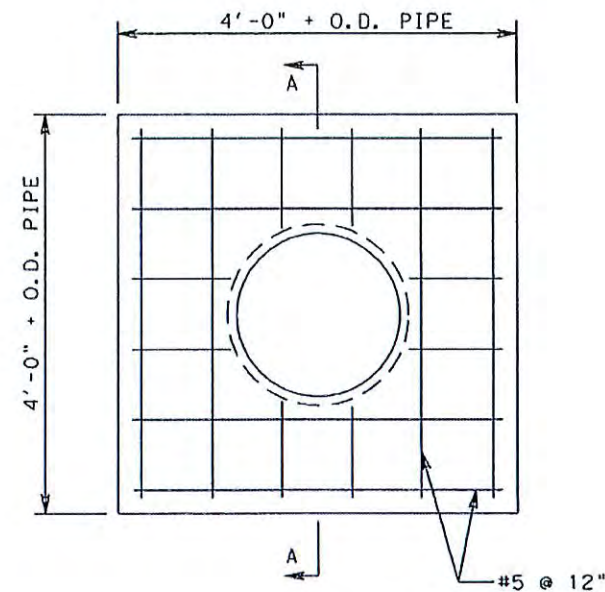
SHEET 2 OF 2

FED. RD. DIV. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH 35 E FR
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LA SALLE
CONTRACT	SECT.	JOB
0017	08	083

85

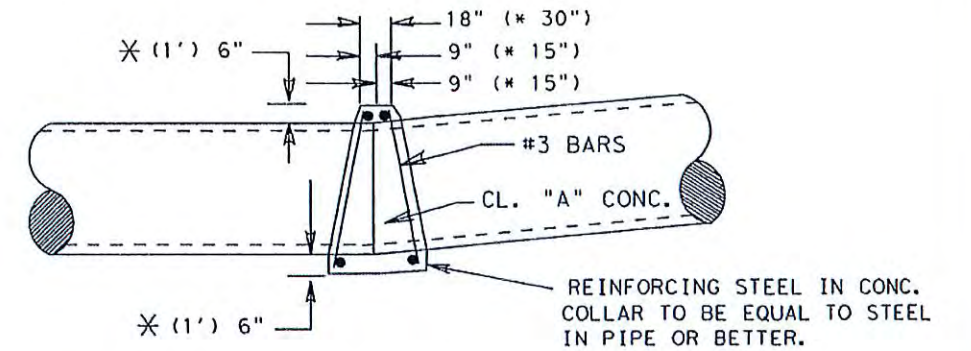
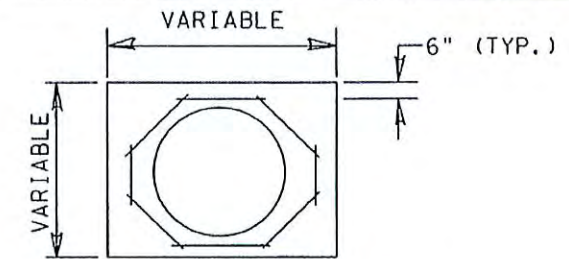


SECTION A-A



FRONT ELEVATION

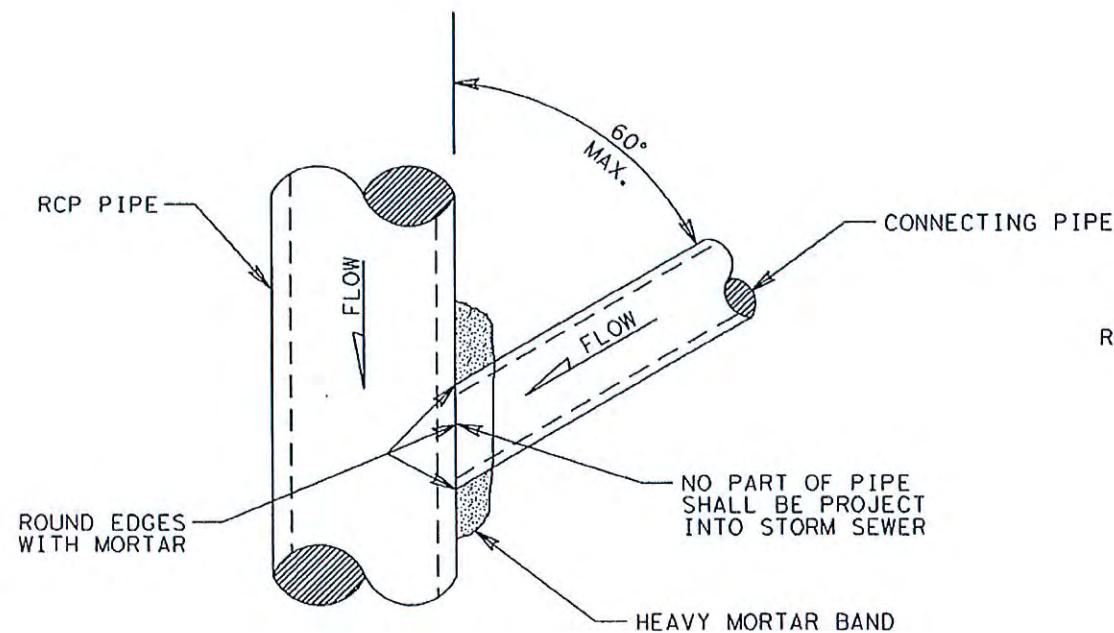
CONCRETE PIPE COLLAR



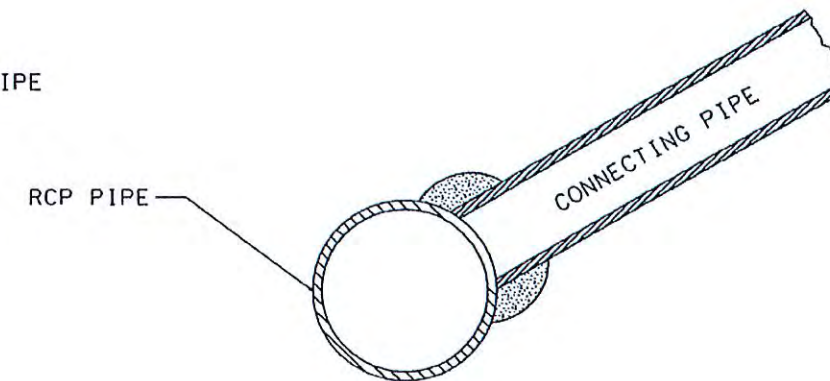
DETAIL FOR CONC. COLLARS
DRAINAGE STRUCTURES AND PIPE
SIPHONS (HORIZ. & VERT. BENDS)

NOTE: PROP. CONC. COLLAR WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO THE BIDS ITEMS INVOLVED.

