INDEX OF SHEETS

SEE SHEET 2

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

PROJECT NO. STP 2024 (775) HES

FM 57
FISHER COUNTY

LIMITS: SH 70 TO PLUM CREEK

NET LENGTH OF ROADWAY= 25,477.00 FT = 4.825 MI

NET LENGTH OF PROJECT= 25,477.00 FT = 4.825 MI

TYPE OF WORK: WIDEN ROAD - ADD SHOULDERS

CONSISTING OF: WIDEN ROADWAY

DESIGN SPEED= 40 mph
CURRENT A.D.T. (2023)= 1,550 vpd
PROJECTED A.D.T. (2041)= 2,100 vpd
FUNCTIONAL CLASS: RURAL MAJOR COLLECTOR

FHWA TEXAS DIVISION	PROJECT NO.		SHEET NO.
	STP 2024 (775) HES		1
STATE	DISTRICT	COUNTY	
TEXAS	ABL	FISHER	
CONTROL	SECTION	JOB	HIGHWAY NO.
0317	01	043	FM 57

FINAL PLANS

LETTING DATE: MARCH 5, 2024

DATE CONTRACTOR BEGAN WORK: _____

DATE WORK WAS COMPLETED: _____

DATE WORK WAS ACCEPTED: _____

FINAL CONTRACT COST: $ _____

CONTRACTOR : _____

CERTIFICATION FOR FINAL PLANS

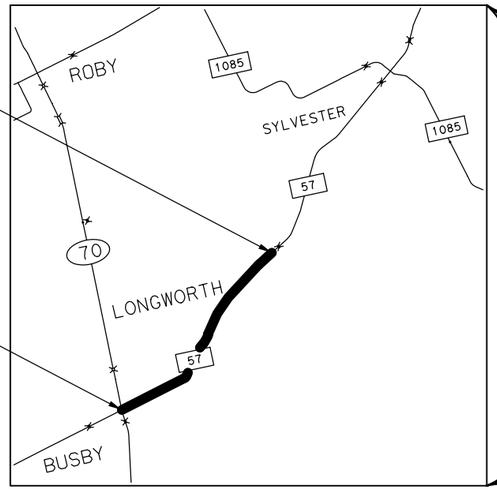
THIS PROJECT WAS BUILT ACCORDING TO THE PLANS AND SPECIFICATIONS. THESE FINAL PLANS REFLECT THE WORK DONE AND THE QUANTITIES SHOWN THEREON AND ON THE FINAL ESTIMATE ARE FINAL QUANTITIES

AREA ENGINEER DATE

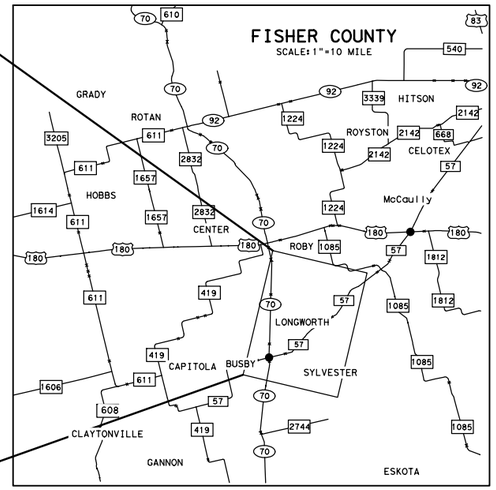
FISHER COUNTY

END PROJECT
END CSJ: 317-01-043
STA: 264+40.00
REF MRK: 274+05.92 MI

BEGIN PROJECT
BEGIN CSJ: 317-01-043
STA: 09+63.00
REF MRK: 274+01.09 MI



VICINITY MAP
NTS



EXCEPTIONS: N/A
EQUATIONS: N/A
RAILROAD CROSSINGS: N/A

THE DISTRICT TRAFFIC SAFETY COMMITTEE HAS REVIEWED THE TRAFFIC CONTROL PLAN FOR THIS PROJECT AND IT IS IN COMPLIENCE WITH CURRENT TRAFFIC CONTROL STANDARDS

DocuSigned by: Michael Wittie, P.E. 62A1...
COMMITTEE CHAIRMAN

12/30/2023
DATE

Texas Department of Transportation

RECOMMENDED FOR LETTING: 12/30/2023
DocuSigned by: Stewart J. Chapman, P.E. 4087...
STEWART J. CHAPMAN, P.E.
AREA ENGINEER

SUBMITTED FOR LETTING: 11/30/2023
Colin G. Blankenship
COLIN G. BLANKENSHIP, P.E.
HDR PROJECT MANAGER

RECOMMENDED FOR LETTING: 12/30/2023
DocuSigned by: Michael Haithcock 5757...
MICHAEL A. HAITHCOCK, P.E.
DIRECTOR OF T P & D

RECOMMENDED FOR LETTING: 12/29/2023
DocuSigned by: Scott E. Darrow 2570...
SCOTT E. DARROW, P.E.
TxDOT PROJECT MANAGER

APPROVED FOR LETTING: 1/2/2024
DocuSigned by: Thomas G. Allbritton, P.E. 0F67...
THOMAS G. ALLBRITTON, P.E.
DISTRICT ENGINEER

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 1, 2014 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, OCTOBER 23,2023)

	SHEET NO.	DESCRIPTION
		I. GENERAL
	1	TITLE SHEET
	2	INDEX OF SHEETS
	3	PROJECT LAYOUT
	4-5	EXISTING TYPICAL SECTION
	6-7	PROPOSED TYPICAL SECTION
	8-12	GENERAL NOTES
	13-14	ESTIMATE & QUANTITY SHEET
	15-19	QUANTITY SUMMARY
		II. TRAFFIC CONTROL PLAN
	20	TRAFFIC CONTROL PLAN NARRATIVE
	21-23	OVERALL CONSTRUCTION SEQUENCE LAYOUT
	24-25	TRAFFIC CONTROL PLAN ADVANCE WARNING SIGNS
	26	TRAFFIC CONTROL PLAN TYPICAL SECTION PHASE 1
	27	TRAFFIC CONTROL PLAN TYPICAL SECTION PHASE 2
	28	TRAFFIC CONTROL PLAN PHASE 2
	29	TREATMENT FOR VARIOUS EDGE CONDITIONS
		TRAFFIC CONTROL PLAN STANDARDS
*	30-41	BC(1)-21 THRU BC(12)-21
*	42-43	TCP (1-1)-18 THRU TCP (1-2)-18
*	44-45	TCP (2-1)-18 THRU TCP (2-2)-18
*	46	TCP (3-1)-13
*	47	TCP(SC-1)-22
*	48	TCP(SC-4)-22
*	49	TCP(SC-7)-22
*	50	TCP(SC-8)-22
*	51	WZ (UL)-13
		III. ROADWAY DETAILS
	52	CONTROL INDEX
	53-54	HORIZONTAL AND VERTICAL CONTROL
	55-56	HORIZONTAL ALIGNMENT DATA
	57-79	PLAN AND PROFILE
	80-81	SIDE STREET PROFILE
	82	DRIVEWAY SUMMARY
	83	DRIVEWAY/SIDE STREET DETAILS
	84-94	EXISTING UTILITY
		ROADWAY STANDARDS
*	95-98	MB(1)-21 THRU MB(4)-21
*	99-100	MBP(1)-22 THRU MBP(2)-22
*	101	GF(31)-19
*	102	GF(31)MS-19
*	103	SGT(10S)31-16
*	104	SGT(11S)31-18
		IV. DRAINAGE DETAILS
	105-106	ROADSIDE DITCH DRAINAGE AREAS
	107-108	ROADSIDE DITCH HYDRAULIC DATA
		V. TRAFFIC ITEMS
	109-119	SIGNING AND PAVEMENT MARKING
	120-121	SIGN DETAILS
	122-123	SUMMARY OF SMALL SIGNS

	SHEET NO.	DESCRIPTION
		TRAFFIC STANDARDS
**	124-126	TSR(3)-13 THRU TSR(5)-13
**	127	SMD (GEN)-08
**	128-130	SMD (SLIP-1)-08 THRU SMD (SLIP-3)-08
**	131-133	D & OM (1)-20 THRU D & OM (3)-20
**	134	D & OM (5)-20
**	135	D & OM (VIA)-20
**	136-138	PM(1)-22 THRU PM(3)-22
**	139	RS(2)-23
**	140	RS(4)-23
**	141	RS(5)-23
**	142	SPRFBA(3)-13
		VI. EROSION CONTROL
	143-144	STORMWATER POLLUTION PREVENTION PLAN
	145	ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS
	146-156	SWP3 SITE PLANS
	157	SWP3 NOTIFICATION BOARD DETAIL
		EROSION CONTROL STANDARDS
***	158-160	EC(1)-16 THRU EC(3)-16
***	161-163	EC(9)-16

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER

* THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE HAVE BEEN SELECTED BY MY OR UNDER MY RESPONSIBLE SUPERVISON AS BEING APPLICABLE TO THIS PROJECT.

Ramendra N. Das — 1/3/2024

RAMENDRA N. DAS, P.E. DATE

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

** THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE HAVE BEEN SELECTED BY MY OR UNDER MY RESPONSIBLE SUPERVISON AS BEING APPLICABLE TO THIS PROJECT.

Siddique — 1/3/2024

ZAHIDUL Q. SIDDIQUE, P.E. DATE

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER

*** THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE HAVE BEEN SELECTED BY MY OR UNDER MY RESPONSIBLE SUPERVISON AS BEING APPLICABLE TO THIS PROJECT.

1/3/2024

KHANDAKER N. ASHFAQUE, P.E. DATE

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

INDEX OF SHEETS

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	2
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

DATE:1/3/2024
FILE:FM57_INDEX.dgn
TIME: 9:14:01 AM
USER:Rdas

NOTES:

1. SEE HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.

MATCH LINE STA 140+00.00

EXIST CULVERT C1
1 ~ 3'X2'SBC
STA 9+20.15

EXIST CULVERT C2
1 ~ 24" RCP
STA 10+62.28

BEGIN WIDENING
℄ FM 57 STA 12+00+00 LT
℄ FM 57 STA 11+00+00 RT

BEGIN PROJECT
BEGIN CONSTRUCTION
CSJ: 0317-01-043
℄ FM 57 STA 09+63.00
LAT: 32°38'22.32"N
LONG: 100°22'32.51"W

SH 70

20+00 EXIST ROW EXIST ROW 40+00 N 77° 20' 21.63" E 60+00

℄ FM 57

FM 57

EXIST CULVERT C3
5 ~ 7'x4' MBC
STA 65+08.54
BRIDGE CL CULVERT
NBI# 08-077-0317-01-009

EXIST CULVERT C4
1 ~ 7'x3' SBC
STA 70+72.28

80+00 PC 85+67.38

20' CHANNEL EASEMENT

EXIST CULVERT C5
1 ~ 7'x3' SBC
STA 83+24.85

CO 113

LONGWORTH

PT 90+45.98

100+00 N 38° 09' 56.43" E

CO 911

PC 116+58.71

CO 910

120+00

CO 120

N 50° 00' 00.61" E

PT 126+75.25

CO 127

EXIST ROW

PC 131+09.30

140

EXIST CULVERT C6
1 ~ 24" CMP
STA 133+97.28

MATCH LINE STA 140+00.00

PT 141+30.36

+00

CO 107

EXIST CULVERT C8
3 ~ 24" CMP
STA 152+61.77

160+00

FM 57

N 38° 06' 47.07" E

PC 164+21.38

PT 169+89.27

EXIST CULVERT C7
3 ~ 6'x6' MBC
STA 147+21.00

50' CHANNEL EASEMENT

50' CHANNEL EASEMENT

EXIST CULVERT C9
2 ~ 36" CMP
STA 175+36.15

180+00

N 49° 28' 14.86" E

EXIST CULVERT C10
2~6'X6' SBC
STA 188+35.28

PC 187+13.91

PT 194+55.91

200+00

N 56° 53' 15.86" E

℄ FM 57

220+00

EXIST CULVERT C11
3 ~ 48" CMP
STA 220+05.44

EXIST ROW

EXIST ROW

240+00

PC 235+99.31

PT 240+95.77

N 61° 51' 08.28" E 260+00

END PROJECT
END CONSTRUCTION
CSJ: 0317-01-043
℄ FM 57 STA 264+40.00
LAT: 32°40'35.69"N
LONG: 100°18'31.38"W

PLUM CREEK

0' 500' 1000'
SCALE IN FEET

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER

Ramendra N. Das

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

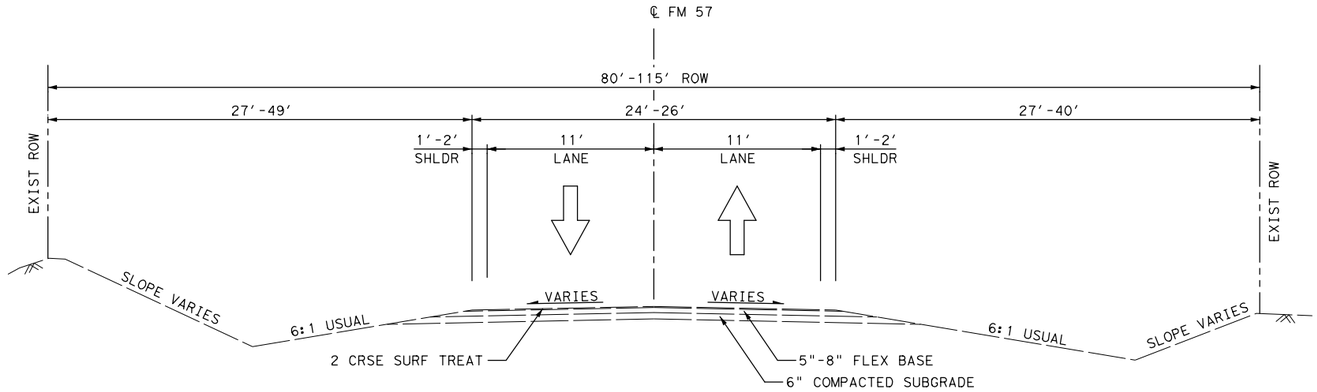
SH 70 TO PLUM CREEK

FM 57
PROJECT LAYOUT

SHEET 01 OF 01

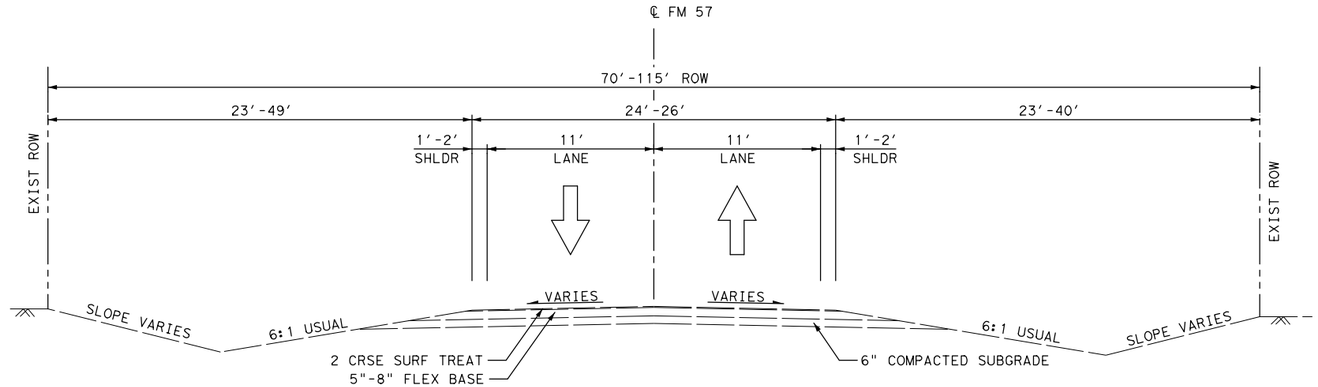
DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	3
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_HLG.pltcfg
USER: Rdos
PENTABLE: FM57_REVISE.tbl
DATE: 11/29/2023
TIME: 1:28:43 PM
SCALE: 1:1000



EXISTING TYPICAL SECTION

STA 9+63 TO STA 62+66



EXISTING TYPICAL SECTION

STA 62+66 TO STA 67+65
STA 72+35 TO STA 81+50
STA 93+25 TO STA 112+50
STA 144+25 TO STA 161+35
STA 176+95 TO STA 184+20
STA 199+60 TO STA 233+05
STA 243+90 TO STA 254+45
STA 258+20 TO STA 263+35

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdas DATE: 11/29/2023 TIME: 1:28:50 PM SCALE: 1:10

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

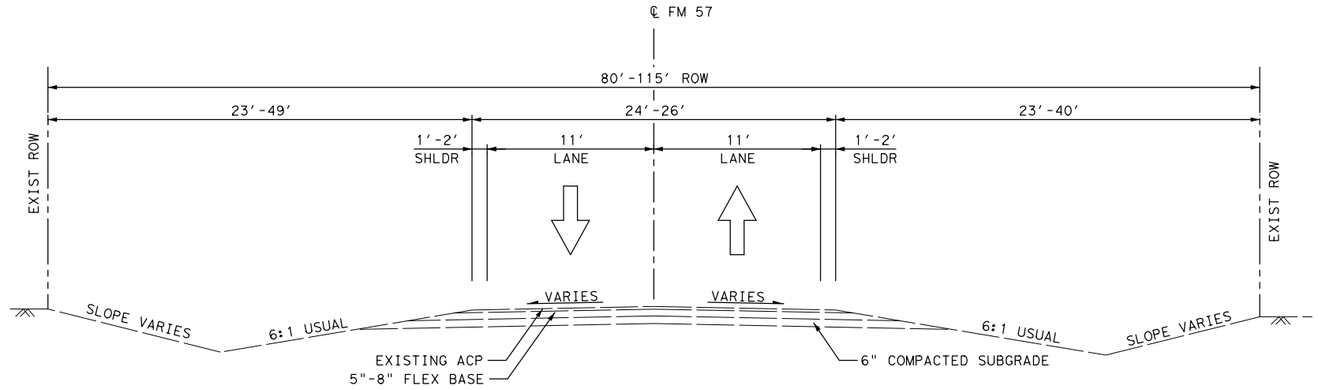
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
EXISTING TYPICAL SECTION

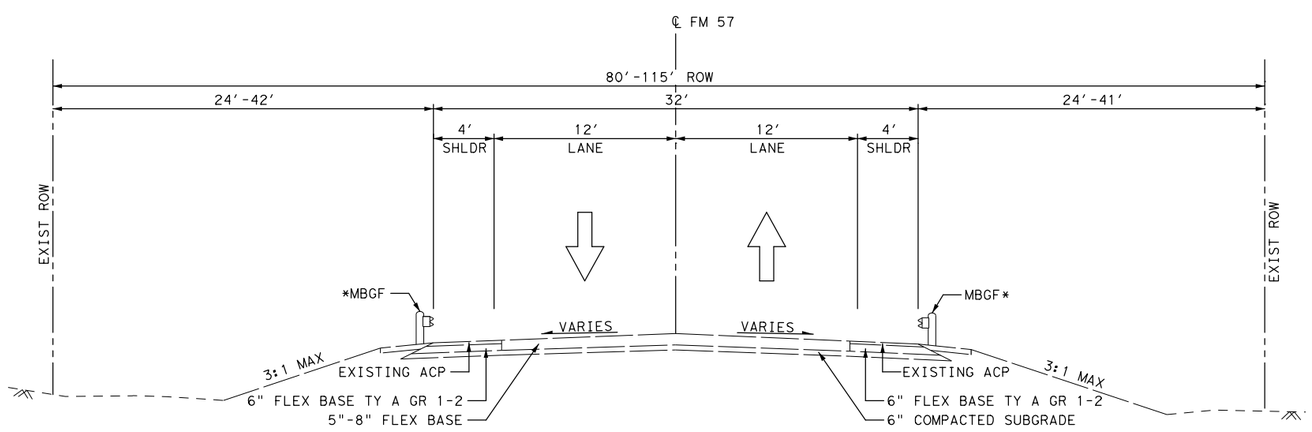
SCALE: NTS SHEET 01 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	4
CHECK IEI	CONTROL 0317	SECTION 01	JOB 043	



EXISTING TYPICAL SECTION

STA 81+50 TO STA 93+25
STA 112+50 TO STA 144+25
STA 161+35 TO STA 173+80
STA 184+20 TO STA 185+27
STA 191+48 TO STA 199+60
STA 233+05 TO STA 243+90
STA 263+35 TO STA 264+40



EXISTING TYPICAL SECTION

STA 67+65 TO STA 72+35
STA 173+80 TO STA 176+95
STA 185+27 TO STA 191+48
STA 254+45 TO STA 258+20

* SEE ROADWAY PLAN AND PROFILE FOR MBGF AND CULVERT LOCATIONS

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER

Ramendra N. Das

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

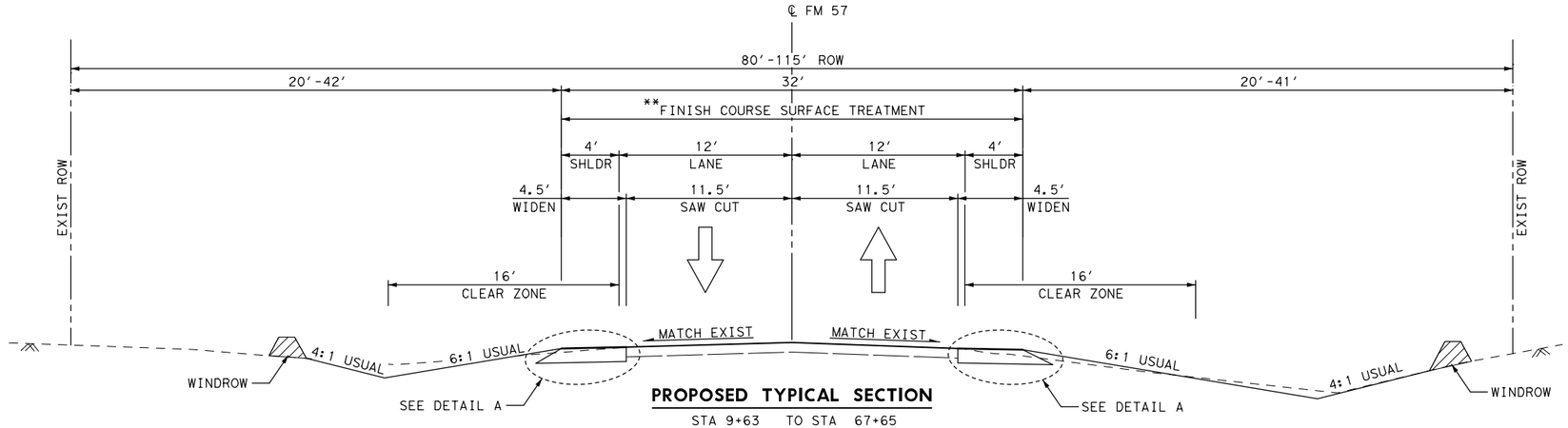
SH 70 TO PLUM CREEK

FM 57
EXISTING TYPICAL SECTION

SCALE: NTS SHEET 02 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	5
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdas DATE: 11/29/2023 TIME: 1:28:58 PM SCALE: 1:1



PROPOSED TYPICAL SECTION

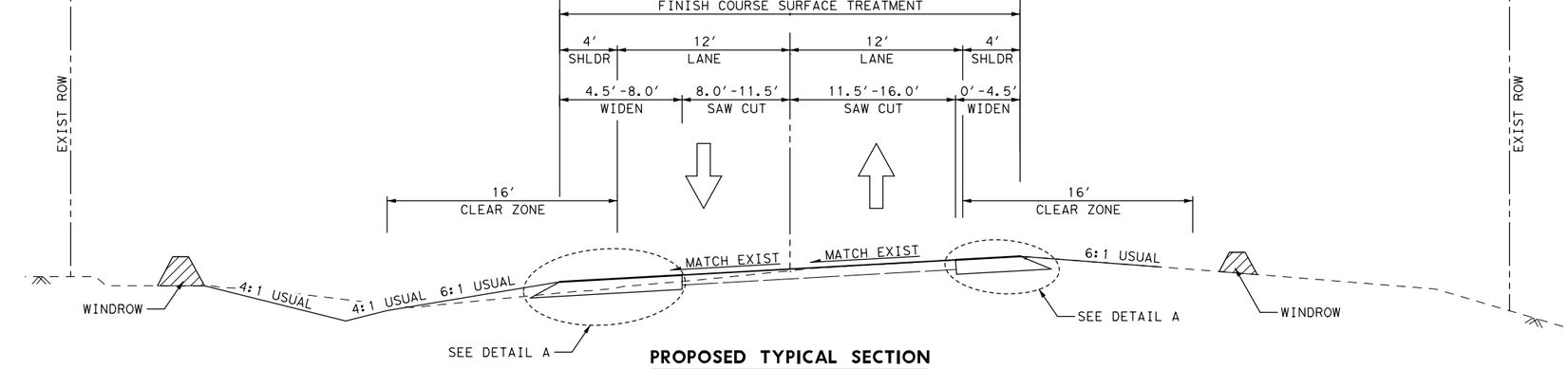
STA 9+63 TO STA 67+65
STA 67+65 TO STA 72+35 (LT)
STA 72+35 TO STA 81+50
STA 93+25 TO STA 112+50
STA 144+25 TO STA 161+35
STA 172+75 TO STA 173+80
STA 176+95 TO STA 184+20
STA 199+60 TO STA 233+05
STA 243+90 TO STA 254+45
STA 258+20 TO STA 263+35

PROP MBGF:
STA 64+53 TO STA 66+98 (LT)
STA 63+05 TO STA 65+50 (RT)

SEE ROADWAY PLAN AND PROFILE FOR PROPOSED MBGF LOCATIONS

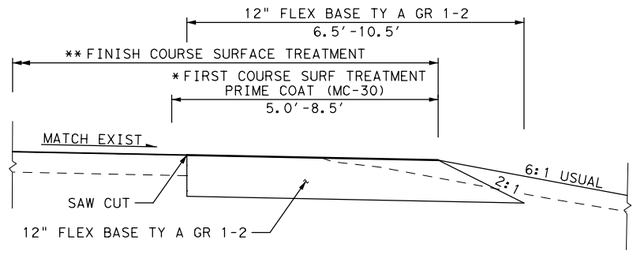
* FIRST COURSE SURFACE TREATMENT WILL CONSIST OF:
316 ASPH (MULTI OPTION)
316 AGGR (TY-B GR-4 SAC-B)

** FINISH COURSE SURFACE TREATMENT WILL CONSIST OF:
316 ASPH (AC-20-5TR)
316 AGGR (TY-PB GR-3 SAC-B)

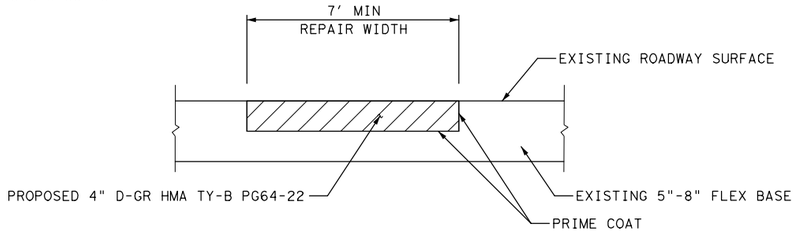


PROPOSED TYPICAL SECTION

STA 81+50 TO STA 93+25



DETAIL A - PAVEMENT STRUCTURE AT WIDENING SECTION



SPOT PAVEMENT REPAIR DETAIL (ITEM 351)

LOCATION AND SIZE OF SPOT PAVEMENT REPAIRS TO BE DETERMINED BY THE ENGINEER. REMOVAL OF EXISTING MATERIAL, DENSE GRADE D-GR HMA TY-B PG64-22 OR BETTER AS APPROVED, AND PRIME COAT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 351.

NOTES:

1. STATION LIMITS SHOWN ARE APPROXIMATE AND FOR NORMAL ROADWAY CONDITION. CONTRACTOR TO ADJUST BASED ON FIELD CONDITION.
2. CONTRACTOR TO FIELD VERIFY EXISTING CROSS SLOPE PRIOR TO WIDENING.
3. SPREAD WINDROW ON EXISTING VEGETATION UP TO EDGE OF PAVEMENT. PLACEMENT AND MAINTENANCE OF WINDROW WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 110.

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

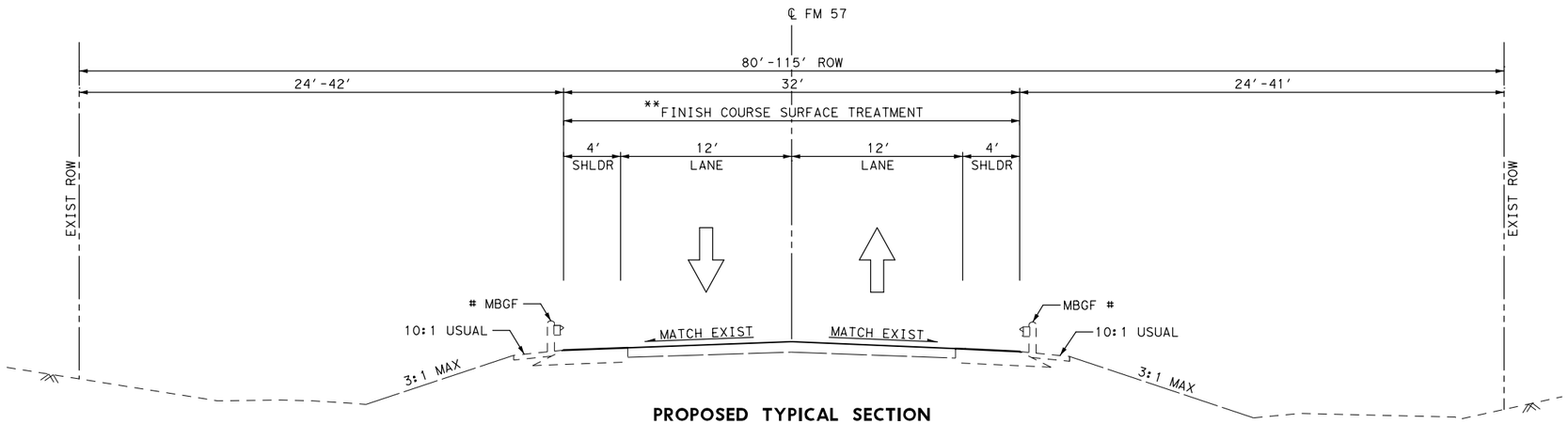
SH 70 TO PLUM CREEK

FM 57
PROPOSED TYPICAL SECTION

SCALE: NTS SHEET 01 OF 02

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	6
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:29:04 PM SCALE: 1:0
USER: Rdas PENTABLE: FM57_REVISE.tbl



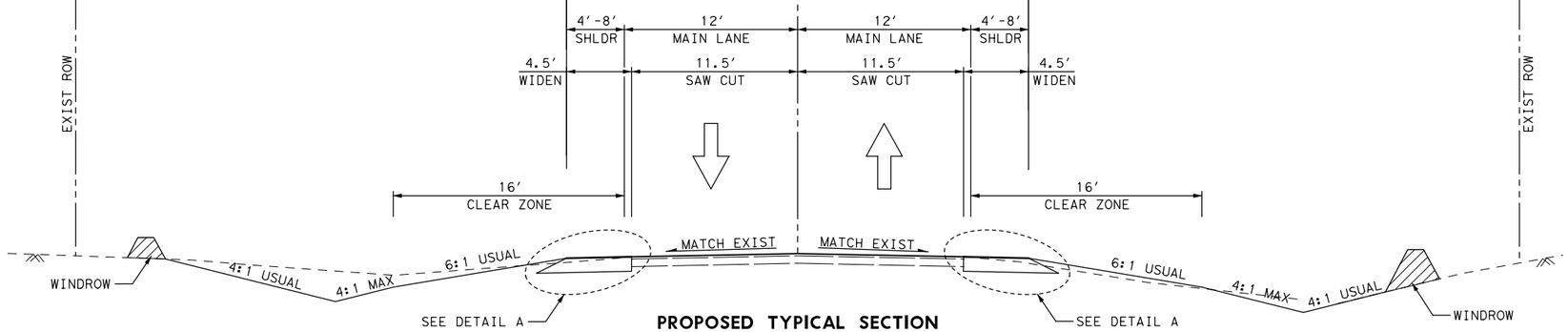
PROPOSED TYPICAL SECTION

STA 67+65 TO STA 72+35 (RT)
STA 173+80 TO STA 176+95
STA 185+27 TO STA 191+48
STA 254+45 TO STA 258+20

* FIRST COURSE SURFACE TREATMENT WILL CONSIST OF:
316 ASPH (MULTI OPTION)
316 AGGR (TY-B GR-4 SAC-B)

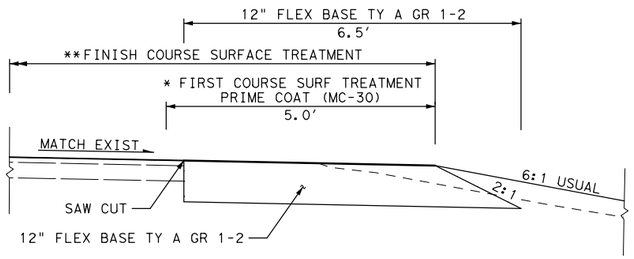
** FINISH COURSE SURFACE TREATMENT WILL CONSIST OF:
316 ASPH (AC-20-5TR)
316 AGGR (TY-PB GR-3 SAC-B)

SEE ROADWAY PLAN AND PROFILE FOR EXISTING MBGF AND CULVERT LOCATIONS

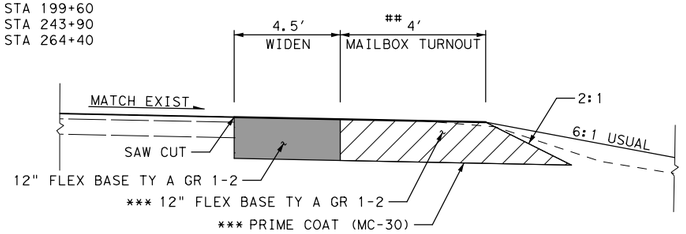


PROPOSED TYPICAL SECTION

STA 112+50 TO STA 144+25
STA 161+35 TO STA 172+75
STA 184+20 TO STA 185+27
STA 191+48 TO STA 199+60
STA 233+05 TO STA 243+90
STA 263+35 TO STA 264+40



DETAIL A - PAVEMENT STRUCTURE AT WIDENING SECTION



MAILBOX TURNOUT DETAIL

REFER TO ROADWAY PLAN AND PROFILE SHEETS FOR LOCATION OF MAILBOX TURNOUTS

*** FL BS (CMP IN PLC)(TY A GR 1-2)(12") AND PRIME COAT (MC-30) WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 530 6012 "INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)"

MAILBOX TURNOUT WILL RECEIVE BOTH FIRST COURSE AND FINISH COURSE SURFACE TREATMENT AND WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 530 6012 "INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)"

NOTES:

1. STATION LIMITS SHOWN ARE APPROXIMATE AND FOR NORMAL ROADWAY CONDITION. CONTRACTOR TO ADJUST BASED ON FIELD CONDITION.
2. CONTRACTOR TO FIELD VERIFY EXISTING CROSS SLOPE PRIOR TO WIDENING.
3. SPREAD WINDROW ON EXISTING VEGETATION UP TO EDGE OF PAVEMENT. PLACEMENT AND MAINTENANCE OF WINDROW WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 110.

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
12/4/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

PROPOSED TYPICAL SECTION

SCALE: NTS SHEET 02 OF 02

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	7
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdas DATE: 12/4/2023 TIME: 8:51:24 AM SCALE: 1:10

CCSJ: 0317-01-043
COUNTY: FISHER
HIGHWAY: FM 57

ABILENE DISTRICT GENERAL NOTES
2014 SPECIFICATIONS

General

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

Stewart Chapman, P.E. / Phone: 325-573-0143 / Stewart.Chapman@txdot.gov
Maxie Allen, P.E. / Phone: 325-573-0142 / Maxie.Allen@txdot.gov
Jose Cabrera, P.E. / Phone: 325-573-0143 / Jose.Cabrera@txdot.gov
(Snyder Area Office)

Contractor questions will be accepted through email, phone, and in person by the above individuals.
For Q&A's on Proposals navigate to
https://tableau.txdot.gov/views/ProjectInformationDashboard/NoticetoContractors
Use the dashboard to navigate to the project you are interested in by scrolling or filtering the dashboard using the controls on the left. Hover over the blue hyperlink for the project you want to view the Q&A for and click on the link in the window that pops up.

All relevant project documentation including contract time, cross sections etc. will be posted on the districts FTP website. https://ftp.dot.state.tx.us/pub/txdot-info/Pre-Letting%20Responses/

Failure to make necessary corrections to SWP3 based on SWP3 inspections will be cause for withholding the monthly estimate until such corrections have been made.

Failure to make necessary corrections to traffic control items based on barricade inspections will be cause for withholding the monthly estimate until such corrections have been made.

Provide ingress/egress to the adjacent properties in areas under construction. Phased construction of driveways and streets shall be required to provide uninterrupted access to adjacent properties. Coordinate work with the property owners before beginning any construction in the vicinity of the drive.

Mailbox manipulation made necessary because of construction shall be done in accordance with Item 560, except that this work will not be paid for directly but will be considered subsidiary to the permanent installation pay item. For temporary mailbox supports, use type 6 as shown on the MB(3)-21 standards.

Cut neat, straight lines with vertical faces along pavement edges or along joints between existing asphalt or concrete pavement and new pavement perpendicular or parallel to the direction of traffic by methods described in applicable bid items, or as directed. Provide clean edges or joints without jagged appearance or chunks broken out. This work is considered subsidiary to various bid items.

CCSJ: 0317-01-043
COUNTY: FISHER
HIGHWAY: FM 57

Environmental

Endangered and Protected Species

1. Migratory Birds
   a. **Bird nesting season is typically 15Feb through 15Sep annually.**
   b. The Contractor will avoid disturbing, destroying, removing, or relocating migratory birds and active nests found in trees, culverts, bridges, on the ground, or anywhere they are encountered.
   c. Perform all tree trimming and other vegetation clearing activities during the non-breeding season (typically 15Sep-15Feb annually). Perform any inactive nest removal and bird exclusion methods to prevent birds from establishing nests. Phasing of work during construction may be necessary to stay in compliance.
   d. When active nests are unexpectedly encountered on-site during construction, the Contractor will stop work and immediately notify the Engineer. Take measures to avoid disturbance of these birds, their occupied nest, eggs, and/or young, in accordance with the Migratory Bird Treaty Act, Texas Parks and Wildlife Code, and TxDOT policy.
   e. The Engineer will notify the Contractor when work may resume.
   f. The Contractor should be prepared to prevent migratory birds from building nests by utilizing nest prevention methods, such as bird-deterrent netting and bird-repelling sprays and/or gels, between 15Feb and 15Sep. The Contractor can discuss other preventative measures with the Engineer and/or District Environmental Staff.

Best Management Practices

1. Bird BMPs
   a. Not disturbing, destroying, or removing active nests, including ground nesting birds, during the nesting season.
   b. Avoiding the removal of unoccupied, inactive nests, as practicable.
   c. Preventing the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair.
   d. Not collecting, capturing, relocating, or transporting birds, eggs, young, or active nests without a permit.

Item 5, "Control of Work"

Use Method C for construction surveying.

All known utilities are identified in the plans, including the crossing of power lines. Use this information to identify potential issues with power poles and power lines prior to bidding.

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:29:8 PM SCALE: 1:1

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	ABL	FISHER	8
CONTROL	SECTION	JOB	
0317	01	043	

Make necessary arrangements with utility owners regarding temporary protections such as bracing power poles, and de-energizing power lines. The Department will not reimburse the cost of such temporary protections to the Contractor, unless the Engineer determines that inadequate information was available at the time the project was bid. **"Call Before You Dig" "Call 811"**

Provide notification to the District Traffic Engineering Section by telephone at 325-676-6991 and by email at ABL_TrafficFix@txdot.gov when planning drilling or excavation work in areas where existing TxDOT underground utilities exist. Visual evidence of TxDOT underground utilities in the area include illumination poles, ground boxes, flashing beacons, traffic signals, etc. This notification must be provided 72 hours in advance of performing the work.

Drilled shaft locations or excavation areas must be staked prior to the notification so that the underground utilities can be located in relationship to the proposed work. Preserve and document the marked utility locations to prevent unnecessary secondary notifications. Notify the Engineer of conflicts between proposed work and underground utilities.

Item 6, "Control of Materials"
To comply with the latest provisions of Build America, Buy America Act (BABA Act) of the Bipartisan Infrastructure Law, the contractor must submit an original of the TxDOT Construction Material Buy America Certification Form for all items classified as construction materials. This form is not required for materials classified as a manufactured product.

Refer to the Buy America Material Classification Sheet for clarification on material categorization.

The Buy America Material Classification Sheet is located at the below link.

https://www.txdot.gov/business/resources/materials/buy-america-material-classification-sheet.html for clarification on material categorization.

Item 7, "Legal Relations and Responsibilities"

The total area disturbed for this project is 37.2 acres. The disturbed area in this project, all project locations in the Contract, and the Contractor project specific locations (PSLs), within 1 mile of the project limits, for the Contract will further establish the authorization requirements for storm water discharges. The Department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization from the TCEQ for Contractor PSLs for construction support activities on or off the ROW. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI for PSLs on the ROW to the Engineer and to the government that operates a separate storm sewer system.

CCSJ: 0317-01-043
COUNTY: FISHER
HIGHWAY: FM 57

Provide one SWP3 Notification Board for this project. Notification Boards are to be placed at locations within the right-of-way but outside the clear zone as directed by the Engineer. Consider this work to be subsidiary to the various bid items of the contract.

The Contractor's attention is directed to the Texas Aggregate Quarry Pit Safety Act. Any pit or quarry meeting the definition of an unacceptable unsafe location as defined in the Act is subject to regulations set forth in this Act. A copy of the Texas Administrative Code, Title 43, Part, 1, Chapter 21, Subchapter M may be viewed at https://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=5&ti=43&pt=1&ch=21&sch=M&rl=Y

No significant traffic generator events identified.

Hard hats are required at all times during construction when construction personnel are in TxDOT Right-of-Way.

LIGHTING STANDARDS FOR HIGHWAY MAINTENANCE OR CONSTRUCTION VEHICLES AND SERVICE VEHICLES

VEHICLE LIGHTING SUMMARY

Vehicle	Color of Flashing Lights	Transportation Code
Police Vehicles	Red/Blue/White/Amber	547.305 & 547.702
Fire/EMS Vehicles	Red/Blue/White/Amber	547.305 & 547.702
Volunteer Fire/EMS	Red/Blue/White/Amber	547.305 & 547.702
School	Bus Red/White (rooftop) /Amber	547.305 & 547.701
Highway Maintenance or Construction Vehicles and Service Vehicles	Amber/Blue	547.105 & TxDOT Lighting Standards

Item 8 "Prosecution and Progress"
Each contract awarded by the Department stands on its own and as such, is separate from other contracts. A Contractor awarded multiple contracts must be capable and sufficiently staffed to concurrently process and/or execute all contracts at the same time.

The Contractor is hereby authorized to begin work prior to the expiration of the number of calendar days provided in the Special Provision to Item 8, Article 8.1. Notify the Engineer in writing of the date to begin work. Time charges will commence when work begins or on the expiration of the number of calendar days provided, whichever occurs first.

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	ABL	FISHER	9
CONTROL	SECTION	JOB	
0317	01	043	

Coordinate and update the work schedule with the project inspector daily. Give a minimum of 24 hours of notice to project inspector if work requiring inspection or testing is to be performed. Failure to do so may cause that work to be delayed or postponed if TxDOT personnel are not available. Work performed without suitable inspection, as determined by the Engineer, may be ordered removed and replaced at Contractor's expense.

Working days will be charged in accordance with Section 8.3.1.4., "Standard Workweek."

Prepare the progress schedule as a Critical Path Method (CPM).

Item 9, "Measurement and Payment"
The progress payment period shall end on the 25th of each month, unless directed by the Area Office Engineer. Material on Hand (MOH) is due two business days before estimate cut off.

Item 100, "Preparing Right of Way"
The Contractor's attention is directed to potential regulations against burning within the project limits. Abide by all local ordinances and county-imposed burn bans. When burning is prohibited, dispose of material in accordance with regulations set forth by other regulatory agencies including the Texas Commission for Environmental Quality. The cost of burning or disposal of any product is subsidiary to various bid items.

Payment for Preparing Right of Way shall be limited to the station ranges and sides identified or as directed by the Engineer. Preparing Right of Way includes pruning and removal of trees and brush for payment. Locations shall be marked and approved by the Engineer prior to performing work.

Begin Station	End Station	Side of Roadway
15+00	16+00	RT
24+00	25+00	LT
52+00	54+00	LT
100+00	103+00	LT
104+00	106+00	LT
108+00	114+00	LT
130+00	132+00	LT
157+00	174+00	RT
177+00	180+00	RT
207+00	221+00	RT
218+00	232+00	LT
234+00	252+00	RT
234+00	245+00	LT
258+00	264+00	RT

CCSJ: 0317-01-043
COUNTY: FISHER
HIGHWAY: FM 57

Item 164, "Seeding for Erosion Control"
Quantities shown are approximate; limits of the temporary and permanent seeding will be determined during construction.

Temporary seeding will be required in several small areas as work progresses to comply with the storm water pollution prevention plan and may require multiple mobilizations of seeding crew.

Item 168, "Vegetative Watering"
Water rate for this project shall be ¼" of water per acre every two weeks for a 3-month period.

Item 204, "Sprinkling for Dust Control"
Sprinkle dust control as directed. Payment for this item will be subsidiary to the various bid items.

Item 247, "Flexible Base"
The flexible base material in this contract has been estimated to be 8000 cubic yards (compacted). The estimated quantity of flexible base is for the roadway. The measured area for payment is the crown width only. The tapers, etc., are not included in the measurements for the flexible base and are considered subsidiary to this item.

Item 316, "Surface Treatments"
When cutback asphalt is used, delay the second surface treatment course or ACP overlay 14 days or as directed by the Engineer.

When cool season emulsion asphalt is used, delay the second surface treatment course or ACP overlay 7 days.

Unless authorized in writing by the Engineer, the open season for the application of AC-20-5TR asphalt is May 1 to August 31.

Cover or protect any sealed expansion joints or rail on bridges and any railroad tracks encountered on this project, as directed by the Engineer. Clean any of these items not properly protected. This work will not be paid for directly but will be considered subsidiary to Item 316.

For items of work that include both summer and winter materials or the Asphalt (Multi Option), the Engineer will determine which asphalt to apply based on timing and prevailing weather conditions. The Asphalt (Multi Option) shall consist of the following choices and rates.

Estimated Summer Rates with Grade 4 Aggr.
ASPH (AC-20-5TR) @ .36 GAL/SY

Estimated Winter Rates with Grade 4 Aggr.
ASPH (CRS-2P) @ .40 GAL/SY

AGGREGATES
AGGR (TY-B GR-4 SAC -B) - 1 CY/140 SY

The rates shown are for estimating purposes and the engineer can dictate higher or lower rates based on roadway conditions.

Item 502, "Barricades, Signs and Traffic Handling"
Provide the Engineer with written notification seven (7) days in advance of major traffic changes. A major traffic change is defined as the temporary (greater than one day) or permanent relocation of traffic lanes typically in an urban setting. The notice will, at a minimum, include the expected date, time and scope of the traffic change. The Department will utilize the information provided to inform the traveling public of the changes. Failure to provide advance notice, or to provide accurate information, will result in delaying the work until such time that the public has been notified.

Additional signs, barricades and traffic handling may be necessary to complete the work shown herein and will be provided by the contractor as required and will be considered subsidiary to this item.

Provide separate attenuators for each work area within a common lane closure as approved or directed by the Engineer.

In sections where traffic is restricted to one lane, two-way traffic, flaggers will be stationed at each end of that section with two-way communication devices and a pilot car will control operations.

In sections where traffic is restricted to one lane, two-way traffic, flaggers will be stationed at each end of that section with two-way communication devices and a pilot car will control operations.

Pilot car is subsidiary to item 502.

Relocate existing roadside signs to temporary supports as approved by the engineer.

All safety appurtenances such as signs, delineators, object markers and route markers will be in place prior to opening each phase of the construction to traffic, unless otherwise directed.

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

The Contractor's person responsible for TCP compliance must be available by local telephone and have a response time within 45 minutes.

Work will not be allowed on both sides of the roadbed at the same time.

CCSJ: 0317-01-043
COUNTY: FISHER
HIGHWAY: FM 57

Equip all work vehicles within 30 feet of the traveled way with a functioning amber strobe light or rotating beacon visible from all directions.

Repair barricades within the timeline shown on the barricade inspection report. Failure to comply will cease all work until barricades are repaired to the satisfaction of the Department. Replace all damaged traffic control devices immediately. Remove any damaged traffic control devices from the project within 24 hours.

Conflicting guide signs shall be covered as approved by the Engineer. This work shall be subsidiary to Item 502.

Reduced regulatory speed limit signs should only be posted in the vicinity of ongoing work activity as shown on BC (3)-21 and not throughout the entire project. Removing, relocating or covering speed limit signs shall be considered subsidiary to item 502.

Item 530, "Intersections, Driveways, and Turnouts"
Excavation and embankment necessary to construct the intersections and driveways according to the details shown elsewhere shall be considered subsidiary to this item.

Item 644, "Small Roadside Sign Supports and Assemblies"
Use the latest edition of the "Standard Highway Sign Designs for Texas" for Sign types for which design details are not shown on the plans.

Sign placement shall be in accordance with the latest edition of the TMUTCD & TxDOT's Sign Crew Field Book located at the following addresses.
TMUTCD - https://www.txdot.gov/business/resources/signage/tmutcd.html
TxDOT's Sign Crew Field Book - http://onlinemanuals.txdot.gov/txdotmanuals/sfb/index.htm

Before final sign installation, stake all sign locations for approval by the engineer.

All triangle slip base small sign mounts installed under this item shall utilize clamp type bases.

Remove entire small sign foundation.

Deliver and stockpile all signs to be salvaged to the Fisher county maintenance yard in Roby, TX, located approximately 11 miles from the north end of the project.

Item 658, “Delineator and Object Marker Assemblies”
Delineators and object marker assemblies will use winged channel posts. The winged channel posts will be 1.12 lb/ft and 6.5 ft in length.

All MBGF delineation shall be GF2 mounted on posts.

Use a minimum 2 inch long lag screws with washers to attach flexible GF2 barrier reflectors to wooden post. For steel posts, use an approved adhesive, or other method approved by Engineer. Concrete Barrier Reflectors shall be equivalent to Shure-tite CTB “Cup Mount”Delineator (8”). Attach delineators to concrete rail with concrete anchors as approved by the Engineer.

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 12:39:21 PM SCALE: 1:1

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	ABL	FISHER	11
CONTROL	SECTION	JOB	
0317	01	043	

CCSJ: 0317-01-043
COUNTY: FISHER
HIGHWAY: FM 57

Item 662, “Work Zone Pavement Markings”
Place work zone pavement markings (flexible tabs) prior to the seal coat operation.

Dispose of tabs and paper in an approved trash receptacle. (Reference Standard **SWP3**, waste material)

Item 666, "Retro reflectorized Pavement Markings"
All longitudinal pavement markings (including profile pavement markings) must meet minimum retro reflectivity requirements.

Establish a true and correct alignment with a method approved by the Engineer. This work will be considered subsidiary.

Contractor is responsible for re-establishing location and alignment for new pavement markings matching pavement marking alignment prior to construction activities. This work will be considered subsidiary.

Item 672, "Raised Pavement Markers"
Provide a complete system of raised pavement markers at locations indicated on the plans and as directed by the engineer. The plans are intended to show typical conditions, which can be extended to similar conditions throughout this project as approved or directed.

Bituminous adhesive shall be used on this project.

Item 3076, “Dense-Graded Hot-Mix Asphalt”
The Engineer reserves the right to test all sources even if the source is listed in the Bituminous Source Rated Quality Catalog.

Provide the testing lab samples to calibrate the ignition oven no later than five **(5)** working days prior to mix design verification.

Paving operations will not be allowed to begin until TxDOT has tested and obtained passing Hamburg results on the trial batch.

A maximum of 0.50% anti-stripping agent will be allowed for each specified mix type.

Dilution of tack coat is not allowed.

Do not exceed a laydown width of 16’ per pass.

Substitute Binders will not be allowed unless RAP is used in the production of the mixture. RAS will not be allowed in surface mixes.

A warm mix additive will be required for hotmix hauls over 50 miles.

Unless otherwise directed by the engineer, a warm mix additive will be required when paving during November 1st through March 15th.

The use of a tapered longitudinal joint will be required for pavement thicker than 2 inches. Provide PG 64-22 tack coat at a rate of 0.10 gal/sy.

The Contractor will be required to tack 100% of the surfaces with uniform coverage prior to the subsequent lift. The type and grade of tack will be approved by the Engineer prior to use.

Tack all vertical joints unless otherwise directed.

Item 6185, "Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)"
Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA) will not be considered a major item of work on this project.

TMAs will only be paid while workers are present or to protect a blunt object.

The contractor will be responsible for determining if one or more of these operations will be ongoing at the same time to determine the total number of TMAs needed for the project. The Contractor must get approval from the Engineer for any changes in the number of TMA as shown in the plans.

If a TMA is used for both mobile and stationary traffic control on the same day, it will be paid for as stationary for that day.

BASIS OF ESTIMATE FOR STATIONARY TMAs				
		TMA (Stationary)		
Phase	Standard	Required	Additional	TOTAL
1	TCP (1-1)-18	1	0	1
	TCP (1-2)-18	1	0	1
	TCP (2-1)-18	1	0	1
	TCP (2-2)-18	1	0	1
2	TCP (1-1)-18	1	0	1
	TCP (1-2)-18	1	0	1
	TCP (2-1)-18	1	0	1
	TCP (2-2)-18	1	0	1

BASIS OF ESTIMATE FOR MOBILE TMAs				
		TMA (Mobile)		
Phase	Standard	Required	Additional	TOTAL
FINAL	TCP (3-1)-13	2	0	2

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	ABL	FISHER	12
CONTROL	SECTION	JOB	
0317	01	043	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0317-01-043 **DISTRICT** Abilene **COUNTY** Fisher
HIGHWAY FM 57

			CONTROL SECTION JOB		**0317-01-043**	TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00193311**		
			COUNTY		**Fisher**		
			HIGHWAY		**FM 57**		
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	100-6002	PREPARING ROW	STA	51.000		51.000	
	110-6001	EXCAVATION (ROADWAY)	CY	10,374.000		10,374.000	
	132-6004	EMBANKMENT (FINAL)(DENS CONT)(TY B)	CY	2,014.000		2,014.000	
	164-6034	DRILL SEEDING (PERM) (RURAL) (SANDY)	AC	38.000		38.000	
	164-6042	DRILL SEEDING (TEMP) (WARM)	AC	19.000		19.000	
	164-6044	DRILL SEEDING (TEMP) (COOL)	AC	19.000		19.000	
	168-6001	VEGETATIVE WATERING	MG	855.000		855.000	
	247-6233	FL BS (CMP IN PLACE)(TY A GR 1-2)(12")	SY	23,970.000		23,970.000	
	310-6009	PRIME COAT (MC-30)	GAL	5,320.000		5,320.000	
	316-6001	ASPH (MULTI OPTION)	GAL	10,640.000		10,640.000	
	316-6017	ASPH (AC-20-5TR)	GAL	36,881.000		36,881.000	
	316-6175	AGGR(TY-B GR-4 SAC-B)	CY	190.000		190.000	
	316-6222	AGGR(TY-PB GR-3 SAC-B)	CY	802.000		802.000	
	351-6013	FLEXIBLE PAVEMENT STRUCTURE REPAIR(4")	SY	2,700.000		2,700.000	
	432-6045	RIPRAP (MOW STRIP)(4 IN)	CY	33.000		33.000	
	500-6001	MOBILIZATION	LS	1.000		1.000	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	9.000		9.000	
	506-6002	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	656.000		656.000	
	506-6011	ROCK FILTER DAMS (REMOVE)	LF	656.000		656.000	
	506-6038	TEMP SEDMT CONT FENCE (INSTALL)	LF	8,040.000		8,040.000	
	506-6039	TEMP SEDMT CONT FENCE (REMOVE)	LF	8,040.000		8,040.000	
	506-6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	1,328.000		1,328.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	1,328.000		1,328.000	
	530-6012	INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)	SY	2,486.000		2,486.000	
	540-6002	MTL W-BEAM GD FEN (STEEL POST)	LF	205.000		205.000	
	540-6020	MTL W - BEAM GD FEN (LOW FILL CULVERT)	LF	70.000		70.000	
	544-6001	GUARDRAIL END TREATMENT (INSTALL)	EA	4.000		4.000	
	560-6011	MAILBOX INSTALL-S (TWW-POST) TY 4	EA	2.000		2.000	
	560-6013	MAILBOX INSTALL-M (TWW-POST) TY 4	EA	3.000		3.000	
	618-6016	CONDT (PVC) (SCH 40) (1")	LF	40.000		40.000	
	620-6008	ELEC CONDR (NO.8) INSULATED	LF	50.000		50.000	
	624-6006	GROUND BOX TY BATTERY (162915)W/APRON	EA	2.000		2.000	
	624-6028	REMOVE GROUND BOX	EA	2.000		2.000	
	636-6001	ALUMINUM SIGNS (TY A)	SF	45.000		45.000	
	644-6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	33.000		33.000	
	644-6004	IN SM RD SN SUP&AM TY10BWG(1)SA(T)	EA	4.000		4.000	
	644-6030	IN SM RD SN SUP&AM TYS80(1)SA(T)	EA	4.000		4.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0317-01-043 **DISTRICT** Abilene **COUNTY** Fisher
HIGHWAY FM 57

			CONTROL SECTION JOB		**0317-01-043**	TOTAL EST.	TOTAL FINAL
			PROJECT ID		**A00193311**		
			COUNTY		**Fisher**		
			HIGHWAY		**FM 57**		
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL		
	644-6031	IN SM RD SN SUP&AM TYS80(1)SA(T-2EXT)	EA	1.000		1.000	
	644-6076	REMOVE SM RD SN SUP&AM	EA	50.000		50.000	
	658-6062	INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2(BI)	EA	8.000		8.000	
	662-6059	WK ZN PAV MRK REMOV (TRAF BTN) TY Y	LF	2,300.000		2,300.000	
	662-6111	WK ZN PAV MRK SHT TERM (TAB)TY Y-2	EA	1,300.000		1,300.000	
	666-6343	REF PROF PAV MRK TY I(W)6"(SLD)(100MIL)	LF	50,550.000		50,550.000	
	666-6346	REF PROF PAV MRK TY I(Y)6"(BRK)(100MIL)	LF	3,380.000		3,380.000	
	666-6347	REF PROF PAV MRK TY I(Y)6"(SLD)(100MIL)	LF	34,290.000		34,290.000	
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF	131.000		131.000	
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA	8.000		8.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA	603.000		603.000	
	677-6002	ELIM EXT PAV MRK & MRKS (6")	LF	2,300.000		2,300.000	
	685-6004	INSTL RDSD FLSH BCN ASSM (SOLAR PWRD)	EA	2.000		2.000	
	685-6006	REMOV RDSD FLSH BCN AM (SOLAR PWRD)	EA	2.000		2.000	
	6001-6002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	2.000		2.000	
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF	160.000		160.000	
	6056-6002	PREFORMED CENTERLINE RUMBLE STRIP	LF	2,670.000		2,670.000	
	6185-6002	TMA (STATIONARY)	DAY	140.000		140.000	
	6185-6005	TMA (MOBILE OPERATION)	DAY	18.000		18.000	
	6350-6001	LEAD LED CHEVRON	EA	2.000		2.000	
	6350-6002	LED CHEVRON	EA	9.000		9.000	
	18	EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000		1.000	
		SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000		1.000	

SUMMARY OF TRAFFIC CONTROL ITEMS

ITEM	662 6059	662 6111	677 6002	* 6001 6002	6185 6002	6185 6005
DESCRIPTION	WK ZN PAV MRK REMOV (TRAF BTN) TY Y	WK ZN PAV MRK SHT TERM (TAB)TY Y-2	ELIM EXT PAV MRK & MRKS (6")	PORTABLE CHANGEABLE MESSAGE SIGN	TMA (STATIONARY)	TMA (MOBILE OPERATION)
	LF	EA	LF	EA	DAY	DAY
PHASE 1					71	
PHASE 2	2300		2,300		69	
FINAL PHASE		1,300				18
PROJECT TOTAL	2,300	1,300	2,300	2	140	18

* CONTRACTOR TO PLACE PORTABLE CHANGEABLE MESSAGE SIGN AT STA 76+50 FOR NORTHBOUND TRAFFIC AND AT STA 96+00 FOR SOUTHBOUND TRAFFIC.

SUMMARY OF ROADWAY ITEMS

ITEM	100 6002	432 6045	530 6012	540 6002	540 6020	544 6001	560 6011	560 6013
DESCRIPTION	PREPARING ROW	RIPRAP (MOW STRIP)(4 IN)	INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)	MTL W-BEAM GD FEN (STEEL POST)	MTL W - BEAM GD FEN (LOW FILL CULVERT)	GUARDRAIL END TREATMENT (INSTALL)	MAILBOX INSTALL-S (TWW-POST) TY 4	MAILBOX INSTALL-M (TWW-POST) TY 4
	STA	CY	SY	LF	LF	EA	EA	EA
SHEET 1 OF 23								
SHEET 2 OF 23	1		89				1	
SHEET 3 OF 23	1							
SHEET 4 OF 23								
SHEET 5 OF 23	1		47					
SHEET 6 OF 23		33	249	205	70	4		1
SHEET 7 OF 23			399					
SHEET 8 OF 23			245					
SHEET 9 OF 23	3		122					1
SHEET 10 OF 23	3		441					1
SHEET 11 OF 23	1		389					
SHEET 12 OF 23								
SHEET 13 OF 23			170					
SHEET 14 OF 23	6		64					
SHEET 15 OF 23	5							
SHEET 16 OF 23								
SHEET 17 OF 23								
SHEET 18 OF 23	5		104					
SHEET 19 OF 23	5		104				1	
SHEET 20 OF 23	8		63					
SHEET 21 OF 23	9							
SHEET 22 OF 23	3							
SHEET 23 OF 23								
PROJECT TOTAL	51	33	2,486	205	70	4	2	3

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

QUANTITY SUMMARY

SHEET 01 OF 05

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	15
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:29:30 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100

SUMMARY OF ASPHALT SURFACE AREAS

ITEM	LENGTH	AVERAGE WIDTH	** 247 6233	*310	*316	*316	*316	*316
DESCRIPTION			FL BS (CMP IN PLACE) (TY A GR 1-2) (12")	PRIME COAT (MC-30)	ASPH (MULTI OPTION)	AGGR (TY-B GR-4 SAC-B)	ASPH (AC-20-5TR)	AGGR (TY-PB GR-3 SAC-B)
	LF	LF	SY	SY	SY	SY	SY	SY
					FIRST COURSE		FINISH COURSE	
BEGIN TO STA 12+00	100	34	50	56	56	56	1,190	1,190
STA 12+00 TO STA 24+00	1,200	32	1,200	1,333	1,333	1,333	4,283	4,283
STA 24+00 TO STA 36+00	1,200	32	1,200	1,333	1,333	1,333	4,267	4,267
STA 36+00 TO STA 48+00	1,200	32	1,200	1,333	1,333	1,333	4,267	4,267
STA 48+00 TO STA 60+00	1,200	32	1,200	1,333	1,333	1,333	4,267	4,267
STA 60+00 TO STA 72+00	1,200	32	983	1,092	1,092	1,092	4,289	4,289
STA 72+00 TO STA 84+00	1,200	32	1,183	1,314	1,314	1,314	4,572	4,572
STA 84+00 TO STA 96+00	1,200	32	1,198	1,318	1,318	1,318	4,267	4,267
STA 96+00 TO STA 108+00	1,200	32	1,200	1,333	1,333	1,333	4,386	4,386
STA 108+00 TO STA 120+00	1,200	32	1,200	1,333	1,333	1,333	4,578	4,578
STA 120+00 TO STA 132+00	1,200	32	1,200	1,333	1,333	1,333	4,447	4,447
STA 132+00 TO STA 144+00	1,200	32	1,200	1,333	1,333	1,333	4,267	4,267
STA 144+00 TO STA 156+00	1,200	32	1,200	1,333	1,333	1,333	4,437	4,437
STA 156+00 TO STA 168+00	1,200	32	1,200	1,333	1,333	1,333	4,267	4,267
STA 168+00 TO STA 180+00	1,200	32	878	976	976	976	4,267	4,267
STA 180+00 TO STA 192+00	1,200	32	710	788	788	788	4,267	4,267
STA 192+00 TO STA 204+00	1,200	32	1,200	1,333	1,333	1,333	4,267	4,267
STA 204+00 TO STA 216+00	1,200	32	1,200	1,333	1,333	1,333	4,267	4,267
STA 216+00 TO STA 228+00	1,200	32	1,200	1,333	1,333	1,333	4,283	4,283
STA 228+00 TO STA 240+00	1,200	32	1,200	1,333	1,333	1,333	4,267	4,267
STA 240+00 TO STA 252+00	1,200	32	1,200	1,333	1,333	1,333	4,267	4,267
STA 252+00 TO STA 264+00	1,200	32	895	984	984	984	4,358	4,358
STA 264+00 TO END	40	40	73	78	78	78	175	175
PROJECT TOTAL			23,970	26,601	26,601	26,601	92,202	92,202

* CONTRACTORS INFORMATION ONLY.

** THE TAPERS ARE NOT INCLUDED IN THE MEASUREMENTS FOR THE FLEXIBLE BASE AND ARE CONSIDERED SUBSIDIARY TO ITEM 247 6233.

BASIS OF ESTIMATE

	ITEM	DESCRIPTION	RATE	AREA (SY)	QUANTITY	UNIT
	247 6233	FL BS (CMP IN PLACE) (TY A GR 1-2) (12")	-	23,970	23,970	SY
	310 6009	PRIME COAT (MC-30)	0.2 GAL/SY	26,601	5,320	GAL
FIRST COURSE	316 6001	ASPH (MULTI OPTION)	0.40 GAL/SY	26,601	10,640	GAL
	316 6175	AGGR (TY-B GR-4 SAC-B)	1 CY/140 SY	26,601	190	CY
FINISH COURSE	316 6017	ASPH (AC-20-5TR)	0.40 GAL/SY	92,202	36,881	GAL
	316 6222	AGGR (TY-PB GR-3 SAC-B)	1 CY/115 SY	92,202	802	CY
PAVEMENT REPAIR	351 6013	*** FLEXIBLE PAVEMENT STRUCTURE REPAIR (4")	-	2700	2700	SY

*** LOCATION AND SIZE OF SPOT PAVEMENT REPAIRS TO BE DETERMINED BY THE ENGINEER. REMOVAL OF EXISTING MATERIAL, DENSE GRADE D-GR HMA TY-B PG64-22 OR BETTER AS APPROVED, AND PRIME COAT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 351.

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

SH 70 TO PLUM CREEK

FM 57

QUANTITY SUMMARY

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	16
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

SUMMARY OF EARTHWORK ITEMS

ITEM	110 6001	132 6004
DESCRIPTION	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (DENS CONT) (TY B)
	CY	CY
11+00.00	0	0
12+00.00	34	5
13+00.00	32	2
14+00.00	29	1
15+00.00	26	1
16+00.00	25	2
17+00.00	29	2
18+00.00	27	2
19+00.00	24	2
20+00.00	31	1
21+00.00	36	1
22+00.00	51	1
23+00.00	44	1
24+00.00	22	1
25+00.00	28	1
26+00.00	34	1
27+00.00	32	1
28+00.00	28	2
29+00.00	24	4
30+00.00	27	7
31+00.00	27	9
32+00.00	24	6
33+00.00	24	3
34+00.00	24	4
35+00.00	24	7
36+00.00	25	6
37+00.00	25	2
38+00.00	23	1
39+00.00	27	1
40+00.00	27	0
41+00.00	27	1
42+00.00	25	2
43+00.00	21	5
44+00.00	21	6
45+00.00	25	4
46+00.00	24	5
47+00.00	20	8
48+00.00	18	10
49+00.00	18	10
50+00.00	19	10
51+00.00	20	7
52+00.00	30	1
53+00.00	38	0
54+00.00	36	0
55+00.00	30	0
56+00.00	24	1
57+00.00	21	2
58+00.00	18	5
59+00.00	18	5
60+00.00	21	4
61+00.00	25	3
62+00.00	38	2
63+00.00	41	2
64+00.00	29	8
65+00.00	22	7
66+00.00	22	3
67+00.00	36	2
68+00.00	31	1
69+00.00	13	2
70+00.00	12	4
71+00.00	35	5
72+00.00	76	4
73+00.00	119	1
74+00.00	126	1
75+00.00	111	2
76+00.00	106	1
77+00.00	108	1
78+00.00	108	3
79+00.00	98	4
TOTAL	2,463	219

SUMMARY OF EARTHWORK ITEMS

ITEM	110 6001	132 6004
DESCRIPTION	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (DENS CONT) (TY B)
	CY	CY
80+00.00	94	3
81+00.00	94	2
82+00.00	99	4
83+00.00	91	3
84+00.00	51	7
85+00.00	21	19
86+00.00	19	21
87+00.00	28	13
88+00.00	47	8
89+00.00	56	8
90+00.00	51	7
91+00.00	41	7
92+00.00	36	6
93+00.00	36	4
94+00.00	45	2
95+00.00	61	0
96+00.00	54	0
97+00.00	35	0
98+00.00	37	0
99+00.00	47	2
100+00.00	51	1
101+00.00	55	0
102+00.00	68	0
103+00.00	103	0
104+00.00	97	0
105+00.00	73	0
106+00.00	73	2
107+00.00	58	3
108+00.00	49	3
109+00.00	58	2
110+00.00	59	1
111+00.00	60	0
112+00.00	69	0
113+00.00	64	3
114+00.00	63	6
115+00.00	73	4
116+00.00	65	4
117+00.00	49	5
118+00.00	41	53
119+00.00	35	55
120+00.00	27	11
121+00.00	24	16
122+00.00	27	20
123+00.00	28	16
124+00.00	50	7
125+00.00	56	4
126+00.00	36	8
127+00.00	43	12
128+00.00	43	10
129+00.00	31	11
130+00.00	131	17
131+00.00	130	24
132+00.00	23	31
133+00.00	25	34
134+00.00	25	34
135+00.00	28	24
136+00.00	35	11
137+00.00	43	10
138+00.00	45	10
139+00.00	38	10
140+00.00	31	9
141+00.00	26	14
142+00.00	26	18
143+00.00	26	14
144+00.00	28	9
145+00.00	27	7
146+00.00	26	14
147+00.00	26	23
148+00.00	26	23
TOTAL	3,436	709

SUMMARY OF EARTHWORK ITEMS

ITEM	110 6001	132 6004
DESCRIPTION	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (DENS CONT) (TY B)
	CY	CY
149+00.00	37	9
150+00.00	76	1
151+00.00	110	1
152+00.00	101	0
153+00.00	66	1
154+00.00	43	2
155+00.00	50	2
156+00.00	54	1
157+00.00	46	1
158+00.00	42	2
159+00.00	41	3
160+00.00	41	3
161+00.00	47	3
162+00.00	54	4
163+00.00	60	5
164+00.00	46	6
165+00.00	21	11
166+00.00	15	14
167+00.00	14	16
168+00.00	13	18
169+00.00	11	22
170+00.00	11	24
171+00.00	16	15
172+00.00	33	7
173+00.00	52	3
174+00.00	32	1
175+00.00	5	19
176+00.00	5	32
177+00.00	15	17
178+00.00	42	5
179+00.00	65	4
180+00.00	77	4
181+00.00	89	3
182+00.00	81	2
183+00.00	49	2
184+00.00	31	1
185+00.00	33	3
186+00.00	29	4
187+00.00	12	4
188+00.00	5	12
189+00.00	5	19
190+00.00	5	12
191+00.00	8	9
192+00.00	24	16
193+00.00	35	19
194+00.00	27	22
195+00.00	25	20
196+00.00	34	14
197+00.00	44	7
198+00.00	40	5
199+00.00	27	9
200+00.00	22	9
201+00.00	22	7
202+00.00	27	8
203+00.00	34	5
204+00.00	39	1
205+00.00	45	1
206+00.00	52	1
207+00.00	50	3
208+00.00	44	4
209+00.00	44	4
210+00.00	44	6
211+00.00	45	8
212+00.00	48	5
213+00.00	56	3
214+00.00	63	4
215+00.00	57	6
216+00.00	50	5
217+00.00	45	2
TOTAL	2,731	521

SUMMARY OF EARTHWORK ITEMS

ITEM	110 6001	132 6004
DESCRIPTION	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (DENS CONT) (TY B)
	CY	CY
218+00.00	31	3
219+00.00	20	4
220+00.00	20	6
221+00.00	32	5
222+00.00	48	3
223+00.00	58	4
224+00.00	69	2
225+00.00	73	2
226+00.00	70	2
227+00.00	56	3
228+00.00	47	3
229+00.00	48	2
230+00.00	48	5
231+00.00	44	9
232+00.00	38	8
233+00.00	36	6
234+00.00	35	10
235+00.00	33	15
236+00.00	25	19
237+00.00	20	25
238+00.00	18	31
239+00.00	16	38
240+00.00	20	37
241+00.00	39	27
242+00.00	45	19
243+00.00	44	13
244+00.00	40	9
245+00.00	31	6
246+00.00	33	5
247+00.00	42	6
248+00.00	57	6
249+00.00	55	8
250+00.00	50	13
251+00.00	54	13
252+00.00	55	7
253+00.00	55	5
254+00.00	47	4
255+00.00	23	4
256+00.00	3	16
257+00.00	3	19
258+00.00	3	5
259+00.00	23	2
260+00.00	37	3
261+00.00	32	33
262+00.00	28	61
263+00.00	22	39
264+00.00	18	0
TOTAL	1,744	565
PROJECT TOTAL	10,374	2,014

NOTES:

1. EARTHWORK QUANTITY INCLUDES DITCH WORK, WIDENING, INTERSECTIONS, MAILBOX TURNOUTS AND MOW STRIPS.
2. REMOVAL OF STABILIZED BASE AND ASPHALT PAVEMENT WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 110 6001 "EXCAVATION (ROADWAY)"

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

QUANTITY SUMMARY

SHEET 03 OF 05

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	17
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:29:41 PM SCALE: 1:00

SUMMARY OF PAVEMENT MARKING ITEMS

ITEM	666 6343	666 6346	666 6347	668 6076	668 6085	672 6009	6056 6001	6056 6002
DESCRIPTION	REF PROF PAV MRK TY I(W)6"(SLD)(100MIL)	REF PROF PAV MRK TY I(Y)6"(BRK)(100MIL)	REF PROF PAV MRK TY I(Y)6"(SLD)(100MIL)	PREFAB PAV MRK TY C (W)(24") (SLD)	PREFAB PAV MRK TY C (W)(WORD)	REFL PAV MRKR TY II-A-A	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	PREFORMED CENTERLINE RUMBLE STRIP
	LF	LF	LF	LF	EA	EA	LF	LF
SHEET 1 OF 11	2,770		2,770	25		36		
SHEET 2 OF 11	4,800	80	4,510			60		
SHEET 3 OF 11	4,800	600	810			42		1,230
SHEET 4 OF 11	4,700	480	2,900	32	6	60	160	
SHEET 5 OF 11	4,700	510	2,600	40	2	60		196
SHEET 6 OF 11	4,750		4,800	14		60		
SHEET 7 OF 11	4,750	400	3,400	20		60		
SHEET 8 OF 11	4,800	600	2,100			60		234
SHEET 9 OF 11	4,800	20	4,800			60		
SHEET 10 OF 11	4,800	80	4,500			60		
SHEET 11 OF 11	4,880	610	1,100			45		1,010
PROJECT TOTAL	50,550	3,380	34,290	131	8	603	160	2,670

SUMMARY OF SIGNING ITEMS

ITEM	618 6016	620 6008	624 6028	624 6006	636 6001	644 6001	644 6004	644 6030	644 6031	644 6076	658 6062	685 6004	685 6006	6350 6001	6350 6002
DESCRIPTION	CONDT (PVC)(SCH 40)(1")	ELEC CONDR (NO. 8) INSULATED	REMOVE GROUND BOX	GROUND BOX TY BATTERY (162915)W/APRON	ALUMINUM SIGNS (TY A)	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	IN SM RD SN SUP&AM TY10BWG(1)SA(T)	IN SM RD SN SUP&AM TYS80(1)SA(T)	IN SM RD SN SUP&AM TYS80(1)SA(T-2EXT)	REMOVE SM RD SN SUP&AM	INSTL DEL ASSM (D-SW)SZ 1(BRF)GF2(BI)	INSTL RDSD FLSH BCN ASSM (SOLAR PWRD)	REMOV RDSD FLSH BCN AM (SOLAR PWRD)	LEAD LED CHEVRON	LED CHEVRON
	LF	LF	EA	EA	SF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
SHEET 1 OF 11						2	2	1	1	6					
SHEET 2 OF 11						1	1			2					
SHEET 3 OF 11						1		1		1	8				
SHEET 4 OF 11	40	50	2	2	45	8		1		21		2	2	2	9
SHEET 5 OF 11						11		1		7					
SHEET 6 OF 11						4	1			5					
SHEET 7 OF 11						4				6					
SHEET 8 OF 11															
SHEET 9 OF 11															
SHEET 10 OF 11															
SHEET 11 OF 11						2				2					
PROJECT TOTAL	40	50	2	2	45	33	4	4	1	50	8	2	2	2	9

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

QUANTITY SUMMARY

SHEET 04 OF 05

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	18
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdas DATE: 11/29/2023 TIME: 1:29:46 PM SCALE: 1:00

SUMMARY OF SWP3 ITEMS										
ITEM	164 6034	164 6042	164 6044	168 6001	506 6002	506 6011	506 6038	506 6039	506 6041	506 6043
DESCRIPTION	DRILL SEEDING (PERM) (RURAL) (SANDY)	DRILL SEEDING (TEMP) (WARM)	DRILL SEEDING (TEMP) (COOL)	VEGETATIVE WATERING	ROCK FILTER DAMS (INSTALL) (TY 2)	ROCK FILTER DAMS (REMOVE)	TEMP SEDMT CONT FENCE (INSTALL)	TEMP SEDMT CONT FENCE (REMOVE)	BIODEG EROSN CONT LOGS (INSTL) (12")	BIODEG EROSN CONT LOGS (REMOVE)
	AC	AC	AC	MG	LF	LF	LF	LF	LF	LF
SHEET 1 OF 11	2	1	1	28	96	96	500	500	80	80
SHEET 2 OF 11	2	1	1	46					144	144
SHEET 3 OF 11	2	1	1	46	128	128			112	112
SHEET 4 OF 11	4	2	2	94	64	64	650	650	112	112
SHEET 5 OF 11	4	2	2	78					96	96
SHEET 6 OF 11	4	2	2	109					224	224
SHEET 7 OF 11	4	2	2	92	128	128	650	650	64	64
SHEET 8 OF 11	4	2	2	82	112	112	2,265	2,265	96	96
SHEET 9 OF 11	4	2	2	94			1,200	1,200	160	160
SHEET 10 OF 11	4	2	2	98	64	64	1,175	1,175	112	112
SHEET 11 OF 11	4	2	2	88	64	64	1,600	1,600	128	128
PROJECT TOTAL	38	19	19	855	656	656	8,040	8,040	1,328	1,328

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
QUANTITY SUMMARY

SHEET 05 OF 05

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	19
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 12:29:54 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100

TRAFFIC CONTROL PLAN GENERAL NOTES

1. AT ALL LOCATIONS, THE CONTRACTOR IS TO VERIFY ALL RIGHT-OF-WAY HAS BEEN CLEARED AND ALL CONFLICTING UTILITIES HAVE BEEN RELOCATED AND CLEARED FOR CONSTRUCTION PRIOR TO THE BEGINNING OF CONSTRUCTION.
2. PRIOR TO EACH PHASE OF CONSTRUCTION, PLACE AND MAINTAIN ADVANCED WARNING SIGNS, TRAFFIC CONTROL DEVICES, WORK ZONE PAVEMENT MARKINGS AND SIGNS IN ACCORDANCE WITH TRAFFIC CONTROL PLAN, TRAFFIC CONTROL STANDARDS, TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND GENERAL NOTES. THE SIGNS, TRAFFIC CONTROL AND WARNING DEVICES SHOWN ARE CONSIDERED MINIMUM AND ADDITIONAL SIGNS, TRAFFIC CONTROL OR WARNING DEVICES DEEMED NECESSARY BY THE ENGINEER OR DICTATED BY FIELD CONDITIONS SHALL BE PROVIDED ACCORDING TO ALL APPLICABLE STANDARDS AND TMUTCD. ADDITIONAL SIGNS OR TRAFFIC CONTROL DEVICES WILL NOT BE PAID DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 502-6001 "BARRICADES, SIGNS AND TRAFFIC HANDLING."
3. THE SEQUENCE OF CONSTRUCTION PROVIDED IS NOT TO BE CONSIDERED RESTRICTIVE. THE CONTRACTOR WITH WRITTEN APPROVAL OF THE ENGINEER, MAY ALTER THE SEQUENCE OF CONSTRUCTION PROVIDED THE TRAFFIC IS MAINTAINED AND THE CRITERIA ESTABLISHED HEREIN IS FOLLOWED.
4. THE CONTRACTOR SHALL ENSURE THAT ALL BARRICADES, SIGNS, CHANNELIZING DEVICES, AND TRAFFIC CONTROL DEVICES ARE MAINTAINED IN A CLEAN FUNCTIONAL CONDITION AT ALL TIMES.
5. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE THROUGHOUT THE DURATION OF THE PROJECT AND CORRECT ANY DRAINAGE DEFICIENCIES THAT PRESENT A HAZARD TO THE TRAVELING PUBLIC OR PROPERTY. THIS WORK WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 502-6001 "BARRICADES, SIGNS AND TRAFFIC HANDLING."
6. MAINTAIN ACCESS TO ALL SIDE STREETS AND ADJOINING PROPERTIES AT ALL TIMES. THIS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO VARIOUS BID ITEMS.
7. NO WORK SHALL BE PERFORMED IN THE TRAVEL WAY, INCLUDING LOADING AND UNLOADING OF TRUCKS.
8. IT IS CONTRACTOR'S RESPONSIBILITY TO MAINTAIN TEMPORARY AND/OR EXISTING PAVEMENT MARKINGS THROUGHOUT THE DURATION OF THE PROJECT.
9. CONTRACTOR SHALL MAINTAIN EXISTING MAILBOXES IN A CLEAN AND FUNCTIONAL CONDITION THROUGHOUT THE DURATION OF THE PROJECT. IF NEEDED, PROVIDE TEMPORARY MAILBOXES. THIS WILL NOT BE PAID FOR DIRECTLY BUT INCIDENTAL TO OTHER TCP ITEMS. ONCE COMPLETED SECTION IS BUILT, INSTALL NEW MAILBOX AS SHOWN IN THE PLANS.
10. CONTRACTOR WILL SUBMIT A CONSTRUCTION LIMIT PLAN FOR APPROVAL THAT ENSURES THE PAVEMENT CONSTRUCTED DURING THE DAY CAN BE OPENED TO TRAFFIC AT NIGHT WITHOUT THE USE OF FLAGGERS OR AS DIRECTED BY THE ENGINEER.
11. PLACE ADVANCE WARNING SIGNS FOR THE ENTIRE PROJECT IN ACCORDANCE WITH THE TXDOT BARRICADE AND CONSTRUCTION STANDARDS.
12. NOTIFY THE AREA ENGINEER (AE) IN WRITING (E-MAIL IS ACCEPTABLE) ONCE ALL TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED. COMMENCEMENT OF WORK WILL NOT BE AUTHORIZED NOR ALLOWED UNTIL THE AE NOTIFIES THE CONTRACTOR IN WRITING (E-MAIL IS ACCEPTABLE) TO PROCEED.
13. THE CONTRACTOR SHALL CONTACT ADJACENT PROPERTY OWNERS CONCERNING INGRESS AND EGRESS OF THEIR PROPERTY DURING CONSTRUCTION.
14. ADJUST STOP SIGNS AS NEEDED ON INTERSECTING STREETS DURING CONSTRUCTION. DO NOT REMOVE ANY EXISTING STOP SIGNS UNTIL TEMPORARY SIGNS ARE IN PLACE.
15. NOTIFY THE ENGINEER IN WRITING WHEN MAJOR TRAFFIC CHANGES ARE TO BE MADE. NOTIFICATIONS MUST BE GIVEN A MINIMUM OF THREE WORKING DAYS PRIOR TO THE CHANGE.
16. PLACE TEMPORARY EROSION CONTROL DEVICES AS SHOWN IN THE SW3P PLANS AND/OR AS DIRECTED BY THE ENGINEER BEFORE BEGINNING OF ANY OTHER WORK.
17. PROVIDE A MINIMUM OF 1-FT LATERAL OFFSET FROM THE TOE OF ALL CHANNELIZING DEVICES TO THE EDGE OF TRAVELED WAY. CONTRACTOR TO COORDINATE WITH THE ENGINEER IF NOT FEASIBLE.

SPECIAL NOTES

1. A MINIMUM 3:1 (H:V) TEMPORARY SAFETY SLOPE OF STABLE COMPACTED MATERIAL WILL BE REQUIRED TO PROTECT ALL DROP-OFF GREATER THAN 2" ALL TIMES DURING NON-WORKING HOURS.
2. SIGNING FOR PAVEMENT DROP-OFF (CW8-9aT) SHOULD BE INSTALLED IN ADVANCE TO THE CONDITION AND REPEATED EVERY 1 MILE.
3. SIGNING FOR UNEVEN LANES (CW 8-11) SHOULD BE INSTALLED IN ADVANCE TO THE CONDITION AND REPEATED EVERY 1 MILE. REFER TO STANDARD DRAWING WZ(UL)-13 FOR ADDITIONAL DETAILS.
4. PRIOR TO EXCAVATION, TOP 6" OF SOIL OF THE AREA TO BE EXCAVATED AND STOCKPILED IN A WINDROW PARALLEL TO THE ROW.
5. NO WORK WILL BE ALLOWED ON BOTH SIDES OF THE ROADWAY UNLESS SHOWN IN THE TCP PLANS OR AS DIRECTED BY THE ENGINEER.
6. MAXIMUM LANE CLOSURE WITH ONE LANE TRAFFIC CONTROL SHALL BE LIMITED TO 2 MILES. CONTRACTOR TO DIVIDE EACH PHASE INTO MULTIPLE SEGMENTS BASED ON FIELD CONDITION OR AS DIRECTED BY THE ENGINEER.
7. THE CONTRACTOR SHALL KEEP AND MAINTAIN THE ROADWAY CLEAN OF ANY DEBRIS AT ALL TIMES DURING ALL OPERATIONS AND COMPLETELY BROOM THE ROADWAY SURFACE BEFORE END OF EACH WORKDAY.
8. CONTRACTOR TO PLACE PORTABLE CHANGEABLE MESSAGE SIGN AT STA 76+50 FOR NORTHBOUND TRAFFIC AND AT STA 96+00 FOR SOUTHBOUND TRAFFIC.

SEQUENCE OF CONSTRUCTION

THE FOLLOWING NARRATIVE IS A SUPPLEMENT TO THE TRAFFIC CONTROL PLAN SHEETS. THE TRAFFIC CONTROL PLAN RECOMMENDS SEGMENTAL CONSTRUCTION TO BALANCE CONSTRUCTION EFFICIENCY WITH THE SAFETY AND CONVENIENCE OF THE TRAVELING PUBLIC AND ABUTTERS.

INSTALL ADVANCED WARNING SIGNS, TRAFFIC CONTROL DEVICES AND SW3P DEVICES FOR EACH PHASE PRIOR TO COMMENCEMENT OF CONSTRUCTION IN ACCORDANCE WITH APPROPRIATE TCP STANDARDS.

DURING CONSTRUCTION, THE CONSTRUCTION SPEED LIMIT ON FM 57 WILL BE REDUCED BY 10 MPH FROM PRE-CONSTRUCTION POSTED SPEED LIMIT.

PHASE 1 - WIDENING OF FM 57 SOUTHBOUND PAVEMENT

1. INSTALL NECESSARY TRAFFIC CONTROL DEVICES. INSTALL STORM WATER POLLUTION PREVENTION DEVICES IN ACCORDANCE WITH SW3P PLANS.
2. SHIFT NORTHBOUND AND SOUTHBOUND FM 57 TRAFFIC TO THE NORTHBOUND LANE USING ONE-LANE TWO-WAY OPERATIONS CONTROLLED BY PILOT CAR AND FLAGGERS PER TXDOT STANDARD TCP(1-2)-18 OR TCP(2-2)-18.
3. SAWCUT AND EXCAVATE AREA TO BE WIDENED.
4. CONSTRUCT WIDENING AS WELL AS DRIVEWAYS AND SIDE STREETS ON THE SOUTHBOUND SIDE OF FM 57 IN ACCORDANCE WITH PROPOSED TCP TYPICAL SECTIONS.
5. RETURN TRAFFIC TO TWO-LANE OPERATIONS DURING NON-CONSTRUCTION HOURS.

PHASE 2 - WIDENING OF FM 57 NORTHBOUND PAVEMENT

1. INSTALL NECESSARY TRAFFIC CONTROL DEVICES. INSTALL STORM WATER POLLUTION PREVENTION DEVICES IN ACCORDANCE WITH SW3P PLANS.
2. SHIFT NORTHBOUND AND SOUTHBOUND FM 57 TRAFFIC TO THE SOUTHBOUND LANE USING ONE-LANE TWO-WAY OPERATIONS CONTROLLED BY PILOT CAR AND FLAGGERS PER TXDOT STANDARD TCP(1-2)-18 OR TCP(2-2)-18.
3. SAWCUT AND EXCAVATE AREA TO BE WIDENED.
4. CONSTRUCT WIDENING AS WELL AS DRIVEWAYS AND SIDE STREETS ON THE NORTHBOUND SIDE OF FM 57 IN ACCORDANCE WITH PROPOSED TCP TYPICAL SECTIONS.
5. RETURN TRAFFIC TO TWO-LANE OPERATIONS DURING NON-CONSTRUCTION HOURS.

FINAL PHASE

1. PLACE FINAL COURSE SURFACE TREATMENT USING TXDOT STANDARD TCP(SC-1)-22 FOR THE ENTIRE PROJECT. PLACE TEMPORARY REFLECTIVE ROADWAY MARKER TABS AS WORK PROGRESSES PER TXDOT STANDARD TCP(SC-7)-22.
2. CONSTRUCTION ACTIVITY WILL BE LIMITED TO WORK ABLE TO BE COMPLETED IN ONE WORKING DAY OR AS DIRECTED BY THE ENGINEER. RETURN TRAFFIC TO TWO-LANE OPERATIONS DURING NON-CONSTRUCTION HOURS.
3. PLACE FINAL STRIPING AND ALL OTHER APPURTENANCES REQUIRED TO COMPLETE FM 57 TO THE FINAL CONFIGURATION AS SHOWN IN THE PLANS AND STANDARDS.
4. PERFORM FINAL CLEANUP OPERATIONS AND COMPLETE ALL PUNCH LIST ITEMS. REMOVE ALL TRAFFIC CONTROL DEVICES.

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

TRAFFIC CONTROL PLAN NARRATIVE

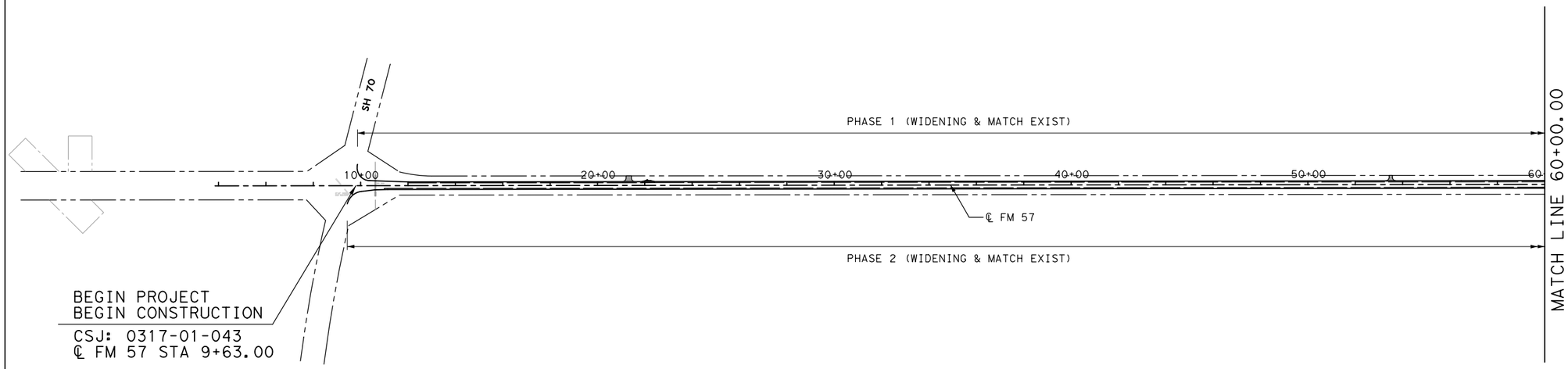
SHEET 01 OF 01

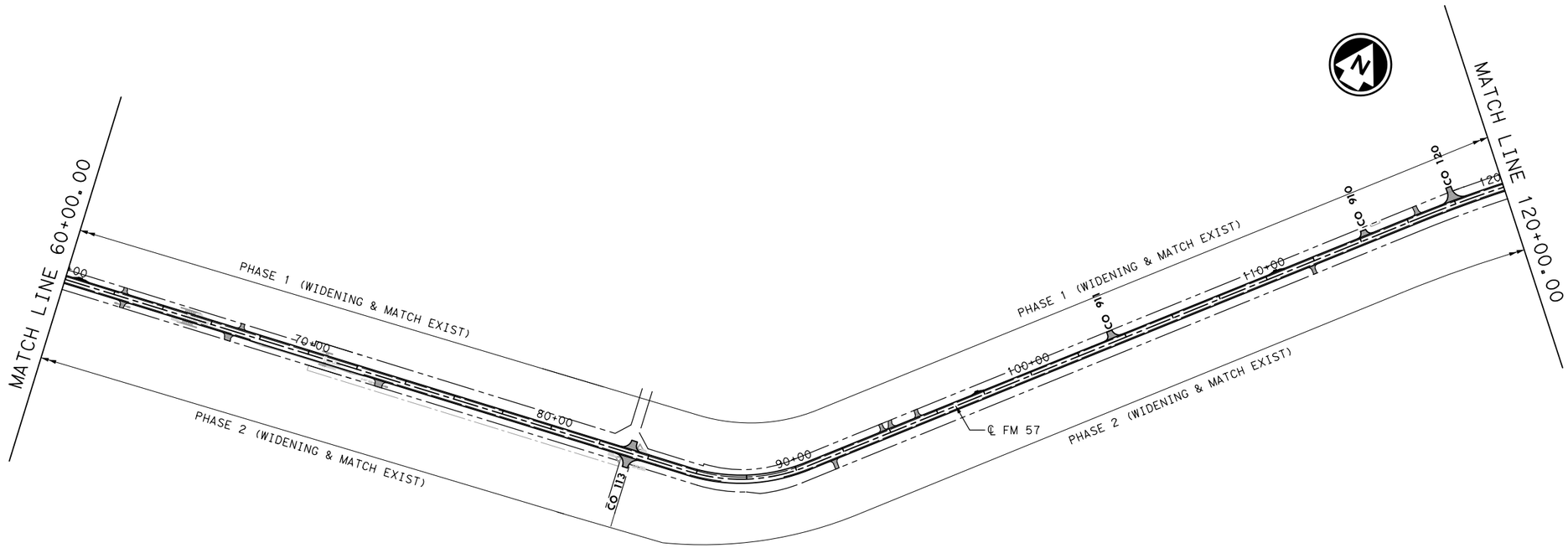
DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	20
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdas DATE: 11/29/2023 TIME: 1:30:00 PM SCALE: 1:1

NOTES:

1. CONTRACTOR TO DIVIDE EACH PHASE INTO MULTIPLE SEGMENTS BASED ON FIELD CONDITION OR AS DIRECTED BY THE ENGINEER. MAXIMUM LANE CLOSURE WITH ONE LANE TRAFFIC CONTROL SHALL BE LIMITED TO 2 MILES.





STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

OVERALL CONSTRUCTION SEQUENCE LAYOUT

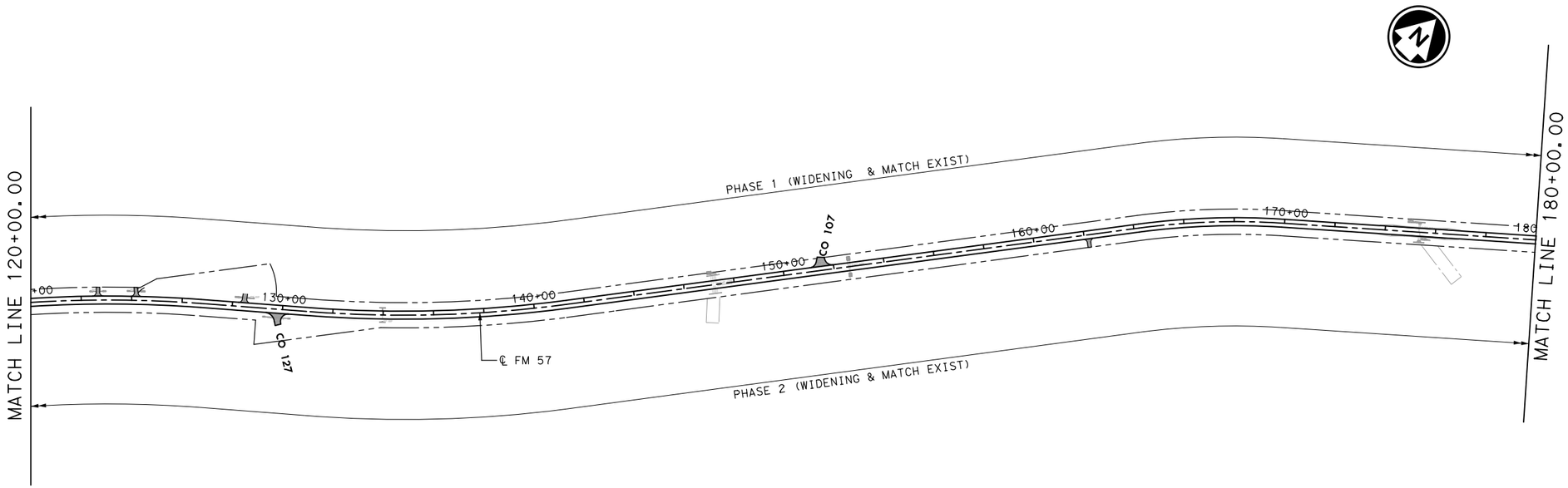
BEGIN TO STA 120+00

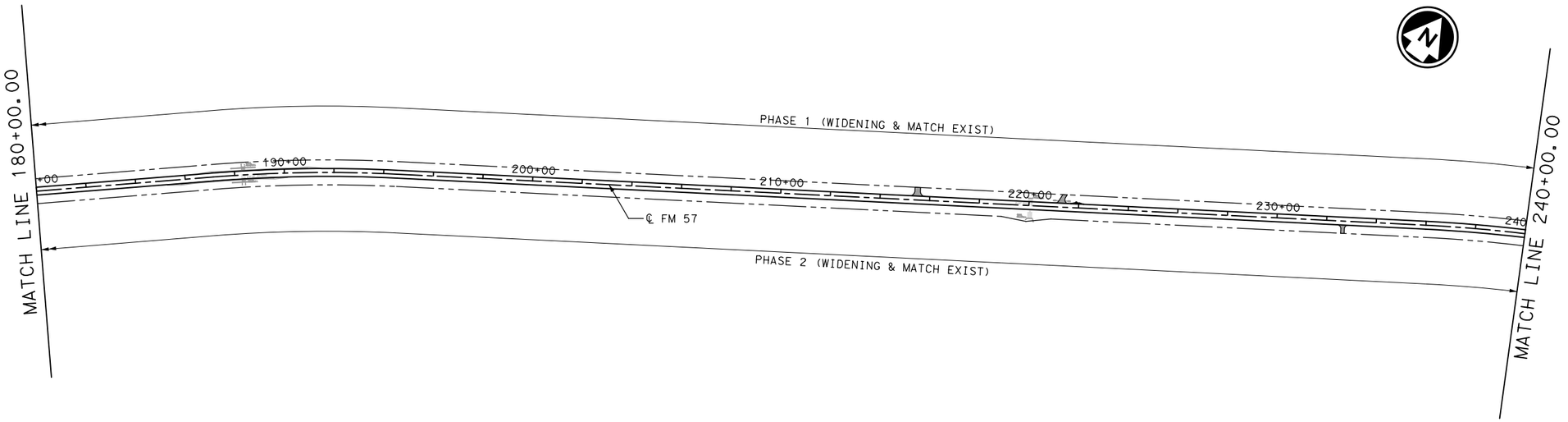
SHEET 01 OF 03

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	21
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

NOTES:

1. CONTRACTOR TO DIVIDE EACH PHASE INTO MULTIPLE SEGMENTS BASED ON FIELD CONDITION OR AS DIRECTED BY THE ENGINEER. MAXIMUM LANE CLOSURE WITH ONE LANE TRAFFIC CONTROL SHALL BE LIMITED TO 2 MILES.