* FOR 42" AND LARGER PIPE



TYPICAL REINFORCED CONC. PIPE
CONNECTION WITHOUT MANHOLE



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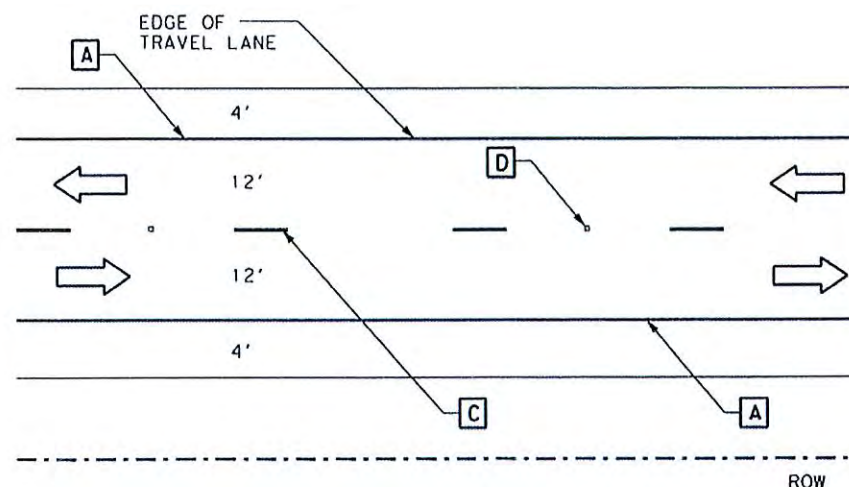
IH35 EAST FRONTAGE ROAD

CONCRETE PIPE COLLAR

SHEET 1 OF 1

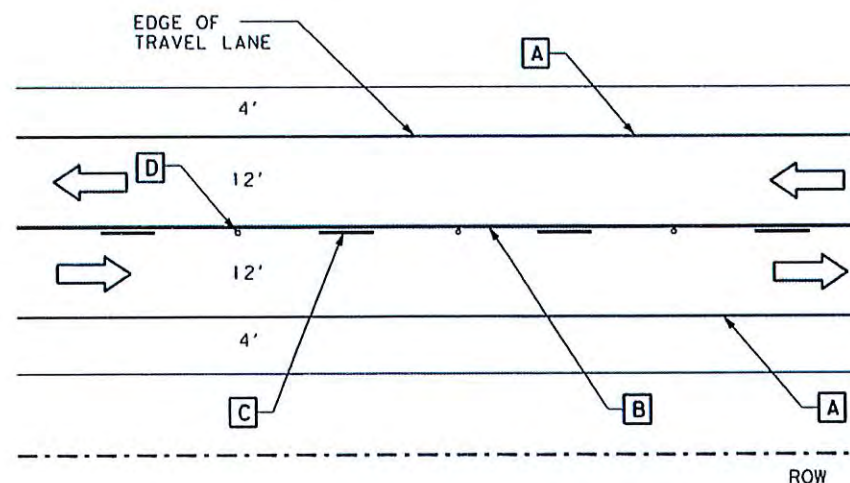
FED. RD. DIST. NO.	PROJECT NO.	HIGHWAY NO.
6	IM 0351 (095)	IH 35 E FR
STATE	STATE DIST. NO.	COUNTY
TEXAS	LAREDO	LA SALLE
CONT.	SECT.	JOB
0017	08	083

86



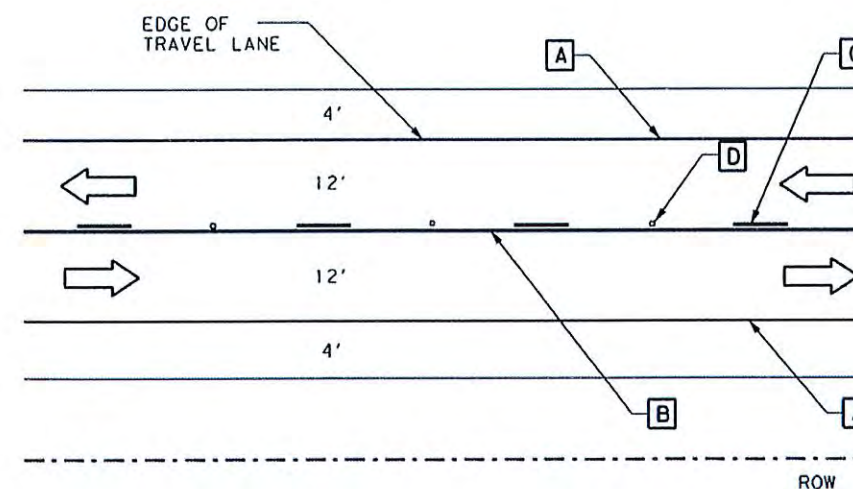
DETAIL "A"
PASSING PERMITTED

STA 2032+40 TO STA 2059+40
STA 2067+90 TO STA 2143+40
STA 2162+40 TO STA 2193+80
STA 2201+70 TO STA 2221+20
STA 2271+10 TO STA 2406+10
STA 2426+60 TO STA 2462+10
STA 2493+20 TO STA 2620+30
STA 2628+50 TO STA 2636+00
STA 2646+70 TO STA 2684+80



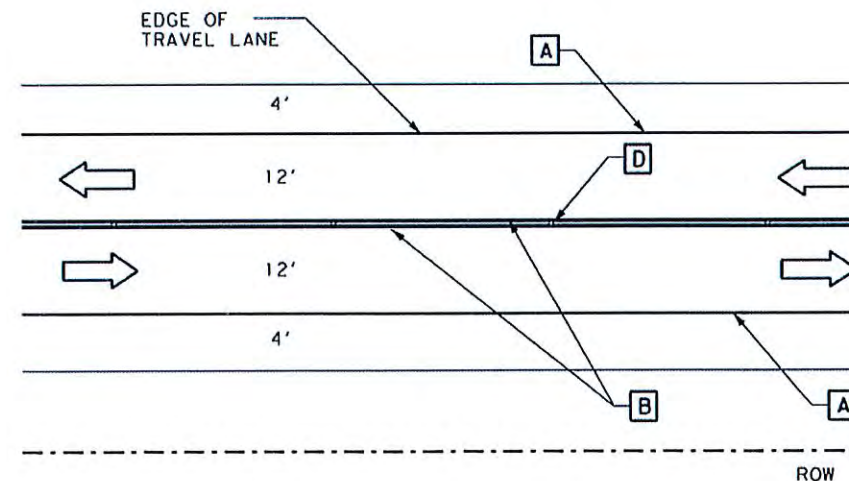
DETAIL "C"
NO PASSING ZONE
ON LEFT

STA 2059+40 TO STA 2067+90
STA 2155+30 TO STA 2162+40
STA 2266+70 TO STA 2271+10
STA 2419+00 TO STA 2426+60
STA 2636+00 TO STA 2646+70