0′ 125′ 250′ 500′
SCALE IN FEET

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

OVERALL CONSTRUCTION SEQUENCE LAYOUT

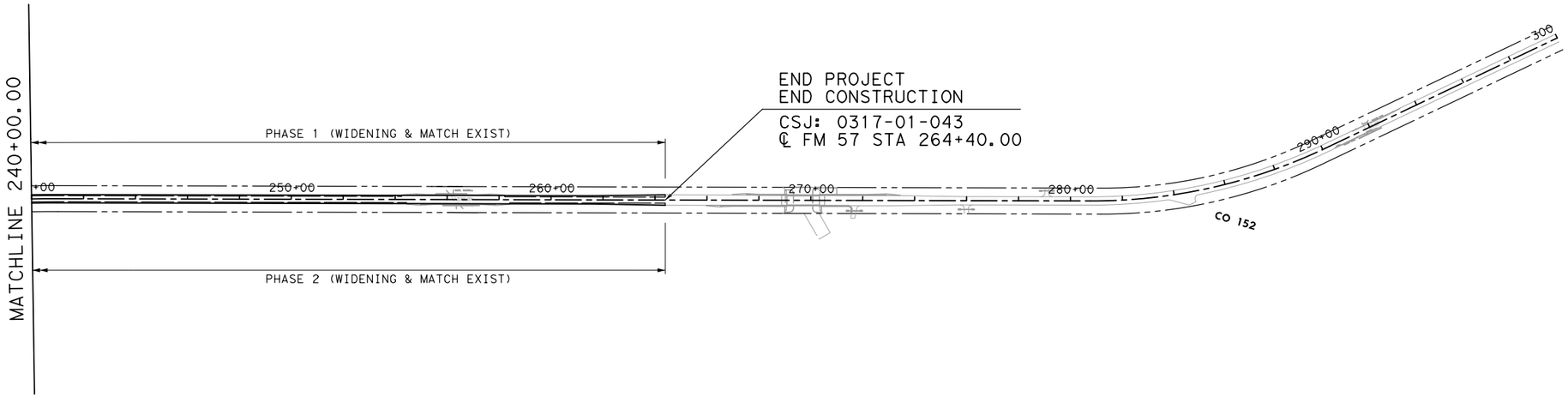
STA 120+00 TO STA 240+00

SHEET 02 OF 03

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	22
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

NOTES:

1. CONTRACTOR TO DIVIDE EACH PHASE INTO MULTIPLE SEGMENTS BASED ON FIELD CONDITION OR AS DIRECTED BY THE ENGINEER. MAXIMUM LANE CLOSURE WITH ONE LANE TRAFFIC CONTROL SHALL BE LIMITED TO 2 MILES.



0′ 125′ 250′ 500′
SCALE IN FEET

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
OVERALL CONSTRUCTION SEQUENCE LAYOUT
STA 240+00 TO END

SHEET 03 OF 03

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	23
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

① OBEY WARNING SIGNS STATE LAW
R20-3T
48" x 42"

② STAY ALERT
TALK OR TEXT LATER
G20-10T
60" x 48"

③ BEGIN WORK ZONE — G20-9TP 24" x 24"
TRAFFIC FINES DOUBLE — R20-5T 24" x 30"
WHEN WORKERS ARE PRESENT — R20-5aTP 24" x 12"

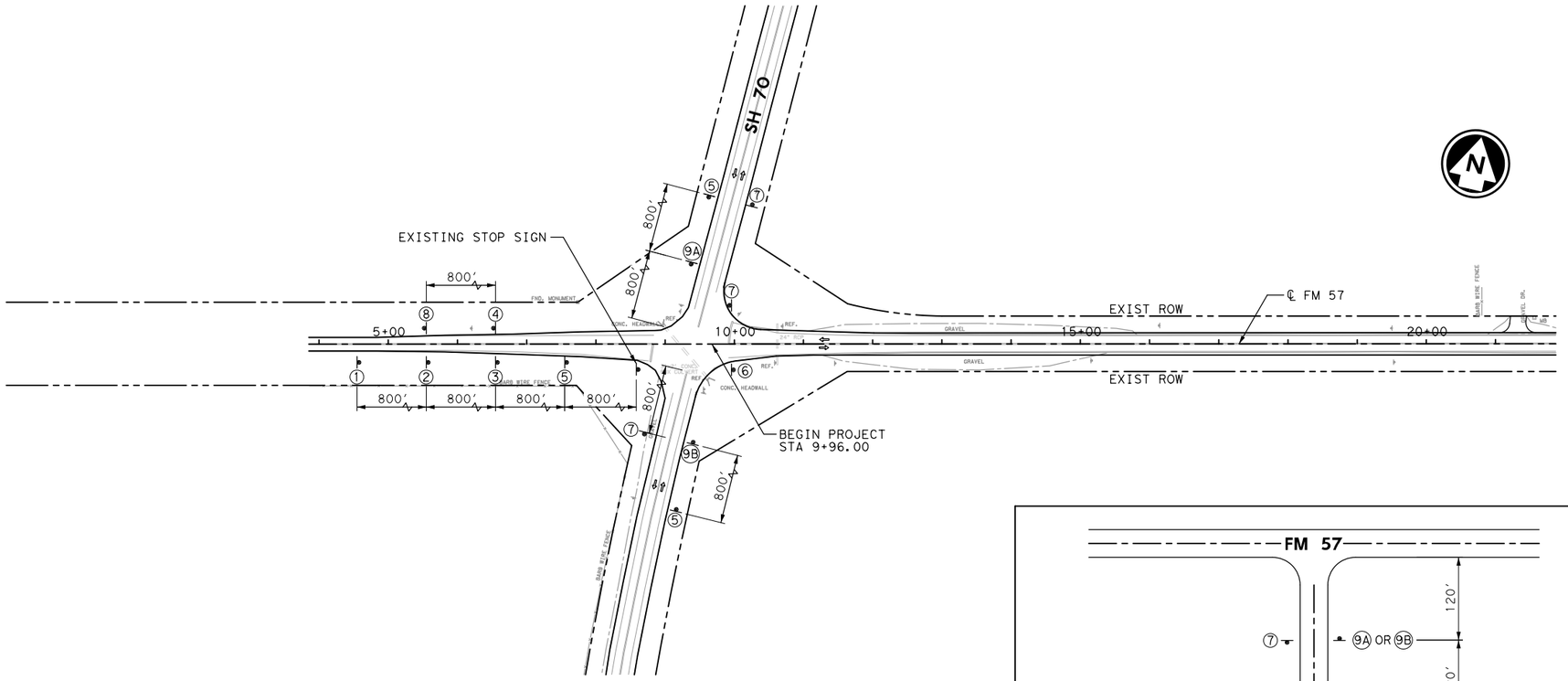
④ SPEED LIMIT 50
R2-1
30" x 36"

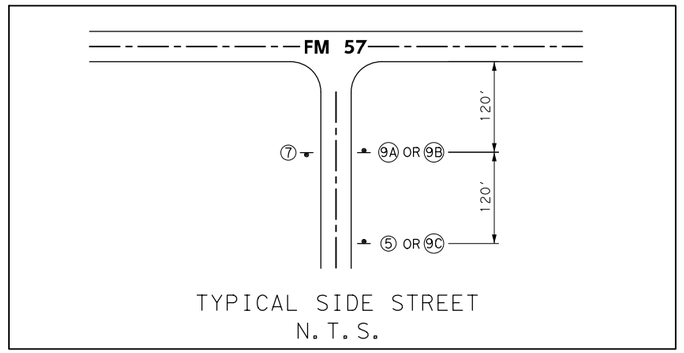
⑤ ROAD WORK AHEAD
CW20-1D
48" x 48"

⑥ BEGIN ROAD WORK NEXT X MILES — G20-5T 48" x 24"
NAME
ADDRESS
CITY
STATE
CONTRACTOR — G20-6T 48" x 30"

0′ 50′ 100′ 200′
SCALE IN FEET

LEGEND:
PROPOSED SIGN





TYPICAL SIDE STREET
N.T.S.

⑦ END ROAD WORK
G20-2
36" x 18"

⑧ END WORK ZONE
G20-2bT
36" x 18"

9A ROAD WORK ⇦ NEXT X MILES
G20-1bTL
72" x 24"

9B ROAD WORK NEXT X MILES ⇨
G20-1bTR
72" x 24"

9C ROAD WORK ⇦ NEXT X MILES NEXT X MILES ⇨
G20-1aT
72" x 24"

NOTES:

1. REFER TO BC STANDARDS FOR ADDITIONAL INFORMATION.
2. ADDITIONAL SIGNS AND TRAFFIC HANDLING MAY BE NECESSARY TO COMPLETE THE WORK AND WILL BE CONSIDERED SUBSIDIARY TO ITEM 502-6001, BARRICADES, SIGNS, AND TRAFFIC HANDLING.

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
TRAFFIC CONTROL PLAN
ADVANCE WARNING SIGNS

SCALE: 1"=200′ SHEET 01 OF 02

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	24
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:30:25 PM USER: Rdos PENTABLE: FM57_REVISE.tbl SCALE: 1:200

① OBEY WARNING SIGNS STATE LAW
R20-3T
48" x 42"

② STAY ALERT
TALK OR TEXT LATER
G20-10T
60" x 48"

③ BEGIN WORK ZONE — G20-9TP 24" x 24"
TRAFFIC FINES DOUBLE — R20-5T 24" x 30"
WHEN WORKERS ARE PRESENT — R20-5aTP 24" x 12"

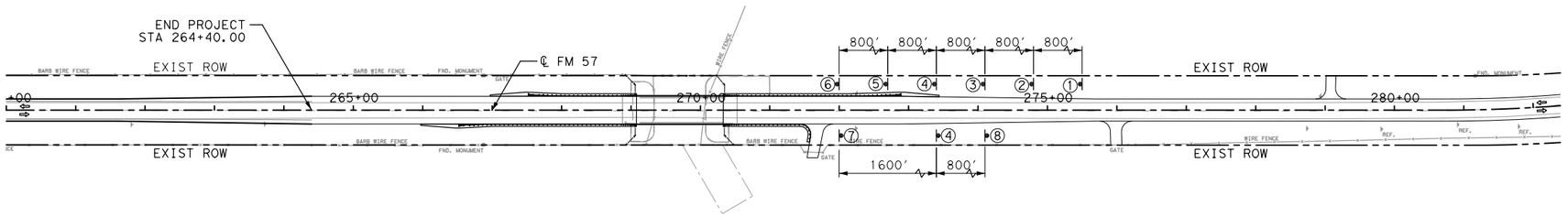
④ SPEED LIMIT 50
R2-1
30" x 36"

⑤ ROAD WORK AHEAD
CW20-1D
48" x 48"

⑥ BEGIN ROAD WORK NEXT X MILES — G20-5T 48" x 24"
NAME
ADDRESS
CITY
STATE
CONTRACTOR — G20-6T 48" x 30"

0′ 50′ 100′ 200′
SCALE IN FEET

LEGEND:
PROPOSED SIGN



⑦ END ROAD WORK
G20-2
36" x 18"

⑧ END WORK ZONE
G20-2bT
36" x 18"

NOTES:

1. REFER TO BC STANDARDS FOR ADDITIONAL INFORMATION.
2. ADDITIONAL SIGNS AND TRAFFIC HANDLING MAY BE NECESSARY TO COMPLETE THE WORK AND WILL BE CONSIDERED SUBSIDIARY TO ITEM 502-6001, BARRICADES, SIGNS, AND TRAFFIC HANDLING.

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

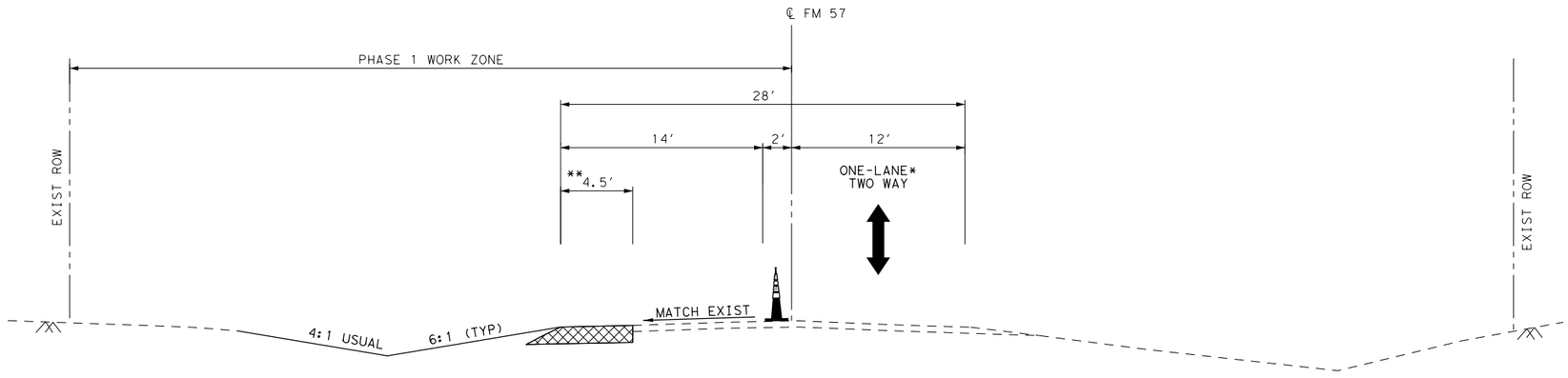
SH 70 TO PLUM CREEK

FM 57
TRAFFIC CONTROL PLAN
ADVANCE WARNING SIGNS

SCALE: 1"=200′ SHEET 02 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	25
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

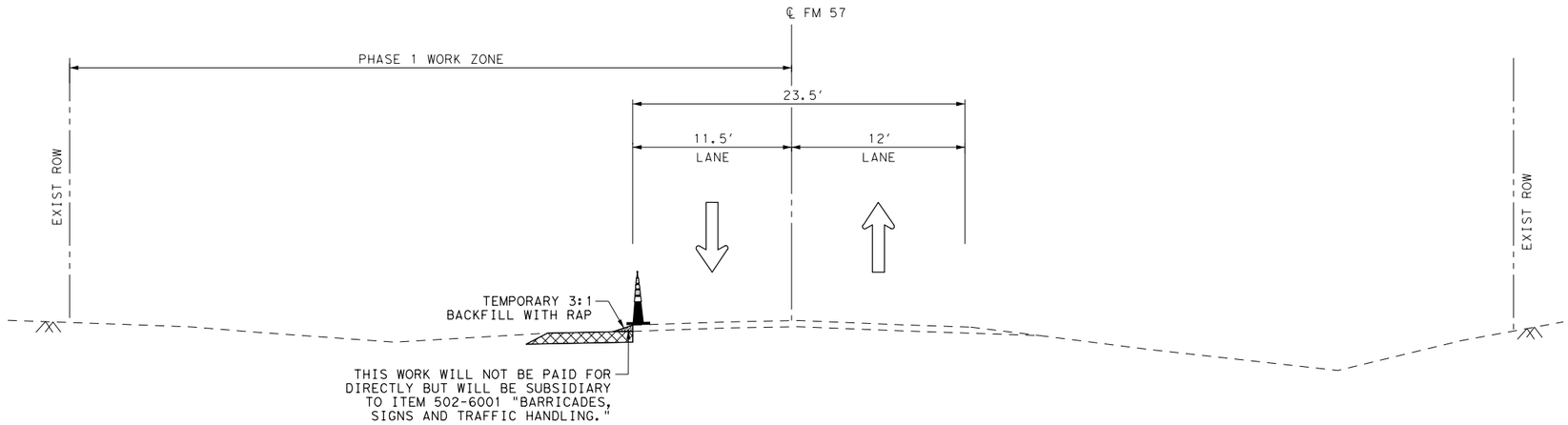
PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:30:31 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:200



PHASE 1 - WIDENING AND MATCH EXISTING
(DAY)

* TRAFFIC CONTROL WITH FLAGGERS USING STANDARD TCP(1-2)-18 OR TCP(2-2)-18 DURING CONSTUCTION WORK HOURS.

** FROM STA 85+00 TO STA 92+00 WIDENING VARIES FROM 4.5' TO 8'. DURING THIS PHASE EXISTING CENTERLINE STRIPING WILL BE UTILIZED.



PHASE 1 - WIDENING AND MATCH EXISTING
(NIGHT)

LEGEND

- PAVEMENT BUILT THIS PHASE
- PAVEMENT BUILT PREVIOUS PHASE
- TRAFFIC DIRECTION
- CHANNELIZING DEVICE (CONE)

NOTES:

1. REFER TO SEQUENCE OF CONSTRUCTION FOR ADDITIONAL INFORMATION.
2. A MINIMUM 3:1 (H:V) TEMPORARY SAFETY SLOPE OF STABLE COMPACTED MATERIAL WILL BE REQUIRED TO PROTECT ALL DROP-OFFS GREATER THAN 1" AT ALL TIMES DURING NON-WORKING HOURS.

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

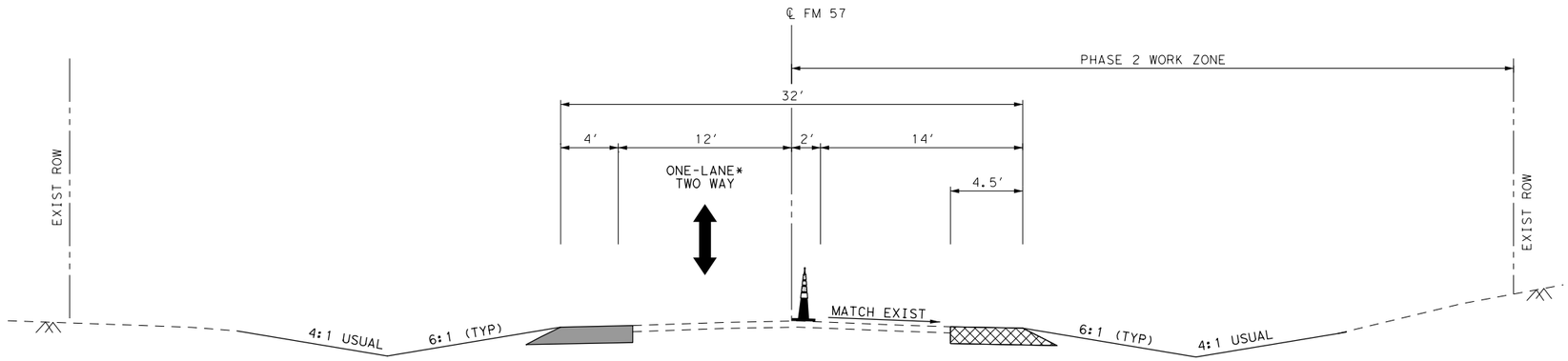
SH 70 TO PLUM CREEK

FM 57
TRAFFIC CONTROL PLAN
TYPICAL SECTION PHASE 1

SHEET 01 OF 01

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	26
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:30:36 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:10



PHASE 2 - WIDENING AND MATCH EXISTING
(DAY)

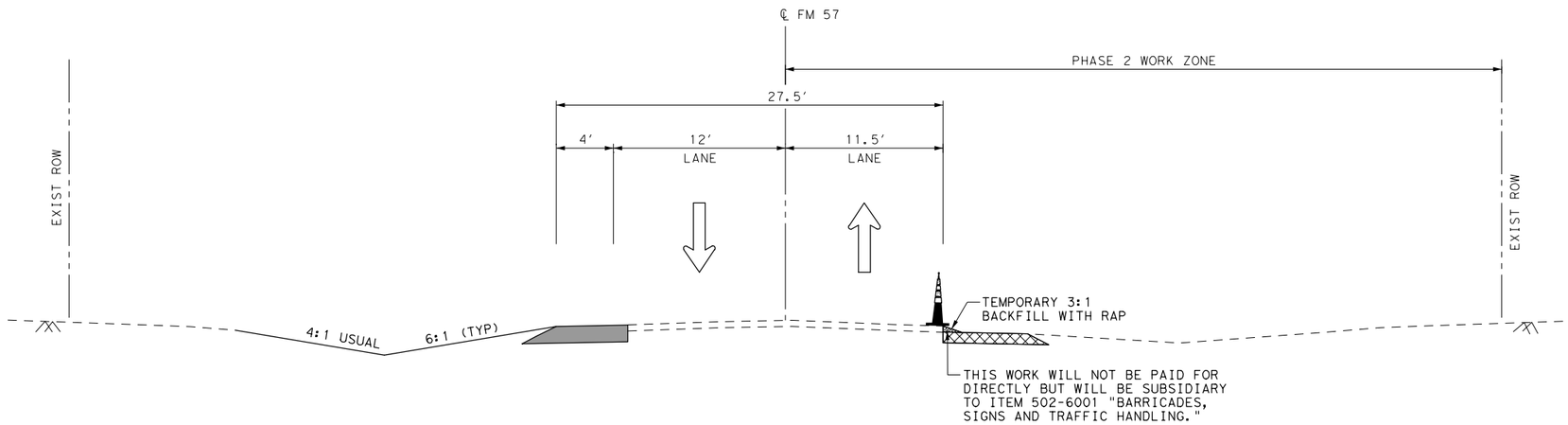
* TRAFFIC CONTROL WITH FLAGGERS USING STANDARD TCP(1-2)-18 OR TCP(2-2)-18 DURING CONSTUCTION WORK HOURS.

LEGEND

- PAVEMENT BUILT THIS PHASE
- PAVEMENT BUILT PREVIOUS PHASE
- TRAFFIC DIRECTION
- CHANNELIZING DEVICE (CONE)

NOTES:

1. REFER TO SEQUENCE OF CONSTRUCTION FOR ADDITIONAL INFORMATION.
2. A MINIMUM 3:1 (H:V) TEMPORARY SAFETY SLOPE OF STABLE COMPACTED MATERIAL WILL BE REQUIRED TO PROTECT ALL DROP-OFFS GREATER THAN 1" AT ALL TIMES DURING NON-WORKING HOURS.



PHASE 2 - WIDENING AND MATCH EXISTING
(NIGHT)

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdas DATE: 11/29/2023 TIME: 1:30:43 PM SCALE: 1:10

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

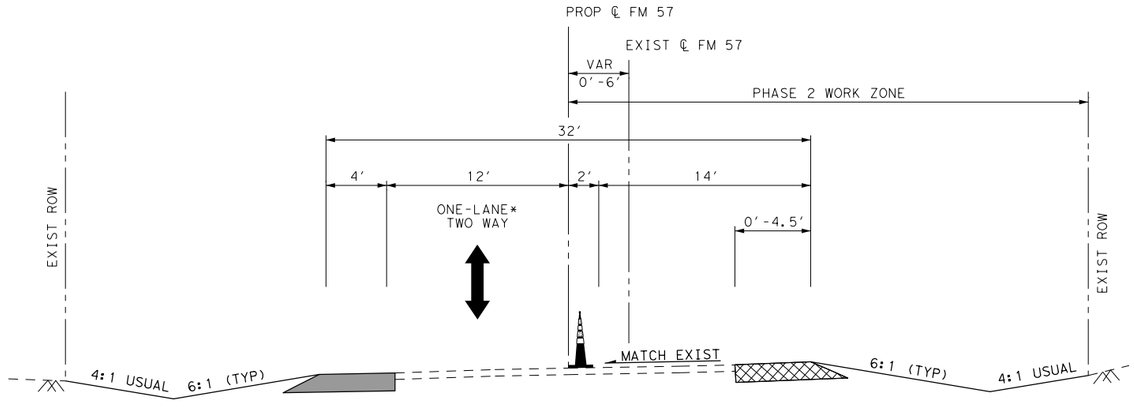
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
TRAFFIC CONTROL PLAN
TYPICAL SECTION PHASE 2

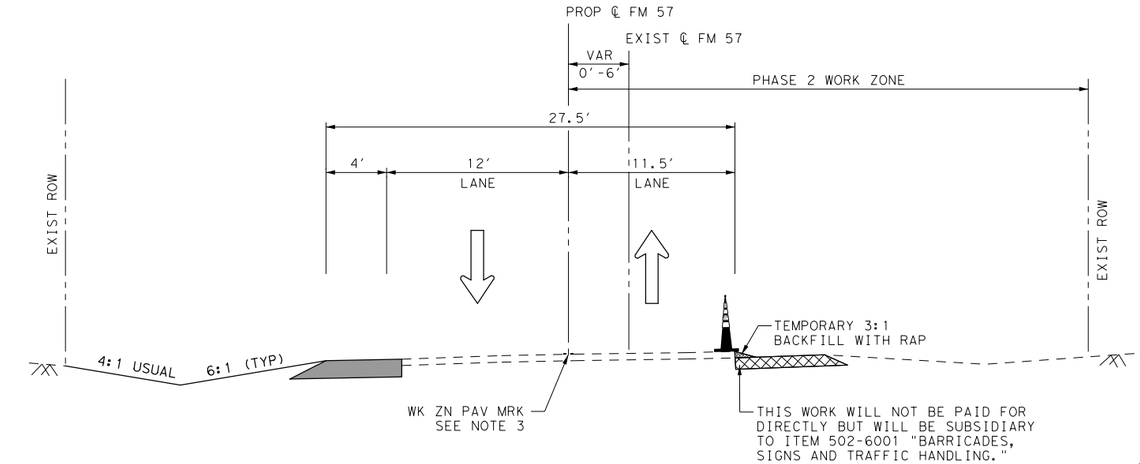
SHEET 01 OF 01

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	27
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

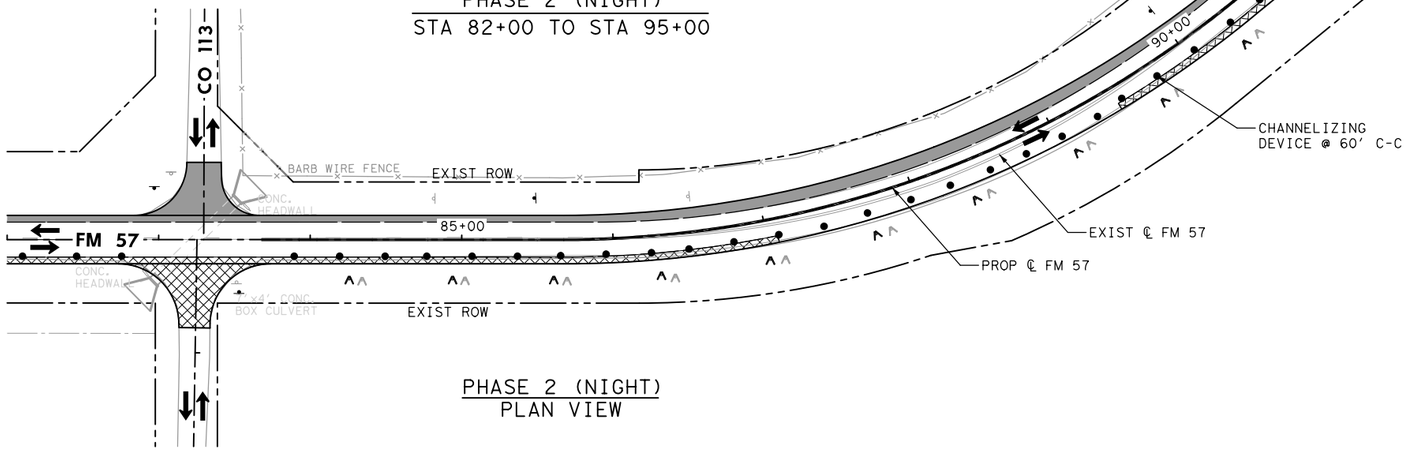


PHASE 2 (DAY)
STA 82+00 TO STA 95+00

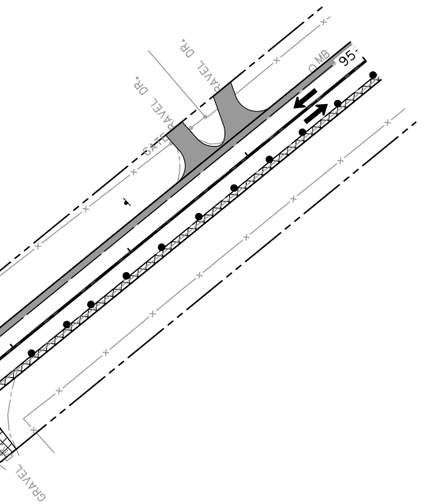
* TRAFFIC CONTROL WITH FLAGGERS USING STANDARD TCP(1-2)-18 OR TCP(2-2)-18 DURING CONSTUCTION WORK HOURS.



PHASE 2 (NIGHT)
STA 82+00 TO STA 95+00



PHASE 2 (NIGHT)
PLAN VIEW



0′ 25′ 50′ 100′
SCALE IN FEET

LEGEND

- PAVEMENT BUILT THIS STEP
- PAVEMENT BUILT PREVIOUS STEP
- CHANNELIZING DEVICE
- SIGN
- DIRECTION OF TRAFFIC

NOTES:

1. CONTRACTOR TO ELIMINATE EXISTING CENTERLINE DBL YELLOW STRIPING FROM STA 83+70 TO STA 95+00 AND PLACE TEMPORARY STRIPING FOLLOWING FINAL STRIPING PLAN FOR THIS AREA PRIOR TO WORKING ON THIS AREA DURING PHASE 2.
2. CONTRACTOR TO USE STANDARD DRAWING TCP(1-2)-18 OR TCP(2-2)-18 FOR ONE-LANE TWO-WAY TRAFFIC CONTROL DURING CONTRUCTION WORK HOURS.
3. REMOVE EXISTING CENTERLINE STRIPING PRIOR TO BEGIN WORKING IN THIS AREA.

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER

Ramendra N. Das

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
TRAFFIC CONTROL PLAN
PHASE 2
STA 82+00 TO STA 95+00

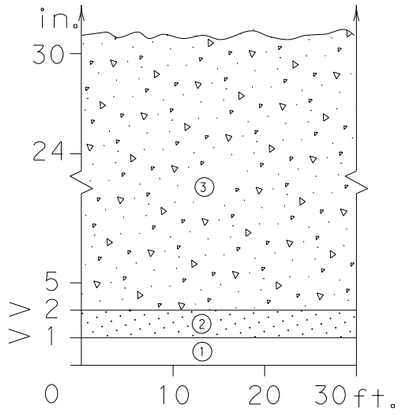
SCALE 1"=100′ SHEET 01 OF 01

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	28
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

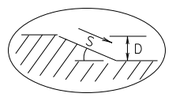
PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:30:50 PM SCALE: 1:100
USER: Rdas PENTABLE: FM57_REVISE.tbl

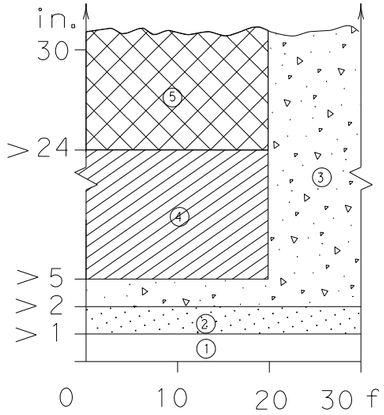
DEFINITION OF TREATMENT ZONES FOR VARIOUS EDGE CONDITIONS

Edge Height (D) in Inches versus Lateral Clearance (Y) in Feet

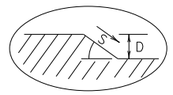


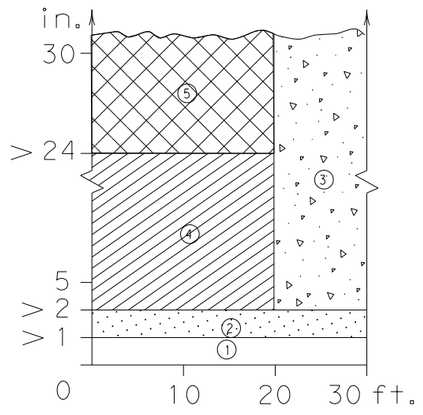
Edge Condition I
S = (3:1) (or flatter)



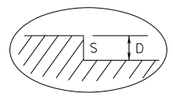


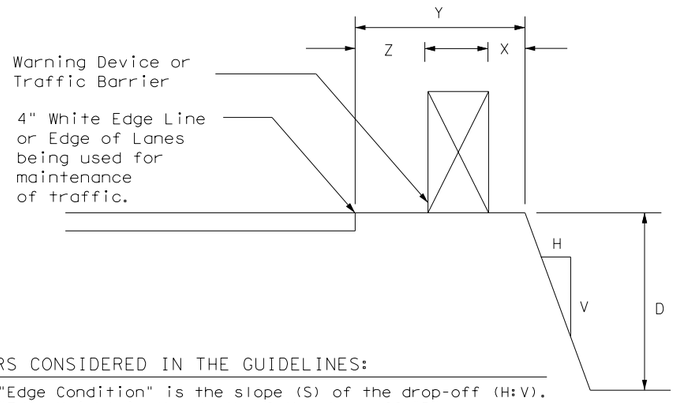
Edge Condition II
S = ((2.99):1) to (1:1)





Edge Condition III
S is steeper than (1:1)





FACTORS CONSIDERED IN THE GUIDELINES:

1. The "Edge Condition" is the slope (S) of the drop-off (H:V). The "Edge Height is the depth of the drop-off "D".

2. Distance "X" is to be the maximum practical under job conditions. Two feet minimum for high speed conditions. Distance "Y" is the lateral clearance from edge of travel lane to edge of dropoff. Distance "Z" does not have a minimum.

3. In addition to the factors considered in the guidelines, each construction zone drop-off situation should be analyzed individually, taking into account other variables, such as: traffic mix, posted speed in the construction zone, horizontal curvature, and the practicality of the treatment options.

4. The conditions for indicating the use of positive or protective barriers are given by Zone-5 and Figure-1. Traffic barriers are primarily applicable for high speed conditions. Urban areas with speeds of 30 mph or less may have a lesser need for signing, delineation, and barriers. Right-angled edges, however, with "D" greater than 2 inches and located within a lateral offset of 6 feet, may indicate a higher level of treatment.

5. If the distance "Y" must be less than 3 feet, the use of a positive barrier may not be feasible. In such a case, consider either: 1) narrowing the lanes to a desired 11 to 12 feet or 10 foot minimum (see CW20-8 sign), or 2) provide an edge slope such as Edge Condition I.

Zone	Treatment Types Guidelines:
①	No treatment
②	CW 8-11 "Uneven Lanes" signs.
③	CW 8-9a Shoulder Drop-Off" or CW 8-11 signs plus vertical panels.
④	CW8-9a or CW 8-11, signs plus drums. Where restricted space precludes the use of drums, use vertical panels. An edge slope to that of the profered Edge Condition I.
⑤	Check indications (Figure-1) for possitive barrier. Where positive barrier is not indicated, the treatment shown above for Zone-4 may be used after consideration of other applicable factors.

Edge Condition Notes:

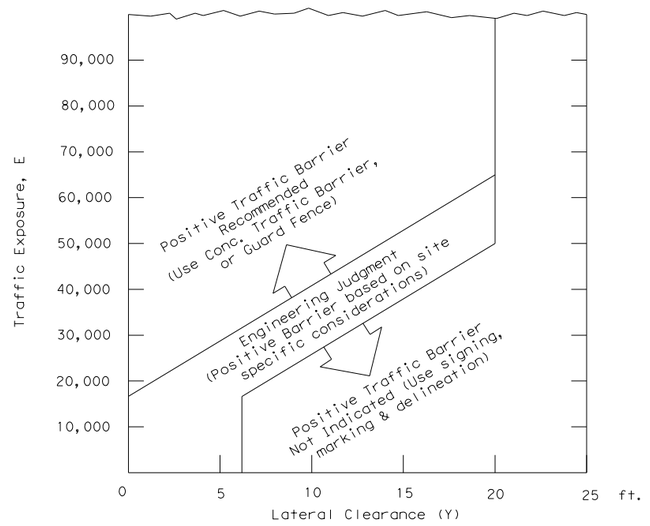
1. Edge Condition I: Most vehicles are able to traverse an edge condition with a slope rate of (3 to 1) or flatter. The slope must be constructed with a compacted material capable of supporting vehicles.

2. Edge Condition II: Most vehicles are able to traverse an edge condition with a slope between (2.99 to 1) and (1 to 1) so long as "D" does not exceed 5 inches. Under-carriage drag on most automobiles will occur when "D" exceeds 6 inches. As "D" exeeds 24 inches, the possibility for rollover is greater in most vehicles.

3. Edge Condition III: When slopes are greater than (1 to 1) and where "D" is greater than 2 inches, a more difficult control factor may exist for some vehicles, if not properly treated. For example, where "D" is greater than 2 inches and up to 24 inches different types of vehicles may experience different steering control at different edge heights. Automobiles might experience more steering control differential when "D" is greater than 2 inches and up to 5 inches. Trucks, particularly those with high loads, have more steering control differential when "D" is greater than 5 inches and up to 24 inches. When "D" exceeds 24 inches, the possibility of rollover is greater for most vehicles.

4. Milling or overlay operations that result in Edge Condition III should not be in place without appropriate warning treatments, and these conditions should not be left in place for extended periods of time.

FIGURE-1: CONDITIONS INDICATING USE OF POSITIVE BARRIER FOR ZONE 5 (▨)



1. E = ADT x T
   Where ADT is that portion of the average daily traffic volume traveling within 20 feet (generally two adjacent lanes) of the edge dropoff condition; and, T is the duration time in years of the dropoff condition.

2. Figure-1 provides a practical approach to the use of positive barriers for the protection of vehicles from pavement drop-offs. Other factors, such as the presence of heavy machinery, construction workers, or the mix and volume of traffic may make the use of positive barriers appropriate, even when the edge condition alone may not justify the use of a barrier.

3. An approved end treatment should be provided for any positive barrier end located within the clear zone.

These guidelines apply to temporary traffic control areas or work zones where continuous pavement edges or drop-offs exists parallel and adjacent to a lane used by traffic. The edge conditions may be present between shoulders and travel lanes, between adjacent or opposing travel lanes, or at intermediate points across the width of the paved surface. Due to the variability in construction operations, tolerances in the variables may be allowed by the engineer. These guidelines do not apply to short term operations. These guidelines do not constitute a rigid standard or policy; rather, they are guidance to be used in conjunction with engineering judgement. These guidelines may be updated on the Design Division's on-line manuals.

Engineer's Seal

STATE OF TEXAS
RAMENDRA N. DAS
98635
LICENSED
PROFESSIONAL ENGINEER

Ramendra N. Das

11/29/2023

Texas Department of Transportation

Traffic Safety Division Standard

TREATMENT FOR VARIOUS EDGE CONDITIONS

FILE: edgecon.dgn	DN:	CK:	DW:	CK:
©TxDOT August 2000	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
03-01 08-01 9-21	DIST	COUNTY		SHEET NO.
	ABL	FISHER		29

DATE: 11/29/2023 1:30:57 PM
FILE: FM57_EDGECON-21.dgn

BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).

2. The development and design of the Traffic Control Plan (TCP)is the responsibility of the Engineer.

3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.

4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.

5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.

6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.

7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.

8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.

10. Where highway construction or maintenance work is being undertaken, other than mobile operations as defined by the Texas Manual on Uniform Traffic Control Devices, CSJ limit signs are required. CSJ limit signs are shown on BC(2). The OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits. For mobile operations, CSJ limit signs are not required.

11. Traffic control devices should be in place only while work is actually in progress or a definite need exists.

12. The Engineer has the final decision on the location of all traffic control devices.

13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY NOTES:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.

2. Except in emergency situations, flagger stations shall be illuminated when flagging is used at night.

COMPLIANT WORKZONE TRAFFIC CONTROL DEVICES

1. Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources.

2. Work zone traffic control devices shall be compliant with the Manual for Assessing safety Hardware (MASH).

THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT http://www.txdot.gov
COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)
DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)
MATERIAL PRODUCER LIST (MPL)
ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"
STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)
TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)
TRAFFIC ENGINEERING STANDARD SHEETS

Texas Department of Transportation

Traffic Safety Division Standard

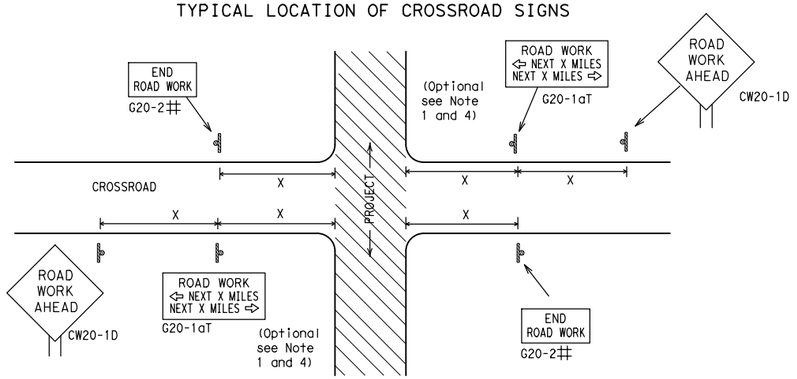
BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-03 7-13	0317	01	043	FM 57
9-07 8-14	DIST	COUNTY		SHEET NO.
5-10 5-21	ABL	FISHER		30

DATE: 11/29/2023 1:31:05 PM
FILE: 1_bc-21.dgn

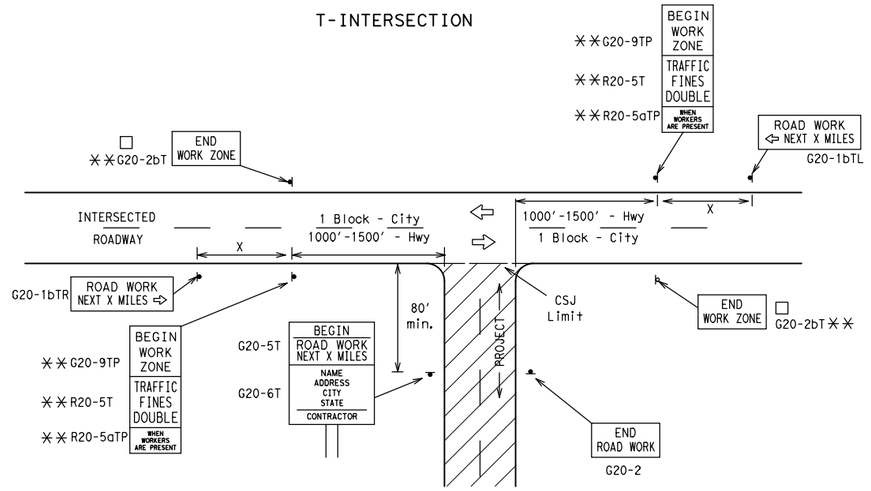
TYPICAL LOCATION OF CROSSROAD SIGNS



May be mounted on back of "ROAD WORK AHEAD"(CW20-1D) sign with approval of Engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D)sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK"(G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume as per TMUTCD Part 5. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES"(G20-1aT)sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection, the Contractor shall place the "CONTRACTOR NAME"(G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow(G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR)" signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING[1,5,6]

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20[4] CW21 CW22 CW23 CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign △ Spacing "X"
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500[2]
60	600[2]
65	700[2]
70	800[2]
75	900[2]
80	1000[2]
✳	✳[3]

✳ For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

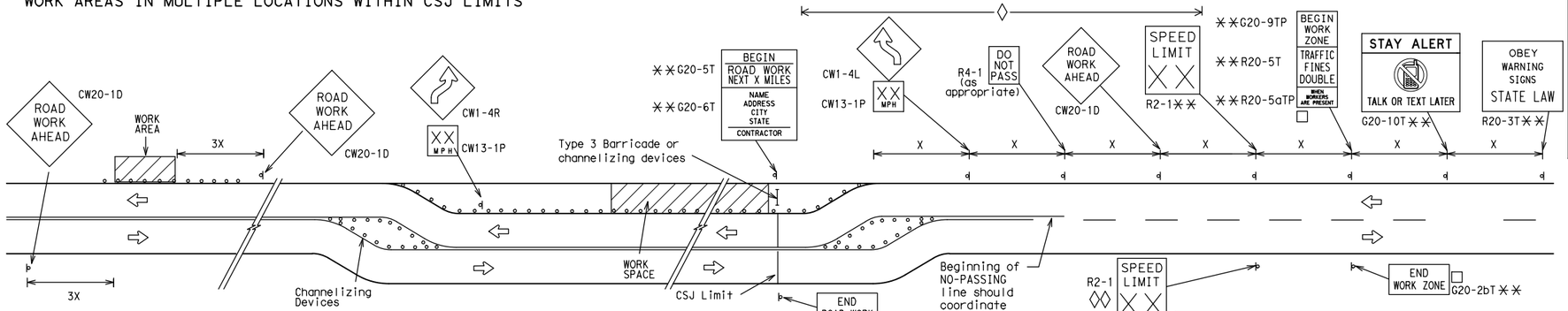
△ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D)signs may be used on low volume crossroads at the discretion of the Engineer as per TMUTCD Part 5. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

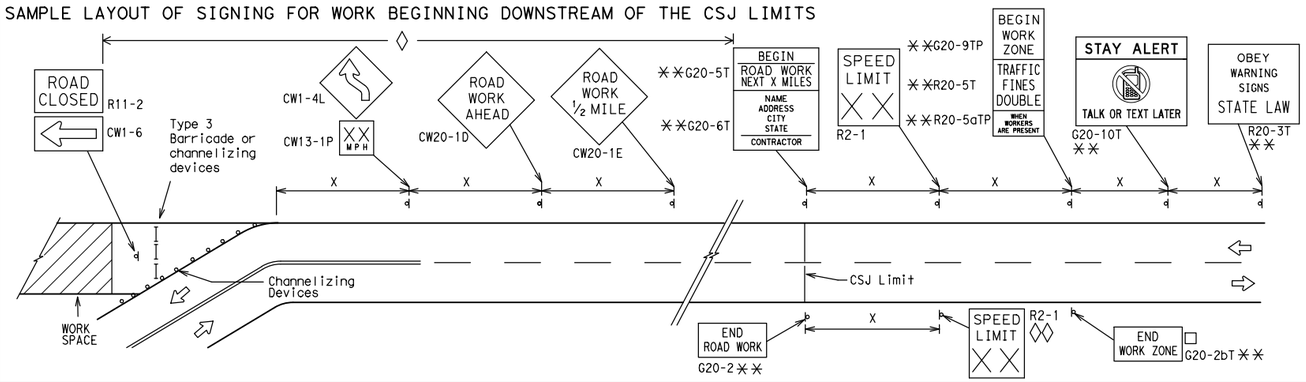
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS



When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD"(CW20-1D)signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES"(G20-5T)sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

□ The "BEGIN WORK ZONE"(G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

✳✳ CSJ limit signing is required for highway construction and maintenance work, with the exception of mobile operations.

◊ Area for placement of "ROAD WORK AHEAD" (CW20-1D)sign and other signs or devices as called for on the Traffic Control Plan.

◊◊ Contractor will install a regulatory speed limit sign at the end of the work zone.

LEGEND	
⊢⊣	Type 3 Barricade
○ ○ ○	Channelizing Devices
▬	Sign
X	See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ABL	FISHER		31

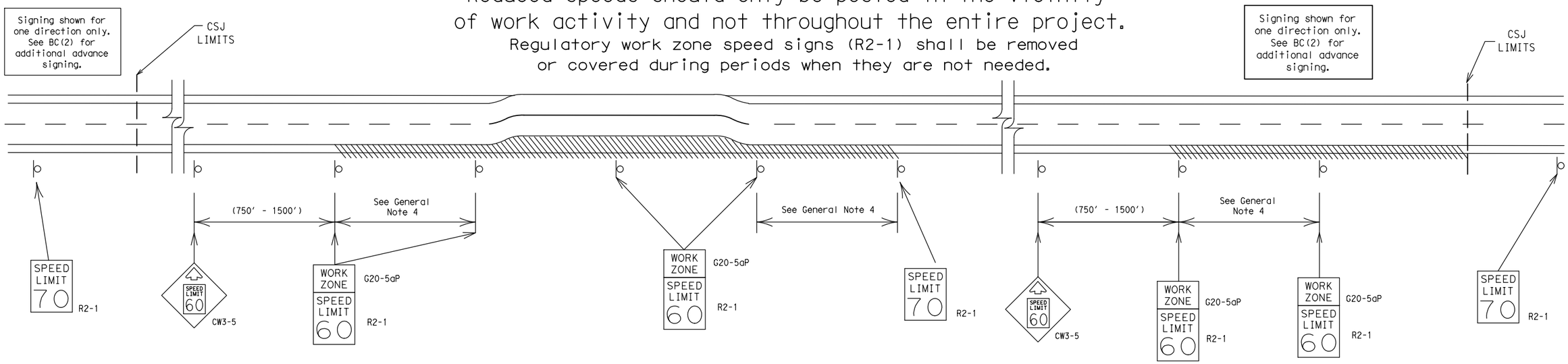
DATE: 11/29/2023 1:31:06 PM
FILE: I_bc-21.dgn

TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project.

Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

a) rough road or damaged pavement surface
b) substantial alteration of roadway geometrics (diversions)
c) construction detours
d) grade
e) width
f) other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the traveled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.
(See Removing or Covering on BC(4)).

GENERAL NOTES

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:
   40 mph and greater 0.2 to 2 miles
   35 mph and less 0.2 to 1 mile
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, erection and maintenance of the"ADVANCE SPEED LIMIT"(CW3-5)sign, "WORK ZONE"(G20-5aP) plaque and the "SPEED LIMIT"(R2-1)signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Law enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
10. For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form #1204 in the TxDOT e-form system.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

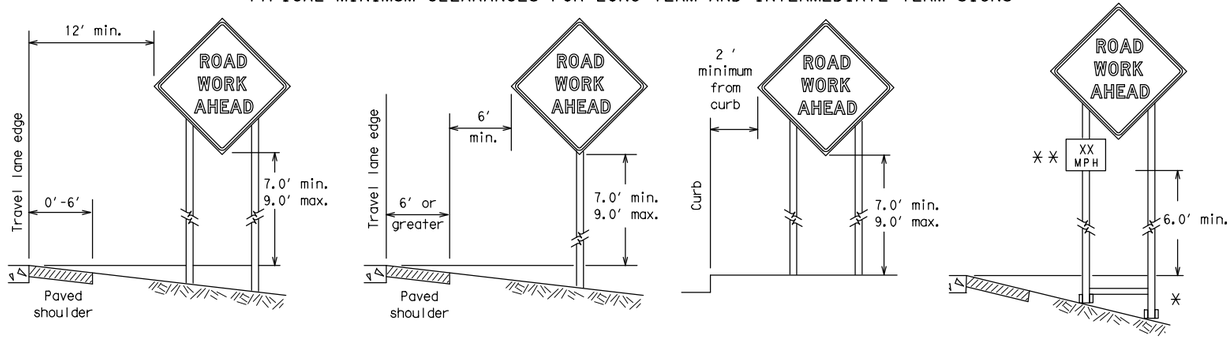
BC(3)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 9-07 8-14 7-13 5-21	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		32

97

DATE: 11/29/2023 1:31:07 PM
FILE: I_bc-21.dgn

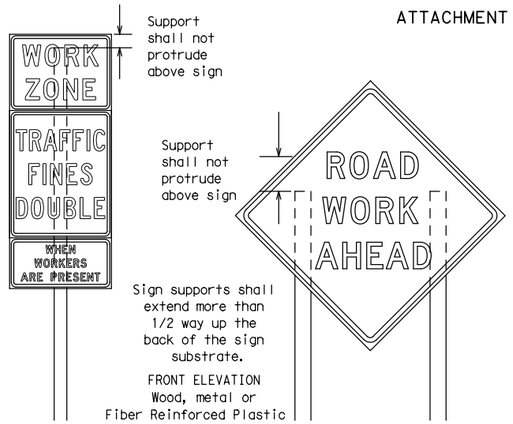
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



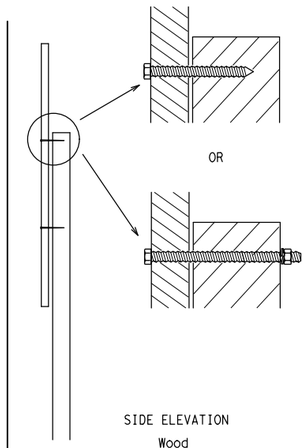
⁎ When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

⁎⁎ When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS



FRONT ELEVATION
Wood, metal or
Fiber Reinforced Plastic



SIDE ELEVATION
Wood

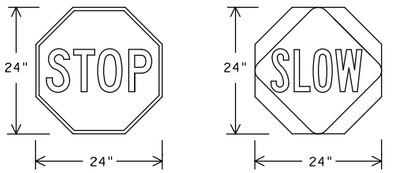
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the spice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24".
2. STOP/SLOW paddles shall be retroreflectorized when used at night.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6′ to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



Background - Red
Legend & Border - White

Background - Orange
Legend & Border - Black

SHEETING REQUIREMENTS (WHEN USED AT NIGHT)		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	ORANGE	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND & BORDER	WHITE	TYPE B OR C SHEETING
LEGEND & BORDER	BLACK	ACRYLIC NON-REFLECTIVE FILM

CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, specific service (LOGO), or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition. For details for covering large guide signs see the TS-CD standard.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC standard sheets, TLRS standard sheets or the CWZTCD list. The signs shall meet the required mounting heights shown on the BC, or the SMD standard sheets during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
5. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
6. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD) for small roadside signs. Supports for temporary large roadside signs shall meet the requirements detailed on the Temporary Large Roadside Signs (TLRS) standard sheets. The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
7. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
8. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
9. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type B_{FL} or Type C_{FL}, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

1. Flags may be used to draw attention to warning signs. When used, the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

Texas Department of Transportation

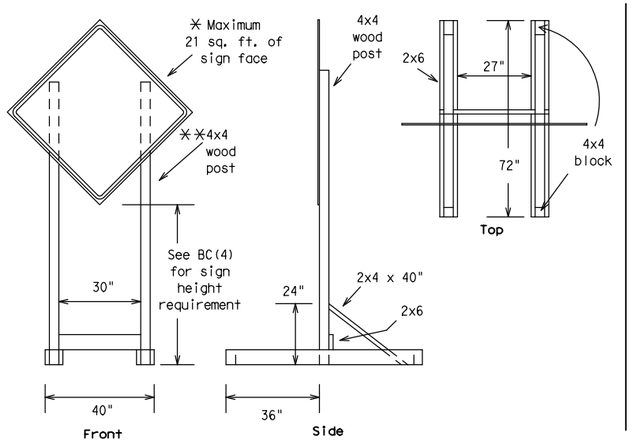
Traffic Safety Division Standard

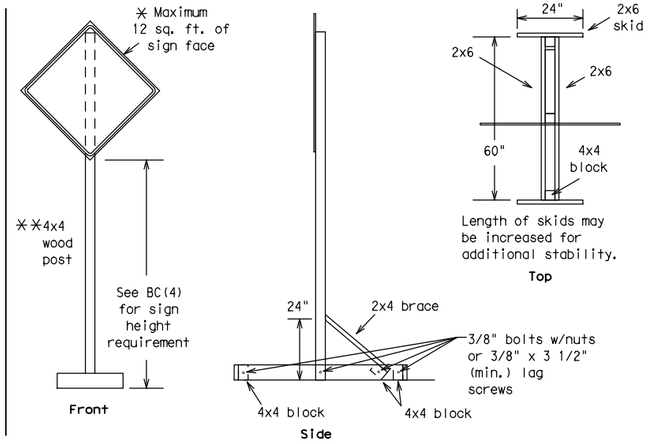
BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ABL	FISHER		33

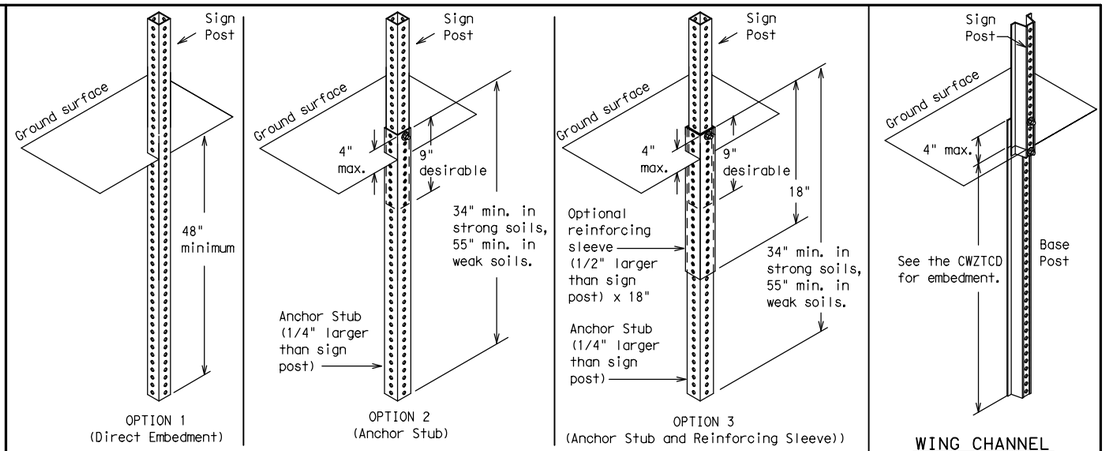
DATE: 11/29/2023 1:31:07 PM
FILE: 1_bc-21.dgn





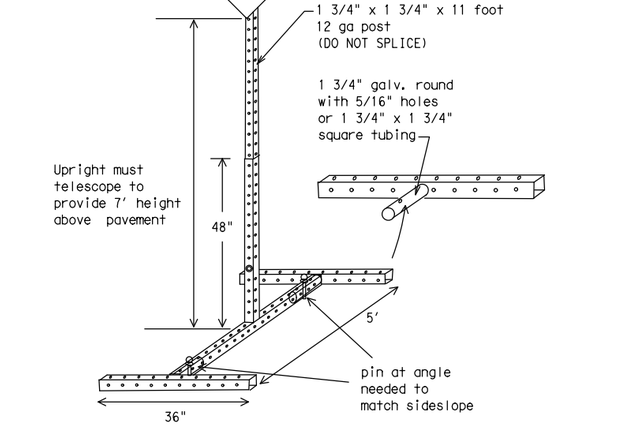
SKID MOUNTED WOOD SIGN SUPPORTS

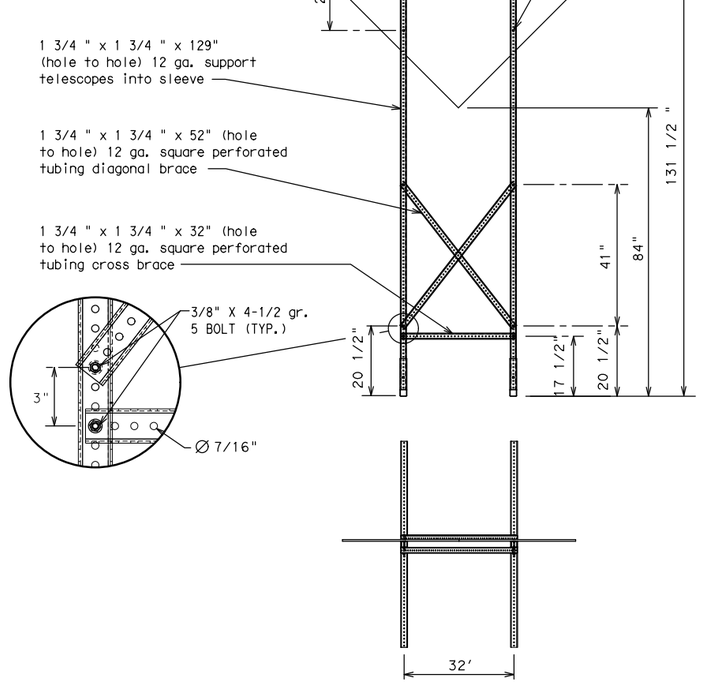
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

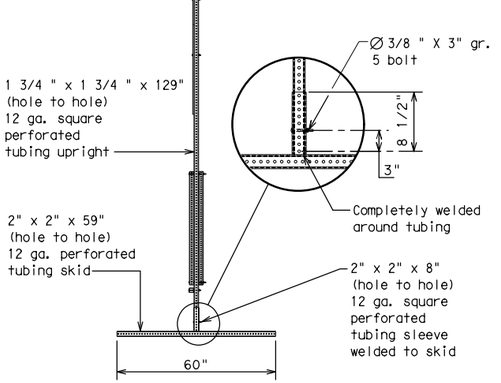


GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support.
The maximum sign square footage shall adhere to the manufacturer's recommendation.
Two post installations can be used for larger signs.







SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).

OTHER DESIGNS

MORE DETAILS OF APPROVED LONG/INTERMEDIATE AND SHORT TERM SUPPORTS CAN BE FOUND ON THE CWZTCD LIST. SEE BC(1) FOR WEBSITE LOCATION.

GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
3. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

* See BC(4) for definition of "Work Duration."

** Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.

□ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ABL	FISHER		34

DATE: 11/29/2023 1:31:08 PM
FILE: 1_bc-21.dgn

WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use, the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD
Alternate	ALT
Avenue	AVE
Best Route	BEST RTE
Boulevard	BLVD
Bridge	BRDG
Cannot	CANT
Center	CTR
Construction Ahead	CONST AHD
CROSSING	XING
Detour Route	DETOUR RTE
Do Not	DONT
East	E
Eastbound	(route) E
Emergency	EMER
Emergency Vehicle	EMER VEH
Entrance, Enter	ENT
Express Lane	EXP LN
Expressway	EXPWY
XXXX Feet	XXXX FT
Fog Ahead	FOG AHD
Freeway	FRWY, FWY
Freeway Blocked	FWY BLKD
Friday	FRI
Hazardous Driving	HAZ DRIVING
Hazardous Material	HAZMAT
High-Occupancy	HOV
Vehicle Highway	HWY
Hour(s)	HR, HRS
Information	INFO
It Is	ITS
Junction	JCT
Left	LFT
Left Lane	LFT LN
Lane Closed	LN CLOSED
Lower Level	LWR LEVEL
Maintenance	MAINT

WORD OR PHRASE	ABBREVIATION
Major	MAJ
Miles	MI
Miles Per Hour	MPH
Minor	MNR
Monday	MON
Normal	NORM
North	N
Northbound	(route) N
Parking	PKING
Road	RD
Right Lane	RT LN
Saturday	SAT
Service Road	SERV RD
Shoulder	SHLDR
Slippery	SLIP
South	S
Southbound	(route) S
Speed	SPD
Street	ST
Sunday	SUN
Telephone	PHONE
Temporary	TEMP
Thursday	THURS
To Downtown	TO DWNTN
Traffic	TRAF
Travelers	TRVLRS
Tuesday	TUES
Time Minutes	TIME MIN
Upper Level	UPR LEVEL
Vehicles (s)	VEH, VEHS
Warning	WARN
Wednesday	WED
Weight Limit	WT LIMIT
West	W
Westbound	(route) W
Wet Pavement	WET PVMT
Will Not	WONT

Roadway designation # IH-number, US-number, SH-number, FM-number

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

- FREEWAY CLOSED X MILE
- FRONTAGE ROAD CLOSED
- ROAD CLOSED AT SH XXX
- SHOULDER CLOSED XXX FT
- ROAD CLSD AT FM XXXX
- RIGHT LN CLOSED XXX FT
- RIGHT X LANES CLOSED
- RIGHT X LANES OPEN
- CENTER LANE CLOSED
- DAYTIME LANE CLOSURES
- NIGHT LANE CLOSURES
- I-XX SOUTH EXIT CLOSED
- VARIOUS LANES CLOSED
- EXIT XXX CLOSED X MILE
- EXIT CLOSED
- RIGHT LN TO BE CLOSED
- MALL DRIVEWAY CLOSED
- X LANES CLOSED TUE - FRI
- XXXXXXXX BLVD CLOSED

Other Condition List

- ROADWORK XXX FT
- ROAD REPAIRS XXXX FT
- FLAGGER XXXX FT
- LANE NARROWS XXXX FT
- RIGHT LN NARROWS XXXX FT
- TWO-WAY TRAFFIC XX MILE
- MERGING TRAFFIC XXXX FT
- CONST TRAFFIC XXX FT
- LOOSE GRAVEL XXXX FT
- UNEVEN LANES XXXX FT
- DETOUR X MILE
- ROUGH ROAD XXXX FT
- ROADWORK PAST SH XXXX
- ROADWORK NEXT FRI-SUN
- BUMP XXXX FT
- US XXX EXIT X MILES
- TRAFFIC SIGNAL XXXX FT
- LANES SHIFT *

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

- MERGE RIGHT
- FORM X LINES RIGHT
- DETOUR NEXT X EXITS
- USE XXXXX RD EXIT
- USE EXIT XXX
- USE EXIT I-XX NORTH
- STAY ON US XXX SOUTH
- USE I-XX E TO I-XX N
- TRUCKS USE US XXX N
- WATCH FOR TRUCKS
- WATCH FOR TRUCKS
- EXPECT DELAYS
- EXPECT DELAYS
- PREPARE TO STOP
- REDUCE SPEED XXX FT
- END SHOULDER USE
- USE OTHER ROUTES
- WATCH FOR WORKERS
- STAY IN LANE *

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Location List

- AT FM XXXX
- BEFORE RAILROAD CROSSING
- NEXT X MILES
- PAST US XXX EXIT
- XXXXXXX TO XXXXXXX
- US XXX TO FM XXXX

Warning List

- SPEED LIMIT XX MPH
- MAXIMUM SPEED XX MPH
- MINIMUM SPEED XX MPH
- ADVISORY SPEED XX MPH
- RIGHT LANE EXIT
- USE CAUTION
- DRIVE SAFELY
- DRIVE WITH CARE

** Advance Notice List

- TUE-FRI XX AM- X PM
- APR XX-XX X PM-X AM
- BEGINS MONDAY
- BEGINS MAY XX
- MAY X-X XX PM - XX AM
- NEXT FRI-SUN
- XX AM TO XX PM
- NEXT TUE AUG XX
- TONIGHT XX PM- XX AM

** See Application Guidelines Note 6.

APPLICATION GUIDELINES

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limited to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work.

WORDING ALTERNATIVES

1. The words RIGHT, LEFT and ALL can be interchanged as appropriate.
2. Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
3. EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
4. Highway names and numbers replaced as appropriate.
5. ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
6. AHEAD may be used instead of distances if necessary.
7. FT and MI, MILE and MILES interchanged as appropriate.
8. AT, BEFORE and PAST interchanged as needed.
9. Distances or AHEAD can be eliminated from the message if a location phase is used.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS, WHEN EXPOSED TO ONE DIRECTION OF TRAFFIC. WHEN EXPOSED TO TWO WAY TRAFFIC, THE FOUR DRUMS SHOULD BE PLACED WITH ONE DRUM AT EACH OF THE FOUR CORNERS OF THE UNIT.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the "Flagger Symbol"(CW20-7) are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow board provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

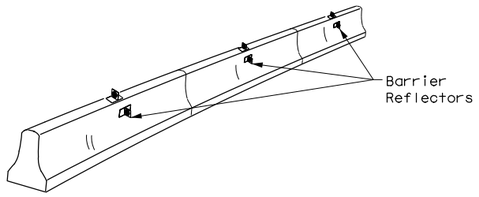
BC(6)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ABL	FISHER		35

100

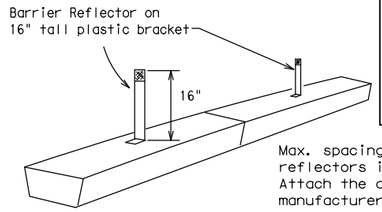
DATE: 11/29/2023 1:31:09 PM
FILE: 1_bc-21.dgn

1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.



CONCRETE TRAFFIC BARRIER (CTB)

3. Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
4. Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional)while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.

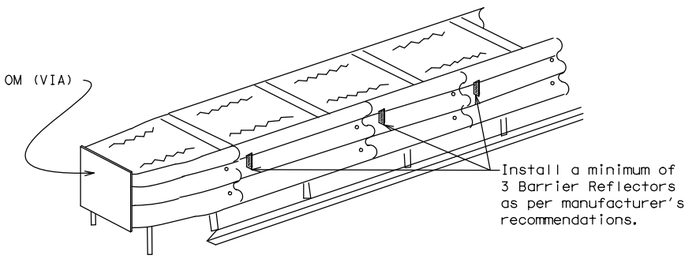


Max. spacing of barrier reflectors is 20 feet. Attach the delineators as per manufacturer's recommendations.

LOW PROFILE CONCRETE BARRIER (LPCB)

LOW PROFILE CONCRETE BARRIER (LPCB) USED IN WORK ZONES

LPCB is approved for use in work zone locations, where the posted speed is 45mph, or less. See Roadway Standard Sheet LPCB.

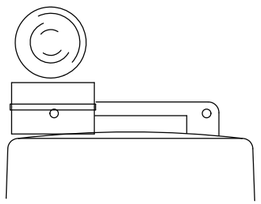


DELINEATION OF END TREATMENTS

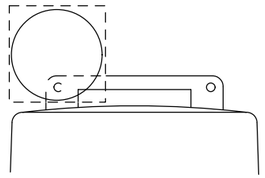
END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet the apppropriate crashworthy standards as defined in the Manual for Assessing Safety Hardware (MASH). Refer to the CWZTCD List for approved end treatments and manufacturers.

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS



Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



Warning reflector may be round or square.Must have a yellow reflective surface area of at least 30 square inches

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B_{FL} or C_{FL} Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
4. Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
8. The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

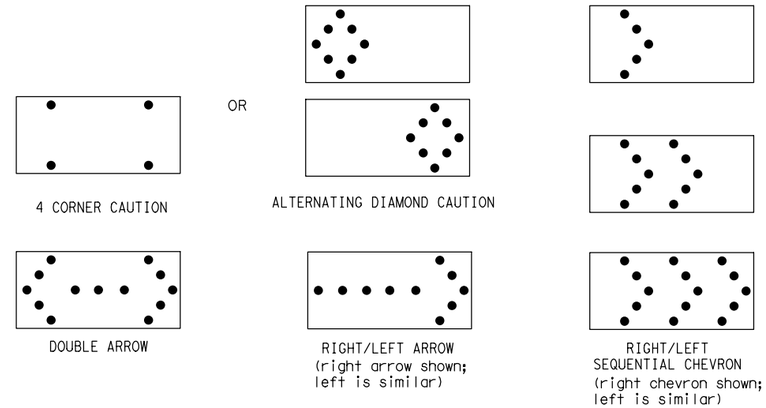
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
4. Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

1. A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
2. The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
6. The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

1. The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
2. Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
3. The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
4. The Flashing Arrow Board should be able to display the following symbols:



4 CORNER CAUTION

ALTERNATING DIAMOND CAUTION

DOUBLE ARROW

RIGHT/LEFT ARROW
(right arrow shown;
left is similar)

RIGHT/LEFT
SEQUENTIAL CHEVRON
(right chevron shown;
left is similar)

5. The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
6. The straight line caution display is NOT ALLOWED.
7. The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
8. Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential chevron display may be used during daylight operations.
11. The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
13. A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
14. Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

REQUIREMENTS			
TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

ATTENTION

Flashing Arrow Boards shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

FLASHING ARROW BOARDS

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the Manual for Assessing Safety Hardware (MASH).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the CWZTCD for a list of approved TMAs.
4. TMAs are required on freeways unless otherwise noted in the plans.
5. A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
6. The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR

BC(7)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ABL	FISHER		36

101

DATE: 11/29/2023 1:31:10 PM
FILE: 1_bc-21.dgn

GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

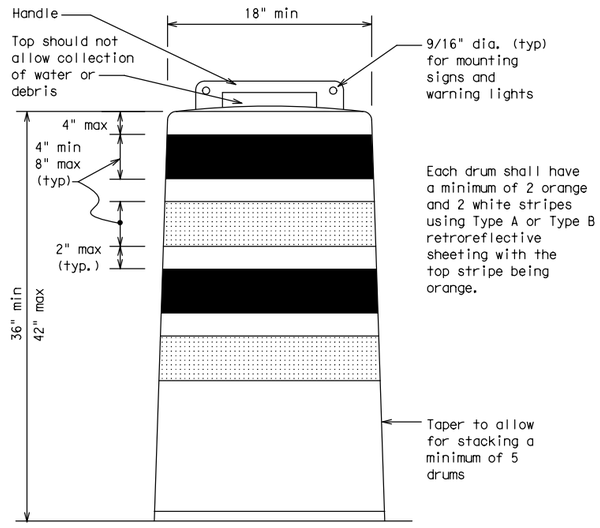
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

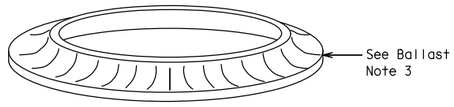
RETROREFLECTIVE SHEETING

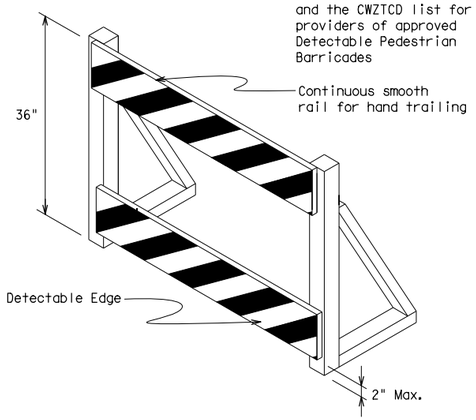
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials," Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.

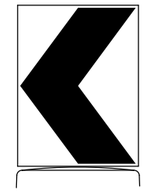




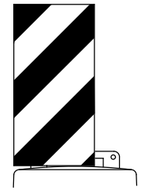


DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to WZ(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

.

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

Texas Department of Transportation

Traffic Safety Division Standard

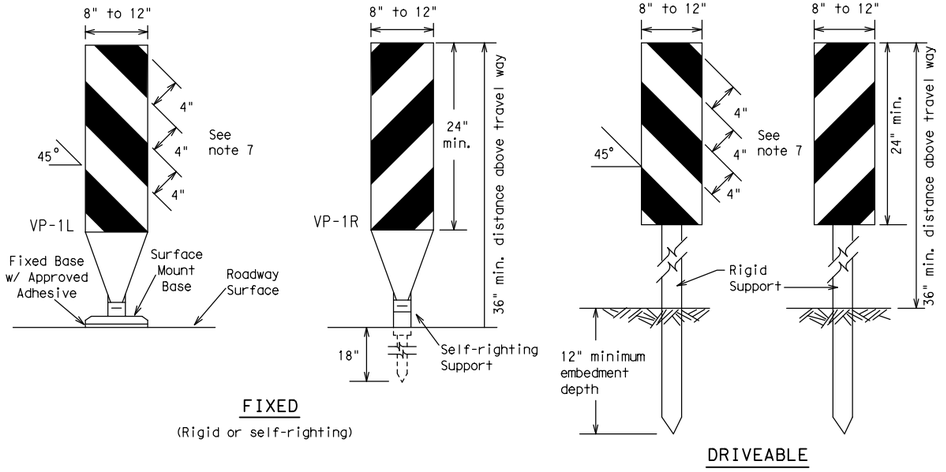
BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21	ABL	FISHER		37
7-13				

102

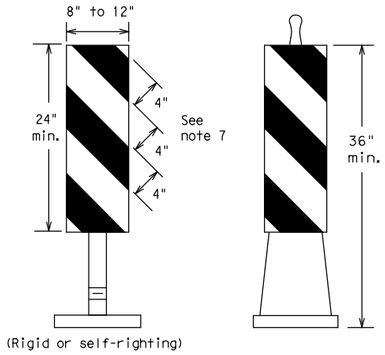
DATE: 11/29/2023 1:31:11 PM
FILE: 1_bc-21.dgn



FIXED

(Rigid or self-righting)

DRIVEABLE

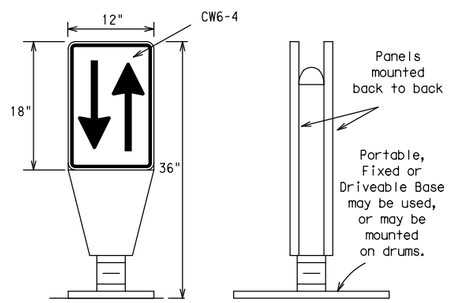


(Rigid or self-righting)

PORTABLE

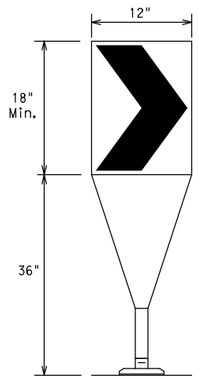
VERTICAL PANELS (VPs)

1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual for additional requirements on the use VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.



OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

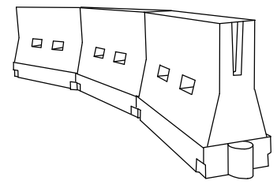
1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with 42" cones or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.



Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways, self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

CHEVRONS



LONGITUDINAL CHANNELIZING DEVICES (LCD)

1. LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
2. LCDs may be used instead of a line of cones or drums.
3. LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
5. LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
6. LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10). Place reflective sheeting near the top of the LCD along the full length of the device.

WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate Manual for Assessing Safety Hardware (MASH) crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS

GENERAL NOTES

1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.

Posted Speed	Formula	Minimum Desirable Taper Lengths ✻✻ 10′ Offset	11′ Offset	12′ Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent
30	$L=\frac{WS^2}{60}$	150′	165′	180′	30′	60′
35		205′	225′	245′	35′	70′
40		265′	295′	320′	40′	80′
45	L = WS	450′	495′	540′	45′	90′
50		500′	550′	600′	50′	100′
55		550′	605′	660′	55′	110′
60		600′	660′	720′	60′	120′
65		650′	715′	780′	65′	130′
70		700′	770′	840′	70′	140′
75		750′	825′	900′	75′	150′
80		800′	880′	960′	80′	160′

✻✻Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS

SHEET 9 OF 12

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ABL	FISHER		38

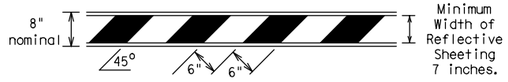
103

DATE: 11/29/2023 1:31:11 PM
FILE: 1_bc-21.dgn

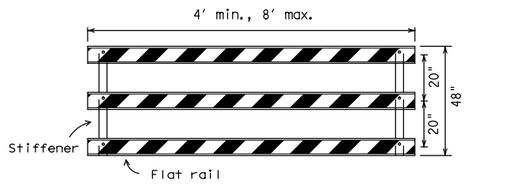
TYPE 3 BARRICADES

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials used in the construction of Type 3 Barricades.
2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road, striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.



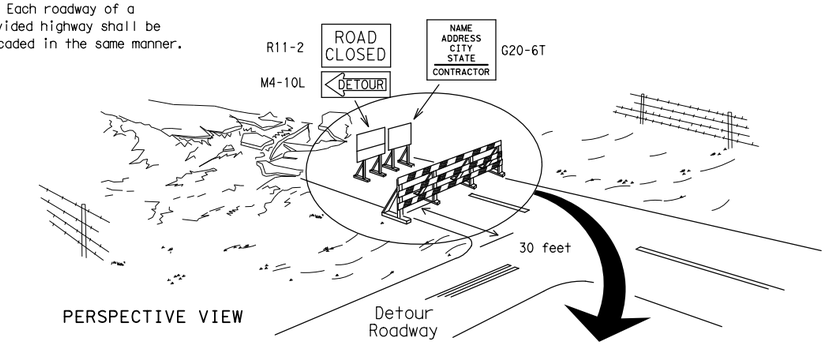
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

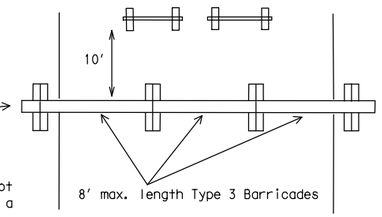
TYPICAL PANEL DETAIL
FOR SKID OR POST TYPE BARRICADES

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

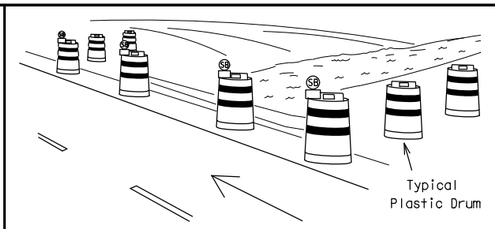
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

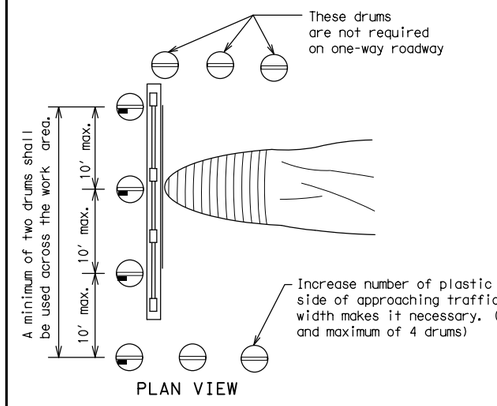
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

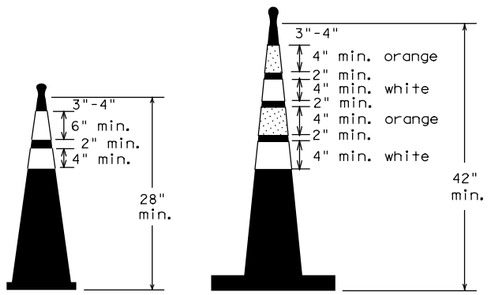
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.



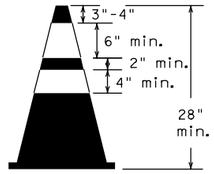
PLAN VIEW

LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
SB	Steady burn warning light or yellow warning reflector

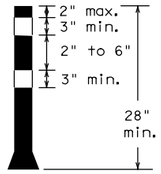
CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



Two-Piece cones



One-Piece cones

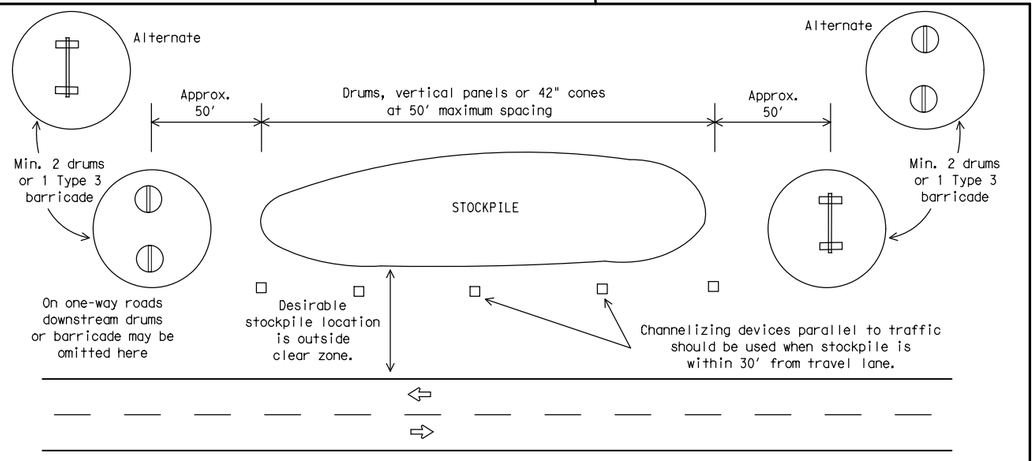


Tubular Marker

28" Cones shall have a minimum weight of 9 1/2 lbs.

42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

1. Traffic cones and tubular markers shall be predominantly orange, and meet the height and weight requirements shown above.
2. One-piece cones have the body and base of the cone molded in one consolidated unit. Two-piece cones have a cone shaped body and a separate rubber base, or ballast, that is added to keep the device upright and in place.
3. Two-piece cones may have a handle or loop extending up to 8" above the minimum height shown, in order to aid in retrieving the device.
4. Cones or tubular markers shall have white or white and orange reflective bands as shown above. The reflective bands shall have a smooth, sealed outer surface and meet the requirements of Departmental Material Specification DMS-8300 Type A or Type B.
5. 28" cones and tubular markers are generally suitable for short duration and short-term stationary work as defined on BC(4). These should not be used for intermediate-term or long-term stationary work unless personnel is on-site to maintain them in their proper upright position.
6. 42" two-piece cones, vertical panels or drums are suitable for all work zone durations.
7. Cones or tubular markers used on each project should be of the same size and shape.



TRAFFIC CONTROL FOR MATERIAL STOCKPILES

SHEET 10 OF 12

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ABL	FISHER		39

104

DATE: 11/29/2023 1:31:12 PM
FILE: 1_bc-21.dgn

WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

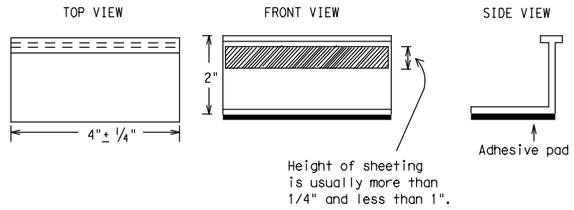
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
   A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
   B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS	DMS-8241
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

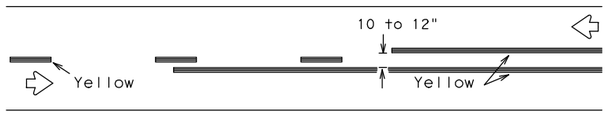
BC(11)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
2-98 9-07 5-21	DIST	COUNTY		SHEET NO.
1-02 7-13	ABL	FISHER		40
11-02 8-14				

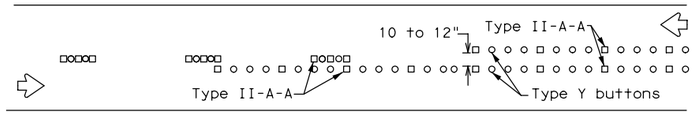
105

DATE: 11/29/2023 1:31:13 PM
FILE: 1_bc-21.dgn

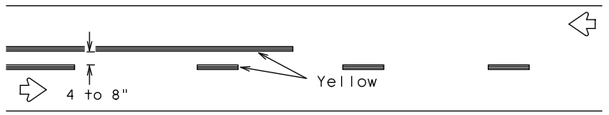
PAVEMENT MARKING PATTERNS



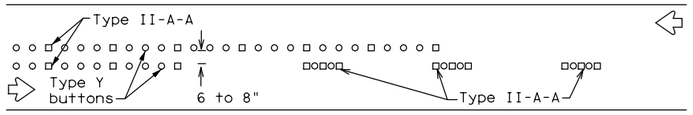
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



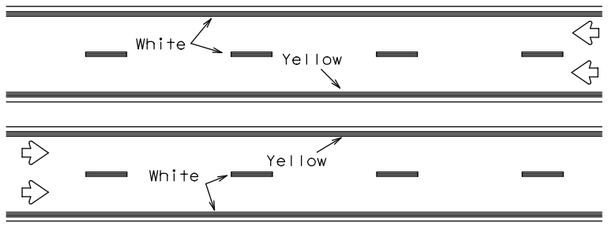
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



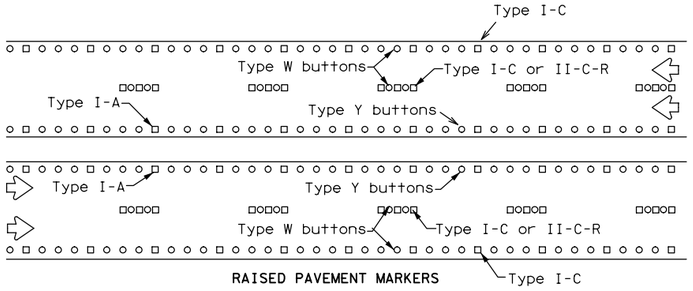
RAISED PAVEMENT MARKERS - PATTERN B

Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer.
Prefabricated markings may be substituted for reflectorized pavement markings.

CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



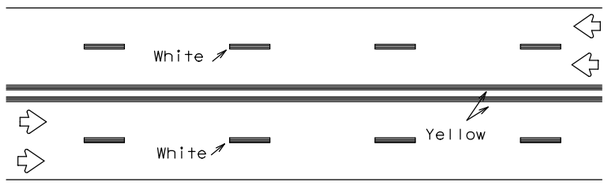
REFLECTORIZED PAVEMENT MARKINGS



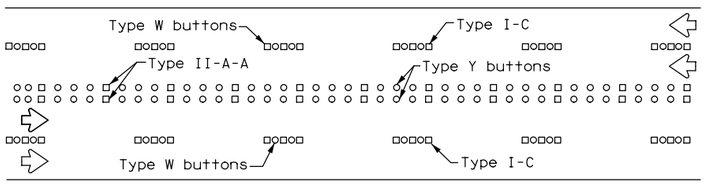
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



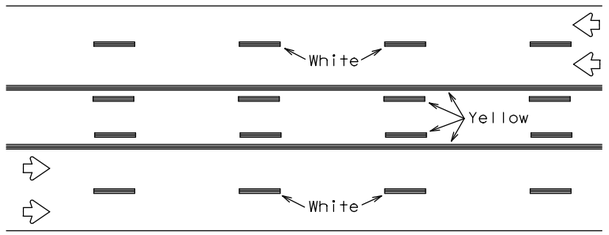
REFLECTORIZED PAVEMENT MARKINGS



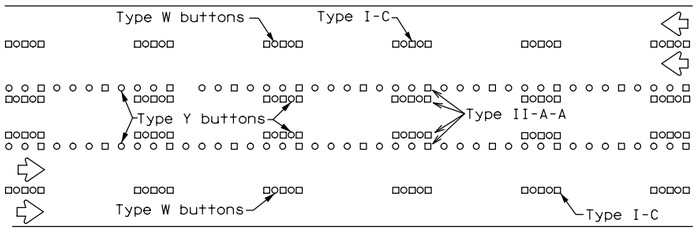
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



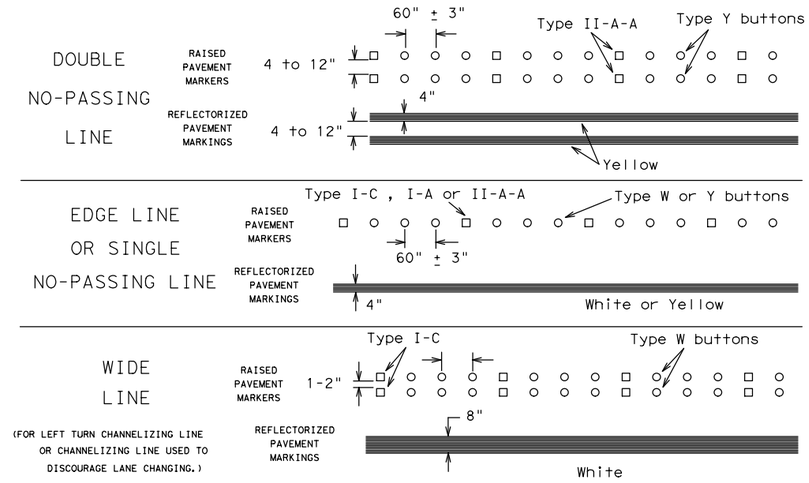
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

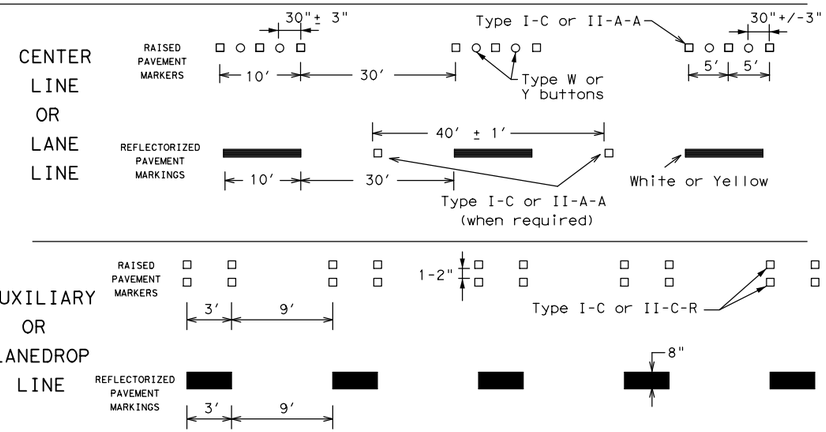
TWO-WAY LEFT TURN LANE

STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

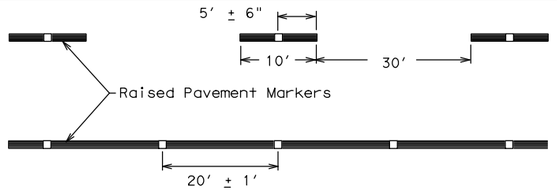


BROKEN LINES



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



Centerline only - not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

Texas Department of Transportation

Traffic Safety Division Standard

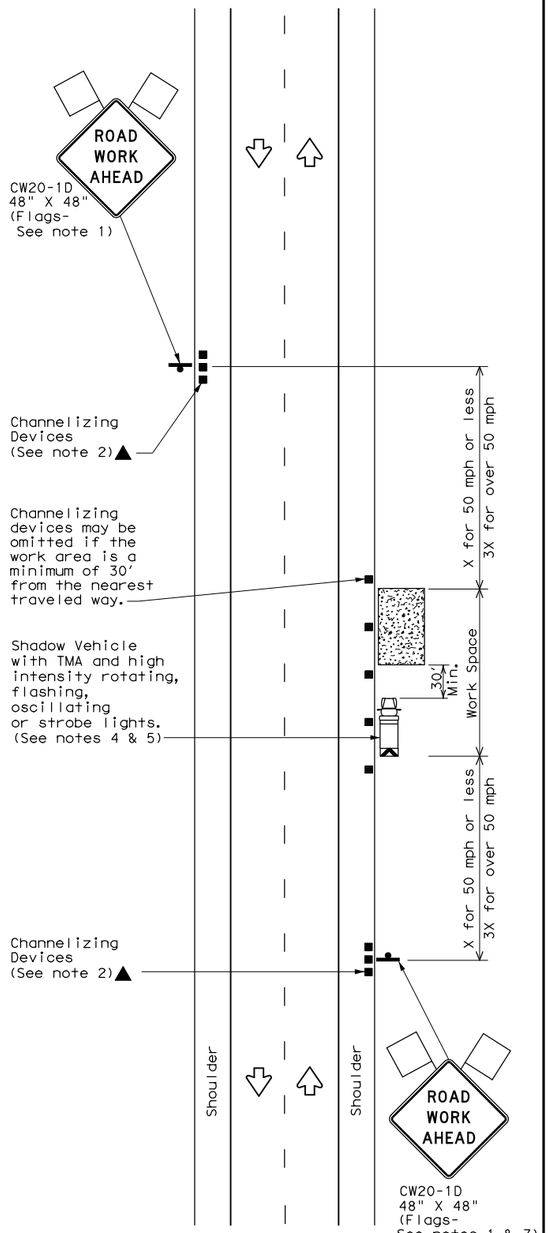
BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS 1-97 9-07 5-21 2-98 7-13 11-02 8-14	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		41

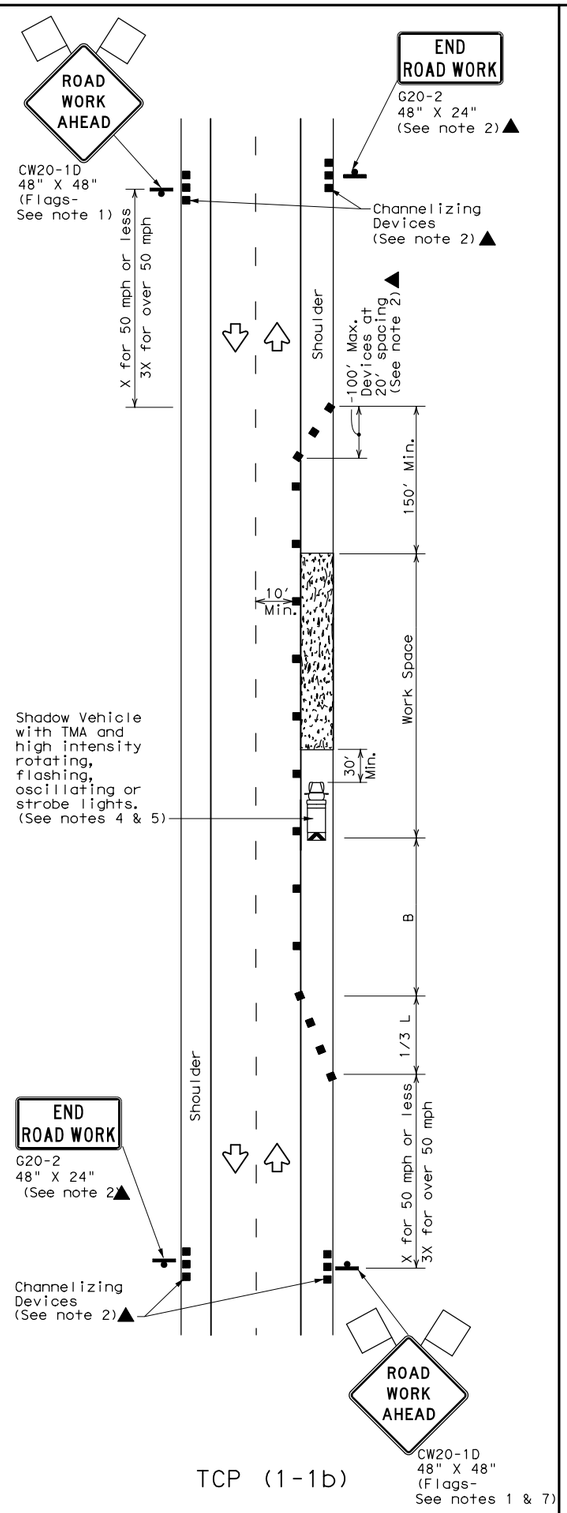
106

DATE: 11/29/2023 1:31:14 PM
FILE: 1_bc-21.dgn



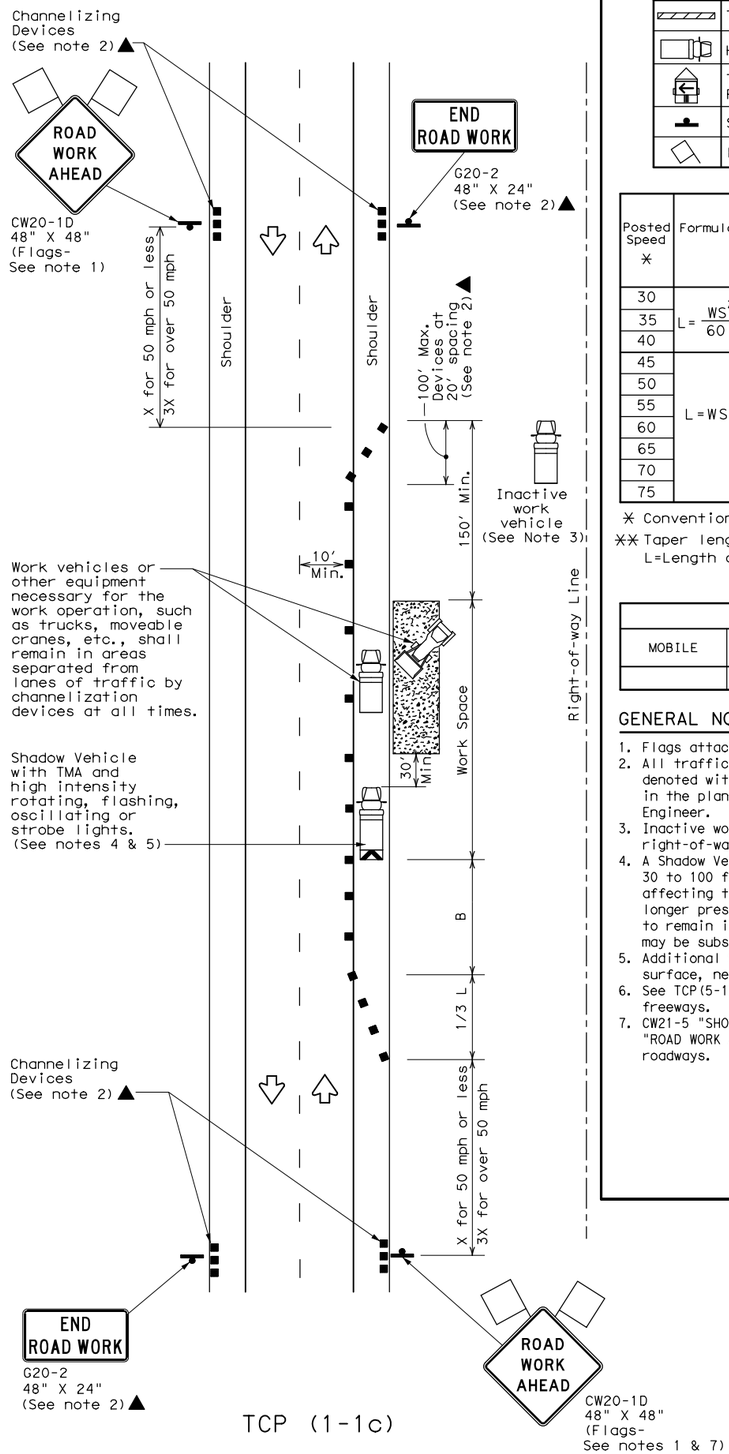
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation

Traffic Operations Division Standard

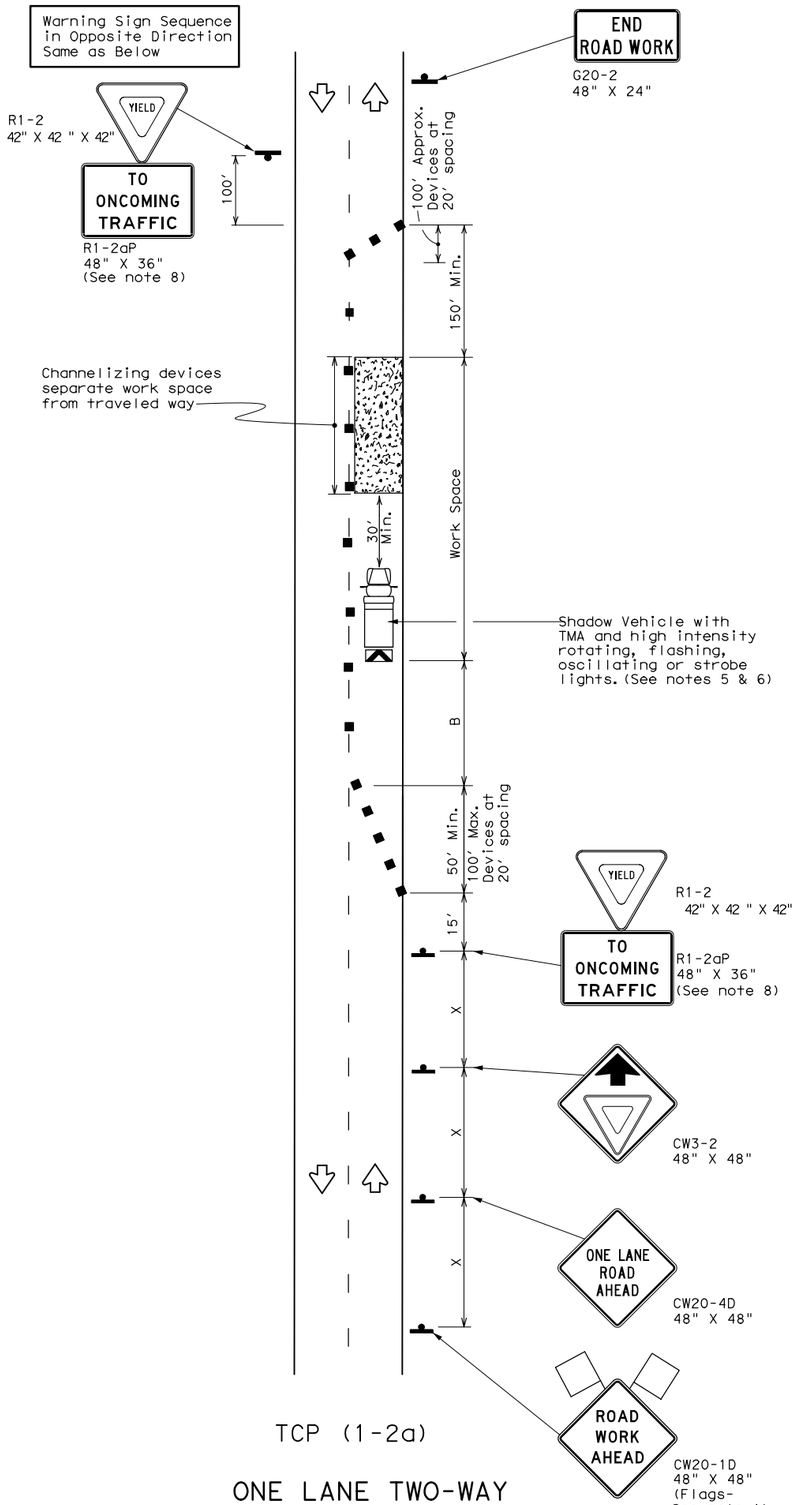
TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-18

FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12	ABL	FISHER		42
1-97 2-18				

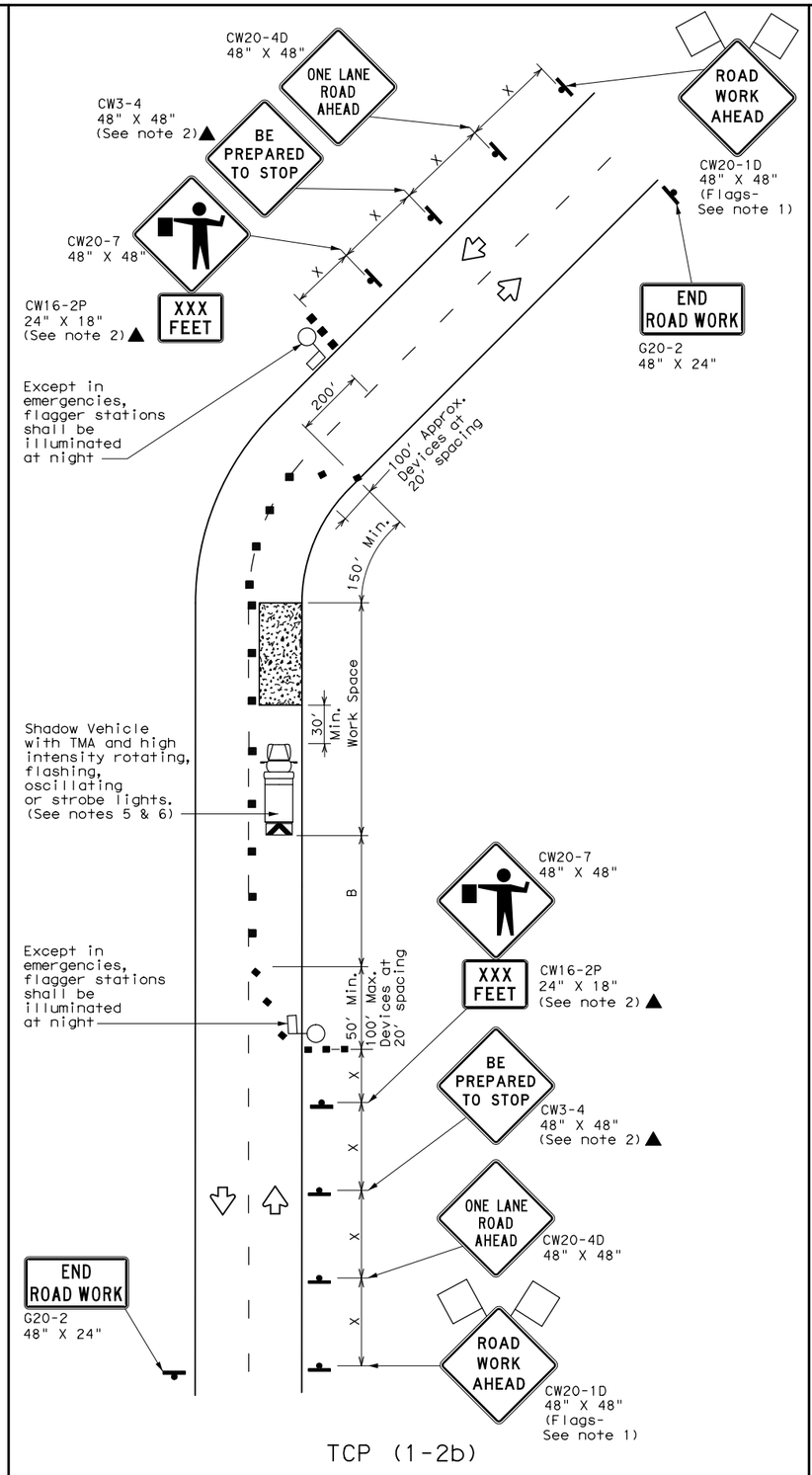
151

DATE: 11/29/2023 1:31:21 PM
FILE: 2_tcp1-1-18.dgn



TCP (1-2a)

ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
(Less than 2000 ADT - See note 7)



TCP (1-2b)

ONE LANE TWO-WAY
CONTROL WITH FLAGGERS

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L=WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
4. Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
5. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
6. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-2a)

7. R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
8. R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

TCP (1-2b)

9. Flaggers should use two-way radios or other methods of communication to control traffic.
10. Length of work space should be based on the ability of flaggers to communicate.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
12. Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
13. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
ONE-LANE TWO-WAY
TRAFFIC CONTROL

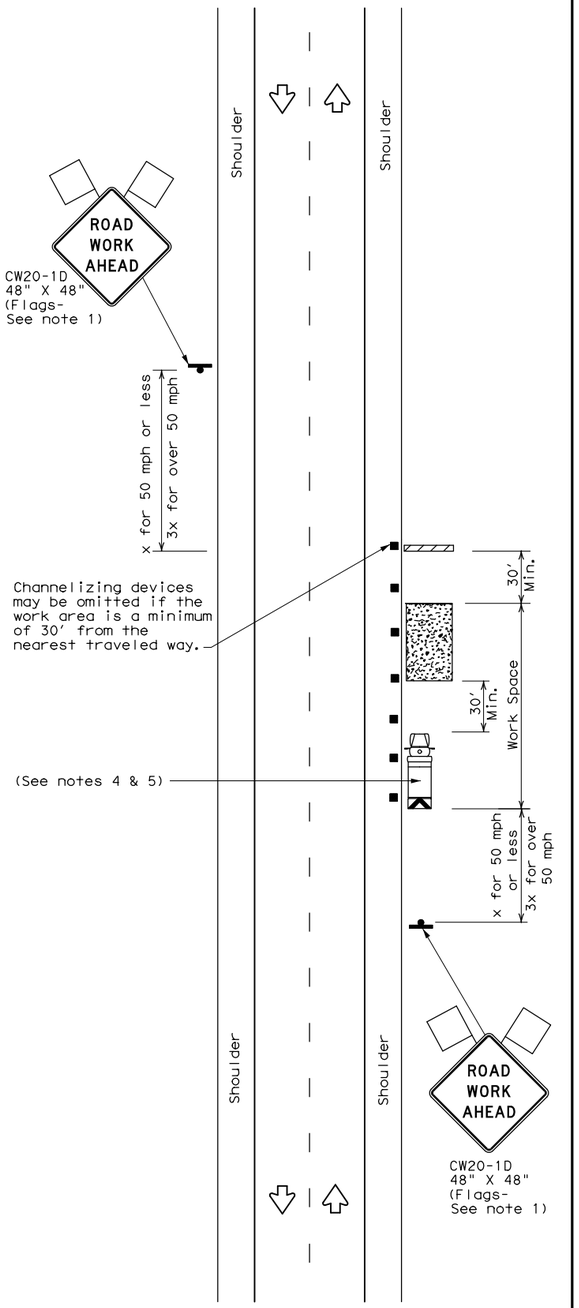
TCP(1-2)-18

FILE: tcp1-2-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-90 4-98 2-94 2-12 1-97 2-18	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		43

152

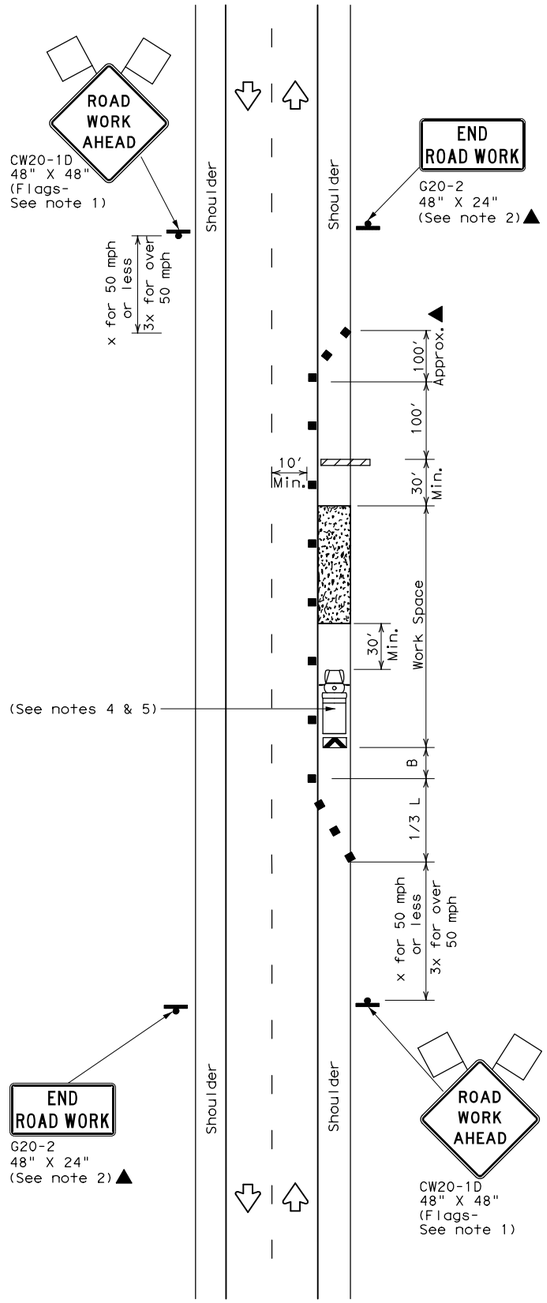
DATE: 11/29/2023 1:31:28 PM
FILE: 3_tcp1-2-18.dgn

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



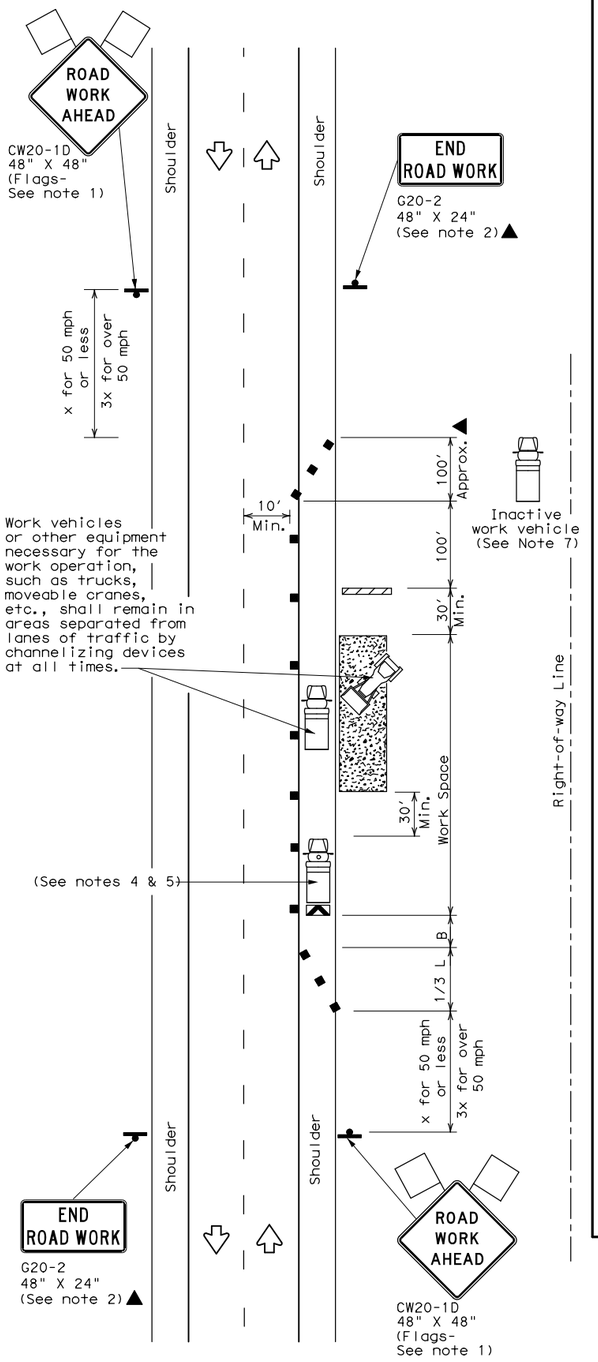
TCP (2-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (2-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (2-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

LEGEND			
	Type 3 Barricade	■ ■	Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed ✳	Formula	Minimum Desirable Taper Lengths ✳✳ 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L=WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

✳ Conventional Roads Only

✳✳ Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓	✓	✓

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated in the plans, or for routine maintenance work, when approved by the Engineer.
3. Stockpiled material should be placed a minimum of 30 feet from nearest traveled way.
4. Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.
6. See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
7. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
8. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation

Traffic Operations Division Standard

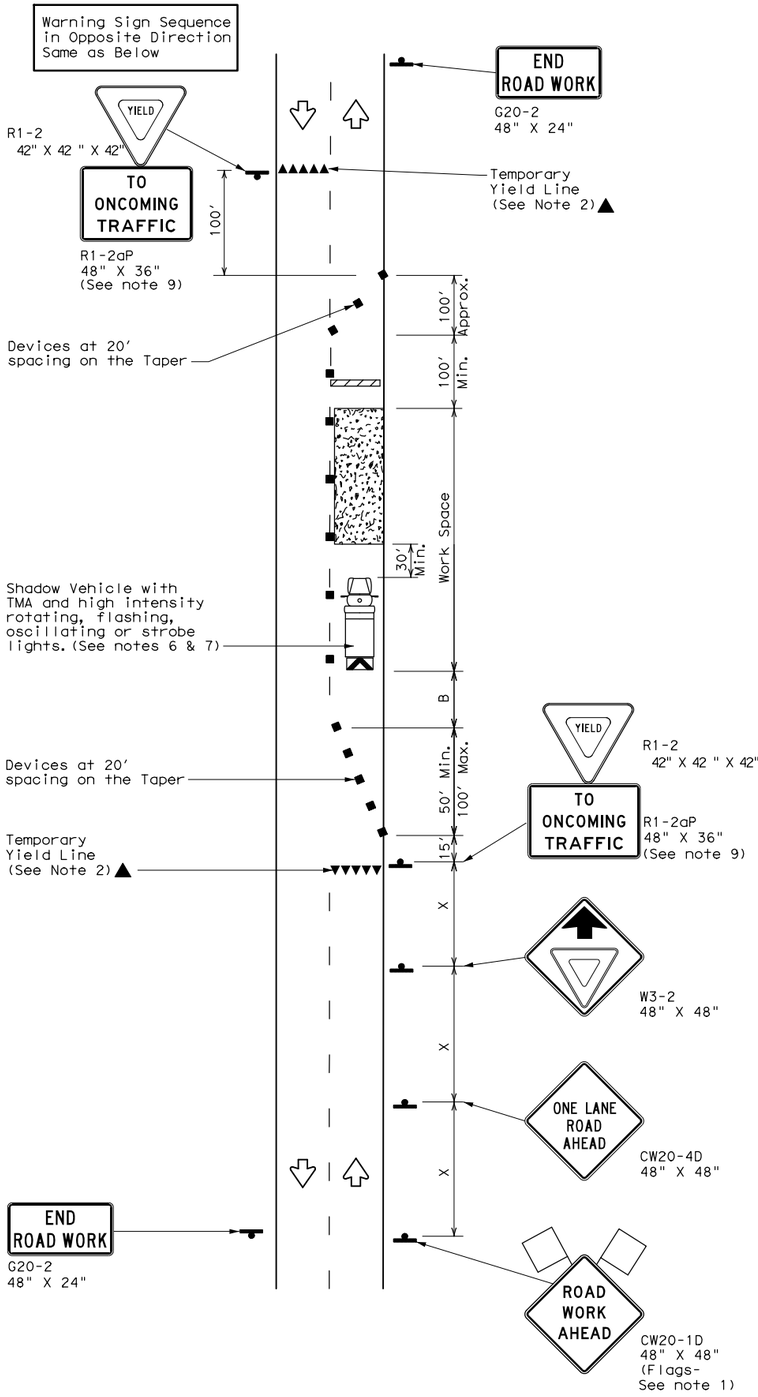
TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(2-1)-18

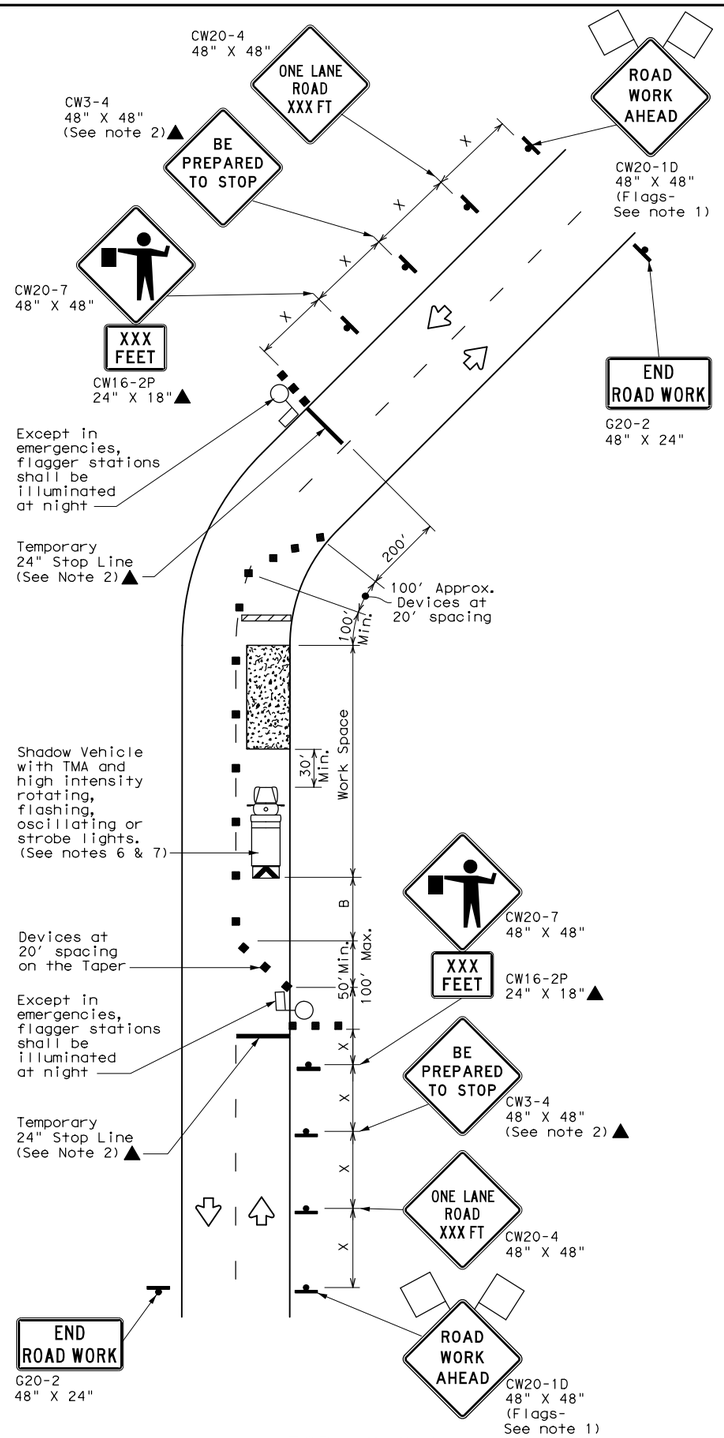
FILE: tcp2-1-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12	ABL	FISHER		44
1-97 2-18				

161

DATE: 11/29/2023 1:31:33 PM
FILE: 4_tcp2-1-18.dgn



TCP (2-2a)
2-LANE ROADWAY WITHOUT PAVED SHOULDERS
ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
(Less than 2000 ADT - See Note 9)



TCP (2-2b)
2-LANE ROADWAY WITHOUT PAVED SHOULDERS
ONE LANE TWO-WAY
CONTROL WITH FLAGGERS

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L=WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓	✓	

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4 "ONE LANE ROAD XXX FT" sign, but proper sign spacing shall be maintained.
4. Flaggers should use two-way radios or other methods of communication to control traffic.
5. Length of work space should be based on the ability of flaggers to communicate.
6. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
7. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect a wider work space.

TCP (2-2a)

8. The R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work space should be no longer than one half city block. In rural areas, roadways with less than 2000 ADT, work space should be no longer than 400 feet.
9. The R1-2aP "YIELD TO ONCOMING TRAFFIC" sign shall be placed on a support at a 7 foot minimum mounting height.

TCP (2-2b)

10. Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the flagger and a queue of stopped vehicles. (See table above).
12. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situtations.

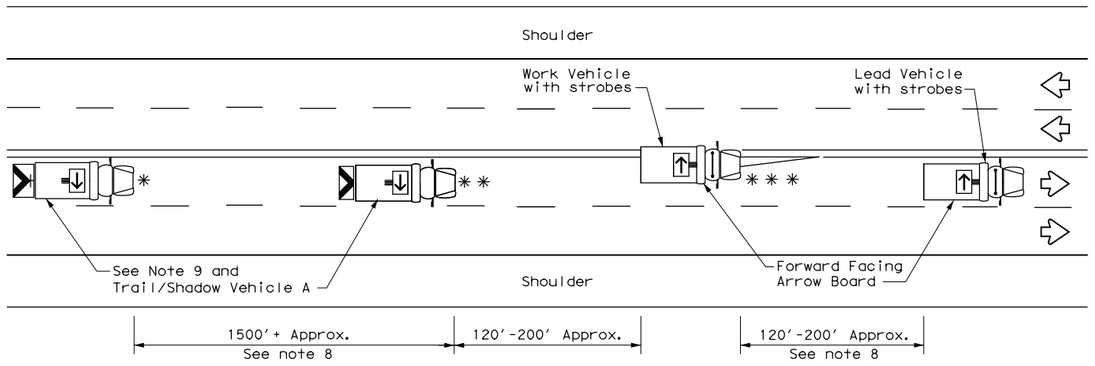
Texas Department of Transportation
Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
ONE-LANE TWO-WAY
TRAFFIC CONTROL

TCP(2-2)-18

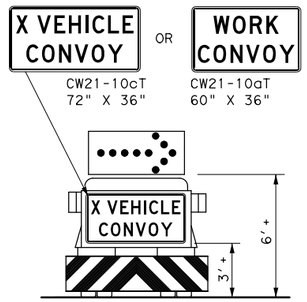
FILE: tcp2-2-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
8-95 3-03	DIST	COUNTY		SHEET NO.
1-97 2-12	ABL	FISHER		45
4-98 2-18				

DATE: 11/29/2023 1:31:43 PM
FILE: 5_tcp2-2-18.dgn



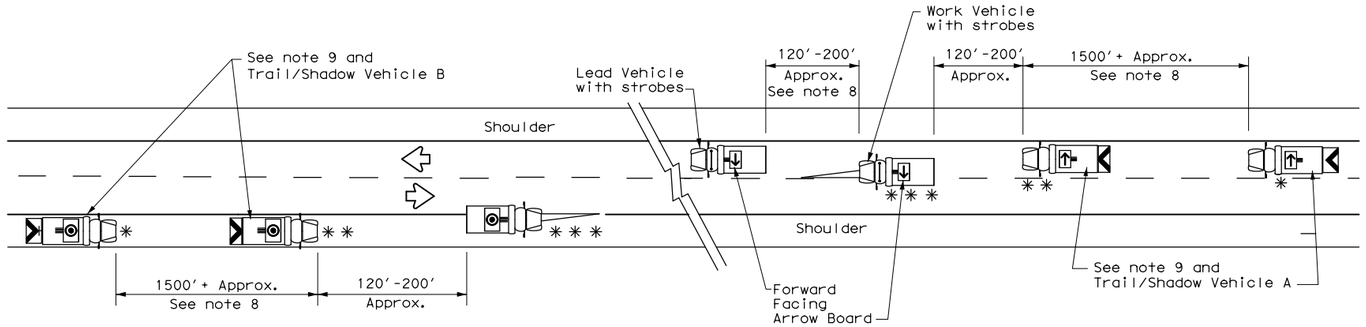
TCP (3-1a)

UNDIVIDED MULTILANE ROADWAY



TRAIL/SHADOW VEHICLE A

with RIGHT Directional display Flashing Arrow Board

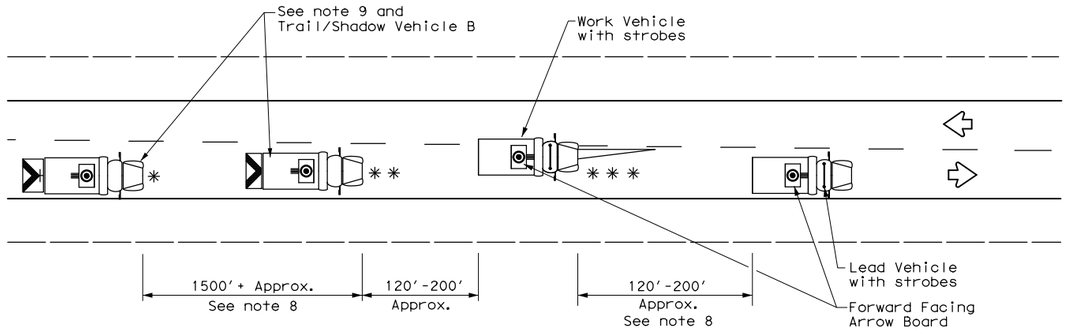


WORK ON SHOULDER

WORK ON TRAVEL LANE

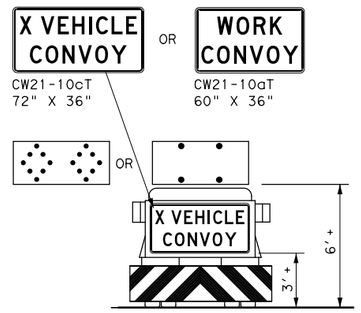
TCP (3-1b)

TWO-WAY ROADWAY WITH PAVED SHOULDERS



TCP (3-1c)

TWO-WAY ROADWAY WITHOUT PAVED SHOULDERS



TRAIL/SHADOW VEHICLE B

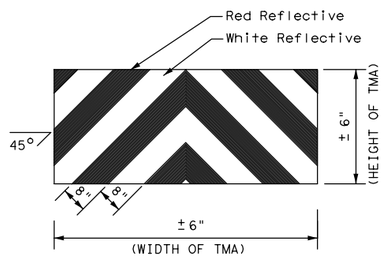
with Flashing Arrow Board in CAUTION display

LEGEND			
*	Trail Vehicle	ARROW BOARD DISPLAY	
* *	Shadow Vehicle		
* * *	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
✓				

GENERAL NOTES

1. TRAIL, SHADOW, and LEAD vehicles shall be equipped with arrow boards as illustrated. When a LEAD vehicle is not used the WORK vehicle must be equipped with an arrow board. The Engineer will determine if the LEAD VEHICLE and/or TRAIL VEHICLE are required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.
2. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
3. The use of truck mounted attenuators (TMA) on the SHADOW VEHICLE and TRAIL VEHICLE are required.
4. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DEPARTMENTAL MATERIAL SPECIFICATION DMS 8300, Type A.
5. Flashing arrow boards shall be Type B or Type C as per the Barricade and Construction (BC) standards. The board shall be controlled from inside the vehicle.
6. Each vehicle shall have two-way radio communication capability.
7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the work convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE and vehicle spacing between WORK VEHICLE and LEAD VEHICLE may vary according to terrain, work activity and other factors.
9. "X VEHICLE CONVOY" (CW21-10cT) or "WORK CONVOY" (CW21-10aT) signs shall be used on TRAIL VEHICLES and SHADOW VEHICLES as shown. As an option 48" X 48" diamond shaped "WORK CONVOY"(CW21-10T) or "X VEHICLE CONVOY" (CW21-10bT) signs may be used where adequate mounting space exists. When used, the X VEHICLE CONVOY sign shall have the number of the convoy vehicles displayed on the sign in the number designation "X" location. The "X VEHICLE CONVOY" sign shall not be used on the SHADOW VEHICLE if a TRAIL VEHICLE is used.
10. On two-lane two-way roadways, the work and protection vehicles should pull over periodically to allow motor vehicle traffic to pass. If motorists are not allowed to pass the work convoy, a "DO NOT PASS" (R4-1) sign should be placed on the back of the rearmost protection vehicle.



STRIPING FOR TMA

Texas Department of Transportation

Traffic Operations Division Standard

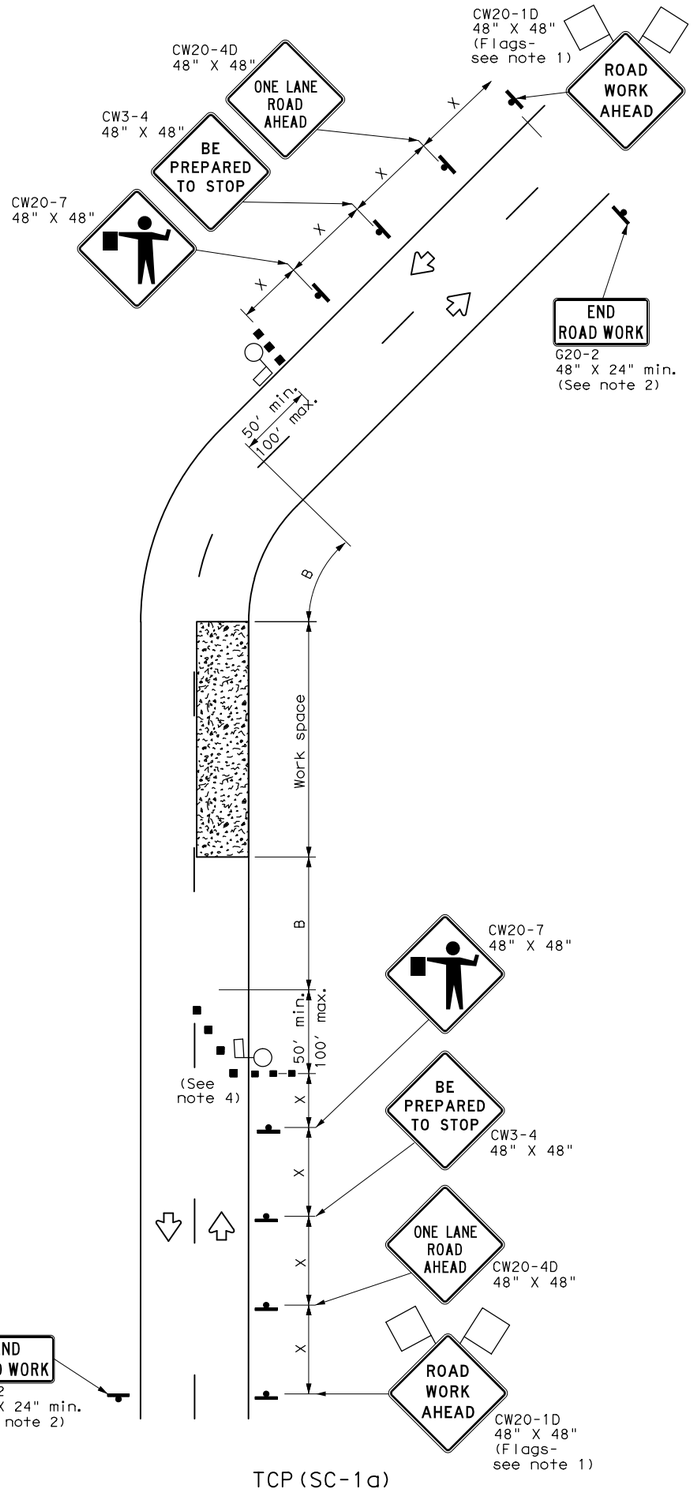
TRAFFIC CONTROL PLAN MOBILE OPERATIONS UNDIVIDED HIGHWAYS

TCP(3-1)-13

FILE: tcp3-1.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-94 4-98 8-95 7-13 1-97	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		46

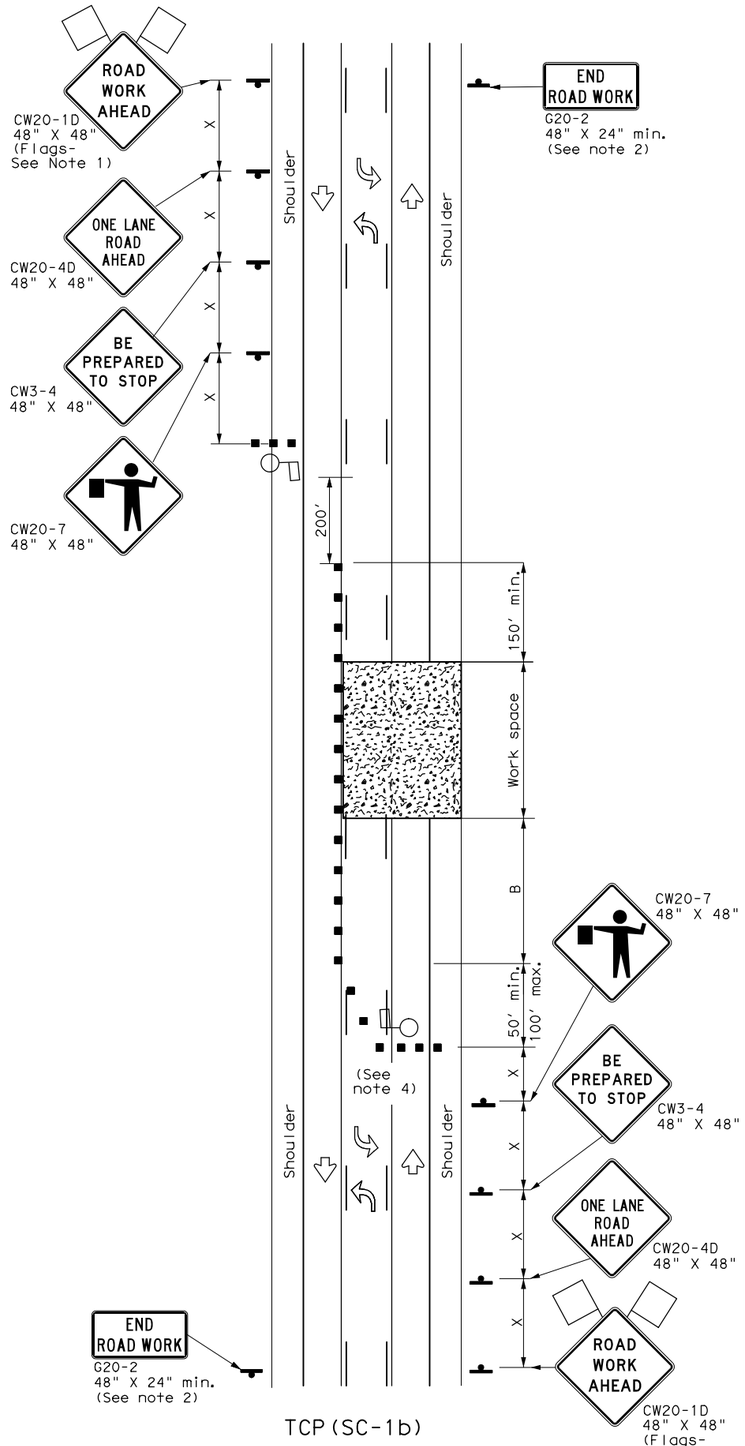
175

DATE: 11/29/2023 11:31:52 PM
FILE: 6_tcp3-1.dgn



TCP(SC-1a)

ONE LANE TWO-WAY (TWO LANES) CONTROL WITH PILOT VEHICLE



TCP(SC-1b)

ONE LANE TWO-WAY (THREE LANES) CONTROL WITH PILOT VEHICLE AND CHANNELIZING DEVICES

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed ✳	Formula	Minimum Desirable Taper Lengths ✳✳ 10′ Offset	11′ Offset	12′ Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing Distance "X"	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150′	165′	180′	30′	60′	120′	90′	200′
35		205′	225′	245′	35′	70′	160′	120′	250′
40		265′	295′	320′	40′	80′	240′	155′	305′
45	L=WS	450′	495′	540′	45′	90′	320′	195′	360′
50		500′	550′	600′	50′	100′	400′	240′	425′
55		550′	605′	660′	55′	110′	500′	295′	495′
60		600′	660′	720′	60′	120′	600′	350′	570′
65		650′	715′	780′	65′	130′	700′	410′	645′
70		700′	770′	840′	70′	140′	800′	475′	730′
75		750′	825′	900′	75′	150′	900′	540′	820′

✳ Conventional Roads Only

✳✳ Taper lengths have been rounded off.

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

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except: if project signing is present, END ROAD WORK (G20-2) sign is optional with approval by the Engineer.
3. Sign spacing may be increased or an additional ROAD WORK AHEAD (CW20-1D) sign may be used if advance warning ahead of the flagger sign is less than 1500 feet.
4. Flaggers should use two-way radios or other methods of communication at all times for traffic control coordination.
5. Flaggers should use 24" STOP (CW20-8) / SLOW (CW20-8aT) paddles to control traffic. Flags should be limited to emergency situations.
6. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
7. If the seal coat operation crosses intersections, traffic in these areas must be controlled. Care must be taken to prevent vehicles from crossing the asphalt before the aggregate is placed. This may require positioning additional traffic control personnel (flaggers) at the intersection.
8. Temporary rumble strips are not required on seal coat operations.
9. The pilot car is used to guide vehicles through traffic control zone. The pilot car shall have an identification name displayed and PILOT CAR, FOLLOW ME (G20-4) sign or message board mounted in a conspicuous position on rear.

TCP (SC-1a)

1. Channelizing devices on the centerline are not required when a pilot car is leading traffic, unless directed by the Engineer.

Texas Department of Transportation — Traffic Safety Division Standard

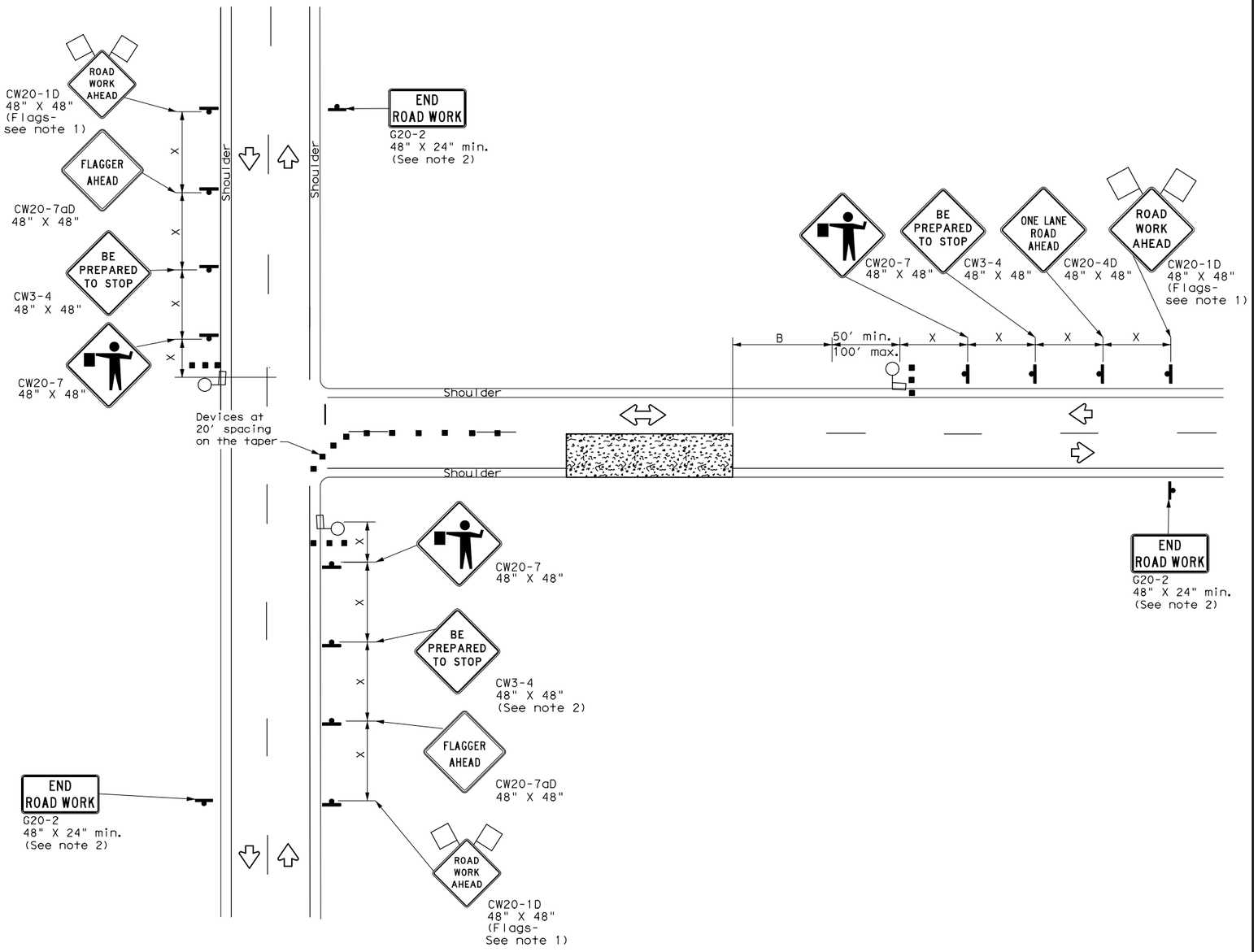
TRAFFIC CONTROL PLAN SEAL COAT OPERATIONS ONE-LANE TWO-WAY

TCP(SC-1)-22

FILE: tcpsc-1-22.dgn	DN:	CK:	DW:	CK:
©TxDOT October 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-21 10-22	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		47

217

DATE: 11/29/2023 1:31:57 PM
FILE: 7_tcpsc-1-22.dgn



ONE LANE TWO-WAY (T-INTERSECTION) CONTROL WITH PILOT VEHICLE

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing Distance "X"	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L=WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* Conventional Roads Only

** Taper lengths have been rounded off.

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

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except: if project signing is present, END ROAD WORK (G20-2) sign is optional with approval by the Engineer.
3. Flaggers should use two-way radios or other methods of communication at all times for traffic control coordination.
4. Flaggers should use 24" STOP (CW20-8) / SLOW (CW20-8aT) paddles to control traffic. Flags should be limited to emergency situations.
5. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
6. Temporary rumble strips are not required on seal coat operations.
7. The pilot car is used to guide vehicles through traffic control zone. The pilot car shall have an identification name displayed and PILOT CAR, FOLLOW ME (G20-4) sign or message board mounted in a conspicuous position on rear.

Texas Department of Transportation

Traffic Safety Division Standard

TRAFFIC CONTROL PLAN SEAL COAT OPERATIONS NEAR INTERSECTION

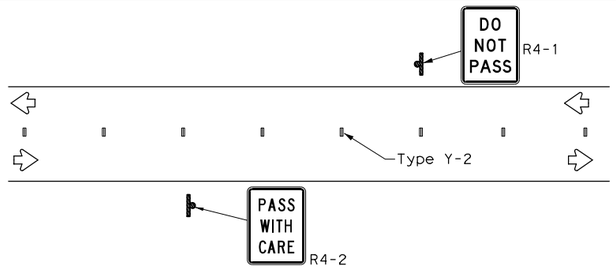
TCP(SC-4)-22

FILE: tcpsc-4-22.dgn	DN:	CK:	DW:	CK:
©TxDOT October 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-21 10-22	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		48

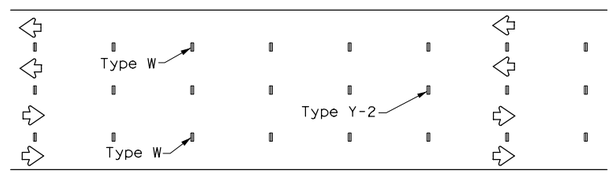
220

DATE: 11/29/2023 1:32:06 PM
FILE: 8_tcpsc-4-22.dgn

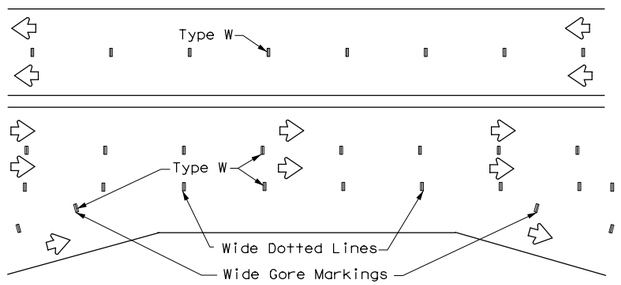
WORK ZONE SHORT TERM PAVEMENT MARKINGS PATTERNS (TABS)



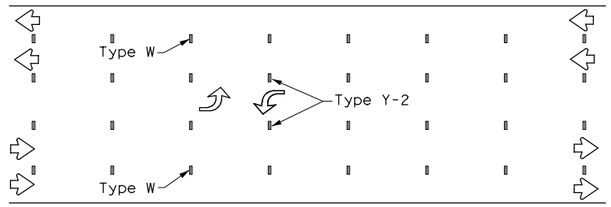
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO LANE TWO-WAY HIGHWAYS



LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS

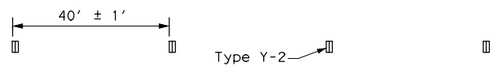
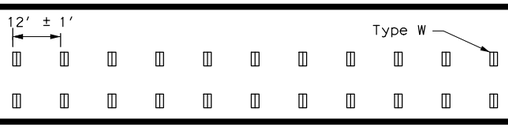
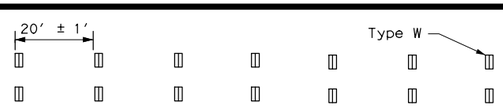


LANE LINES FOR DIVIDED HIGHWAY

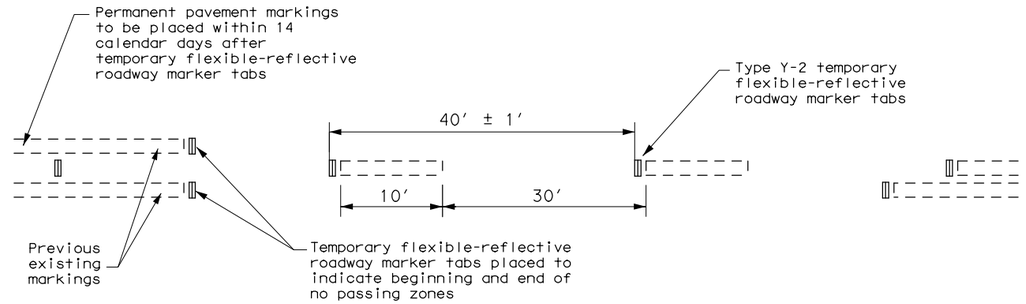


TWO-WAY LEFT TURN LANE

WORK ZONE SHORT TERM PAVEMENT MARKINGS DETAILS (TABS)

SOLID LINES	DOUBLE NO-PASSING LINE	
	SINGLE NO-PASSING LINE or CHANNELIZATION LINE	
	8" WIDE SOLID LINE	
BROKEN LINES (FOR CENTER LINE OR LANE LINE)		
WIDE DOTTED LINES (FOR LANE DROP LINES)		
WIDE GORE MARKINGS		

TABS ON CENTERLINES OF TWO-LANE TWO-WAY ROADS



TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS

1. Temporary markings for surfacing projects shall be Temporary Flexible-Reflective Roadway Marker Tabs with protective cover unless otherwise approved by the Engineer. Tabs are to be installed to provide true alignment for striping crews or as directed by the Engineer. Tabs will be placed at the spacing indicated. Tabs should be applied to the pavement no more than two days before the surfacing is applied. After the surfacing is rolled and swept, the protective cover over the reflective strip shall be removed.
2. Temporary Flexible-Reflective Roadway Marker Tabs detailed on this sheet will be designated Type Y-2 (two amber reflective surfaces with a yellow body); Type Y (one amber reflective surface with yellow body); and Type W (one white or silver reflective surface with white body). Additional details may be found on BC(11).
3. Temporary Flexible-Reflective Roadway Marker Tabs will require normal maintenance replacement when used on roadways with an Average Daily Traffic (ADT) per lane of up to 7500 vehicles with no more than 10% truck mix. When roadway volumes exceed these values, additional maintenance replacement of these devices should be planned for.
4. When dry, tabs shall be visible for a minimum distance of 200 feet during normal daylight hours and when illuminated by automobile low- beam head light at night, unless sight distance is restricted by roadway geometrics.
5. No two consecutive tabs nor four tabs per 1000 feet of line shall be missing or fail to meet the visual performance requirements of Note 4.
6. Tabs shall meet requirements of Departmental Material Specification DMS-8242.
7. Tabs shall NOT be used to simulate edge lines.

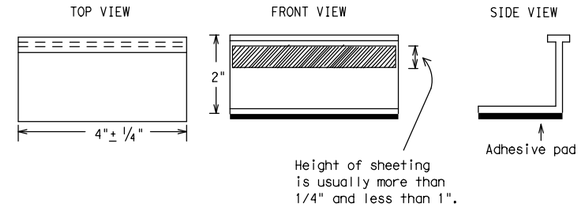
NOTES:

1. The Contractor will be responsible for maintaining short term pavement markings until permanent pavement markings are in place. When the Contractor is responsible for placement of permanent pavement markings, no segment of roadway shall remain without permanent pavement markings for a period greater than 14 calendar days unless weather conditions prohibit placement. Permanent pavement markings shall be placed as soon as weather permits.
2. For exit gores where a lane is being dropped, place wide gore markings or retroreflective channelizing devices to guide motorist through the exit. If channelizing devices are to be used it should be noted elsewhere in the plans. One piece cones are NOT acceptable.
3. Dimensions indicated on this sheet are typical and approximate. Variations in size and height may occur between markers or devices made by manufacturers, by as much as 1/4 inch, unless otherwise noted.

DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS) & MATERIAL PRODUCER LISTS (MPL)

1. DMSs referenced above may be found along with embedded links to their respective MPLs at the following website: http://www.txdot.gov

TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS



Texas Department of Transportation

Traffic Safety Division Standard

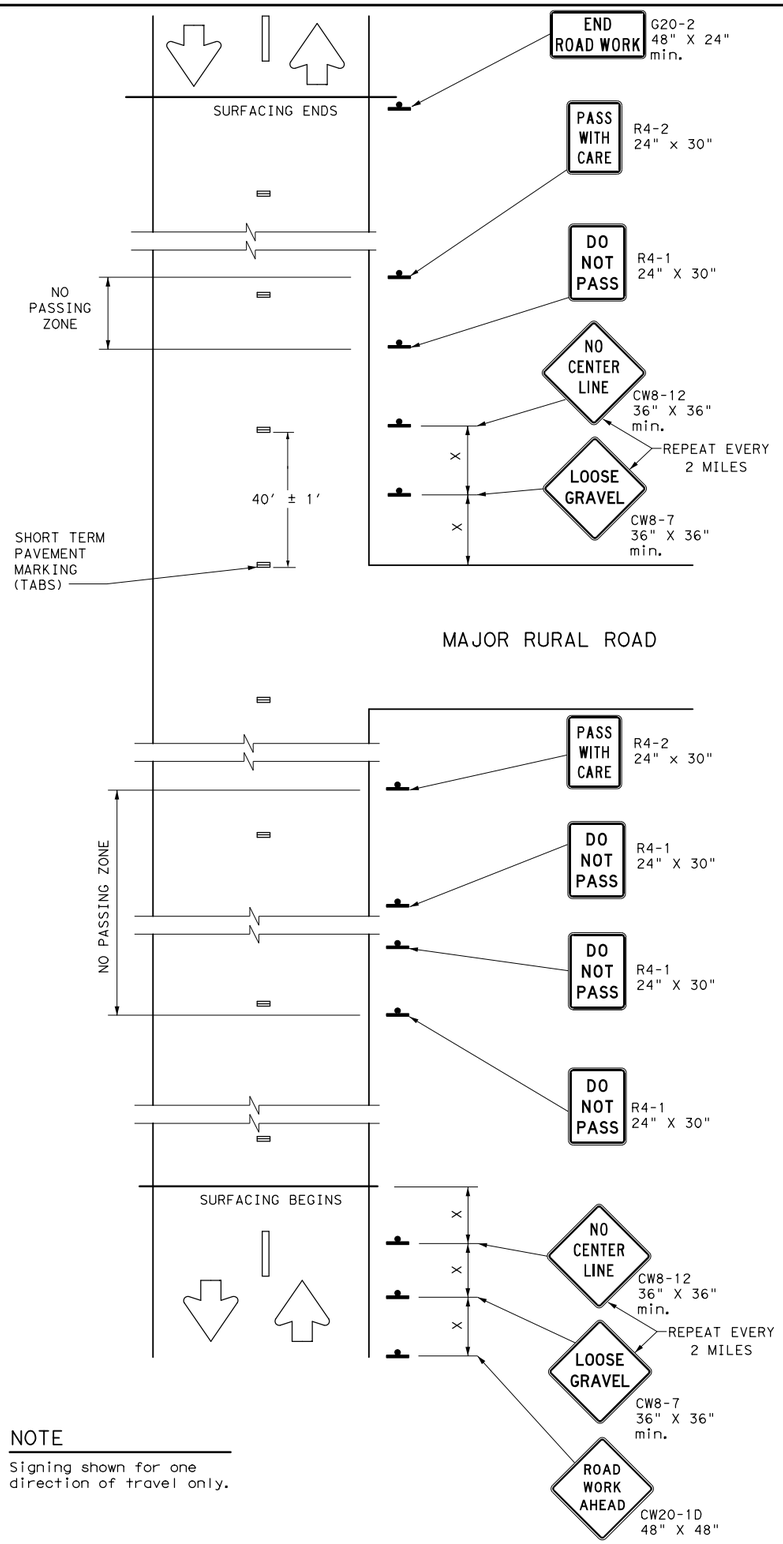
TEMPORARY PAVEMENT MARKINGS FOR SEAL COAT OPERATIONS

TCP(SC-7)-22

FILE: tcpsc-7-22.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT October 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
4-21 10-22	DIST	COUNTY		SHEET NO.
	ABL	FISHER		49

223

DATE: 11/29/2023
FILE: 9_tcpsc-7-22.dgn



NOTE

Signing shown for one direction of travel only.

NO PASSING ZONES ON TWO-LANE TWO-WAY ROADS

DO NOT PASS (R4-1) SIGN and NO-PASSING ZONES

A. Prior to the beginning of construction, all currently striped no-passing zones shall be signed with the DO NOT PASS (R4-1) signs and PASS WITH CARE (R4-2) signs placed at the beginning and end of each zone for each direction of travel, except as otherwise provided herein. Signs marking these individual no-passing zones need not be covered prior to construction if the signs supplement the existing pavement markings.

B. At the discretion of the Engineer, in areas of numerous no-passing zones, several zones may be combined as a single zone. If passing is to be prohibitd over one or more lengthy sections, a DO NOT PASS sign and a NEXT XX MILES (R20-1TP) plaque may be used at the beginning of such zones. The DO NOT PASS sign and the NEXT XX MILES plaque should be repeated every mile to the end of the no-passing zone. In areas where there is a considerable distance between no-passing zones, the end of the no-passing zone may be signed with a PASS WITH CARE sign and a NEXT XX MILES plaque.

C. Depending on traffic volumes and length of sections, it may be desirable to prohibit passing throughout the project to prevent damage to windshields and lights. The DO NOT PASS sign and NEXT XX MILES plaque should be used and repeated as often as necessary for this purpose. Where several existing zones are to be combined into one individual no-passing zone, the sign at the beginning of the zone should be covered until the surfacing operation has passed this location so as not to have the DO NOT PASS sign conflict with the existing pavement markings. Also, unless one day of operation completes the entire length of such combined zones, appropriate DO NOT PASS and PASS WITH CARE signs should be placed at the beginning and end of the no-passing zones where the surfacing operation has stopped for the day.

D. DO NOT PASS and PASS WITH CARE signs are to remain in place until permanent pavement markings are installed.

NO CENTER LINE (CW8-12) SIGN

A. Center line markings are yellow pavement markings that delineate the separation between lanes that have opposite directions of travel on a roadway. Divided highways do not typically have center line markings.

B. At the time construction activity obliterates the existing center line markings (low volume roads may not have an existing center line), a NO CENTER LINE (CW8-12) sign should be erected at the beginning of the work area, at approximately two mile intervals within the work area, beyond major intersections, and other locations deemed necessary by the Engineer.

C. The NO CENTER LINE signs are to remain in place until permanent pavement markings are installed.

LOOSE GRAVEL (CW8-7) SIGN

A. When construction begins, a LOOSE GRAVEL (CW8-7) sign should be erected at each end of the work area and repeated at intervals of approximately two miles in rural areas and closer in urban areas.

B. The LOOSE GRAVEL signs are to remain in place until the condition no longer exists.

COORDINATION OF SIGN LOCATIONS

A. The location of warning signs at the beginning and end of a work area are to be coordinated with other signing typically shown on the Barricade and Construction Standards for project limits to ensure adequate sign spacing.

B. Where possible, the ROAD WORK AHEAD (CW20-1D), LOOSE GRAVEL (CW8-7), and NO CENTER LINE (CW8-12) signs should be placed:
   a.) In the sequence shown following the OBEY WARNING SIGNS STATE LAW (R20-3T) sign and the TRAFFIC FINES DOUBLE (R20-5T) sign; and
   b.) One "X" sign spacing prior to the CONTRACTOR (G20-6T) sign typically located at or near the limits of surfacing.

LOOSE GRAVEL and NO CENTER LINE sign placements will then be repeated as described above.

Posted Speed *	Minimum Sign Spacing Distance "X"
30	120′
35	160′
40	240′
45	320′
50	400′
55	500′
60	600′
65	700′
70	800′
75	900′

* Conventional Roads Only

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Surfacing operations that cover or obliterate existing pavement markings must first have the passing zones clearly marked with tabs as well as having any of the traffic control devices detailed on this sheet furnished and erected as directed by the Engineer.
2. The devices shown on this sheet are to be used to supplement those required by the BC Standards or others required elsewhere in the plans.
3. Signs shall be erected as detailed on the BC Standards or the Compliant Work Zone Traffic Control Devices List (CWZTCD) on supports approved for Short Duration / Short Term Stationary Work Zone Sign Supports.
4. When surfacing operations take place on divided highways, freeways or expressways, the size of diamond shaped construction warning signs shall be 48" x 48".
5. Signs on divided highways, freeways and expressways should be placed on both right and left sides of the roadway based on roadway conditions as directed by the Engineer.

Texas Department of Transportation

Traffic Safety Division Standard

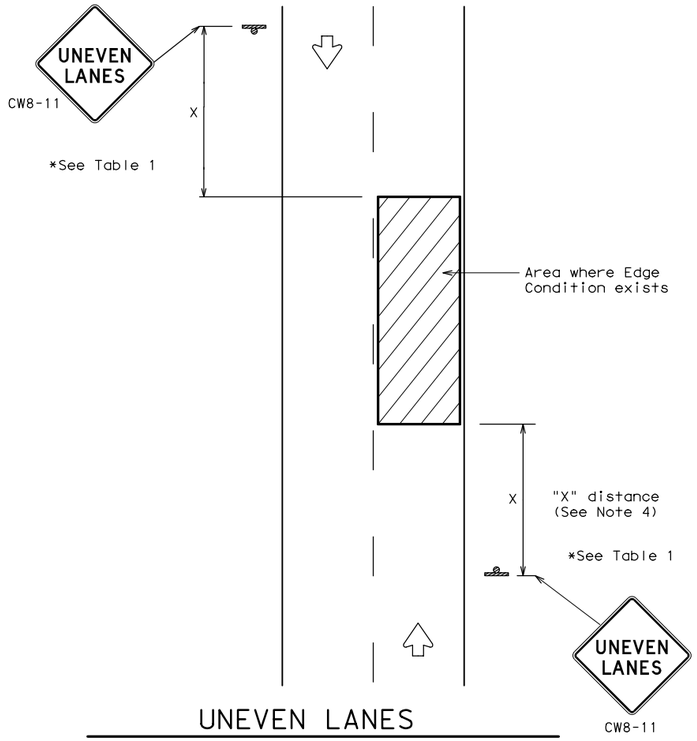
TRAFFIC CONTROL DETAILS FOR SEAL COAT OPERATIONS

TCP(SC-8)-22

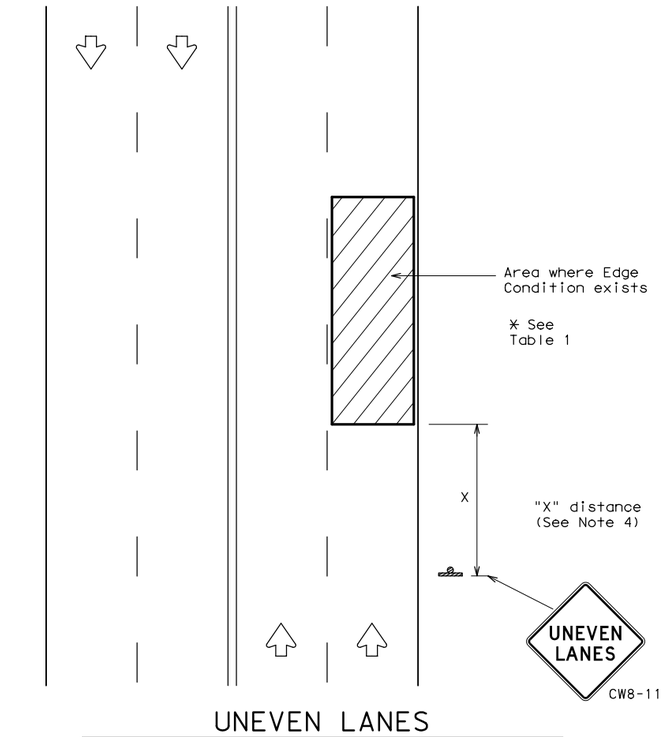
FILE: tcpsc-8-22.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
4-21	DIST	COUNTY		SHEET NO.
10-22	ABL	FISHER		50

224

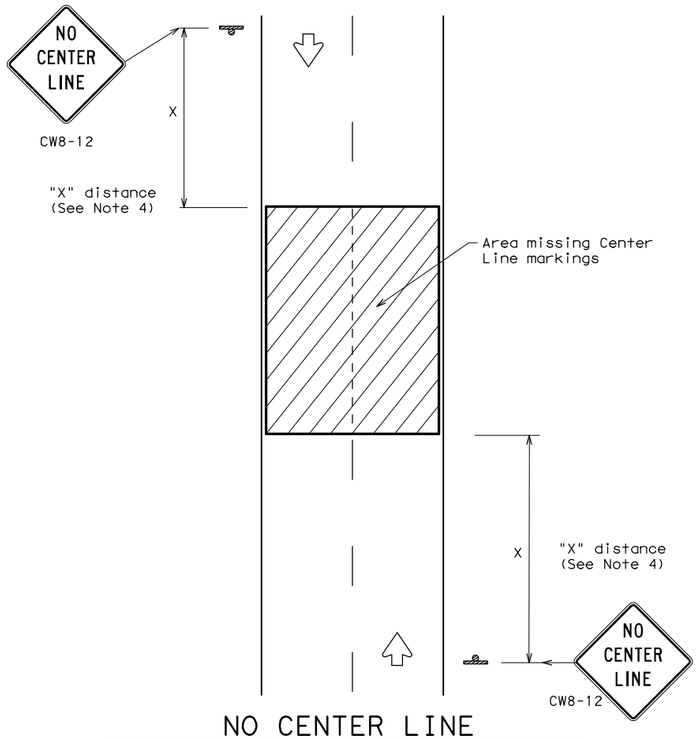
DATE: 11/29/2023 1:32:21 PM
FILE: 10_tcpsc-8-22.dgn



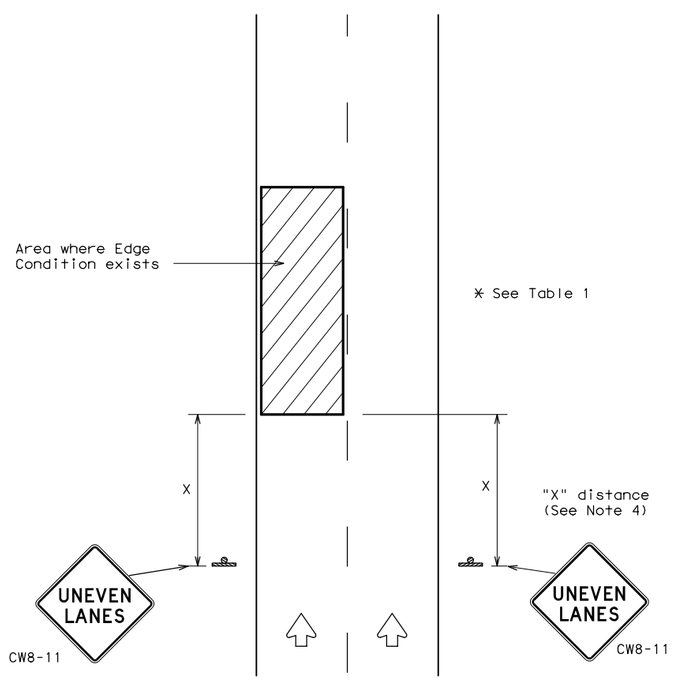
UNEVEN LANES
TWO LANE CONVENTIONAL ROAD



UNEVEN LANES
FOUR LANE CONVENTIONAL ROAD



NO CENTER LINE
TWO LANE CONVENTIONAL ROAD



UNEVEN LANES
DIVIDED ROADWAY

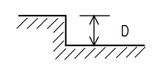
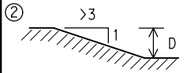
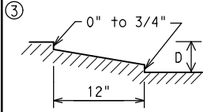
DEPARTMENTAL MATERIAL SPECIFICATIONS	
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY (REMOVABLE) PREFABRICATED PAVEMENT MARKINGS	DMS-8241
SIGN FACE MATERIALS	DMS-8300

COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B_{FL} OR TYPE C_{FL} SHEETING
BLACK	LEGEND & BORDERS	ACRYLIC NON-REFLECTIVE SHEETING

GENERAL NOTES

1. If spalling or holes occur, ROUGH ROAD (CW8-8) signs should be placed in advance of the condition and be repeated every two miles where the condition persists.
2. UNEVEN LANES (CW8-11) signs shall be installed in advance of the condition and repeated every mile. Signs installed along the uneven lane condition may be supplemented with the NEXT XX MILES (CW7-3aP) plaque or Advisory Speed (CW13-1P) plaque.
3. NO CENTER LINE (CW8-12) signs and temporary pavement markings as per the WZ(STPM) standard shall be installed if yellow centerlines separating two way traffic are obscured or obliterated. Repeat NO CENTER LINE signs every two miles where the center line markings are not in place. The signs and markings shall remain in place until permanent pavement markings are installed.
4. Signs shall be spaced at the distances recommended as per BC standards.
5. Additional signs may be required as directed by the Engineer. Signs shall remain in place until final surface is applied. Signs shall be considered subsidiary to Item 502 "BARRICADES, SIGNS AND TRAFFIC HANDLING."
6. Signs shall be fabricated and mounted on supports as shown on the BC standards and/or listed on the "Compliant Work Zone Traffic Control Devices" list.
7. Short term markings shall not be used to simulate edge lines.
8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition.

TABLE 1

Edge Condition	Edge Height (D)	* Warning Devices
① 	Less than or equal to: 1¼" (maximum-planing) 1½" (typical-overlay)	Sign: CW8-11
	Distance "D" may be a maximum of 1 1/4 " for planing operations and 2" for overlay operations if uneven lanes with edge condition 1 are open to traffic after work operations cease.	
② 	Less than or equal to 3"	Sign: CW8-11
③  Notched Wedge Joint	Distance "D" may be a maximum of 3" if uneven lanes with edge condition 2 or 3 are open to traffic after work operations cease. Uneven lanes should not be open to traffic when "D" is greater than 3".	

TRAFFIC CONTROL DURING PLANING, OVERLAY AND LEVELING OPERATIONS ARE SHOWN ELSEWHERE IN THE PLANS.

MINIMUM WARNING SIGN SIZE	
Conventional roads	36" x 36"
Freeways/expressways, divided roadways	48" x 48"

Texas Department of Transportation

Traffic Operations Division Standard

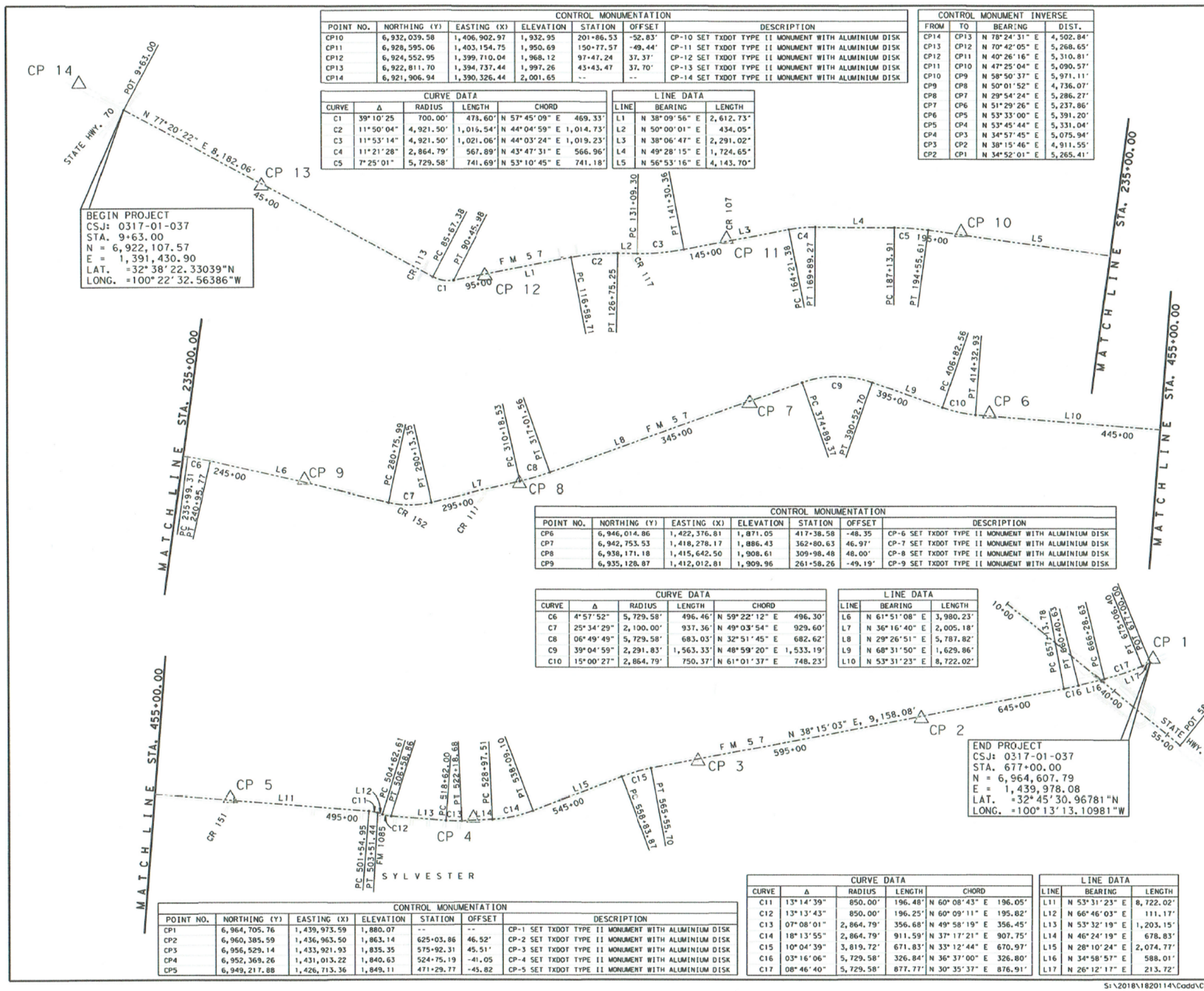
SIGNING FOR UNEVEN LANES

WZ(UL)-13

FILE: wzul-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
8-95 2-98 7-13	DIST	COUNTY		SHEET NO.
1-97 3-03	ABL	FISHER		51

112

DATE: 11/29/2023 1:32:27 PM
FILE: 11_wzul-13.dgn



NOTES:

1. ALL COORDINATES AND BEARINGS ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM OF 1983 (NAD83) (2011 ADJUSTMENT, 2010 EPOCH) NORTH CENTRAL ZONE (4202), AS ESTABLISHED BY GPS OBSERVATIONS AND BASED ON THE TxDOT RTN MOUNT POINT, NAD83_(2010)-WEST_VRS_RTCM.

2. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) (2011 ADJUSTMENT, 2010 EPOCH) GEOID 12B, AS ESTABLISHED BY GPS OBSERVATIONS AND BASED ON THE TEXAS MOUNT POINT: NAD83_(2010)-WEST_VRS_RTCM.

3. THE UNIT OF MEASURE IS THE U.S. SURVEY FOOT.

4. ALL COORDINATES AND DISTANCES ARE SURFACE VALUES AND CAN BE CONVERTED TO GRID VALUES BY MULTIPLYING BY THE PROJECT COMBINED FACTOR OF 0.9998057373418.

5. REVISED 22 OCTOBER, 2018 FOR ALIGNMENT REVISION.

THIS SURVEY CONTROL INFORMATION HAS BEEN ACCEPTED AND INCORPORATED INTO THIS PS&E

STATE OF TEXAS
REGISTERED
DARCY B. WEILNAU
5607
PROFESSIONAL LAND SURVEYOR

THE CONTROL POINTS HEREIN WERE DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION.

Darcy B. Weilnau 14 March 2019

DARCY B. WEILNAU
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 5607

LANDTECH
2525 North Loop West, Suite 300,
Houston, Texas 77008
T: 713-861-7068 F: 713-861-4131
TBPE Registration No. F-1364; TBPLS Registration No. 10019100

FM 57
CONTROL INDEX

FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
6	TX				FM 57
STATE DIST.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
ABL	FISHER	0317	01	037	

SH 70 TO PLUM CREEK

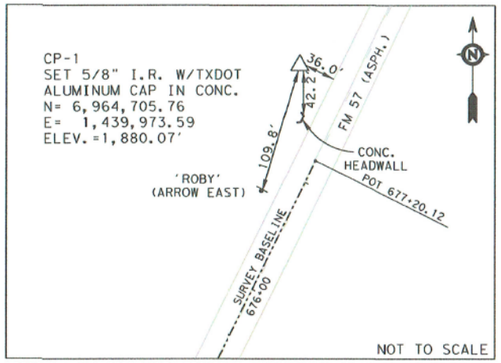
FM 57
CONTROL INDEX

SCALE: NTS SHEET 01 OF 01

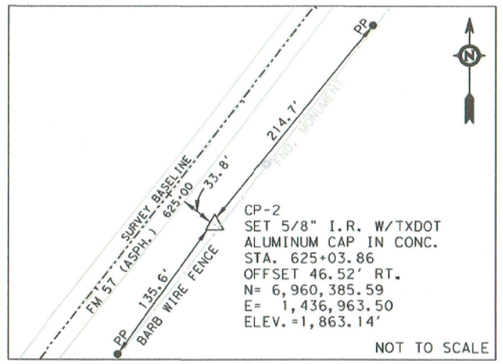
DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	52
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:32:33 PM SCALE: 1:1

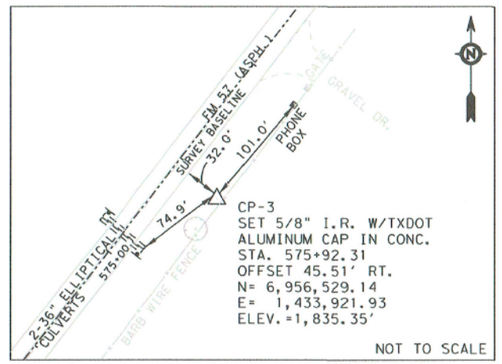
S:\2018\1820114\Cadd\Control\For Plan Set\WRF031701037-Survey Control Index-01.dgn



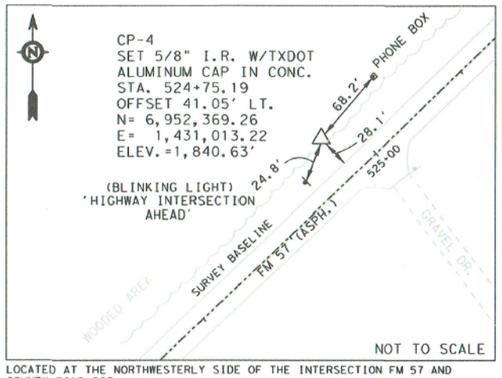
LOCATED 1,260 FEET NORTH FROM THE INTERSECTION OF US 80 AND FM 57.



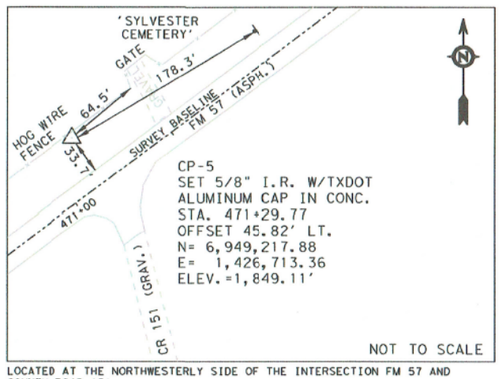
LOCATED 4,035 FEET SOUTHWESTERLY FROM THE INTERSECTION OF US 80 AND FM 57.



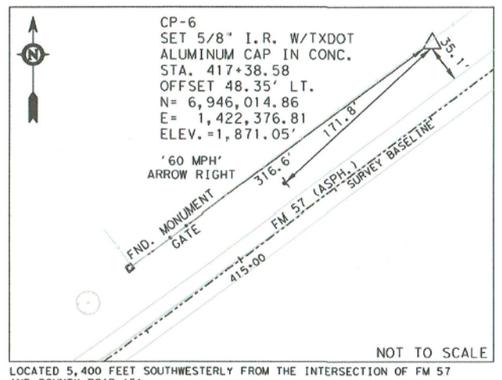
LOCATED 1.7 MILES SOUTHWESTERLY FROM THE INTERSECTION OF US 80 AND FM 57.



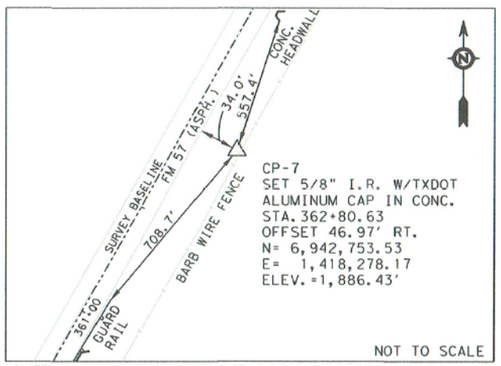
LOCATED AT THE NORTHWESTERLY SIDE OF THE INTERSECTION FM 57 AND COUNTY ROAD 825.



LOCATED AT THE NORTHWESTERLY SIDE OF THE INTERSECTION FM 57 AND COUNTY ROAD 151.



LOCATED 5,400 FEET SOUTHWESTERLY FROM THE INTERSECTION OF FM 57 AND COUNTY ROAD 151.



LOCATED 1.1 MILES NORTHEASTERLY FROM THE INTERSECTION OF FM 57 AND COUNTY ROAD 111.

NOTES:

1. ALL COORDINATES AND BEARINGS ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM OF 1983 (NAD83) (2011 ADJUSTMENT, 2010 EPOCH) NORTH CENTRAL ZONE (4202), AS ESTABLISHED BY GPS OBSERVATIONS AND BASED ON THE TxDOT RTN MOUNT POINT, NAD83_(2010)-WEST_VRS_RTCM.

2. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) (2011 ADJUSTMENT, 2010 EPOCH) GEOID 12B, AS ESTABLISHED BY GPS OBSERVATIONS AND BASED ON THE TEXAS MOUNT POINT: NAD83_(2010)-WEST_VRS_RTCM.

3. THE UNIT OF MEASURE IS THE U.S. SURVEY FOOT.

4. ALL COORDINATES AND DISTANCES ARE SURFACE VALUES AND CAN BE CONVERTED TO GRID VALUES BY MULTIPLYING BY THE PROJECT COMBINED FACTOR OF 0.9998057373418.

5. REVISED 22 OCTOBER, 2018 FOR ALIGNMENT REVISION.

THIS SURVEY CONTROL INFORMATION HAS BEEN ACCEPTED AND INCORPORATED INTO THIS PS&E

STATE OF TEXAS
REGISTERED
DARCY B. WEILNAU
5607
PROFESSIONAL LAND SURVEYOR

THE CONTROL POINTS HEREIN WERE DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION.

Darcy B. Weilnau 14 March 2019

DARCY B. WEILNAU
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 5607

LANDTECH
2525 North Loop West, Suite 300,
Houston, Texas 77008
T: 713-861-7068 F: 713-861-4131
TBPE Registration No. F-1364; TBPLS Registration No. 10019100

FM 57
HORIZONTAL & VERTICAL CONTROL

FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.				HIGHWAY NO.
8	TX					FM 57
STATE DIST.	COUNTY	CONTROL NO.	SECTION NO.		JOB NO.	SHEET NO.
ABL	FISHER	0317	01		037	

SH 70 TO PLUM CREEK

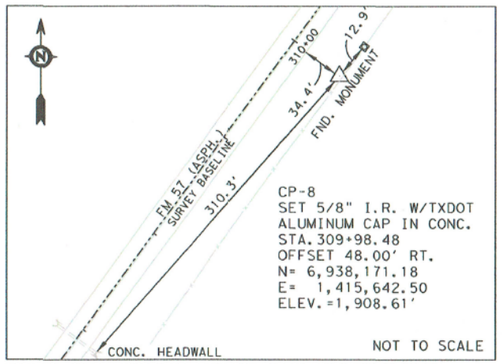
FM 57
HORIZONTAL AND VERTICAL CONTROL

SCALE: NTS SHEET 01 OF 02

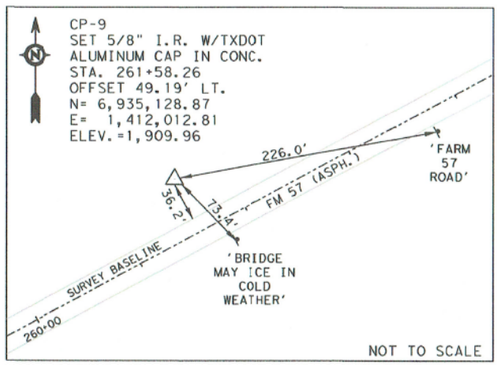
DESIGN IEI	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS IEI	6	(SEE THE TITLE SHEET)		FM 57
CHECK IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	53
	CONTROL	SECTION	JOB	
	0317	01	043	

S:\2018\1820114\Cadd\Control\For Plan Set\MRF03170103?Horiz&Vert Cntrl.dgn

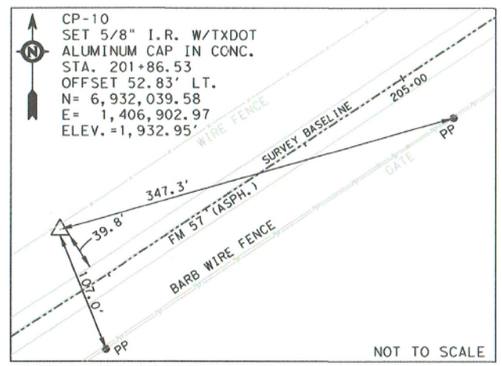
PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:32:35 PM SCALE: 1:1



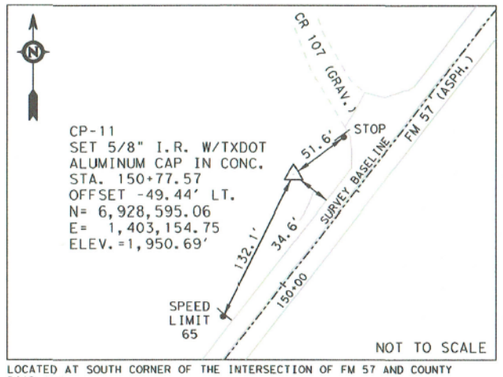
LOCATED 700 FEET NORTHEASTERLY FROM THE INTERSECTION OF FM 57 AND COUNTY ROAD 111.



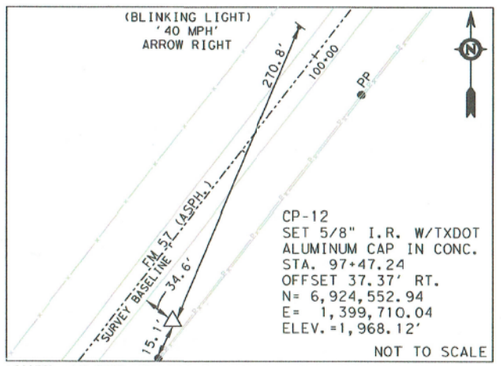
LOCATED 2.1 MILES NORTHEASTERLY FROM THE INTERSECTION OF FM 57 AND COUNTY ROAD 107.



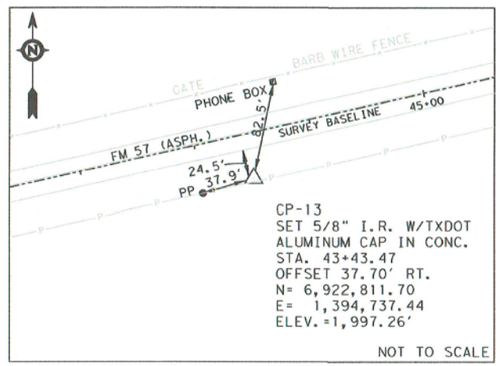
LOCATED 0.9 OF A MILE NORTHEASTERLY FROM THE INTERSECTION OF FM 57 AND COUNTY ROAD 107.



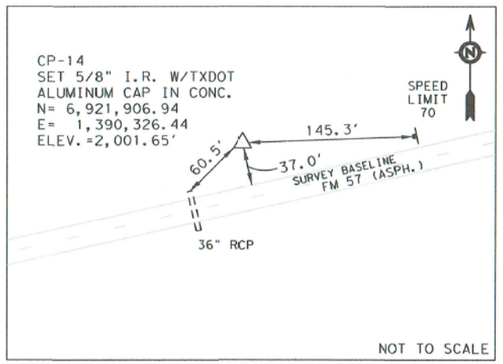
LOCATED AT SOUTH CORNER OF THE INTERSECTION OF FM 57 AND COUNTY ROAD 107.



LOCATED 1445 FEET NORTHEASTERLY FROM THE INTERSECTION OF FM 57 AND COUNTY ROAD 113.



LOCATED 3406 FEET NORTHEASTERLY FROM THE INTERSECTION OF FM 57 AND SH 70.



LOCATED 1100 FEET SOUTHWESTERLY FROM THE INTERSECTION OF FM 57 AND SH 70.

NOTES:

1. ALL COORDINATES AND BEARINGS ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM OF 1983 (NAD83) (2011 ADJUSTMENT, 2010 EPOCH) NORTH CENTRAL ZONE (4202), AS ESTABLISHED BY GPS OBSERVATIONS AND BASED ON THE TxDOT RTN MOUNT POINT, NAD83_(2010)-WEST_VRS_RTCM.

2. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) (2011 ADJUSTMENT, 2010 EPOCH) GEOID 12B, AS ESTABLISHED BY GPS OBSERVATIONS AND BASED ON THE TEXAS MOUNT POINT: NAD83_(2010)-WEST_VRS_RTCM.

3. THE UNIT OF MEASURE IS THE U.S. SURVEY FOOT.

4. ALL COORDINATES AND DISTANCES ARE SURFACE VALUES AND CAN BE CONVERTED TO GRID VALUES BY MULTIPLYING BY THE PROJECT COMBINED FACTOR OF 0.9998057373418.

5. REVISED 22 OCTOBER, 2018 FOR ALIGNMENT REVISION.

THIS SURVEY CONTROL INFORMATION HAS BEEN ACCEPTED AND INCORPORATED INTO THIS PS&E

STATE OF TEXAS
REGISTERED
DARCY B. WEILNAU
5607
PROFESSIONAL
LAND SURVEYOR

THE CONTROL POINTS HEREIN WERE DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY SUPERVISION.