DETAIL "B"
NO PASSING ZONE
ON RIGHT

STA 2143+40 TO STA 2150+80
STA 2221+20 TO STA 2227+10
STA 2406+10 TO STA 2415+00
STA 2620+30 TO STA 2628+50
STA 2684+80 TO STA 2697+60



DETAIL "D"
NO PASSING ZONE (BOTH SIDES)

STA 2001+10 TO STA 2032+40
STA 2150+80 TO STA 2155+30
STA 2193+80 TO STA 2201+70
STA 2227+10 TO STA 2246+60
STA 2251+80 TO STA 2266+70
STA 2415+00 TO STA 2419+00
STA 2462+10 TO STA 2472+10
STA 2484+00 TO STA 2493+20
STA 2697+60 TO STA 2731+50

- LEGEND**
- [A] REFL PROF PAV MRK TY I (W) (SLD) (4")
 - [B] REFL PROF PAV MRK TY I (Y) (SLD) (4")
 - [C] REFL PROF PAV MRK TY I (Y) (BRK) (4")
 - [D] RAIS PAV MRK CL B (REFL) TY II A-A
- DIRECTION OF TRAFFIC FLOW

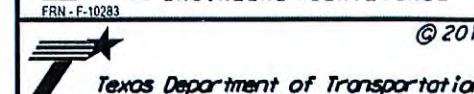
NOTE:

SEE PM(1)-12 FOR "ROADWAYS WITH REDUCED SHOULDER WIDTHS ACROSS BRIDGE OR CULVERT" PAVEMENT MARKINGS. MAINTAIN MINIMUM 12' LANES WITH L=W+S, FOR A 55MPH DESIGN SPEED, OR MINIMUM 100 FOOT TAPER IN AND OUT OF REGIONS OF RAC.

NOT TO SCALE



8/16/2013



IH35 EAST FRONTAGE ROAD

**PAVEMENT MARKING
DETAILS**

SHEET 1 OF 1

PROJ. NO.	PROJECT NO.	HIGHWAY NO.
22		IH 35
STATE	STATE DISC. NO.	COUNTY
TEXAS	LRD	LA SALLE
CONT.	SECT.	JOB
0017	08	083

123

A. GENERAL SITE AREA

1. PROJECT LIMITS:

FROM: FRIO/LA SALLE COUNTY LINE TO: 0.1 MILE NORTH OF BI 35
NET LENGTH OF ROADWAY 71,216.00 FT 13.488 MILES
NET LENGTH OF BRIDGE 495.00 FT 0.091 MILES
TOTAL LENGTH 71,711.00 FT 13.582 MILES

2. PROJECT SITE MAPS:

*Project Location Map: Title Sheet
*Drainage Patterns: N/A
*Approx. Slopes Anticipated After Major Gradients and Areas of Soil Disturbance: Typ Sects
*Major Controls and Locations of Stabilization Practices: N/A
*Project Specific Locations: To be specified by Project Field Office and located in the Project SW3P file
*Surface Waters and Discharge Locations: Drainage Details Sheets
Latitude N/A Longitude N/A

3. PROJECT DESCRIPTION:

FOR THE CONSTRUCTION OF A RURAL MAJOR COLLECTOR CONSISTING OF GRADING, INLETS, STRUCTURES, ASPHALT PAVEMENT, MILLING, CEMENT TREATED FLEX BASE, SIGNING, PAVEMENT MARKINGS, ETC.

4. MAJOR SOIL DISTURBING ACTIVITIES:

SOIL DISTURBING ACTIVITIES WILL INCLUDE BACKFILLING OF PAVEMENT EDGES, WIDENING OF ROAD, EXTENDING OF DRAINAGE STRUCTURES (CULVERTS), S.E.T. INSTALLATION AND EXISTING SLOPE ADJUSTMENTS.

5. EXISTING CONDITION OF SOIL & VEGETATIVE

COVER AND % OF EXISTING VEGETATIVE COVER:

EXISTING SECTION IS A STATE HIGHWAY ON A SANDY LOAM TYPE MATERIAL EMBANKMENT WITH FMR VEGETATION OF VARIOUS GRASSES THROUGHOUT THE PROJECT.

APPROXIMATELY 80% VEGETATION COVER EXISTS WITHIN R.O.W. BOUNDARY.

6. TOTAL PROJECT AREA: (TXDOT R.O.W.)

156.39 AC

7. TOTAL AREA TO BE DISTURBED: (TXDOT R.O.W.)

92.19 AC

8. WEIGHTED RUNOFF COEFFICIENT

BEFORE CONSTRUCTION:
AFTER CONSTRUCTION:

0.35
0.44

9. NAME OF RECEIVING WATERS:

DRAIN TO SEVERAL CREEK EVENTUALLY CONNECTS TO NUECES RIVER.

10. PROJECT SW3P FILE:

FOR PROJECTS DISTURBING ONE ACRE OR MORE, TXDOT WILL MAINTAIN A SW3P FILE AT THE PROJECT FIELD OFFICE WHICH CONTAINS THE FOLLOWING: INDEX SHEET, TCEO N.O.I., TCEO SIGNATURE AUTHORITY, TCEO FEE PAYMENT FORM, TPDES STORM WATER PROGRAM OR CONSTRUCTION SITE NOTICE, TPDES PERMIT COVERAGE NOTICE, SW3P INSPECTOR QUALIFICATION STATEMENTS, INSPECTION AND MAINTENANCE REPORTS, REQUIRED LOCATION MAPS, STORED MATERIALS LIST SPECIFYING ASSOCIATED CONTROL MEASURES, THE APPENDIX WHICH CONTAINS THE TPDES CONSTRUCTION GENERAL PERMIT LANGUAGE, AND THE CONTRACTOR'S PSL PERMIT. N.O.I. AND CONSTRUCTION SITE NOTICE SHALL BE POSTED IN AN AREA THAT IS VIEWED BY THE GENERAL PUBLIC

10. FOR TXDOT ENGINEER/INSPECTOR USE:

P.S.L.	YES	NO
PARTY NOTIFIED IN WRITING	YES	NO
(IDENTIFY OTHER AREAS TO BE DISTURBED		
(PLANTS PROVIDING SUPPORT TO CONSTRUCTION		
SITE AUTHORIZED UNDER THIS PERMIT WITHIN		
ONE MILE OF PROJECT)	ACRES	
ADJACENT DEVELOPMENT/CONSTRUCTION	YES	NO
(OTHER THAN TXDOT'S CONTRACTORS)		
PARTY NOTIFIED IN WRITING	YES	NO

B. EROSION AND SEDIMENT CONTROL

1. SOIL STABILIZATION PRACTICES:

(SELECT T = TEMPORARY OR P = PERMANENT AS APPLICABLE)

<input checked="" type="checkbox"/> T TEMPORARY SEEDING	<input type="checkbox"/> PRESERVATION OF NATURAL RESOURCES
<input type="checkbox"/> MULCHING (HAY OR STRAW)	<input type="checkbox"/> FLEXIBLE CHANNEL LINER
<input type="checkbox"/> BUFFER ZONES	<input type="checkbox"/> RIGID CHANNEL LINER
<input type="checkbox"/> PLANTING	<input type="checkbox"/> SOIL RETENTION BLANKET
<input checked="" type="checkbox"/> P SEEDING	<input type="checkbox"/> COMPOST MANUFACTURED TOPSOIL
<input type="checkbox"/> SODDING	<input type="checkbox"/> SOIL TACKIFIER
	<input type="checkbox"/> OTHER:

2. STRUCTURAL PRACTICES:

(SELECT T = TEMPORARY OR P = PERMANENT AS APPLICABLE)

<input checked="" type="checkbox"/> T SILT FENCES
<input type="checkbox"/> HAY BALES
<input checked="" type="checkbox"/> T ROCK FILTER DAMS
<input type="checkbox"/> DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
<input type="checkbox"/> DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
<input type="checkbox"/> DIVERSION DIKE AND SWALE COMBINATION
<input type="checkbox"/> PIPE SLOPE DRAINS
<input type="checkbox"/> PAVED FLUMES
<input checked="" type="checkbox"/> T ROCK BEDDING AT CONSTRUCTION EXIT
<input type="checkbox"/> TIMBER MATTING AT CONSTRUCTION EXIT
<input type="checkbox"/> CHANNEL LINERS
<input type="checkbox"/> SEDIMENT TRAPS
<input type="checkbox"/> SEDIMENT BASINS
<input type="checkbox"/> STORM INLET SEDIMENT TRAP
<input type="checkbox"/> STONE OUTLET STRUCTURES
<input type="checkbox"/> CURBS AND GUTTERS
<input type="checkbox"/> STORM SEWERS
<input type="checkbox"/> VELOCITY CONTROL DEVICES
<input type="checkbox"/> OTHER:

3. STORM WATER MANAGEMENT:

STORM WATER DRAINAGE WILL BE PROVIDED BY GRASS DITCHES AND RCP AND BOX CULVERTS. SOIL STABILIZATION AND VARIOUS STRUCTURAL PRACTICES WILL BE APPLIED TO ALL PROJECT AREA RUNOFF ENTERING THE OUTFALL DRAINAGE SYSTEM.

4. STORM WATER MANAGEMENT ACTIVITIES: (SEQUENCE OF CONSTRUCTION)

PRE- CONSTRUCTION

1. SILT FENCE AND ROCK FILTER DAMS SHALL BE PLACED IN EXISTING DITCHES PRIOR TO ANY DISTURBANCE OF SOIL.

DURING- CONSTRUCTION

2. BACKFILL PAVEMENT WIDENING.
3. REPLACE TOPSOIL AND PERFORM DRILL SEEDING.

4. PERMANENT DRILL SEEDING SHALL BE PLACED WITHIN 14 DAYS OF FINAL EMBANKMENT PLACEMENT OR AT FINAL CUT LOCATIONS. DISTURBED SOIL IN WHICH NO WORK IS TO BE DONE FOR 21 DAYS OR MORE SHALL BE TEMPORARY DRILL SEEDING WITHIN 14 DAYS. OTHER SOIL STABILIZATION PRACTICES MAY ALSO BE REQUIRED BY THE ENGINEER.

POST- CONSTRUCTION

5. REMOVE SILT FENCE AFTER 70% VEGETATION IS ESTABLISHED.

5. NON-STORM WATER DISCHARGES:

NON-STORM WATER DISCHARGES SHOULD BE FILTERED, OR HELD IN RETENTION BASINS, BEFORE BEING ALLOWED TO MIX WITH STORM WATER. THESE DISCHARGES CONSIST OF NON-POLLUTED GROUND WATER, SPRING WATER, FOUNDATION WATER AND/OR FOOTING DRAIN WATER AND WATER FOR DUST CONTROL, PAVEMENT WASHING AND VEHICLE WASHWATER CONTAINING NO DETERGENTS.

C. OTHER REQUIREMENTS & PRACTICES

1. MAINTENANCE:

ALL EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT SHALL BE PERFORMED AT THE EARLIEST DATE POSSIBLE BUT NO LATER THAN 7 CALENDAR DAYS AFTER THE SURROUNDING EXPOSED GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAS CEASED, TEMPORARILY OR PERMANENTLY, SHALL BE STABILIZED WITHIN 14 CALENDAR DAYS UNLESS THEY ARE SCHEDULED TO AND DO RESUME WITHIN 21 CALENDAR DAYS. THE AREAS ADJACENT TO CREEKS AND DRAINAGEWAYS SHALL HAVE PRIORITY FOLLOWED BY DEVICES PROTECTING STORM SEWER INLETS.

2. INSPECTION:

INSPECTIONS SHALL BE PERFORMED BY A TXDOT INSPECTOR EVERY 14 DAYS AND WITHIN 24 HOURS AFTER EVERY 0.5 INCHES OR MORE OF RAIN. AN INSPECTION AND MAINTENANCE REPORT SHALL BE FILED FOR EACH INSPECTION. BASED ON THE INSPECTION RESULTS, THE CONTROLS SHALL BE REVISED AS PER THE INSPECTION REPORT.

3. WASTE MATERIALS:

ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER SHALL MEET ALL STATE AND LOCAL CITY SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY LOCAL REGULATION. AND HAILED TO A LOCAL APPROVED LANDFILL SITE. NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON SITE.