Darcy B. Weilnau 14 March 2019

DARCY B. WEILNAU
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 5607

LANDTECH
2525 North Loop West, Suite 300,
Houston, Texas 77008
T: 713-861-7068 F: 713-861-4131
TBPE Registration No. F-1364; TBPLS Registration No. 10019100

FM 57
HORIZONTAL & VERTICAL CONTROL

FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
6	TX				FM 57
STATE DIST.	COUNTY	CONTROL NO.	SECTION NO.	JOB NO.	SHEET NO.
ABL	FISHER	0317	01	037	--

S:\2018\1820114\Cadd\Control\For Plan Set\MRF031701037-Horiz&Vert Cntrl.dgn

SH 70 TO PLUM CREEK

FM 57
HORIZONTAL AND VERTICAL CONTROL

SCALE: NTS SHEET 02 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
IEI	TEXAS	ABL	FISHER	54
CHECK	CONTROL	SECTION	JOB	
IEI	0317	01	043	
CHECK				
IEI				

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:32:36 PM SCALE: 1:1

HORIZONTAL ALIGNMENT FOR ℄ FM 57

Beginning chain FM57_PROP description

Point 101 N 6,921,980.9540 E 1,390,867.2653 Sta 3+85.32

Course from 101 to 102 N 77° 20′ 21.63" E Dist 8,182.06

Point 102 N 6,923,774.2676 E 1,398,850.3808 Sta 85+67.38

Curve Data

Curve FM57_HC_01

P.I. Station	88+16.46	N	6,923,828.8603	E	1,399,093.4059
Delta =	39° 10′ 25.20" (LT)				
Degree =	8° 11′ 06.40"				
Tangent =	249.08				
Length =	478.60				
Radius =	700.00				
External =	42.99				
Long Chord =	469.33				
Mid. Ord. =	40.51				
P.C. Station	85+67.38	N	6,923,774.2684	E	1,398,850.3846
P.T. Station	90+45.98	N	6,924,024.6919	E	1,399,247.3203
C.C.		N	6,924,457.2481	E	1,398,696.9612
Back = N	77° 20′ 21.63" E				
Ahead = N	38° 09′ 56.43" E				
Chord Bear = N	57° 45′ 09.03" E				

Point 103 N 6,924,024.6919 E 1,399,247.3203 Sta 90+45.98

Course from 103 to 104 N 38° 09′ 56.43" E Dist 2,612.73

Point 104 N 6,926,078.8909 E 1,400,861.8237 Sta 116+58.71

Curve Data

Curve FM57_HC_02

P.I. Station	121+68.80	N	6,926,479.9302	E	1,401,177.0217
Delta =	11° 50′ 04.18" (RT)				
Degree =	1° 09′ 51.10"				
Tangent =	510.08				
Length =	1,016.54				
Radius =	4,921.50				
External =	26.36				
Long Chord =	1,014.73				
Mid. Ord. =	26.22				
P.C. Station	116+58.71	N	6,926,078.8875	E	1,400,861.8211
P.T. Station	126+75.25	N	6,926,807.8053	E	1,401,567.7704
C.C.		N	6,923,037.7082	E	1,404,731.2384
Back = N	38° 09′ 56.43" E				
Ahead = N	50° 00′ 00.61" E				
Chord Bear = N	44° 04′ 58.52" E				

Point 105 N 6,926,807.8053 E 1,401,567.7704 Sta 126+75.25

Course from 105 to 106 N 50° 00′ 00.61" E Dist 434.05

Point 106 N 6,927,086.8088 E 1,401,900.2759 Sta 131+09.30

Curve Data

Curve FM57_HC_03

P.I. Station	136+21.68	N	6,927,416.1508	E	1,402,292.7727
Delta =	11° 53′ 13.54" (LT)				
Degree =	1° 09′ 51.10"				
Tangent =	512.37				
Length =	1,021.06				
Radius =	4,921.50				
External =	26.60				
Long Chord =	1,019.23				
Mid. Ord. =	26.46				
P.C. Station	131+09.30	N	6,927,086.8080	E	1,401,900.2748
P.T. Station	141+30.36	N	6,927,819.2793	E	1,402,609.0144
C.C.		N	6,930,856.9051	E	1,398,736.8068
Back = N	50° 00′ 00.61" E				
Ahead = N	38° 06′ 47.07" E				
Chord Bear = N	44° 03′ 23.84" E				

Point 107 N 6,927,819.2793 E 1,402,609.0144 Sta 141+30.36

Course from 107 to 108 N 38° 06′ 47.07" E Dist 2,291.02

Point 108 N 6,929,621.8417 E 1,404,023.0683 Sta 164+21.38

Curve Data

Curve FM57_HC_04

P.I. Station	167+06.27	N	6,929,845.9820	E	1,404,198.8993
Delta =	11° 21′ 27.79" (RT)				
Degree =	2° 00′ 00.00"				
Tangent =	284.88				
Length =	567.89				
Radius =	2,864.79				
External =	14.13				
Long Chord =	566.96				
Mid. Ord. =	14.06				
P.C. Station	164+21.38	N	6,929,621.8428	E	1,404,023.0691
P.T. Station	169+89.27	N	6,930,031.1049	E	1,404,415.4268
C.C.		N	6,927,853.6501	E	1,406,277.0692
Back = N	38° 06′ 47.07" E				
Ahead = N	49° 28′ 14.86" E				
Chord Bear = N	43° 47′ 30.97" E				

Point 109 N 6,930,031.1049 E 1,404,415.4268 Sta 169+89.27

Course from 109 to 110 N 49° 28′ 14.86" E Dist 1,724.64

Point 110 N 6,931,151.8398 E 1,405,726.2852 Sta 187+13.91

Curve Data

Curve FM57_HC_05

P.I. Station	190+85.29	N	6,931,393.1680	E	1,406,008.5527
Delta =	7° 25′ 01.01" (RT)				
Degree =	1° 00′ 00.00"				
Tangent =	371.37				
Length =	741.70				
Radius =	5,729.58				
External =	12.02				
Long Chord =	741.18				
Mid. Ord. =	12.00				
P.C. Station	187+13.91	N	6,931,151.8410	E	1,405,726.2866
P.T. Station	194+55.61	N	6,931,596.0385	E	1,406,319.6098
C.C.		N	6,926,796.9317	E	1,409,449.5716
Back = N	49° 28′ 14.86" E				
Ahead = N	56° 53′ 15.86" E				
Chord Bear = N	53° 10′ 45.36" E				

Point 111 N 6,931,596.0385 E 1,406,319.6098 Sta 194+55.61

Course from 111 to 112 N 56° 53′ 15.86" E Dist 4,143.70

Point 112 N 6,933,859.6648 E 1,409,790.3820 Sta 235+99.31

Curve Data

Curve FM57_HC_06

P.I. Station	238+47.70	N	6,933,995.3525	E	1,409,998.4291
Delta =	4° 57′ 52.41" (RT)				
Degree =	1° 00′ 00.00"				
Tangent =	248.38				
Length =	496.46				
Radius =	5,729.58				
External =	5.38				
Long Chord =	496.30				
Mid. Ord. =	5.38				
P.C. Station	235+99.31	N	6,933,859.6653	E	1,409,790.3827
P.T. Station	240+95.77	N	6,934,112.5264	E	1,410,217.4374
C.C.		N	6,929,060.5585	E	1,412,920.3445
Back = N	56° 53′ 15.86" E				
Ahead = N	61° 51′ 08.28" E				
Chord Bear = N	59° 22′ 12.07" E				

Point 113 N 6,934,112.5264 E 1,410,217.4374 Sta 240+95.77

Course from 113 to 114 N 61° 51′ 08.28" E Dist 3,980.22

Point 114 N 6,935,990.1819 E 1,413,726.9383 Sta 280+75.99

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER

Ramendra N. Das

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

SH 70 TO PLUM CREEK

FM 57
HORIZONTAL ALIGNMENT DATA

SHEET 01 OF 02

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	55
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:32:45 PM PENTABLE: FM57_REVISE.tbl SCALE: 1:1
USER: Rdos

HORIZONTAL ALIGNMENT FOR ℄ CO 113 LT

Beginning chain 113_L description

Point 1011 N 6,923,956.9013 E 1,398,566.6431 Sta 1083+29.77

Course from 1011 to 1012 S 12° 28′ 13.09" E Dist 240.3829

Point 1012 N 6,923,722.1895 E 1,398,618.5498 Sta 1085+70.15

Ending chain 113_L description

HORIZONTAL ALIGNMENT FOR ℄ CO 113 RT

Beginning chain 113_R description

Point 1013 N 6,923,721.2013 E 1,398,614.1508 Sta 1083+25.26

Course from 1013 to 1014 S 11° 43′ 20.07" E Dist 243.0328

Point 1014 N 6,923,483.2372 E 1,398,663.5271 Sta 1085+68.29

Ending chain 113_R description

HORIZONTAL ALIGNMENT FOR ℄ CO 911

Beginning chain 911 description

Point 1021 N 6,925,196.6422 E 1,399,861.5160 Sta 1101+06.05

Course from 1021 to 1022 S 51° 55′ 49.97" E Dist 241.2950

Point 1022 N 6,925,047.8558 E 1,400,051.4788 Sta 1103+47.34

Ending chain 911 description

HORIZONTAL ALIGNMENT FOR ℄ CO 910

Beginning chain 910 description

Point 1031 N 6,926,043.9716 E 1,400,529.2287 Sta 1111+82.09

Course from 1031 to 1032 S 50° 57′ 09.21" E Dist 239.9458

Point 1032 N 6,925,892.8145 E 1,400,715.5765 Sta 1114+22.04

Ending chain 910 description

HORIZONTAL ALIGNMENT FOR ℄ CO 120

Beginning chain 120 description

Point 1041 N 6,926,339.7341 E 1,400,759.6012 Sta 1115+53.92

Course from 1041 to 1042 S 51° 05′ 02.42" E Dist 243.5315

Point 1042 N 6,926,186.7524 E 1,400,949.0852 Sta 1117+97.45

Ending chain 120 description

HORIZONTAL ALIGNMENT FOR ℄ CO 127

Beginning chain 127 description

Point 1051 N 6,926,995.1348 E 1,401,791.0223 Sta 1129+66.68

Course from 1051 to 1052 S 58° 09′ 54.61" E Dist 109.0426

Point 1052 N 6,926,937.6178 E 1,401,883.6619 Sta 1130+75.72

Ending chain 127 description

HORIZONTAL ALIGNMENT FOR ℄ CO 107

Beginning chain 107 description

Point 1061 N 6,928,725.2382 E 1,403,173.2436 Sta 1150+31.93

Course from 1061 to 1062 S 13° 37′ 02.64" E Dist 25.5728

Point 1062 N 6,928,700.3842 E 1,403,179.2644 Sta 1150+57.50

Curve Data

Curve CO107_HC					
P.I. Station		1151+00.17	N	6,928,658.9296	E 1,403,189.3067
Delta	=	46° 12′ 15.85"	(LT)		
Degree	=	57° 17′ 44.81"			
Tangent	=	42.6582			
Length	=	80.6419			
Radius	=	100.0000			
External	=	8.7185			
Long Chord	=	78.4745			
Mid. Ord.	=	8.0194			
P.C. Station		1150+57.51	N	6,928,700.3886	E 1,403,179.2633
P.T. Station		1151+38.15	N	6,928,637.4857	E 1,403,226.1832
C.C.			N	6,928,723.9323	E 1,403,276.4523
Back	= S 13° 37′ 02.64" E				
Ahead	= S 59° 49′ 18.48" E				
Chord Bear	= S 36° 43′ 10.56" E				

Point 1063 N 6,928,637.4857 E 1,403,226.1832 Sta 1151+38.15

Course from 1063 to 1064 S 59° 49′ 18.48" E Dist 19.6126

Point 1064 N 6,928,627.6266 E 1,403,243.1376 Sta 1151+57.76

Ending chain 107 description

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

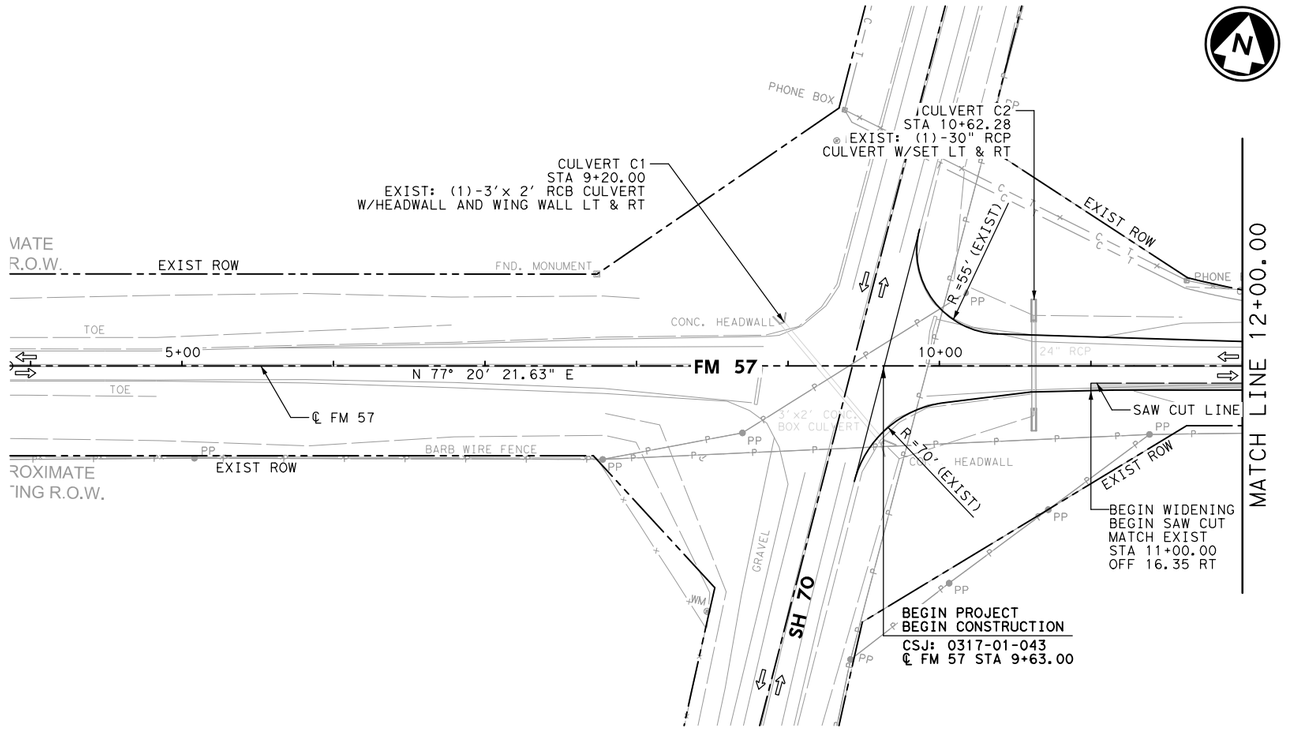
SH 70 TO PLUM CREEK

FM 57
HORIZONTAL ALIGNMENT DATA

SHEET 02 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	56
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:32:52 PM PENTABLE: FM57_REVISE.tbl SCALE: 1:1
USER: Rdas



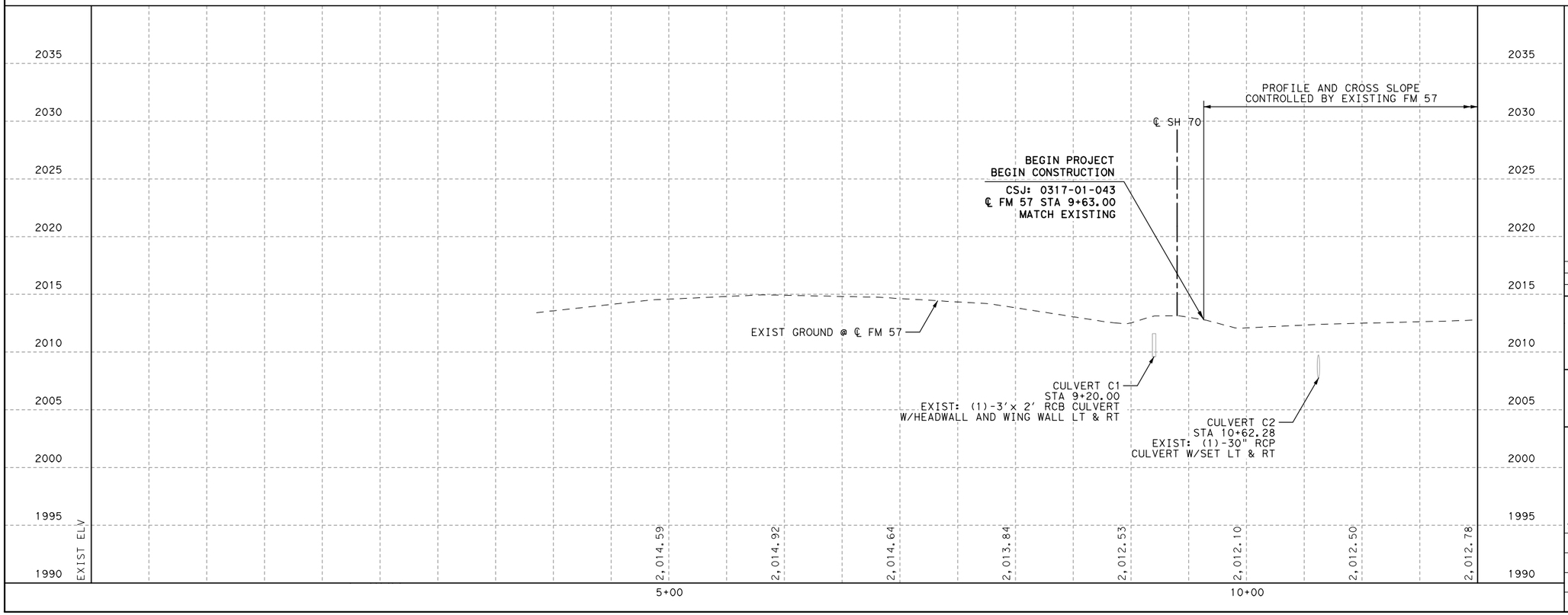
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

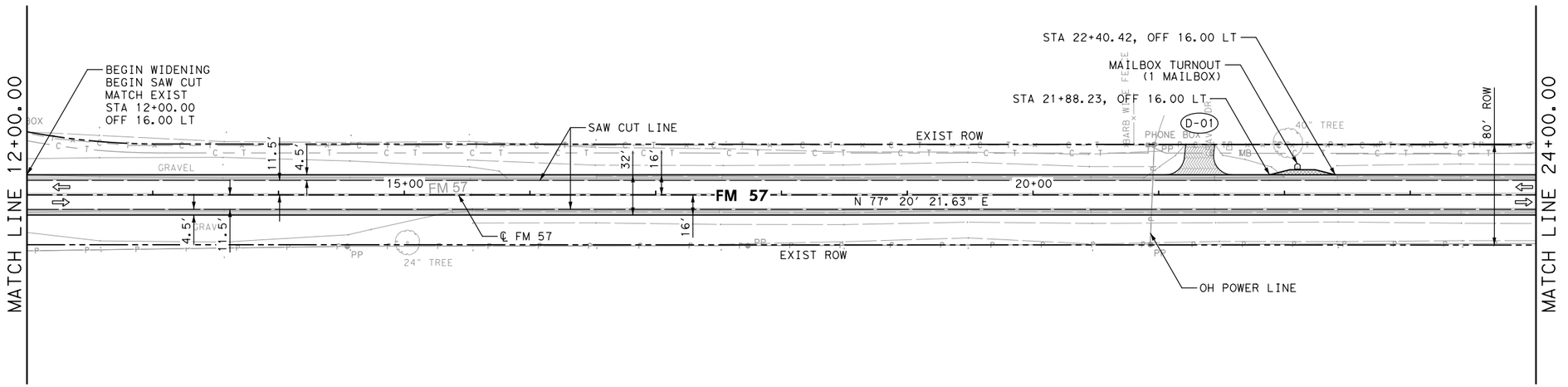
SH 70 TO PLUM CREEK

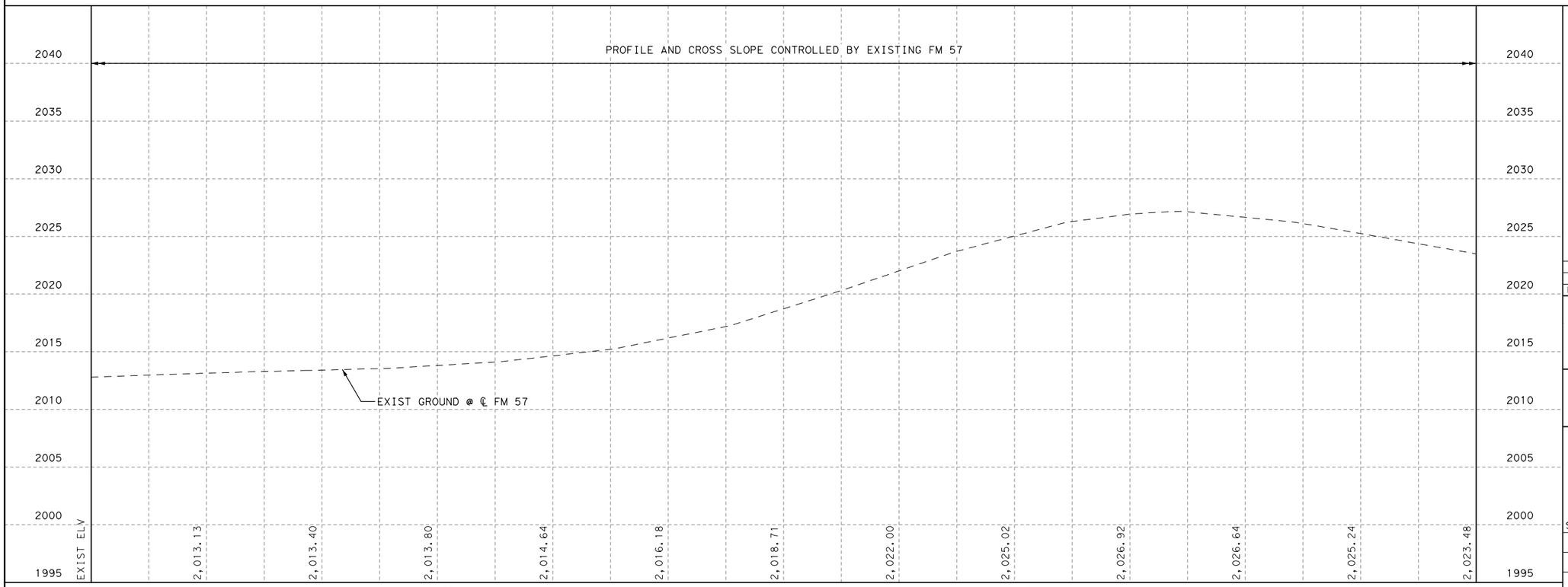
FM 57
PLAN AND PROFILE
BEGIN TO STA 12+00

SCALE 1"=100'H, 1"=10'V SHEET 01 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	57
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:32:58 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100.002





LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

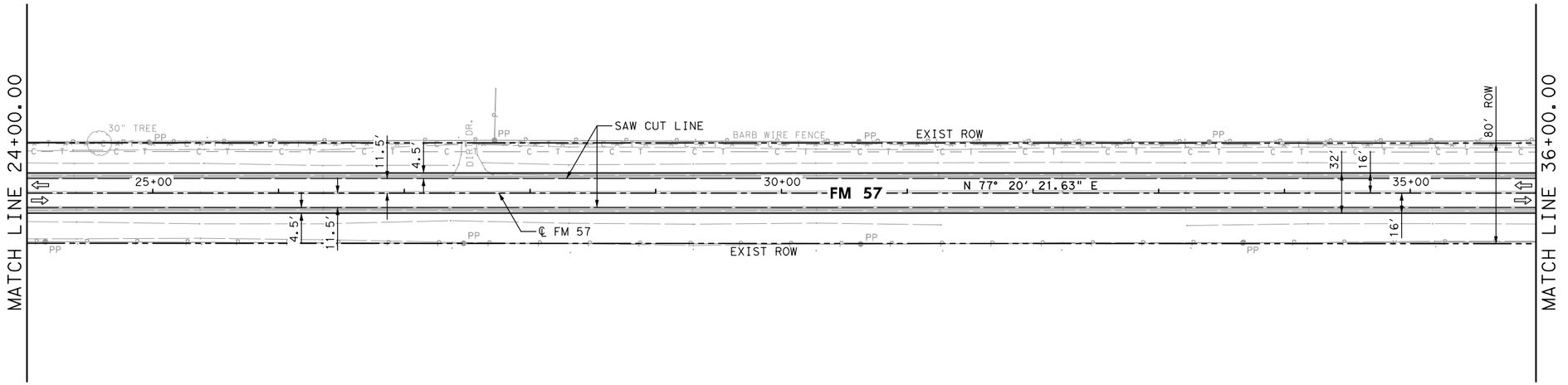
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 12+00 TO STA 24+00

SCALE 1"=100'H, 1"=10'V SHEET 02 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	58
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:33:03 PM SCALE: 1:00
USER: Rdas PENTABLE: FM57_REVISE.tbl



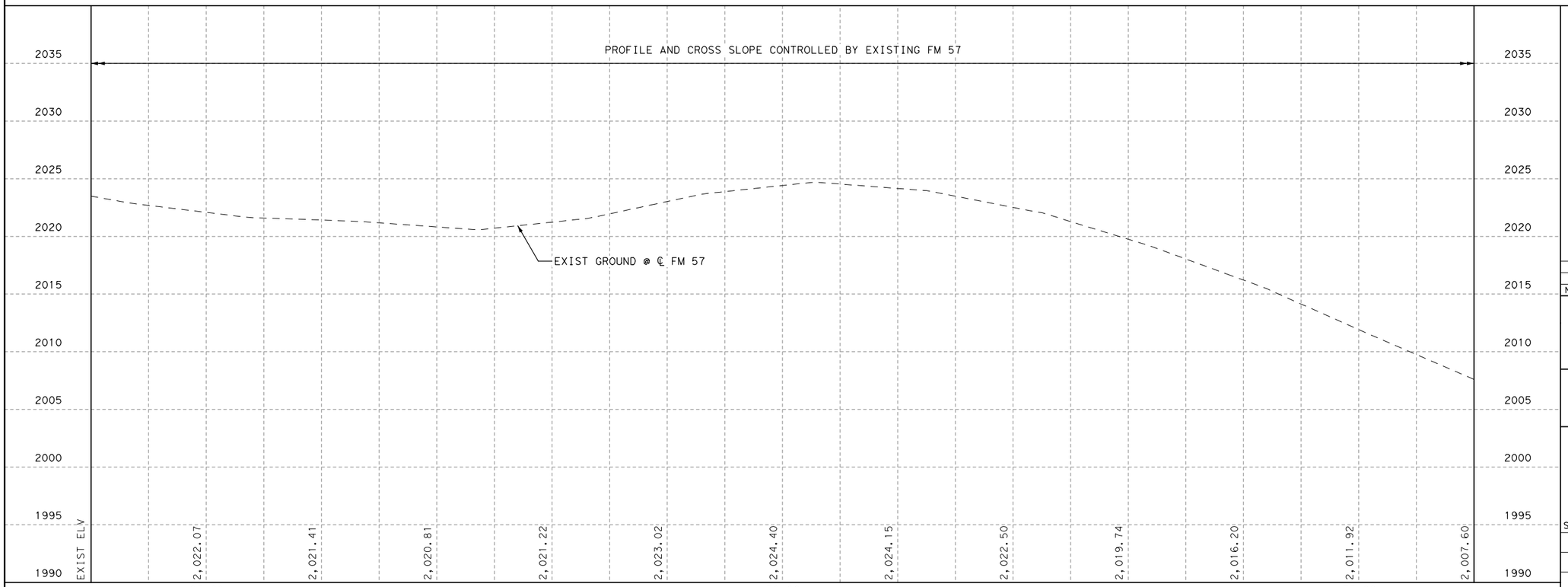
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

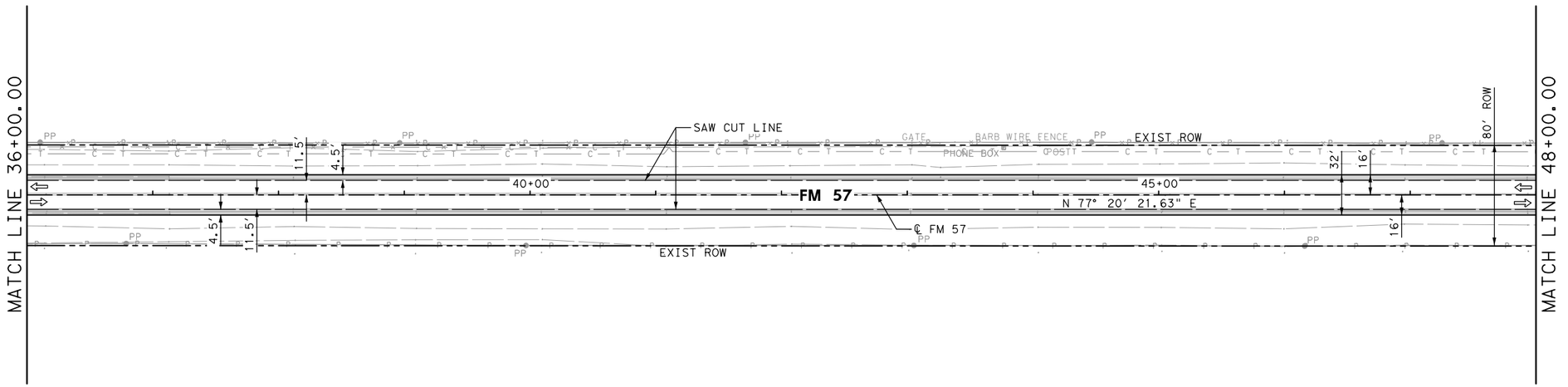
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 24+00 TO STA 36+00

SCALE 1"=100'H, 1"=10'V SHEET 03 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	59
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:33:09 PM SCALE: 1:00
USER: Rdas PENTABLE: FM57_REVISE.tbl



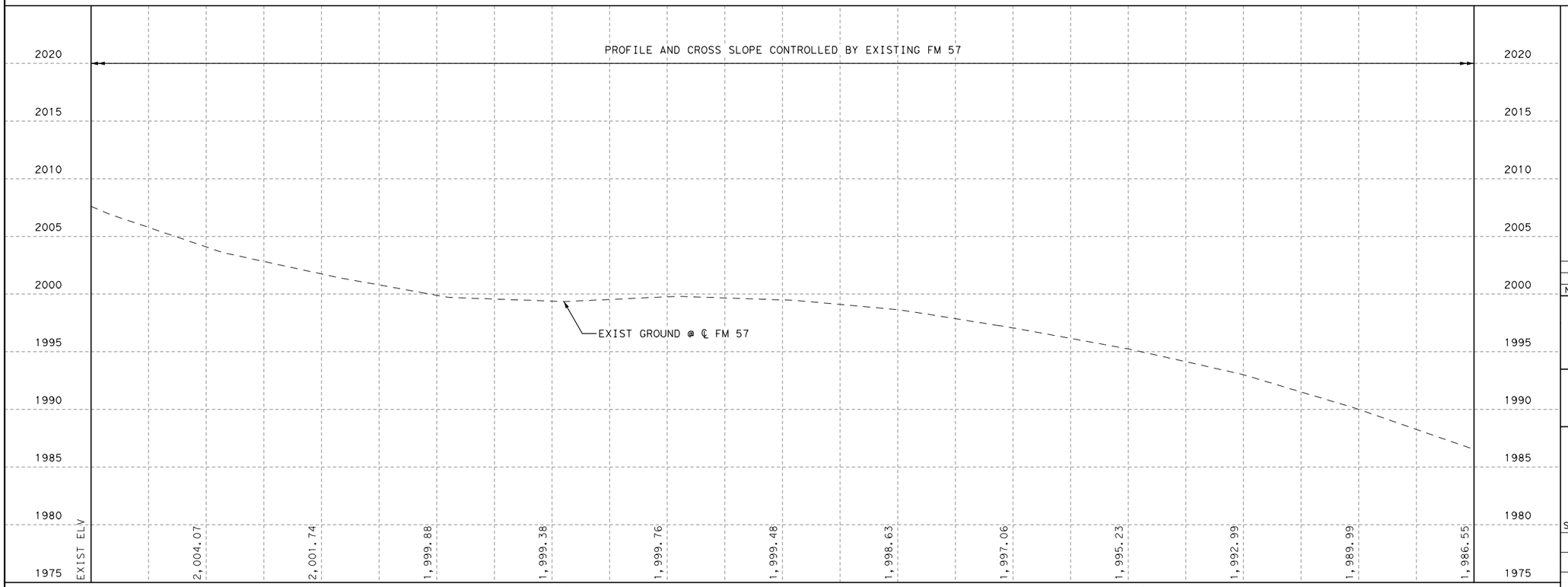
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

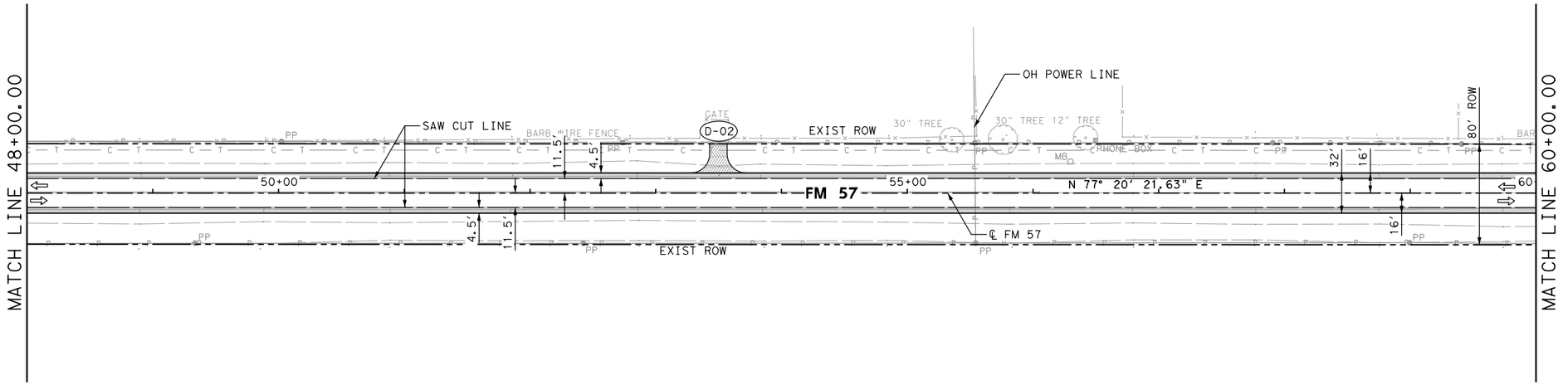
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 36+00 TO STA 48+00

SCALE 1"=100'H, 1"=10'V SHEET 04 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	60
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:33:15 PM SCALE: 1:00
USER: Rdas PENTABLE: FM57_REVISE.tbl



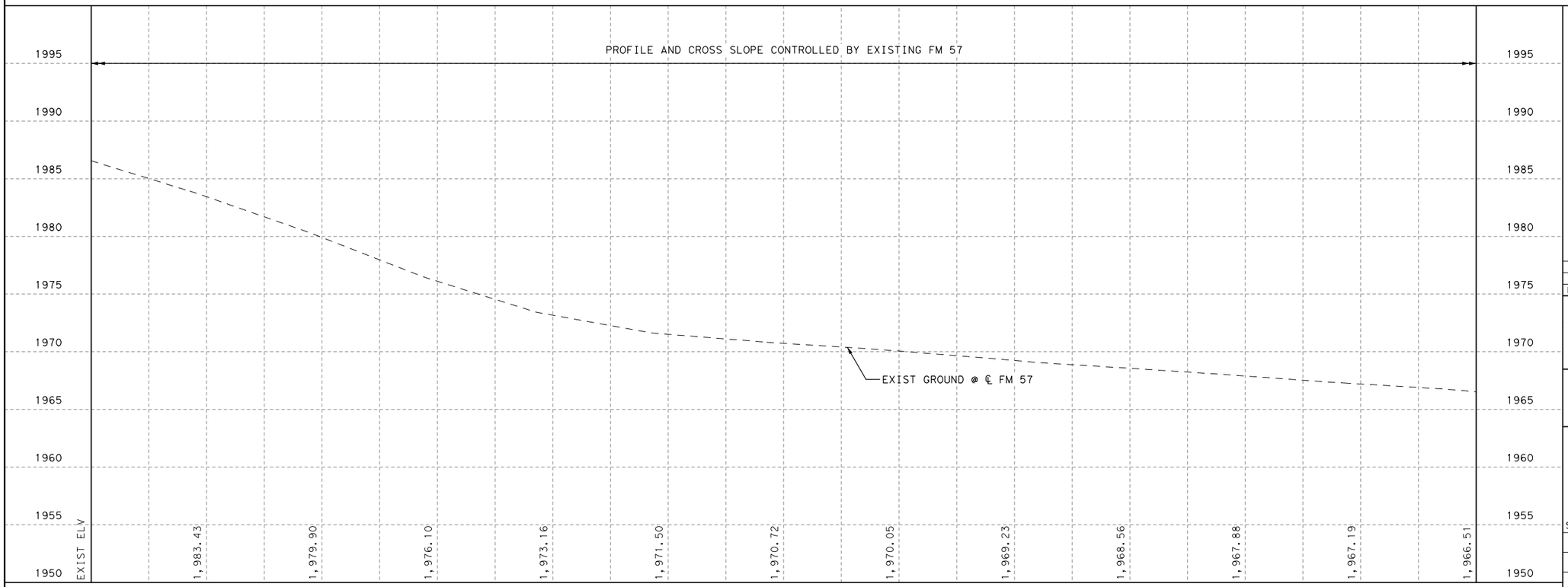
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:33:21 PM
SCALE: 1:00
PENTABLE: FM57_REVISE.tbl

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

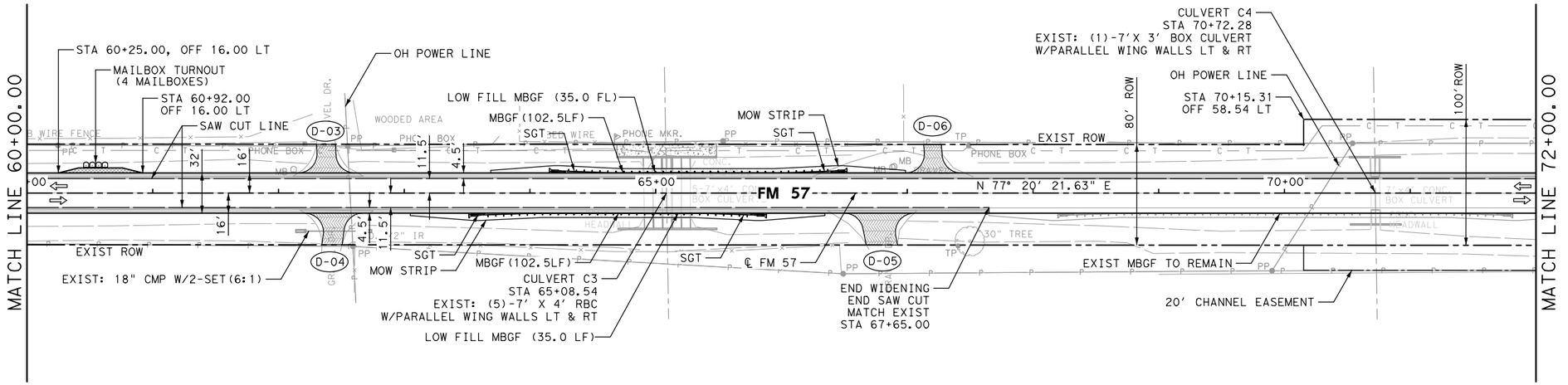
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 48+00 TO STA 60+00

SCALE 1"=100'H, 1"=10'V SHEET 05 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	61
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



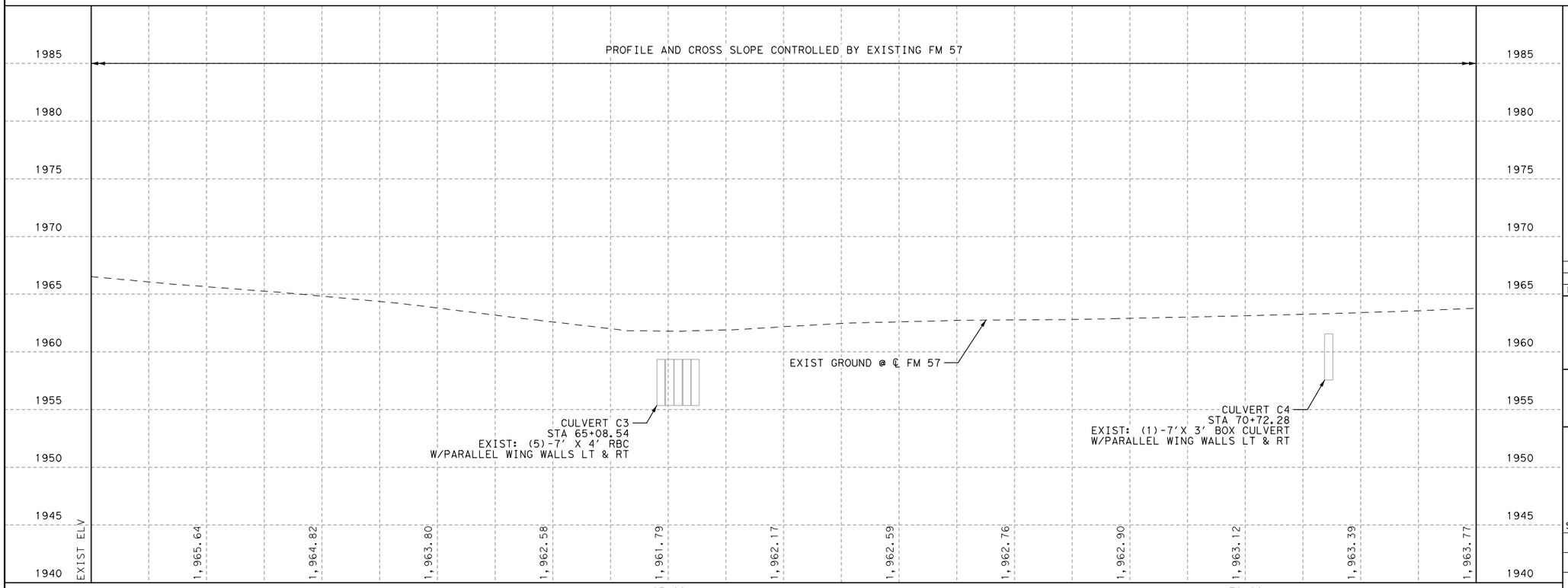
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

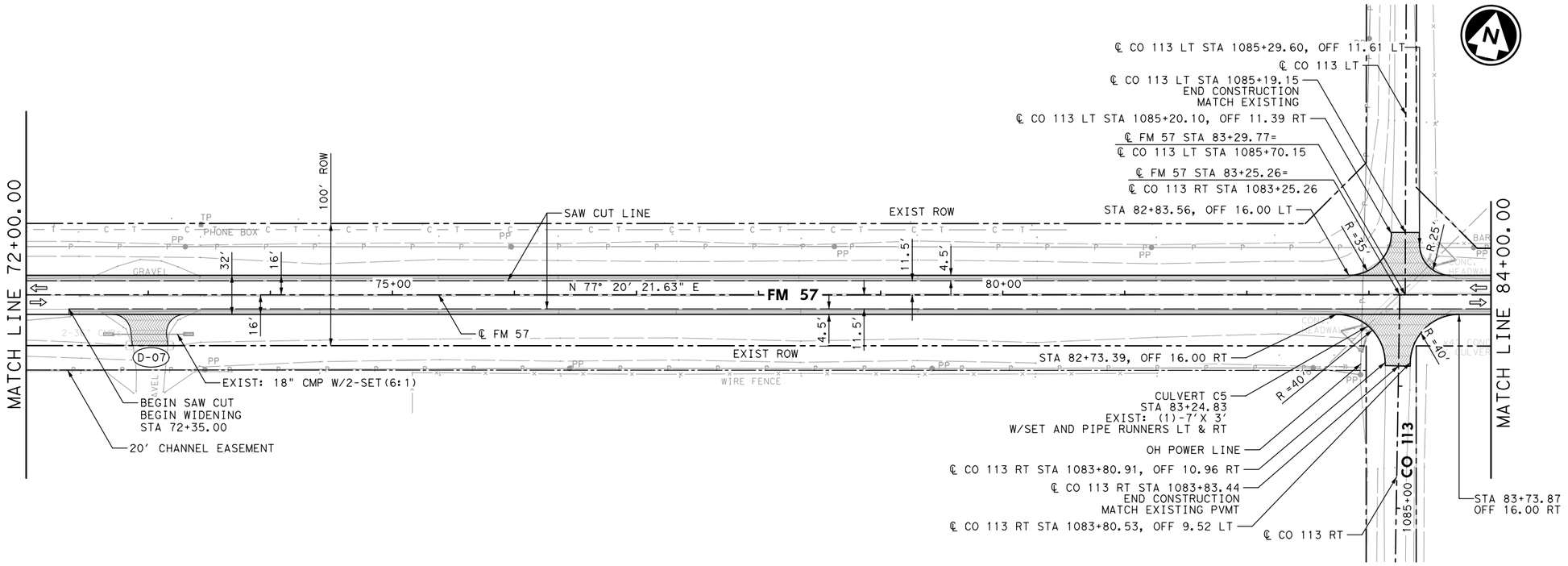
PLAN AND PROFILE

STA 60+00 TO STA 72+00

SCALE 1"=100'H, 1"=10'V SHEET 06 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	62
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:33:27 PM
SCALE: 1:00
PENTABLE: FM57_REVISE.tbl



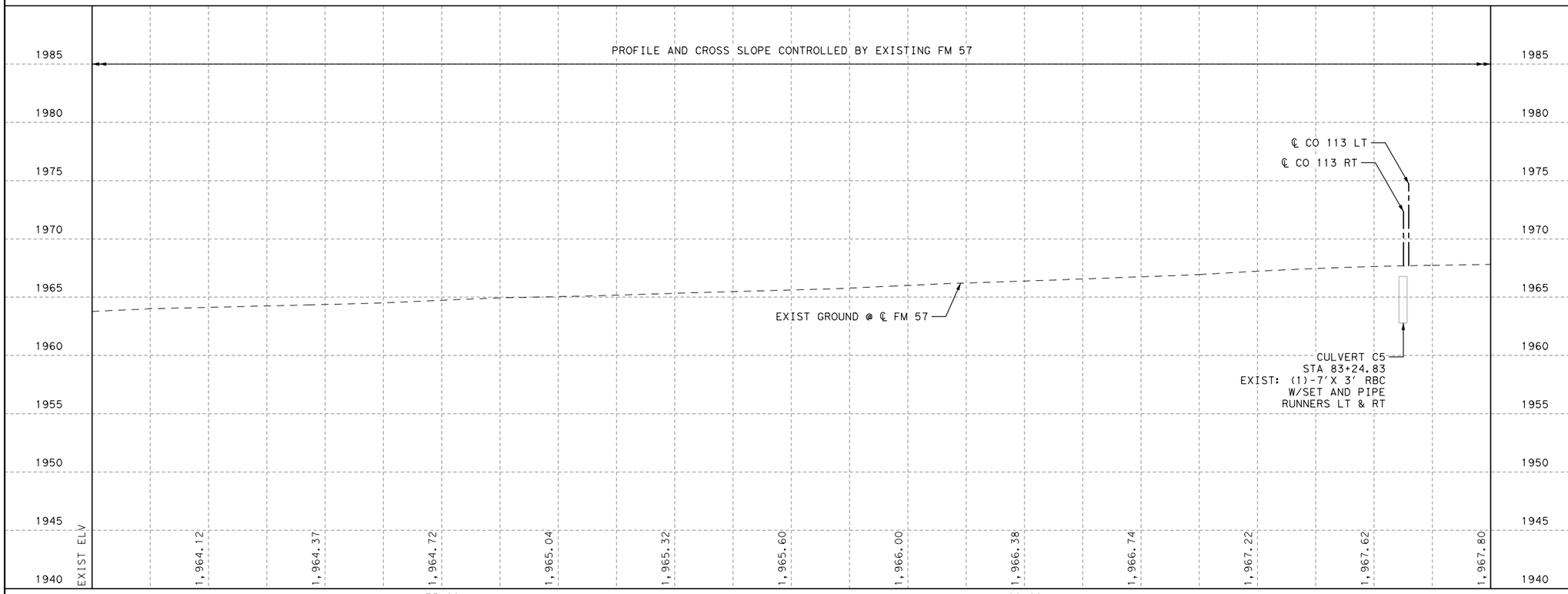
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:33:33 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:00

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

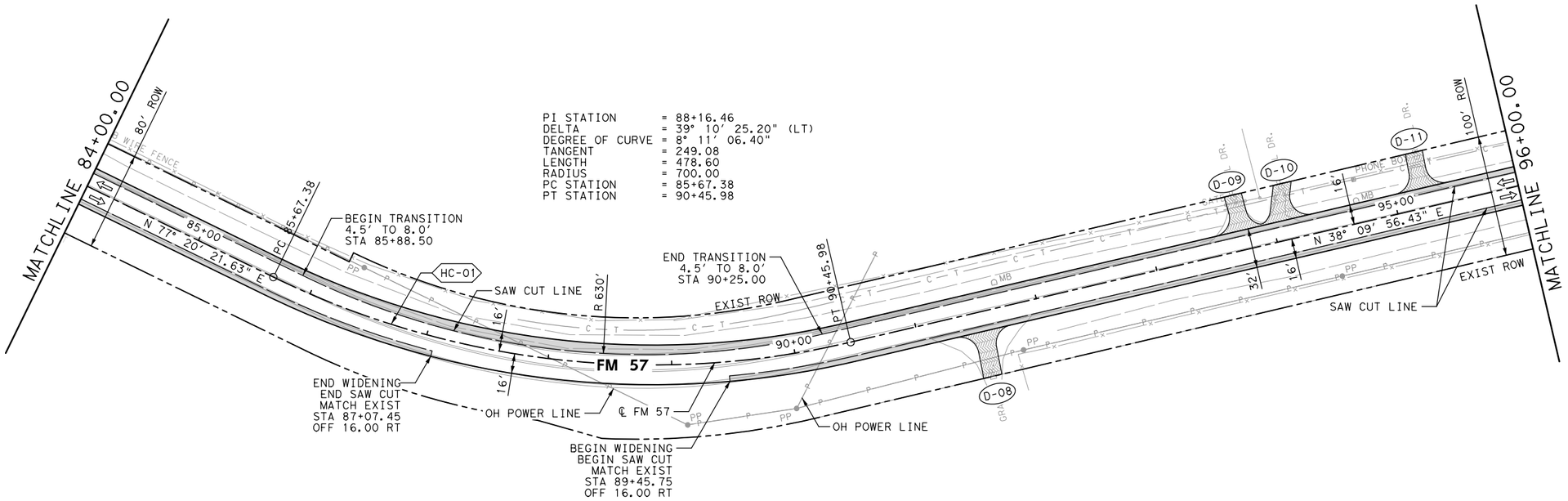
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 72+00 TO STA 84+00

SCALE 1"=100'H, 1"=10'V SHEET 07 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	63
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



PI STATION = 88+16.46
DELTA = 39° 10' 25.20" (LT)
DEGREE OF CURVE = 8° 11' 06.40"
TANGENT = 249.08
LENGTH = 478.60
RADIUS = 700.00
PC STATION = 85+67.38
PT STATION = 90+45.98

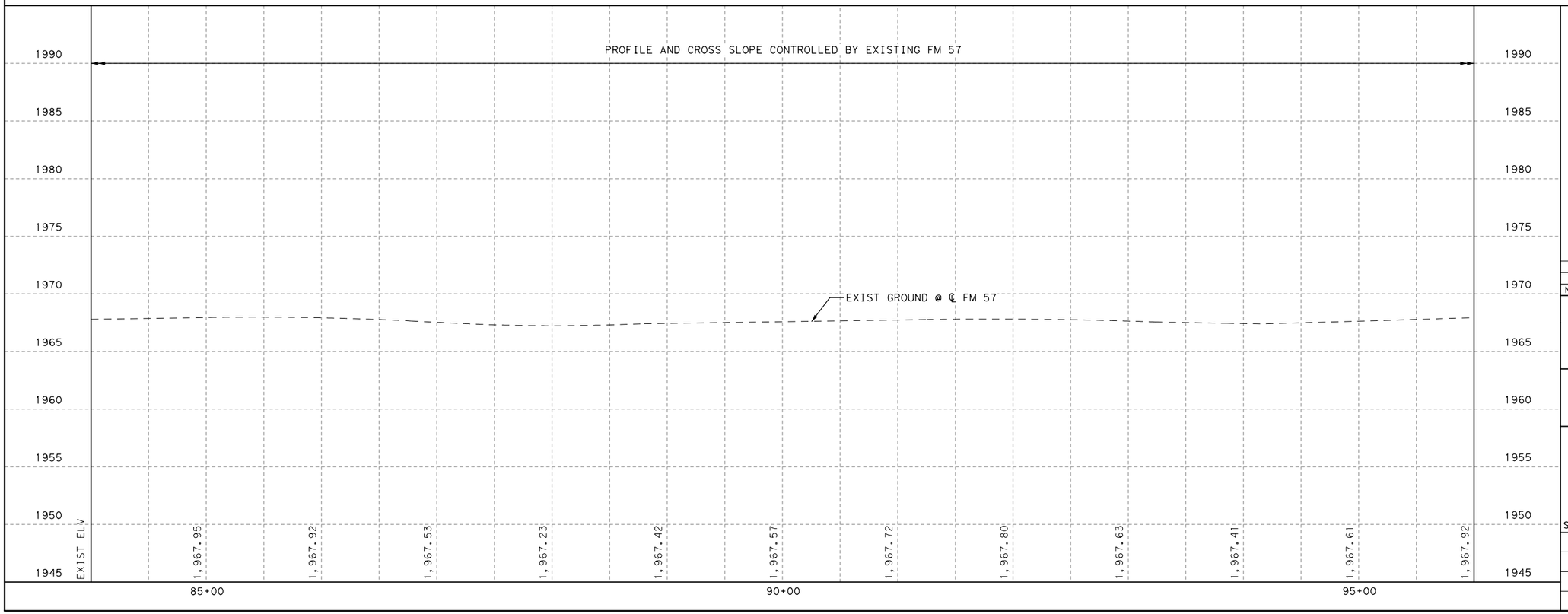
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
PENTABLE: FM57_REVISE.tbl
DATE: 11/29/2023
TIME: 1:33:39 PM
SCALE: 1:00

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

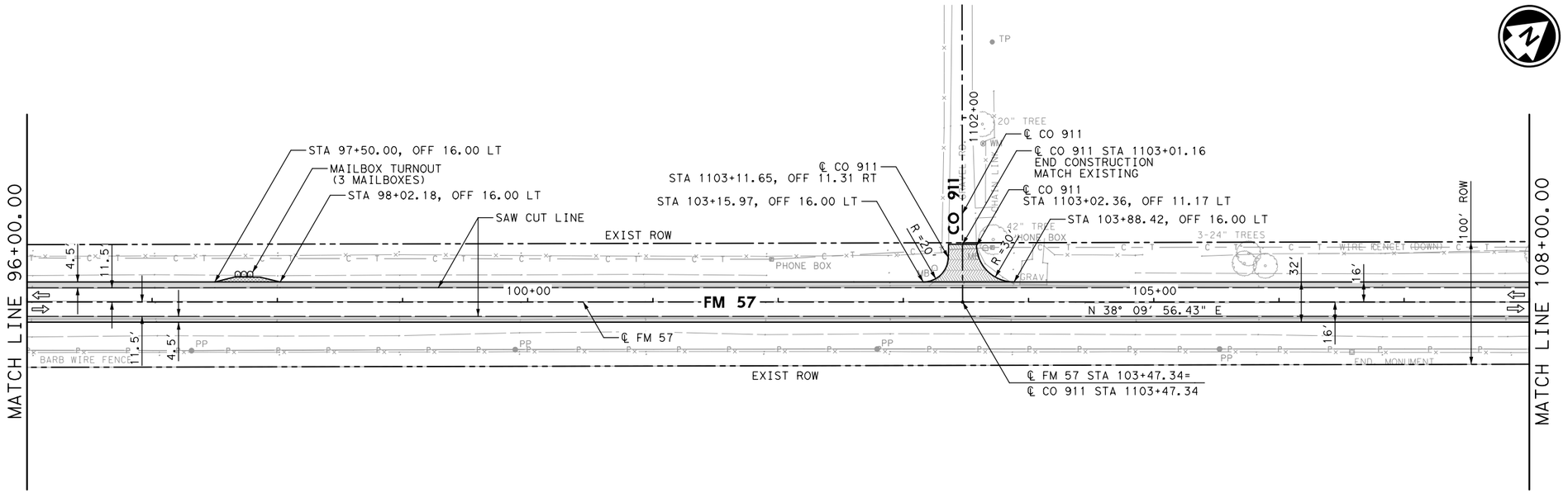
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 84+00 TO STA 96+00

SCALE 1"=100'H, 1"=10'V SHEET 08 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	64
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



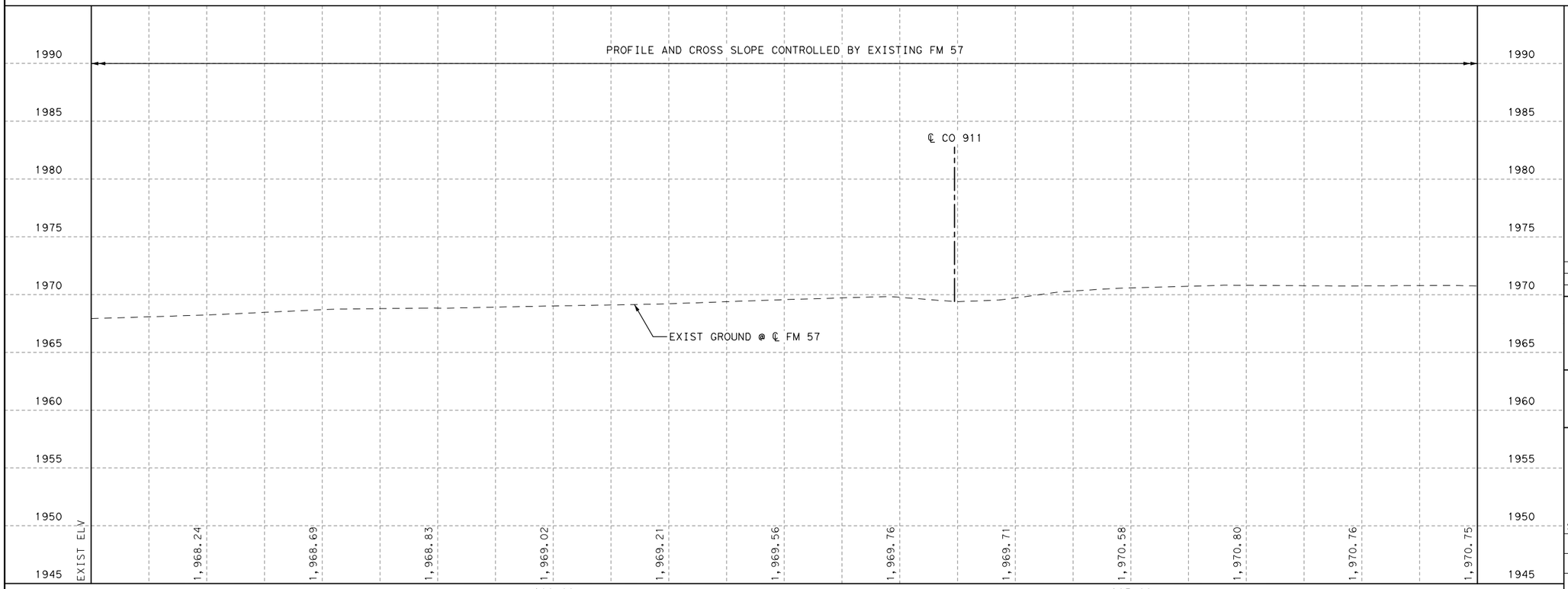
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
PENTABLE: FM57_REVISE.tbl
DATE: 11/29/2023
TIME: 1:33:45 PM
SCALE: 1:100.01

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

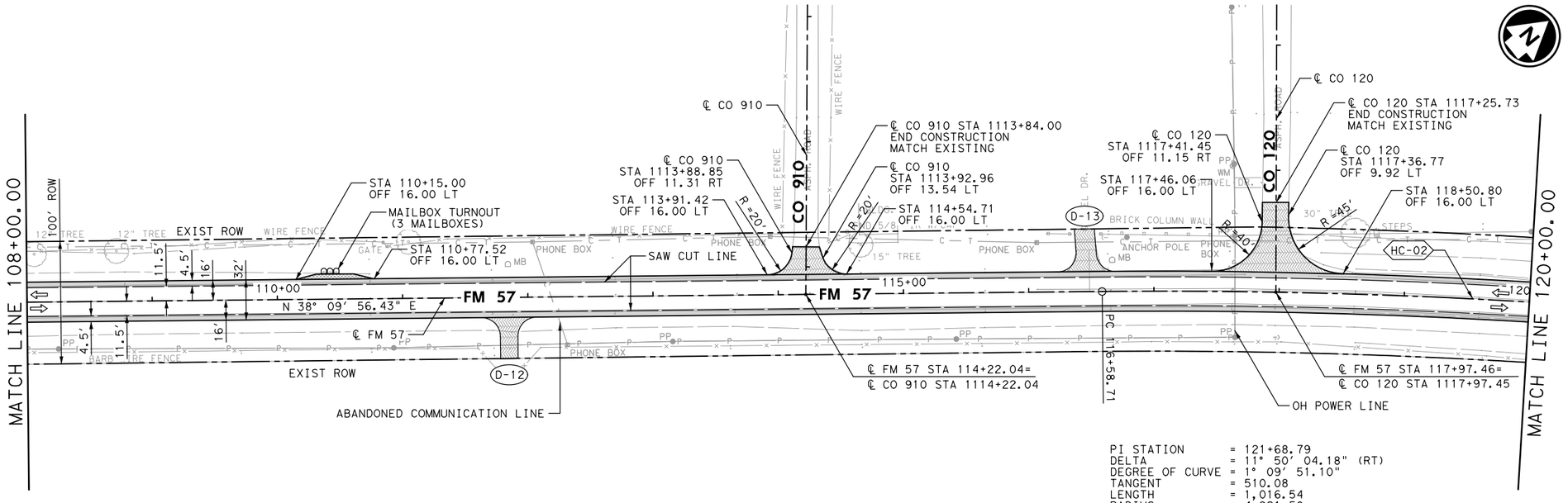
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 96+00 TO STA 108+00

SCALE 1"=100'H, 1"=10'V SHEET 09 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	65
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



PI STATION = 121+68.79
DELTA = 11° 50' 04.18" (RT)
DEGREE OF CURVE = 1° 09' 51.10"
TANGENT = 510.08
LENGTH = 1,016.54
RADIUS = 4,921.50
PC STATION = 116+58.71
PT STATION = 126+75.25

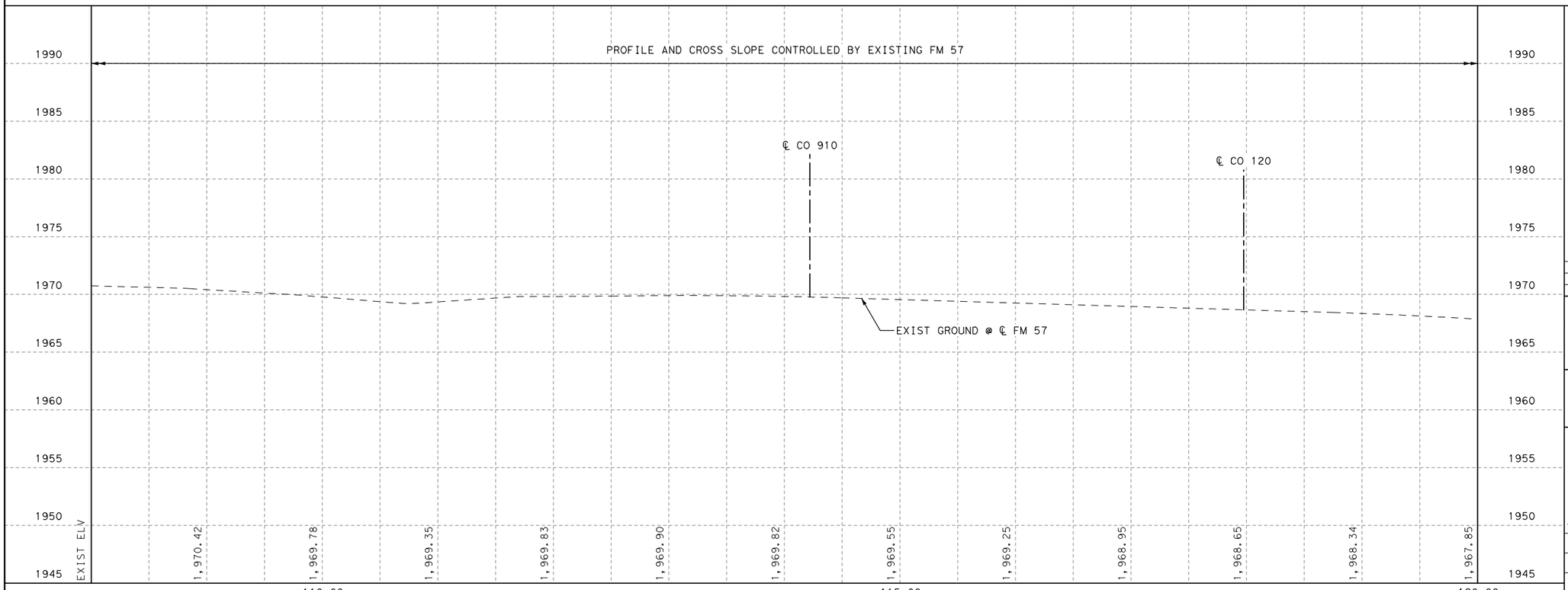
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:33:51 PM
SCALE: 1:00
PENTABLE: FM57_REVISE.tbl

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

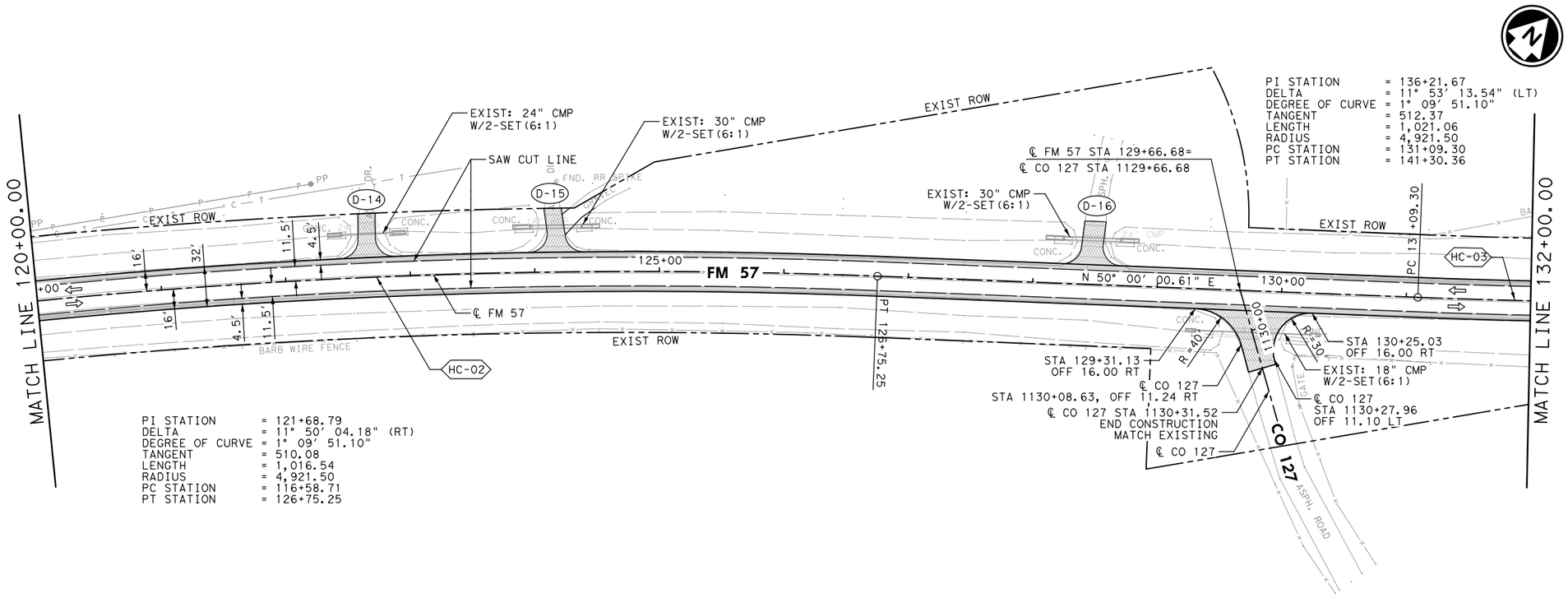
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 108+00 TO STA 120+00

SCALE 1"=100'H, 1"=10'V SHEET 10 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	66
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



PI STATION = 121+68.79
DELTA = 11° 50′ 04.18" (RT)
DEGREE OF CURVE = 1° 09′ 51.10"
TANGENT = 510.08
LENGTH = 1,016.54
RADIUS = 4,921.50
PC STATION = 116+58.71
PT STATION = 126+75.25

PI STATION = 136+21.67
DELTA = 11° 53′ 13.54" (LT)
DEGREE OF CURVE = 1° 09′ 51.10"
TANGENT = 512.37
LENGTH = 1,021.06
RADIUS = 4,921.50
PC STATION = 131+09.30
PT STATION = 141+30.36

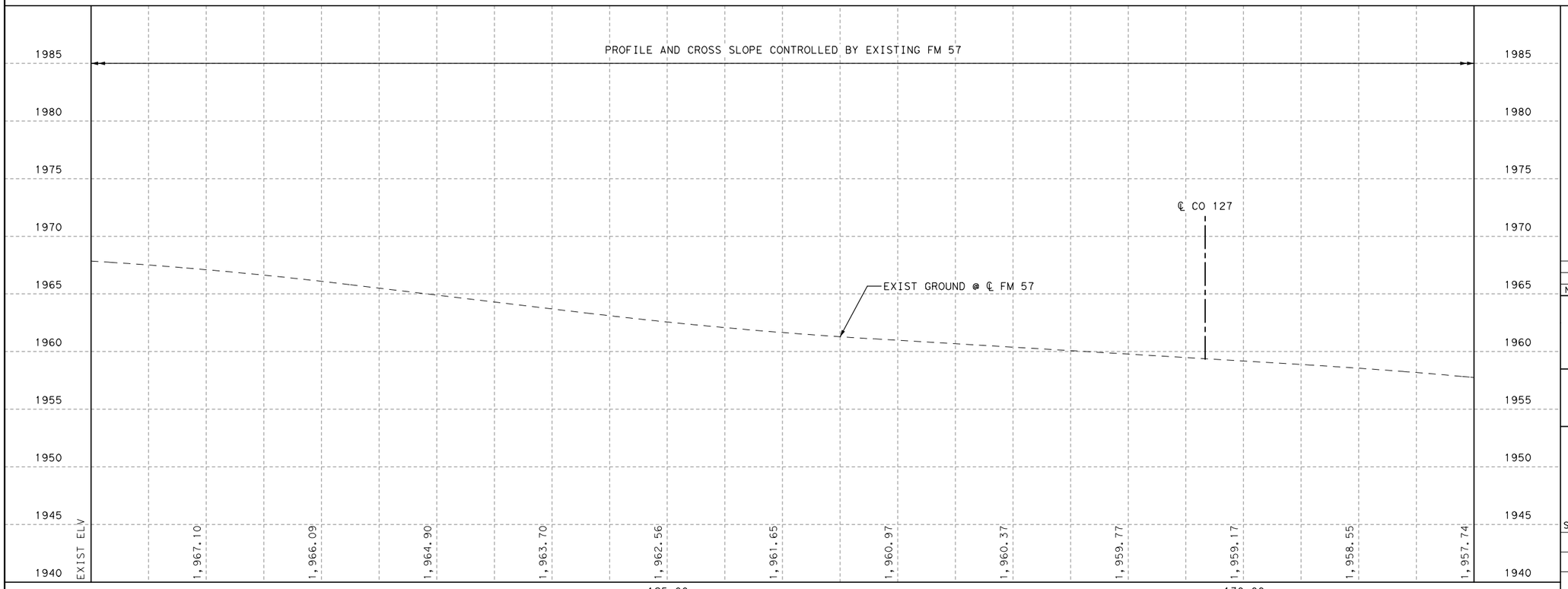
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



RAMENDRA N. DAS
140885
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

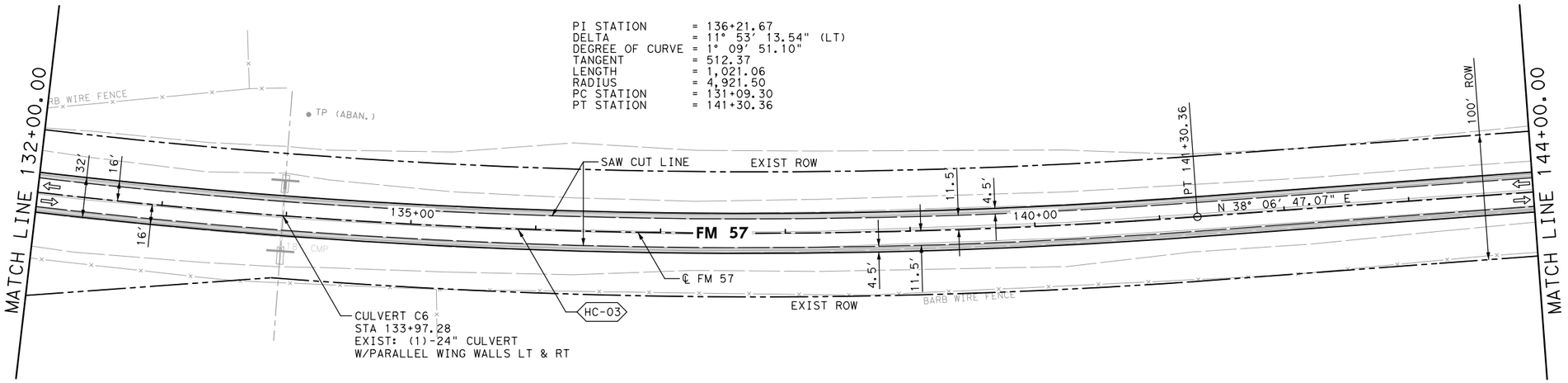
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 120+00 TO STA 132+00

SCALE 1"=100'H, 1"=10'V SHEET 11 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	67
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:33:57 PM SCALE: 1:00
USER: Rdas PENTABLE: FM57_REVISE.tbl



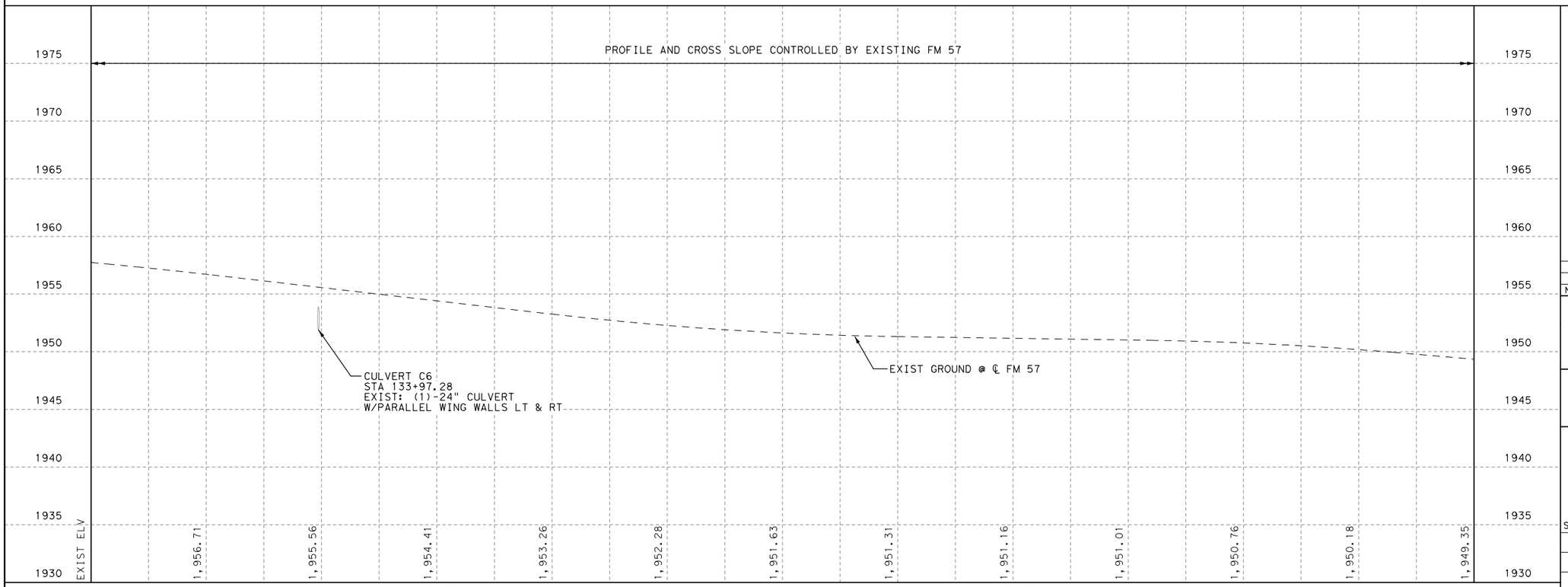
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

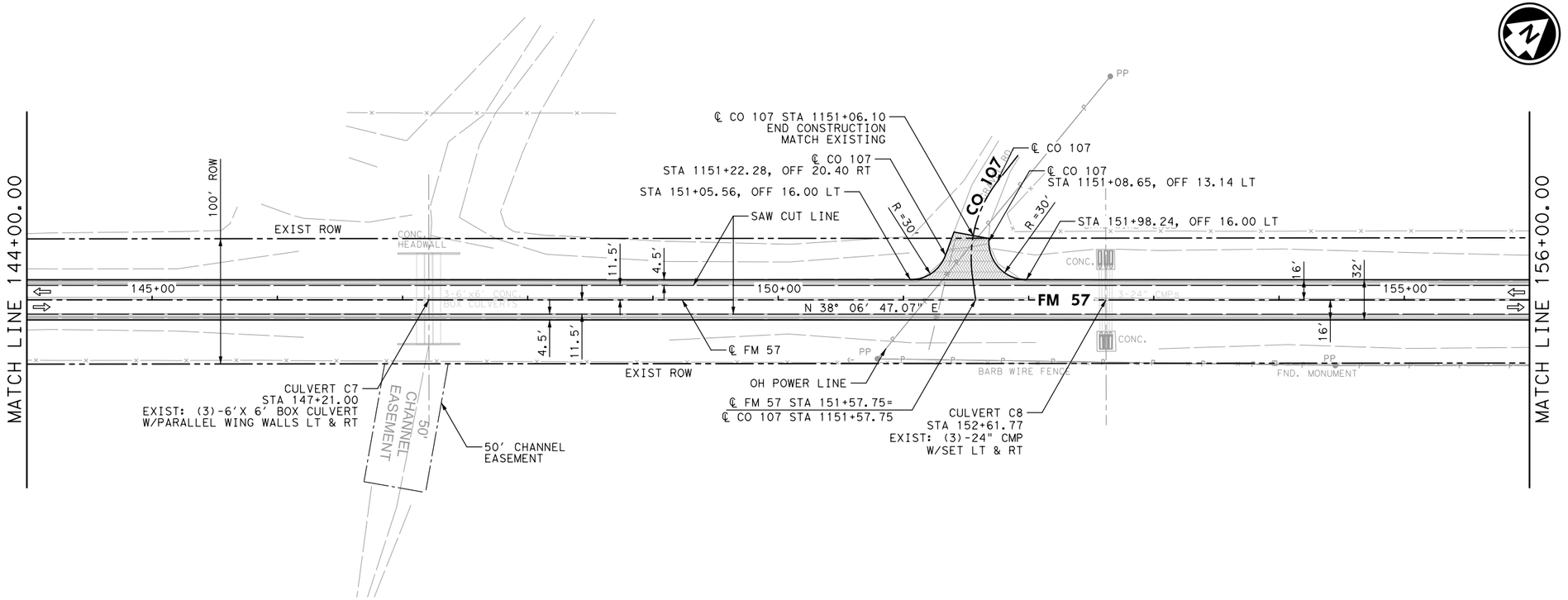
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 132+00 TO STA 144+00

SCALE 1"=100'H, 1"=10'V SHEET 12 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	68
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:34:03 PM
SCALE: 1:100
PENTABLE: FM57_REVISE.tbl



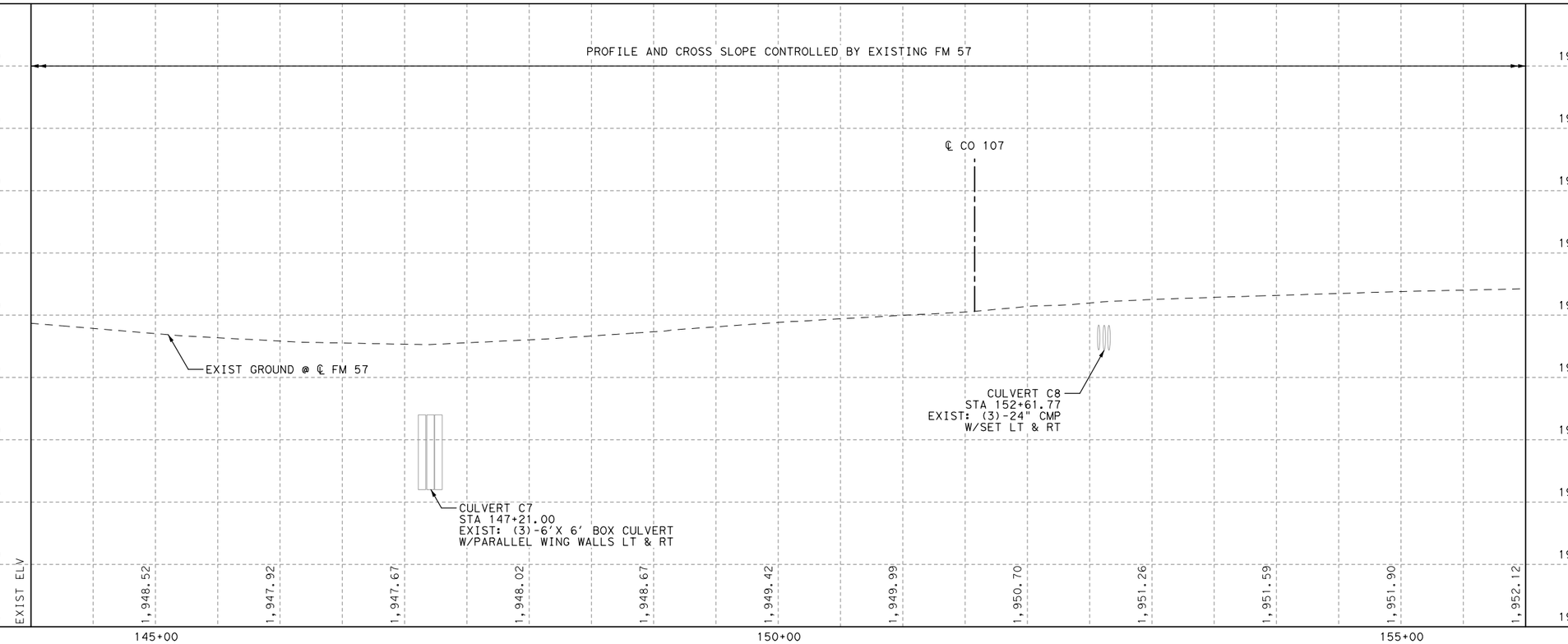
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID ITEMS.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
PENTABLE: FM57_REVISE.tbl
DATE: 11/29/2023
TIME: 1:34:09 PM
SCALE: 1:00

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

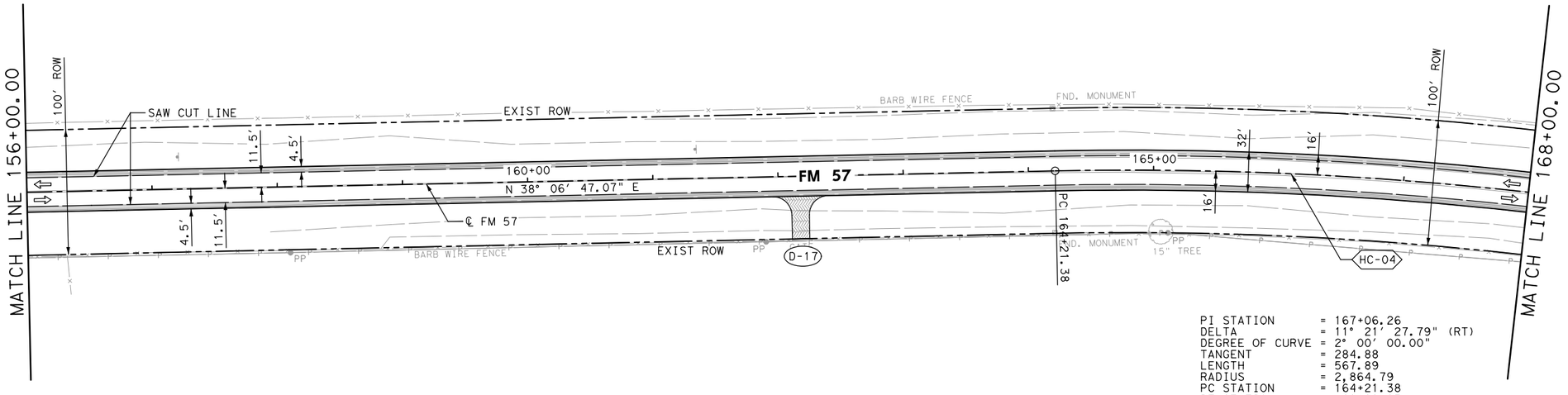
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 144+00 TO STA 156+00

SCALE 1"=100'H, 1"=10'V SHEET 13 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	69
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



PI STATION = 167+06.26
DELTA = 11° 21' 27.79" (RT)
DEGREE OF CURVE = 2° 00' 00.00"
TANGENT = 284.88
LENGTH = 567.89
RADIUS = 2,864.79
PC STATION = 164+21.38
PT STATION = 169+89.27

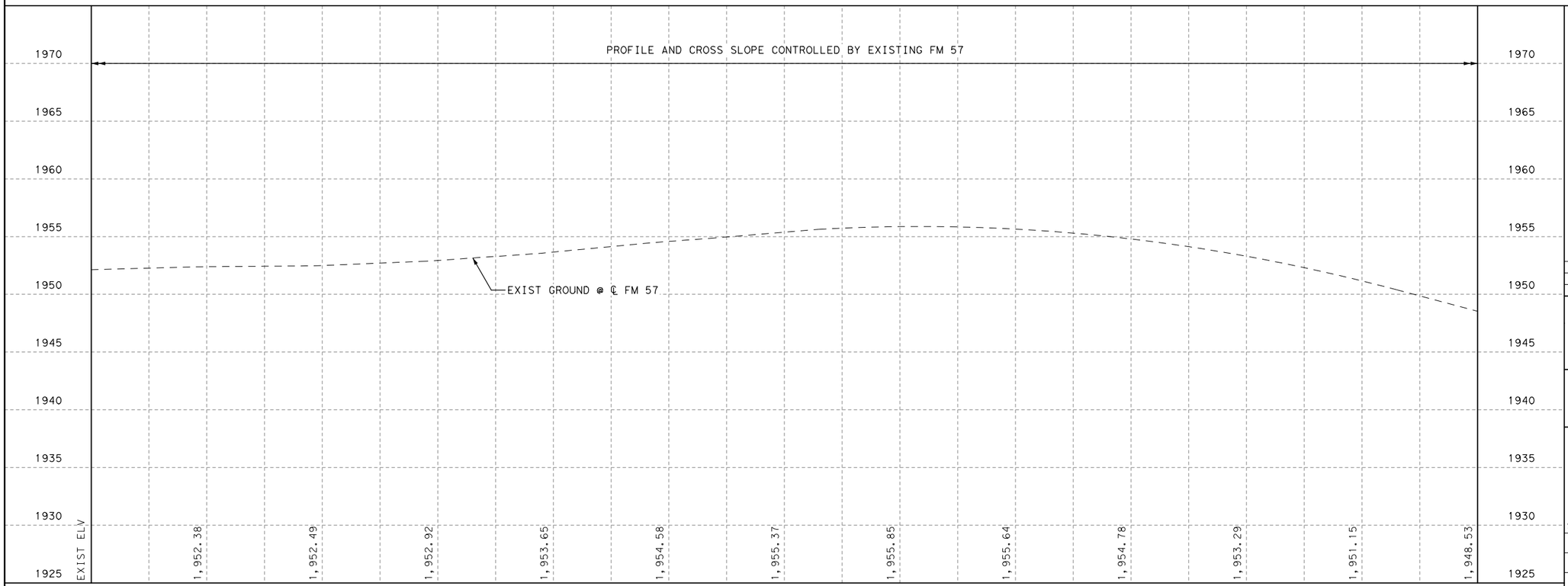
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
PENTABLE: FM57_REVISE.tbl
DATE: 11/29/2023
TIME: 1:34:17 PM
SCALE: 1:00

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

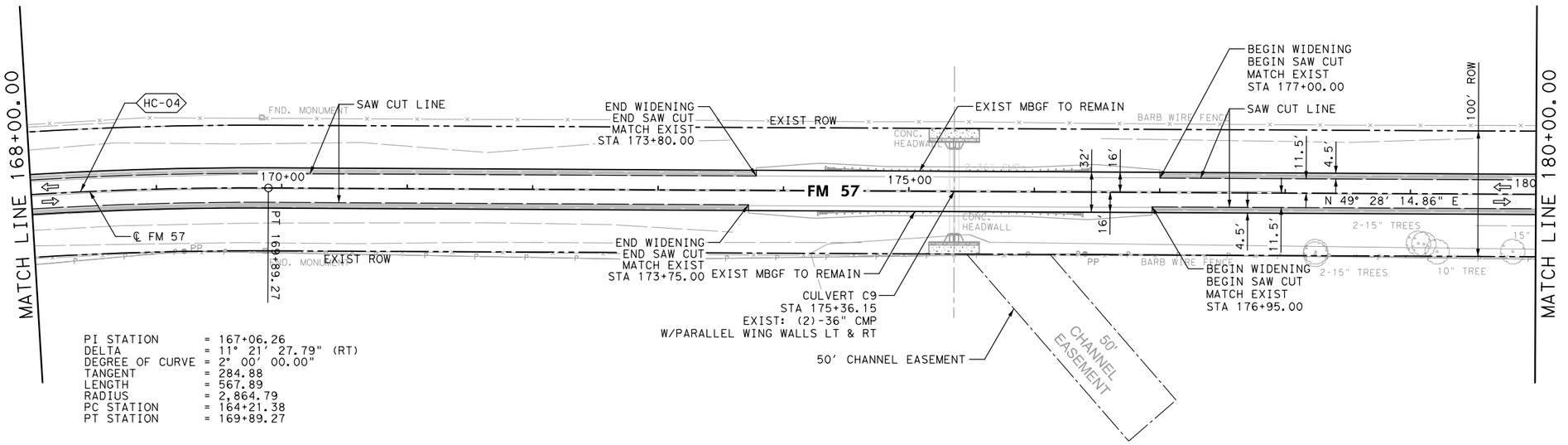
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 156+00 TO STA 168+00

SCALE 1"=100'H, 1"=10'V SHEET 14 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	70
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



PI STATION = 167+06.26
DELTA = 11° 21' 27.79" (RT)
DEGREE OF CURVE = 2° 00' 00.00"
TANGENT = 284.88
LENGTH = 567.89
RADIUS = 2,864.79
PC STATION = 164+21.38
PT STATION = 169+89.27

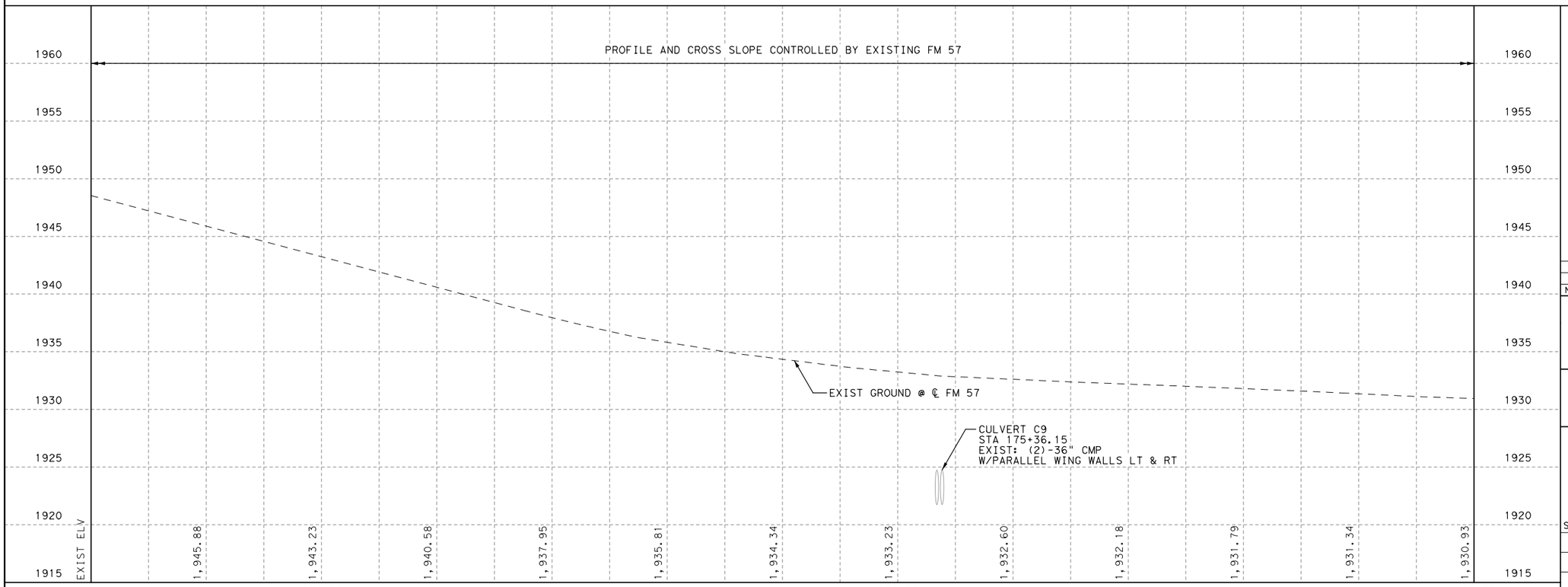
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



RAMENDRA N. DAS
140885
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

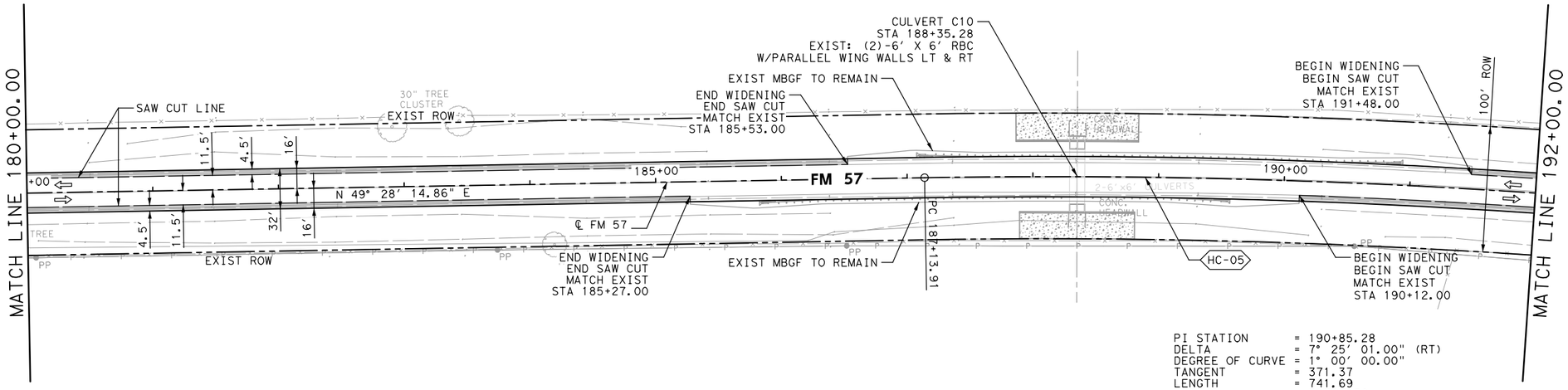
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 168+00 TO STA 180+00

SCALE 1"=100'H, 1"=10'V SHEET 15 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	71
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:34:26 PM
SCALE: 1:100
PENTABLE: FM57_REVISE.tbl



PI STATION = 190+85.28
DELTA = 7° 25' 01.00" (RT)
DEGREE OF CURVE = 1° 00' 00.00"
TANGENT = 371.37
LENGTH = 741.69
RADIUS = 5,729.58
PC STATION = 187+13.91
PT STATION = 194+55.61

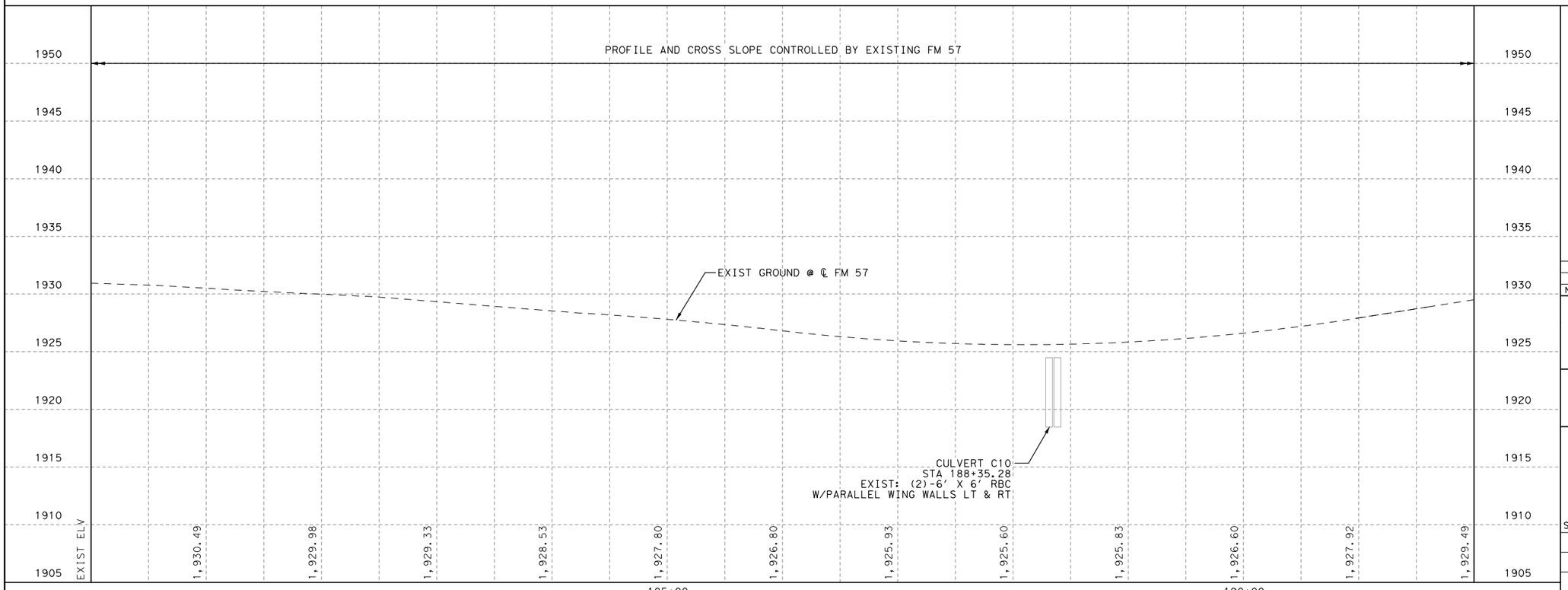
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



RAMENDRA N. DAS
140885
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

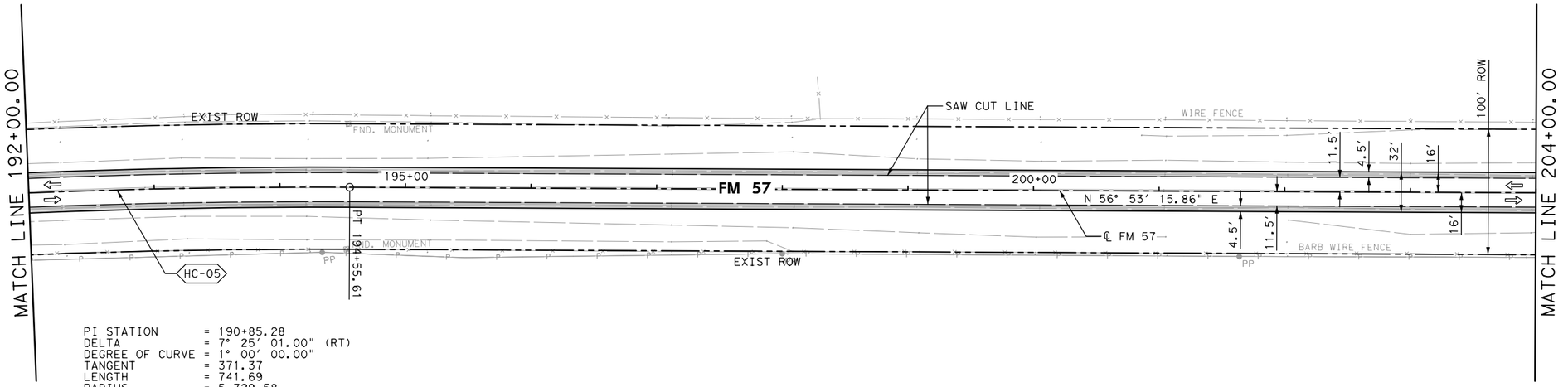
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 180+00 TO STA 192+00

SCALE 1"=100'H, 1"=10'V SHEET 16 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
IEI	TEXAS	ABL	FISHER	72
CHECK	CONTROL	SECTION	JOB	
IEI	0317	01	043	
CHECK				
IEI				

PLOT DRIVER: PDF_H_G.pltdg
USER: Rdas
DATE: 11/29/2023
TIME: 1:34:33 PM
SCALE: 1:00
PENTABLE: FM57_REVISE.tbl



PI STATION = 190+85.28
DELTA = 7° 25' 01.00" (RT)
DEGREE OF CURVE = 1° 00' 00.00"
TANGENT = 371.37
LENGTH = 741.69
RADIUS = 5,729.58
PC STATION = 187+13.91
PT STATION = 194+55.61

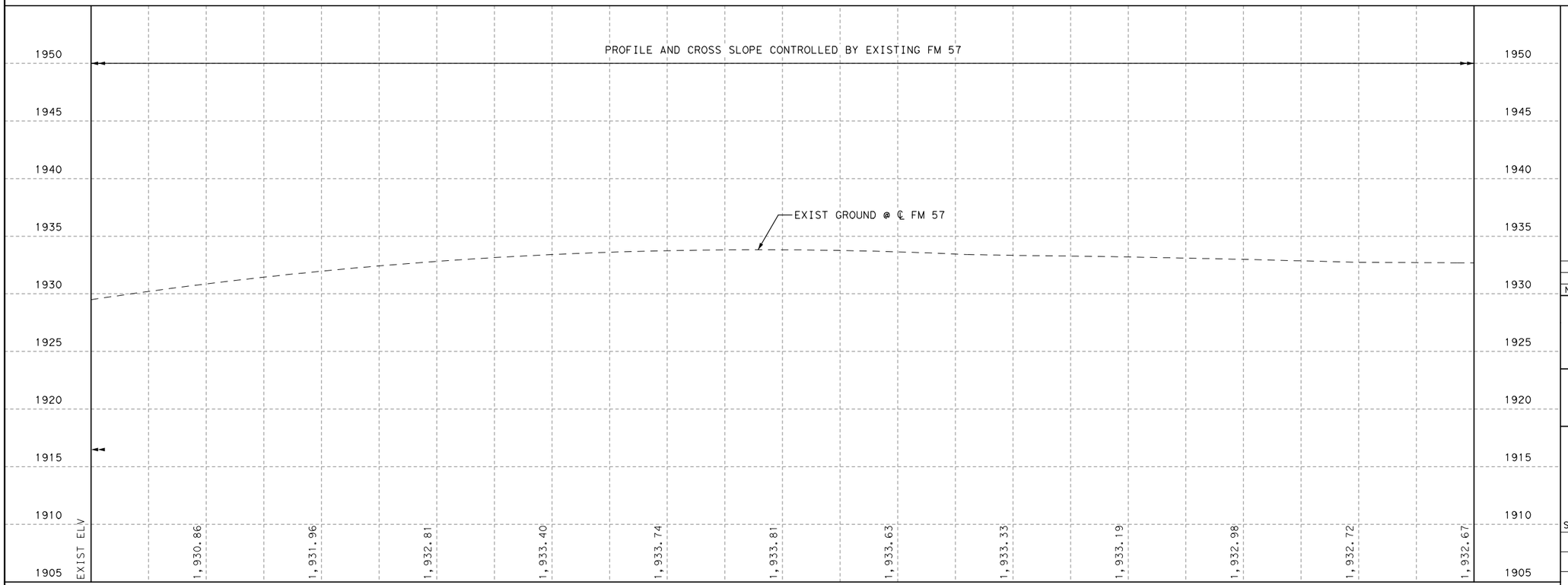
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

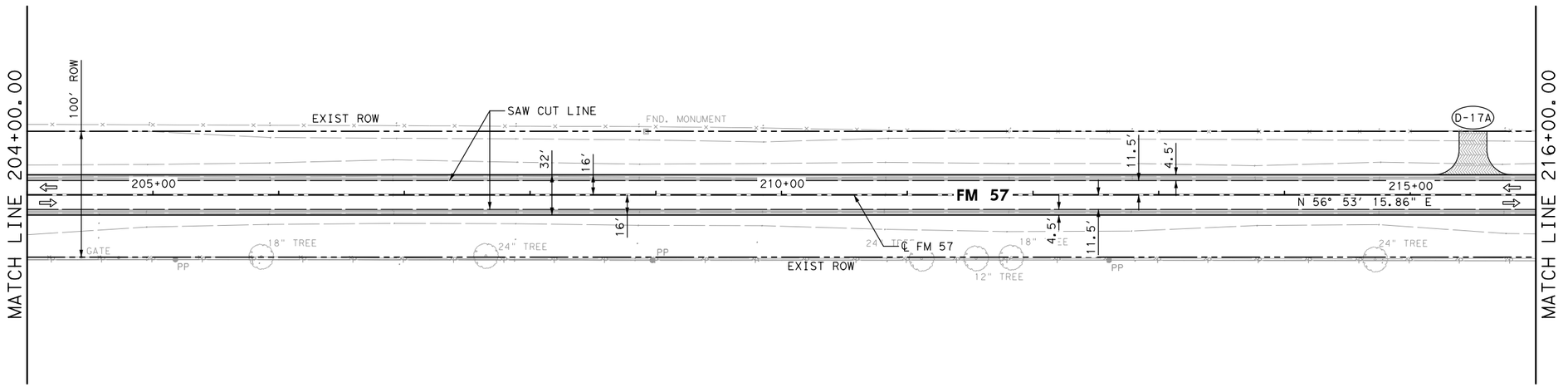
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 192+00 TO STA 204+00

SCALE 1"=100'H, 1"=10'V SHEET 17 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	73
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:34:40 PM SCALE: 1:00
USER: Rdas PENTABLE: FM57_REVISE.tbl



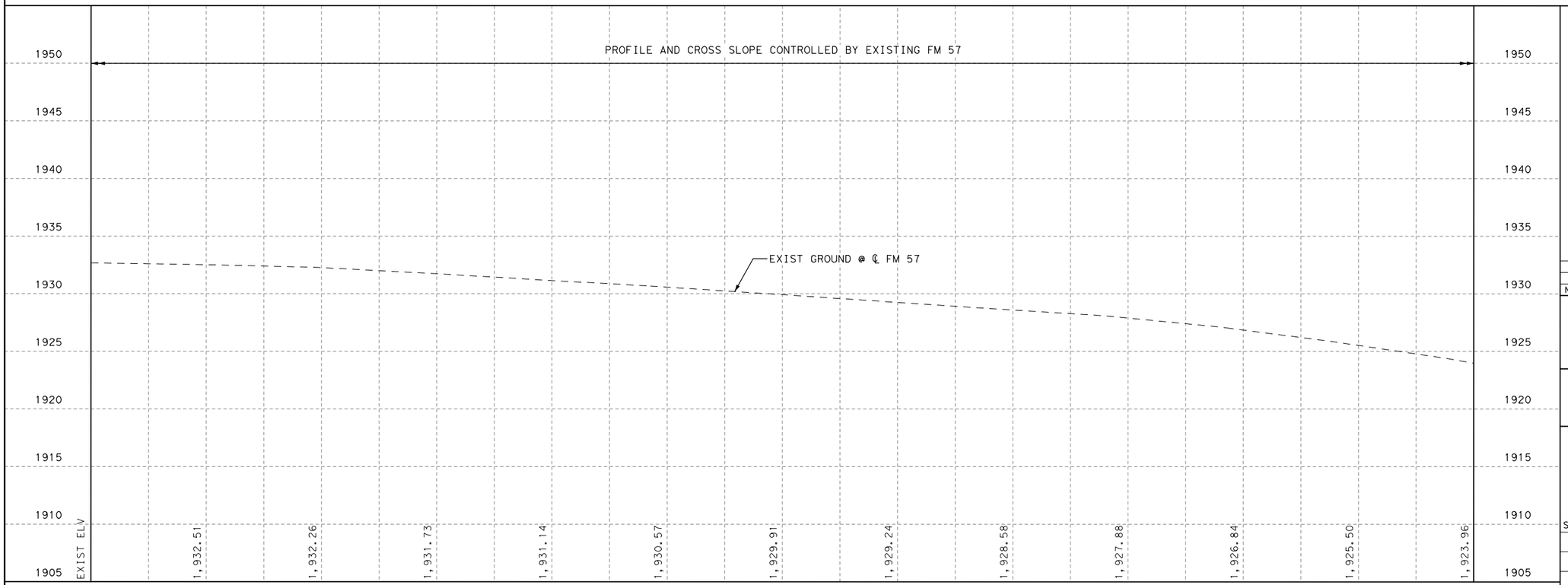
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
PENTABLE: FM57_REVISE.tbl
DATE: 11/29/2023
TIME: 1:34:46 PM
SCALE: 1:00.02

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

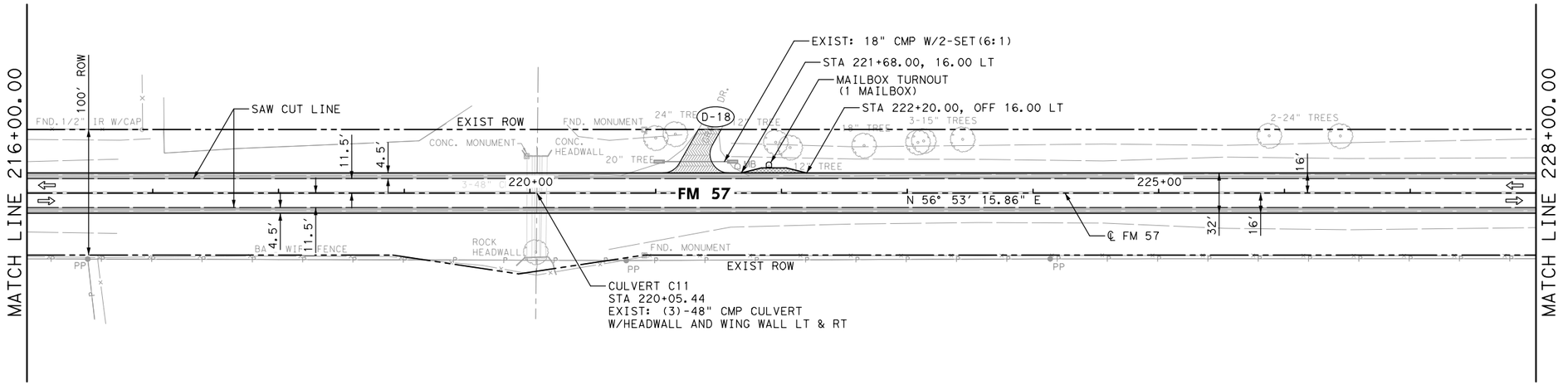
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 204+00 TO STA 216+00

SCALE 1"=100'H, 1"=10'V SHEET 18 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	74
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



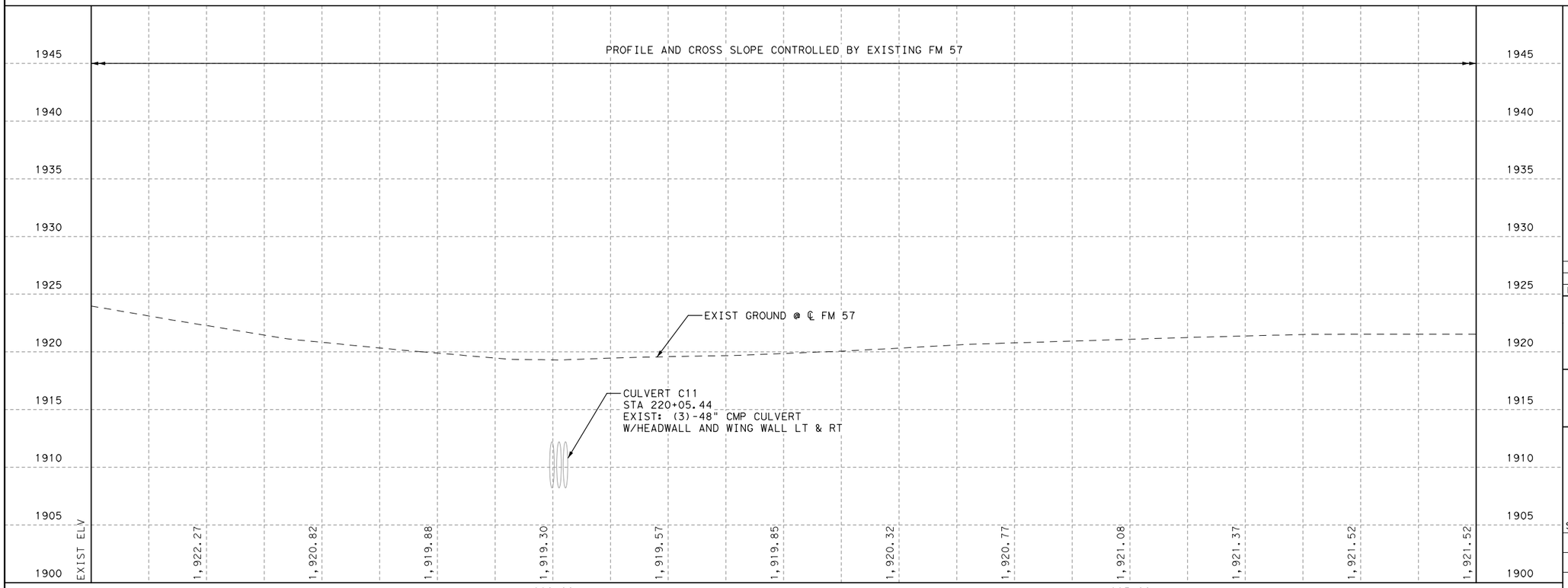
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
PENTABLE: FM57_REVISE.tbl
DATE: 11/29/2023
TIME: 1:34:52 PM
SCALE: 1:00

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

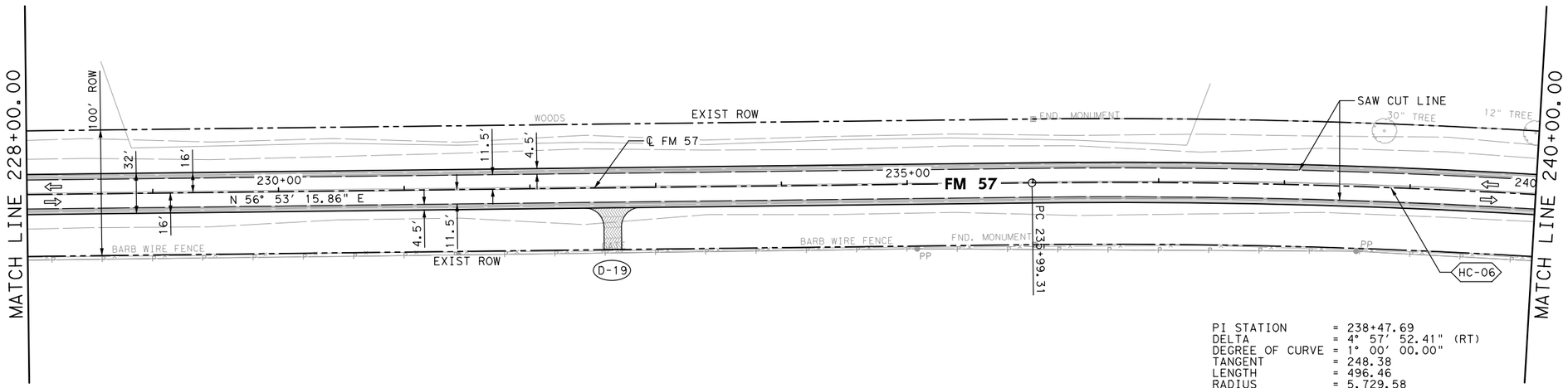
SH 70 TO PLUM CREEK

FM 57

PLAN AND PROFILE
STA 216+00 TO STA 228+00

SCALE 1"=100'H, 1"=10'V SHEET 19 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	75
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



PI STATION = 238+47.69
DELTA = 4° 57' 52.41" (RT)
DEGREE OF CURVE = 1° 00' 00.00"
TANGENT = 248.38
LENGTH = 496.46
RADIUS = 5,729.58
PC STATION = 235+99.31
PT STATION = 240+95.77

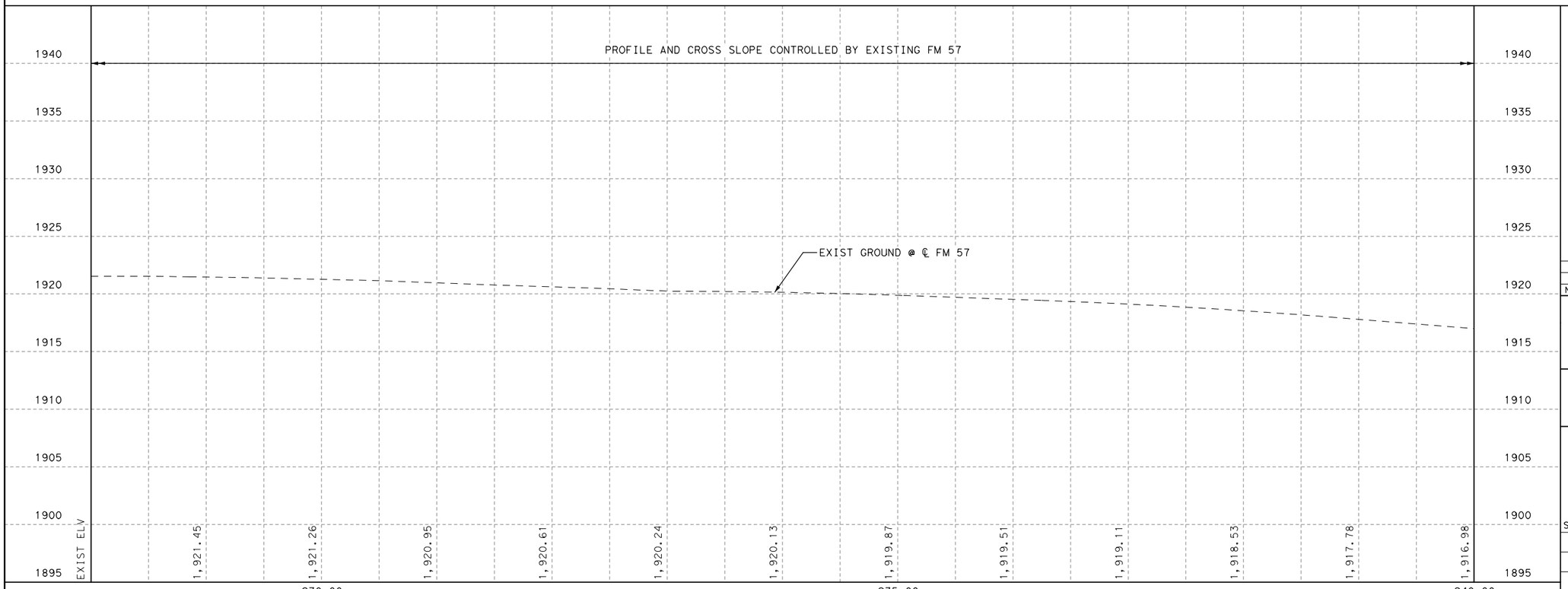
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

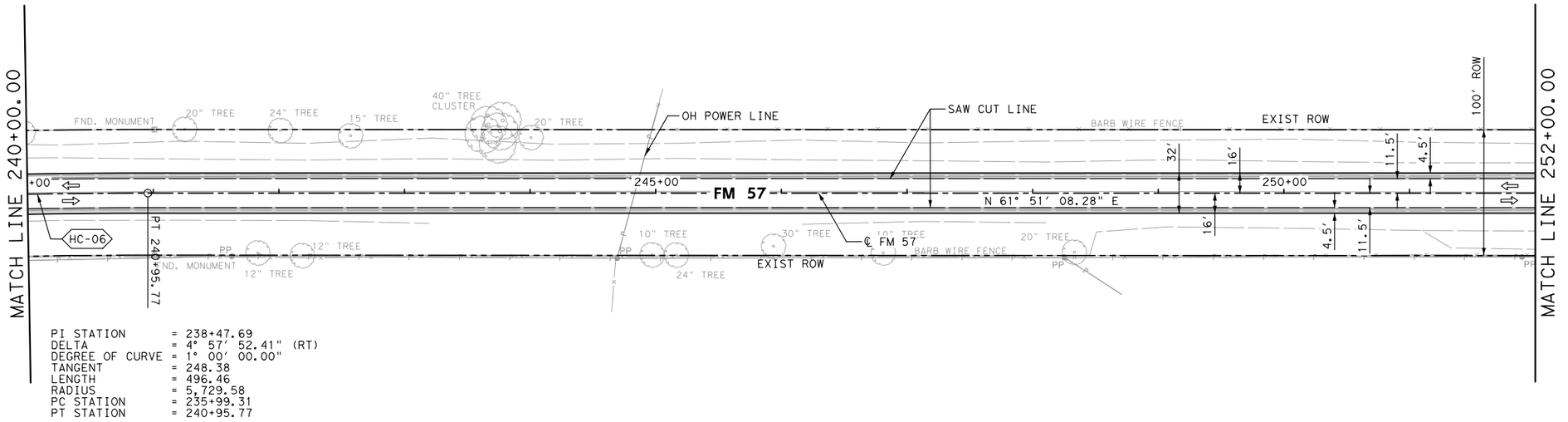
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 228+00 TO STA 240+00

SCALE 1"=100'H, 1"=10'V SHEET 20 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	76
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:34:59 PM
SCALE: 1:00
PENTABLE: FM57_REVISE.tbl



PI STATION = 238+47.69
DELTA = 4° 57' 52.41" (RT)
DEGREE OF CURVE = 1° 00' 00.00"
TANGENT = 248.38
LENGTH = 496.46
RADIUS = 5,729.58
PC STATION = 235+99.31
PT STATION = 240+95.77

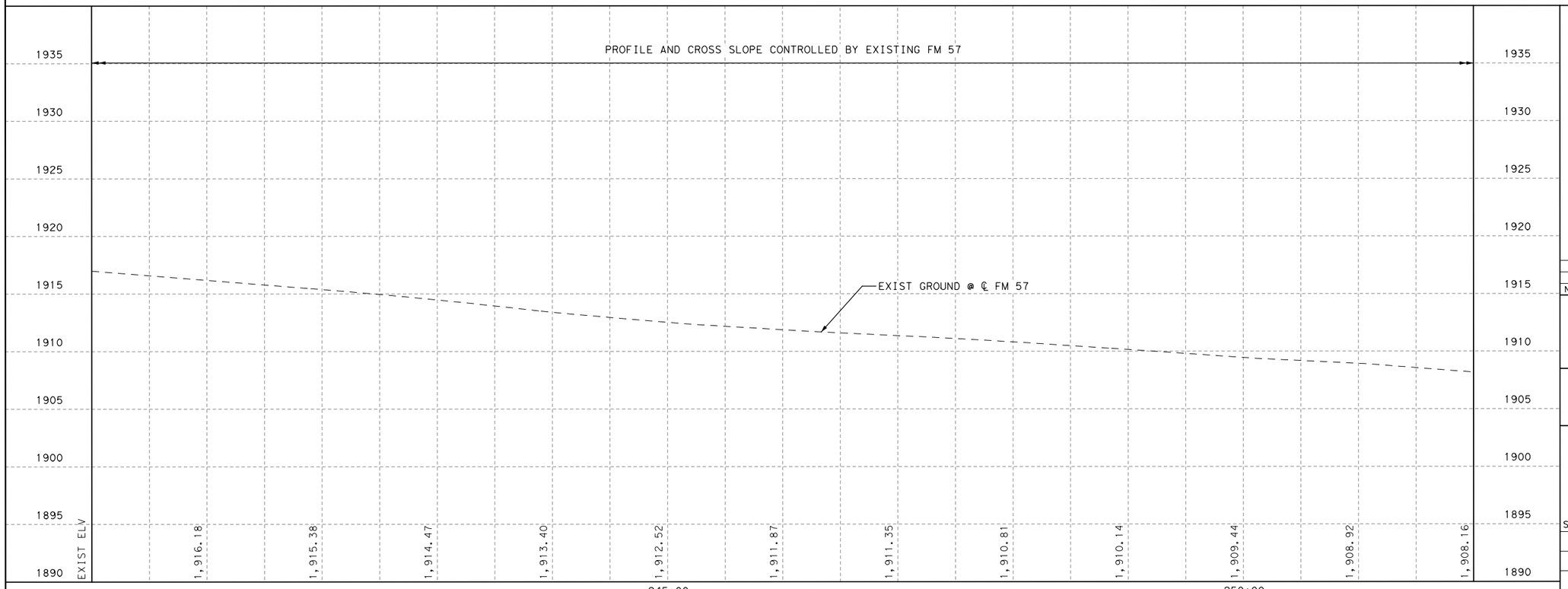
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

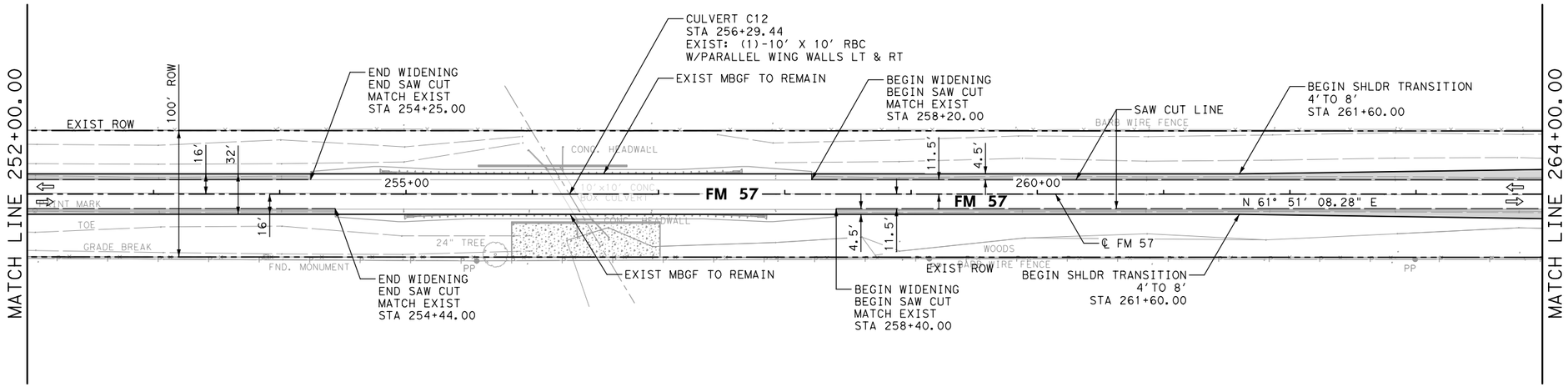
SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 240+00 TO STA 252+00

SCALE 1"=100'H, 1"=10'V SHEET 21 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	77
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:35:10 PM SCALE: 1:00.083
USER: Rdas PENTABLE: FM57_REVISE.tbl



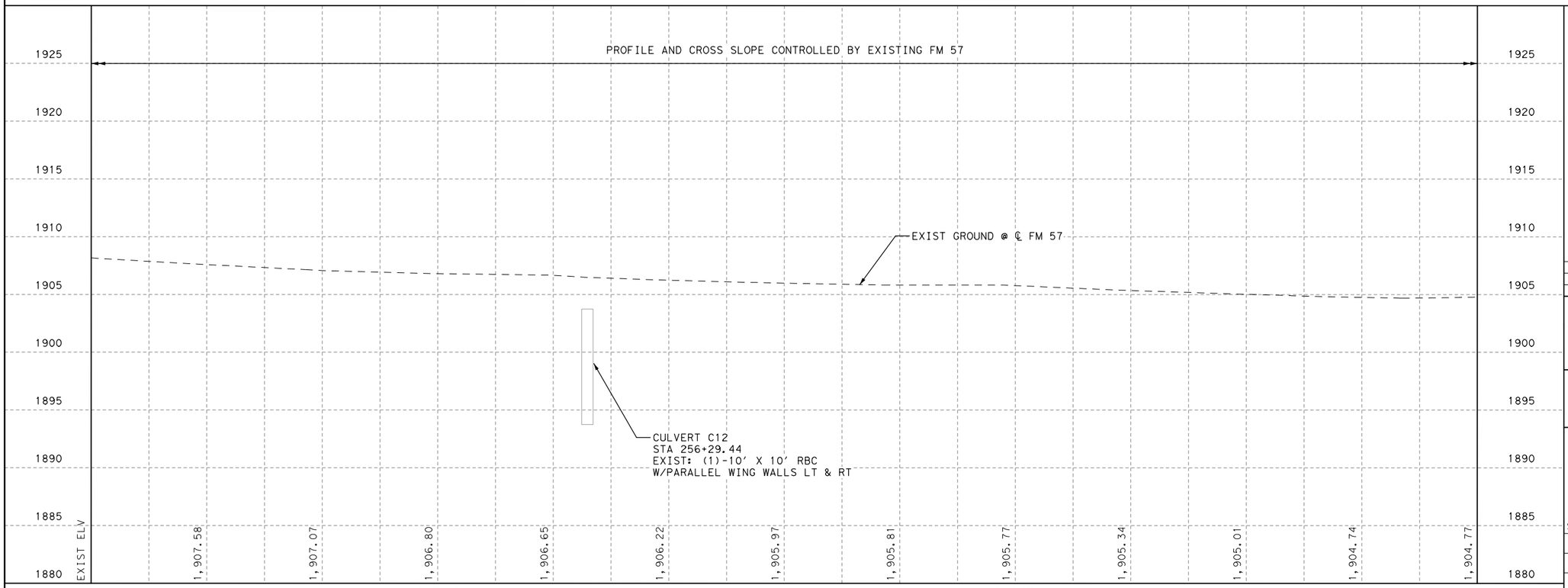
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:35:22 PM
SCALE: 1:00.016
PENTABLE: FM57_REVISE.tbl

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

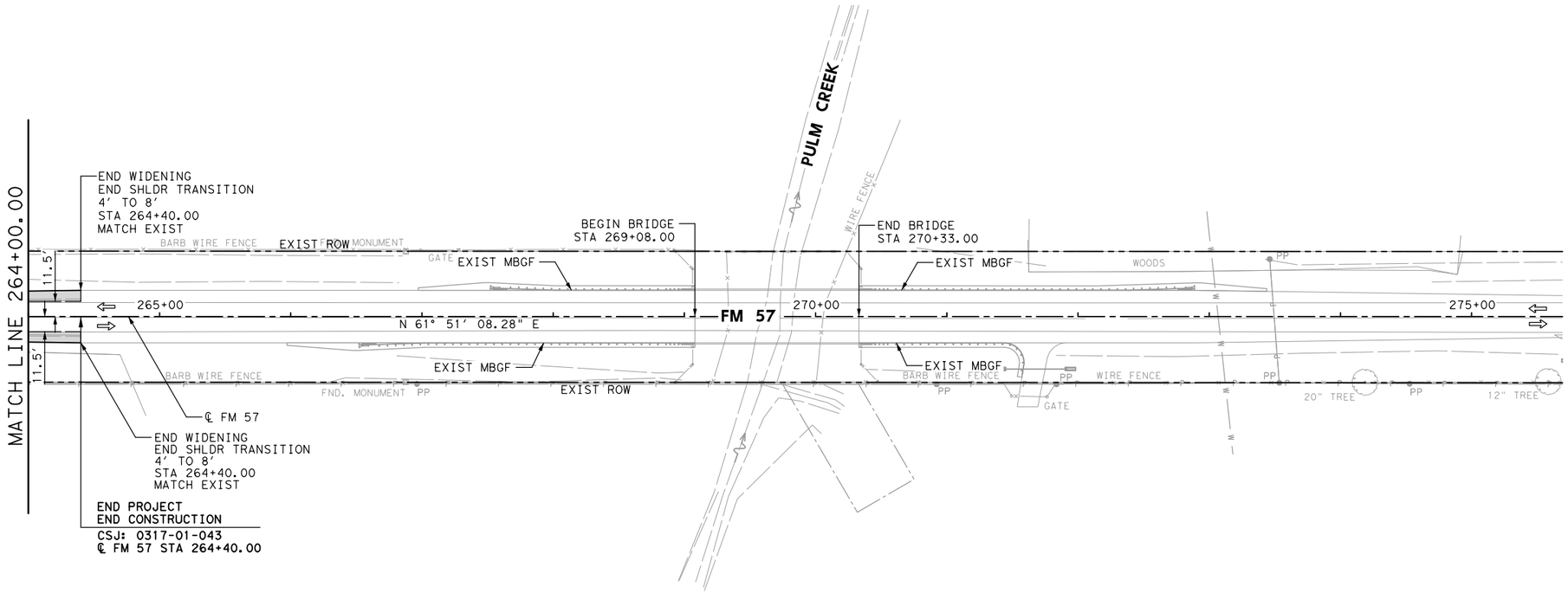
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
PLAN AND PROFILE
STA 252+00 TO STA 264+00

SCALE 1"=100'H, 1"=10'V SHEET 22 OF 23

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	78
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



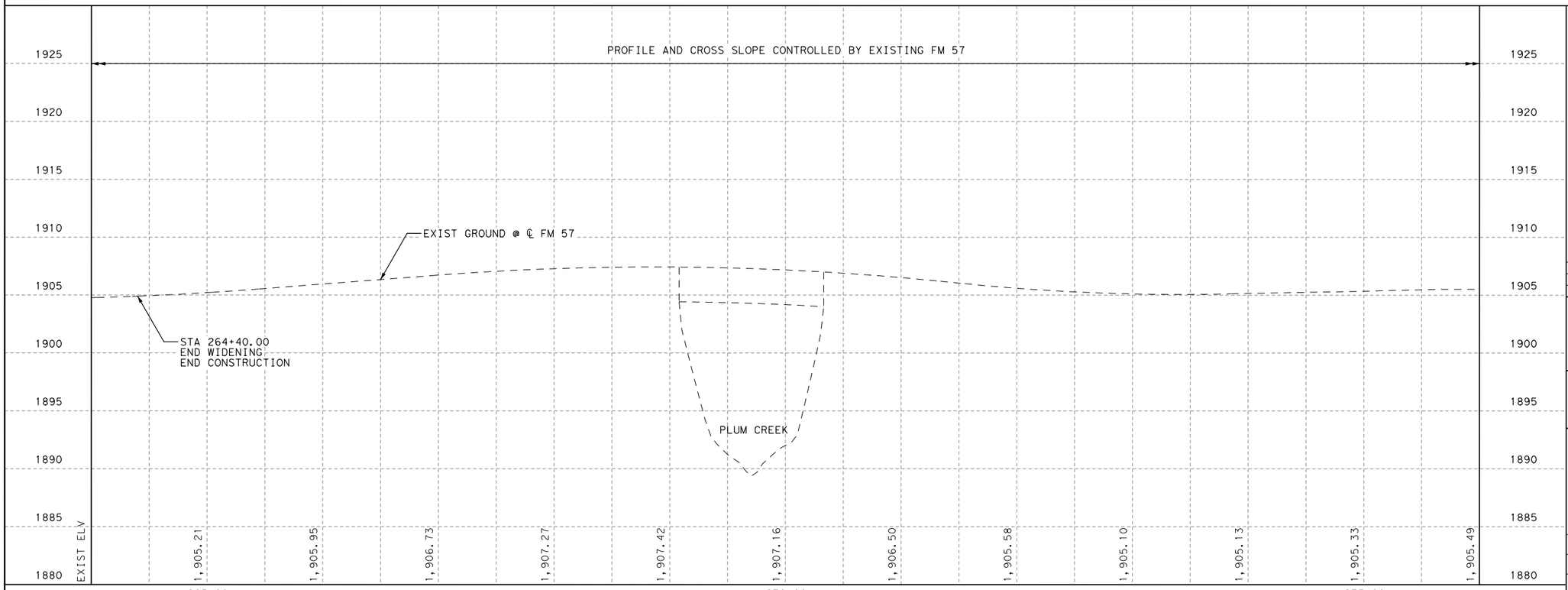
LEGEND:

- HC-XX — CURVE ID LABEL
- D-XX — DRIVEWAY ID LABEL
- FULL-DEPTH CONSTRUCTION
- PROPOSED DRIVEWAY/SIDE STREET
- MAILBOX TURNOUT
- DIRECTION OF TRAFFIC
- MAILBOX ASSEMBLY

NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS OTHERWISE NOTED.
2. REFER TO HORIZONTAL ALIGNMENT DATA SHEET FOR ADDITIONAL INFORMATION.
3. REFER TO TYPICAL SECTION SHEET FOR ADDITIONAL INFORMATION.
4. CONTRACTOR TO VERIFY ELEVATIONS OF EXISTING PAVEMENT TIE-IN LOCATIONS PRIOR TO CONSTRUCTION AND MAKE ADJUSTMENT AS NEEDED.
5. SAW CUTTING SHALL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT BID TIMES.
6. REFER TO SIDE STREET PROFILE AND DRIVEWAY DETAILS SHEETS FOR ADDITIONAL INFORMATION.
7. CONTRACTOR TO PROTECT ALL EXISTING CULVERTS DURING WORK.
8. REFER TO PROPOSED TYPICAL SECTION SHEET FOR MAILBOX TURNOUT DETAILS.
9. CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.

0 50 100
SCALE IN FEET



STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

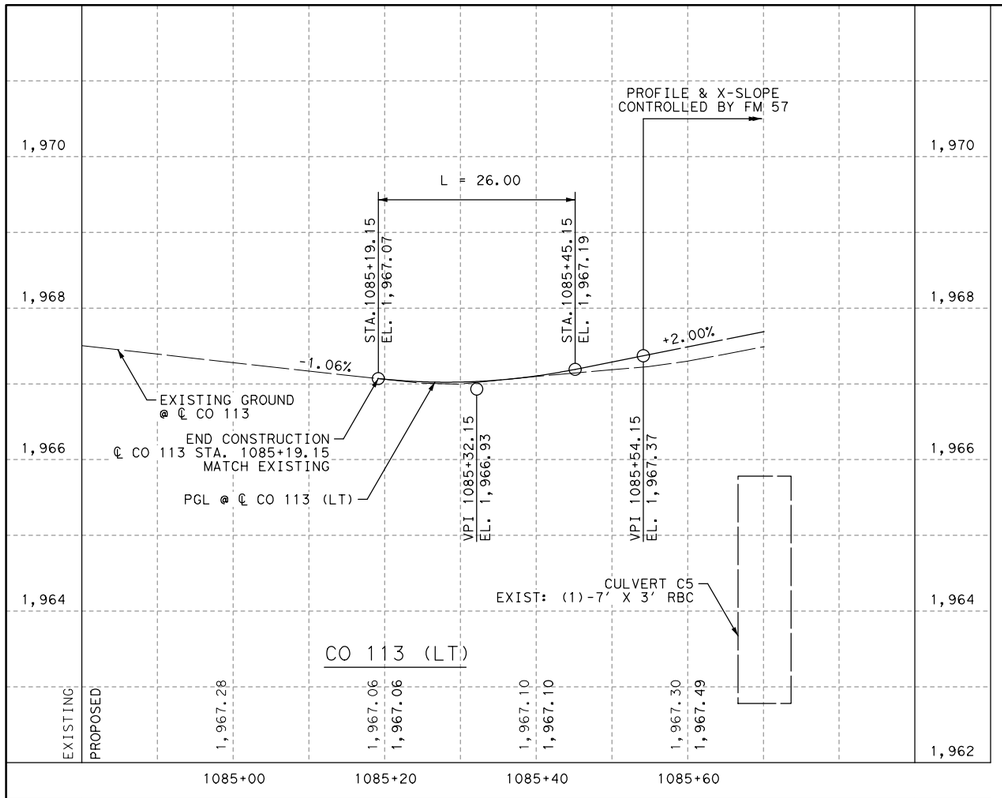
SH 70 TO PLUM CREEK

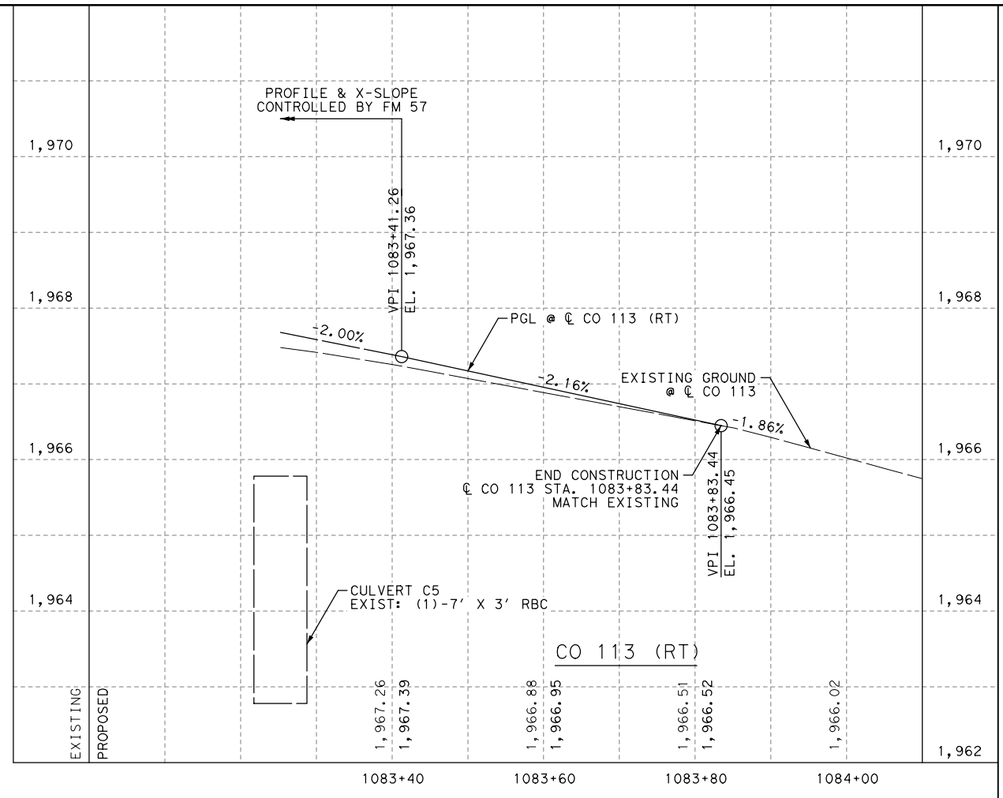
FM 57
PLAN AND PROFILE
STA 264+00 TO END

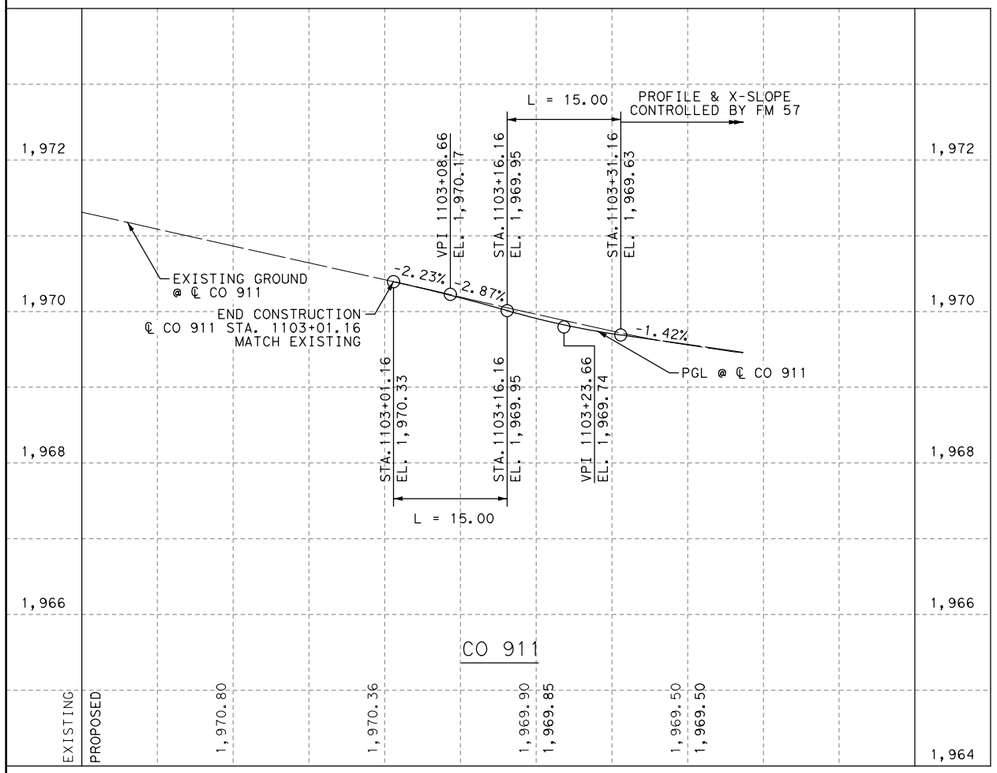
SCALE 1"=100'H, 1"=10'V SHEET 23 OF 23

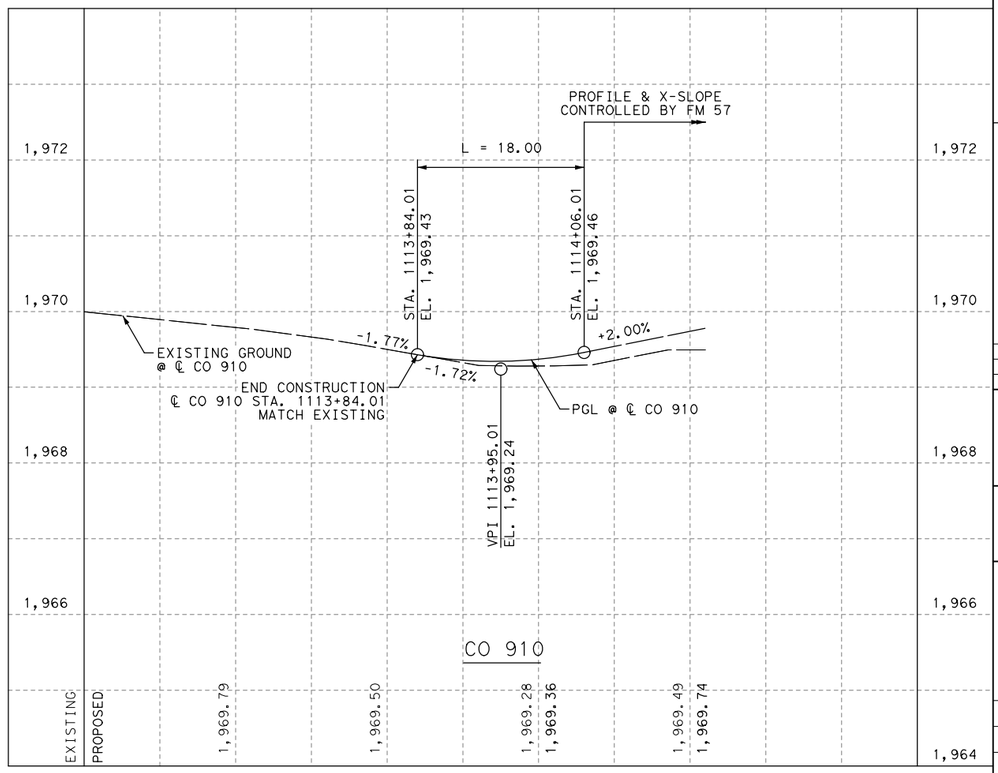
DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	79
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:35:36 PM SCALE: 1:100.0/8 PENTABLE: FM57_REVISE.tbl
USER: Rdas









NOTES:

1. REFER TO FM 57 PLAN & PROFILE SHEETS FOR ADDITIONAL INFORMATION.
2. REFER TO HORIZONTAL DATA SHEETS FOR HORIZONTAL ALIGNMENT INFORMATION.

HORZ 0 10 20
VERT 0 1 2
SCALE IN FEET

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

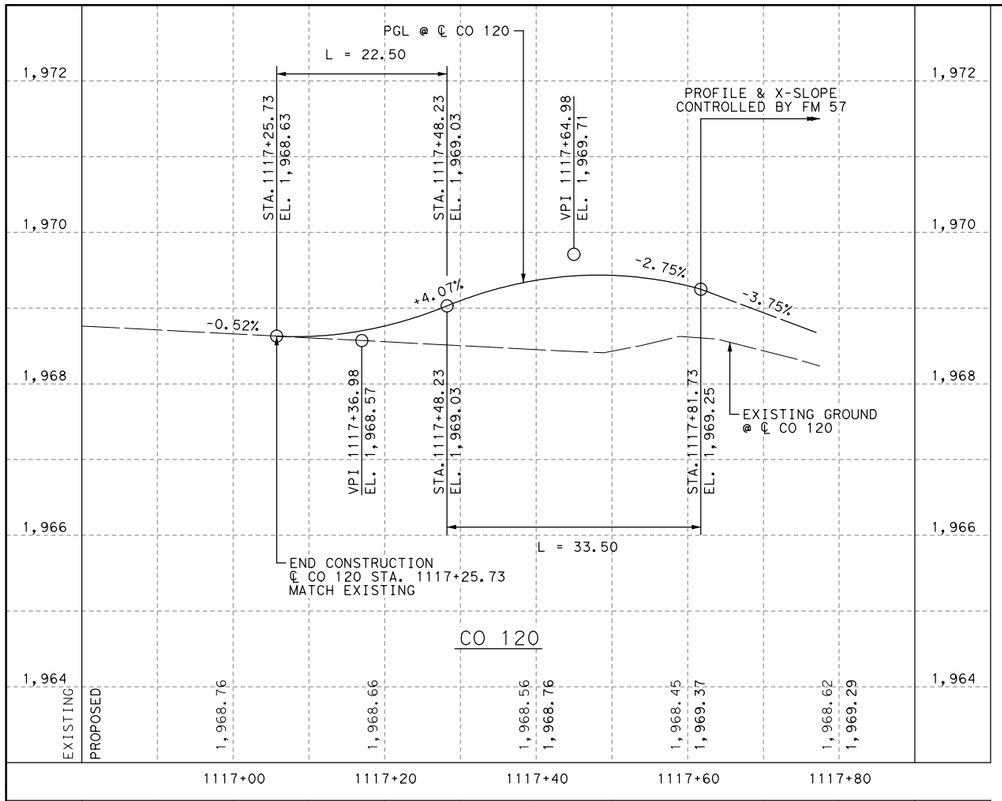
SH 70 TO PLUM CREEK

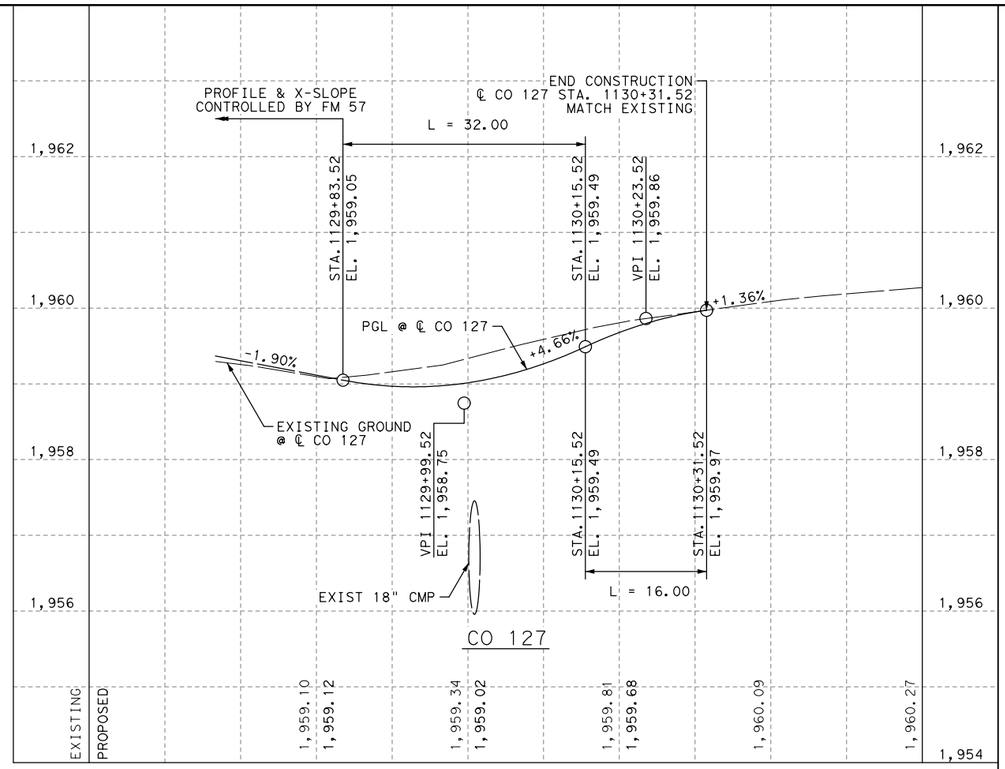
FM 57
SIDE STREET
PROFILE

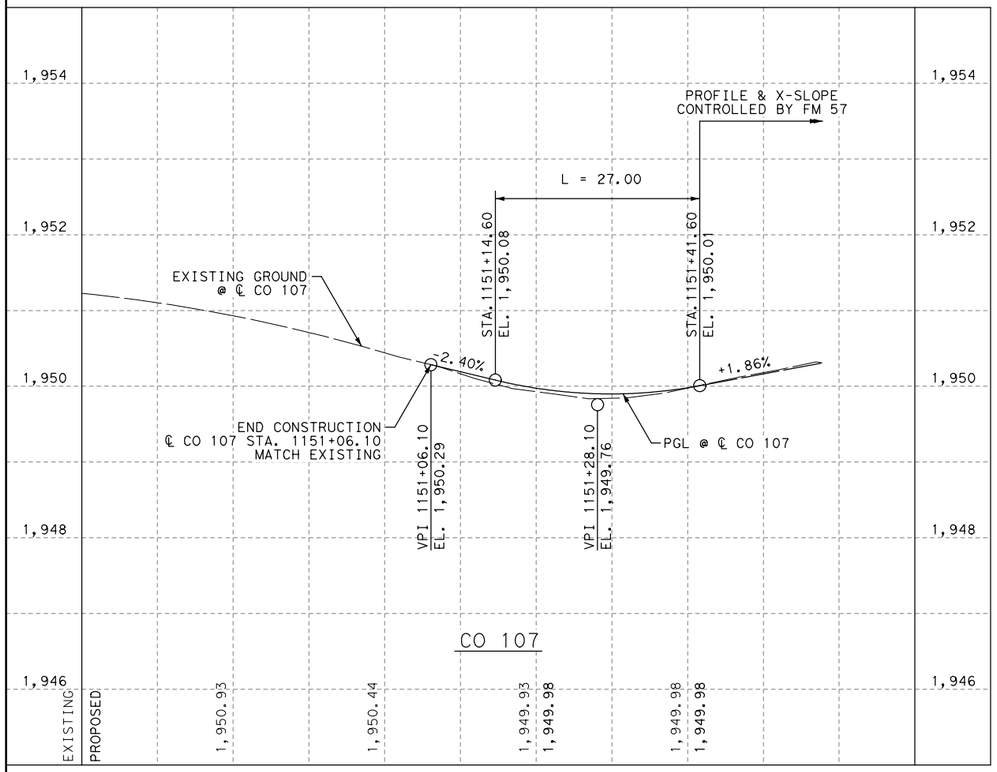
SCALE 1"=20'H; 1"=2'V SHEET 01 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK	TEXAS	ABL	FISHER	80
IEI	CONTROL	SECTION	JOB	
CHECK IEI	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:35:42 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:20







NOTES:

1. REFER TO FM 57 PLAN & PROFILE SHEETS FOR ADDITIONAL INFORMATION.
2. REFER TO HORIZONTAL DATA SHEETS FOR HORIZONTAL ALIGNMENT INFORMATION.

HORZ 0 10 20
VERT 0 1 2
SCALE IN FEET

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
SIDE STREET
PROFILE

SCALE 1"=20'H; 1"=2'V SHEET 02 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	81
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:35:48 PM SCALE: 1:20
USER: Rdas PENTABLE: FM57_REVISE.tbl

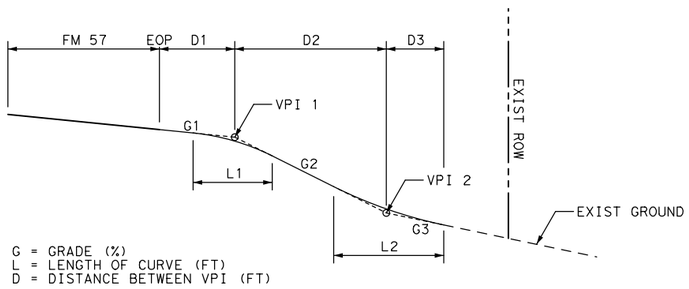
NOTES:

1. ALL STATIONS ARE BASED ON ℄ FM 57 UNLESS NOTED OTHERWISE.

DRIVEWAY INFORMATION

DRIVEWAY ID	STATION	WIDTH	D1	D2	D3	L1	L2	G1	G2	G3	AREA	*EXIST DRIVEWAY TYPE
		FT	FT	FT	FT	FT	FT	%	%	%	SY	
D-01	21+28.68	23.0	5.70	5.27		10.0		-3.85	4.45		73	GRAVEL
D-02	53+49.83	14.0	4.00	10.37	3.50	8.0	7.0	-3.24	2.00	7.87	47	GRAVEL
D-03	62+39.49	15.0	3.16	2.50		5.0		-3.83	3.01		49	GRAVEL
D-04	62+48.21	16.0	14.52	9.12		18.0		-3.83	5.49		56	GRAVEL
D-05	66+71.49	25.0	6.56					-0.62			82	GRAVEL
D-06	67+23.46	14.0	6.25	3.50		7.0		-1.17	1.55		46	GRAVEL
D-07	72+96.39	29.0	4.43	9.43		8.0		-6.13	1.84		93	GRAVEL
D-08	91+53.45	15.0	4.22	9.92		6.0		-1.54	-6.62		72	GRAVEL
D-09	93+75.50	14.0	9.97	4.00		8.0		-2.62	3.14		57	GRAVEL
D-10	93+98.36	14.0	2.83					-2.49			58	GRAVEL
D-11	95+22.16	14.0	3.01	3.00		6.0		-0.21	3.57		58	GRAVEL
D-12	111+84.83	14.0	25.84					-2.71			72	GRAVEL
D-13	116+48.50	16.0	4.00	12.27	3.47	8.0	7.0	2.29	-5.00	0.60	70	GRAVEL
D-14	122+65.44	14.0	4.00	13.15	4.23	8.0	11.0	3.72	-4.00	2.16	66	ASPHALT
D-15	124+21.52	14.0	4.00	9.78	4.00	12.0	12.0	3.88	-4.00	4.85	66	ASPHALT
D-16	128+43.88	17.0	10.54	2.00		4.0		-2.05	1.49		77	ASPHALT
D-17	162+17.50	14.0	2.50	20.23	4.77	5.0	8.0	-2.00	-4.50	2.56	64	GRAVEL
D-17A	215+50.00	22.0	6.00			12.0		-3.00	4.44		104	GRAVEL
D-18	221+14.47	18.0	18.54	4.00		8.0		-1.97	3.13		87	GRAVEL
D-19	232+65.48	14.0	24.72	8.57		4.0		-2.61	1.46		63	GRAVEL

* REPLACE ALL DRIVEWAYS PER THE PAVEMENT DESIGN SHOWN IN THE DRIVEWAY/SIDE STREET DETAILS SHEET.



PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdas DATE: 11/29/2023 TIME: 1:35:55 PM SCALE: 1:1

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

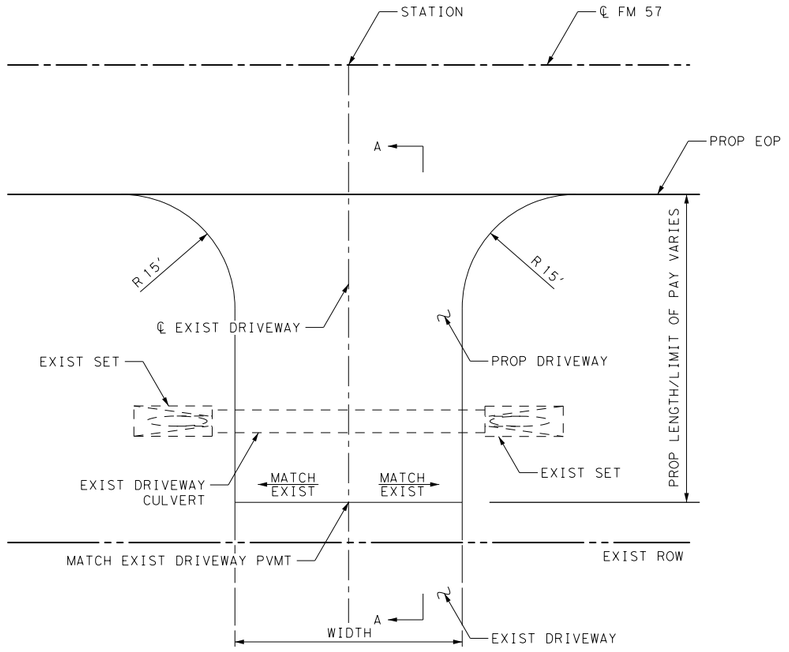
Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57
DRIVEWAY SUMMARY

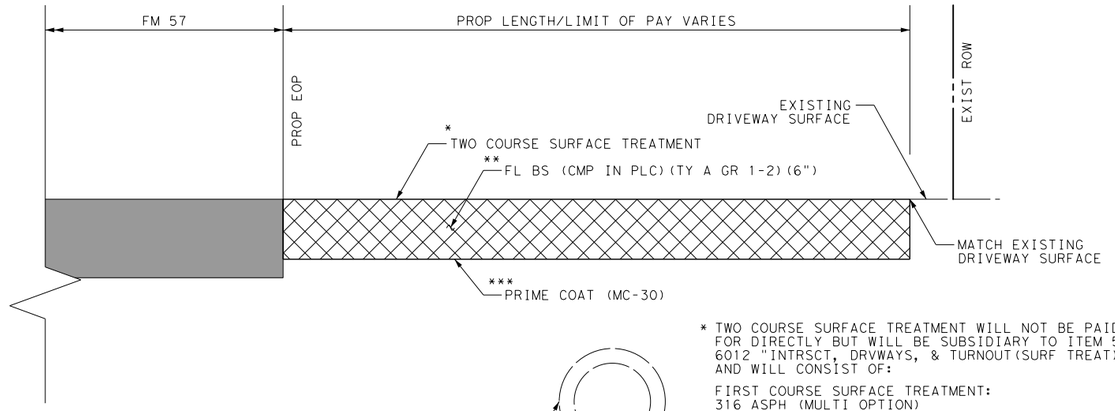
SHEET 01 OF 01

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	82
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



TYPICAL DRIVEWAY LAYOUT

NTS



SECTION A-A

NTS

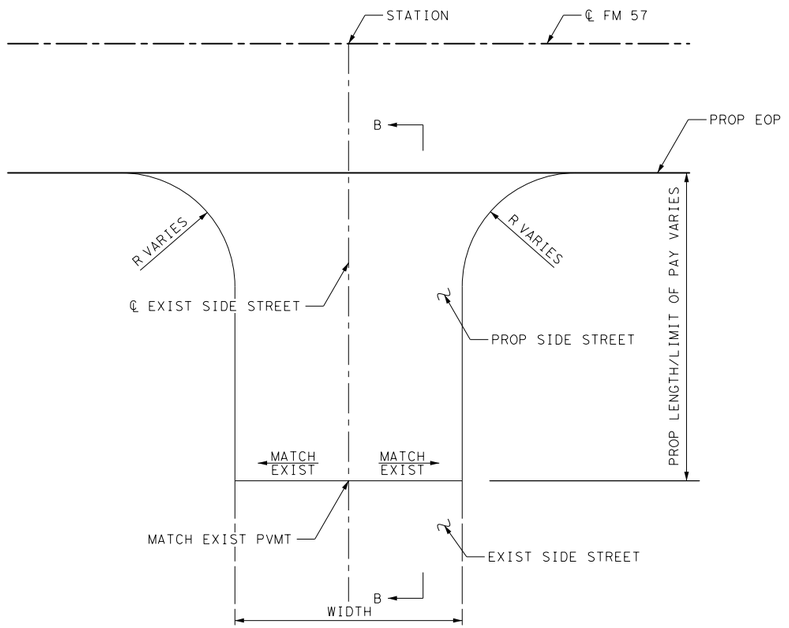
* TWO COURSE SURFACE TREATMENT WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 530 6012 "INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)" AND WILL CONSIST OF:

FIRST COURSE SURFACE TREATMENT:
316 ASPH (MULTI OPTION)
316 AGGR (TY-B GR-4 SAC-B)

FINISH COURSE SURFACE TREATMENT:
316 ASPH (AC-20-5TR)
316 AGGR (TY-PB GR-3 SAC-B)

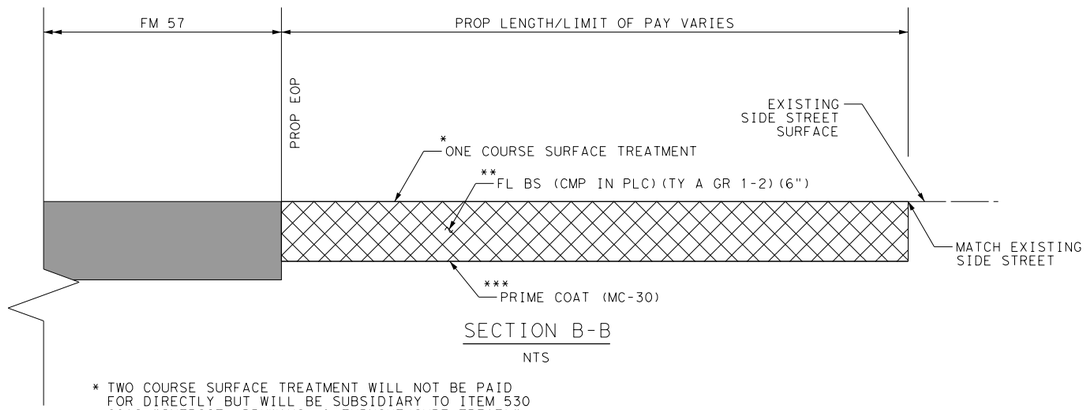
** FL BS (CMP IN PLC)(TY A GR 1-2)(6") WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 530 6012 "INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)"

*** PRIME COAT (MC-30) WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 530 6012 "INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)"



TYPICAL SIDE STREET LAYOUT

NTS



SECTION B-B

NTS

* TWO COURSE SURFACE TREATMENT WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 530 6012 "INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)" AND WILL CONSIST OF:

FIRST COURSE SURFACE TREATMENT:
316 ASPH (MULTI OPTION)
316 AGGR (TY-B GR-4 SAC-B)

FINISH COURSE SURFACE TREATMENT:
316 ASPH (AC-20-5TR)
316 AGGR (TY-PB GR-3 SAC-B)

** FL BS (CMP IN PLC)(TY A GR 1-2)(6") WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 530 6012 "INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)"

*** PRIME COAT (MC-30) WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO ITEM 530 6012 "INTRSCT, DRVWAYS, & TURNOUT(SURF TREAT)"

NOTE: REPLACE ALL SIDE STREETS PER THE PAVEMENT DESIGN SHOWN HERE.

STATE OF TEXAS
RAMENDRA N. DAS
140885
LICENSED
PROFESSIONAL ENGINEER
Ramendra N. Das
12/1/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

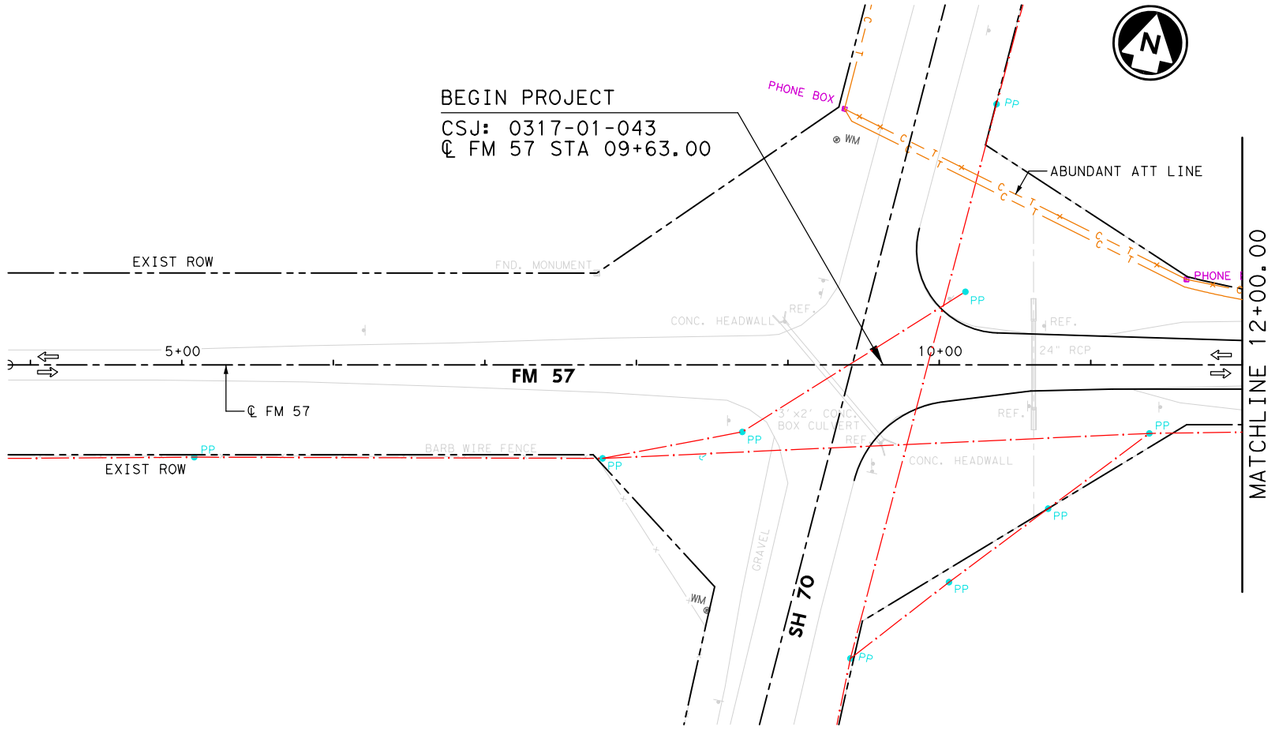
FM 57

DRIVEWAY/SIDE STREET DETAILS

SHEET 01 OF 01

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	83
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg DATE: 12/1/2023 TIME: 9:03:00 AM SCALE: 1:1
USER: Rdas PENTABLE: FM57_REVISE.tbl

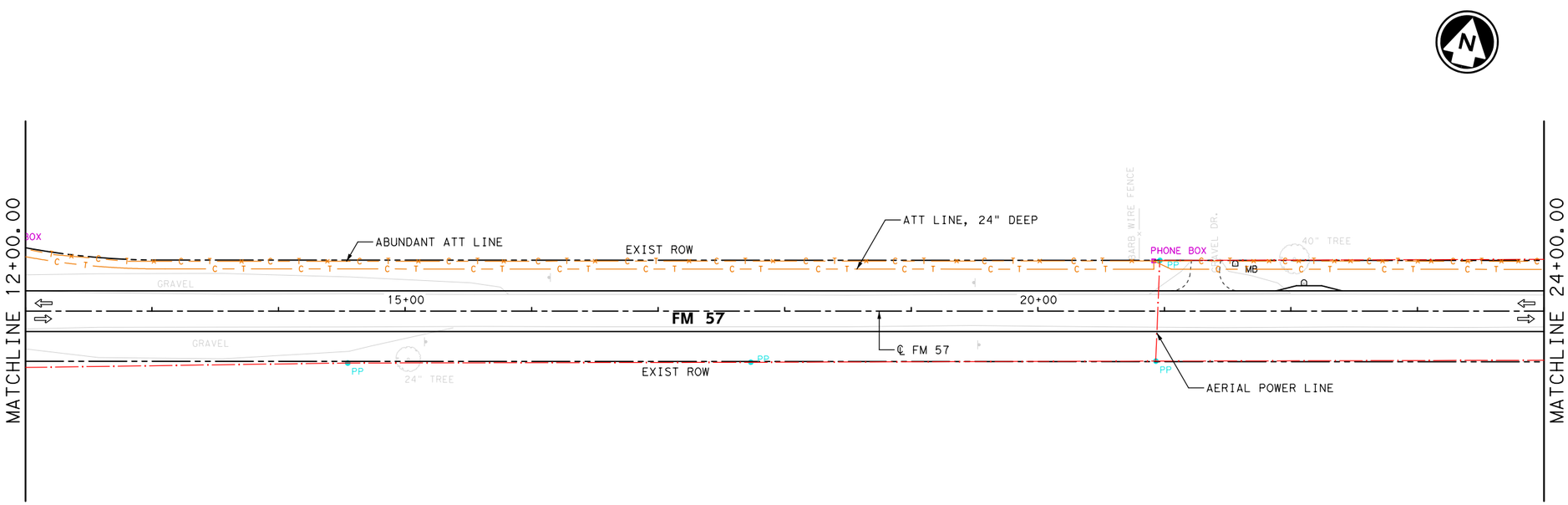


LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.



0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

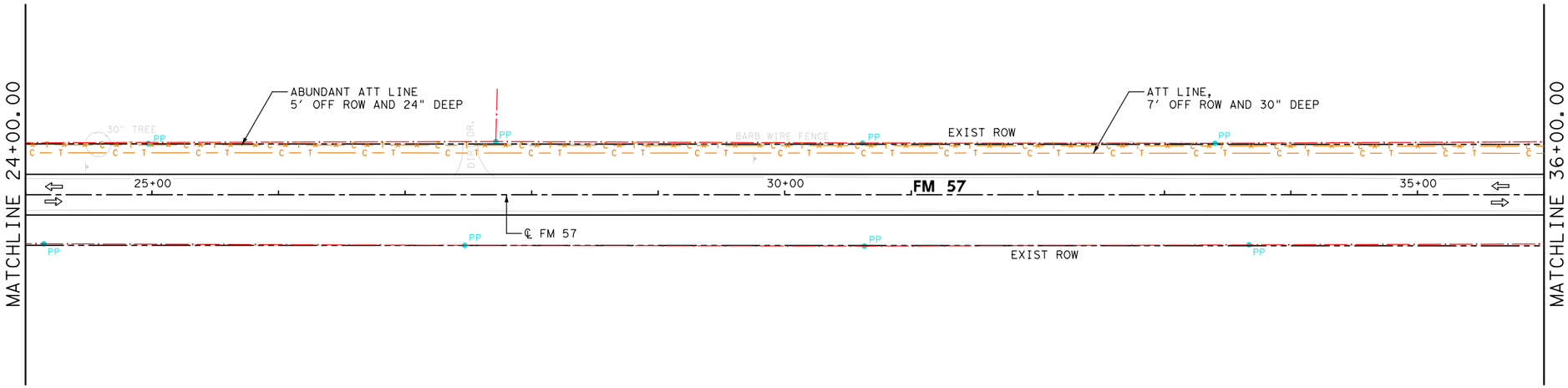
SH 70 TO PLUM CREEK

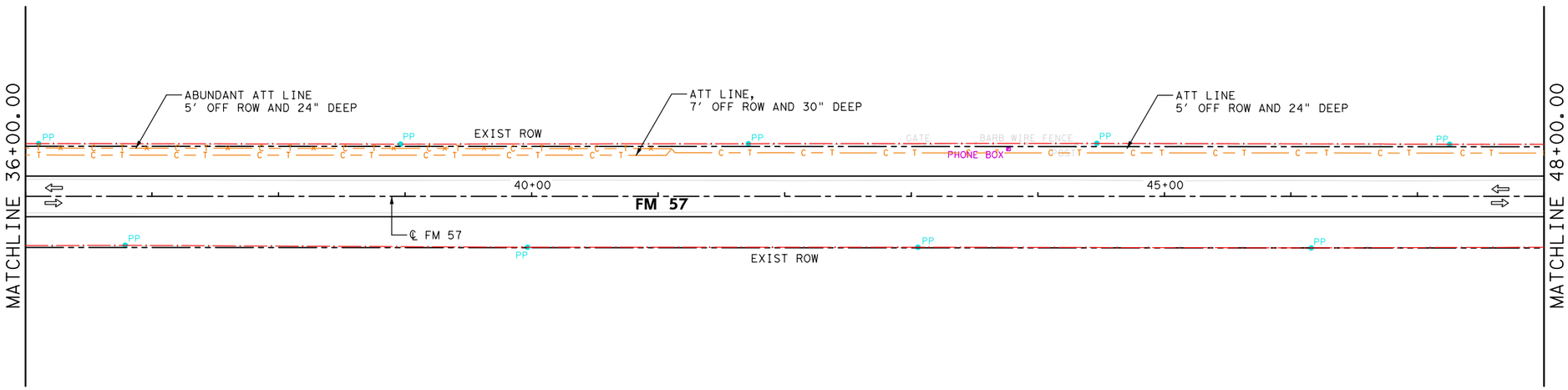
FM 57
EXISTING UTILITY
BEGIN TO STA 24+00

SHEET 01 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	84
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:55:10 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

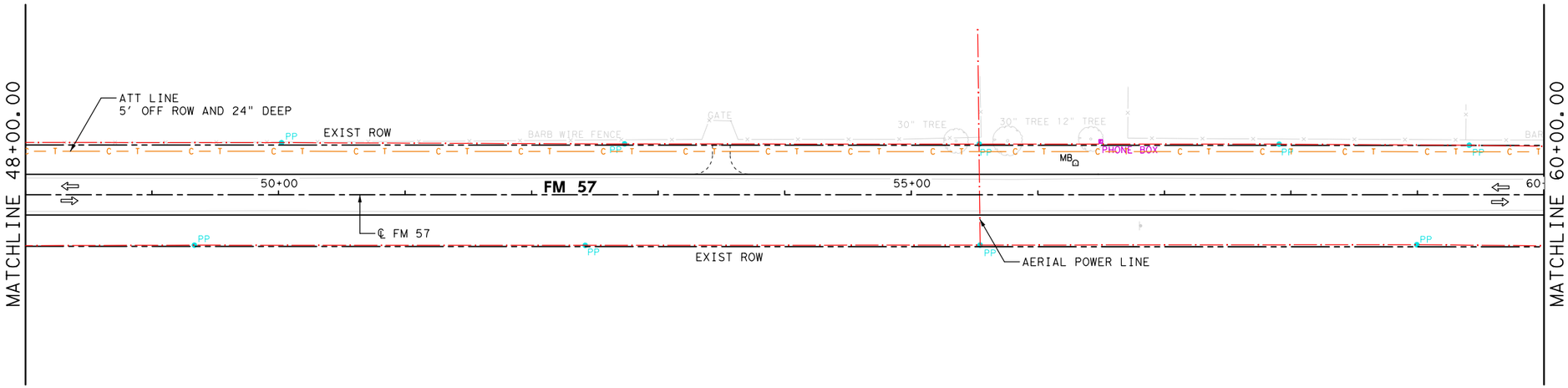
SH 70 TO PLUM CREEK

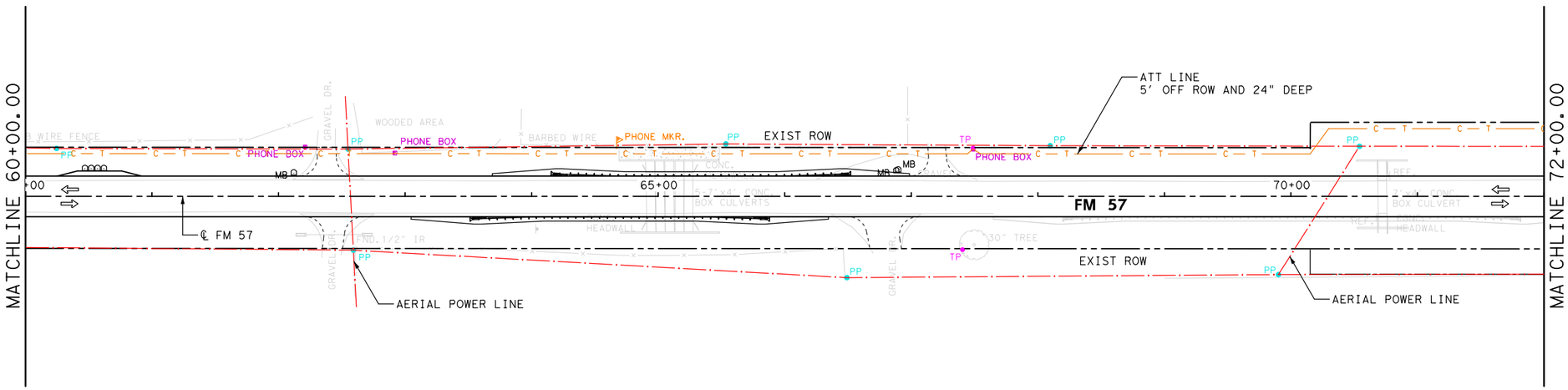
FM 57
EXISTING UTILITY
STA 24+00 TO STA 48+00

SHEET 02 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	85
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:55:16 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

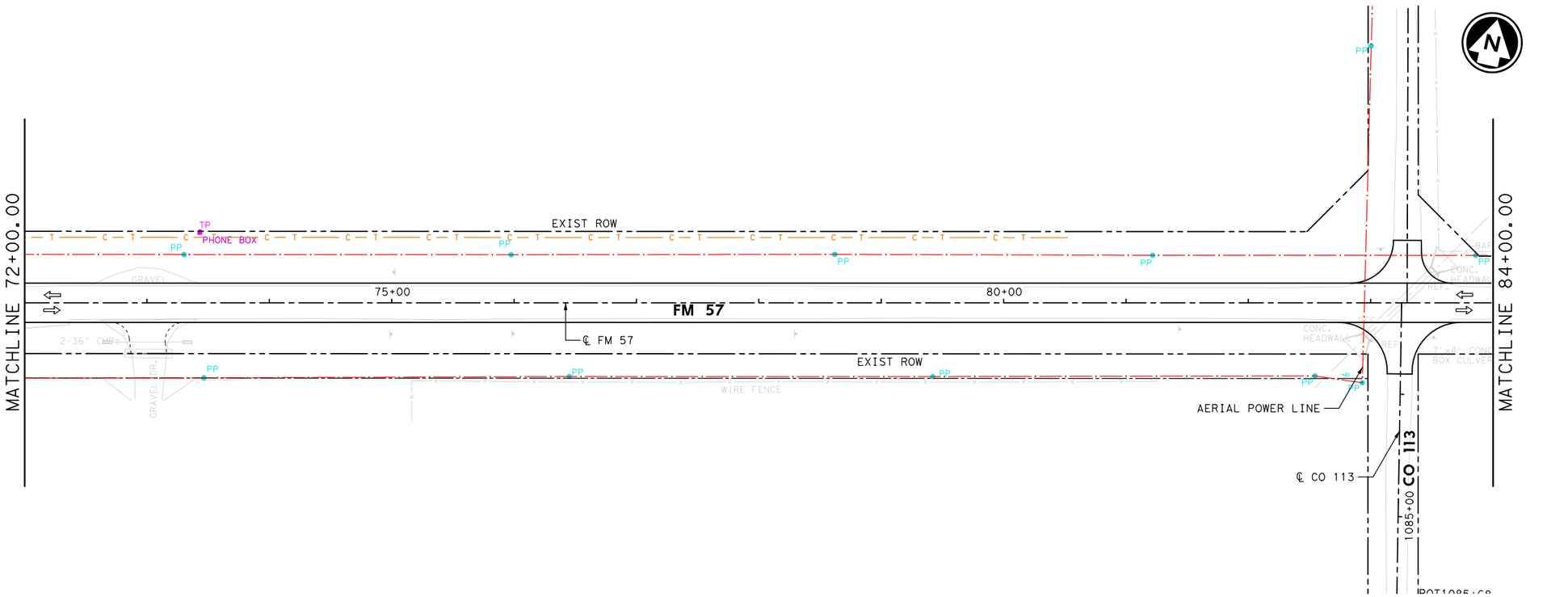
SH 70 TO PLUM CREEK

FM 57
EXISTING UTILITY
STA 48+00 TO STA 72+00

SHEET 03 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	86
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:55:23 PM SCALE: 1:100



LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

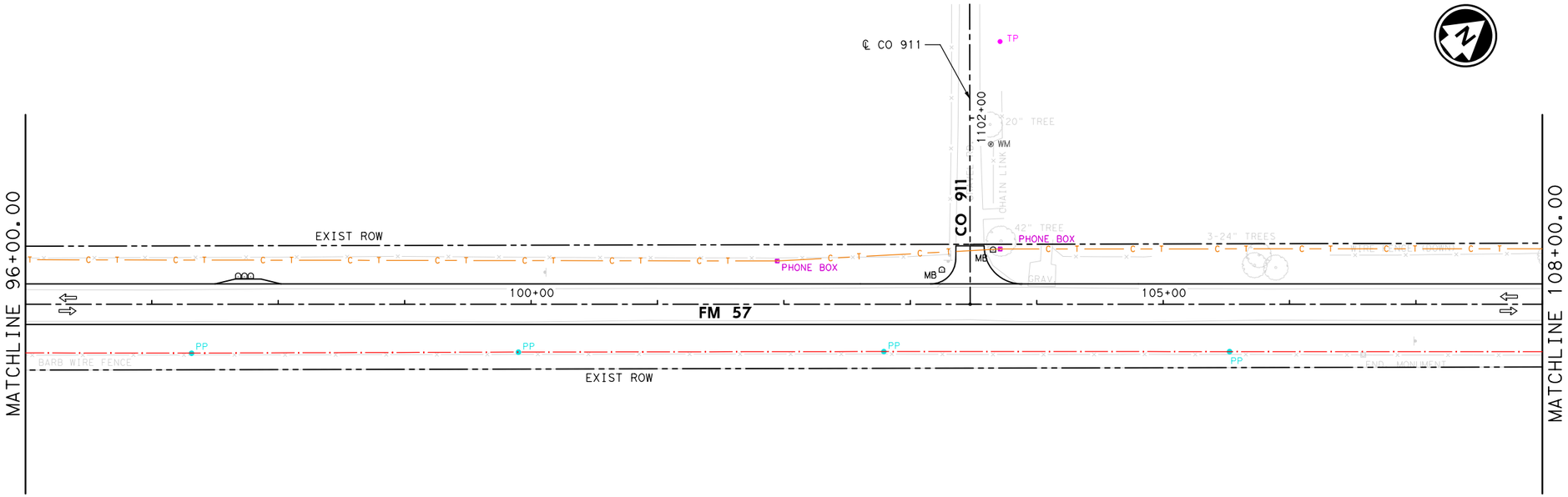
SH 70 TO PLUM CREEK

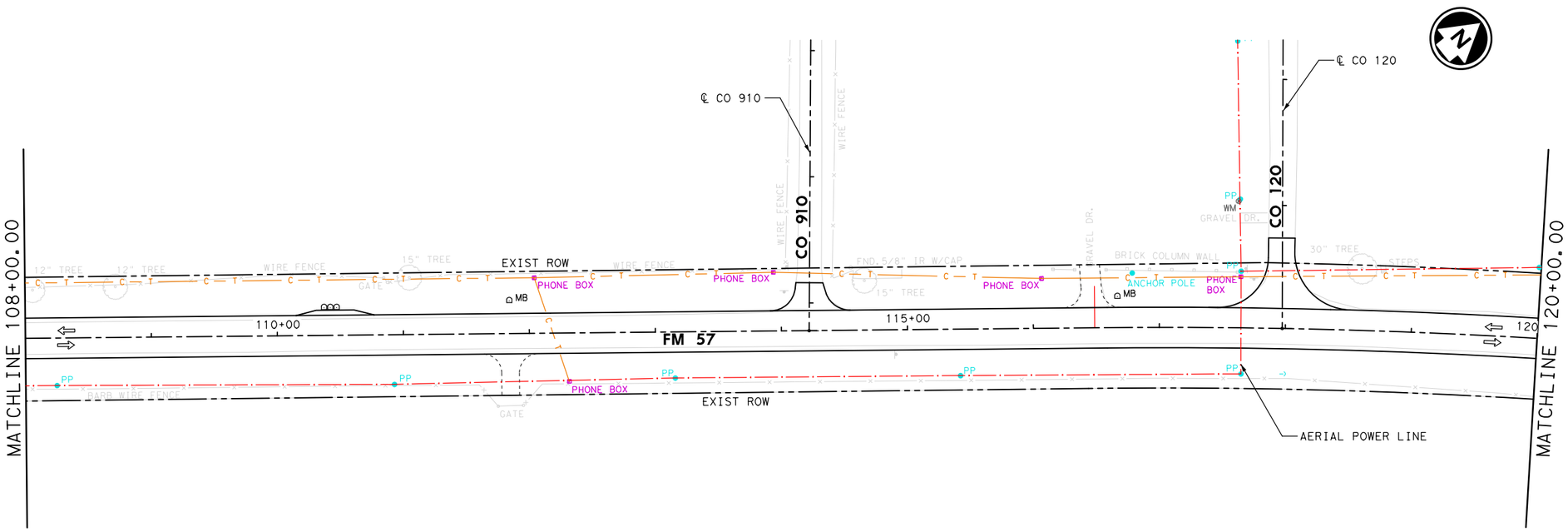
FM 57
EXISTING UTILITY
STA 72+00 TO STA 96+00

SHEET 04 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	87
CHECK IEI	CONTROL 0317	SECTION 01	JOB 043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:55:30 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

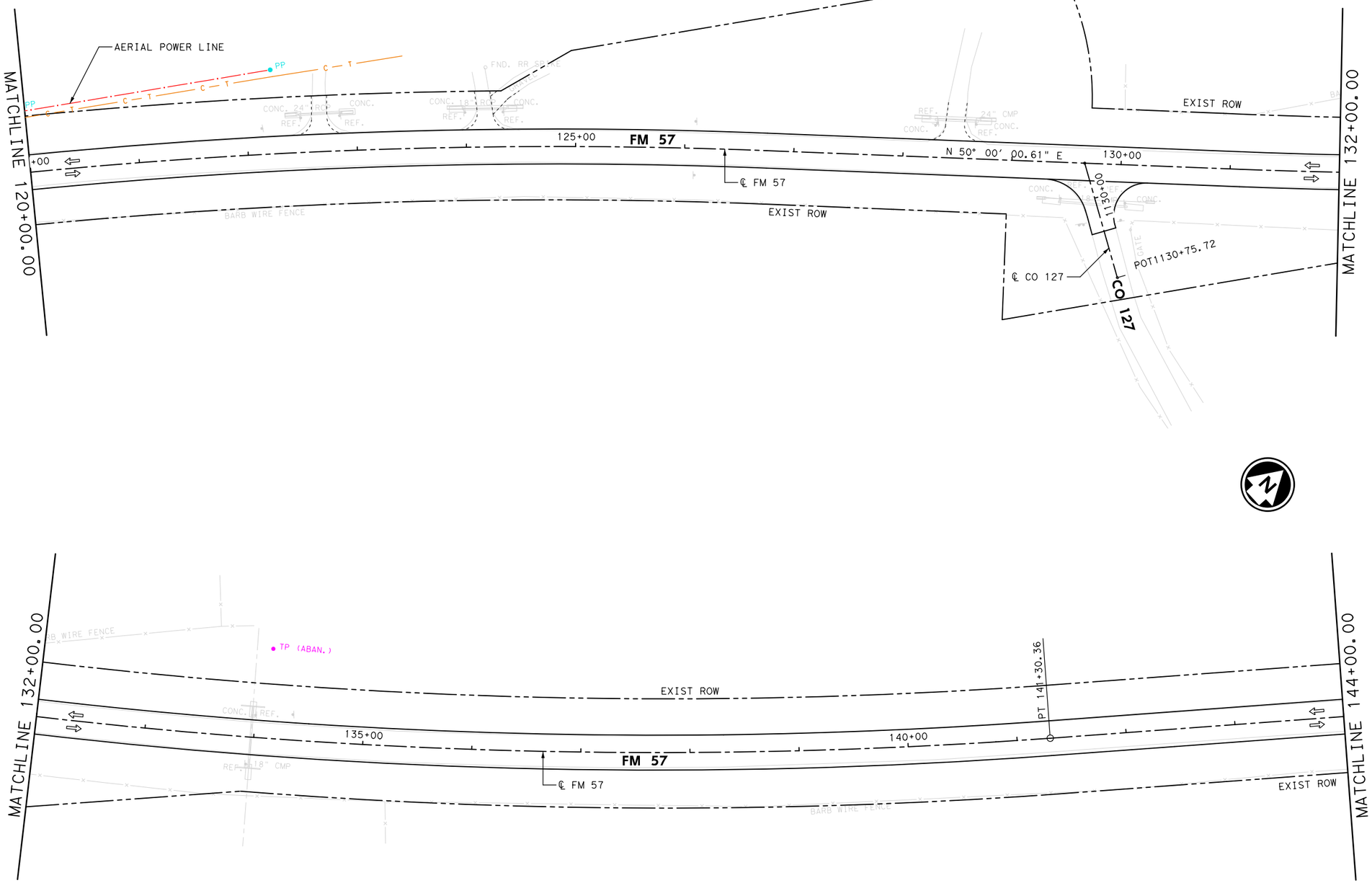
SH 70 TO PLUM CREEK

FM 57
EXISING UTILITY
STA 96+00 TO STA 120+00

SHEET 05 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	88
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:55:38 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100



LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

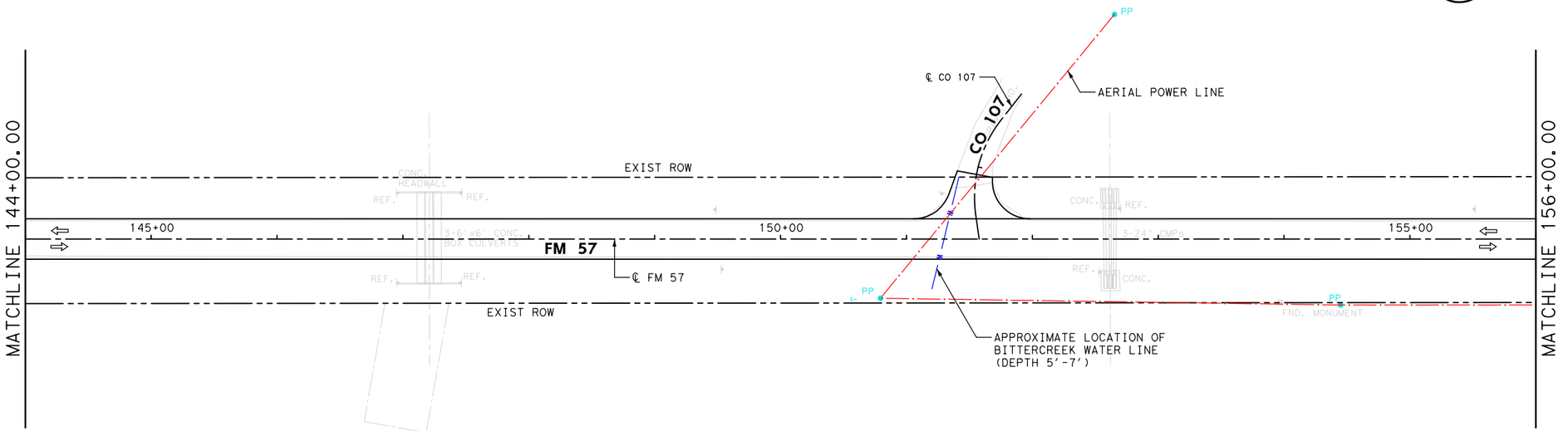
SH 70 TO PLUM CREEK

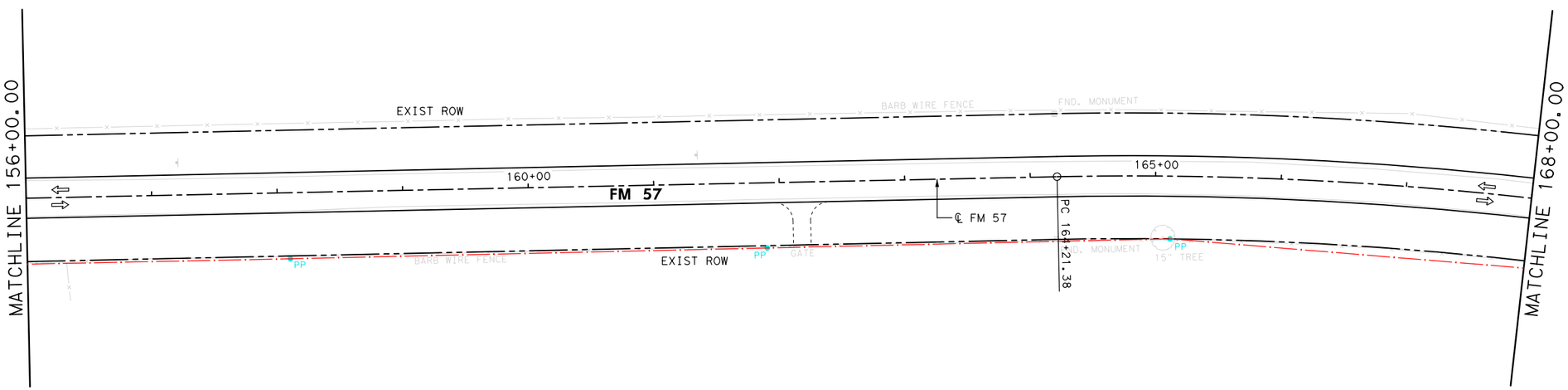
FM 57
EXISTING UTILITY
STA 120+00 TO STA 144+00

SHEET 06 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	89
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:55:49 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

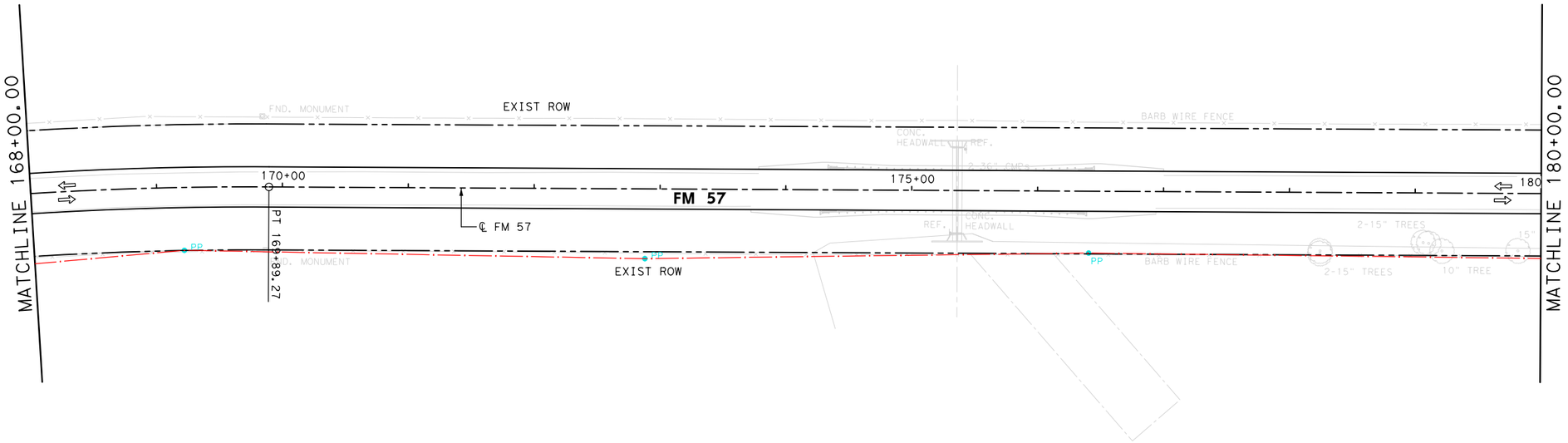
SH 70 TO PLUM CREEK

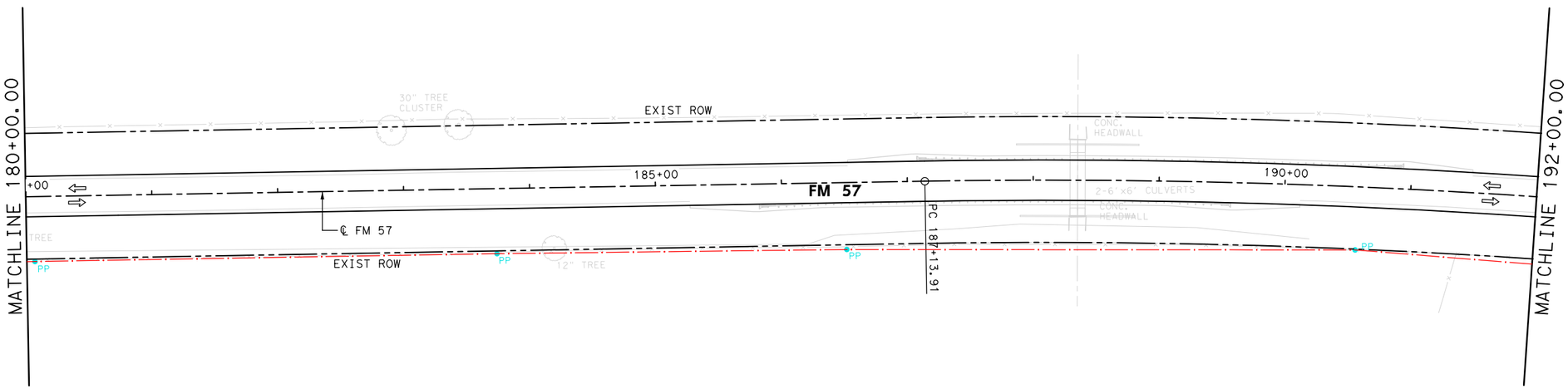
FM 57
EXISTING UTILITY
STA 144+00 TO STA 168+00

SHEET 07 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	90
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:55:55 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

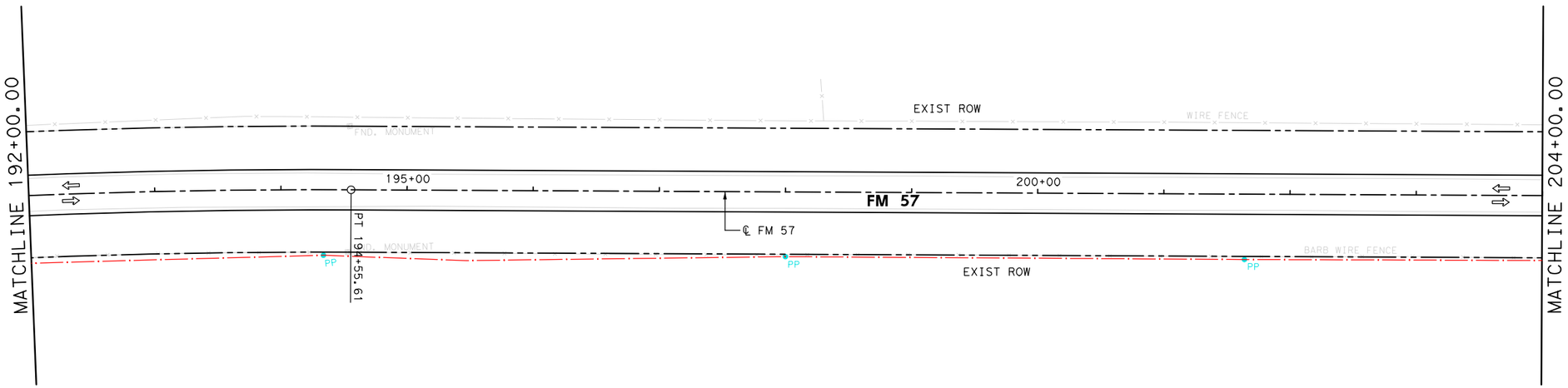
SH 70 TO PLUM CREEK

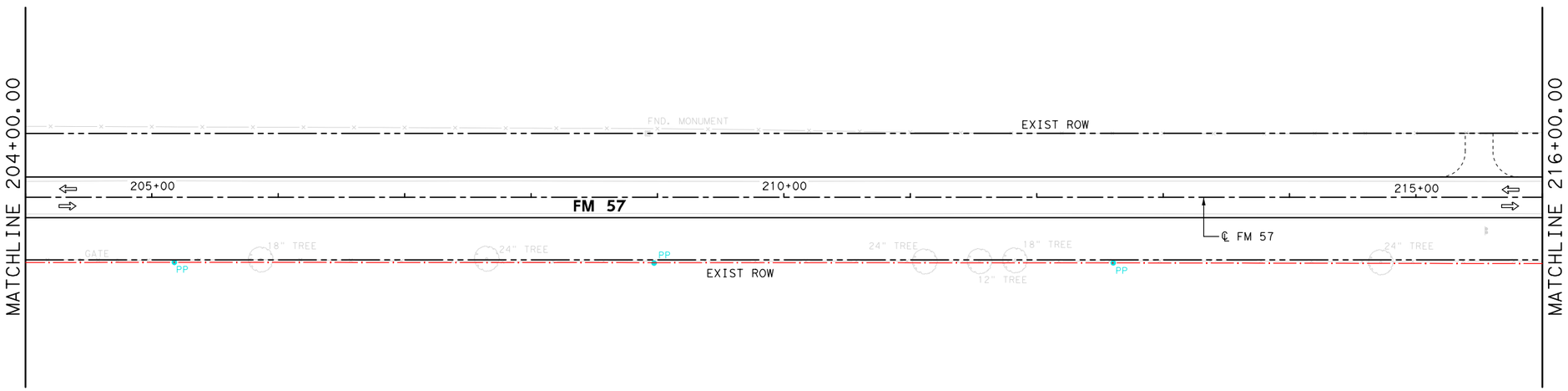
FM 57
EXISTING UTILITY
STA 168+00 TO STA 192+00

SHEET 08 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	91
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:56:04 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

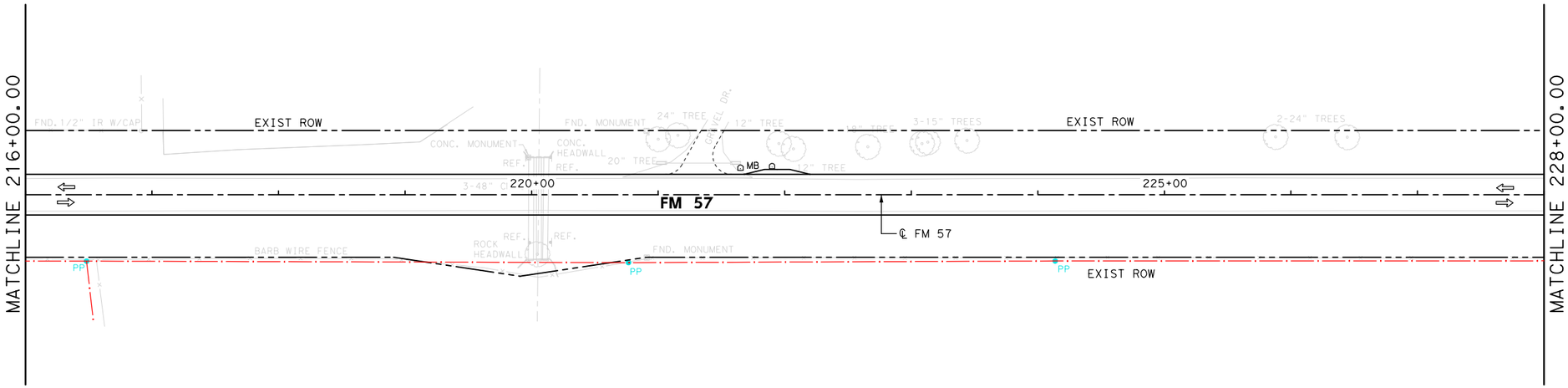
SH 70 TO PLUM CREEK

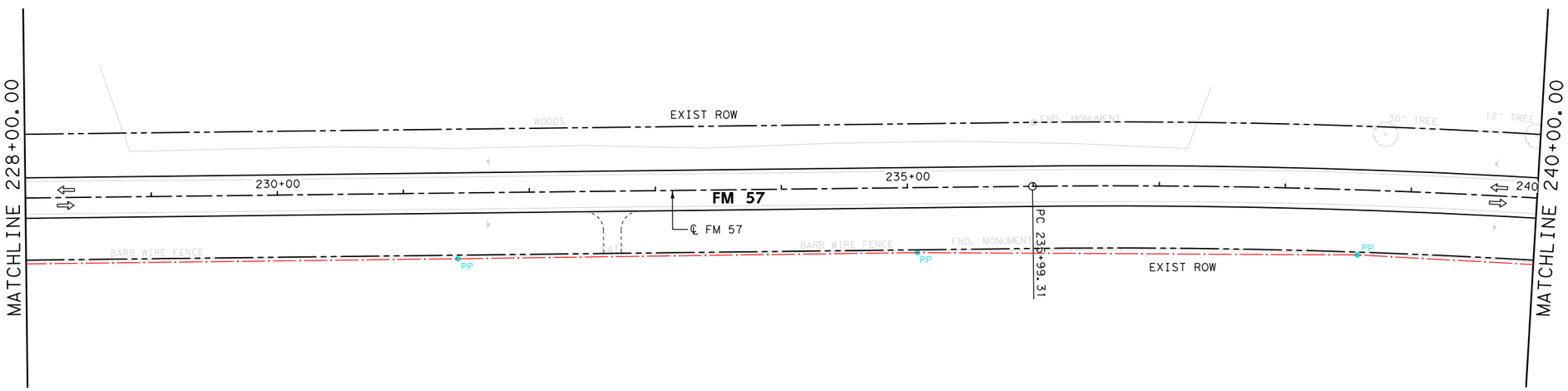
FM 57
EXISTING UTILITY
STA 192+00 TO STA 216+00

SHEET 09 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	92
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:56:14 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

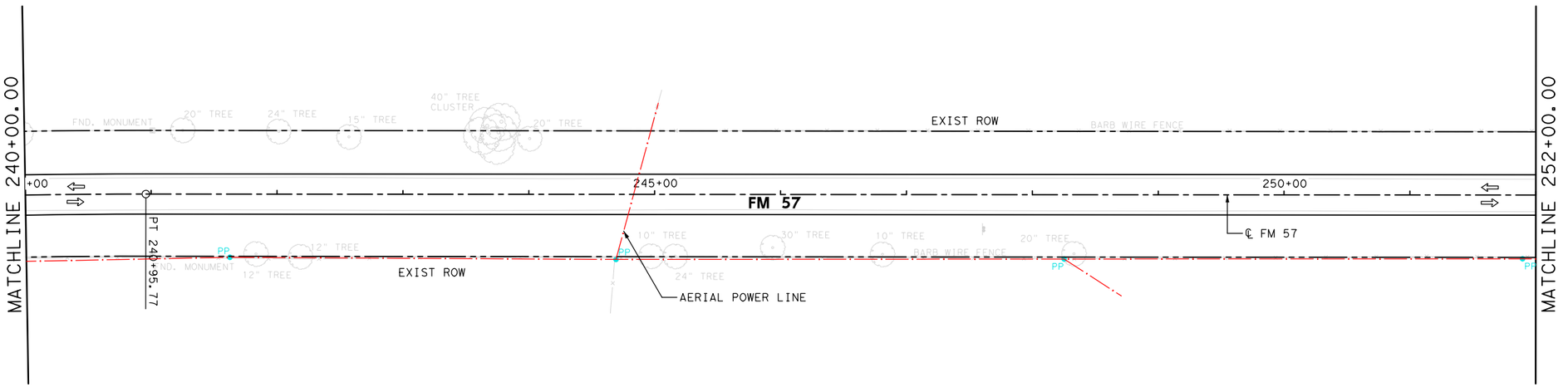
SH 70 TO PLUM CREEK

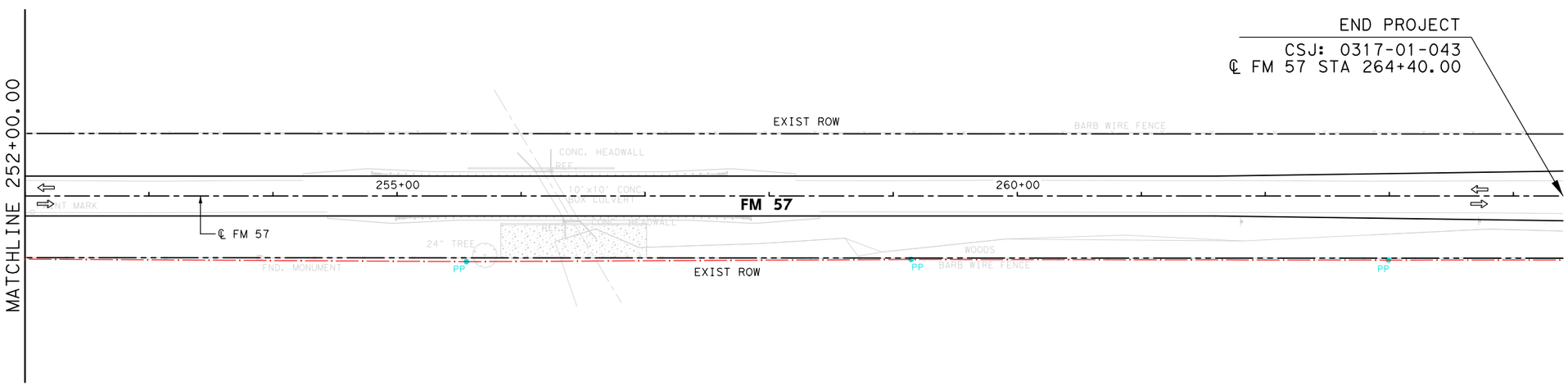
FM 57
EXISTING UTILITY
STA 216+00 TO STA 240+00

SHEET 10 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	93
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:56:21 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- EXISTING BURRIED GAS LINE
- PROPOSED BURRIED FIBER OPTIC
- EXISTING BURRIED FIBER OPTIC
- EXISTING AERIAL POWER LINE
- EXISTING WATER SUPPLY LINE
- DIRECTION OF TRAFFIC
- POLE
- PHONE BOX
- PHONE MARKER
- GAS LINE MARKER
- DOWN GUY AND ANCHOR

NOTES:

1. EXISTING UTILITY INFORMATION SHOWN ARE APPROXIMATE AND BASED ON INFORMATION RECEIVED FROM TXDOT AND FIELD SURVEY AS OF 04/03/2019.
2. PROPOSED BURIED FIBER OPTIC CABLE LINE IS AT A MINIMUM DEPTH OF 42" FROM THE EXISTING GROUND.