4. HAZARDOUS WASTE (INCLUDING SPILL REPORTING):

AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES ARE CONSIDERED TO BE HAZARDOUS AND WILL NEED PROPER STORAGE: FUEL, PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SOIL STABILIZATION, OR CONCRETE CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE SPILL COORDINATOR SHOULD BE CONTACTED IMMEDIATELY. WASH WATER AND CONCRETE WILL NOT BE ALLOWED TO ENTER ANY STORM DRAIN OR WATERWAY. LIKEWISE, WASHOUT OF CONCRETE TRUCKS SHALL NOT BE PERFORMED ONSITE WITHOUT A SYSTEM OF CONTAINMENT. THESE DISCHARGES ARE CONSIDERED NON-ALLOWABLE. NON-STORM WATER DISCHARGES. CONCRETE TRUCKS SHALL NOT DUMP INTO STORM DRAINS OR SANITARY SEWERS.

5. SANITARY WASTE:

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NECESSARY OR AS REQUIRED BY LOCAL REGULATIONS BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

6. OFFSITE VEHICLE TRACKING:

THE CONTRACTOR SHALL BE REQUIRED, ON A REGULAR BASIS OR AS MAY BE DIRECTED BY THE ENGINEER, TO DAMPEN HAIL ROADS FOR DUST CONTROL, STABILIZE AND MAINTAIN CONSTRUCTION ENTRANCE/EXIT. PROVIDE FOR A MOTORIZED BROOM OR A VACUUM TYPE SWEEPER TO BE AVAILABLE ON A WEEKLY BASE OR AS MAY BE DIRECTED TO REMOVE SEDIMENT FROM PAVED ROADWAYS ADJUTING OR TRANSVERSING PROJECT SITE.

7. MANAGEMENT PRACTICES:

1. DISPOSAL AREAS, STOCKPILES, AND HAIL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED.
2. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS.
3. ALL WATERWAYS SHALL BE CLEARED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, DEBRIS, AND OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.
4. SEDIMENT MUST BE REMOVED FROM TRAPS AND PONDS NO LATER THAT DESIGN CAPACITY HAS BEEN REDUCED BY 50%.



Lan D. Vo
NAME
Project Engineer
TITLE
7/16/13
DATE

TEXAS DEPARTMENT OF TRANSPORTATION
LAREDO DISTRICT

STORM POLLUTION PREVENTION PLAN (SW3P)

REVISIONS	DATE	DESCRIPTION	BY	DATE
1	7/16/13	INITIAL DESIGN	LAN D. VO	7/16/13
2	7/16/13	FINAL DESIGN	LAN D. VO	7/16/13

STATE	FEDERAL	STATE	FEDERAL	STATE	FEDERAL
LA SALLE	6	LA SALLE	6	LA SALLE	6
COUNTY	CONTROL	SECTION	JOB	DATE	
LA SALLE	0017	08	083	11 35 E FR	

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DATE: FILE:

I. STORMWATER POLLUTION PREVENTION-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Permit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 1122.

List MS4 Operator(s) that may receive discharges from this project. They may need to be notified prior to construction activities.

1.
2.
☐ No Action Required ☒ Required Action

Action No.

1. Prevent stormwater pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000
2. Comply with the SW3P and revise when necessary to control pollution or required by the Engineer.
3. Post Construction Site Notice (CSN) with SW3P information on or near the site, accessible to the public and TCEQ, EPA or other inspectors.
4. When Contractor project specific locations (PSL's) increase disturbed soil area to 5 acres or more, submit NOI to TCEQ and the Engineer.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas.

The Contractor must adhere to all of the terms and conditions associated with the following permit(s):

- ☐ No Permit Required
☒ Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)
☐ Nationwide Permit 14 - PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)
☐ Individual 404 Permit Required
☐ Other Nationwide Permit Required: NWP# _____

Required Actions: List waters of the US permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

1.
2.
3.
4.

The elevation of the ordinary high water marks of any areas requiring work to be performed in the waters of the US requiring the use of a nationwide permit can be found on the Bridge Layouts.

Best Management Practices:

Erosion

- ☒ Temporary Vegetation
☐ Blankets/Matting
☐ Mulch
☐ Sodding
☐ Interceptor Swale
☐ Diversion Dike
☐ Erosion Control Compost
☐ Mulch Filter Berm and Socks
☐ Compost Filter Berm and Socks

Sedimentation

- ☒ Silt Fence
☒ Rock Berm
☐ Triangular Filter Dike
☐ Sand Bag Berm
☐ Straw Bale Dike
☐ Brush Berms
☐ Erosion Control Compost
☐ Mulch Filter Berm and Socks
☐ Compost Filter Berm and Socks
☐ Stone Outlet Sediment Traps
☐ Sediment Basins

Post-Construction TSS

- ☒ Vegetative Filter Strips
☐ Retention/Irrigation Systems
☐ Extended Detention Basin
☐ Constructed Wetlands
☐ Wet Basin
☐ Erosion Control Compost
☐ Mulch Filter Berm and Socks
☐ Compost Filter Berm and Socks
☐ Vegetation Lined Ditches
☐ Sand Filter Systems
☒ Grassy Swales

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.

- ☒ No Action Required ☐ Required Action

Action No.

1.
2.
3.
4.

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical.

- ☐ No Action Required ☒ Required Action

Action No.

1. In accordance with the Standard Specifications For Construction And Maintenance Of Highway, Streets, And Bridges; Item 164 - Seeding for Erosion Control; provide and install temporary or permanent seeding for erosion control as shown on the plans or as directed for all seeding and replanting of right of way where possible.
2. In accordance with Executive Order 13112 on invasive species and the Executive Memorandum on Beneficial Landscaping, native species of plants shall be used for all seeding and replanting of right of way where possible.
3. Avoid or minimize the clearing of woody vegetation.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS.

- ☐ No Action Required ☒ Required Action

Action No.

1. Under the Migratory Bird Treaty Act, the work may not remove active nests from bridges, trees, ground and other structure during migratory bird nesting season, (February 1st, through November 1st). If Contractor needs to perform work within right of way during nesting season, the Contractor shall conduct a survey to determine if nests are present. If present, Contractor shall maintain a minimum 25 feet buffer from vegetation around the nest until the young have fledged or the nest is abandoned.
2. There is potential presence of state-listed species & species of concern in the project area and state law prohibits the taking (incidental or otherwise) of state listed species. Taking is defined as the collection, hooking, hunting, netting, shooting, or share by any means or devices. If any listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If coves or sinkholes are discovered, cease work in the immediate area, and contact the Engineer immediately.