0 50 100
SCALE IN FEET

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

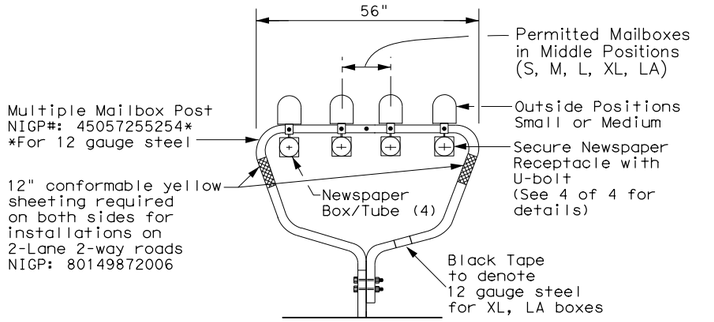
FM 57
EXISTING UTILITY
STA 240+00 TO END

SHEET 11 OF 11

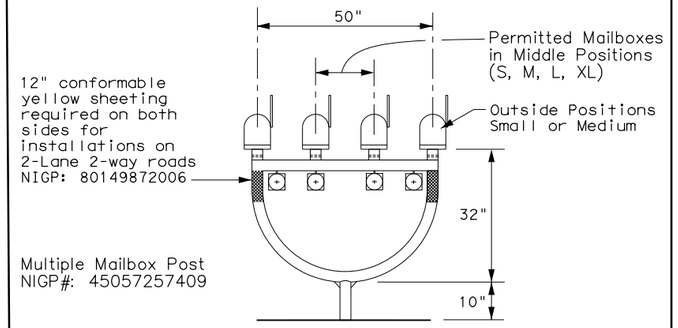
DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	94
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_C.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:56:27 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100

TYPE 1 - MULTIPLE



TYPE 4 - MULTIPLE



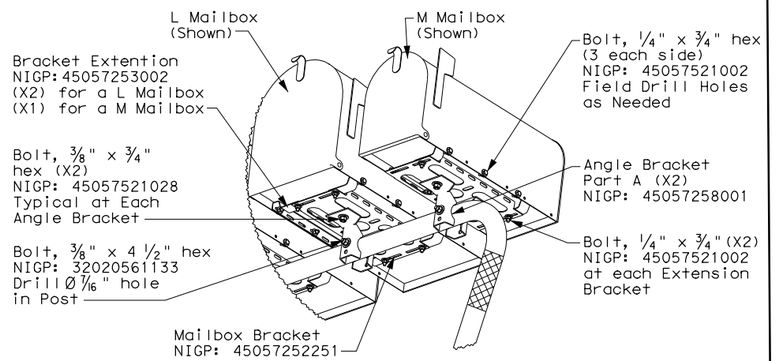
MAILBOX SIZES

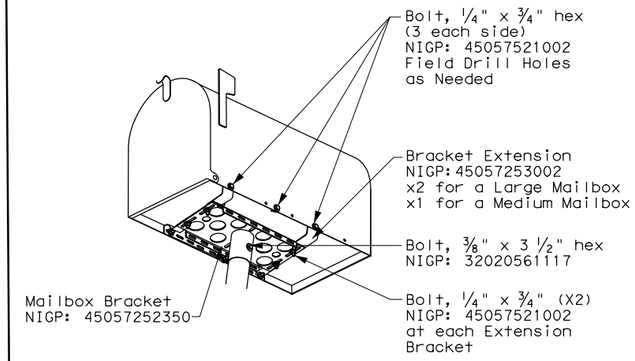
MAILBOX SIZE	TYPICAL DIMENSIONS			MAX **
	LENGTH	WIDTH	HEIGHT	WEIGHT
SMALL	19 ½"	6"	7"	6 LBS
MEDIUM	22 ½" *	8" *	11 ½" *	8 LBS
LARGE	23 ½"	11 ½"	13 ½"	11 LBS
EXTRA LARGE	18"	14"	12"	13 LBS
LOCKABLE	18"	11 ½"	15"	23 LBS

* See Note 1.
** Excluding Molded Plastic on 4 X 4 Post

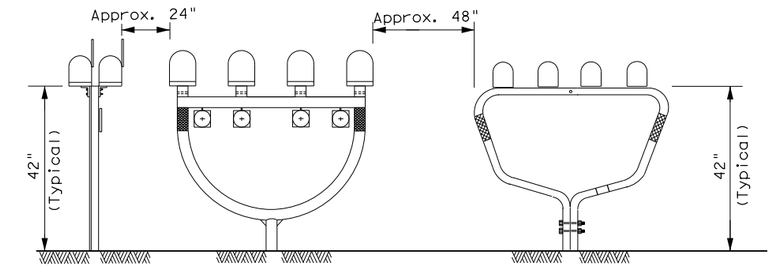
GENERAL NOTES:

1. Dimensions shown (length, width, and height) are typical, not maximums. However, anytime a medium size mailbox is mounted on a single/double mount or on the outside position on a multi mount, the dimensions shown are maximums.
2. Mailboxes shall be made of light weight sheet metal or light weight plastic. Heavy steel, cast iron or decorative mailboxes shall not be used on the state highway system.





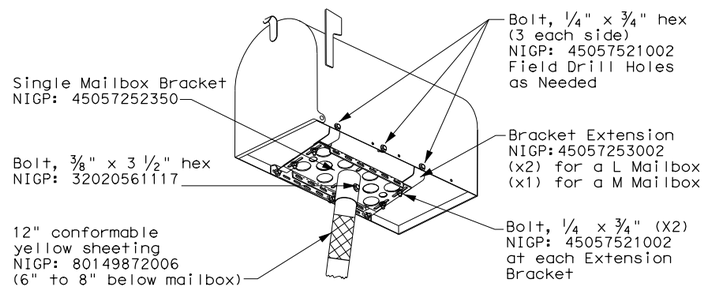
TYPICAL INSTALLATION MEASUREMENTS

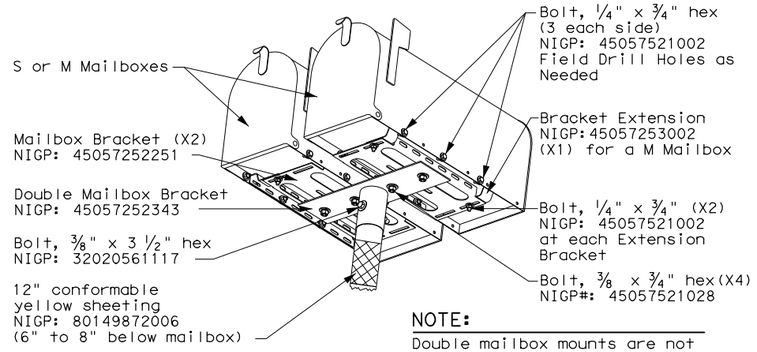


NOTE:

Mailbox installations in sidewalk areas shall be in accordance with the latest TxDOT Design Standard sheets PED-Pedestrian Facilities Curb Ramps.

TYPE 2 and 4 - SINGLE/DOUBLE

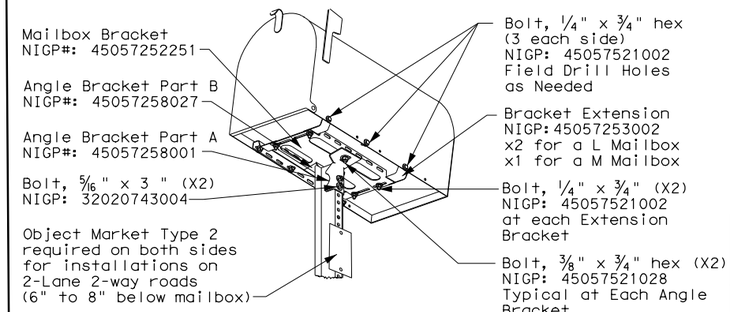


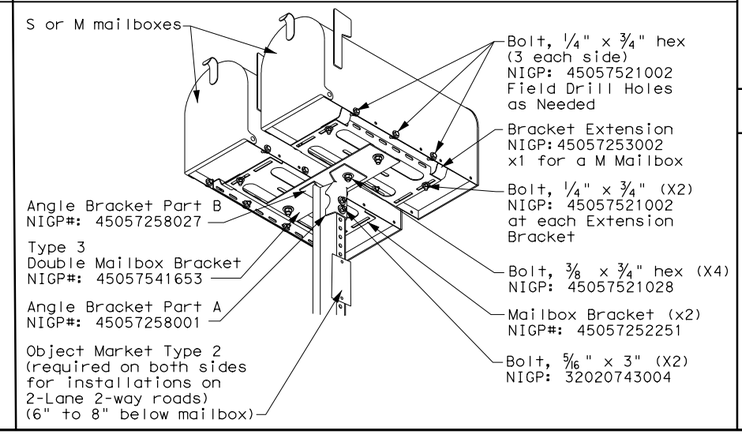


NOTE:

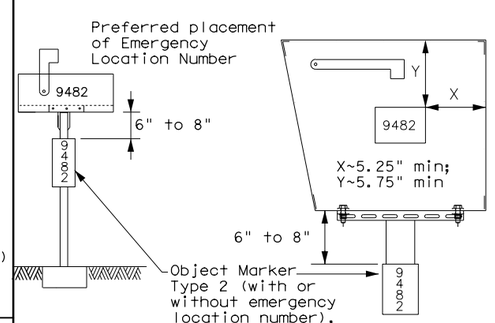
Double mailbox mounts are not allowed with a type 4 multiple mailbox installation

TYPE 3 - SINGLE/DOUBLE





PLACEMENT OF EMERGENCY LOCATION NUMBER

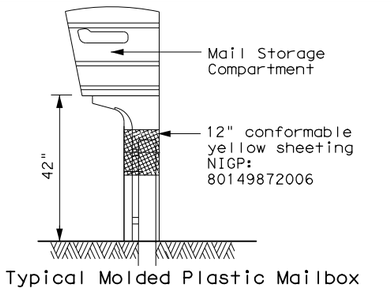


NOTES:

1. Location numbers are provided by homeowner. Minimum size 1" height.
2. Location number is typically placed on the mailbox in a contrasting color.
3. Black numbers may be placed on the Type 2 object marker if the numbers cannot be placed on the mailbox.
4. Alternatively, a green or blue plate with white numbers attached may be mounted below the object marker. Other contrasting color configuration, as approved, may be used.
5. See 3 of 4 for Foundation details.
6. See 4 of 4 for Hardware details.

SHEET 1 OF 4

TYPE 5



Typical Molded Plastic Mailbox

Texas Department of Transportation — Maintenance Division Standard

MAILBOX MOUNTING AND ASSEMBLY

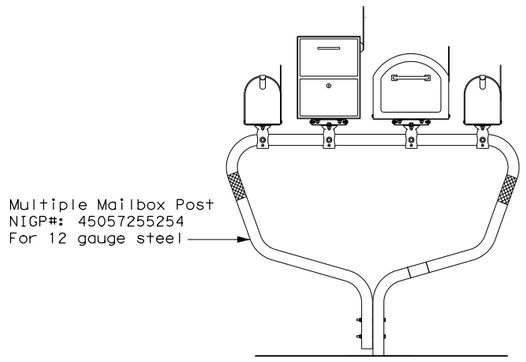
MB(1)-21

FILE: MB-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		95

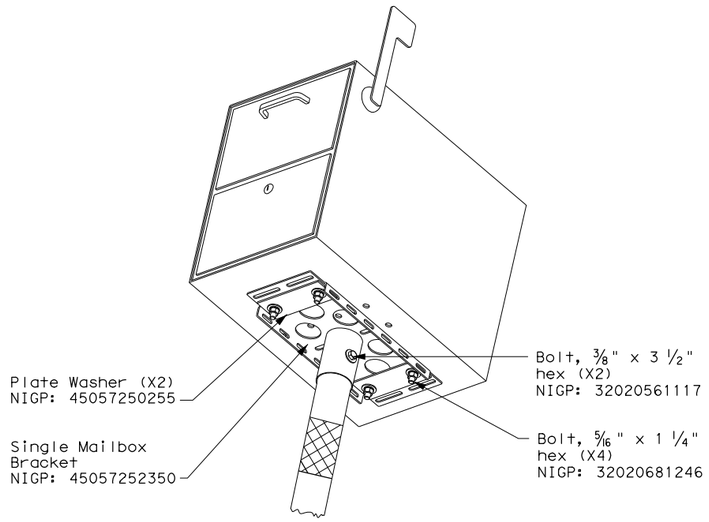
DATE: 11/29/2023 1:37:09 PM
FILE: 1_mb-21(1).dgn

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

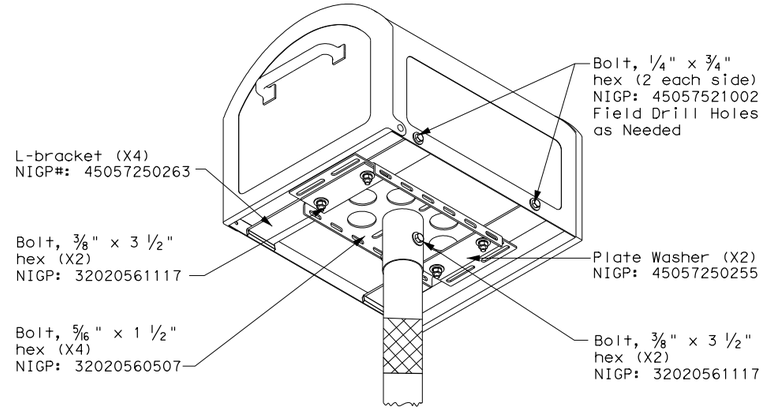
TYPE 1- MULTI LOCKABLE AND XL MAILBOX



TYPE 2/4 - SINGLE LOCKABLE MAILBOX

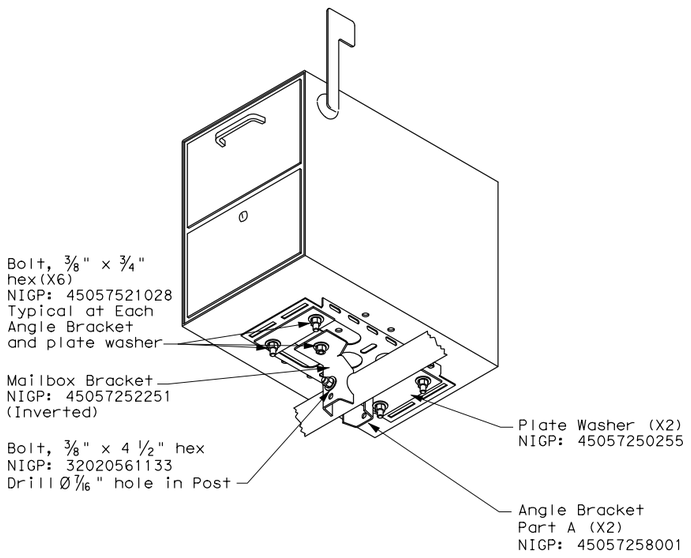


TYPE 2/4 - SINGLE XL MAILBOX

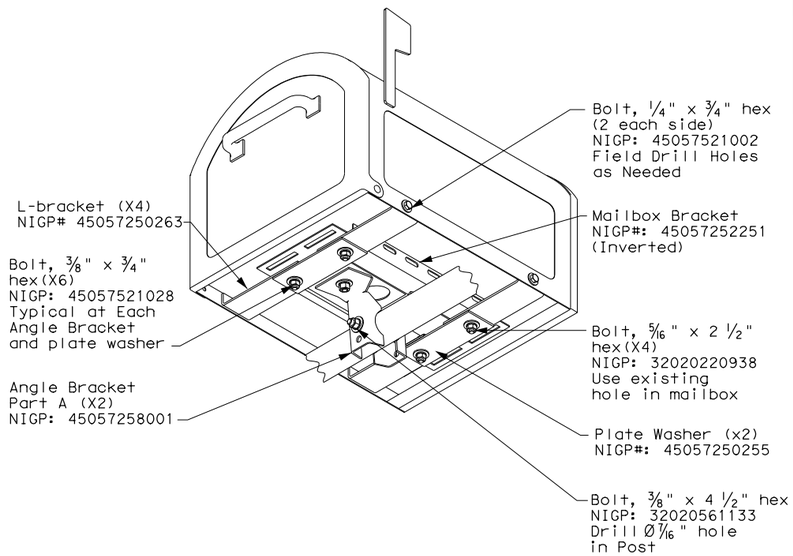


NOTE:
Follow same configuration when mounting an XL mailbox on a Type 4 multi post.

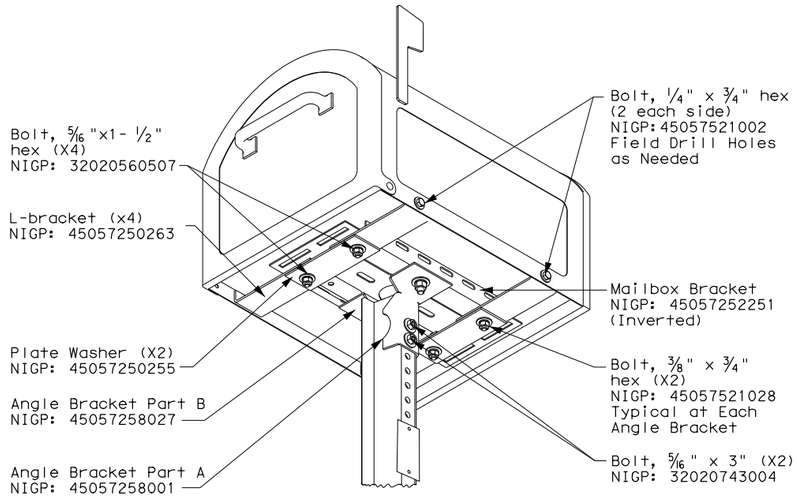
TYPE 1 MULTI – LOCKABLE ARCHITECTURAL (LA)



TYPE 1 MULTI – XL MAILBOX



TYPE 3 - XL MAILBOX MOUNTING



Texas Department of Transportation

Maintenance Division Standard

XL AND LOCKABLE ARCHITECTURAL MAILBOX ASSEMBLY

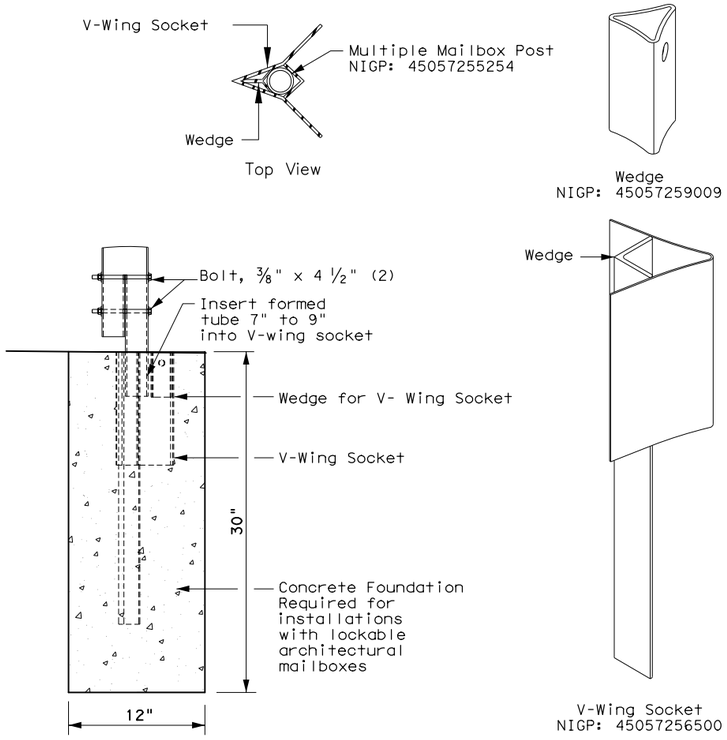
MB(2)-21

FILE: MB-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		96

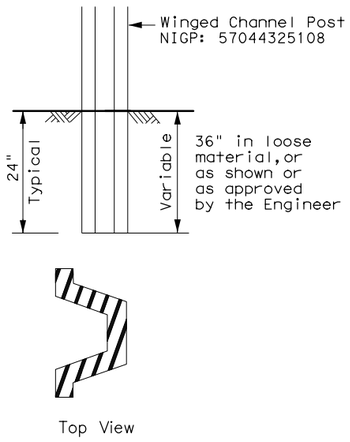
DATE: 11/29/2023 1:37:10 PM
FILE: 1_mb-21(1).dgn

TYPE 1 - SUPPORT/FOUNDATION

Thin Wall Tube w/ V-LOC Anchorage



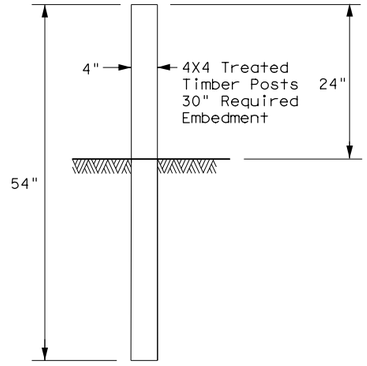
TYPE 3 - SUPPORT/FOUNDATION



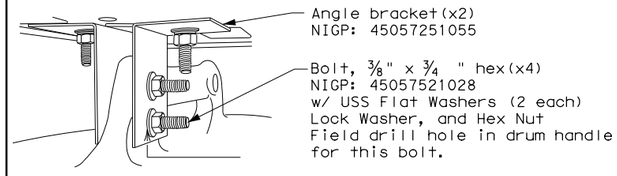
NOTES:

1. Attach Object Marker(OM) facing direction of traffic.
2. OM will also be required on opposite side if installed on a 2-Lane, 2-Way roadway.

TYPE 5 - SUPPORT/FOUNDATION



TYPE 6 - TEMPORARY MAILBOX SUPPORT



Plastic Drum NIGP: 55093383655
Rubber Collar NIGP: 55093387102

NOTES:

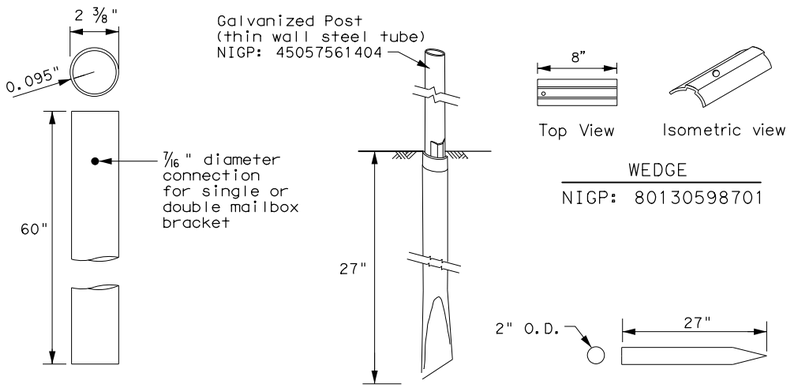
1. Place on approved plastic drum as shown in the Compliant Work Zone Traffic Control Devices (CWZTCD).
2. Existing attachment hardware shall be used unless damaged. Damaged hardware shall be replaced.

GENERAL NOTES:

1. Erect post plumb or vertical.
2. When galvanized part is required galvanize in accordance with Item 445.
3. Use a concrete footing as shown or when directed. Concrete footing will be required when soils do not hold the support/foundations in a stable condition, only on Type 1, Type 2, and Type 4

TYPE 2 - SUPPORT/FOUNDATION

Thin Wall Steel Tube w/Wedge Anchor System

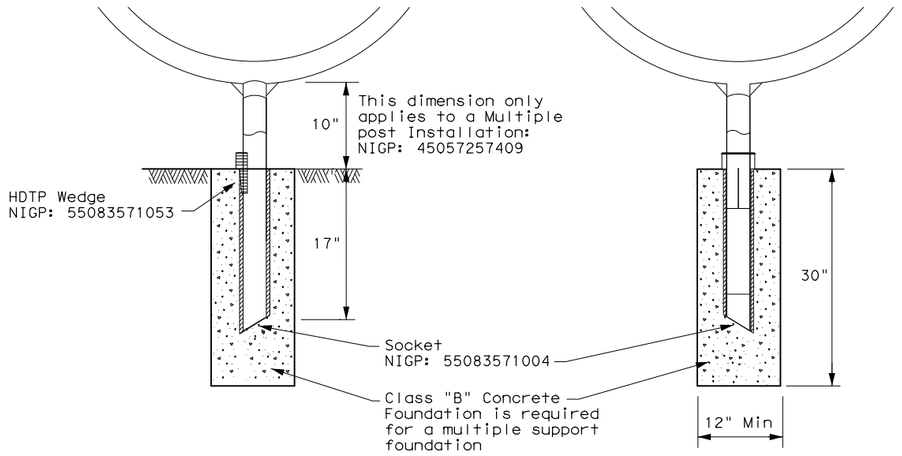


MAILBOX POST

WEDGE ANCHOR
NIGP: 80130238407

TYPE 4 - SUPPORT/FOUNDATION

Whitecoated steel post NIGP: 45057561107
Multiple post NIGP: 45057257409
Recycled Rubber post (RR) NIGP: 45057561057



SHEET 3 OF 4

Texas Department of Transportation

Maintenance Division Standard

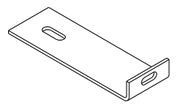
MAILBOX SUPPORT AND FOUNDATION

MB(3)-21

FILE: MB-21.dgn	DN:	CK:	DW:	CK:
© TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		97

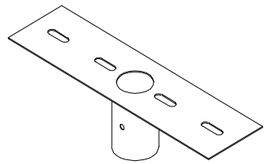
DATE: 11/29/2023 1:37:10 PM
FILE: 1_mb-21(1).dgn

TYPE	TYPE 1	TYPE 2	TYPE 3	TYPE 4			TYPE 5	TYPE 6
Configuration	Multiple	Single or Double	Single or Double	Single	Double	Multiple	Single	Single
Mailbox Size NIGP #	Outside Position: S or M Inside Position: S, M, L, XL, or LA	Single: S, M, L, XL, or LA Double: SS, SM, MM	Single: S, M, L, or XL Double: SS, SM, MM	S, M, L, XL, or LA	SS, SM, or MM	Outside Position: S or M Inside Position: S, M, L, or XL	Molded Plastic	S, or M
Mailbox Post NIGP #	45057255254 (Galvanized Multiple)	45057561404 (Thin Walled Gavanize)	57044325108 (Wing Channel Post)	45057561107 (Thin walled white powder coated) 45057561057 (Recycled Rubber Post: S or M only)	45057561107 (Thin Walled White Powder Coated)	45057257409 (White Powder Coated Multiple)	4x4 Timber	Construction Barrel
Post and Mailbox Hardware NIGP #	45057259009 (Wedge) 45057256500 (V-Wing Socket) 45057253002 (Bracket Extension) 45057252251 (Mailbox Bracket) 45057258001 (Part A Angle Bracket x2) 45057250255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket for XL x4)	80130598701 (Wedge) 80130238407 (Wedge Anchor) 45057253002 (Bracket Extension) 45057252343 (Double MB Bracket) 45057252350 (S. Mailbox Bracket) 45057252251 (Mailbox Bracket) 45057250255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket forXL x4)	45057541653 (Type 3 Double Mailbox Bracket) 45057252251 (Mailbox Bracket) 45057253002 (Bracket Extension) 45057258001 (Part A Angle Bracket) 45057258027 (Part B Angle Bracket) 45057250255 (Plate Washer for XL x2) 45057250263 (L-Bracket for XL x4)	55083571053 (Wedge) 55083571004 (Socket) 45057252350 (Single Mailbox Bracket) 45057253002 (Bracket Extension) 45057250255 (Plate Washer for XL/LA x2) 45057250263 (L-Bracket for XL x4)	55083571053 (Wedge) 55083571004 (Socket) 45057253002 (Bracket Extension) 45057252343 (Double Mount Bracket) 45057252251 (Mailbox Bracket x2)	55083571053 (Wedge) 55083571004 (Socket) 45057253002 (Bracket Extension) 45057252350 (Single Mount Bracket) 45057250255 (Plate Washer for XL x2) 45057250263 (L-Bracket for XL x4)	None	45057251055 Angle Bracket (x2)
Foundation Used	Class B Concrete (Required for LA Mailboxes)	Class B Concrete (Required for LA Mailboxes)	None	Class B Concrete (not used with recycled rubber post, required for LA Mailboxes)	Class B Concrete (not required)	Class B Concrete	None	None



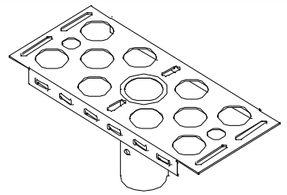
NIGP: 45057250263

L-Bracket x4 for
XL sized mailboxes



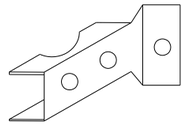
NIGP: 45057252343

Double Mailbox Bracket
For Type 2 and Type 4
double mount



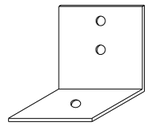
NIGP: 45057252350

Single Mailbox Bracket
For Type 2 single and for
Type 4 single and multi mount



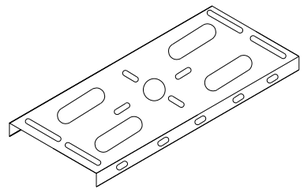
NIGP: 45057258001

Part "A" Angle Bracket
For Type 1 multi (2 per mailbox)
and Type 3 single and double



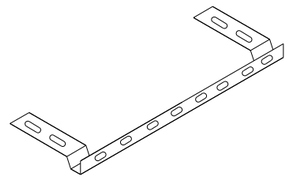
NIGP: 45057251055

Type 6 Angle Bracket
(2 per mailbox)



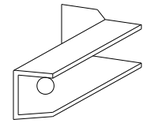
NIGP: 45057252251

Mailbox Bracket
For Type 1 multi and
any double mount (use 2)



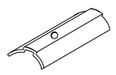
NIGP: 45057253002

Bracket Extension
Use 1 for a medium Mailbox
Use 2 for a Large Mailbox



NIGP: 45057258027

Part "B" Angle Bracket
For Type 3 single
and double



NIGP: 80130598701

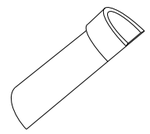
Wedge for Type 2

NIGP: 45057250255

Plate Washer for Architecural
and XL Mailboxes

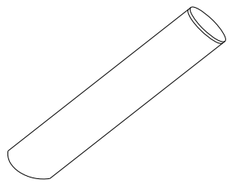
NIGP: 45057541653

Type 3 double mailbox bracket



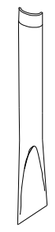
NIGP: 55083571053

Type 4 Mailbox Wedge



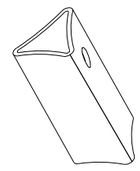
NIGP: 55083571004

Type 4 Mailbox Socket



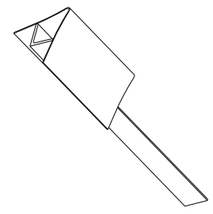
NIGP: 80130238407

Type 2 Wedge Anchor



NIGP: 45057259009

Wedge for Type 1 V-wing Socket



NIGP: 45057256500

V-wing Socket for
Type 1 Foundation

NIGP #	OBJECT MARKERS AND CONFORMABLE SHEETING
55008311759	Type 2 OM 4"x4" (3 Needed) for Type 3 Wing Channel Post
55008312906	Type 2 OM 6"x12" (1 needed) for Type 3 Wing Channel Post
80149872006	12" Conformable Reflective Yellow Sheeting for Flexible Posts

NOTES:

1. Type 2 object marker in accordance with Traffic Engineering Standard Delineators & Object Markers.
2. A light weight receptacle for newspaper delivery can be attached to mailbox posts if the receptacle does not touch the mailbox, present a hazard to traffic or delivery of the mail, extend beyond the front of the mailbox, or display advertising, except the publication title.

BID CODES FOR CONTRACTS

MB-(X) ASSM TY (XXX) (X)

Type of Mailbox
- S = Single
- D = Double
- M = Multiple
- MP = Molded Plastic

Type of Post
- WC = Winged Channel Post
- RR = Recycled Rubber
- TWW = Thin Walled White Tubing
- TWG = Thin Walled Galvanized Tubing
- TIM = Timber

Type of Foundation
- Ty 1 = V-Loc
- Ty 2 = Wedge Anchor Steel System
- Ty 3 = Winged Channel post
- Ty 4 = Wedge Anchor Plastic System
- Ty 5 = 4 X 4 Post

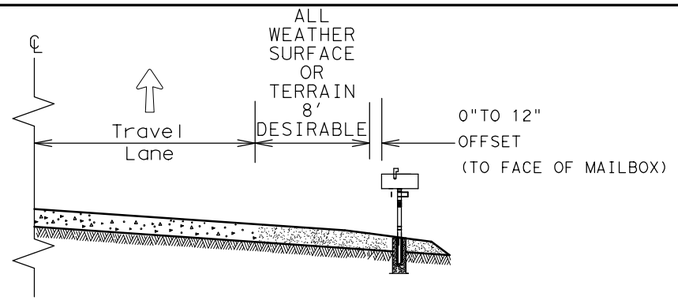
DATE: 11/29/2023 1:37:11 PM
FILE: 1_mb-21(1).dgn

Texas Department of Transportation — Maintenance Division Standard

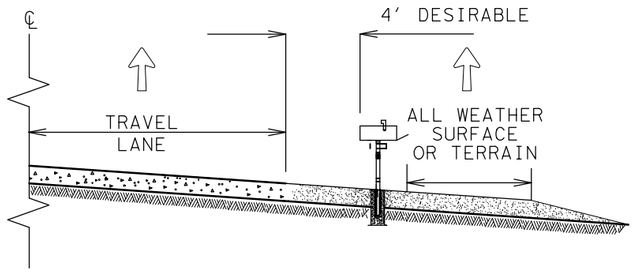
NIGP PARTS LIST AND COMPATIBILITY

MB(4)-21

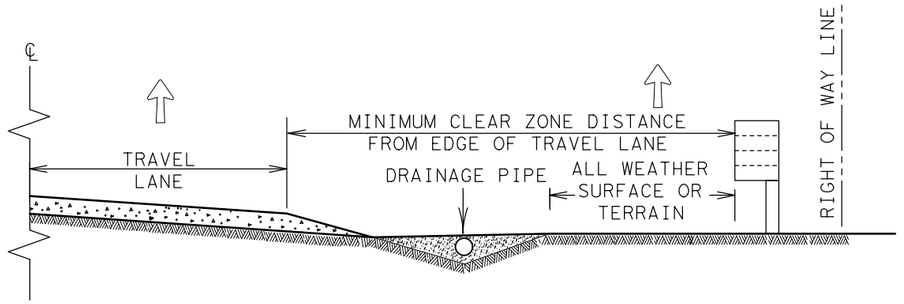
FILE: MB-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		98



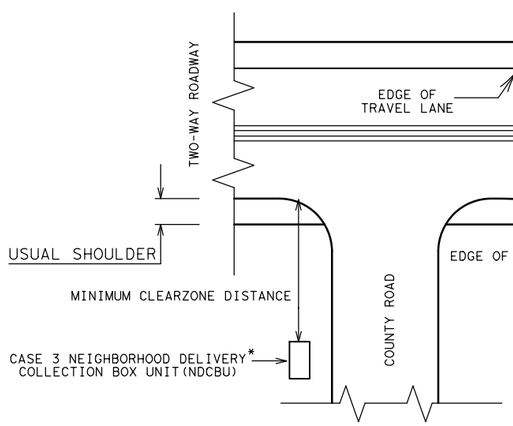
CASE 1. OFF TRAVEL WAY DELIVERY

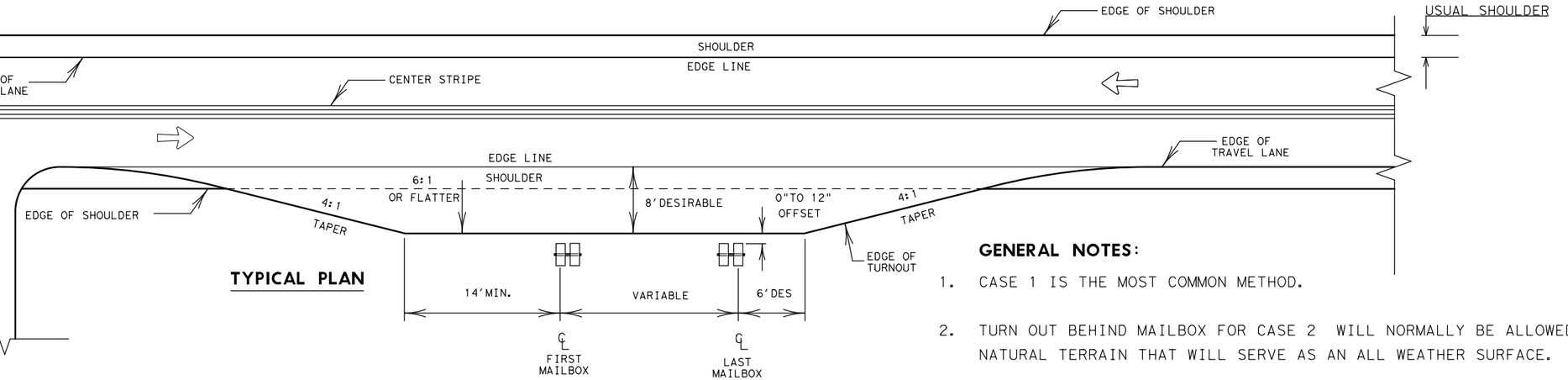


CASE 2. BACK SIDE DELIVERY

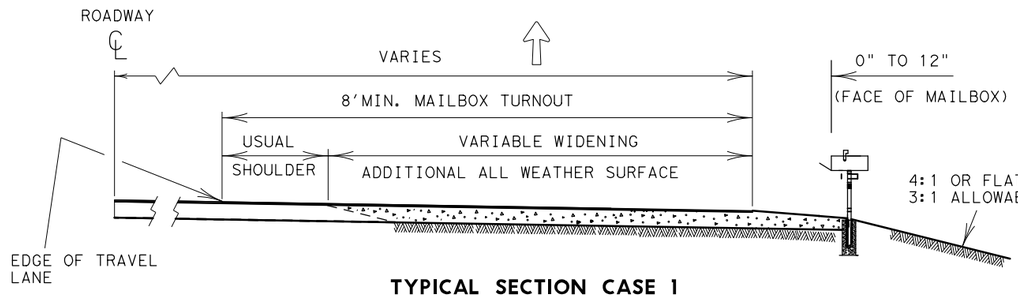


CASE 3. DELIVERY NEAR RIGHT OF WAY LINE





TYPICAL PLAN



TYPICAL SECTION CASE 1

GENERAL NOTES:

1. CASE 1 IS THE MOST COMMON METHOD.
2. TURN OUT BEHIND MAILBOX FOR CASE 2 WILL NORMALLY BE ALLOWED FOR NATURAL TERRAIN THAT WILL SERVE AS AN ALL WEATHER SURFACE.
3. ALL WEATHER DRIVEWAYS FOR CASE 3 MAILBOXES LOCATED AT THE RIGHT OF WAY LINE SHOULD NORMALLY BE PLACED IN CONJUNCTION WITH COUNTY ROADS OR OTHER CONNECTING COMMUNITY ROADS OR STREETS. WHEN 3 OR MORE MULTI-RACKS ARE ANTICIPATED, THE USE OF AN NDCBU IS RECOMMENDED. ONLY RURAL PATRONS LOCATED ON STATE MAINTAINED HIGHWAYS MAY HAVE A MAILBOX OR NDCBU SLOT ON TXDOT RIGHT OF WAY.

*NDCBU MAY BE INSTALLED ON COUNTY ROAD ROW WITH APPROVAL OF COUNTY.

MAIL DELIVERY VEHICLE TRAVEL DIRECTION

Texas Department of Transportation | *Maintenance Division Standard*

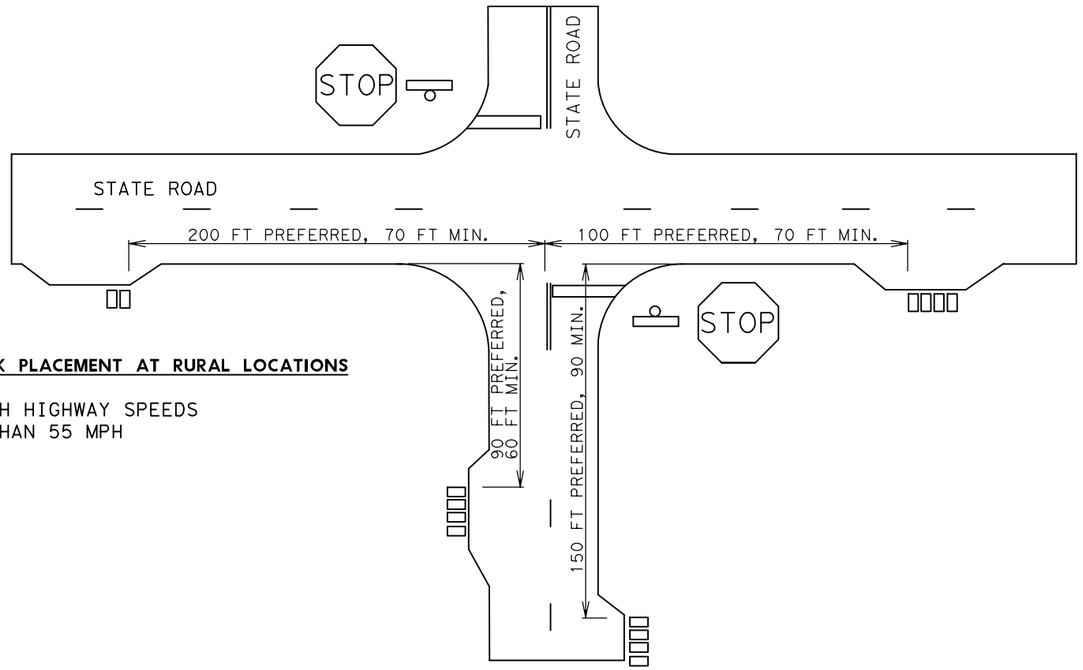
Guideline

MAILBOX SIDE ROAD PLACEMENT AND TURNOUTS

MBP(1)-22

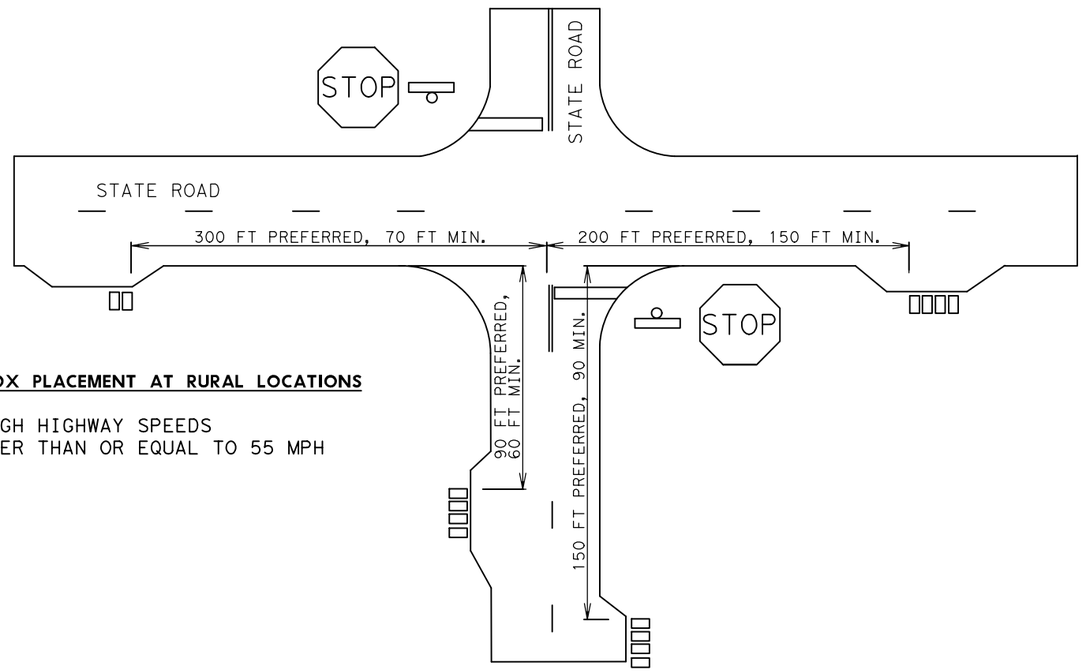
FILE: MBP-22.DGN	DN: VS		CK:		DW: VS		CK:
©TxDOT OCTOBER 2022	CONT	SECT	JOB		HIGHWAY		
REVISIONS 12/2012 5/2014	0317	01	043		FM 57		
	DIST	COUNTY			SHEET NO.		
	ABL	FISHER			99		

DATE: 11/29/2023 1:37:15 PM
FILE: 7_mbp-22.dgn



MAILBOX PLACEMENT AT RURAL LOCATIONS

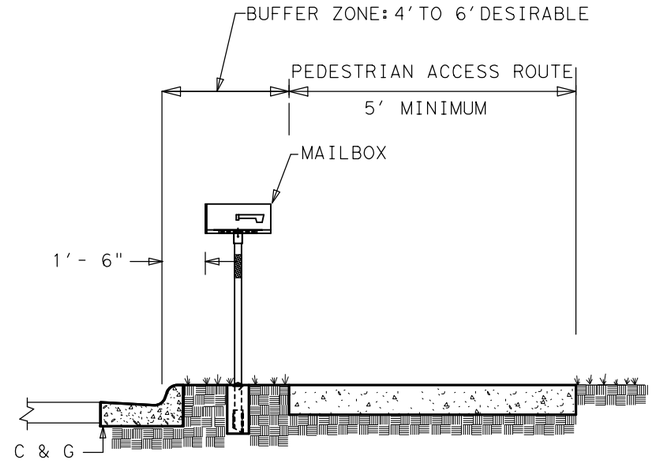
THROUGH HIGHWAY SPEEDS
LESS THAN 55 MPH



MAILBOX PLACEMENT AT RURAL LOCATIONS

THROUGH HIGHWAY SPEEDS
GREATER THAN OR EQUAL TO 55 MPH

CURB AND GUTTER MAILBOX INSTALLATION



NOTES:

1. A NON-TRAVERSABLE SURFACE MUST BE INSTALLED NEAR THE MAILBOX (NATURAL VEGETATION OR OTHER) IN THE BUFFER ZONE. ALTERNATIVELY, A BASE WITH A MINIMUM HEIGHT OF 2.5 INCHES MAY BE INSTALLED SO THAT THE EDGE OF THE MAILBOX DOES NOT EXTEND OUT MORE THAN 4 INCHES HORIZONTALLY BEYOND THE BASE.

2. THE SIDEWALK WIDTH MAY BE REDUCED TO 4 FOOT FOR SHORT DISTANCES AROUND THE MAILBOX IF NEEDED.

3. MAINTAIN A MINIMUM OF 5 FEET BETWEEN OBSTRUCTIONS IN THE PEDESTRIAN ACCESS ROUTE.

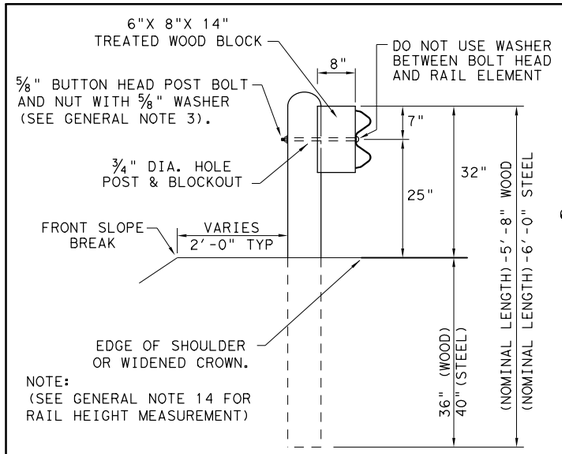
Texas Department of Transportation — Maintenance Division Standard

MAILBOX PLACEMENT CURBS & INTERSECTIONS

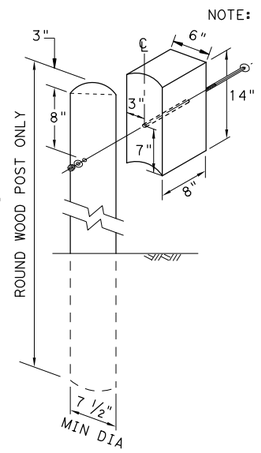
MBP(2)-22

FILE: MBP-22.DGN	DN: VS	CK:	DW: VS	CK:
© TxDOT OCTOBER 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 12/2012 5/2014	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		100

DATE: 11/29/2023 1:37:15 PM
FILE: 7_mbp-22.dgn

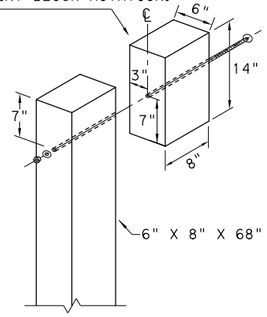


TYPICAL POST PLACEMENT

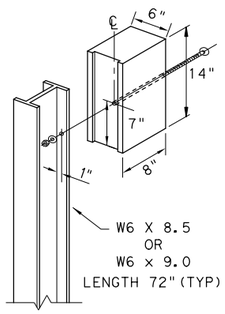


WOOD BLOCK TO
ROUND WOOD POST

NOTE: TOENAIL WITH ONE 16D GALV. NAIL TO PREVENT BLOCK ROTATION.

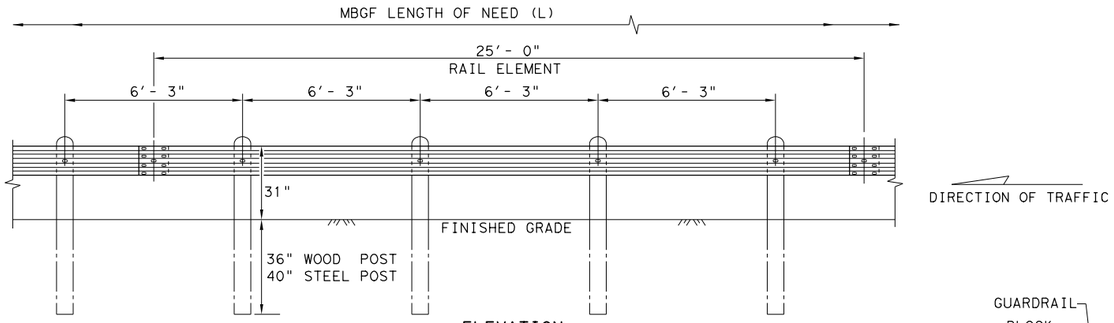


WOOD BLOCK TO
RECTANGULAR WOOD POST



ROUTED WOOD BLOCK
TO I-BEAM STEEL POST

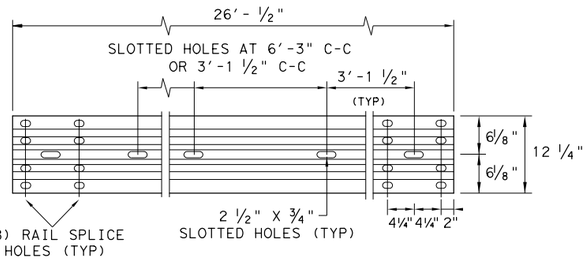
NOTE: ✳✳ "WOOD" INDICATES DIMENSIONS FOR BOTH ROUND AND RECTANGULAR WOOD POST SYSTEMS.



DIRECTION OF TRAFFIC

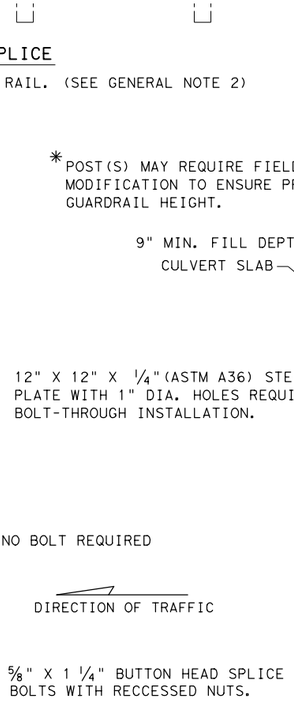
ELEVATION
MID-SPAN RAIL SPLICE

SHOWING A 25'- 0" SECTION OF W-BEAM RAIL. (SEE GENERAL NOTE 2)



ELEVATION 25'- 0"(NOM.) W-BEAM SECTION

NOTES: SEE GENERAL NOTE 2 FOR ALLOWABLE RAIL TYPES.
SEE RAIL SPLICE DETAIL FOR REQUIRED HARDWARE.



✳ POST(S) MAY REQUIRE FIELD MODIFICATION TO ENSURE PROPER GUARDRAIL HEIGHT.

STEEL POST CONNECTION TO CULVERT SLAB (USE WHEN THERE IS LESS THAN 36" COVER OVER CULVERT SLAB).

LOW FILL CULVERT POST

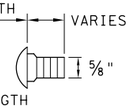
NOTE: TWO INSTALLATION OPTIONS.

1. BOLT-THROUGH OPTION: REQUIRES A 6" MIN. SLAB THICKNESS. ⅞" DIA (ASTM A449) HEAVY HEX BOLTS WITH TWO HARDENED WASHER EACH AND HEAVY HEX NUTS.
   NOTE: BOLT LENGTH = SLAB PLUS 2 ¼" MIN.

2. EPOXY ANCHOR OPTION: THIS OPTION MAY ONLY BE USED IF THE CULVERT SLAB IS 9" MIN. THICK. THREADED ANCHOR RODS MUST BE ⅞" DIA. ASTM A449 OR A193 GRADE B7 WITH HEAVY HEX NUT, AND ONE HARDENED WASHER EACH. EMBED ANCHOR RODS 6" WITH HILTI HIT RE 500 EPOXY ADHESIVE. OTHER TYPE III CLASS C EPOXY ADHESIVES MEETING THE REQUIREMENTS OF DMS-6100, "EPOXIES AND ADHESIVES", MAY BE USED IF IT CAN BE DEMONSTRATED THAT THEY MEET OR EXCEED THE STRENGTH OF HILTI HIT RE 500 WITH THE SAME EMBEDMENT DEPTH AND THREADED ROD DIA. FOLLOW THE MANUFACTURER'S REQUIREMENTS FOR INSTALLING EPOXIED THREADED RODS. EXTEND RODS ¼" MIN. BEYOND NUT.

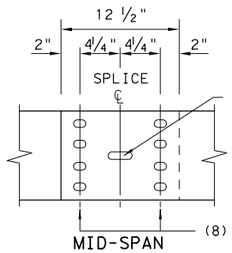
NOTE: CULVERTS OF 25 FT. OR LESS, SEE GF(31)LS STANDARD FOR "LONG SPAN" OPTION.

NOTE:
FOUR TYPES OF BUTTON-HEAD GUARD RAIL BOLTS COME WITH A RECCESSED NUT.



BUTTON HEAD BOLT

NOTE: SEE GENERAL NOTE 3 FOR SPLICE & POST BOLT DETAILS.



DIRECTION OF TRAFFIC

MID-SPAN
RAIL SPLICE DETAIL

NOTE: GF(31), MID-SPAN RAIL SPLICES ARE REQUIRED WITH 6'-3" POST SPACINGS.

GENERAL NOTES

1. THE TYPE OF POST (ROUND WOOD POST, RECTANGULAR WOOD POST, OR STEEL POST) WILL BE AS SHOWN IN THE PLANS. THE EXACT POSITION OF MBGF SHALL BE SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. STEEL POSTS TO BE GALVANIZED IN ACCORDANCE WITH ITEM 445, "GALVANIZING."
2. RAIL ELEMENTS SHALL MEET THE REQUIREMENTS OF ITEM 540,"METAL BEAM GUARD FENCE" EXCEPT AS MODIFIED IN THE PLANS. THE CONTRACTOR MAY FURNISH RAIL ELEMENTS OF 25'- 0", OR 12'- 6" (NOM.) LENGTHS. RAIL ELEMENTS MAY HAVE SLOTTED HOLES AT 3'-1 ½" C-C OR 6'-3" C-C. A SPECIAL LENGTH OF RAIL MAY BE MANUFACTURED TO ACCOMMODATE THE DOWNSTREAM ANCHOR TERMINAL (DAT) AND THE TRANSITION SECTIONS OF GUARDRAIL.
3. BUTTON HEAD "POST BOLTS & NUTS" SHALL MEET THE REQUIREMENTS OF (ASTM A307), AND SHALL BE OF SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND ⅝" WASHER (FWC16a) AND NOT MORE THAN 1" BEYOND IT. TRIM REMAINING BOLT LENGTH TO MEET REQUIRED LENGTH.
4. FITTINGS (BOLTS, NUTS, AND WASHERS) SHALL BE GALVANIZED IN ACCORDANCE WITH ITEM 445,"GALVANIZING." FITTINGS SHALL BE SUBSIDIARY TO THE BID ITEM.
5. CROWN SHALL BE WIDENED TO ACCOMMODATE THE METAL BEAM GUARD FENCE.
6. THE LATERAL APPROACH TO THE GUARD FENCE, SHALL HAVE A MAXIMUM SLOPE OF 1V:10H.
7. IF SHOWN ELSEWHERE IN THE PLANS OR AS DIRECTED BY THE ENGINEER, THE GUARD FENCE MAY BE FLARED AT A RATE OF 25:1 OR FLATTER.
8. UNLESS OTHERWISE SHOWN IN THE PLANS, GUARD FENCE PLACED IN THE VICINITY OF CURBS SHALL BE POSITIONED SO THAT THE FACE OF CURB IS LOCATED DIRECTLY BELOW OR BEHIND THE FACE OF THE RAIL. RAIL PLACED OVER CURBS SHALL BE INSTALLED SO THAT THE POST BOLT IS LOCATED APPROXIMATELY 25 INCHES ABOVE THE GUTTER PAN OR EDGE OF SHOULDER.
9. APPLICATIONS IN SOLID ROCK ARE ONLY ALLOWED WITH STEEL POSTS. IF SOLID ROCK IS ENCOUNTERED WITHIN 0 TO 18" OF THE FINISHED GRADE, DRILL A 24" DIA. HOLE, 24" INTO THE ROCK. IF SOLID ROCK IS ENCOUNTERED BELOW 18", DRILL A 12" DIA. HOLE, 12" INTO THE ROCK OR TO THE STANDARD EMBEDMENT DEPTH, WHICHEVER MAYBE LESS. ANY EXCESS POST LENGTH, AFTER MEETING THESE DEPTHS, MAY BE FIELD CUT TO ENSURE PROPER GUARDRAIL MOUNTING HEIGHT. BACKFILL WITH COARSE AGGREGATE MATERIAL.
10. POSTS SHALL NOT BE SET IN CONCRETE, OF ANY DEPTH.
11. SPECIAL FABRICATION WILL BE REQUIRED AT INSTALLATION LOCATIONS HAVING A CURVATURE OF LESS THAN 150 FT. RADIUS.
12. UNLESS OTHERWISE SHOWN IN THE PLANS, A COMPOSITE MATERIAL BLOCK THAT MEETS THE REQUIREMENTS OF DMS-7210,"COMPOSITE MATERIAL POSTS AND BLOCKS FOR METAL BEAM GUARD FENCE" MAY BE SUBSTITUTED FOR BLOCKS OF SIMILAR DIMENSIONS. THE CONSTRUCTION DIVISION, TXDOT MAINTAINS A MATERIAL PRODUCER LIST (MPL) FOR PRODUCERS OF MATERIALS CONFORMING TO DMS-7210 ONLY PRODUCERS ON THE MPL MAY FURNISH COMPOSITE MATERIAL BLOCKS.
13. FOR THE LOW FILL CULVERT OPTION, POSTS LOCATED PARTIALLY OR WHOLLY BETWEEN PRECAST BOX CULVERT UNITS, THE USE OF A CAST-IN-PLACE CONCRETE CLOSURE BETWEEN BOXES IS REQUIRED. THE LENGTH OF THE CAST-IN-PLACE CONCRETE CLOSURE SHALL ACCOMMODATE THE PLACEMENT OF THE LOW FILL CULVERT OPTION. SEE CONCRETE CLOSURE DETAILS ON BRIDGE STANDARD SCP-MD.
14. GUARDRAIL HEIGHT MEASUREMENT: WHEN THE GUARDRAIL IS LOCATED ABOVE PAVEMENT, MEASURE THE HEIGHT FROM THE PAVEMENT TO THE TOP OF THE W-BEAM RAIL. WHEN THE GUARDRAIL IS LOCATED UP TO 2 FT. OFF OF THE EDGE OF PAVEMENT OR FOR A PAVEMENT OVERLAY, USE A 10-FOOT STRAIGHTEDGE TO EXTEND THE PAVEMENT/SHOULDER SLOPE TO THE BACK OF RAIL, MEASURE FROM THE BOTTOM OF STRAIGHTEDGE TO THE TOP OF RAIL. FOR GUARDRAIL LOCATED DOWN A 10:1 SLOPE, MEASURE FROM THE NOMINAL TERRAIN.

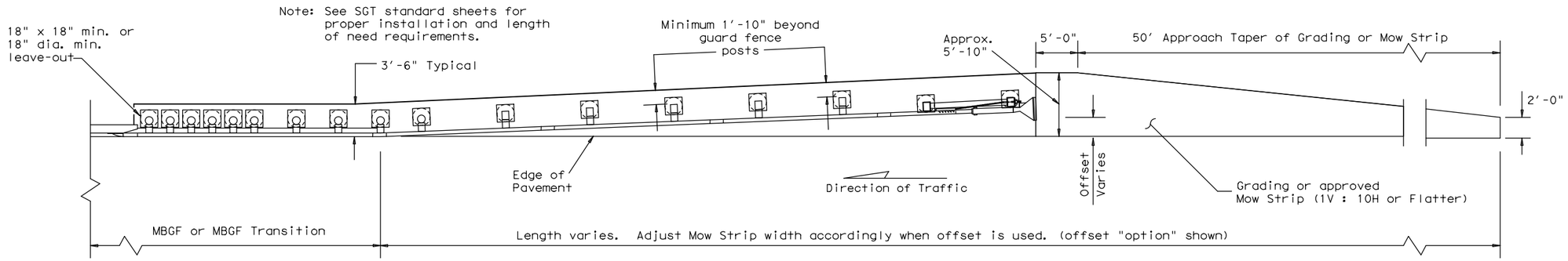
NOTE: TRANSISTIONS TO BRIDGE RAILS OR TRAFFIC BARRIERS.
SEE GF(31)TL3 TR STANDARD FOR HIGH-SPEED TL-3 TRANSITIONS.
SEE GF(31)TL2 TR STANDARD FOR LOW-SPEED TL-2 TRANSITIONS.

Texas Department of Transportation | Design Division Standard

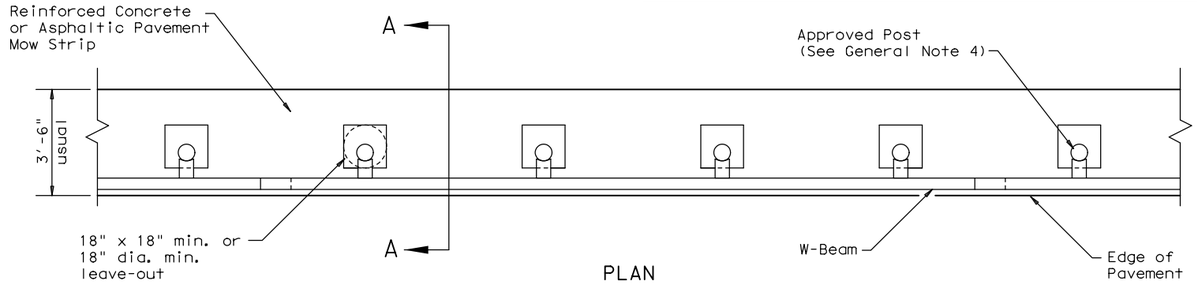
METAL BEAM GUARD FENCE
TL-3 MASH COMPLIANT
GF(31)-19

FILE: gf3119.dgn	DN: TxDOT	CK: KM	DW: VP	CK: CGL/AG	
©TxDOT: NOVEMBER 2019	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0317	01	043	FM 57	
	DIST	COUNTY		SHEET NO.	
	ABL	FISHER		101	

DATE: 11/29/2023
FILE: 2_gf3119.dgn

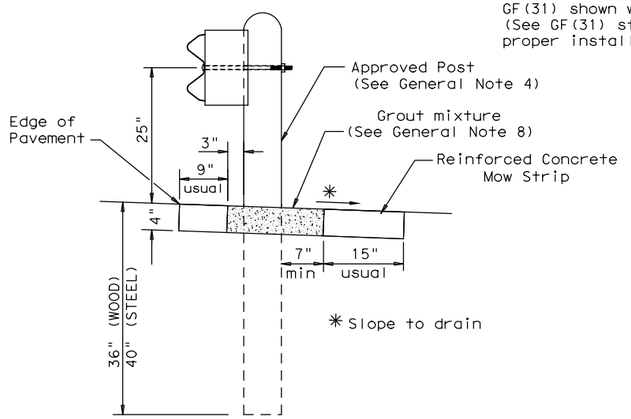


GRADING AND MOW STRIP AT GUARDRAIL END TREATMENTS



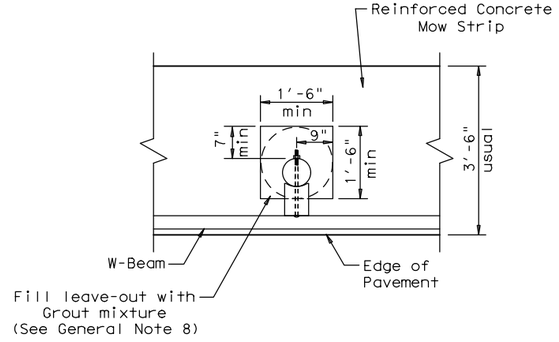
PLAN

GF(31) shown with Mow Strip
(See GF(31) standard sheet for proper installation)



SECTION A-A

Typical



MOW STRIP DETAIL

Reinforced Concrete Mow Strip with 18" x 18" Square or 18" Dia. minimum leave-out.

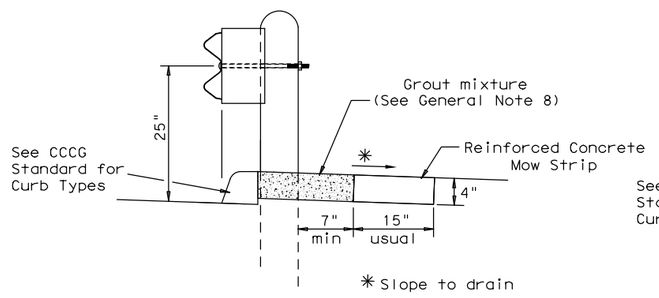
Note: Site Condition(s)

Site conditions may exist where grading is required for the proper installation of metal guard fence and end treatments.

Approach grading or mow strip may be decreased or eliminated, as directed by the Engineer.

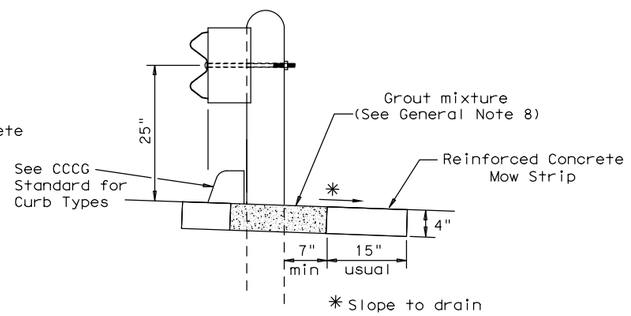
GENERAL NOTES

1. This mow strip design is for use with metal beam guard fence, guard fence transitions, and guard fence end treatments. See applicable GF(31) MBGF or GF(31) Transition Standard sheet for additional information.
2. Mow strips shall be reinforced concrete with (wire mesh or synthetic fiber), as shown on the plans and will be paid for under the pertinent bid item. Reinforced concrete shall be placed in accordance with Item 432, "Riprap." The use of the synthetic fiber in lieu of steel reinforcing is acceptable, provided the fiber producer is on the Department Material Producer List (MPL), maintained by TxDOT, Construction Division.
3. The leave-out behind the post shall be a minimum of 7".
4. Only steel (W6 x 8.5 or W6 x 9.0), or 7 ½" Dia. round wood posts are acceptable for use in the mow strip. See GF(31) Standard for additional details.
5. Other curb placement options may be used. Curbs are not considered part of the mow strip and will be paid for under other pertinent bid item.
6. Thickness of the mow strip will be 4".
7. The limits of payment for reinforced concrete will include leave-outs for the posts.
8. The leave-outs shall be filled with a Grout mixture consisting of: 2719 pounds sand, 188 pounds Type 1 or II cement, and 550 pounds of water per cubic yard, with a 28-day compressive strength of approximately 230 psi or less. Provide grout with a consistency that will flow into and completely fill all voids. Due to auger size, larger leave-out dimensions are acceptable from both an impact performance and maintenance repair standpoint (Suggested Maximum leave-out of 20"). Payment for furnishing and placing the grout mixture will be subsidiary to the pay item of riprap mow strip.



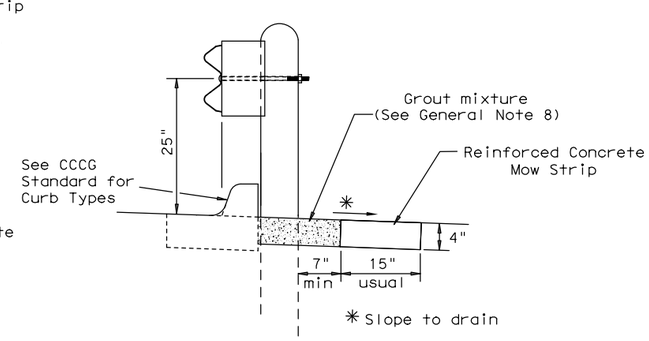
CURB OPTION (1)

This option will increase the post embedment throughout the system.



CURB OPTION (2)

Curb shown on top of mow strip



CURB OPTION (3)

Texas Department of Transportation

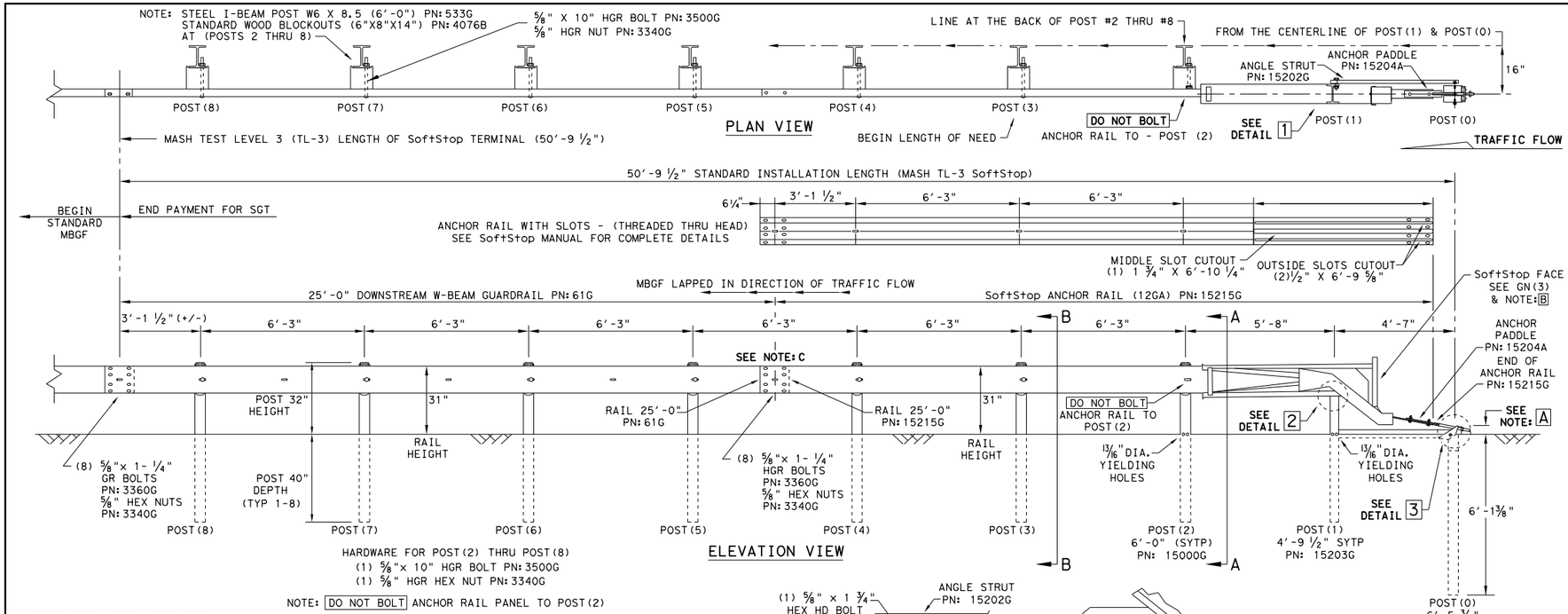
Design Division Standard

METAL BEAM GUARD FENCE (MOW STRIP) TL-3 MASH COMPLIANT

GF(31)MS-19

FILE: gf31ms19.dgn	DN: TxDOT	CK: KM	DW: VP	CK: CGL/AG
©TxDOT: NOVEMBER 2019	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		102

DATE: 11/29/2023
FILE: 3_gf31ms19.dgn



GENERAL NOTES

1. FOR SPECIFIC INFORMATION REGARDING INSTALLATION AND TECHNICAL GUIDANCE OF THE SYSTEM, CONTACT: TRINITY HIGHWAY AT 1(888)323-6374. 2525 N. STEMMONS FREEWAY, DALLAS, TX 75207
2. FOR INSTALLATION, REPAIR AND MAINTENANCE REFER TO THE; SoftStop END TERMINAL, PRODUCT DESCRIPTION ASSEMBLY MANUAL. PN: 620237B
3. APPLY HIGH INTENSITY REFLECTIVE SHEETING, "OBJECT MARKER" ON THE FRONT FACE OF THE DEVICE PER MANUFACTURER'S RECOMMENDATIONS. OBJECT MARKER SHALL CONFORM TO THE STANDARDS REQUIRED IN TEXAS MUTCD.
4. FOR POST (LEAVE-OUT) INSTALLATION AND GUIDANCE SEE TXDOT'S LATEST ROADWAY MOW STRIP STANDARD.
5. HARDWARE (BOLTS, NUTS, & WASHERS) SHALL BE GALVANIZED IN ACCORDANCE WITH ITEM 445, "GALVANIZING". FITTINGS SHALL BE SUBSIDIARY TO THE BID ITEM.
6. A COMPOSITE MATERIAL BLOCKOUT THAT MEETS THE REQUIREMENTS OF DMS-7210, MAY BE SUBSTITUTED FOR BLOCKOUTS OF SIMILAR DIMENSIONS. SEE CONSTRUCTION DIVISION MATERIAL PRODUCER LIST (MPL) FOR CERTIFIED PRODUCERS.
7. IF SOLID ROCK IS ENCOUNTERED SEE THE MANUFACTURER'S INSTALLATION MANUAL AND REFER TO THE LATEST ROADWAY MBGF STANDARD FOR INSTALLATION GUIDANCE.
8. POSTS SHALL NOT BE SET IN CONCRETE.
9. IT IS ACCEPTABLE TO INSTALL THE SoftStop IMPACT HEAD PARALLEL TO THE GRADE LINE OR WITH AN UPWARD TILT.
10. DO NOT ATTACH THE SoftStop SYSTEM DIRECTLY TO A RIGID BARRIER.
11. UNDER NO CIRCUMSTANCES SHALL THE GUARDRAIL WITHIN THE SoftStop SYSTEM BE CURVED.
12. A FLARE RATE OF UP TO 25:1 MAY BE USED TO PREVENT THE TERMINAL HEAD FROM ENCROACHING ON THE SHOULDER. THE FLARE MAY BE DECREASED OR ELIMINATED FOR SPECIFIC INSTALLATIONS, IF DIRECTED BY THE ENGINEER.

NOTE: A	THE INSTALLATION HEIGHT OF FULLY ASSEMBLED ANCHOR POST WILL VARY FROM 3-3/4" MIN. TO 4" MAX. ABOVE FINISHED GRADE.
NOTE: B	PART PN: 5852B RIGHT-SIDE (HIGH INTENSITY REFLECTIVE SHEETING) PART PN: 5851B LEFT-SIDE (HIGH INTENSITY REFLECTIVE SHEETING)
NOTE: C	W-BEAM SPLICE LOCATED BETWEEN LINE POST(4) AND LINE POST(5) GUARDRAIL PANEL 25'-0" PN: 61G ANCHOR RAIL 25'-0" PN: 15215G LAP GUARDRAIL IN DIRECTION OF TRAFFIC FLOW.

PART	QTY	MAIN SYSTEM COMPONENTS
620237B	1	PRODUCT DESCRIPTION ASSEMBLY MANUAL (LATEST REV.)
15208A	1	SoftStop HEAD (SEE MANUAL FOR RIGHT-LEFT APPROACH)
15215G	1	SoftStop ANCHOR RAIL (12GA) WITH CUTOUT SLOTS
61G	1	SoftStop DOWNSTREAM W-BEAM RAIL (12GA) (25'- 0")
15205A	1	POST #0 - ANCHOR POST (6'- 5 7/8")
15203G	1	POST #1 - (SYTP) (4'- 9 1/2")
15000G	1	POST #2 - (SYTP) (6'- 0")
533G	6	POST #3 THRU #8 - I-BEAM (W6 x 8.5) (6'- 0")
4076B	7	BLOCKOUT - WOOD (ROUTED) (6" x 8" x 14")
6777B	7	BLOCKOUT - COMPOSITE (4" x 7 1/2" x 14")
15204A	1	ANCHOR PADDLE
15207G	1	ANCHOR KEEPER PLATE (24 GA)
15206G	1	ANCHOR PLATE WASHER (1/2" THICK)
15201G	2	ANCHOR POST ANGLE (10" LONG)
15202G	1	ANGLE STRUT
		HARDWARE
4902G	1	1" ROUND WASHER F436
3908G	1	1" HEAVY HEX NUT A563 GR.DH
3717G	2	3/4" x 2 1/2" HEX BOLT A325
3701G	4	3/4" ROUND WASHER F436
3704G	2	3/4" HEAVY HEX NUT A563 GR.DH
3360G	16	5/8" x 1 1/4" W-BEAM RAIL SPLICE BOLTS HGR
3340G	25	5/8" W-BEAM RAIL SPLICE NUTS HGR
3500G	7	5/8" x 10" HGR POST BOLT A307
3391G	1	5/8" x 1 3/4" HEX HD BOLT A325
4489G	1	5/8" x 9" HEX HD BOLT A325
4372G	4	5/8" WASHER F436
105285G	2	5/8" x 2 1/2" HEX HD BOLT GR-5
105286G	1	7/16" x 1 1/2" HEX HD BOLT GR-5
3240G	6	5/8" ROUND WASHER (WIDE)
3245G	3	5/8" HEX NUT A563 GR.DH
5852B	1	HIGH INTENSITY REFLECTIVE SHEETING - SEE NOTE: B

NOTE:
THIS STANDARD IS A BASIC REPRESENTATION OF THE SoftStop END TERMINAL, IT IS NOT INTENDED TO REPLACE THE PRODUCT DESCRIPTION ASSEMBLY MANUAL.

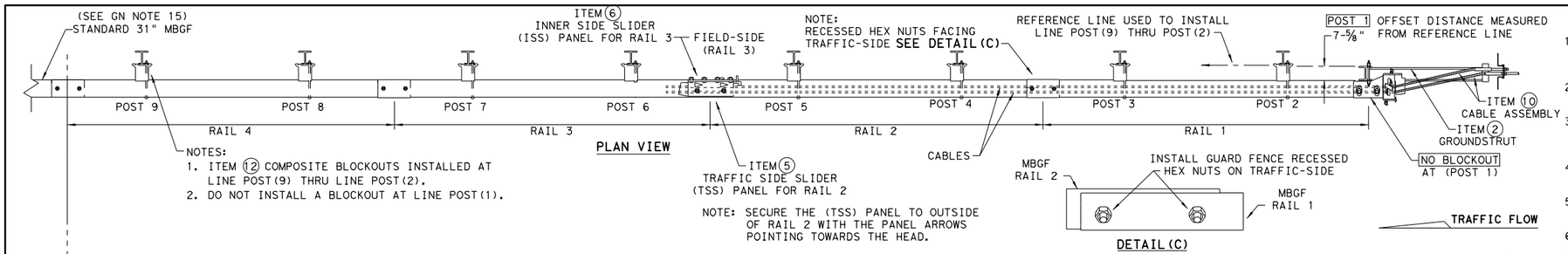
Texas Department of Transportation

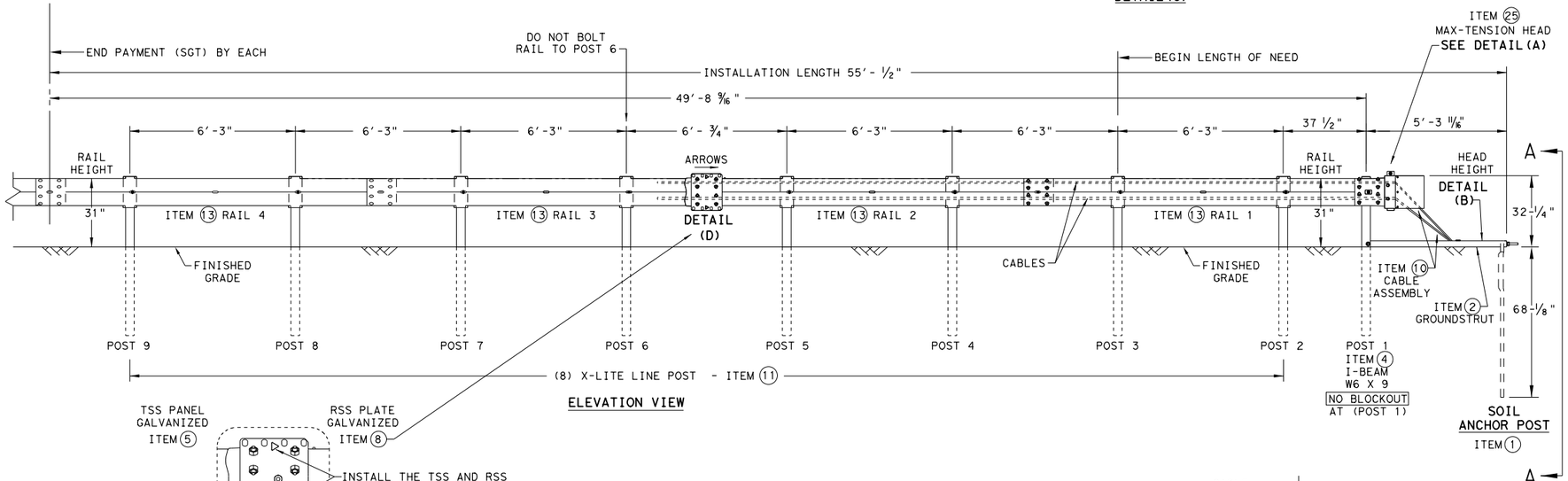
Design Division Standard

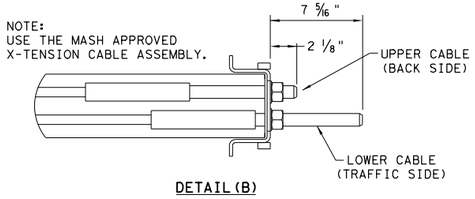
TRINITY HIGHWAY
SOFTSTOP END TERMINAL
MASH - TL-3
SGT(10S)31-16

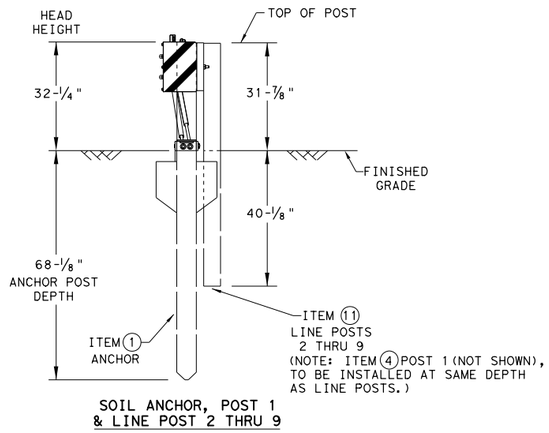
FILE: sgt10s3116	DN: TxDOT	CK: KM	DW: VP	CK: MB/VP
©TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		103

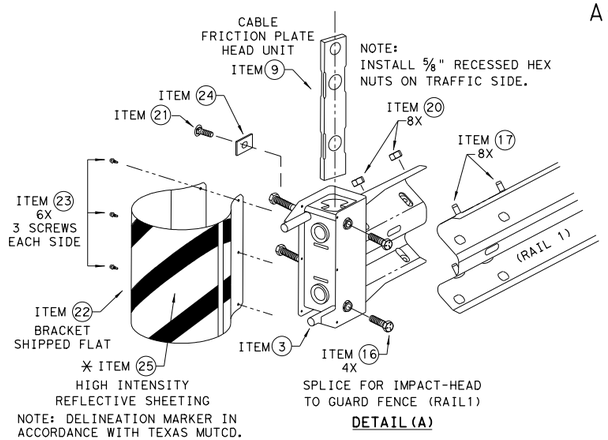
DATE: 11/29/2023
FILE: 5_sgt10s3116.dgn











GENERAL NOTES

1. FOR SPECIFIC INFORMATION REGARDING INSTALLATION AND TECHNICAL GUIDANCE OF THE SYSTEM, CONTACT: LINDSAY TRANSPORTATION SOLUTIONS (LTS) - BARRIER SYSTEMS, INC. AT (707) 374-6800
2. FOR INSTALLATION, REPAIR, & MAINTENANCE REFER TO THE; MAX-TENSION INSTALLATION INSTRUCTION MANUAL. P/N MANMAX REV D (ECN 3516).
3. APPLY HIGH INTENSITY REFLECTIVE SHEETING, "OBJECT MARKER" ON THE FRONT FACE OF THE DEVICE PER MANUFACTURE'S RECOMMENDATIONS. OBJECT MARKER SHALL CONFORM TO THE STANDARDS REQUIRED IN TEXAS MUTCD.
4. FOR POST (LEAVE-OUT) INSTALLATION AND GUIDANCE SEE TXDOT'S LATEST ROADWAY MOW STRIP STANDARD.
5. ALL STEEL COMPONENTS ARE GALVANIZED PER ASTM A123 OR EQUIVALENT UNLESS OTHERWISE STATED.
6. SYSTEM SHOWN USING STEEL WIDE FLANGE POST WITH COMPOSITE BLOCKOUTS.
7. COMPOSITE MATERIAL BLOCKOUT THAT MEETS THE REQUIREMENTS OF DMS-7210, MAY BE SUBSTITUTED FOR BLOCKOUTS SIMILAR DIMENSIONS. SEE CONSTRUCTION DIVISION MATERIAL PRODUCER LIST(MPL)FOR CERTIFIED PRODUCERS.
8. REFER TO INSTALLATION MANUAL FOR SPECIFIC PANEL LAPPING GUIDANCE.
9. IF SOLID ROCK IS ENCOUNTERED SEE THE MANUFACTURER'S INSTALLATION MANUAL FOR INSTALLATION GUIDANCE.
10. POSTS SHALL NOT BE SET IN CONCRETE.
11. A DRIVING CAP WITH A TIMBER OR PLASTIC INSERT SHALL BE USED WHEN DRIVING POST TO PREVENT DAMAGE TO THE GALVANIZING ON TOP OF THE POST.
12. MAX-TENSION SYSTEM SHALL NEVER BE INSTALLED WITHIN A CURVED SECTION OF GUARDRAIL.
13. IF A DELINEATION MARKER IS REQUIRED, MARKER SHALL BE IN ACCORDANCE WITH TEXAS MUTCD.
14. THE SYSTEM IS SHOWN WITH 12'-6" MBGF PANELS, 25'-0" MBGF PANELS ARE ALSO ALLOWED.
15. A MINIMUM OF 12'-6" OF 12GA. MBGF IS REQUIRED IMMEDIATELY DOWNSTREAM OF THE MAX-TENSION SYSTEM.

ITEM #	PART NUMBER	DESCRIPTION	QTY
1	BSI-1610060-00	SOIL ANCHOR - GALVANIZED	1
2	BSI-1610061-00	GROUND STRUT - GALVANIZED	1
3	BSI-1610062-00	MAX-TENSION IMPACT HEAD	1
4	BSI-1610063-00	W6x9 I-BEAM POST 6FT.-GALVANIZED	1
5	BSI-1610064-00	TSS PANEL - TRAFFIC SIDE SLIDER	1
6	BSI-1610065-00	ISS PANEL - INNER SIDE SLIDER	1
7	BSI-1610066-00	TOOTH - GEOMET	1
8	BSI-1610067-00	RSS PLATE - REAR SIDE SLIDER	1
9	B061058	CABLE FRICTION PLATE - HEAD UNIT	1
10	BSI-1610069-00	CABLE ASSEMBLY - MASH X-TENSION	2
11	BSI-1012078-00	X-LITE LINE POST-GALVANIZED	8
12	B090534	8" W-BEAM COMPOSITE-BLOCKOUT XT110	8
13	BSI-4004386	12'-6" W-BEAM GUARD FENCE PANELS 12GA.	4
14	BSI-1102027-00	X-LITE SQUARE WASHER	1
15	BSI-2001886	5/8" X 7" THREAD BOLT HH (GR.5)GEOMET	1
16	BSI-2001885	3/4" X 3" ALL-THREAD BOLT HH (GR.5)GEOMET	4
17	4001115	5/8" X 1 1/4" GUARD FENCE BOLTS (GR.2)MGAL	48
18	2001840	5/8" X 10" GUARD FENCE BOLTS MGAL	8
19	2001636	5/8" WASHER F436 STRUCTURAL MGAL	2
20	4001116	5/8" RECESSED GUARD FENCE NUT (GR.2)MGAL	59
21	BSI-2001888	5/8" X 2" ALL THREAD BOLT (GR.5)GEOMET	1
22	BSI-1701063-00	DELINEATION MOUNTING (BRACKET)	1
23	BSI-2001887	1/4" X 3/4" SCREW SD HH 410SS	7
24	4002051	GUARDRAIL WASHER RECT AASHTO FWR03	1
* 25	SEE NOTE BELOW	HIGH INTENSITY REFLECTIVE SHEETING	1
** 26	4002337	8" W-BEAM TIMBER-BLOCKOUT, PDB01B	8
** 27	BSI-4004431	25' W-BEAM GUARDRAIL PANEL,8-SPACE,12GA.	2
28	MANMAX Rev-(D)	MAX-TENSION INSTALLATION INSTRUCTIONS	1

* TO BE PROVIDED BY DISTRIBUTOR OR CONTRACTOR.

** ALTERNATIVE ITEMS NOT SHOWN.
ITEM(26) 8" WOOD-BLOCKOUTS
ITEM(27) 25'GUARD FENCE PANELS

NOTE:
THIS STANDARD IS A BASIC REPRESENTATION OF THE MAX-TENSION END TERMINAL, IT IS NOT INTENDED TO REPLACE THE PRODUCT DESCRIPTION ASSEMBLY MANUAL.

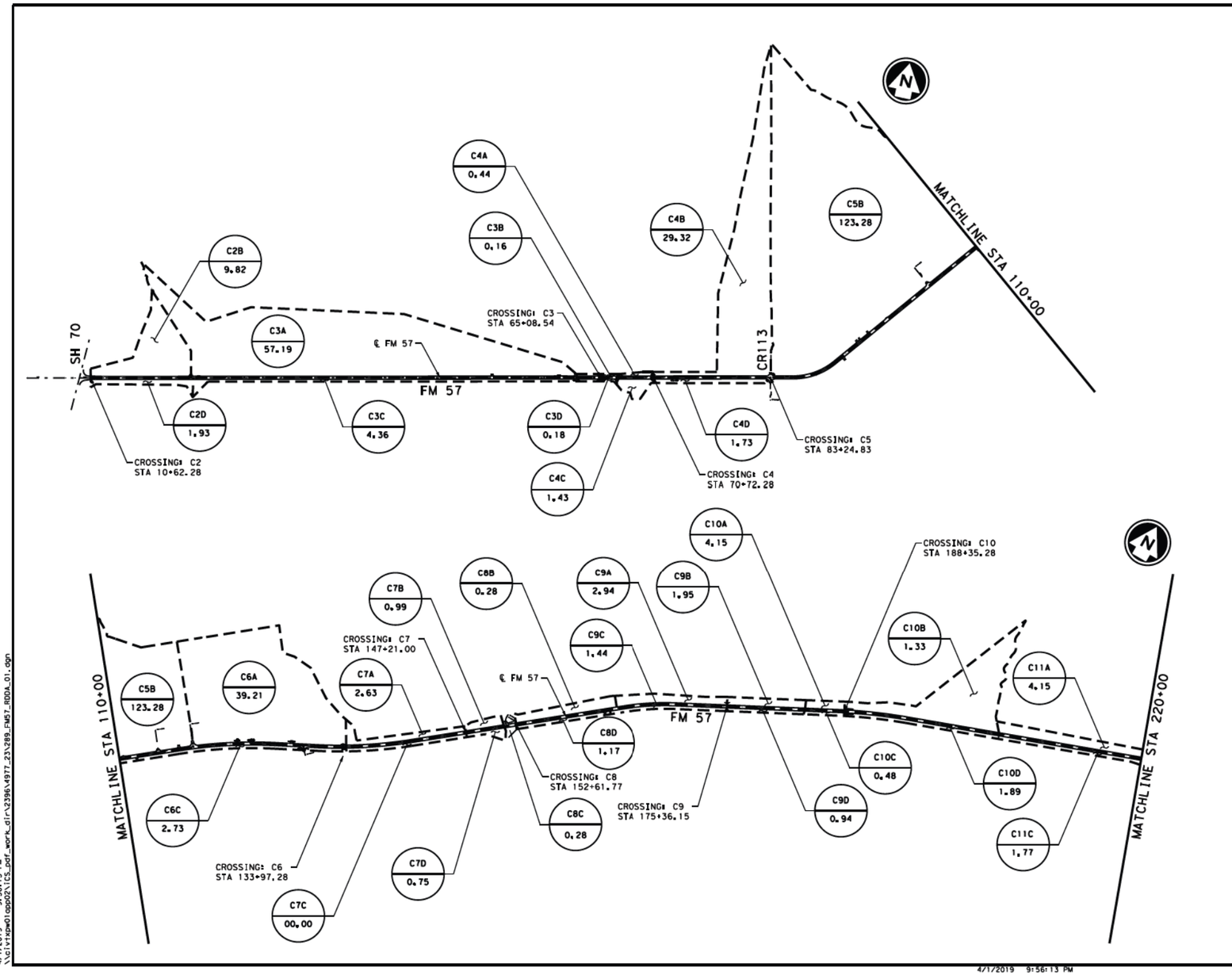
Texas Department of Transportation

Design Division Standard

MAX-TENSION END TERMINAL
MASH - TL-3
SGT(11S)31-18

FILE: sgt11s3118.dgn	DN: TxDOT	CK: KM	DW: TxDOT	CK: CL
© TxDOT: FEBRUARY 2018	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		104

DATE: 11/29/2023
FILE: 6_sgt11s3118.dgn



LEGEND

- DRAINAGE AREA BOUNDARY
- DITCH FLOW
- DIRECTION OF FLOW
- ID / 00.00 — DRAINAGE AREA ID / DRAINAGE AREA ACREAGE

NOTES:

1. ALL STATIONING IS REFERENCED TO THE ℄ FM 57 UNLESS OTHERWISE NOTED.
2. SEE OVERALL DRAINAGE AREA MAP SHEETS FOR FULL EXTENTS OF DRAINAGE AREA BOUNDARIES.

0 500 1000

STATE OF TEXAS
PAUL M. BAXTER
98224
LICENSED PROFESSIONAL ENGINEER
4/1/2019

CivilTech Engineering, Inc.
11821 Telge Road
Cypress, Texas 77429
PH: (281) 304-0200 • FX: (281) 304-0210
Firm Registration No. F-382

FM 57 FROM SH 70 TO US 180

ROADSIDE DITCH DRAINAGE AREAS BEGIN TO STA 220+00

SHEET 1 OF 4

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
RS	6	(SEE THE TITLE SHEET)		FM 57, etc
GRAPHICS DA	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK CW	TEXAS	ABL	FISHER	
CHECK PB	CONTROL	SECTION	JOB	
	0317	01	037, etc	

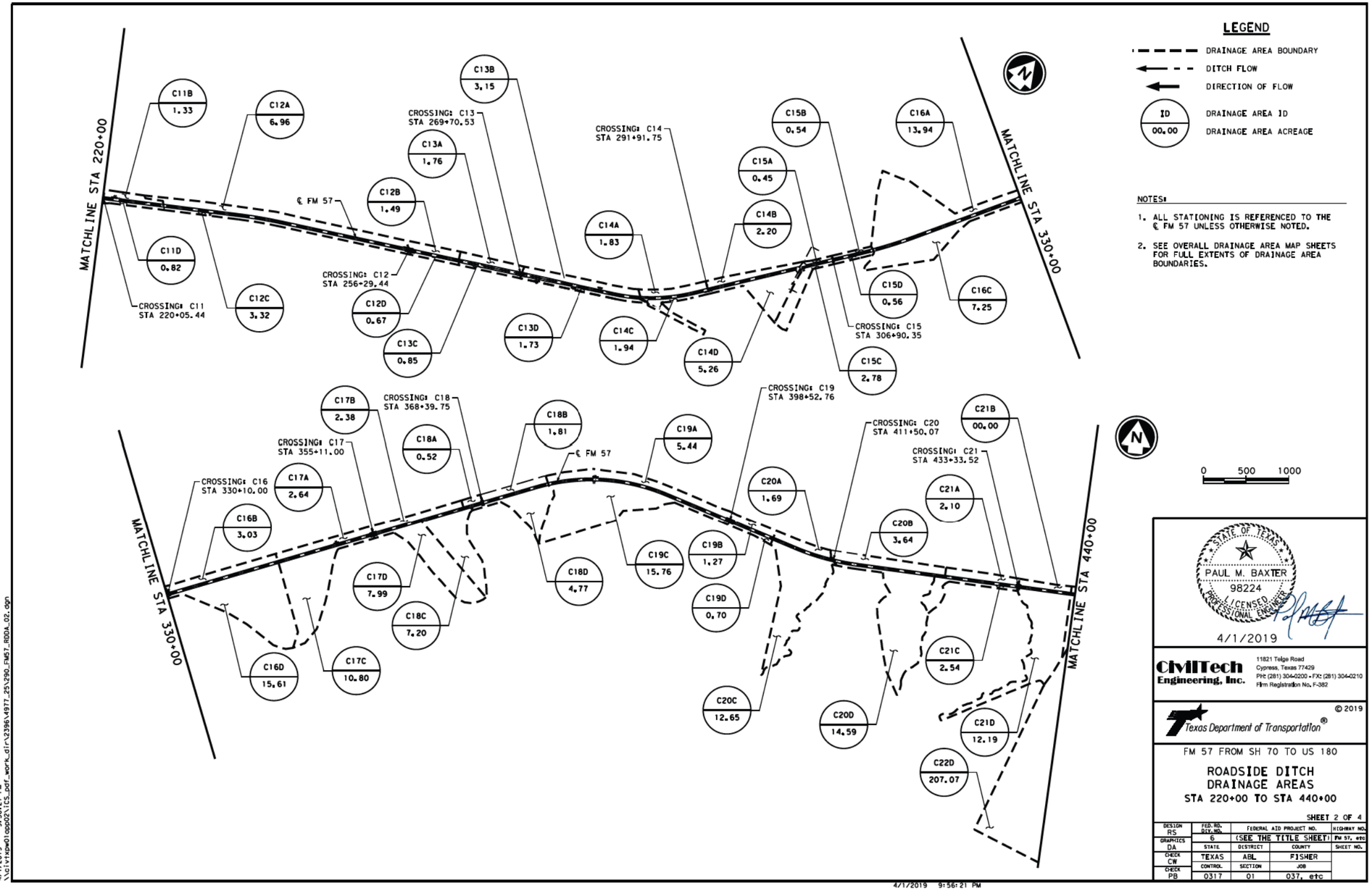
SH 70 TO PLUM CREEK

FM 57
ROADSIDE DITCH DRAINAGE AREAS BEGIN TO STA 220+00

SCALE: NTS SHEET 01 OF 02

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	105
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

4/1/2019 9:56:13 PM
\\civilfs\pw01\dgn02\TCS_pdf_work_dir\2396\4977.23\289_FM57_RDDA_01.dgn
PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:37:49 PM SCALE: 1:1



STATE OF TEXAS
PAUL M. BAXTER
98224
LICENSED PROFESSIONAL ENGINEER
4/1/2019

CivilTech Engineering, Inc.
11821 Telge Road
Cypress, Texas 77429
PH: (281) 304-0200 - FX: (281) 304-0210
Firm Registration No. F-382

FM 57 FROM SH 70 TO US 180

ROADSIDE DITCH
DRAINAGE AREAS
STA 220+00 TO STA 440+00

SHEET 2 OF 4

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
RS	6	(SEE THE TITLE SHEET)		FM 57, etc
GRAPHICS DA	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK CW	TEXAS	ABL	FISHER	
CHECK PB	CONTROL	SECTION	JOB	
	0317	01	037, etc	

SH 70 TO PLUM CREEK

FM 57
ROADSIDE DITCH
DRAINAGE AREAS
STA 220+00 TO END

SCALE: NTS SHEET 02 OF 02

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	106
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

4/1/2019 9:56:21 PM
\\civiltxpw01opp02\ICS_pdf_work_dir\2396\1977_25\290_FM57_RDDA_02.dgn
4/1/2019 9:56:21 PM
PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:37:51 PM SCALE: 1:1

ROADSIDE DITCH HYDRAULIC DATA

DITCH	LIMITS FROM STA	LIMITS FROM ELEV	LIMITS TO STA	LIMITS TO ELEV	LENGTH (FT)	LEFT SIDE SLOPE (X:1)	BOTTOM WIDTH (FT)	RIGHT SIDE SLOPE (X:1)	DITCH GRADE (FT/FT)	DITCH DEPTH (FT)	CROSS SECTIONAL FLOW AREA (SF)	WETTED PERIMETER (FT)	HYDRAULIC RADIUS R=A/(WP) (FT)	MANNING'S n-VALUE	VELOCITY (FPS)	VELOCITY HEAD (FT)	DITCH CAPACITY (CFS)	CONTRIBUTING AREA ID	Q 10-YR (CFS)
C2B	12+00.00	2010.90	15+00.00	2011.80	300	4	0	6	0.0030	1.47	10.88	15.05	0.72	0.035	1.88	0.05	20.42	C2B	12.53
C2B	15+00.00	2011.80	21+00.00	2025.00	600	4	0	6	0.0226	1.50	11.25	15.31	0.73	0.035	5.21	0.42	58.60	C2B	12.53
C2D	12+00.00	2010.40	16+00.00	2012.61	400	4	0	6	0.0051	1.84	16.93	18.78	0.90	0.035	2.84	0.13	48.12	C2D	2.77
C2D	16+00.00	2012.61	21+00.00	2025.00	500	4	0	6	0.0248	1.16	6.73	11.84	0.57	0.035	4.60	0.33	30.93	C2D	2.77
C3A	21+00.00	2025.00	22+00.00	2025.00	100	4	0	6	0.0060	1.20	7.20	12.25	0.59	0.035	2.31	0.08	16.66	C3A	45.19
C3A	22+00.00	2025.00	25+00.00	2019.90	300	4	0	6	0.0170	1.52	11.50	15.48	0.74	0.035	4.55	0.32	52.37	C3A	45.19
C3A	25+00.00	2019.90	32+00.00	2020.30	700	4	0	6	0.0061	1.36	9.25	13.88	0.67	0.035	2.54	0.10	23.53	C3A	45.19
C3A	32+00.00	2020.30	39+00.00	1998.10	700	4	0	6	0.0317	1.59	12.57	16.18	0.78	0.035	6.41	0.64	80.54	C3A	45.19
C3A	39+00.00	1998.10	43+00.00	1996.20	400	4	0	6	0.0047	1.88	17.77	19.24	0.92	0.035	2.77	0.12	49.17	C3A	45.19
C3A	43+00.00	1996.20	52+00.00	1971.42	900	4	0	6	0.0312	1.39	9.71	14.22	0.68	0.035	5.83	0.53	56.58	C3A	45.19
C3A	52+00.00	1971.42	61+00.00	1963.19	900	4	0	6	0.0091	1.36	9.26	13.89	0.67	0.035	3.11	0.15	28.78	C3A	45.19
C3A	61+00.00	1963.19	63+00.00	1960.95	200	4	0	6	0.0010	2.25	25.31	22.96	1.10	0.035	1.44	0.03	36.36	C3A	45.19
C3A	63+00.00	1960.95	64+00.00	1959.92	100	4	0	6	0.0652	1.60	12.80	16.33	0.78	0.035	9.24	1.33	118.28	C3A	45.19
C3B	66+00.00	1960.10	66+66.63	1960.70	67	4	0	6	0.0652	1.60	12.80	16.33	0.78	0.035	9.24	1.33	118.28	C3B	0.28
C3C	21+00.00	2025.00	25+00.00	2019.68	400	4	0	6	0.0158	0.85	3.61	8.67	0.42	0.035	2.98	0.14	10.78	C3C	3.66
C3C	25+00.00	2019.68	28+00.00	2019.70	300	4	0	6	0.0158	0.85	3.61	8.67	0.42	0.035	2.98	0.14	10.78	C3C	3.66
C3C	28+00.00	2019.70	30+00.00	2022.48	200	4	0	6	0.0139	1.25	7.81	12.76	0.61	0.035	3.62	0.20	28.27	C3C	3.66
C3C	30+00.00	2022.48	31+00.00	2022.38	100	4	0	6	0.0010	1.20	7.20	12.25	0.59	0.035	0.94	0.01	6.80	C3C	3.66
C3C	31+00.00	2022.38	43+00.00	1996.48	1,200	4	0	6	0.0216	1.20	7.20	12.25	0.59	0.035	4.39	0.30	31.59	C3C	3.66
C3C	43+00.00	1996.48	53+00.00	1969.88	1,000	4	0	6	0.0250	1.27	8.13	13.01	0.62	0.035	4.92	0.38	39.95	C3C	3.66
C3C	53+00.00	1969.88	62+00.00	1962.68	900	4	0	6	0.0080	1.22	7.47	12.47	0.60	0.035	2.70	0.11	20.20	C3C	3.66
C3C	62+00.00	1962.68	64+00.00	1959.97	200	4	0	6	0.0136	1.22	7.47	12.47	0.60	0.035	3.52	0.19	26.29	C3C	3.66
C3D	65+27.70	1959.00	66+54.11	1959.80	126	4	0	6	0.0642	0.70	2.45	7.14	0.34	0.035	5.28	0.43	12.94	C3D	0.46
C4A	67+00.00	1960.51	70+00.00	1959.91	300	4	0	5	0.0025	1.49	9.44	13.01	0.73	0.035	1.73	0.05	16.29	C4A	0.76
C4B	70+00.00	1959.91	71+00.00	1958.41	100	4	0	4	0.0356	1.19	5.66	9.81	0.58	0.035	5.57	0.48	31.54	C4B	22.32
C4B	71+00.00	1958.41	81+00.00	1963.69	1,000	4	0	6	0.0043	2.76	37.12	27.52	1.35	0.035	3.40	0.18	126.04	C4B	22.32
C4C	67+00.00	1960.65	70+00.00	1960.35	300	4	0	6	0.0041	1.38	9.45	14.03	0.67	0.035	2.09	0.07	19.74	C4C	2.79
C4D	70+00.00	1960.35	82+00.00	1964.20	1,200	4	0	4	0.0030	0.70	1.98	5.83	0.34	0.035	1.13	0.02	2.25	C4D	3.41
C5B	92+00.00	1964.75	103+00.00	1966.98	1,100	4	0	6	0.0020	1.90	18.05	19.39	0.93	0.035	1.81	0.05	32.76	C5B	117.05
C5B	103+00.00	1966.98	117+00.00	1966.68	1,400	4	0	6	0.0042	1.80	16.26	18.40	0.88	0.035	2.53	0.10	41.14	C5B	117.05
C6A	118+00.00	1966.18	120+00.00	1965.18	200	5	0	6	0.0050	1.95	20.35	21.20	0.96	0.035	2.93	0.13	59.60	C6A	89.95
C6A	120+00.00	1965.18	133+00.00	1952.83	1,300	4	0	6	0.0095	2.65	35.13	27.05	1.30	0.035	4.94	0.38	173.47	C6A	89.95
C6A	133+00.00	1952.83	134+00.00	1951.88	100	4	0	6	0.0055	4.32	93.31	44.09	2.12	0.035	5.21	0.42	485.75	C6A	89.95
C7A	135+00.00	1951.33	145+00.00	1946.53	1,000	4	0	6	0.0048	1.10	6.07	11.25	0.54	0.035	1.95	0.06	11.83	C7A	3.96
C7A	145+00.00	1946.53	146+00.00	1945.03	100	4	0	6	0.0150	2.57	33.02	26.23	1.26	0.035	6.08	0.57	200.79	C7A	3.96
C7B	149+00.00	1946.22	152+00.00	1947.36	300	4	0	6	0.0064	1.35	9.05	13.73	0.66	0.035	2.58	0.10	23.32	C7B	1.32
C7C	135+00.00	1951.39	137+00.00	1949.79	200	4	0	6	0.0070	1.94	18.88	19.83	0.95	0.035	3.45	0.18	65.09	C7C	2.90
C7C	137+00.00	1949.79	144+00.00	1947.53	700	4	0	6	0.0028	1.69	14.23	17.22	0.83	0.035	1.98	0.06	28.24	C7C	2.90
C7C	144+00.00	1947.53	146+00.00	1943.59	200	4	0	4	0.0318	4.01	64.32	33.07	1.95	0.035	11.83	2.17	761.04	C7C	2.90
C7D	149+00.00	1945.98	151+00.00	1947.34	200	4	0	5	0.0068	2.37	24.41	21.11	1.16	0.035	3.87	0.23	94.39	C7D	0.88
C8B	152+00.00	1947.36	163+00.00	1953.50	1,100	4	0	6	0.0083	1.18	6.93	12.01	0.58	0.035	2.68	0.11	18.57	C8B	5.07
C8C	151+00.00	1947.34	152+00.00	1948.02	100	4	0	6	0.0068	1.38	9.52	14.08	0.68	0.035	2.70	0.11	25.75	C8C	0.33
C8D	152+00.00	1948.02	153+00.00	1948.50	100	4	0	6	0.0380	0.70	2.45	7.14	0.34	0.035	4.06	0.26	9.96	C8D	1.69
C8D	153+00.00	1948.50	161+00.00	1951.60	800	4	0	6	0.0039	0.89	3.94	9.06	0.43	0.035	1.52	0.04	5.99	C8D	1.69
C8D	161+00.00	1951.60	162+00.00	1952.60	100	4	0	6	0.0100	2.40	28.80	24.49	1.18	0.035	4.74	0.35	136.59	C8D	1.69
C9A	163+00.00	1953.50	173+00.00	1932.90	1,000	4	0	6	0.0206	2.15	23.11	21.94	1.05	0.035	6.33	0.62	146.20	C9A	6.15
C9B	175+56.09	1921.76	177+00.00	1927.34	144	4	0	6	0.0346	0.86	3.70	8.78	0.42	0.035	4.45	0.31	16.45	C9B	3.50
C9B	177+00.00	1927.34	183+00.00	1927.64	600	4	0	6	0.0028	1.19	7.02	12.09	0.58	0.035	1.58	0.04	11.07	C9B	3.50
C9C	162+00.00	1952.60	166+00.00	1951.60	400	4	0	6	0.0100	1.93	18.53	19.65	0.94	0.035	4.09	0.26	75.85	C9C	1.87
C9C	166+00.00	1951.60	173+00.00	1932.10	700	4	0	6	0.0279	1.06	5.59	10.79	0.52	0.035	4.58	0.33	25.60	C9C	1.87
C9D	175+56.29	1921.59	177+00.00	1927.59	144	4	0	6	0.0365	0.71	2.52	7.25	0.35	0.035	4.02	0.25	10.14	C9D	1.21
C9D	177+00.00	1927.59	183+00.00	1927.69	600	4	0	6	0.0032	0.88	3.84	8.95	0.43	0.035	1.36	0.03	5.24	C9D	1.21
C10A	183+00.00	1927.64	186+00.00	1924.36	300	4	0	5	0.0109	1.63	12.40	15.57	0.80	0.035	3.82	0.23	47.42	C10A	1.86
C10B	191+00.00	1925.32	193+00.00	1928.12	200	4	0	6	0.0140	2.18	23.76	22.25	1.07	0.035	5.26	0.43	125.06	C10B	23.21
C10B	193+00.00	1928.12	197+00.00	1930.62	400	4	0	6	0.0063	2.72	36.00	27.08	1.33	0.035	4.07	0.26	146.52	C10B	23.21
C10B	197+00.00	1930.62	204+00.00	1929.57	700	4	0	6	0.0015	0.72	2.61	7.38	0.35	0.035	0.83	0.01	2.16	C10B	23.21
C10C	184+00.00	1926.79	186+00.00	1924.32	200	4	0	6	0.0112	1.38	9.48	14.05	0.67	0.035	3.46	0.19	32.83	C10C	0.92
C10D	191+00.00	1925.54	194+00.00	1930.14	300	4	0	6	0.0163	2.36	26.46	22.92	1.15	0.035	5.97	0.55	157.97	C10D	2.61
C10D	194+00.00	1930.14	198+00.00	1931.00	400	4	0	6	0.0044	1.85	17.02	18.83	0.90	0.035	2.63	0.11	44.80	C10D	2.61
C10D	198+00.00	1931.00	204+00.00	1930.38	600	4	0	6	0.0012	1.34	8.93	13.64	0.65	0.035	1.10	0.02	9.79	C10D	2.61
C11A	204+63.23	1930.70	206+00.00	1929.90	137	6	0	6	0.0025	1.85	20.54	22.51	0.91	0.035	2.00	0.06	41.12	C11A	7.03
C11A	206+00.00	1929.90	209+00.00	1928.10	300	6	0	6	0.0060	2.17	28.25	26.40	1.07	0.035	3.45	0.18	97.48	C11A	7.03
C11A	209+00.00	1928.10	217+00.00	1920.10	800	5	0	6	0.0010	2.61	37.47	29.18	1.28	0.035	1.59	0.04	59.58	C11A	7.03
C11A	217+00.00	1920.10	220+00.00	1917.60	300	4	0	5	0.0250	2.50	28.13	23.06	1.22	0.035	7.69	0.92	216.15	C11A	7.03
C11B	220+00.00	1917.60	222+00.00	1917.75	200	4	0	6	0.0504	1.55	12.01	15.82	0.76	0.035	7.95	0.98	95.55	C11B	2.78

4/1/2019 9:56:05 PM
\\civil\xpw01cpp02\1C5_pdf_work_dir\23961\4977_48\316_FM57_HYD_DITCH_01.dgn

4/1/2019 9:56:05 PM

STATE OF TEXAS
PAUL M. BAXTER
98224
LICENSED PROFESSIONAL ENGINEER
4/1/2019

CivilTech Engineering, Inc.
11821 Telge Road
Cypress, Texas 77429
Ph: (281) 304-0200 • FX: (281) 304-0210
Firm Registration No. F-382

FM 57 FROM SH 70 TO US 180

DRAINAGE

ROADSIDE DITCH
HYDRAULIC DATA

SHEET 1 OF 3

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
RS	6	(SEE THE TITLE SHEET)		FM 57, etc
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
DA				
CHECK	TEXAS	ABL	FISHER	
CW	CONTROL	SECTION	JOB	
CHECK	0317	01	037, etc	
PB				

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:37:52 PM SCALE: 1:1

SH 70 TO PLUM CREEK

FM 57

ROADSIDE DITCH
HYDRAULIC DATA

SCALE: NTS SHEET 01 OF 02

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
IEI	TEXAS	ABL	FISHER	107
CHECK	CONTROL	SECTION	JOB	
IEI	0317	01	043	
CHECK				

ROADSIDE DITCH HYDRAULIC DATA

DITCH	LIMITS FROM STA	LIMITS FROM ELEV	LIMITS TO STA	LIMITS TO ELEV	LENGTH (FT)	LEFT SIDE SLOPE (X:1)	BOTTOM WIDTH (FT)	RIGHT SIDE SLOPE (X:1)	DITCH GRADE (FT/FT)	DITCH DEPTH (FT)	CROSS SECTIONAL FLOW AREA (SF)	WETTED PERIMETER (FT)	HYDRAULIC RADIUS R=A/(WP) (FT)	MANNING'S n-VALUE	VELOCITY (FPS)	VELOCITY HEAD (FT)	DITCH CAPACITY (CFS)	CONTRIBUTING AREA ID	Q 10-YR (CFS)
C11B	222+00.00	1917.75	227+00.00	1919.04	500	4	0	6	0.0026	2.03	20.69	20.76	1.00	0.035	2.16	0.07	44.63	C11B	2.78
C11C	205+00.00	1930.08	207+00.00	1929.48	200	4	0	6	0.0030	2.05	21.08	20.96	1.01	0.035	2.34	0.09	49.35	C11C	3.60
C11C	207+00.00	1929.48	213+00.00	1925.25	600	4	0	6	0.0071	2.14	22.90	21.84	1.05	0.035	3.69	0.21	84.47	C11C	3.60
C11C	213+00.00	1925.25	217+00.00	1920.08	400	4	0	6	0.0105	1.76	15.58	18.01	0.86	1.035	0.13	0.00	2.08	C11C	4.60
C11C	217+00.00	1920.08	218+00.00	1917.63	100	4	0	6	0.0245	1.57	12.32	16.02	0.77	0.035	5.59	0.49	68.94	C11C	3.60
C11D	222+00.00	1917.51	227+00.00	1919.00	500	4	0	6	0.0044	2.06	21.15	20.99	1.01	0.035	2.85	0.13	60.37	C11D	0.89
C12A	228+00.00	1918.74	237+00.00	1916.04	900	4	0	6	0.0030	2.29	26.34	23.42	1.12	0.035	2.52	0.10	66.40	C12A	4.77
C12A	237+00.00	1916.04	245+00.00	1909.79	800	4	0	6	0.0079	0.74	2.73	7.54	0.36	0.035	1.92	0.06	5.22	C12A	4.77
C12A	245+00.00	1909.79	255+00.00	1903.99	1,000	4	0	6	0.0057	1.42	10.00	14.34	0.70	0.035	2.53	0.10	25.30	C12A	4.77
C12B	255+00.00	1903.99	257+00.00	1900.95	200	4	0	4	0.0590	0.55	1.21	4.54	0.27	0.035	4.28	0.28	5.18	C12B	3.16
C12B	257+00.00	1900.95	260+00.00	1901.84	300	4	0	6	0.0030	1.09	5.94	11.12	0.53	0.035	1.53	0.04	9.12	C12B	3.16
C12C	228+00.00	1919.20	236+00.00	1916.60	800	4	0	6	0.0031	1.37	9.34	13.95	0.67	0.035	1.82	0.05	16.97	C12C	3.37
C12C	236+00.00	1916.60	254+00.00	1905.30	1,800	4	0	6	0.0063	1.81	16.30	18.43	0.88	0.035	3.11	0.15	50.66	C12C	3.37
C12C	254+00.00	1905.30	255+00.00	1904.05	100	4	0	6	0.0125	1.45	10.51	14.80	0.71	0.035	3.79	0.22	39.83	C12C	3.37
C12D	256+64.45	1903.50	258+00.00	1903.12	136	4	0	6	0.0568	2.38	28.32	24.29	1.17	0.035	11.24	1.96	318.35	C12D	1.28
C12D	258+00.00	1903.12	262+00.00	1900.90	400	4	0	6	0.0013	2.26	25.65	23.12	1.11	0.035	1.65	0.04	42.20	C12D	1.28
C13B	260+00.00	1901.84	270+00.00	1891.92	1,000	0	0	0	0.0270	0.09	0.00	0.18	0.00	0.035	0.00	0.00	0.00	C13B	2.94
C13B	270+00.00	1891.92	283+00.00	1902.65	1,300	4	0	4	0.0020	2.06	16.93	16.97	1.00	0.035	1.89	0.06	31.93	C13B	2.94
C13C	265+00.00	1902.60	266+00.00	1903.01	100	4	0	4	0.0010	1.49	8.88	12.29	0.72	0.035	1.08	0.02	9.63	C13C	1.37
C13D	270+00.00	1892.29	283+00.00	1901.25	1,300	4	0	5	0.0013	1.67	11.98	14.69	0.82	0.035	1.34	0.03	16.04	C13D	1.84
C14A	284+00.00	1902.40	290+00.00	1900.90	600	4	0	6	0.0025	1.61	12.48	15.88	0.79	0.035	1.81	0.05	22.63	C14A	2.54
C14B	290+00.00	1900.90	293+00.00	1898.06	300	4	0	4	0.0300	3.54	50.13	29.19	1.72	0.035	10.58	1.74	530.11	C14B	2.54
C14B	293+00.00	1895.00	298+00.00	1905.56	500	4	0	4	0.0150	2.40	23.04	19.79	1.16	0.035	5.77	0.52	132.95	C14B	4.26
C14B	298+00.00	1905.56	302+00.00	1907.56	400	4	0	5	0.0050	2.42	26.25	22.27	1.18	0.035	3.36	0.18	88.15	C14B	4.26
C14C	284+00.00	1901.13	289+00.00	1900.48	500	4	0	6	0.0013	1.43	10.20	14.58	0.70	0.035	1.21	0.02	12.34	C14C	2.10
C14D	294+00.00	1901.06	299+00.00	1906.40	500	4	0	6	0.0108	1.24	7.67	12.64	0.61	0.035	3.17	0.16	24.34	C14D	8.21
C14D	299+00.00	1906.40	302+00.00	1906.96	300	4	0	6	0.0045	2.40	28.80	24.49	1.18	0.035	3.19	0.16	91.97	C14D	8.21
C15A	303+00.00	1907.06	305+00.00	1906.06	200	4	0	6	0.0050	1.67	14.00	17.08	0.82	0.035	2.64	0.11	36.91	C15A	0.71
C15A	305+00.00	1906.06	306+00.00	1905.28	100	4	0	4	0.0105	2.62	27.46	21.61	1.27	1.035	0.17	0.00	4.75	C15A	1.71
C15B	306+00.00	1905.28	307+00.00	1904.49	100	4	0	4	0.0150	3.31	43.82	27.29	1.61	0.035	7.15	0.79	313.36	C15B	0.83
C15B	307+00.00	1904.49	311+00.00	1906.99	400	4	0	6	0.0050	1.69	14.20	17.20	0.83	0.035	2.65	0.11	37.60	C15B	0.83
C15C	303+00.00	1906.56	306+00.00	1905.36	300	4	0	6	0.0040	1.24	7.47	12.31	0.61	0.035	1.93	0.06	14.41	C15C	2.66
C15D	307+00.00	1904.55	311+00.00	1906.55	400	4	0	6	0.0030	1.15	6.40	11.37	0.56	0.035	1.59	0.04	10.16	C15D	0.65
C16A	311+00.00	1906.99	312+00.00	1907.49	100	4	0	6	0.0050	1.21	7.32	12.35	0.59	0.035	2.12	0.07	15.55	C16A	8.06
C16A	312+00.00	1907.49	324+00.00	1889.39	1,200	4	0	6	0.0156	1.16	6.43	11.38	0.57	0.035	3.64	0.21	23.41	C16A	8.06
C16A	324+00.00	1889.39	329+00.00	1884.69	500	4	0	5	0.0090	1.57	11.34	14.79	0.77	0.035	3.38	0.18	38.36	C16A	8.06
C16A	329+00.00	1884.69	330+00.00	1881.99	100	4	0	4	0.0270	3.91	61.15	32.24	1.90	0.035	10.72	1.78	655.58	C16A	8.06
C16B	330+00.00	1881.99	331+00.00	1883.36	100	4	0	6	0.0137	1.34	8.98	13.68	0.66	0.035	3.76	0.22	33.79	C16B	3.40
C16B	331+00.00	1883.36	332+00.00	1884.26	100	4	0	6	0.0090	0.34	0.58	3.47	0.17	0.035	1.22	0.02	0.71	C16B	3.40
C16B	332+00.00	1884.26	343+00.00	1885.36	1,100	4	0	6	0.0010	1.03	5.31	10.52	0.51	0.035	0.85	0.01	4.54	C16B	3.40
C16C	312+00.00	1906.85	313+00.00	1906.44	100	4	0	6	0.0035	1.86	17.21	18.93	0.91	0.035	2.38	0.09	40.94	C16C	4.77
C16C	313+00.00	1906.44	330+00.00	1882.00	1,700	4	0	6	0.0144	1.43	10.11	14.43	0.70	0.035	4.03	0.25	40.71	C16C	4.77
C16D	330+00.00	1882.00	331+00.00	1884.10	100	4	0	4	0.0150	2.71	29.38	22.35	1.31	0.035	6.26	0.61	183.82	C16D	10.10
C16D	331+00.00	1884.10	343+00.00	1885.09	1,200	4	0	6	0.0010	2.49	30.55	25.03	1.22	0.035	1.54	0.04	46.96	C16D	10.10
C17A	344+00.00	1885.46	353+00.00	1881.56	900	4	0	6	0.0098	1.25	7.66	12.51	0.61	0.035	3.04	0.14	23.28	C17A	4.07
C17A	353+00.00	1881.56	354+00.00	1878.96	100	4	0	4	0.0260	1.84	13.54	15.17	0.89	0.035	6.36	0.63	86.17	C17A	4.07
C17B	354+00.00	1878.96	356+00.00	1879.23	200	4	0	6	0.0365	0.97	4.70	9.90	0.48	0.035	4.95	0.38	23.30	C17B	3.50
C17B	356+00.00	1879.23	366+00.00	1884.99	1,000	4	0	6	0.0052	1.17	6.90	11.99	0.58	0.035	2.13	0.07	14.68	C17B	4.50
C17C	344+00.00	1885.19	347+00.00	1885.49	300	4	0	6	0.0010	2.01	20.20	20.51	0.98	0.035	1.33	0.03	26.92	C17C	7.98
C17C	347+00.00	1885.49	350+00.00	1882.49	300	4	0	6	0.0100	1.87	17.42	19.05	0.91	0.035	4.01	0.25	69.88	C17C	7.98
C17C	350+00.00	1882.49	354+00.00	1880.82	400	4	0	6	0.0030	2.41	28.92	24.55	1.18	0.035	2.60	0.11	75.23	C17C	7.98
C17D	358+00.00	1880.42	360+00.00	1881.62	200	4	0	4	0.0060	1.08	4.67	8.91	0.52	0.035	2.14	0.07	10.00	C17D	8.60
C18A	367+00.00	1884.38	368+00.00	1883.78	100	4	0	4	0.0030	1.52	9.24	12.53	0.74	0.035	1.90	0.06	17.59	C18A	1.13
C18B	368+00.00	1883.78	369+00.00	1883.28	100	4	0	4	0.0300	2.12	17.98	17.48	1.03	0.035	7.51	0.88	135.05	C18B	3.40
C18B	369+00.00	1883.28	373+00.00	1887.78	400	4	0	6	0.0113	2.06	21.17	21.00	1.01	0.035	4.54	0.32	96.08	C18B	3.40
C18B	373+00.00	1887.78	374+00.00	1890.53	100	4	0	6	0.0275	2.17	23.54	22.15	1.06	0.035	7.35	0.84	173.14	C18B	3.40
C18B	374+00.00	1890.53	375+00.00	1892.28	100	4	0	6	0.0175	0.82	3.36	8.37	0.40	0.035	3.07	0.15	10.31	C18B	3.40
C18C	361+00.00	1882.22	368+00.00	1883.72	700	4	0	4	0.0049	1.41	7.90	11.59	0.68	0.035	2.30	0.08	18.17	C18C	6.17
C18D	369+00.00	1883.00	376+00.00	1893.31	700	4	0	4	0.0161	1.28	6.76	10.87	0.62	0.035	3.93	0.24	26.59	C18D	4.46
C19A	382+00.00	1890.10	386+00.00	1888.10	400	4	0	6	0.0050	1.86	17.30	18.98	0.91	0.035	2.83	0.12	48.94	C19A	8.00
C19A	386+00.00	1888.10	393+00.00	1873.55	700	4	0	6	0.0220	1.11	6.13	11.30	0.54	0.035	4.20	0.27	25.73	C19A	8.00
C19A	393+00.00	1873.55	397+00.00	1867.95	400	4	0	6	0.0140	0.75	2.67	7.28	0.37	0.035	2.58	0.10	6.89	C19A	8.00
C19B	400+00.00	1870.30	402+00.00	1872.56	200	4	0	5	0.0113	1.37	8.45	12.63	0.67	0.035	3.46	0.19	29.22	C19B	8.00
C19B	402+00.00	1872.56	404+00.00	1872.04	200	4	0	6	0.0026	0.58	1.68	5.92	0.28	0.035	0.94	0.01	1.58	C19B	1.83

4/1/2019 9:57:31 PM
\\civilvxpw01cpp02\1C5_pdf_work_dir\23961\4977.58\317_FM57_HYD_DITCH_02.dgn

4/1/2019 9:57:31 PM

PAUL M. BAXTER
98224
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
4/1/2019

CivilTech Engineering, Inc.
11821 Telge Road
Cypress, Texas 77429
Ph: (281) 304-0200 • FX: (281) 304-0210
Firm Registration No. F-382

Texas Department of Transportation®

FM 57 FROM SH 70 TO US 180

DRAINAGE
ROADSIDE DITCH
HYDRAULIC DATA

SHEET 2 OF 3

DESIGN RS	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS DA	6	(SEE THE TITLE SHEET)		FM 57, etc
	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK CW	TEXAS	ABL	FISHER	
CHECK PB	CONTROL	SECTION	JOB	
	0317	01	037, etc	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdas DATE: 11/29/2023 TIME: 1:37:54 PM SCALE: 1:1

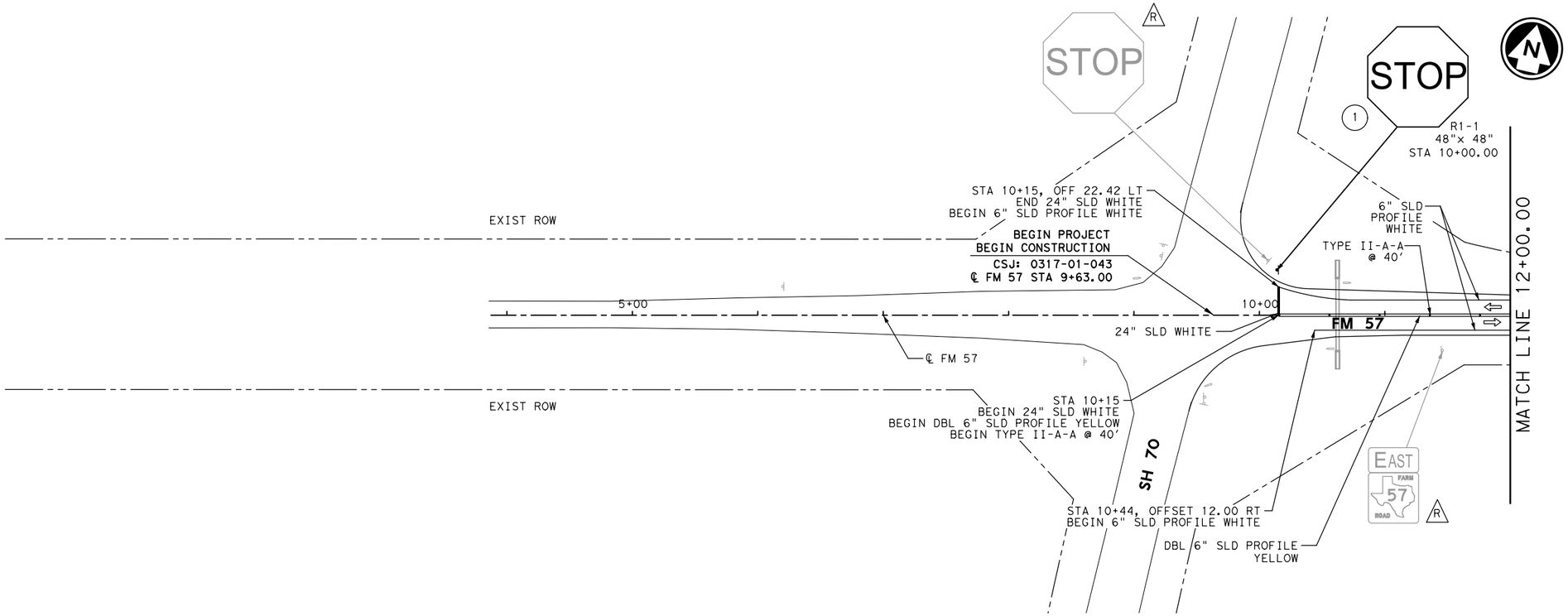
4/1/2019 9:57:31 PM

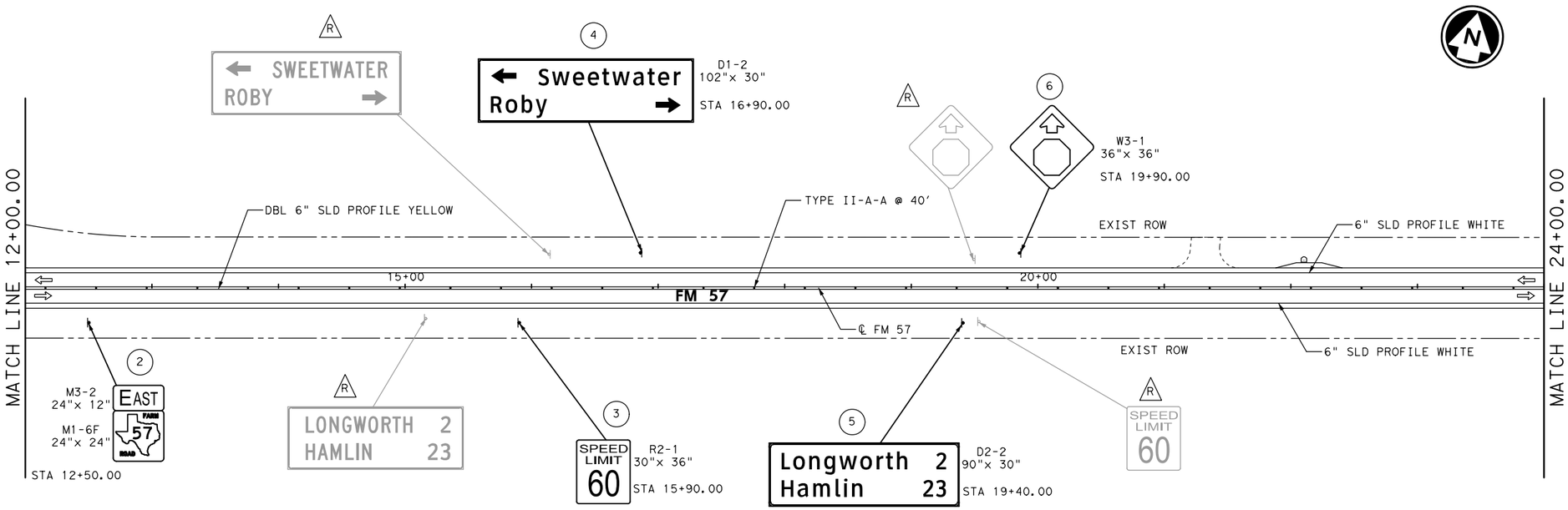
SH 70 TO PLUM CREEK

FM 57
ROADSIDE DITCH
HYDRAULIC DATA

SCALE: NTS SHEET 02 OF 02

DESIGN IEI	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GRAPHICS IEI	6	(SEE THE TITLE SHEET)		FM 57
	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	108
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	





LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

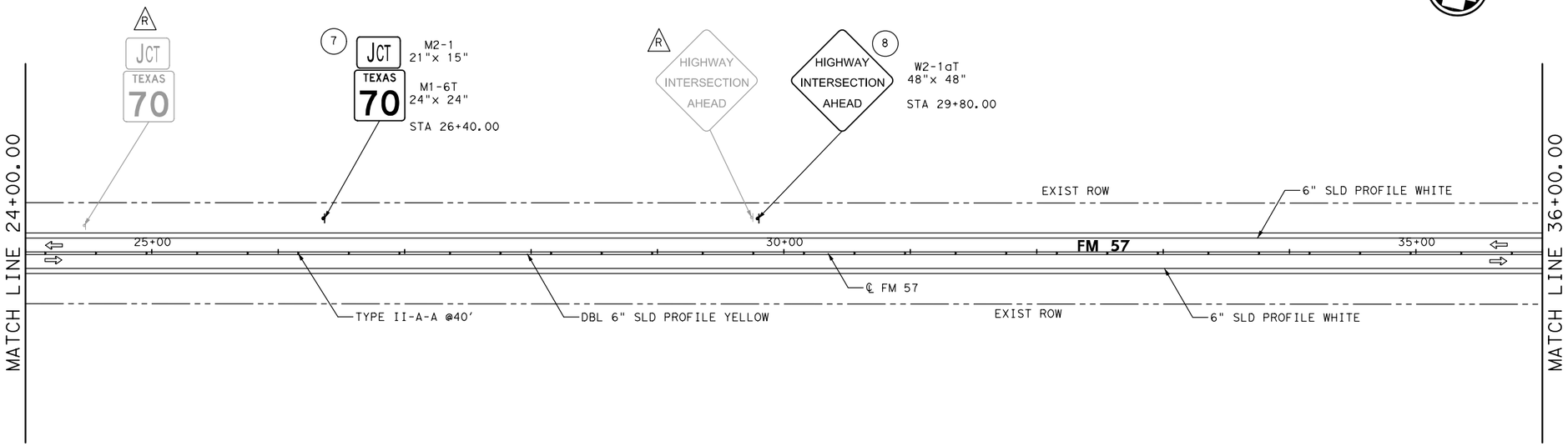
SH 70 TO PLUM CREEK

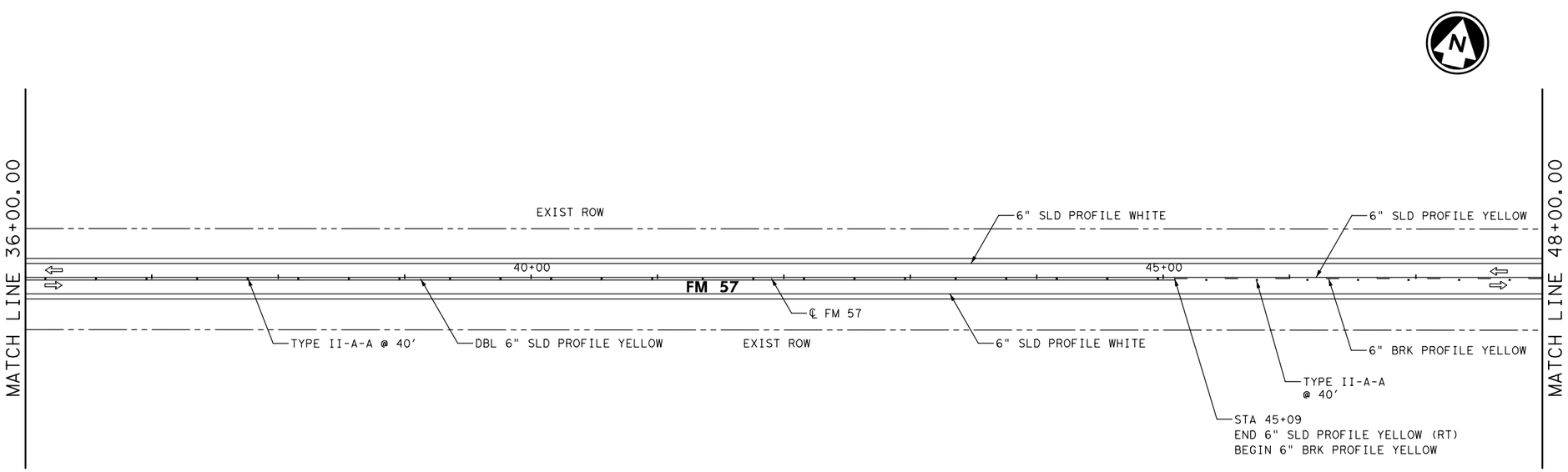
FM 57
SIGNING AND PAVEMENT MARKING
BEGIN TO STA 24+00

SHEET 01 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	109
CHECK IEI	CONTROL 0317	SECTION 01	JOB 043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:38:01 PM SCALE: 1:100





LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

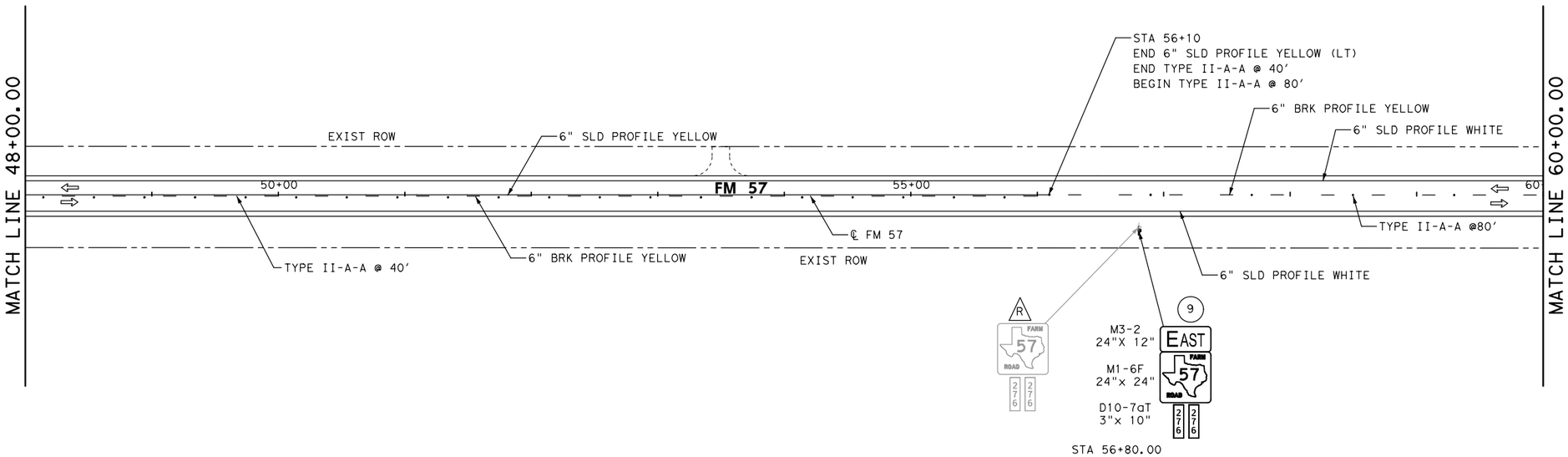
Texas Department of Transportation

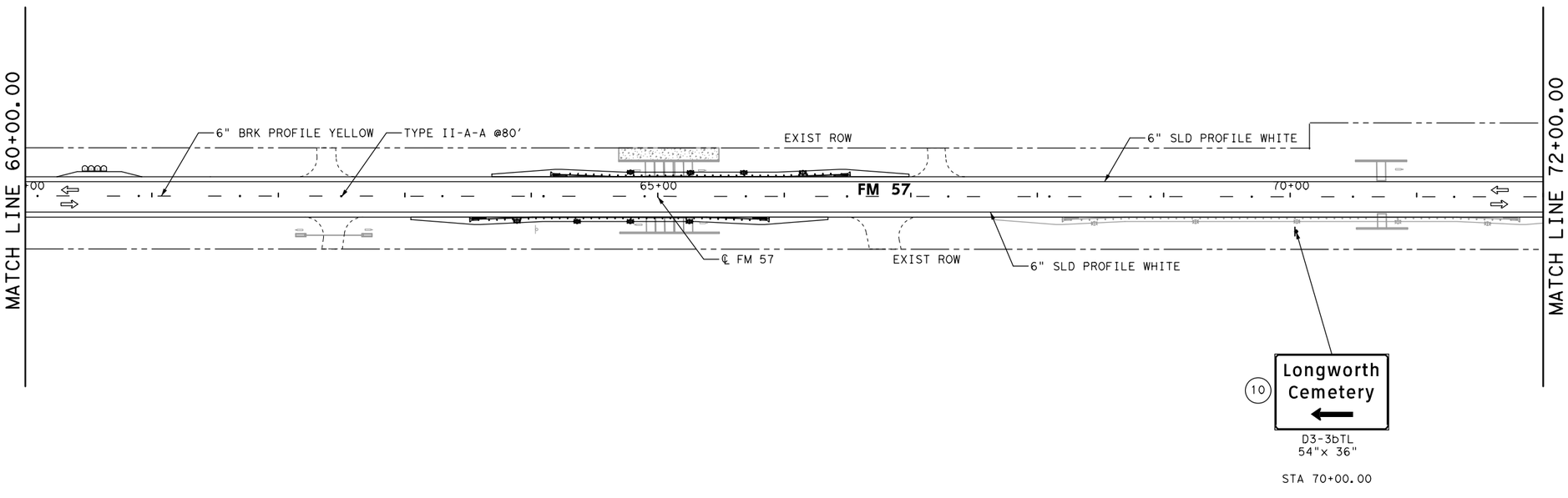
SH 70 TO PLUM CREEK

FM 57
SIGNING AND PAVEMENT MARKING
STA 24+00 TO STA 48+00

SHEET 02 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	110
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	





LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

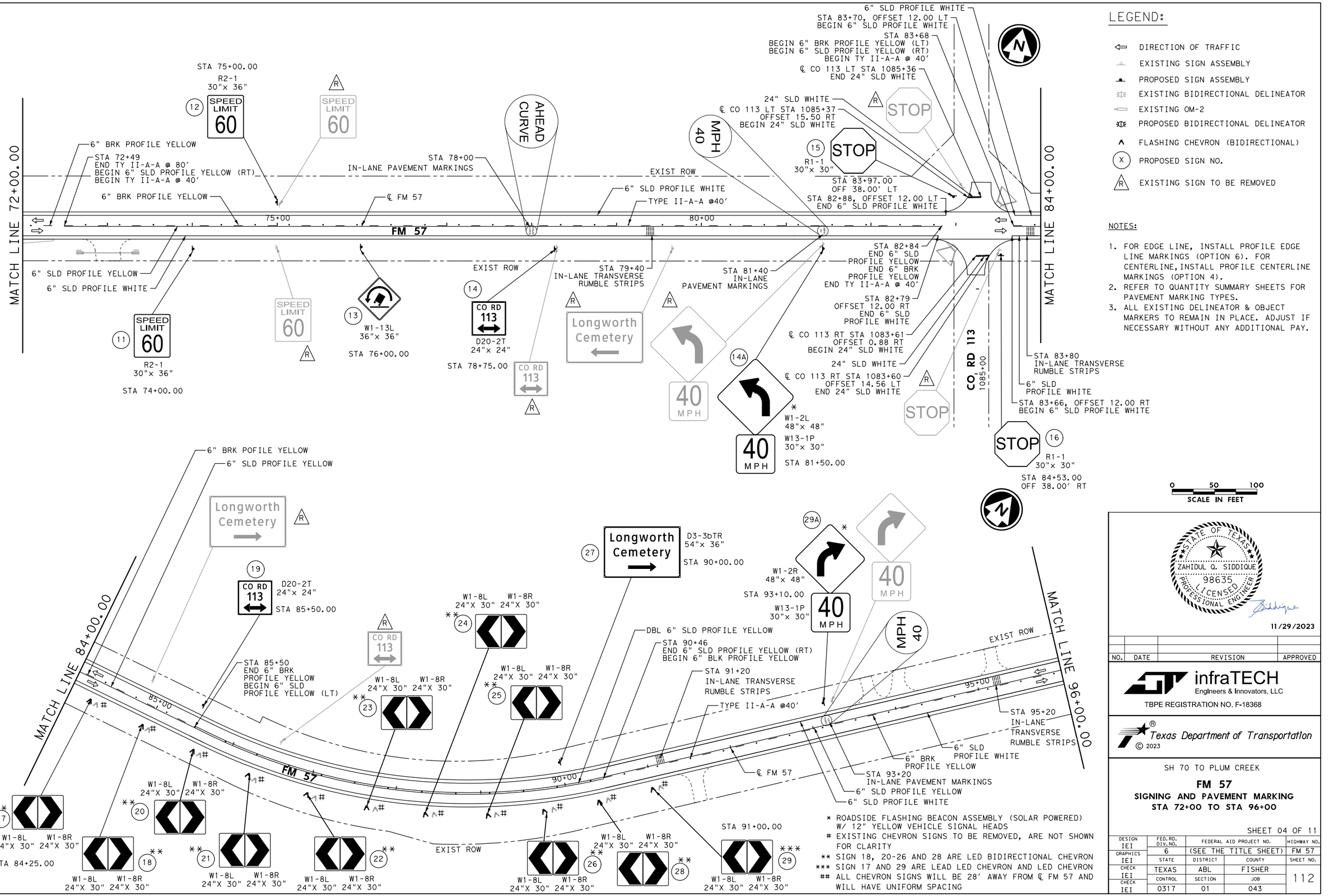
SH 70 TO PLUM CREEK

FM 57
SIGNING AND PAVEMENT MARKING
STA 48+00 TO STA 72+00

SHEET 03 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	111
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:38:12 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100



LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

* ROADSIDE FLASHING BEACON ASSEMBLY (SOLAR POWERED) W/ 12" YELLOW VEHICLE SIGNAL HEADS

\# EXISTING CHEVRON SIGNS TO BE REMOVED, ARE NOT SHOWN FOR CLARITY

** SIGN 18, 20-26 AND 28 ARE LED BIDIRECTIONAL CHEVRON

*** SIGN 17 AND 29 ARE LEAD LED CHEVRON AND LED CHEVRON

\#\# ALL CHEVRON SIGNS WILL BE 28' AWAY FROM ℄ FM 57 AND WILL HAVE UNIFORM SPACING

ZAHIDUL Q. SIDDIQUE
98635
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

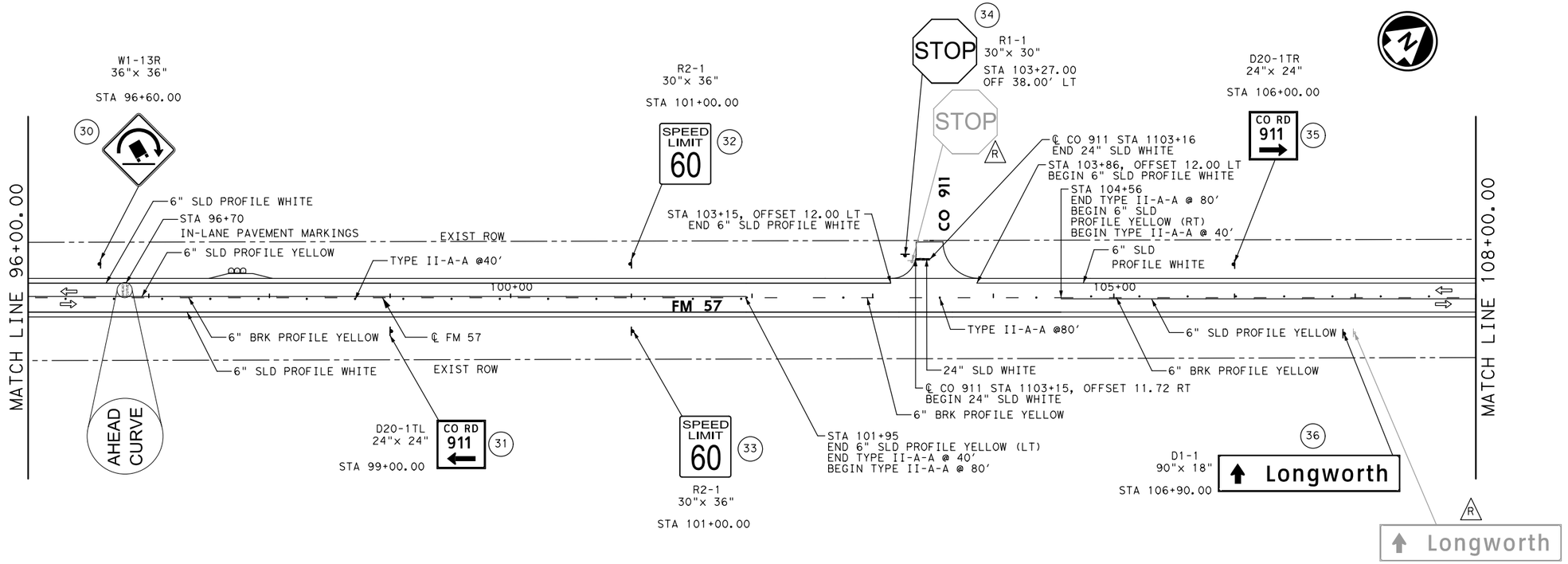
SIGNING AND PAVEMENT MARKING

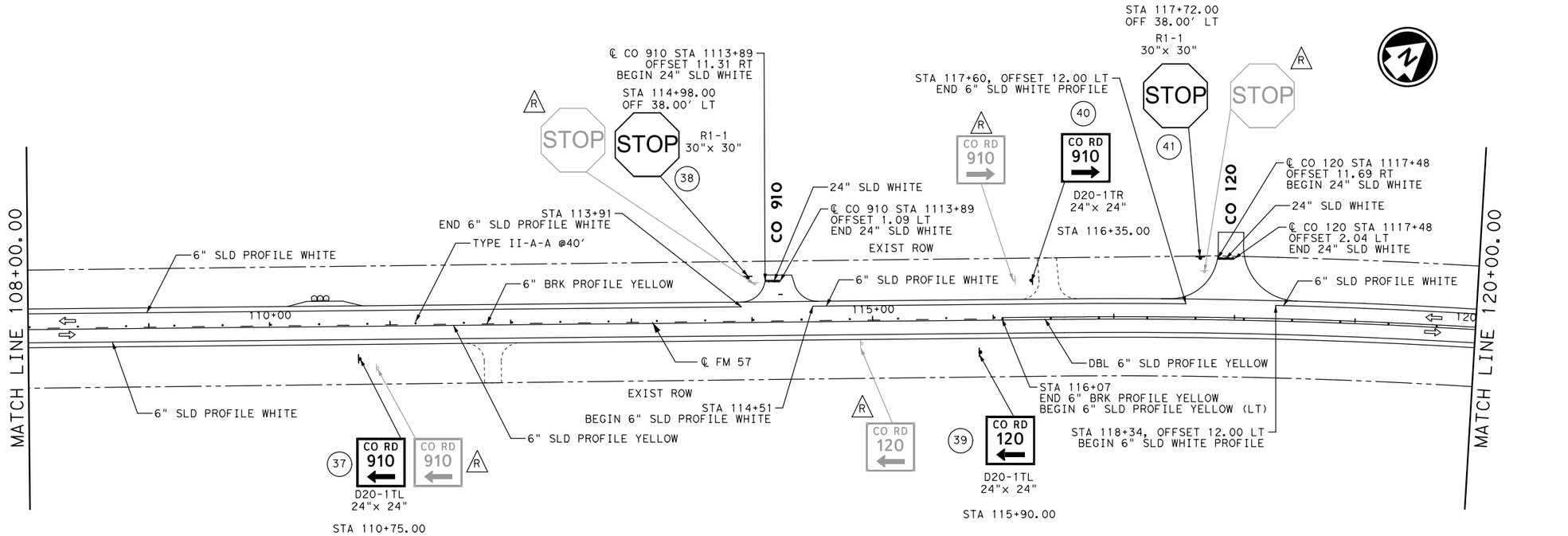
STA 72+00 TO STA 96+00

SHEET 04 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	112
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PENTABLE: FM57_REVISE.tbl
TIME: 1:38:17 PM
SCALE: 1:100
DATE: 11/29/2023
PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas





LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

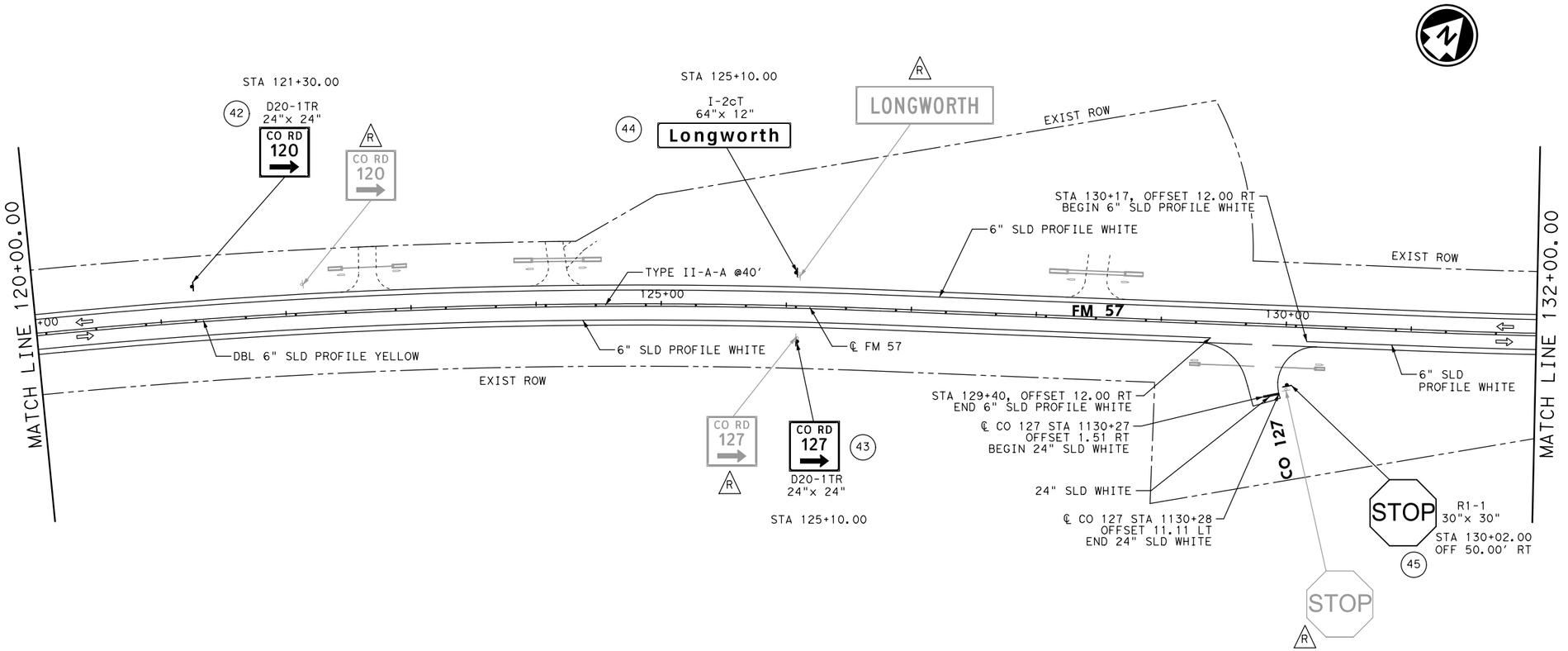
FM 57

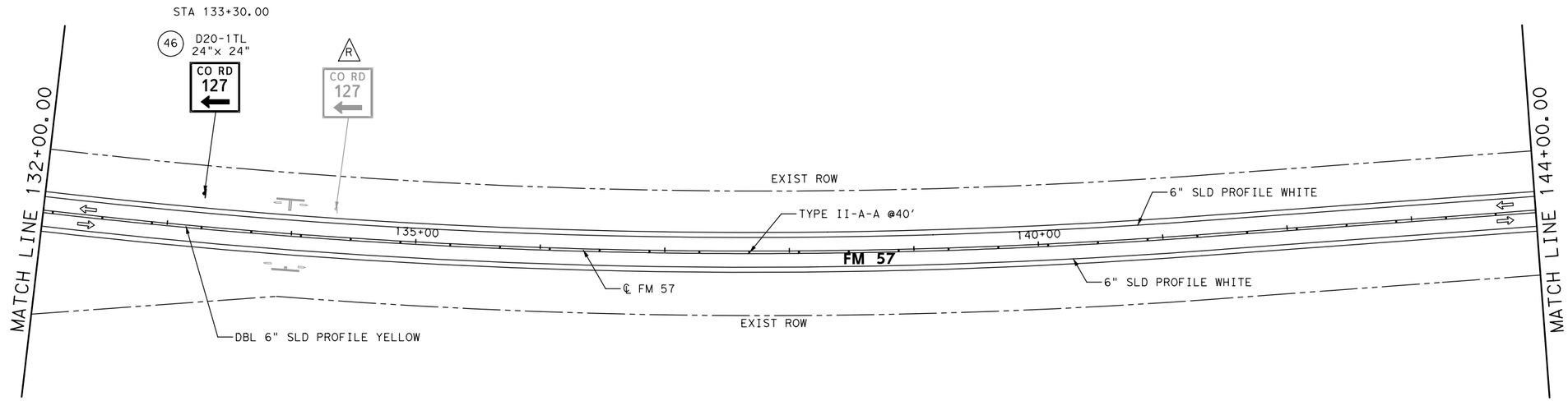
SIGNING AND PAVEMENT MARKING
STA 96+00 TO STA 120+00

SHEET 05 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	113
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:38:23 PM SCALE: 1:100





LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

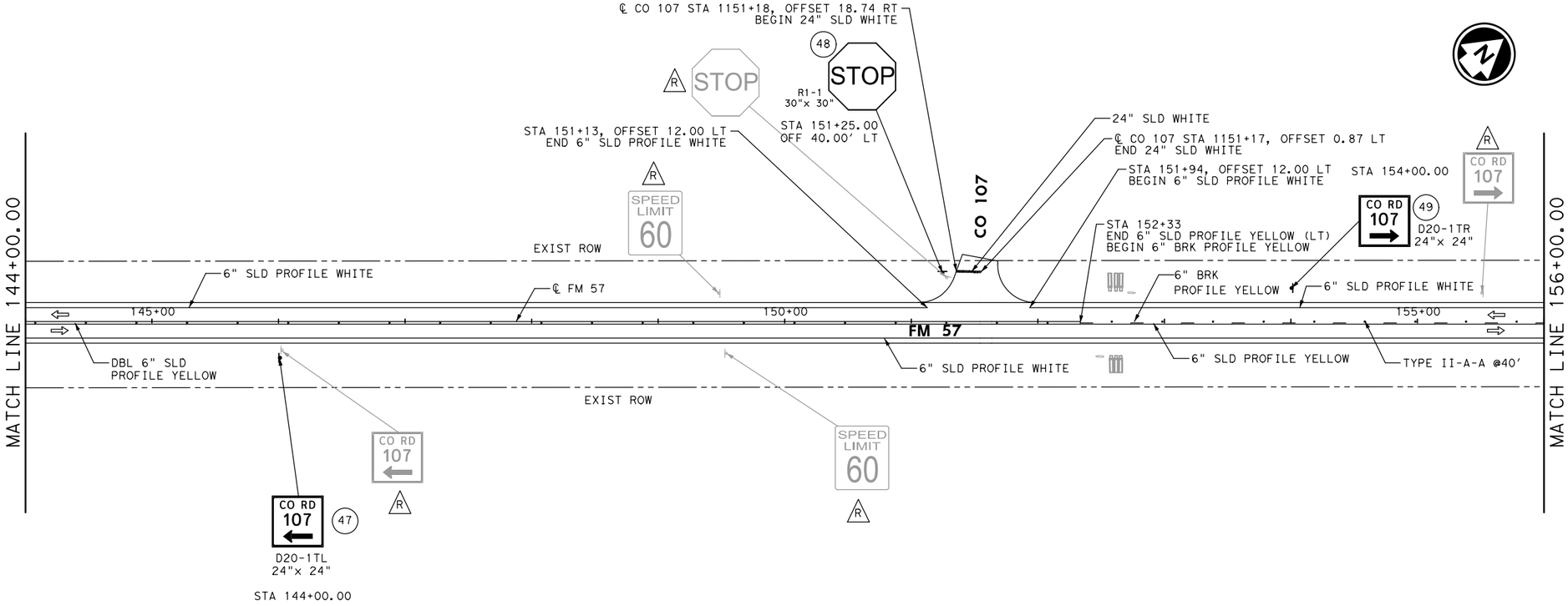
SH 70 TO PLUM CREEK

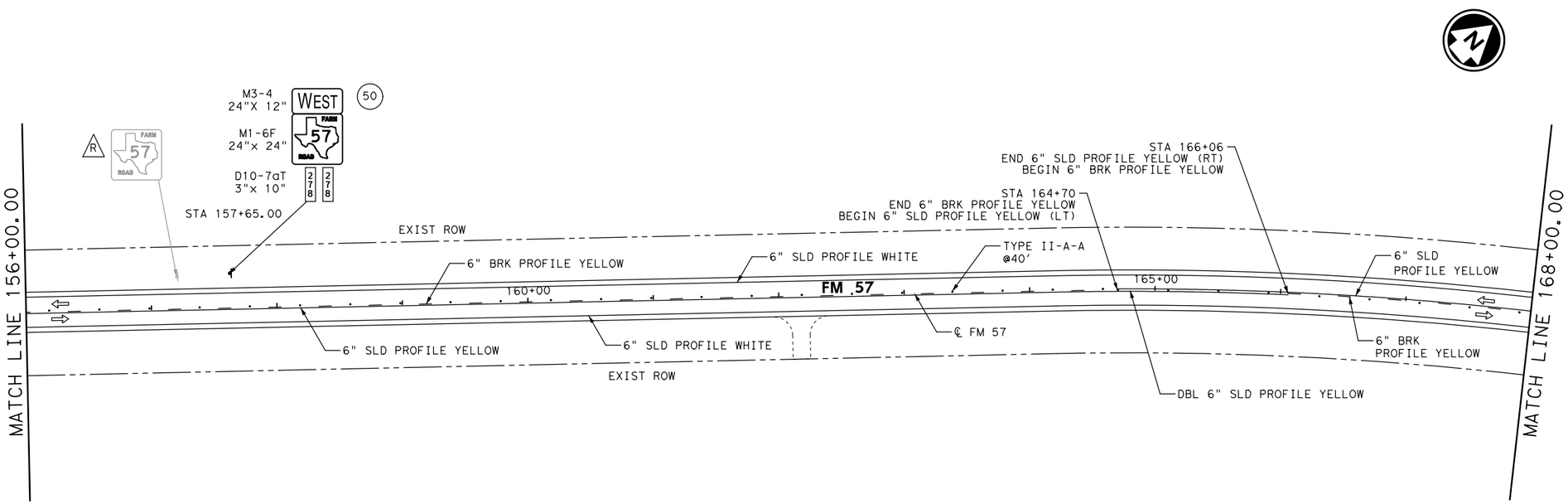
FM 57
SIGNING AND PAVEMENT MARKING
STA 120+00 TO STA 144+00

SHEET 06 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	114
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:38:29 PM SCALE: 1:100





LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

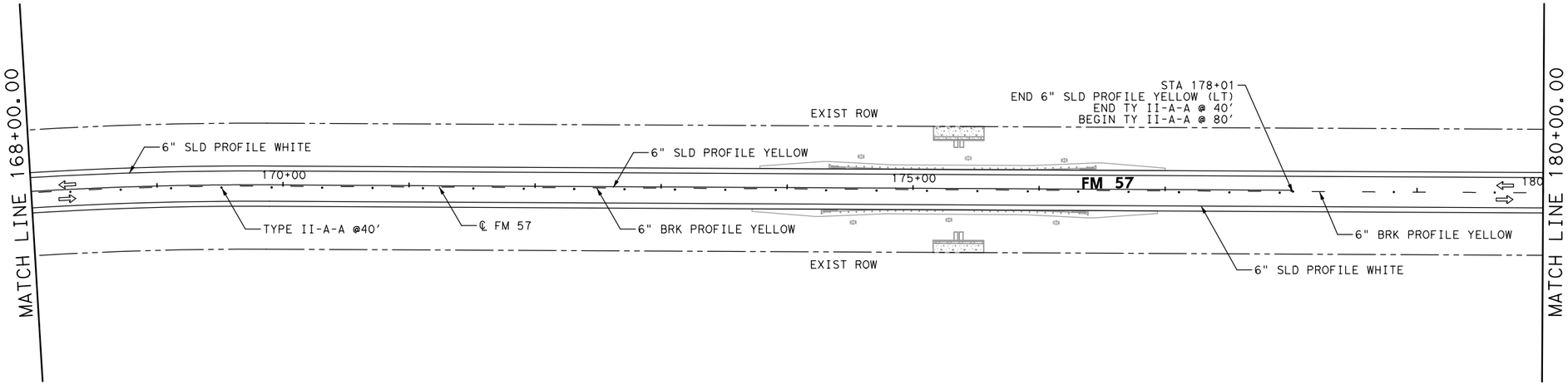
FM 57

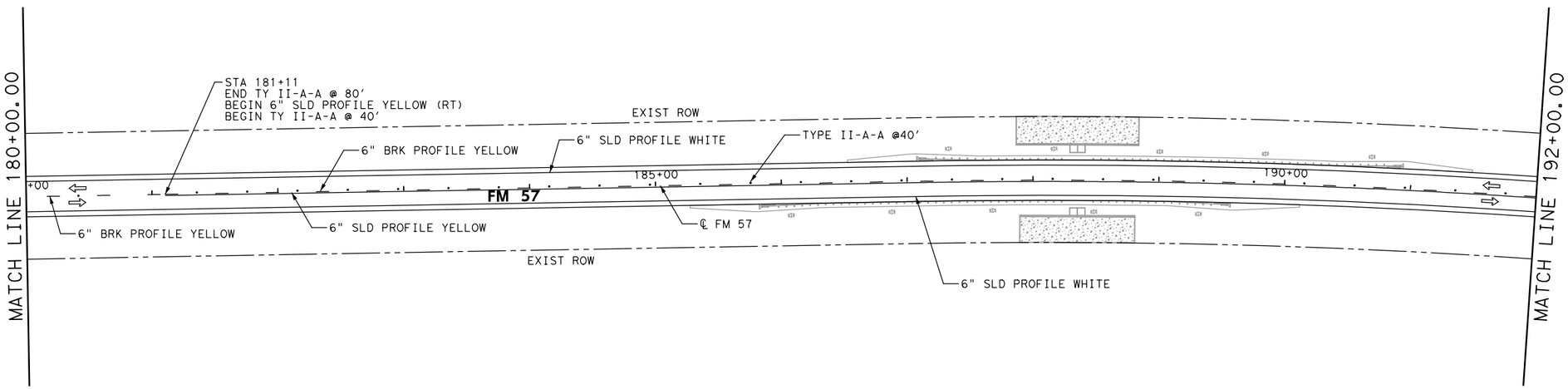
SIGNING AND PAVEMENT MARKING
STA 144+00 TO STA 168+00

SHEET 07 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	115
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:38:35 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

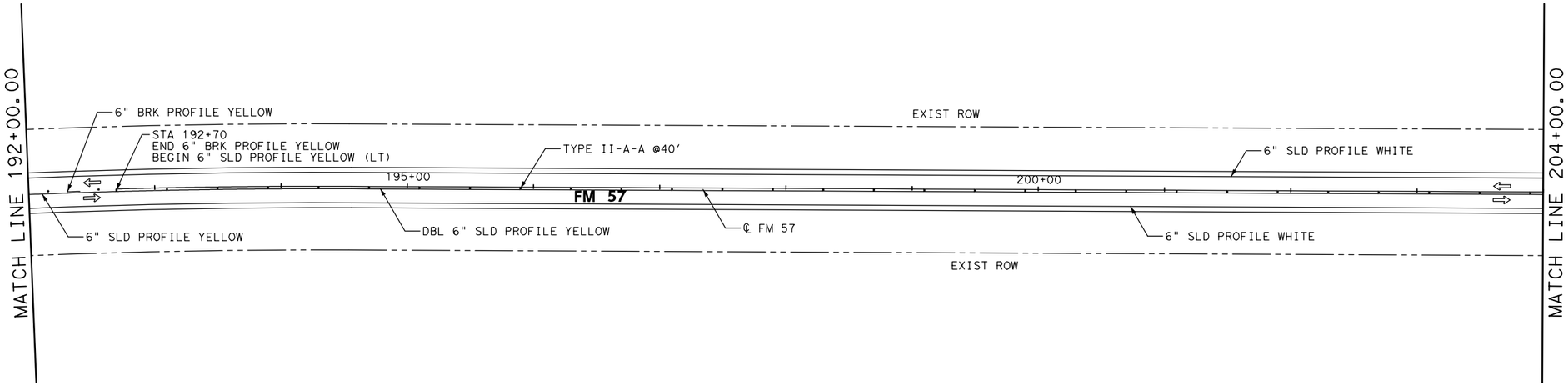
SH 70 TO PLUM CREEK

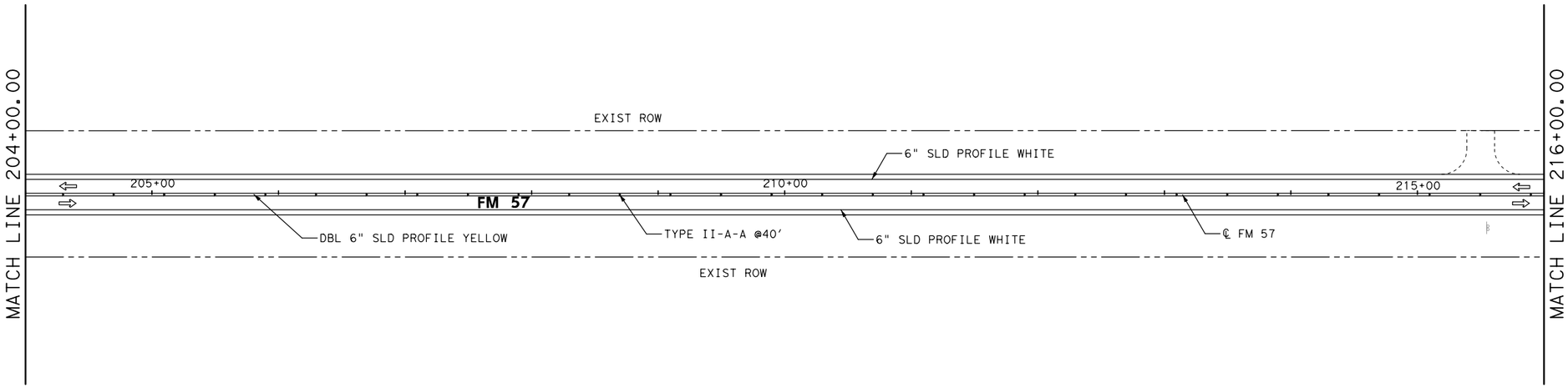
FM 57
SIGNING AND PAVEMENT MARKING
STA 168+00 TO STA 192+00

SHEET 08 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	116
CHECK IEI	CONTROL 0317	SECTION 01	JOB 043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:38:41 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

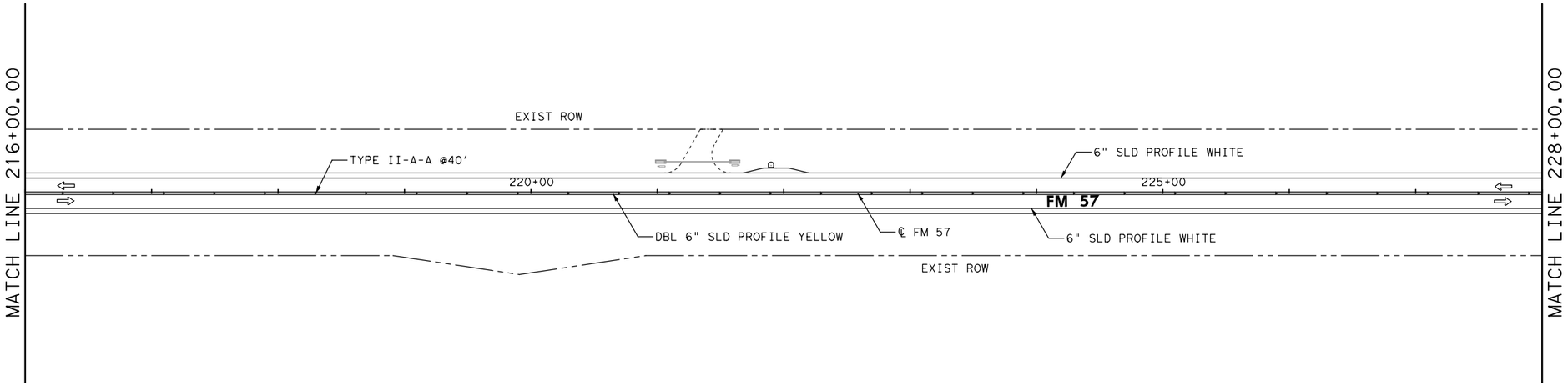
SH 70 TO PLUM CREEK

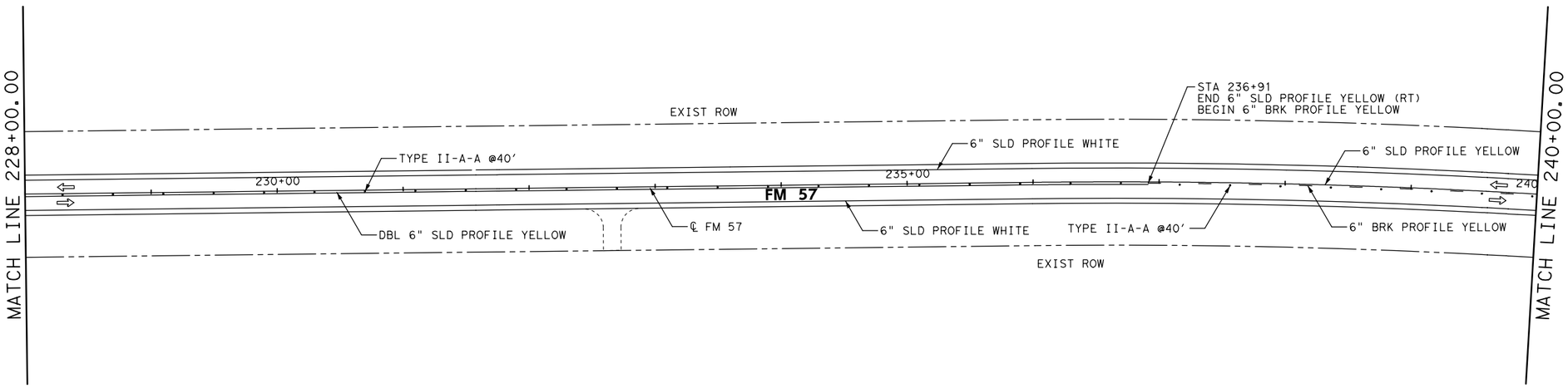
FM 57
SIGNING AND PAVEMENT MARKING
STA 192+00 TO STA 216+00

SHEET 09 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	117
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:38:47 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100





LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.

0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

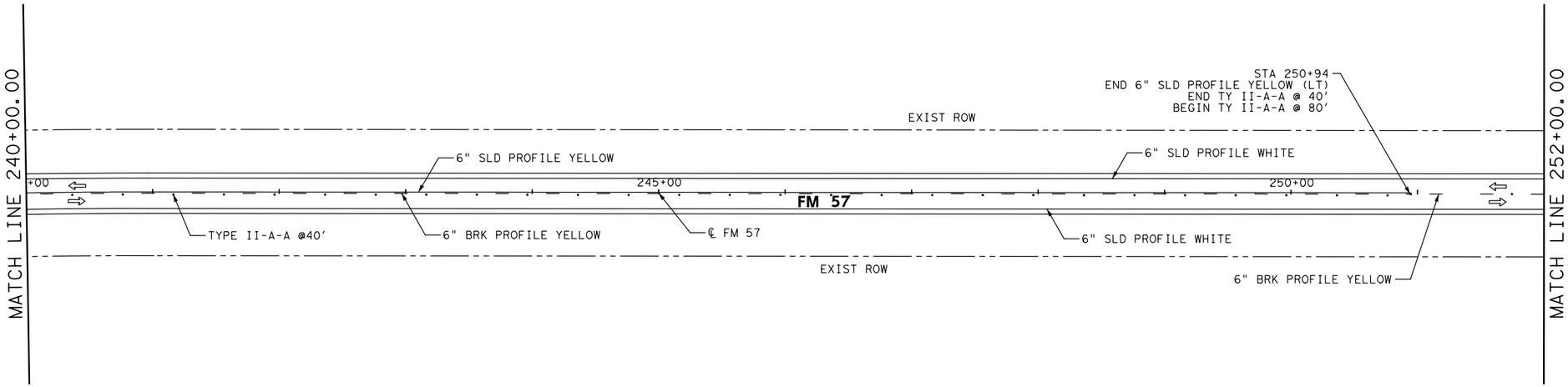
SH 70 TO PLUM CREEK

FM 57
SIGNING AND PAVEMENT MARKING
STA 216+00 TO STA 240+00

SHEET 10 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	118
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:38:53 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100

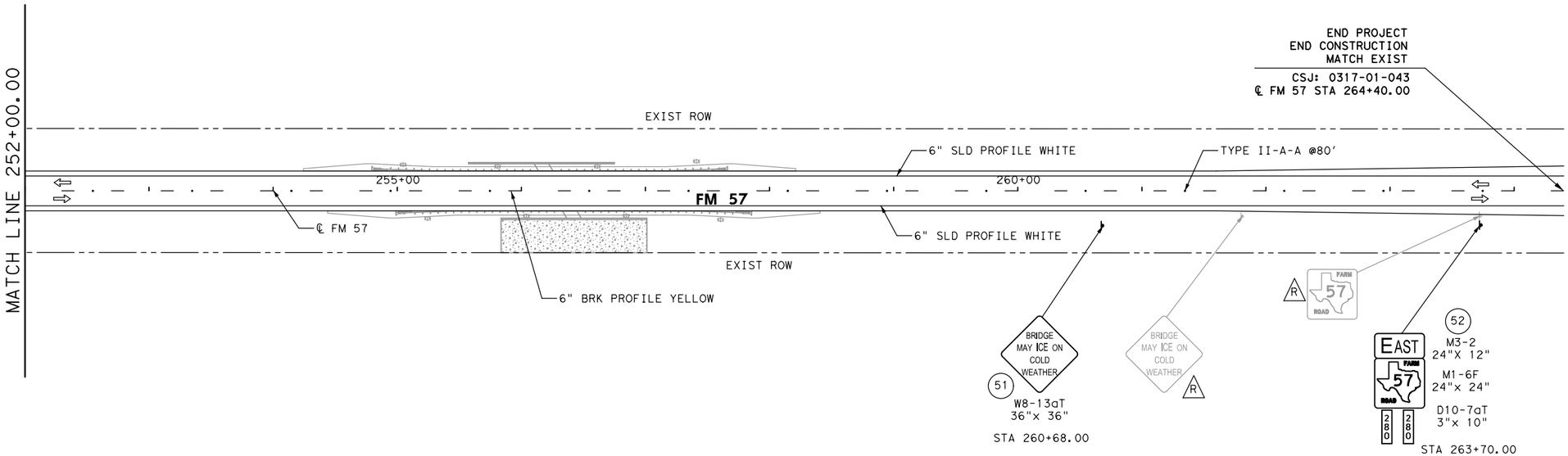


LEGEND:

- DIRECTION OF TRAFFIC
- EXISTING SIGN ASSEMBLY
- PROPOSED SIGN ASSEMBLY
- EXISTING BIDIRECTIONAL DELINEATOR
- EXISTING OM-2
- PROPOSED BIDIRECTIONAL DELINEATOR
- FLASHING CHEVRON (BIDIRECTIONAL)
- (X) PROPOSED SIGN NO.
- (R) EXISTING SIGN TO BE REMOVED

NOTES:

1. FOR EDGE LINE, INSTALL PROFILE EDGE LINE MARKINGS (OPTION 6). FOR CENTERLINE, INSTALL PROFILE CENTERLINE MARKINGS (OPTION 4).
2. REFER TO QUANTITY SUMMARY SHEETS FOR PAVEMENT MARKING TYPES.
3. ALL EXISTING DELINEATOR & OBJECT MARKERS TO REMAIN IN PLACE. ADJUST IF NECESSARY WITHOUT ANY ADDITIONAL PAY.



0 50 100
SCALE IN FEET

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

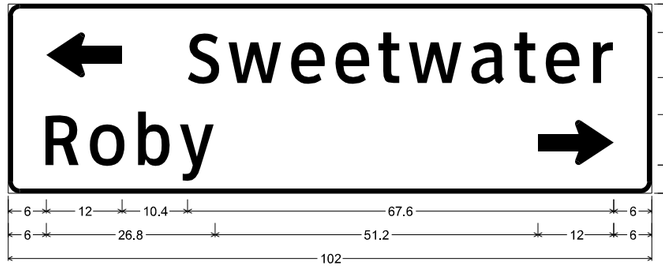
SH 70 TO PLUM CREEK

FM 57
SIGNING AND PAVEMENT MARKING
STA 240+00 TO END

SHEET 11 OF 11

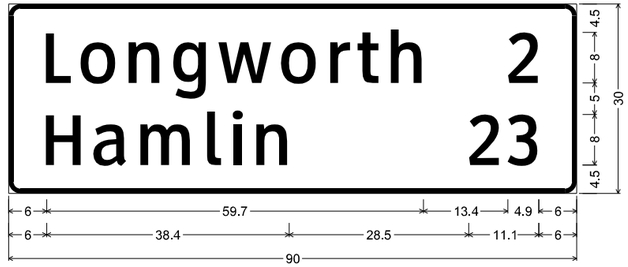
DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	119
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:38:59 PM SCALE: 1:100



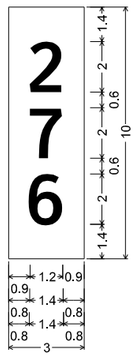
SIGN NO. 4

D1-2;
1.9" Radius, 0.8" Border, White on, Green;
Standard Arrow Custom 12.0" X 7.1" 180'; "Sweetwater" ClearviewHwy-3-W;
"Roby" ClearviewHwy-3-W; Standard Arrow Custom 12.0" X 7.1" 0';



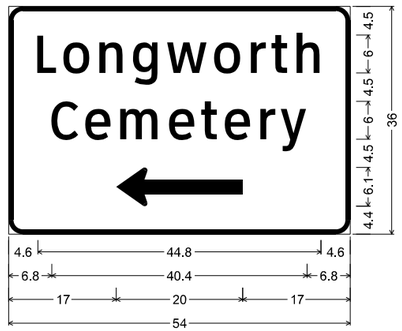
SIGN NO. 5

D2-2;
1.9" Radius, 0.8" Border, White on, Green;
"Longworth" ClearviewHwy-3-W; "Hamlin" ClearviewHwy-3-W; "2" ClearviewHwy-3-W;
"23" ClearviewHwy-3-W;



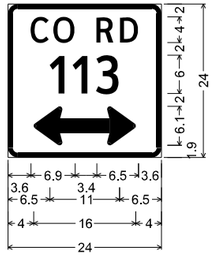
SIGN NO. 9

D10-7aT;
No border, White on, Green;
"2" ClearviewHwy-4-W;
"7" ClearviewHwy-4-W;
"6" ClearviewHwy-4-W;



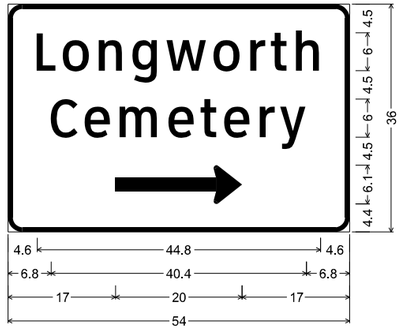
SIGN NO. 10

D3-3bTL;
2.3" Radius, 0.8" Border, White on, Green;
"Longworth" ClearviewHwy-3-W;
"Cemetery" ClearviewHwy-3-W;
Standard Arrow Custom 20.0" X 6.1" 180';



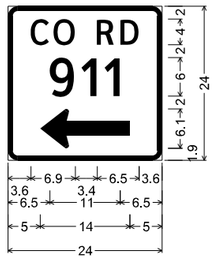
SIGN NO. 14, 19

D20-2T;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"113" ClearviewHwy-3-W;
Double Headed Arrow Custom - 16.0" 0';



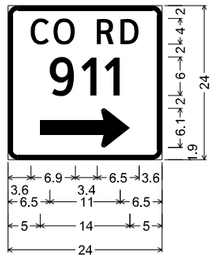
SIGN NO. 27

D3-3bTR;
2.3" Radius, 0.8" Border, White on, Green;
"Longworth" ClearviewHwy-3-W;
"Cemetery" ClearviewHwy-3-W;
Standard Arrow Custom 20.0" X 6.1" 0';



SIGN NO. 31

D20-1TL;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"911" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 180';

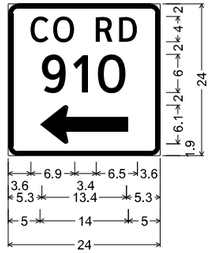


SIGN NO. 35

D20-1TR;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"911" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 0';

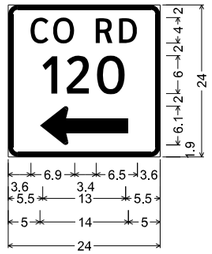
SIGN NO. 36

D1-1;
1.5" Radius, 0.5" Border, White on, Green;
Standard Arrow Custom 10.0" X 7.1" 90'; "Longworth" ClearviewHwy-3-W;



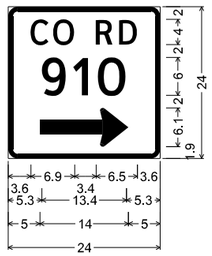
SIGN NO. 37

D20-1TL;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"910" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 180';



SIGN NO. 39

D20-1TL;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"120" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 180';



SIGN NO. 40

D20-1TR;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"910" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 0';

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 TIME: 1:39:05 PM SCALE: 1:100
USER: Rdos PENTABLE: FM57_REVISE.tbl

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

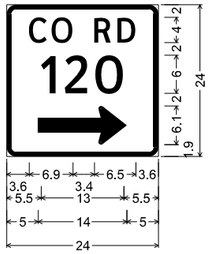
SH 70 TO PLUM CREEK

FM 57

SIGN DETAILS

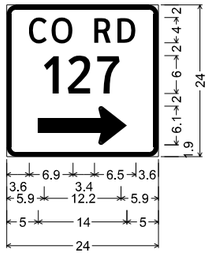
SHEET 01 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	120
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	



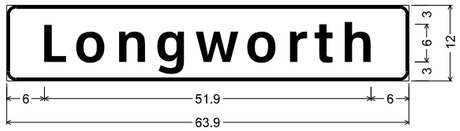
SIGN NO. 42

D20-1TR;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"120" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 0';



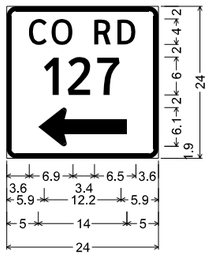
SIGN NO. 43

D20-1TR;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"127" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 0';



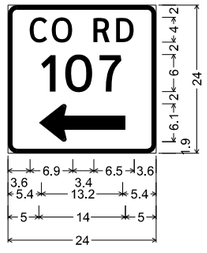
SIGN NO. 44

I-2cT;
1.5" Radius, 0.5" Border, White on, Green;
"Longworth" ClearviewHwy-5-W;



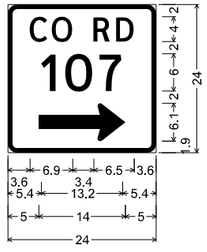
SIGN NO. 46

D20-1TL;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"127" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 180';



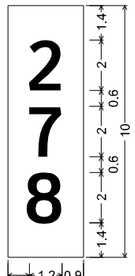
SIGN NO. 47

D20-1TL;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"107" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 180';



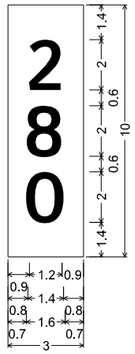
SIGN NO. 49

D20-1TR;
1.5" Radius, 0.8" Border, White on, Green;
"CO RD" ClearviewHwy-3-W;
"107" ClearviewHwy-3-W;
Standard Arrow Custom 14.0" X 6.1" 0';



SIGN NO. 50

D10-7aT;
No border, White on, Green;
"2" ClearviewHwy-4-W;
"7" ClearviewHwy-4-W;
"8" ClearviewHwy-4-W;



SIGN NO. 52

D10-7aT;
No border, White on, Green;
"2" ClearviewHwy-4-W;
"8" ClearviewHwy-4-W;
"0" ClearviewHwy-4-W;

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

SH 70 TO PLUM CREEK

FM 57

SIGN DETAILS

SHEET 02 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	121
CHECK IEI	CONTROL 0317	SECTION 01	JOB 043	

SUMMARY OF SMALL SIGNS

SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	POST TYPE FRP = Fiberglass TWT = Thin-Wall 10BWG = 10 BWG S80 = Sch 80	POSTS 1 or 2	ANCHOR TYPE UA=Universal Conc UB=Universal Bolt SA=Slipbase-Conc SB=Slipbase-Bolt WS=Wedge Steel WP=Wedge Plastic	MOUNTING DESIGNATION PREFABRICATED P = "Plain" T = "T" U = "U"	MOUNTING DESIGNATION 1EXT or 2EXT = # of Ext BM = Extruded Wind Beam WC = 1.12 #/ft Wing Channel EXAL= Extruded Alum Sign Panels	NOTE
1 OF 11 (FM 57)	1	R1-1	STOP	48X48	X		10BWG	1	SA	T		
	2	M3-2	EAST	24X12	X		10BWG	1	SA	P		
		M1-6F	FM 57	24X24	X							
	3	R2-1	SPEED LIMIT 60	30X36	X		10BWG	1	SA	P		
	4	D1-2	← Sweetwater Roby →	102X30	X		S80	1	SA	T	2EXT	
	5	D2-2	Longworth 2 Hamlin 23	90X30	X		S80	1	SA	T		
	6	W3-1	STOP AHEAD	36X36	X		10BWG	1	SA	T		
2 OF 11 (FM 57)	7	M2-1	JCT	21X15	X		10BWG	1	SA	P		
		M1-6T	TEXAS 70	24X24	X							
	8	W2-1aT	HIGHWAY INTERSECTION AHEAD	48X48	X		10BWG	1	SA	T		
3 OF 11 (FM 57)	9	M3-2	EAST	24X12	X		10BWG	1	SA	P		
		M1-6F	FM 57	24X24	X							
		D10-7aT	TRM (276)	3X10	X							
		D10-7aT	TRM (276)	3X10	X							
	10	D3-3bTL	Longworth Cemetery ←	54X36	X		S80	1	SA	T		
4 OF 11 (FM 57)	11	R2-1	SPEED LIMIT 60	30x36	X		10BWG	1	SA	P		
	12	R2-1	SPEED LIMIT 60	30x36	X		10BWG	1	SA	P		
	13	W1-13L	LEFT TRUCT ROLLOVER	36x36	X		10BWG	1	SA	P		
	14,19	D20-2T	CO RD 113 ↔	24X24	X		10BWG	1	SA	P		
	14A	W1-2L	LEFT CURVE	48X48	X		FLASHING BEACON MOUNTED					
		W13-P	ADVISORY SPEED LIMIT 40	30X30								
	15,16	R1-1	STOP	30X30	X		10BWG	1	SA	P		
	17	W1-8L	LEAD LED CHEVRON	24x30	X		10BWG	1	SA	P		
		W1-8R	LED CHEVRON	24x30	X							
	18, 20-26, 28	W1-8L	LED BI-DIRECTIONAL CHEVRON	24x30	X		10BWG	1	SA	P		
		W1-8R	LED BI-DIRECTIONAL CHEVRON	24x30	X							
	27	D3-3bTR	Longworth Cemetery →	54X36	X		S80	1	SA	T		
	29	W1-8L	LED CHEVRON	24x30	X		10BWG	1	SA	P		
		W1-8R	LEAD LED CHEVRON	24x30	X							
	29A	W1-2R	RIGHT CURVE	48X48	X		FLASHING BEACON MOUNTED					
		W13-1P	ADVISORY SPEED LIMIT 40	30X30	X							

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.080"
7.5 to 15	0.100"
Greater than 15	0.125"

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

http://www.txdot.gov/

NOTE:

1. Sign supports shall be located as shown on the plans, except that the Engineer may shift the sign supports, within design guidelines, where necessary to secure a more desirable location or to avoid conflict with utilities. Unless otherwise shown on the plans, the Contractor shall stake and the Engineer will verify all sign support locations.
2. For installation of bridge mount clearance signs, see Bridge Mounted Clearance Sign Assembly (BMCS)Standard Sheet.
3. For Sign Support Descriptive Codes, see Sign Mounting Details Small Roadside Signs General Notes & Details SMD(GEN).

PLOT DRIVER: PDF_H_G.pltcfg DATE: 11/29/2023 USER: Rdos
PENTABLE: FM57_REVISE.tbl TIME: 1:39:17 PM SCALE: 1:100

ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

SUMMARY OF SMALL SIGNS

SHEET 01 OF 02

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	122
CHECK IEI	CONTROL 0317	SECTION 01	JOB 043	

SUMMARY OF SMALL SIGNS

SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	POST TYPE FRP = Fiberglass TWT = Thin-Wall 10BWG = 10 BWG S80 = Sch 80	POSTS 1 or 2	ANCHOR TYPE UA=Universal Conc UB=Universal Bolt SA=Slipbase-Conc SB=Slipbase-Bolt WS=Wedge Steel WP=Wedge Plastic	MOUNTING DESIGNATION PREFABRICATED P = "Plain" T = "T" U = "U"	1EXT or 2EXT = # of Ext BM = Extruded Wind Beam WC = 1.12 #/ft Wing Channel EXAL= Extruded Alum Sign Panels	NOTE
5 OF 11 (FM 57)	30	W1-13R	RIGHT TRUCK ROLLOVER	36X36	X		10BWG	1	SA	P		
	31	D20-1TL	CO RD 911 ←	24X24	X		10BWG	1	SA	P		
	32	R2-1	SPEED LIMIT 60	30x36	X		10BWG	1	SA	P		
	33	R2-1	SPEED LIMIT 60	30x36	X		10BWG	1	SA	P		
	34,38,41	R1-1	STOP	30X30	X		10BWG	1	SA	P		
	35	D20-1TR	CO RD 911 →	24X24	X		10BWG	1	SA	P		
	36	D1-1	↑ Longworth	90X18	X		S80	1	SA	T		
	37	D20-1TL	CO RD 910 ←	24X24	X		10BWG	1	SA	P		
	39	D20-1TL	CO RD 120 ←	24X24	X		10BWG	1	SA	P		
	40	D20-1TR	CO RD 910 →	24X24	X		10BWG	1	SA	P		
6 OF 11 (FM 57)	42	D20-1TR	CO RD 120 →	24X24	X		10BWG	1	SA	P		
	43	D20-1TR	CO RD 127 →	24X24	X		10BWG	1	SA	P		
	44	I-2cT	Longworth	64X12	X		10BWG	1	SA	T		
	45	R1-1	STOP	30X30	X		10BWG	1	SA	P		
	46	D20-1TL	CO RD 127 ←	24X24	X		10BWG	1	SA	P		
7 OF 11 (FM 57)	47	D20-1TL	CO RD 107 ←	24X24	X		10BWG	1	SA	P		
	48	R1-1	STOP	30X30	X		10BWG	1	SA	P		
	49	D20-1TR	CO RD 107 →	24X24	X		10BWG	1	SA	P		
	50	M3-4	WEST	24X12	X		10BWG	1	SA	P		
		M1-6F	FM 57	24X24	X							
		D10-7aT	TRM (278)	3X10	X							
		D10-7aT	TRM (278)	3X10	X							
11 OF 11 (FM 57)	51	W8-13aT	BRIDGE MAY ICE ON COLD WEATHER	36X36	X		10BWG	1	SA	P		
	52	M3-2	EAST	24X12	X		10BWG	1	SA	P		
		M1-6F	FM 57	24X24	X							
		D10-7aT	TRM (280)	3X10	X							
		D10-7aT	TRM (280)	3X10	X							

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.080"
7.5 to 15	0.100"
Greater than 15	0.125"

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

http://www.txdot.gov/

NOTE:

1. Sign supports shall be located as shown on the plans, except that the Engineer may shift the sign supports, within design guidelines, where necessary to secure a more desirable location or to avoid conflict with utilities. Unless otherwise shown on the plans, the Contractor shall stake and the Engineer will verify all sign support locations.
2. For installation of bridge mount clearance signs, see Bridge Mounted Clearance Sign Assembly (BMCS)Standard Sheet.
3. For Sign Support Descriptive Codes, see Sign Mounting Details Small Roadside Signs General Notes & Details SMD(GEN).

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdas
DATE: 11/29/2023
TIME: 1:39:21 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:100

STATE OF TEXAS
ZAHIDUL Q. SIDDIQUE
98635
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

SH 70 TO PLUM CREEK

FM 57

SUMMARY OF SMALL SIGNS

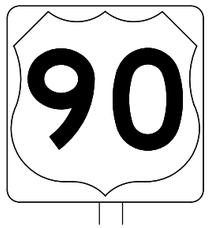
SHEET 02 OF 02

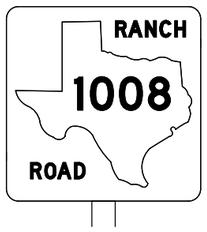
DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	123
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

DATE: 11/29/2023 1:39:25 PM
FILE: 1_tsr3-13.dgn

REQUIREMENTS FOR INDEPENDENT MOUNTED ROUTE SIGNS

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE A SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & BORDERS	ALL OTHERS	TYPE B or C SHEETING

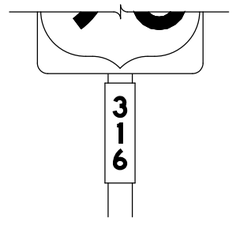


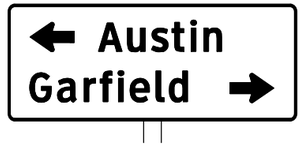


TYPICAL EXAMPLES

REQUIREMENTS FOR BLUE, BROWN & GREEN D AND I SERIES GUIDE SIGNS

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	ALL	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE D SHEETING
LEGEND, SYMBOLS & BORDERS	ALL OTHERS	TYPE B OR C SHEETING





TYPICAL EXAMPLES

GENERAL NOTES

1. Signs to be furnished shall be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).

2. White legend shall use the Clearview Alphabet. The following Clearview fonts shall be used to replace the existing white Federal Highway Administration (FHWA) Standard Highway Alphabets, when not specified in the SHSD, or in the plans.

B	CV-1W
C	CV-2W
D	CV-3W
E	CV-4W
Emod	CV-5WR
F	CV-6W

3. Route sign legend (ie. IH, US, SH and FM shields) shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets B, C, D, E, Emod or F).

4. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legend shall provide a balanced appearance when spacing is not shown.

5. Independent mounted route sign with white or colored legend and borders shall be applied by screening process with transparent color ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof. White legend, symbols and borders on all other signs shall be cut-out white sheeting applied to colored background sheeting.

6. Information regarding borders and radii for signs is found in the "Standard Highway Sign Designs for Texas". Dimensions shown and described for borders and corner radii on parent sign are nominal. Borders may vary in width as much as 1/2 inch. Corner radii above 3 inches may vary in width as much as 1 inch. Borders and corner radii within a parent sign must be of matching widths. The sign area outside the corner radius should be trimmed or rounded.

7. Sign substrate shall be any material that meets the Departmental Material Specification requirements of DMS-7110 or approved alternative.

8. Mounting details of roadside signs are shown in the "SMD series" Standard Plan Sheets.

DEPARTMENTAL MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

http://www.txdot.gov/

Texas Department of Transportation

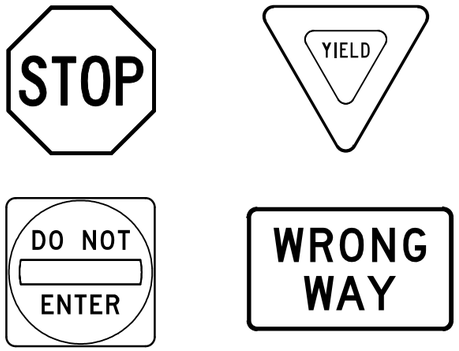
Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

TSR(3)-13

FILE: tsr3-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	ABL	FISHER		124

REQUIREMENTS FOR RED BACKGROUND REGULATORY SIGNS
(STOP, YIELD, DO NOT ENTER AND WRONG WAY SIGNS)



REQUIREMENTS FOR FOUR SPECIFIC SIGNS ONLY

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	WHITE	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE B OR C SHEETING
LEGEND	RED	TYPE B OR C SHEETING

REQUIREMENTS FOR WHITE BACKGROUND REGULATORY SIGNS
(EXCLUDING STOP, YIELD, DO NOT ENTER AND WRONG WAY SIGNS)

TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND, BORDERS AND SYMBOLS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND, BORDERS AND SYMBOLS	ALL OTHER	TYPE B OR C SHEETING

GENERAL NOTES

1. Signs to be furnished shall be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Sign legend shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legend shall provide a balanced appearance when spacing is not shown.
4. Black legend and borders shall be applied by screening process or cut-out acrylic non-reflective black film to background sheeting, or combination thereof.
5. White legend and borders shall be applied by screening process with transparent colored ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof.
6. Colored legend shall be applied by screening process with transparent colored ink, transparent colored overlay film or colored sheeting to background sheeting, or combination thereof.
7. Sign substrate shall be any material that meets the Departmental Material Specification requirements of DMS-7110 or approved alternative.
8. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.