LIST OF ABBREVIATIONS

BMP: Best Management Practice	SPCC: Spill Prevention Control and Countermeasure
CGP: Construction General Permit	SW3P: Storm Water Pollution Prevention Plan
DSHS: Texas Department of State Health Services	PCN: Pre-Construction Notification
FHWA: Federal Highway Administration	PSL: Project Specific Location
MOA: Memorandum of Agreement	TCEQ: Texas Commission on Environmental Quality
MOU: Memorandum of Understanding	TPDES: Texas Pollutant Discharge Elimination System
MS4: Municipal Separate Stormwater Sewer System	TPWD: Texas Parks and Wildlife Department
MBTA: Migratory Bird Treaty Act	TxDOT: Texas Department of Transportation
NOT: Notice of Termination	T&E: Threatened and Endangered Species
NWP: Nationwide Permit	USACE: U.S. Army Corps of Engineers
NOI: Notice of Intent	USFWS: U.S. Fish and Wildlife Service

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):

Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropriate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the following are detected:

- * Dead or distressed vegetation (not identified as normal)
- * Trash piles, drums, canister, barrels, etc.
- * Undesirable smells or odors
- * Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation or replacements (bridge class structures not including box culverts)?

- ☐ Yes ☒ No

If "No", then no further action is required.

If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?

- ☐ Yes ☒ No

If "Yes", then TxDOT must retain a DSHS licensed asbestos consultant to assist with the notification, develop abatement/mitigation procedures, and perform management activities as necessary. The notification form to DSHS must be postmarked at least 15 working days prior to scheduled demolition.

If "No", then TxDOT is still required to notify DSHS 15 working days prior to any scheduled demolition.

In either case, the Contractor is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between the Engineer and asbestos consultant in order to minimize construction delays and subsequent claims.

Any other evidence indicating possible hazardous materials or contamination discovered on site. Hazardous Materials or Contamination Issues Specific to this Project:

- ☐ No Action Required ☒ Required Action

Action No.

1. Any hazardous materials and/or petroleum contamination encountered during construction must be handled according to applicable federal and state regulations and contact Project Manager immediately.
2.
3.

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

- ☐ No Action Required ☒ Required Action

Action No.

1. Noise

Contractor shall make every reasonable effort to minimize construction noise through abatement measure such as work hour controls and proper maintenances of mufflers.

2. Air

Common dust control techniques such as surface chemical treatment or watering of unpaved road surface & vehicle speed reduction shall be implemented to minimize and prevent airborne dust during construction.

- 3.



Texas Department of Transportation


Design Division Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS
EPIC

FILE: epic.dgn	DATE: TxDOT	CR: AM	CR: VP	CR: AR
© TxDOT January 2012	CONT	SECT	JOB	HIGHWAY
REVISIONS	0017	08	083	1H 35 E FR
12-12-2011 (05)	DIST	COUNTY	SHEET NO.	
AREDO	LA SALLE			130

DN:	DATE:
CK:	LEVELS DISPLAYED
DW:	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
CK:	1 7 1 1 2 2 2 2 2 2 2 2 2 2 2 2
	ACC: 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
	FILE: 4 9 6 0 5 1 2 5 3 5 5 5 5 5 5 5

030F.DGN

DRILL SEEDING WITH STRAW/HAY MULCH PREFERRED RURAL/SMALL URBAN SEEDING METHOD	STRAW/HAY MULCH SEEDING PREFERRED RURAL/SMALL URBAN SEEDING METHOD	CELLULOSE FIBER MULCH SEEDING PREFERRED LARGE URBAN SEEDING METHOD	BROADCAST SEEDING	DRILL SEEDING PREFERRED RURAL/URBAN OVER-SEEDING METHOD																														
RECOMMENDED USES: • PERMANENT SEEDING (BARE SOIL) (YEAR-ROUND)	RECOMMENDED USES: • PERMANENT SEEDING (BARE SOIL) (YEAR-ROUND) • TEMPORARY SEEDING (BARE SOIL) (YEAR-ROUND)	RECOMMENDED USES: • TEMPORARY SEEDING (BARE SOIL) (COOL ONLY) • OVERSEEDING PERMANENT GRASSES INTO TEMP GRASSES (YEAR-ROUND)	RECOMMENDED USES: • TEMPORARY SEEDING (BARE SOIL) (COOL ONLY) • OVERSEEDING PERMANENT GRASSES INTO TEMP GRASSES (YEAR-ROUND)	RECOMMENDED USES: • OVERSEEDING PERMANENT GRASSES INTO TEMP GRASSES (YEAR-ROUND)																														
REQUIRED BID ITEMS: 164 2033 DRILL SEEDING (PERM) (RURAL) (SANDY) OR 164 2035 DRILL SEEDING (PERM) (RURAL) (CLAY) OR 164 2037 DRILL SEEDING (PERM) (URBAN) (SANDY) OR 164 2039 DRILL SEEDING (PERM) (URBAN) (CLAY) AND 164 2045 STRAW OR HAY MULCHING AND 314 2022 EMULS ASPH (EROSN CONT) (MS - 2 OR SS - 1)	REQUIRED BID ITEMS: 164 2013 STRAW / HAY MLCH SEED (PERM) (RURAL) (SANDY) OR 164 2015 STRAW / HAY MLCH SEED (PERM) (RURAL) (CLAY) OR 164 2017 STRAW / HAY MLCH SEED (PERM) (URBAN) (SANDY) OR 164 2019 STRAW / HAY MLCH SEED (PERM) (URBAN) (CLAY) OR 164 2047 STRAW / HAY MLCH SEED (TEMP) (WARM) OR 164 2049 STRAW / HAY MLCH SEED (TEMP) (COOL) AND 314 2022 EMULS ASPH (EROSN CONT) (MS - 2 OR SS - 1)	REQUIRED BID ITEMS: 164 2031 CELL FBR MLCH SEED (TEMP) (COOL) OR 164 2021 CELL FBR MLCH SEED (PERM) (RURAL) (SANDY) OR 164 2023 CELL FBR MLCH SEED (PERM) (RURAL) (CLAY) OR 164 2025 CELL FBR MLCH SEED (PERM) (URBAN) (SANDY) OR 164 2027 CELL FBR MLCH SEED (PERM) (URBAN) (CLAY)	REQUIRED BID ITEMS: 164 2011 BROADCAST SEED (TEMP) (COOL) OR 164 2001 BROADCAST SEED (PERM) (RURAL) (SANDY) OR 164 2003 BROADCAST SEED (PERM) (RURAL) (CLAY) OR 164 2005 BROADCAST SEED (PERM) (URBAN) (SANDY) OR 164 2007 BROADCAST SEED (PERM) (URBAN) (CLAY)	REQUIRED BID ITEMS: 164 2033 DRILL SEEDING (PERM) (RURAL) (SANDY) OR 164 2035 DRILL SEEDING (PERM) (RURAL) (CLAY) OR 164 2037 DRILL SEEDING (PERM) (URBAN) (SANDY) OR 164 2039 DRILL SEEDING (PERM) (URBAN) (CLAY)																														
CONSTRUCTION SEQUENCE: ■ Refer to Items 162 & 164 of the Texas Standard Specifications for Construction of Highways, Streets, and Bridges 2004 for specifications, dimensions, volumes and measurements that have been modified or not shown. 1. Distribute topsoil Refer to Item 160 for instructions and requirements. Uniformly distribute topsoil at a thickness of 6 inches unless otherwise specified in the plans. 2. Prepare seed bed Refer to section 164.3 for instructions. 3. Apply seed mixture Refer to Item 164 for instructions. Refer to "Seed Mix" shown on sheet 2 of 2 for a list of species and rates. 4. Apply fertilizer Refer to Item 166 for instructions. 5. Apply straw/hay mulch & emulsion Refer to section 164.3.E for instructions. Anchor mulch with emulsion (SS-1, CSS-1, MS-2, CMS-2); undiluted, at the following rates: Hay - 0.15 gallons/sy Straw - 0.30 gallons/sy *Vegetative watering is not required unless otherwise specified in the general notes under Item 168.	CONSTRUCTION SEQUENCE: ■ Refer to Items 162 & 164 of the Texas Standard Specifications for Construction of Highways, Streets, and Bridges 2004 for specifications, dimensions, volumes and measurements that have been modified or not shown. 1. Distribute topsoil Refer to Item 160 for instructions and requirements. Uniformly distribute topsoil at a thickness of 6 inches unless otherwise specified in the plans. 2. Prepare seed bed Refer to section 164.3 for instructions. 3. Apply seed mixture Refer to Item 164 for instructions. Refer to "Seed Mix" shown on sheet 2 of 2 for a list of species and rates. 4. Apply fertilizer Refer to Item 166 for instructions. 5. Apply straw/hay mulch & emulsion Refer to section 164.3.B for instructions. Anchor mulch with emulsion (SS-1, CSS-1, MS-2, CMS-2); undiluted, at the following rates: Hay - 0.15 gallons/sy Straw - 0.30 gallons/sy *Vegetative watering is not required unless otherwise specified in the general notes under Item 168.	CONSTRUCTION SEQUENCE: ■ Refer to Items 162 & 164 of the Texas Standard Specifications for Construction of Highways, Streets, and Bridges 2004 for specifications, dimensions, volumes and measurements that have been modified or not shown. 1. Distribute topsoil Refer to Item 160 for instructions and requirements. Uniformly distribute topsoil at a thickness of 6 inches unless otherwise specified in the plans. 2. Prepare seed bed Refer to section 164.3 for instructions. Prior to seeding: • If seeding into bare ground - till soil to a 4 inch depth. • If seeding into temporary vegetation cover - mow at a height range of 4-7 inches. 3. Apply seed, fertilizer, mulch mixture, & emulsion Refer to Items 164 and 166 for instructions. Refer to "Seed Mix" shown on sheet 2 of 2 for a list of species and rates. Use the 2-step method in which the seed and less than 10% of the required mulch is applied in the first application. The remainder of the mulch and is then applied in the subsequent applications. 4. Begin Vegetative Watering Initiate vegetative watering as follows: Cool temporary vegetation - within 5 days of placing the seed. Permanent vegetation - delay watering until after next rainfall of 1/2" or greater or as directed by the Area Engineer.	CONSTRUCTION SEQUENCE: ■ Refer to Items 162 & 164 of the Texas Standard Specifications for Construction of Highways, Streets, and Bridges 2004 for specifications, dimensions, volumes and measurements that have been modified or not shown. 1. Distribute topsoil Refer to Item 160 for instructions and requirements. Uniformly distribute topsoil at a thickness of 6 inches unless otherwise specified in the plans. 2. Prepare seed bed Refer to section 164.3 for instructions. Prior to seeding: If seeding into bare ground - till soil to a 4 inch depth. If seeding into temporary vegetation cover - mow at a height range of 4-7 inches. 3. Apply seed mixture Refer to Items 164 and 166 for instructions. Refer to "Seed Mix" shown on sheet 2 of 2 for a list of species and rates. 4. Apply fertilizer Refer to Item 166 for instructions. 5. Begin Vegetative Watering Initiate vegetative watering as follows: Cool temporary vegetation - within 5 days of placing the seed. Permanent vegetation - delay watering until after next rainfall of 1/2" or greater or as directed by the Area Engineer.	CONSTRUCTION SEQUENCE: ■ Refer to Items 162 & 164 of the Texas Standard Specifications for Construction of Highways, Streets, and Bridges 2004 for specifications, dimensions, volumes and measurements that have been modified or not shown. 1. Distribute topsoil Refer to Item 160 for instructions and requirements. Uniformly distribute topsoil at a thickness of 6 inches unless otherwise specified in the plans. 2. Prepare seed bed Refer to section 164.3 for instructions. Prior to seeding: If seeding into bare ground - till soil to a 4 inch depth. If seeding into temporary vegetation cover - mow at a height range of 4-7 inches. 3. Apply seed mixture Refer to Items 164 and 166 for instructions. Refer to "Seed Mix" shown on sheet 2 of 2 for a list of species and rates. 4. Apply fertilizer Refer to Item 166 for instructions. 5. Begin Vegetative Watering Initiate vegetative watering as follows: Cool temporary vegetation - within 5 days of placing the seed. Permanent vegetation - delay watering until after next rainfall of 1/2" or greater.																														
<div><div>TEXAS DEPARTMENT OF TRANSPORTATION LAREDO DISTRICT SHEET 1 OF 2 REVEGETATION NOTES AND SPECIFICATIONS</div><div><table><tr><td>© TxDOT</td><td>JANUARY 2002</td><td>DN:</td><td>CL:</td><td>DR:</td><td>CL:</td></tr><tr><td>REVISIONS</td><td>STATE DISTRICT</td><td>FEDERAL REGION</td><td>FEDERAL AID PROJECT</td><td colspan="2">SHEET</td></tr><tr><td></td><td>LAREDO</td><td>6</td><td>IM 0351 (2095)</td><td colspan="2">131</td></tr><tr><td></td><td>COUNTY</td><td>CONTROL</td><td>SECTION</td><td>JOB</td><td>HIGHWAY</td></tr><tr><td></td><td>LA SALLE</td><td>0017</td><td>08</td><td>083</td><td>TH 35 E FR</td></tr></table></div></div>					© TxDOT	JANUARY 2002	DN:	CL:	DR:	CL:	REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET			LAREDO	6	IM 0351 (2095)	131			COUNTY	CONTROL	SECTION	JOB	HIGHWAY		LA SALLE	0017	08	083	TH 35 E FR
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	COUNTY	CONTROL	SECTION	JOB	HIGHWAY																													
	LA SALLE	0017	08	083	TH 35 E FR																													

PERMANENT SOIL STABILIZATION

PERMANENT SEED MIX	January 15 thru April 30		May 1 thru August 31		September 1 thru January 14	
	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN
	■ Clay Soils *	■ Clay Soils *	■ Clay Soils *	■ Clay Soils *	■ Clay Soils *	■ Clay Soils *
	Green Sprangletop 0.3 Sideoats Grams (Haskell) 3.6 Plains Bristlegrass 1.2 Buffalograss (Texoka) 3.2 Bermudagrass 1.2 Illinois Bundleflower 1.0	Green Sprangletop 0.3 Sideoats Grams (Haskell) 4.5 Buffalograss (Texoka) 1.6 Bermudagrass 1.8	Green Sprangletop 0.3 Sideoats Grams (Haskell) 3.6 Plains Bristlegrass 1.2 Buffalograss (Texoka) 1.6 Bermudagrass 1.2 Illinois Bundleflower 1.0 Foxtail Millet 3.0 Browntop Millet 6.0	Green Sprangletop 0.3 Sideoats Grams (Haskell) 4.5 Buffalograss (Texoka) 1.6 Bermudagrass 1.2 Foxtail Millet 3.0 Browntop Millet 6.0	Green Sprangletop 0.3 Sideoats Grams (Haskell) 3.6 Plains Bristlegrass 1.2 Buffalograss (Texoka) 1.6 Bermudagrass 1.2 Illinois Bundleflower 1.0 Oats 40.0	Green Sprangletop 0.3 Sideoats Grams (Haskell) 4.5 Buffalograss (Texoka) 1.6 Bermudagrass 1.8 Oats 40.0
■ Sandy Soils *	Green Sprangletop 0.3 Bermudagrass 1.2 Sand Dropseed 0.2 Lehmans Lovegrass 0.3 Purple Prairieclover 0.5	■ Sandy Soils *	■ Sandy Soils *	■ Sandy Soils *	■ Sandy Soils *	■ Sandy Soils *
		Green Sprangletop 0.3 Bermudagrass 1.0 Buffalograss 3.2 Sand Dropseed 0.3	Green Sprangletop 0.3 Bermudagrass 0.6 Sand Dropseed 0.2 Lehmans Lovegrass 0.2 Purple Prairieclover 0.5 Foxtail Millet 3.0 Browntop Millet 6.0	Green Sprangletop 0.3 Bermudagrass 0.8 Buffalograss 3.2 Sand Dropseed 0.3 Foxtail Millet 3.0 Browntop Millet 6.0	Green Sprangletop 0.3 Bermudagrass 0.6 Sand Dropseed 0.2 Lehmans Lovegrass 0.2 Purple Prairieclover 0.5 Oats 40.0	Green Sprangletop 0.3 Bermudagrass 0.8 Buffalograss 3.2 Sand Dropseed 0.3 Oats 40.0

TEMPORARY SOIL STABILIZATION

* SEED QUANTITIES ARE POUNDS PURE LIVE SEED PER ACRE.

TEMPORARY SEED MIX	February 15 thru September 31	
	WARM SEASON	
	Foxtail Millet 6.0 Browntop Millet 15.0	
	October 1 thru February 14	
	COOL SEASON	
Oats 72.0		

VEGETATIVE WATERING FOR SEED AND SOD

ITEM 168---VEGETATIVE WATERING

RURAL---NO VEGETATIVE WATERING

URBAN---TEMPORARY IRRIGATION---REFER TO IRRIGATION PLAN SHEETS FOR ZONE TIMES.

URBAN---TRUCK IRRIGATION---REFER TO WATERING SCHEDULE BELOW:

WATERING SCHEDULE

	DAYS 1-14	DAYS 15-28	DAYS 29-42	TOTAL CYCLES
Seeded Sites	Twice per day	Twice per day	Once per day	70
Sodded Sites	Twice per day	Once per day		42

Standard watering rate is 1/4 inch per cycle. However, rate and frequency may be adjusted, with the approval of the engineer, to meet site conditions.

SEEDING NOTES:

- All seed shall meet labeling, delivery, analysis, and testing requirements as described in Item 164.2.A.
- All drill seeding shall be accomplished using a pasture or rangeland type drill seeder. Grain drills or Brillian seeders are not acceptable. Seedbed prep is required, even for no-till drill seeders, when seeding into bare soil.
- All seed shall be drilled to a depth of 1/4 inch to 1/2 inch.
- Seeding with compost:
 - Prior to seeding, one inch of compost shall be applied to the soil followed by an application of fertilizer. Refer to Item 166 Fertilizer for specifications and application rate.
 - Compost/fertilizer shall be tilled into the soil to a depth of four inches. Seed into prepared seedbed.
- Where drill seeding is specified, and site conditions prevent it, broadcast seeding is permitted as approved by the engineer.
- CELL FIBER MULCH SEEDING shall only be used where site conditions prevent drill seeding (refer to plan sheets for type of seeding). Seeding shall be a two-step process as detailed above.
- Vegetative watering shall be paid for under Item 168. Watering rate and specifications shall be as shown on sheet 2 of 2 under Item 168.

TEXAS DEPARTMENT OF TRANSPORTATION
LAREDO DISTRICT

SHEET 2 OF 2

REVEGETATION NOTES AND SPECIFICATIONS

© TxDOT JANUARY 2002		Doc -	Est -	Dir -	City -
REVIEWS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
	LA 2200	6	IM 0351 (095)		132
	COUNTY	CENTRAL	SECTION	JOB	MILE/MAY
	LA SALLE	0017	08	083	13 5 E FR