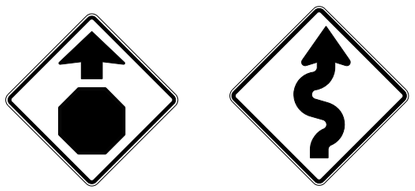
ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

DEPARTMENTAL MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

http://www.txdot.gov/

REQUIREMENTS FOR WARNING SIGNS



TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	FLOURESCENT YELLOW	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & SYMBOLS	ALL OTHER	TYPE B OR C SHEETING

REQUIREMENTS FOR SCHOOL SIGNS

TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	FLOURESCENT YELLOW GREEN	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND, BORDERS AND SYMBOLS	BLACK	ACRYLIC NON-REFLECTIVE FILM
SYMBOLS	RED	TYPE B OR C SHEETING

Texas Department of Transportation

Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

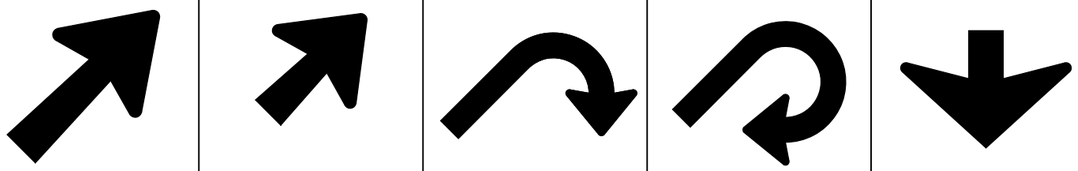
TSR(4)-13

FILE: tsr4-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		125

DATE: 11/29/2023 1:39:30 PM
FILE: 2_tsr4-13.dgn

ARROW DETAILS

for Large Ground-Mounted and Overhead Guide Signs



Type A | Type B | E-3 | E-4 | Down Arrow

TYPE	LETTER SIZE	USE
A-1	10.67" U/L and 10" Caps	Single Lane Exits
A-2	13.33" U/L and 12" Caps	
A-3	16" & 20" U/L	
B-1	10.67" U/L and 10" Caps	Multiple Lane Exits
B-2	13.33" U/L and 12" Caps	
B-3	16" & 20" U/L	

CODE	USED ON SIGN NO.
E-3	E5-1aT
E-4	E5-1bT

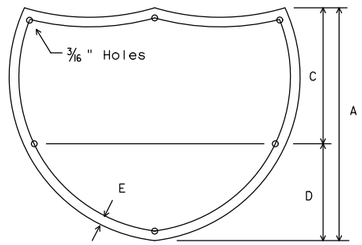
NOTE

Arrow dimensions are shown in the "Standard Highway Sign Designs for Texas" manual.

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

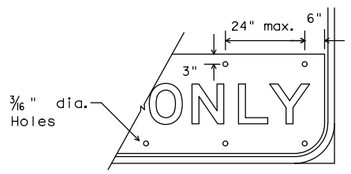
http://www.txdot.gov/

SIGN BLANK PUNCHING DETAILS FOR ATTACHMENTS WHEN SPECIFIED TO BE TYPE A ALUMINUM SIGNS (FOR MOUNTING TO GUIDE SIGN FACE)

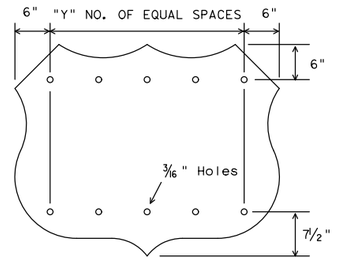


INTERSTATE ROUTE MARKERS

A	C	D	E
36	21	15	1 1/2
48	28	20	1 3/4

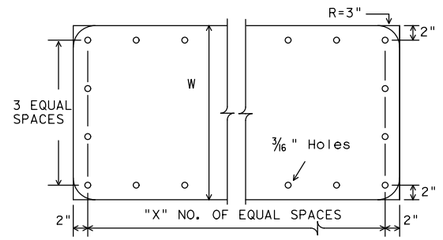


EXIT ONLY PANEL



U.S. ROUTE MARKERS

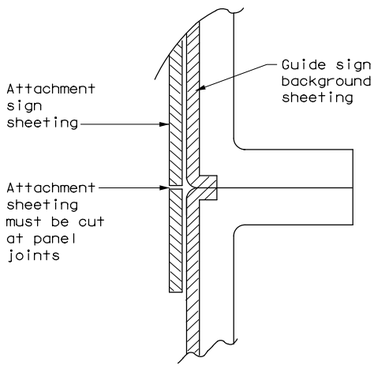
Sign Size	"Y"
24x24	2
30x24	3
36x36	3
45x36	4
48x48	4
60x48	5



STATE ROUTE MARKERS

No. of Digits	W	X
4	24	4
4	36	5
4	48	6
3	24	3
3	36	4
3	48	5

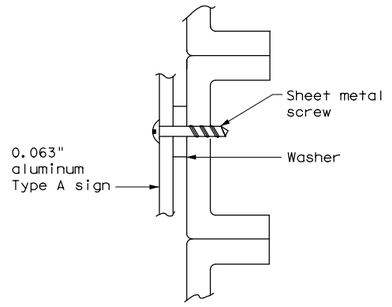
MOUNTING DETAILS OF ATTACHMENTS TO GUIDE SIGN FACE ("EXIT ONLY" AND "LEFT EXIT" PANELS, ROUTE MARKERS AND OTHER ATTACHMENTS)



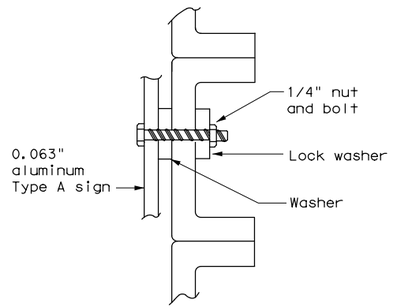
DIRECT APPLIED ATTACHMENT

NOTE:

1. Sheeting for legend, symbols, and borders must be cut at panel joints.
2. Direct applied attachment signs will be subsidiary to "Aluminum Signs" or "Fiberglass Signs".



SCREW ATTACHMENT



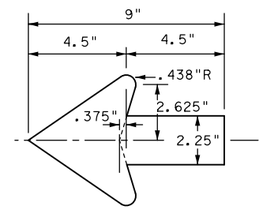
NUT/BOLT ATTACHMENT

NOTE:

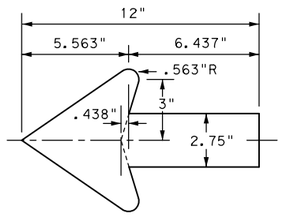
Furnish Type A aluminum sign attachments only when specified in the plans. These signs will be paid for under "Aluminum Signs".

ARROW DETAILS

for Destination Signs (Type D)



Standard arrow to be used with 6 inch letters.



Standard arrow to be used with 8 inch letters.

Texas Department of Transportation

Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

TSR(5)-13

FILE: tsr5-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	ABL	FISHER		126

5

DATE: 11/29/2023 1:39:35 PM
FILE: 3_tsr5-13.dgn

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

SIGN SUPPORT DESCRIPTIVE CODES

(Descriptive Codes correspond to project estimate and quantities sheets)

SM RD SGN ASSM TY XXXXX(X)XX(X-XXXX)

Post Type

FRP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))
TWT = Thin-Walled Tubing (see SMD(TWT))
10BWG = 10 BWG Tubing (see SMD(SLIP-1) to (SLIP-3))
S80 = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

Number of Posts (1 or 2)

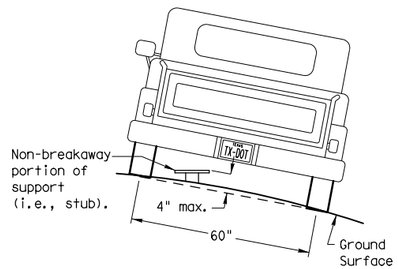
Anchor Type

UA = Universal Anchor - Concreted (see SMD(FRP) and (TWT))
UB = Universal Anchor - Bolted down (see SMD(FRP) and (TWT))
WS = Wedge Anchor Steel - (see SMD(TWT))
WP = Wedge Anchor Plastic (see SMD(TWT))
SA = Slipbase - Concreted (see SMD(SLIP-1) to (SLIP-3))
SB = Slipbase - Bolted Down (see SMD(SLIP-1) to (SLIP-3))

Sign Mounting Designation

P = Prefab. "Plain" (see SMD(SLIP-1) to (SLIP-3), (TWT), (FRP))
T = Prefab. "T" (see SMD(SLIP-1) to (SLIP-3), (TWT))
U = Prefab. "U" (see SMD(SLIP-1) to (SLIP-3))
IF REQUIRED
1EXT or 2EXT = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TWT))
BM = Extruded Wind Beam (see SMD(SLIP-1) to (SLIP-3))
WC = 1.12 #/ft Wing Channel (see SMD(SLIP-1) to (SLIP-3))
EXAL = Extruded Aluminum Sign Panels (see SMD(SLIP-1))

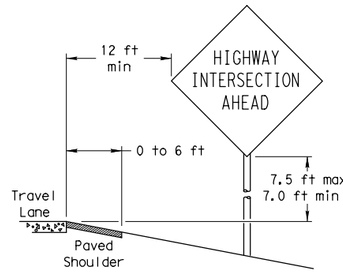
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel paths).

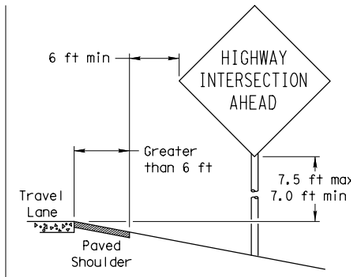
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

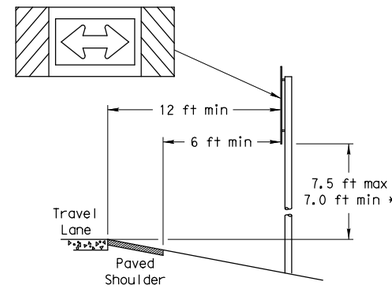
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



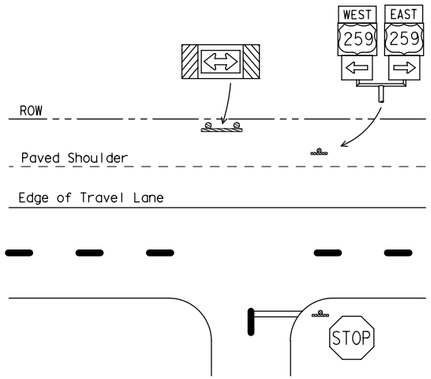
GREATER THAN 6 FT. WIDE

When the shoulder is greater than 6 ft in width, the sign must be placed at least 6 ft. from the edge of the shoulder.

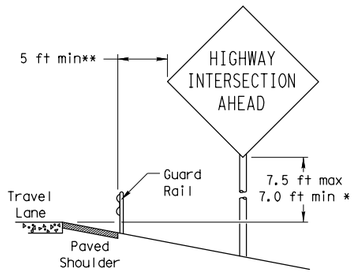
T-INTERSECTION



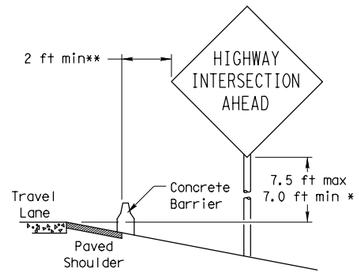
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



BEHIND BARRIER



BEHIND GUARDRAIL



BEHIND CONCRETE BARRIER

**Sign clearance based on distance required for proper guard rail or concrete barrier performance.

* Signs shall be mounted using the following condition that results in the greatest sign elevation:

(1) a minimum of 7 to a maximum of 7.5 feet above the edge of the travel lane or

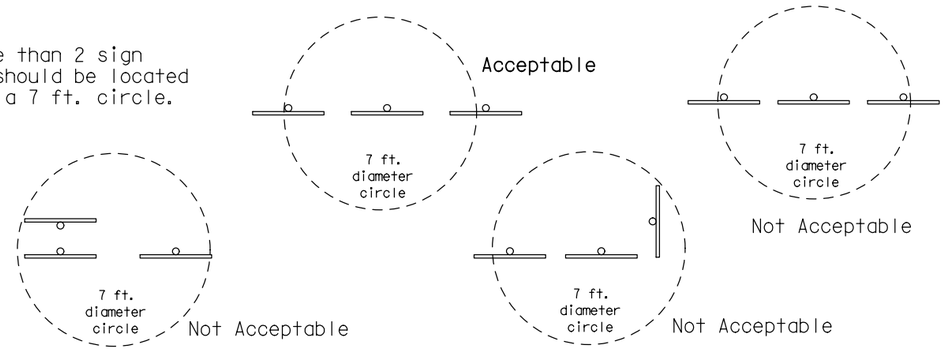
(2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

The maximum values may be increased when directed by the Engineer.

See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.

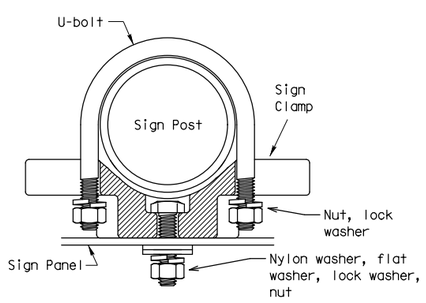
The website address is:
http://www.txdot.gov/publications/traffic.htm

No more than 2 sign posts should be located within a 7 ft. circle.

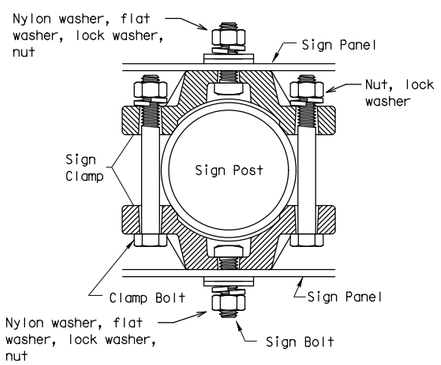


TYPICAL SIGN ATTACHMENT DETAIL

Single Signs



Back-to-Back Signs



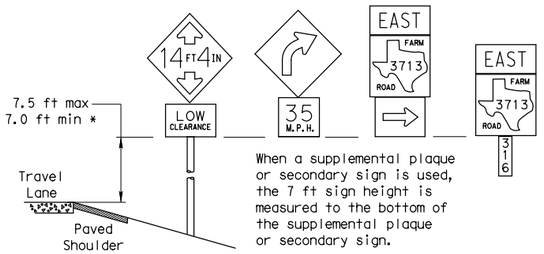
Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

Sign clamps may be either the specific size clamp or the universal clamp.

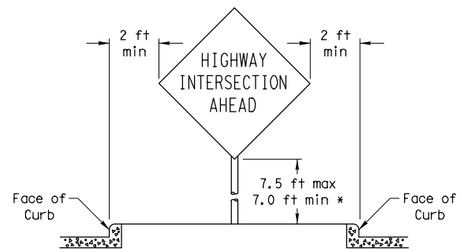
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



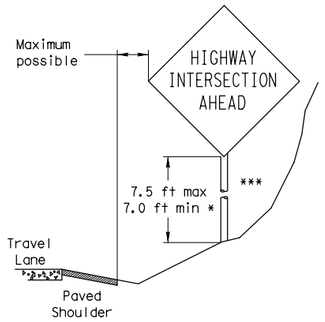
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

CURB & GUTTER OR RAISED ISLAND



RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

SMD(GEN)-08

REVISIONS
9-08

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

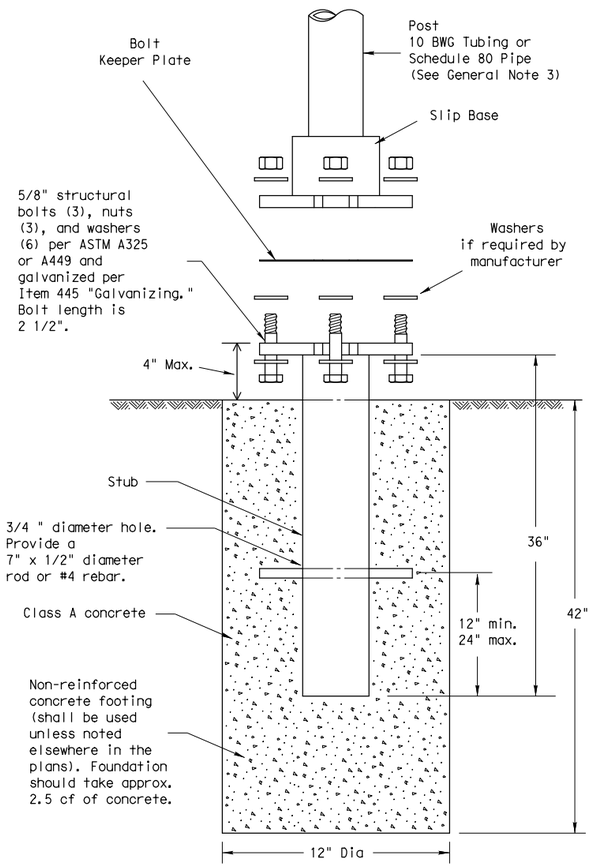
CONT	SECT	JOB	HIGHWAY
0317	01	043	FM 57

DIST	COUNTY	SHEET NO.
ABL	FISHER	127

26A

DATE: 11/29/2023 1:39:40 PM
FILE: 4*smdgen.dgn

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. http://www.txdot.gov/business/producer_list.htm The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

1. Slip base shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
2. Material used as post with this system shall conform to the following specifications:
   10 BWG Tubing (2.875" outside diameter)
   - 0.134" nominal wall thickness
   - Seamless or electric-resistance welded steel tubing or pipe
   - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   - Other steels may be used if they meet the following:
     - 55,000 PSI minimum yield strength
     - 70,000 PSI minimum tensile strength
     - 20% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
   - Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
   - Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.

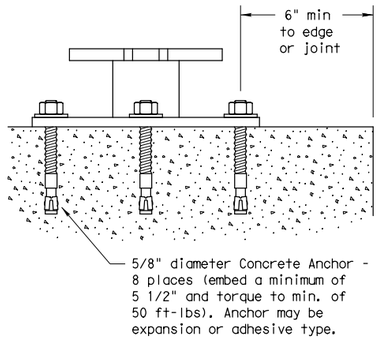
   Schedule 80 Pipe (2.875" outside diameter)
   - 0.276" nominal wall thickness
   - Steel tubing per ASTM A500 Gr C
   - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
     - 46,000 PSI minimum yield strength
     - 62,000 PSI minimum tensile strength
     - 21% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
   - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
   - Galvanization per ASTM A123
3. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: http://www.txdot.gov/publications/traffic.htm
4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation
1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
3. Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
4. Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
5. The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support
1. Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be plumb and straight.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

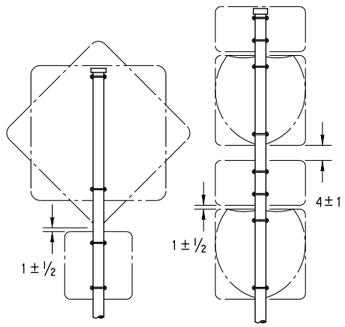
REVISIONS
9-08

CONT	SECT	JOB	HIGHWAY
0317	01	043	FM 57

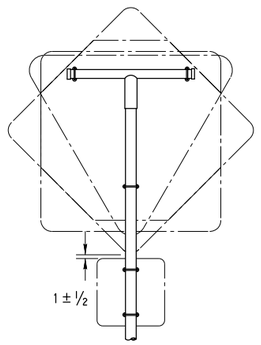
DIST	COUNTY	SHEET NO.
ABL	FISHER	128

DATE: 11/29/2023 1:39:45 PM
FILE: 5*smds1.dgn

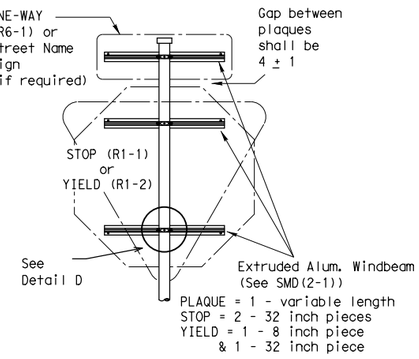
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



SM RD SGN ASSM TY XXXXX(1)XX(P)

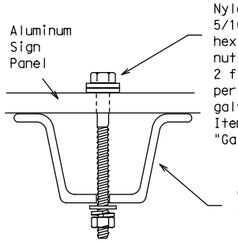


SM RD SGN ASSM TY XXXXX(1)XX(T)



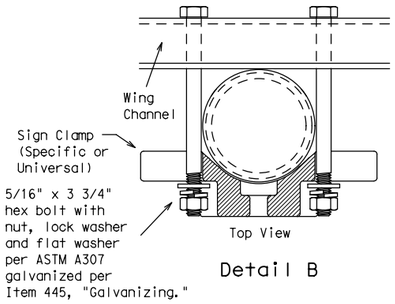
PLAQUE = 1 - variable length
STOP = 2 - 32 inch pieces
YIELD = 1 - 8 inch piece
& 1 - 32 inch piece

SM RD SGN ASSM TY XXXXX(1)XX(P-BM)



Top View

Detail A



Top View

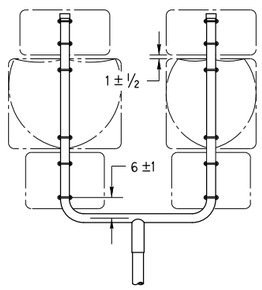
Detail B

GENERAL NOTES:

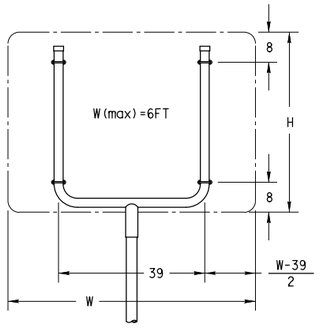
1.

SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

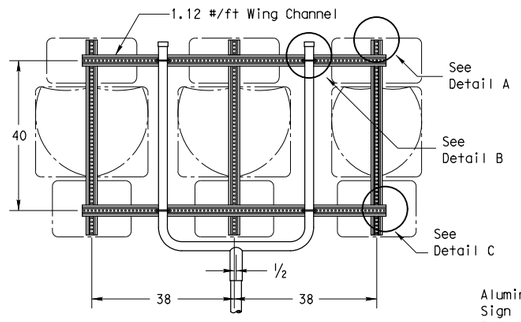
2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
11. Additional sign clamp required on the "T-bracket" post for 24 inch height signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.
13. Sign blanks shall be the sizes and shapes shown on the plans.



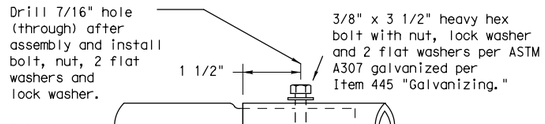
SM RD SGN ASSM TY XXXXX(1)XX(U)



SM RD SGN ASSM TY XXXXX(1)XX(U)

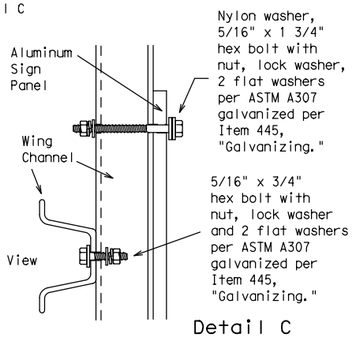


SM RD SGN ASSM TY XXXXX(1)XX(U-WC)
(See Note 11)

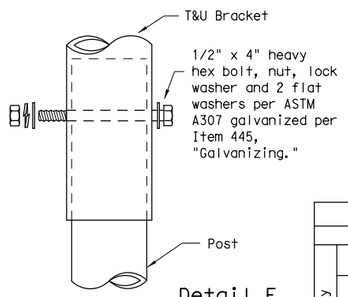


Detail F

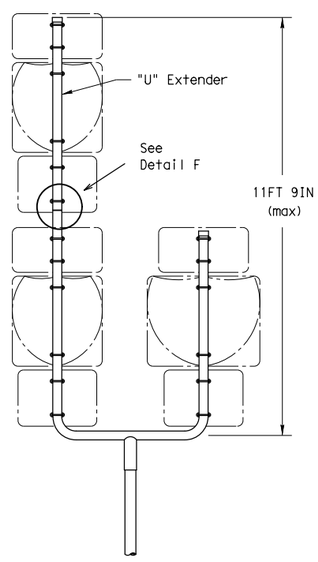
Splices shall only be allowed behind the sign substrate.



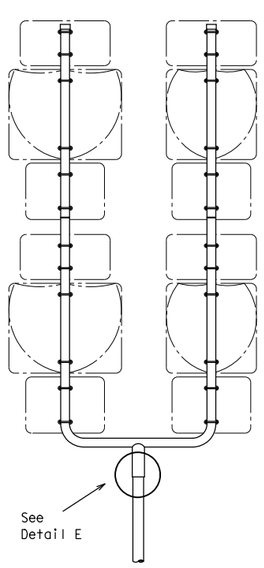
Detail C



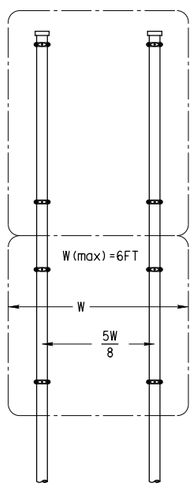
Detail E



SM RD SGN ASSM TY S80(1)XX(U-1EXT)

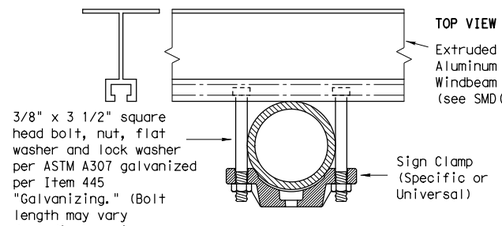


SM RD SGN ASSM TY S80(1)XX(U-2EXT)

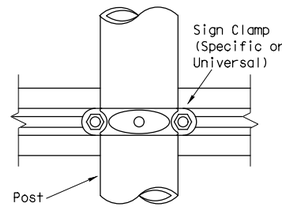


SM RD SGN ASSYM TY XXXXX(2)XX(P)

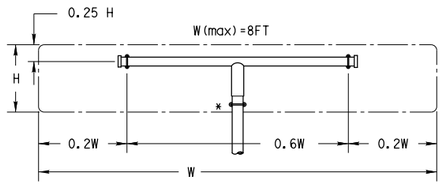
SIDE VIEW



Detail D



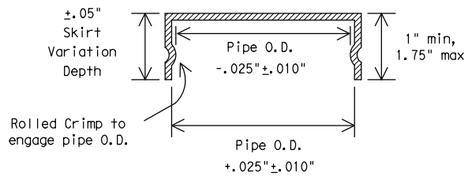
REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)



SM RD SGN ASSM TY XXXXX(1)XX(T)
(* - See Note 12)

All dimensions are in english unless detailed otherwise.

FRICTION CAP DETAIL



Friction caps may be manufactured from hot rolled or cold rolled steel sheets. The minimum sheet metal thickness shall be 24 gauge for all cap sizes.

The rim edges shall be reasonably straight and smooth. Caps shall be sized and formed in such a manner as to produce a drive-on friction fit and have no tendency to rock when seated on the pipe. The depth shall be sufficient to give positive protection against entrance of rainwater. They shall be free of sharp creases or indentations and show no evidence of metal fracture.

Caps shall have an electrodeposited coating of zinc in accordance with the requirements of ASTM B633 Class FE/ZN 8.

Texas Department of Transportation
Traffic Operations Division

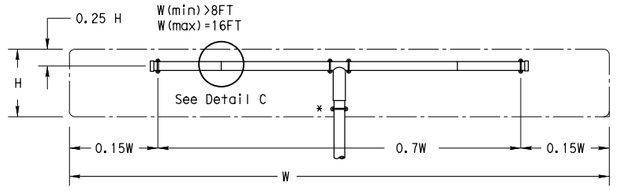
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-2)-08

REVISIONS	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
9-08	CONT	SECT	JOB	HIGHWAY
	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		129

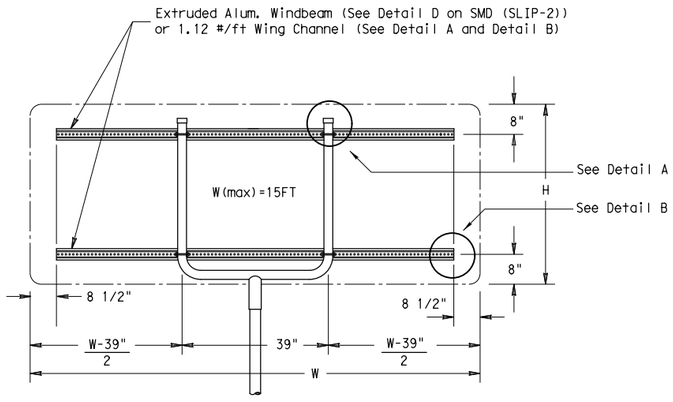
26C

DATE: 11/29/2023 1:39:52 PM
FILE: 6*smds2.dgn

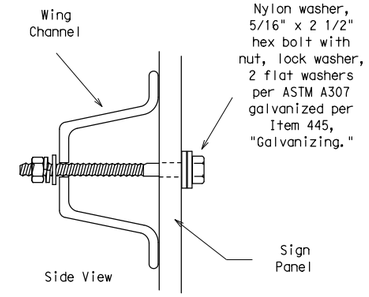


SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)

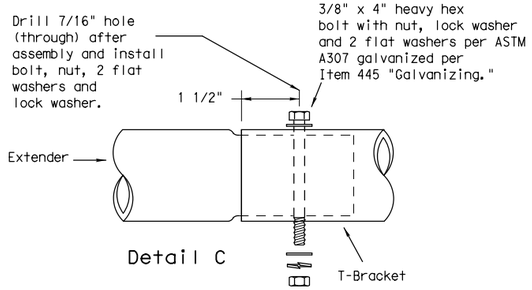
(* - See Note 12)



SM RD SGN ASSM TY XXXXX(1)XX(U-XX)

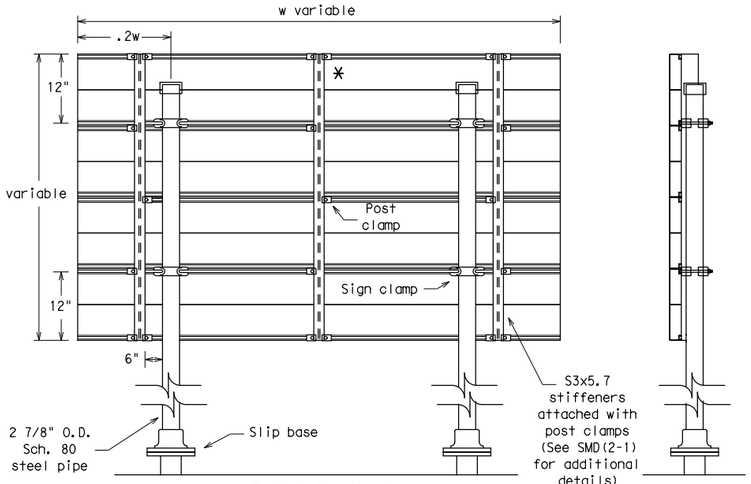


Detail B



Detail C

Splices shall only be allowed behind the sign substrate.

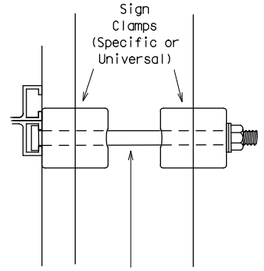


Typical Sign Mount

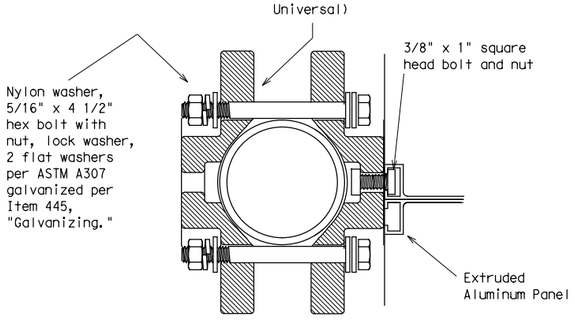
SM RD SGN ASSM TY S80(2)XX(P-EXAL)

* Additional stiffener placed at approximate center of signs when sign width is greater than 10'.

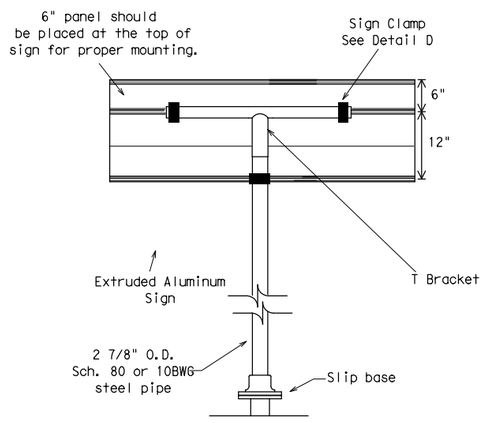
See Detail E
for clamp installation



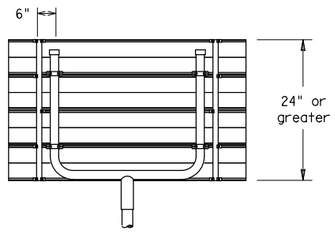
Detail E



Detail D
EXTRUDED ALUMINUM SIGN WITH T BRACKET



Extruded Aluminum Sign
With T Bracket



Use Extruded Alum. Windbeam as stiffeners
See SMD (2-1) for additional details

See Detail E
for clamp installation

GENERAL NOTES:

SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

1. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
2. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
3. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
4. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
5. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
6. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
7. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
8. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
9. Sign blanks shall be the sizes and shapes shown on the plans.
10. Additional sign clamp required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
11. Post open ends shall be fitted with Friction Caps.

REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-3)-08

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

CONT	SECT	JOB	HIGHWAY
0317	01	043	FM 57

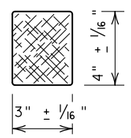
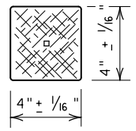
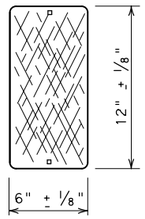
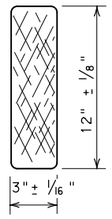
DIST	COUNTY	SHEET NO.
ABL	FISHER	130

REVISIONS
9-08

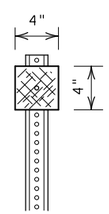
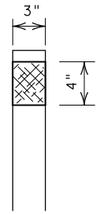
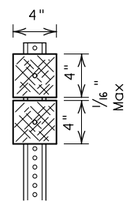
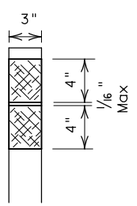
26D

DATE: 11/29/2023 1:39:59 PM
FILE: 7*smds3.dgn

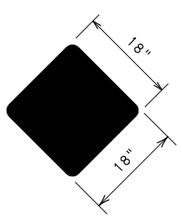
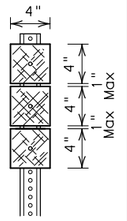
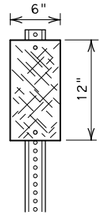
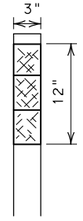
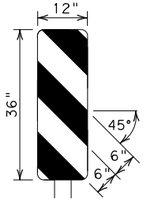
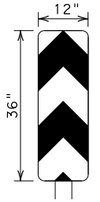
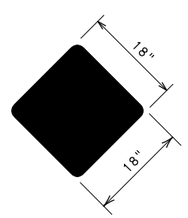
REFLECTOR UNIT SIZES FOR DELINEATORS AND OBJECT MARKERS

	SIZE 1	SIZE 2	SIZE 3	SIZE 4
DEVICE				
SHEETING	Yellow, White or Red Type B or C reflective sheeting			
NOTE	1. Size 1 and 4 - Direct applied reflective sheeting for use on flexible post (flx). 2. Size 2 and 3 - For use on wing channel (wc) post only. Use approved metal, plastic or fiberglass backplate with 17/64" mounting holes.			

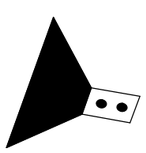
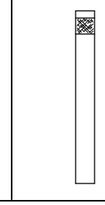
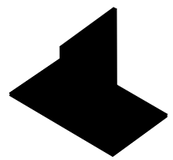
DELINEATORS

	SINGLE		DOUBLE	
DEVICE				
	1-Size 2 reflector unit	1-Size 1 reflector unit	2-Size 2 reflector units	2-Size 1 reflector units
SHEETING	Yellow, White or Red Type B or C Reflective Sheeting			
POST TYPE	WC	YFLX, WFLX	WC	YFLX, WFLX
MOUNT TYPE	GND	GND, SRF	GND	GND, SRF

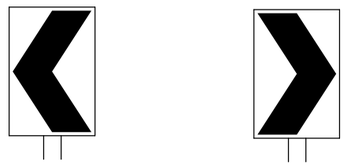
OBJECT MARKERS

	Type 1 (OM-1)	Type 2 (OM-2)			Type 3 (OM-3)			Type 4 (OM-4)
	OM-1	OM-2X	OM-2Y	OM-2Z	OM-3L	OM-3R	OM-3C	OM-4
DEVICE								
		3-Size 2 reflector units	1-Size 3 reflector unit	3-Size 1 reflector units or 1-Size 4 reflector unit				
SHEETING	Yellow-Type B_{FL} or C_{FL} Sheeting	Yellow - Type B or C Sheeting			Alternating acrylic black and retroflective yellow - Type B_{FL} or C_{FL} Sheeting			Red -Type B_{FL} or C_{FL} Sheeting
POST TYPE	TWT	WC	WC	WFLX	TWT			TWT
MOUNT TYPE	WAS, WAP	GND	GND	GND, SRF	WAS, WAP			WAS, WAP

BARRIER REFLECTORS (BRF)

	GF1	GF2	CTB
DEVICE			
	1. Barrier reflectors shall meet the requirements of DMS 8600. 2. Approved Barrier Reflectors are listed on the "Barrier Reflectors" Material Producer List at: www.txdot.gov.		
SHEETING	Yellow, White, Red		
NOTE	1. Reflective sheeting shall have a minimum dimension of 3 inches and minimum surface area of 9 square inches.		

CHEVRONS

DEVICE	 W1-8			
SIZE (W x L)	18"x 24" (Conventional)	24"x 30" (Conventional Oversize)	30"x 36" (Expressway)	36" x 48" (Freeway)
MOUNTING HEIGHT	4'-0" or 7'-0"		7'-0" Only	
NOTE	1. CHEVRON (W1-8) signs and ONE DIRECTION LARGE ARROW (W1-6) Signs shall be installed per Sign Mounting Details (SMD) Standard Sheets and paid under Item 644 (Small Roadside Sign Assemblies). 2. When there is a need to increase conspicuity, the Texas version of the ONE DIRECTION LARGE ARROW sign (W1-9T) may be used instead of the ONE DIRECTION LARGE ARROW (W1-6).			

ONE DIRECTION LARGE ARROW

DEVICE	 W1-6	
SIZE (W x L)	48" x 24" (Conventional)	60" x 30" (Expressway & Freeway)
MOUNTING HEIGHT	7'-0"	

D & OM DESCRIPTIVE CODES

INSTL DEL ASSM (D-XX)SZ X (XXXX)XXX(XX)

NUMBER OF REFLECTORS
- S = Single
- D = Double

COLOR OF REFLECTORS
- W = White
- Y = Yellow
- R = Red

REFLECTOR UNIT SIZE
- 1 or 2

TYPE OF POST OR DELINEATOR
- WC = Wing Channel Post
- YFLX = Yellow Flexible Post
- WFLX = White Flexible Post
- BRF = Barrier Reflector

TYPE OF MOUNT
- GND = Embedded (drivable or set in concrete)
- CTB = Concrete Barrier Mount
- GF1 or GF2 = Guard Fence Attachment
- SRF = Surface Mount

DIRECTION
- If Required
- BI = Bi-Directional
- BR = Bi-Directional with red on back

INSTL OM ASSM (OM-XX) (XXXX)XXX(XX)

TYPE OF OBJECT MARKER
- 1, 2, 3, or 4

NUMBER OF REFLECTORS OR DIRECTION
- X = 3-Size 2 reflector units (Type 2 only)
- Y = 1-Size 3 reflector unit (Type 2 only)
- Z = 3-Size 1 or 1-Size 4 reflector unit(s) (Type 2 only)
- L = Left Side (Type 3 Object Marker only)
- R = Right Side (Type 3 Object Marker only)
- C = Center (Type 3 Object Marker only)

TYPE OF POST
- WC = Wing Channel Post
- WFLX = White Flexible Post
- TWT = Thin Walled Tubing

TYPE OF MOUNT
- GND = Embedded (drivable)
- SRF = Surface Mount
- WAS = Wedge Anchor Steel
- WAP = Wedge Anchor Plastic

DIRECTION
- If Required
- BI = Bi-Directional

DEPARTMENTAL MATERIAL SPECIFICATIONS	
FLEXIBLE DELINEATOR & OBJECT MARKER POSTS (EMBEDDED & SURFACE MOUNT TYPES)	DMS-4400
SIGN FACE MATERIALS	DMS-8300
DELINEATORS, OBJECT MARKERS AND BARRIER REFLECTORS	DMS-8600

NOTE:

Delineator and object marker substrates and sign substrates shall be 0.080" Aluminum sign blank to conform to ASTM B-209 Alloy 6061-T6 or approved alternative.

Texas Department of Transportation

Traffic Safety Division Standard

DELINEATOR & OBJECT MARKER MATERIAL DESCRIPTION

D & OM(1)-20

FILE: dom1-20.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
10-09 3-15	DIST	COUNTY		SHEET NO.
4-10 7-20	ABL	FISHER		131

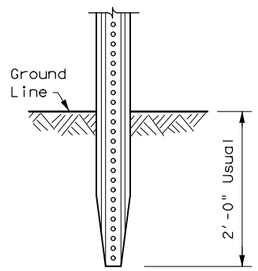
20A

DATE: 11/29/2023 1:40:05 PM
FILE: 8_dom1-20.dgn

POST TYPE AND SUPPORT FOUNDATION DETAILS

WING CHANNEL (WC)

GND

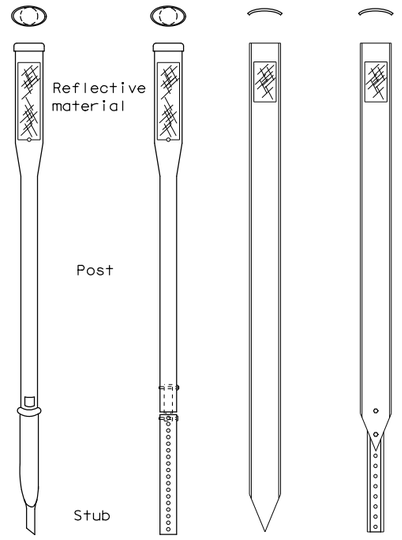


NOTES

1. Embedded Wing Channel (WC) post option may be used for Type 2 Object Markers and Delineators only.
2. 1.12 lbs/ft steel per ASTM A 1011 SS Gr. 50, or ASTM A499.

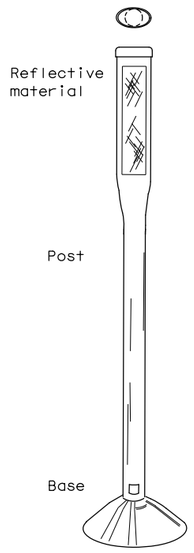
FLEXIBLE POSTS (YFLX, WFLX)

GND



EMBEDDED

SRF



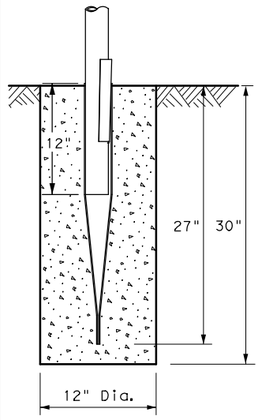
SURFACE MOUNT

NOTES

1. See "Flexible Delineator and Object Marker Posts" Material Producer List for approved devices.
2. Install per manufacturer's recommendations.
3. Post length may vary to meet field conditions.
4. When using yellow delineators with flexible posts to separate opposing direction of travel, such as centerline or median use, the flexible posts shall be yellow.

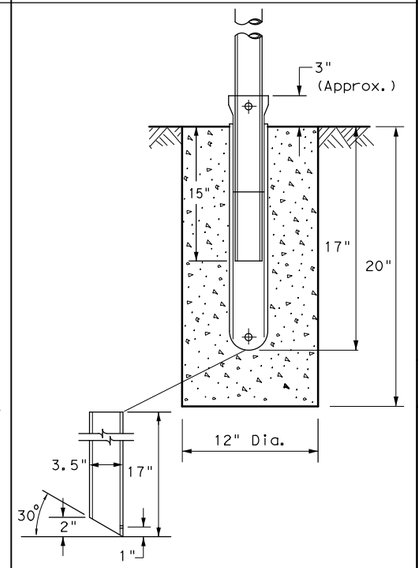
WEDGE ANCHOR SYSTEMS

WAS



STEEL

WAP



PLASTIC

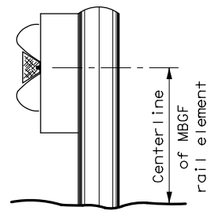
NOTE

1. Install per manufacturer's recommendations.

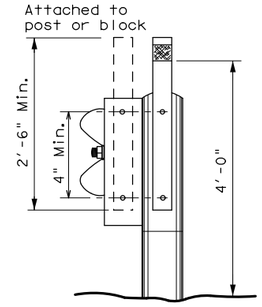
TYPE OF BARRIER MOUNTS

GUARD FENCE ATTACHMENT

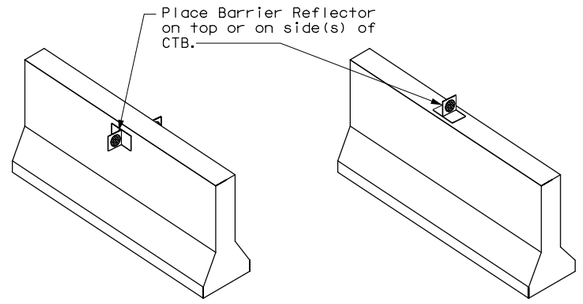
GF1



GF2



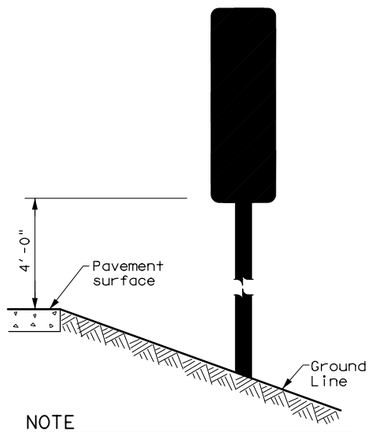
CONCRETE TRAFFIC BARRIER (CTB)



GENERAL NOTES

1. Place delineators on a section of roadway at a consistent distance from the edge of pavement.
2. Where a restriction prevents consistent placement from the pavement edge, place the affected object markers in line with the innermost edge of the obstruction.
3. When Type 2 object markers and delineators are more than 8'-0" from the edge of the pavement, it may not be possible to maintain a height of approximately 4'-0". If this is the case, place the object marker or delineator as close to the desired height as possible.
4. Install all delineators, object markers and barrier reflectors in accordance with the manufacturer's recommendation.
5. Barrier reflectors should be installed a minimum of 18 inches above the edge of the pavement surface.
6. Diagonal stripes on Type 3 object markers shall slope down toward the intended travel lane.

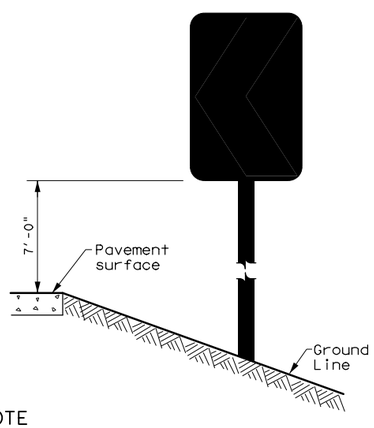
TYPES 1, 3, AND 4 OBJECT MARKERS AND CHEVRONS



NOTE

Mounting at 4 feet to the bottom of the chevron is permitted for chevrons that will not exceed a height of 6'-6" to the top of the chevron (sizes 24" x 30" and smaller)

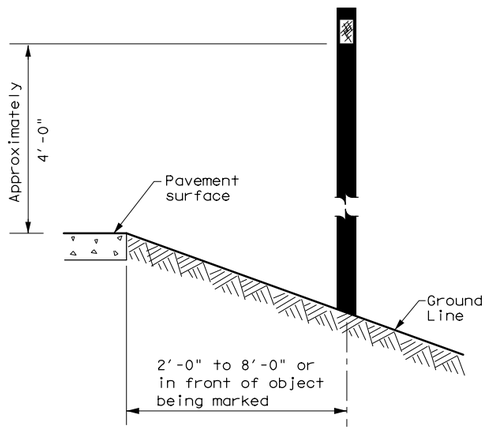
CHEVRONS AND ONE DIRECTION LARGE ARROW SIGN



NOTE

Chevrons 30" x 36" and larger shall be mounted at a height of 7' to the bottom of the chevron. Chevron sign and ONE DIRECTION LARGE ARROW sign (W1-9T) shall be installed per SMD standard sheets and paid under item 644.

DELINEATORS AND TYPE 2 OBJECT MARKERS



See general notes 1, 2 and 3.

Texas Department of Transportation

Traffic Safety Division Standard

DELINEATOR & OBJECT MARKER INSTALLATION

D & OM(2)-20

FILE: dom2-20.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
© TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
10-09 3-15	DIST	COUNTY		SHEET NO.
4-10 7-20	ABL	FISHER		132

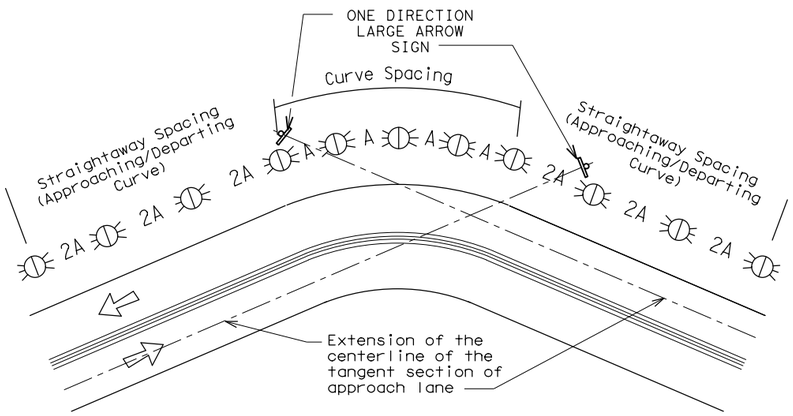
20B

DATE: 11/29/2023 1:40:12 PM
FILE: 9_dom2-20.dgn

MINIMUM WARNING DEVICES AT CURVES WITH ADVISORY SPEEDS

Amount by which Advisory Speed is less than Posted Speed	Curve Advisory Speed	
	Turn (30 MPH or less)	Curve (35 MPH or more)
5 MPH & 10 MPH	• RPMs	• RPMs
15 MPH & 20 MPH	• RPMs and One Direction Large Arrow sign	• RPMs and Chevrons; or • RPMs and One Direction Large Arrow sign where geometric conditions or roadside obstacles prevent the installation of chevrons.
25 MPH & more	• RPMs and Chevrons; or • RPMs and One Direction Large Arrow sign where geometric conditions or roadside obstacles prevent the installation of chevrons	• RPMs and Chevrons

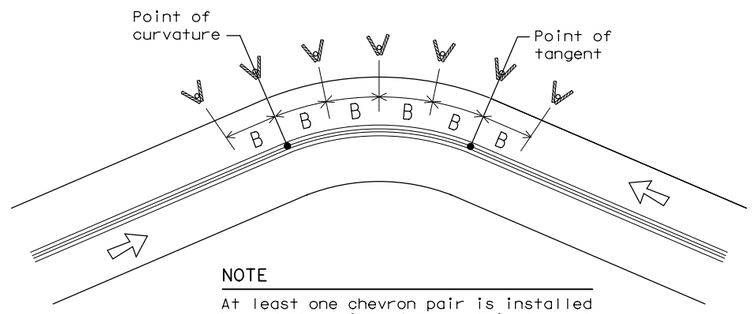
SUGGESTED SPACING FOR DELINEATORS ON HORIZONTAL CURVES



NOTE

ONE DIRECTION LARGE ARROW (W1-6) sign should be located at approximately and perpendicular to the extension of the centerline of the tangent section of approach lane.

SUGGESTED SPACING FOR CHEVRONS ON HORIZONTAL CURVES



NOTE

At least one chevron pair is installed beyond the point of tangent in tangent section.

DELINEATOR AND CHEVRON SPACING

WHEN DEGREE OF CURVE OR RADIUS IS KNOWN

Degree of Curve	FEET			
	Radius of Curve	Spacing in Curve	Spacing in Straightaway	Chevron Spacing in Curve
		A	2A	B
1	5730	225	450	——
2	2865	160	320	——
3	1910	130	260	200
4	1433	110	220	160
5	1146	100	200	160
6	955	90	180	160
7	819	85	170	160
8	716	75	150	160
9	637	75	150	120
10	573	70	140	120
11	521	65	130	120
12	478	60	120	120
13	441	60	120	120
14	409	55	110	80
15	382	55	110	80
16	358	55	110	80
19	302	50	100	80
23	249	40	80	80
29	198	35	70	40
38	151	30	60	40
57	101	20	40	40

Curve delineator approach and departure spacing should include 3 delineators spaced at 2A. This spacing should be used during design preparation or when the degree of curve is known.

DELINEATOR AND CHEVRON SPACING

WHEN DEGREE OF CURVE OR RADIUS IS NOT KNOWN

Advisory Speed (MPH)	Spacing in Curve	Spacing in Straightaway	Chevron Spacing in Curve
	A	2xA	B
65	130	260	200
60	110	220	160
55	100	200	160
50	85	170	160
45	75	150	120
40	70	140	120
35	60	120	120
30	55	110	80
25	50	100	80
20	40	80	80
15	35	70	40

If the degree of curve is not known, delineator spacing may be determined based on the Advisory Speed of the curve. Use the delineator curve spacing for each Advisory Speed (MPH).

DELINEATOR AND OBJECT MARKER APPLICATION AND SPACING

CONDITION	REQUIRED TREATMENT	MINIMUM SPACING
Frwy./Exp. Tangent	RPMs	See PM-series and FPM-series standard sheets
Frwy./Exp. Curve	Single delineators on right side	See delineator spacing table
Frwy/Exp.Ramp	Single delineators on at least one side of ramp (should be on outside of curves) (see Detail 3 on D&OM(4))	100 feet on ramp tangents Use delineator spacing table for ramp curves ("straightway spacing" does not apply to ramp curves)
Acceleration/Deceleration Lane	Double delineators (see Detail 3 on D&OM(4))	100 feet (See Detail 3 on D & OM (4))
Truck Escape Ramp	Single red delineators on both sides	50 feet
Bridge Rail (steel or concrete)and Metal Beam Guard Fence	Bi-Directional Delineators when undivided with one lane each direction Single Delineators when multiple lanes each direction	Equal spacing (100'max) but not less than 3 delineators
Concrete Traffic Barrier (CTB) or Steel Traffic Barrier	Barrier reflectors matching the color of the edge line	Equal spacing 100' max
Cable Barrier	Reflectors matching the color of the edge line	Every 5th cable barrier post (up to 100'max)
Guard Rail Terminus/Impact Head	Divided highway - Object marker on approach end Undivided 2-lane highways - Object marker on approach and departure end	Requires reflective sheeting provided by manufacturer per D & OM (VIA) or a Type 3 Object Marker (OM-3) in front of the terminal end See D & OM (5) and D & OM (6)
Bridges with no Approach Rail	Type 3 Object Marker (OM-3) at end of rail and 3 single delineators approaching rail	See D & OM(5)
Reduced Width Approaches to Bridge Rail	Type 2 and Type 3 Object Markers (OM-3) and 3 single delineators approaching bridge	Requires reflective sheeting provided by manufacturer per D & OM (VIA) or a Type 3 Object Marker (OM-3) in front of the terminal end See D & OM (5)
Culverts without MBGF	Type 2 Object Markers	See Detail 2 on D & OM(4)
Crossovers	Double yellow delineators and RPMs	See Detail 1 on D & OM (4)
Pavement Narrowing (lane merge) on Freeways/Expressway	Single delineators adjacent to affected lane for full length of transition	100 feet

NOTES

1. Unless indicated otherwise, the delineator or barrier reflector color shall conform to the color of the pavement edge line on the side of the road where the delineators or barrier reflectors are placed.
2. Barrier reflectors may be used to replace required delineators.
3. Single red delineators may be mounted on the back side of delineator posts for wrong way driver applications

LEGEND	
	Bi-directional Delineator
	Delineator
	Sign

Texas Department of Transportation

Traffic Safety Division Standard

DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

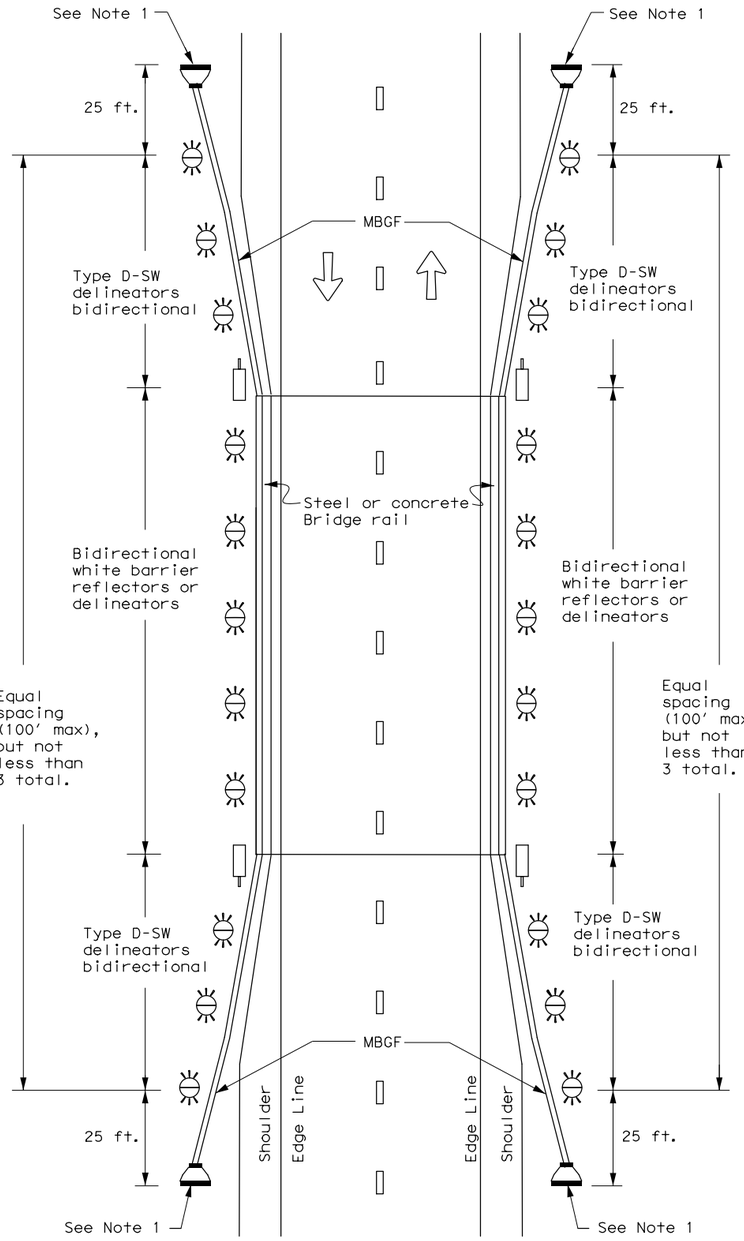
D & OM(3)-20

FILE: dom3-20.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
3-15 8-15	DIST	COUNTY		SHEET NO.
8-15 7-20	ABL	FISHER		133

20C

DATE: 11/29/2023 1:40:19 PM
FILE: 10_dom3-20.dgn

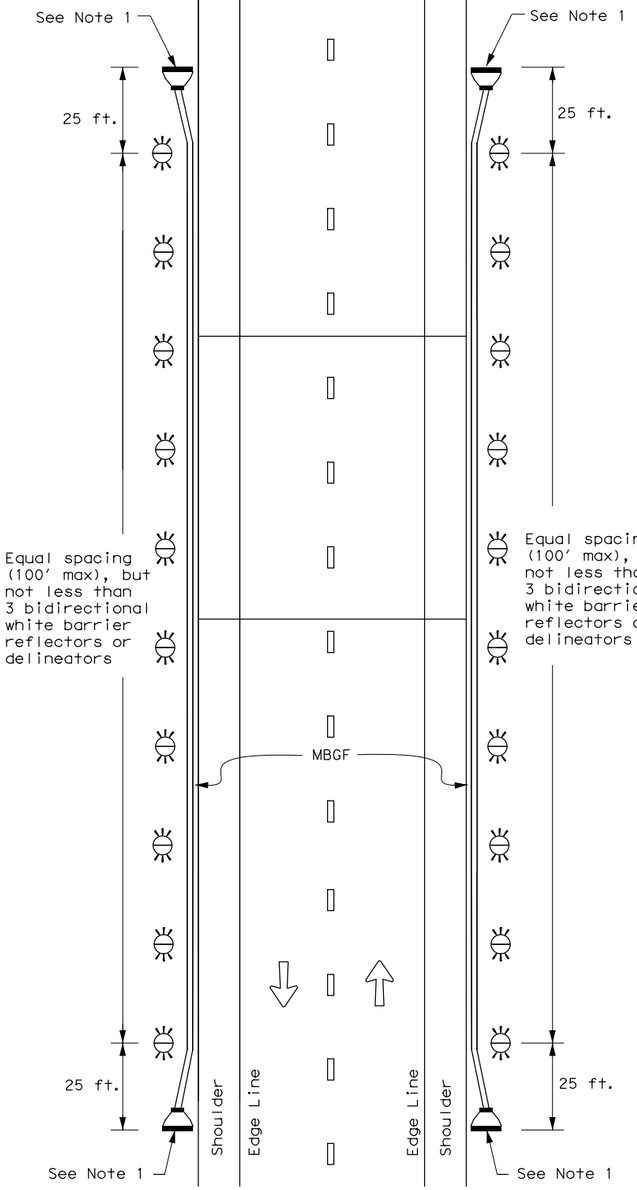
TWO-WAY, TWO LANE ROADWAY WITH REDUCED WIDTH APPROACH RAIL



NOTE:

1. Terminal ends require reflective sheeting provided by manufacturer per D & OM (VIA) or a Type 3 Object Marker (OM-3) in front of the terminal end.

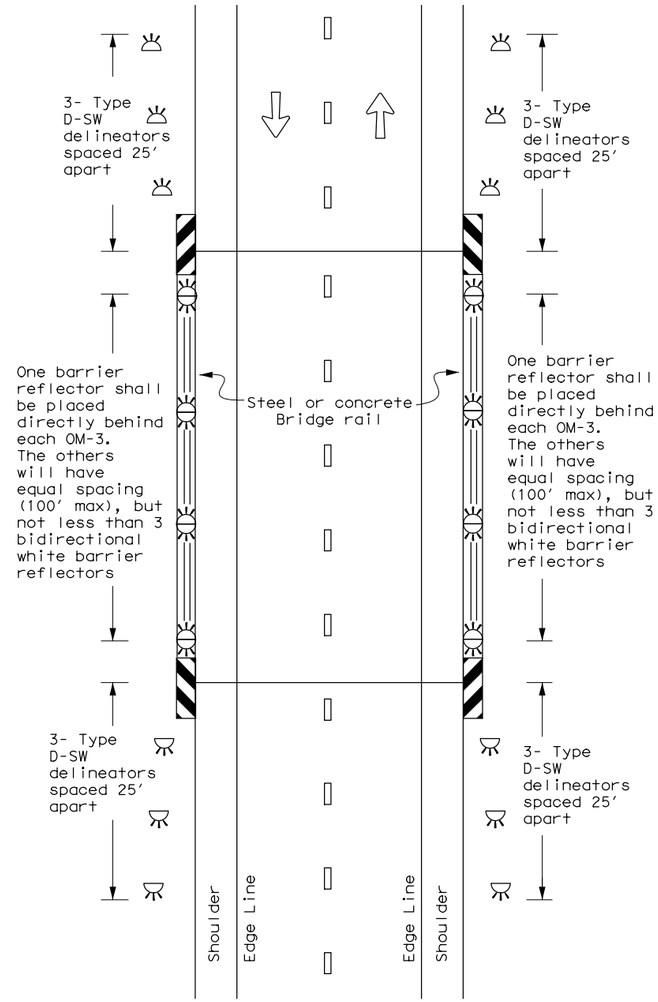
TWO-WAY, TWO LANE ROADWAY WITH METAL BEAM GUARD FENCE (MBGF)



NOTE:

1. Terminal ends require reflective sheeting provided by manufacturer per D & OM (VIA) or a Type 3 Object Marker (OM-3) in front of the terminal end.

TWO-WAY, TWO LANE ROADWAY BRIDGE WITH NO APPROACH RAIL



LEGEND

	Bidirectional Delineator
	Delineator
	OM-3
	OM-2
	Terminal End
	Traffic Flow

Texas Department of Transportation

Traffic Safety Division Standard

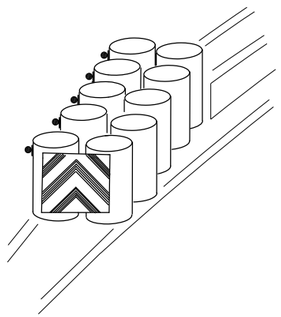
DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

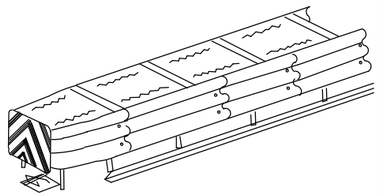
D & OM(5)-20

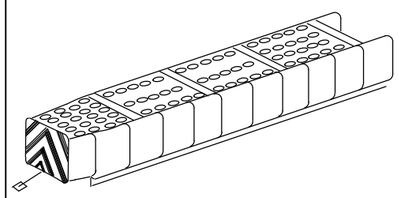
FILE: dom5-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT August 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
7-20	DIST	COUNTY		SHEET NO.
	ABL	FISHER		134

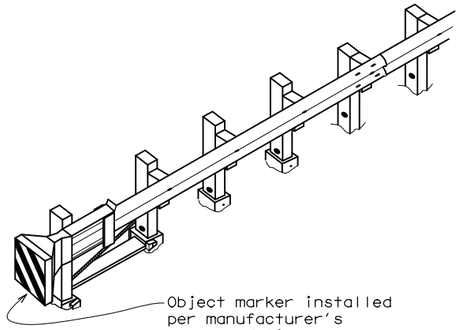
20E

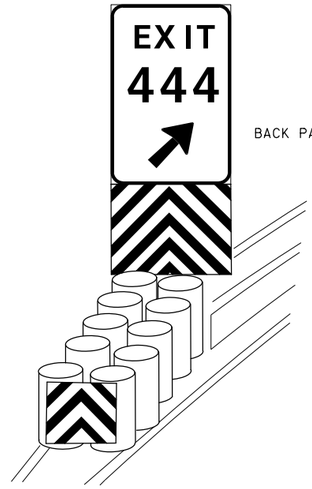
DATE: 11/29/2023 1:40:26 PM
FILE: 12_dom5-20.dgn

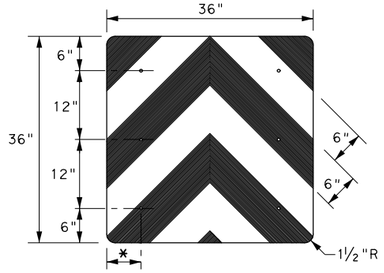


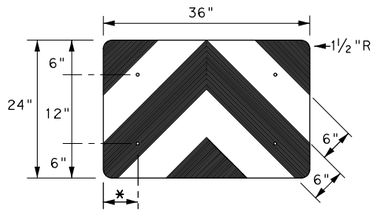




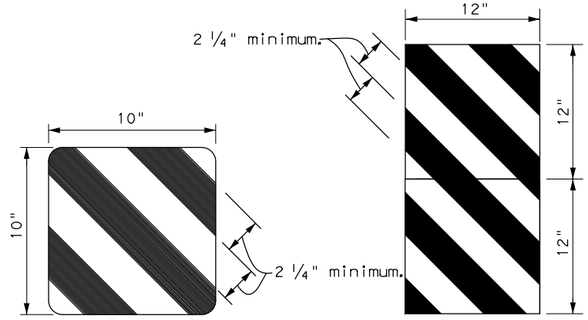




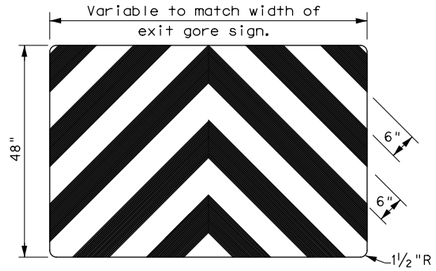


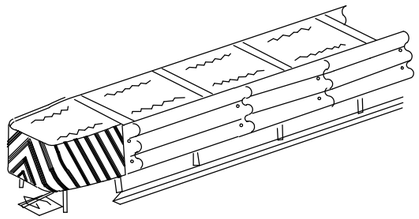


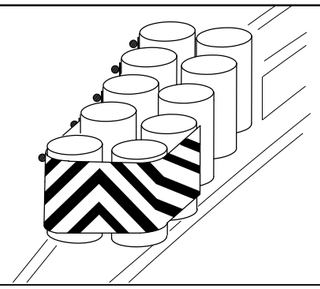
* Adjust to fit attenuator per manufacturer's recommendation, or as directed by the Engineer

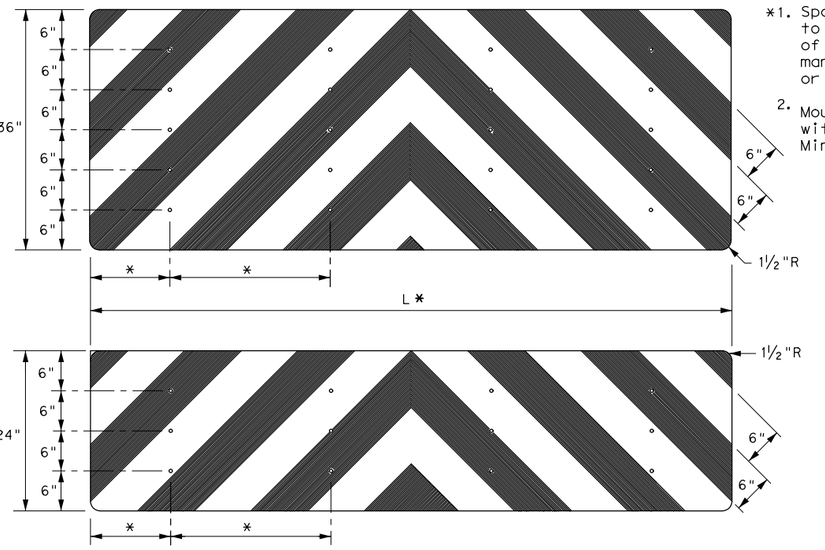


OBJECT MARKERS SMALLER THAN 3 FT^2









NOTES

*1. Spacing should be adjusted to attach through centerline of drum, per attenuator manufacturers recommendation, or as directed by the Engineer.

2. Mounting should be flush with top of attenuator. Minimum size 96" x 24".

NOTES

1. Object Markers shall conform to the Texas MUTCD and meet the color and reflectivity requirement of Department Material Specification DMS 8300. Background shall be yellow reflective sheeting (Type B or C) and Chevron shall be black.

2. Object Markers may be fabricated from adhesive backed reflective sheeting applied directly to guardrail end treatment, or applied directly to an "end cap" as per the manufacturer's recommendation. Direct applied sheeting shall provide a smooth surface and have no wrinkles, air bubbles, cuts or tears. A radius at the corners is not required for direct applied sheeting.

3. Object Marker size may be reduced to fit smaller devices. Width of alternating black and yellow stripes are typically 6". Object Markers smaller than 3ft may have reduced width stripes of a minimum of 2 ¼".

4. Pop rivets, screws, or nuts and bolts may be used to attach object markers and reflectors. Holes, slots or other openings may be cut or drilled through object markers to allow cable or other attachments.

5. Object Marker at nose of attenuator is subsidiary to the attenuator.

6. See D & OM (1-4) for required barrier reflectors.

Texas Department of Transportation

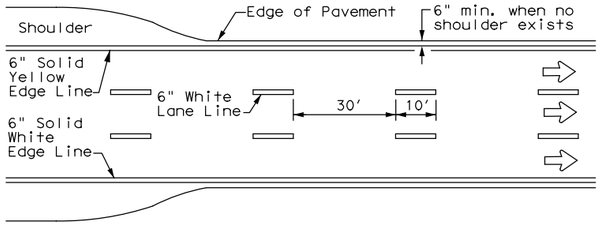
Traffic Safety Division Standard

DELINEATOR & OBJECT MARKER FOR VEHICLE IMPACT ATTENUATORS

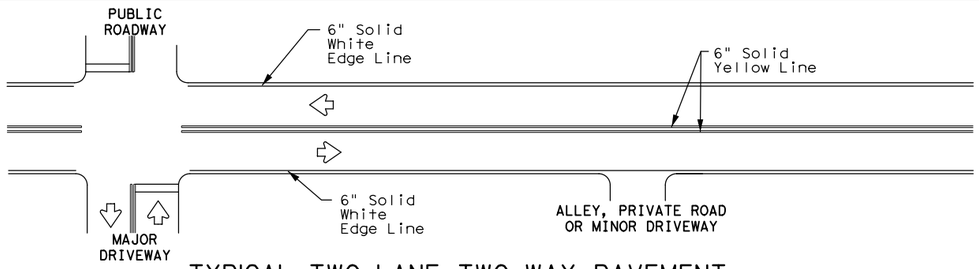
D & OM(VIA)-20

FILE: domvia20.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT December 1989	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
4-92 8-04	DIST	COUNTY		SHEET NO.
8-95 3-15	ABL	FISHER		135
4-98 7-20				
20G				

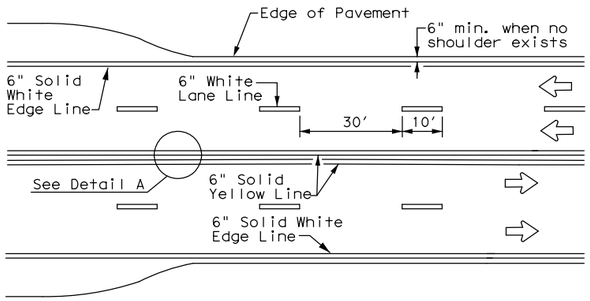
DATE: 11/29/2023 1:40:34 PM
FILE: 13_domvia-20.dgn

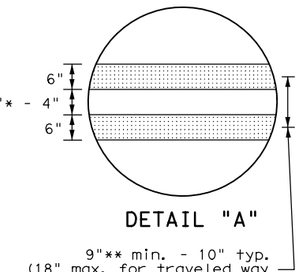


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS





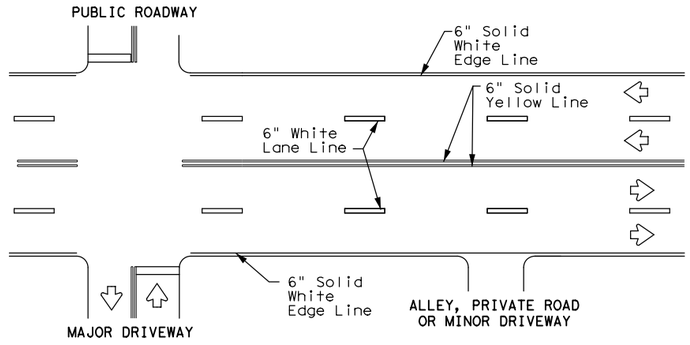
DETAIL "A"

9"** min. - 10" typ.
(18" max. for traveled way greater than 48' only)

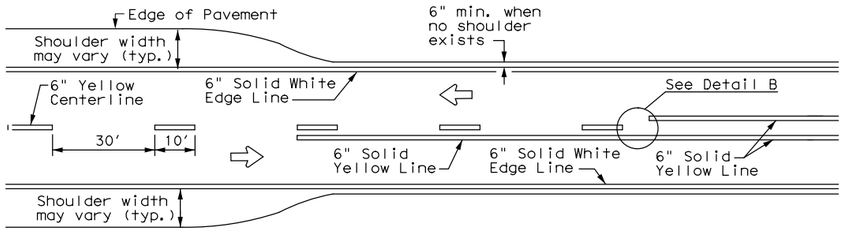
CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

* 2" minimum for restripe projects when approved by the Engineer.

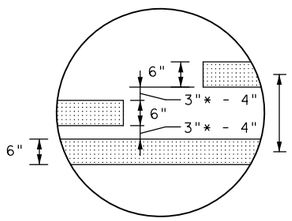
** 8" minimum for restripe projects when approved by the Engineer.



TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS



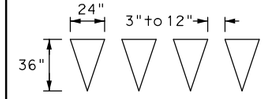
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



18" min. - 20" max.
(16" minimum for restripe projects when approved by the Engineer.)

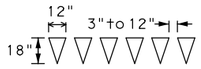
DETAIL "B"

* 2" minimum for restripe projects when approved by the Engineer.

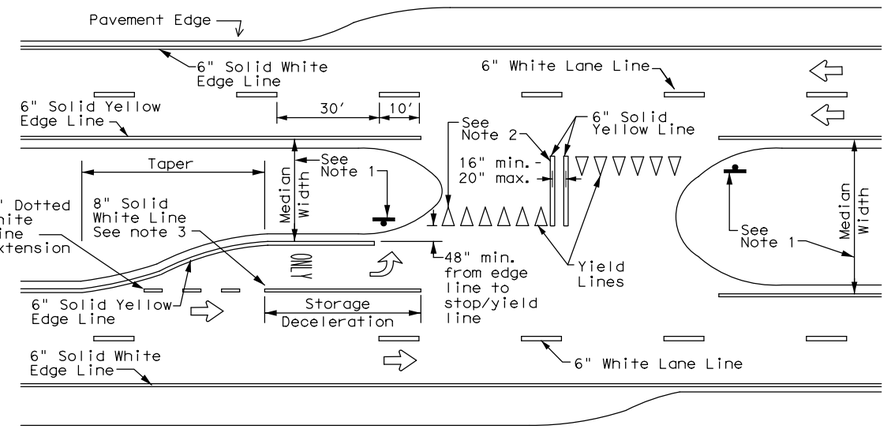


For posted speed on road being marked equal to or greater than 45 MPH.

YIELD LINES



For posted speed on road being marked equal to or less than 40 MPH.



FOUR LANE DIVIDED ROADWAY CROSSOVERS

NOTES

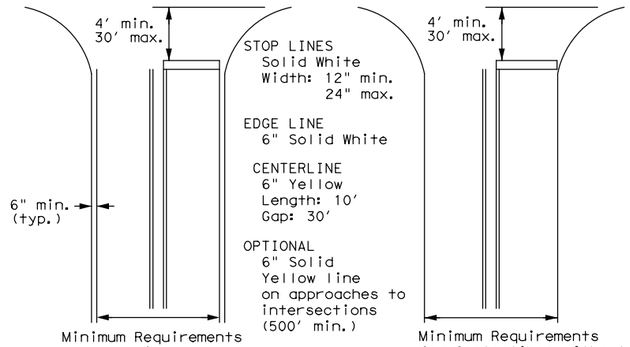
1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs and stop bars are optional as determined by the Engineer.
2. Install median striping (double yellow centerlines and stop lines/yield lines) when a 50' or greater median centerline can be placed. Stop lines shall only be used with stop signs. Yield lines shall only be used with yield signs.
3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

GENERAL NOTES

1. Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edge lines are not required in curb and gutter sections of roadways.
2. The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the center of edge line to the center of edge line of a two lane roadway.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



NOTE: Traveled way is exclusive of shoulder widths. Refer to General Note 2 for additional details.

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Roadways

Texas Department of Transportation

Traffic Safety Division Standard

TYPICAL STANDARD PAVEMENT MARKINGS

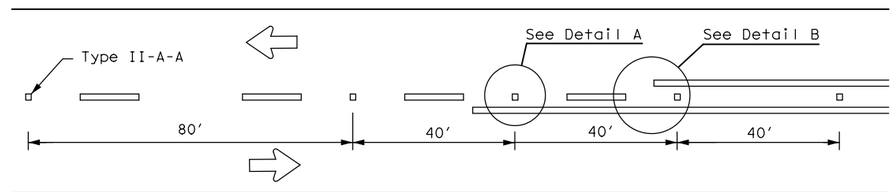
PM(1)-22

FILE: pm1-22.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 11-78 8-00 6-20 / 8-95 3-03 12-22 / 5-00 2-12	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		136

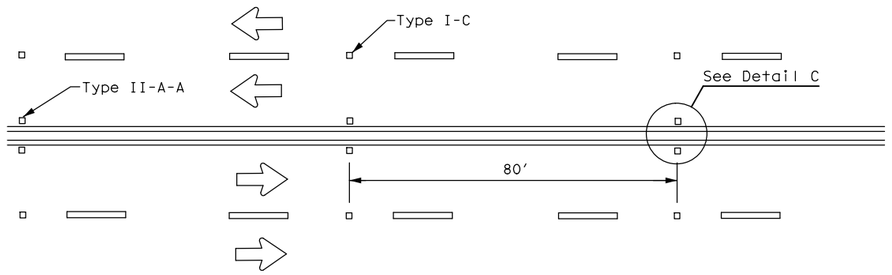
22A

DATE: 11/29/2023 1:40:42 PM
FILE: 14_pm1-22.dgn

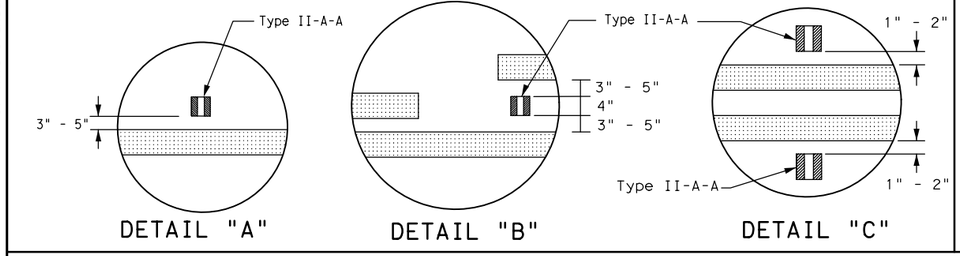
REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

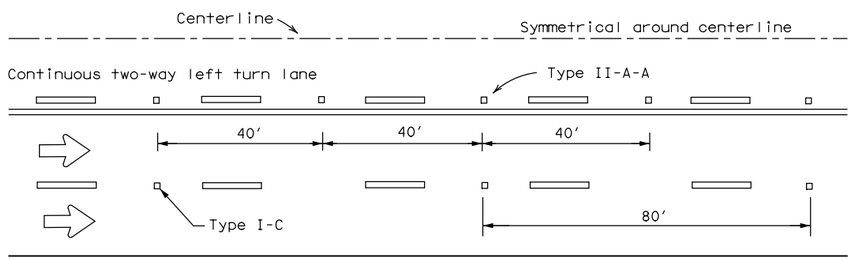


CENTERLINE FOR ALL TWO LANE TWO-WAY ROADWAYS

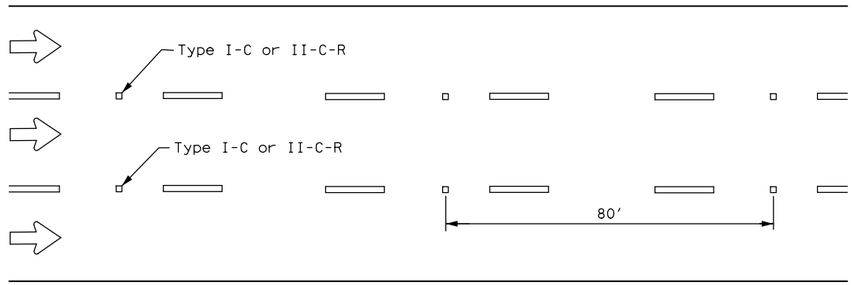


CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY ROADWAYS





CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



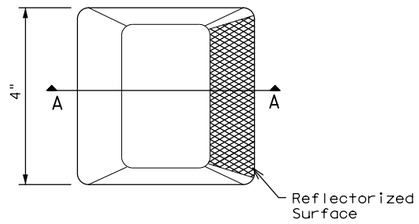
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.

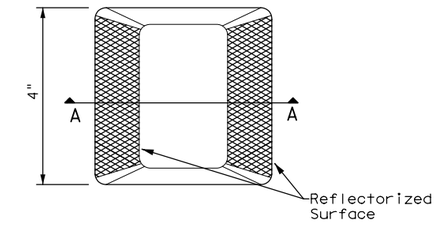
See Note 3.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

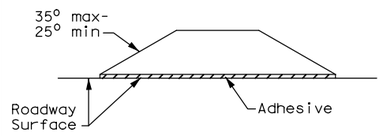
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)

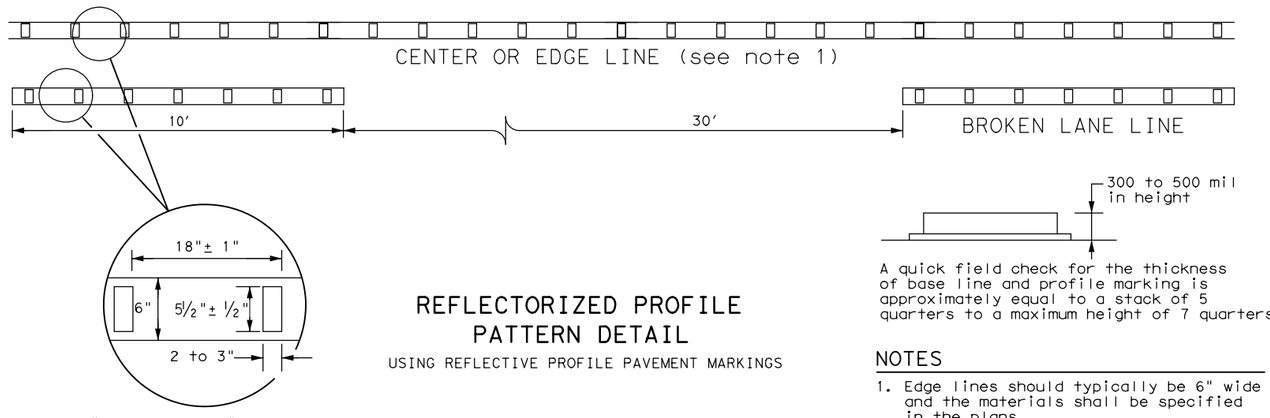


Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS



6" EDGE LINE, 6" CENTERLINE OR 6" LANE LINE

REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

A quick field check for the thickness of base line and profile marking is approximately equal to a stack of 5 quarters to a maximum height of 7 quarters.

NOTES

1. Edge lines should typically be 6" wide and the materials shall be specified in the plans.
2. Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

GENERAL NOTES

1. All raised pavement markers placed along broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.
3. Use raised pavement marker Type I-C with undivided roadways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.

Texas Department of Transportation

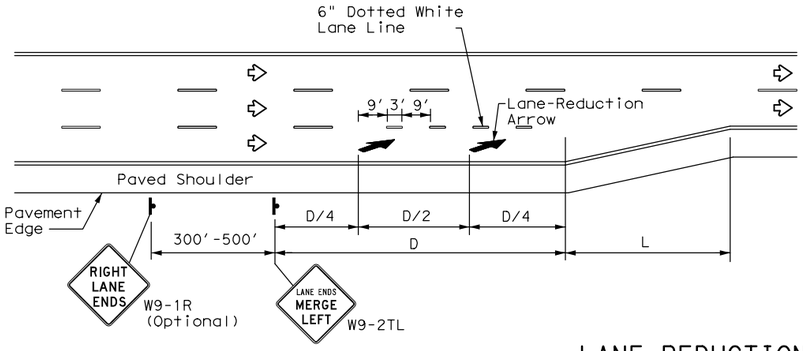
Traffic Safety Division Standard

POSITION GUIDANCE USING RAISED MARKERS RELECTORIZED PROFILE MARKINGS PM(2)-22

FILE: pm2-22.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-77 8-00 6-20 4-92 2-10 12-22 5-00 2-12	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		137

22B

DATE: 11/29/2023 1:40:47 PM
FILE: 15_pm2-22.dgn



LANE REDUCTION

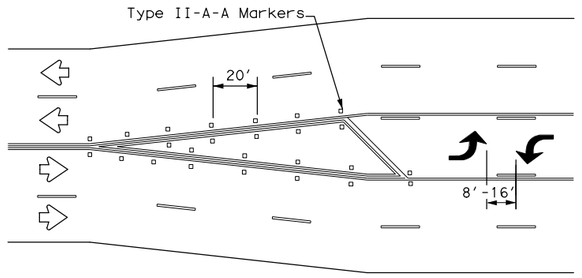
NOTES

1. Lane reduction pavement markings are used where the number of through lanes is reduced because of narrowing of the roadway or because of a section of on-street parking in what would otherwise be a through lane. For Texas Super 2 Passing Lanes, see TS2(PL) standard sheets.
2. On divided highways, an additional RIGHT LANE ENDS (W9-1R) sign may be installed in the median aligned with the W9-1R sign on the right side of the highway.
3. Lane reduction arrows are required for speeds of 45 mph or greater. An optional third lane reduction arrow may be added based on engineering judgement. If used, the optional third lane reduction arrow should be centered between the first and last lane reduction arrows.
4. For lane reductions on Freeways and Expressways, signing shall conform to the TxDOT Freeway Signing Handbook.

ADVANCED WARNING SIGN DISTANCE (D)		
Posted Speed	D (ft)	L (ft)
30 MPH	460	$L=\frac{WS^2}{60}$
35 MPH	565	
40 MPH	670	
45 MPH	775	L=WS
50 MPH	885	
55 MPH	990	
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	

GENERAL NOTES

1. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
2. When lane-use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
3. Use raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.
4. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer. See Chapter 3 of the Roadway Design Manual for additional information on turning lanes or storage lengths.

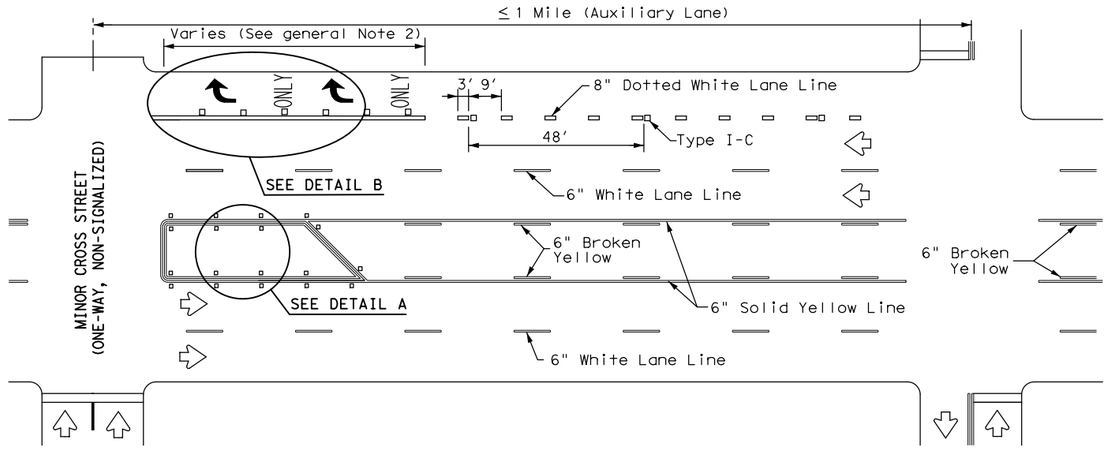


A two-way left-turn (TWLT) lane-use arrow pavement marking should be used at or just downstream from the beginning of a two-way left-turn lane within a corridor. Repeating the marking after each intersection or dedicated turn bay is not required unless stated elsewhere in the plans.

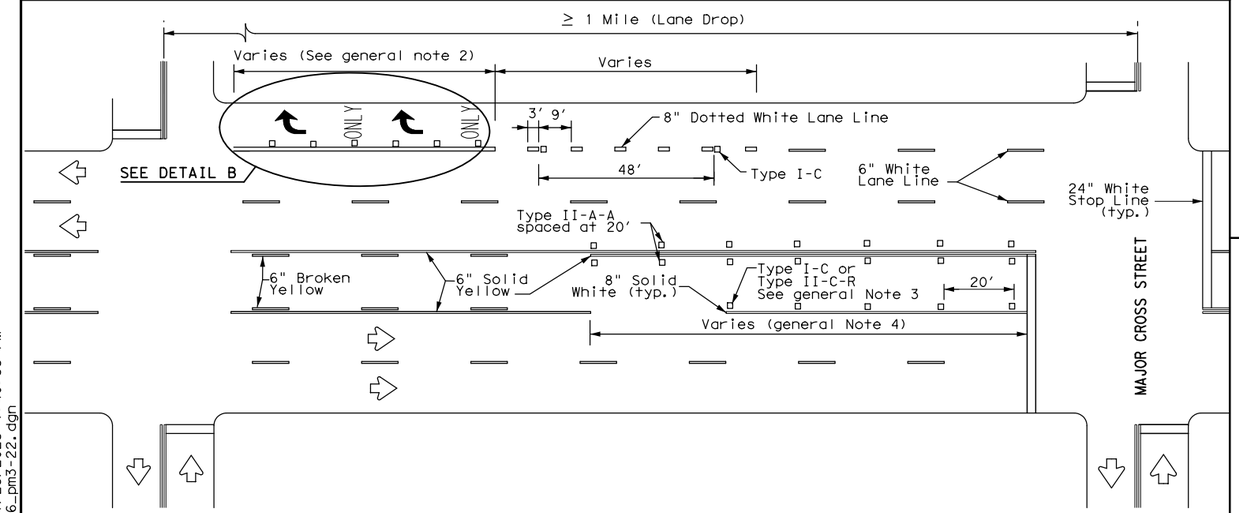
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

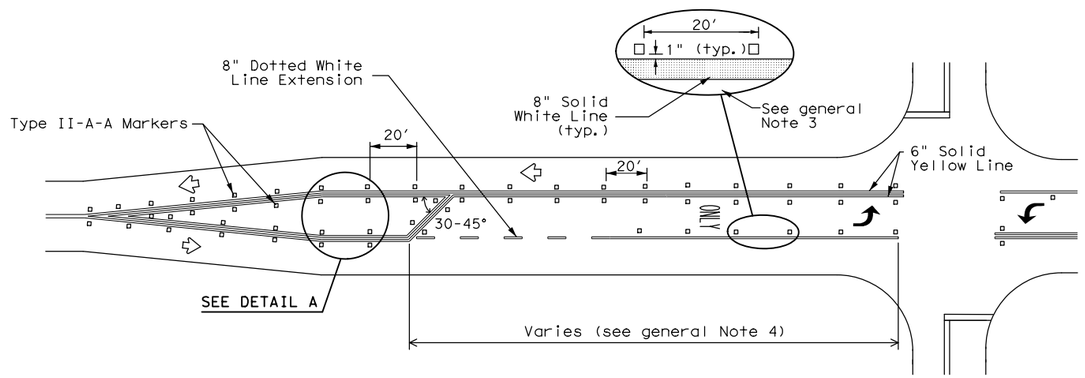
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



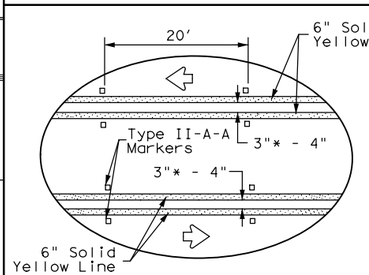
TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



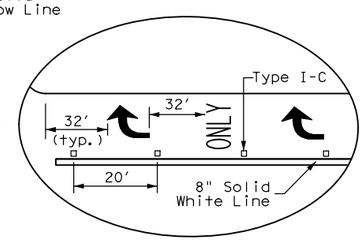
TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



TYPICAL TWO-LANE ROADWAY INTERSECTION WITH LEFT TURN BAYS



DETAIL A



DETAIL B

* 2" minimum allowed for restripe projects when approved by the Engineer.

Texas Department of Transportation

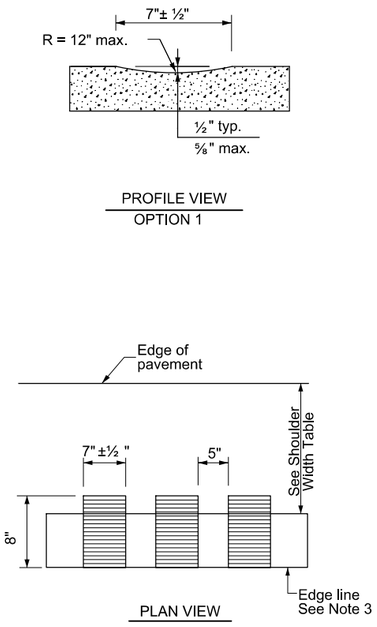
Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS PM(3)-22

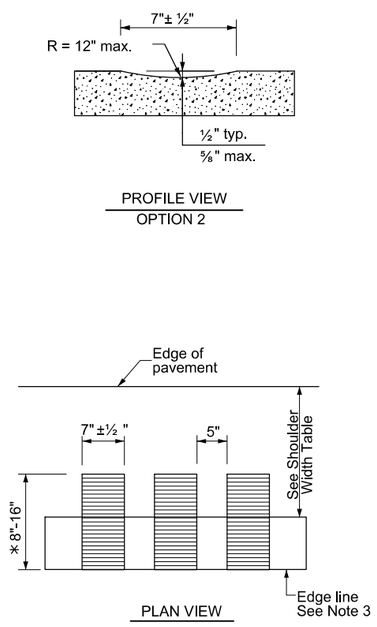
FILE: pm3-22.dgn	DN:	CK:	DW:	CK:
©TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-98 3-03 6-20 5-00 2-10 12-22 8-00 2-12	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		138

22C

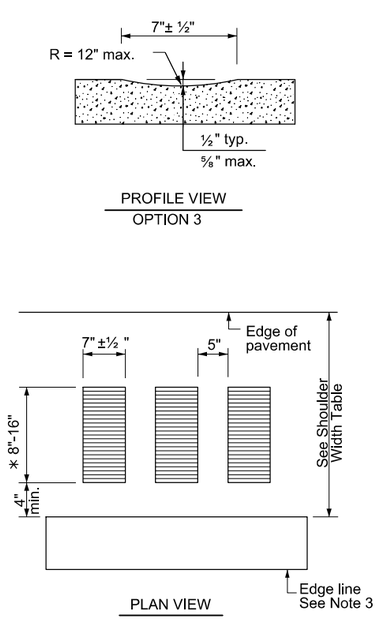
DATE: 11/29/2023 1:40:53 PM
FILE: 16_pm3-22.dgn



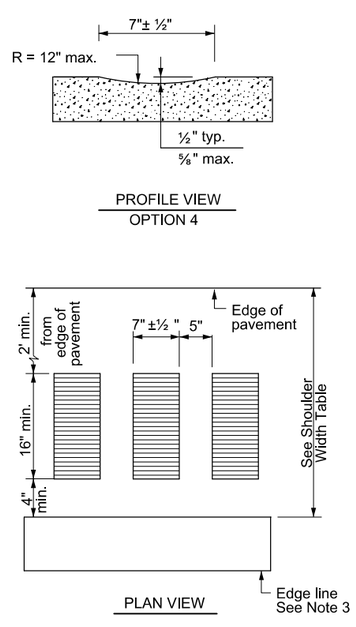
CONTINUOUS MILLED DEPRESSIONS (Rumble Strips)



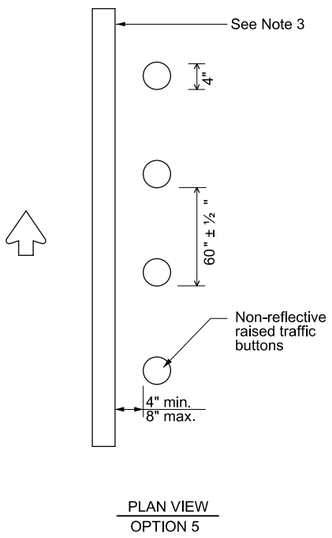
CONTINUOUS MILLED DEPRESSIONS (Rumble Strips)



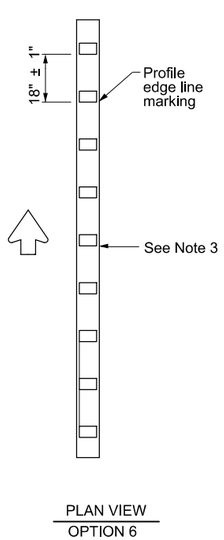
CONTINUOUS MILLED DEPRESSIONS (Rumble Strips)



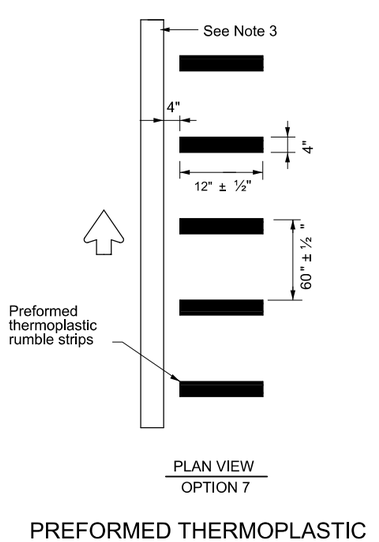
CONTINUOUS MILLED DEPRESSIONS (Rumble Strips)



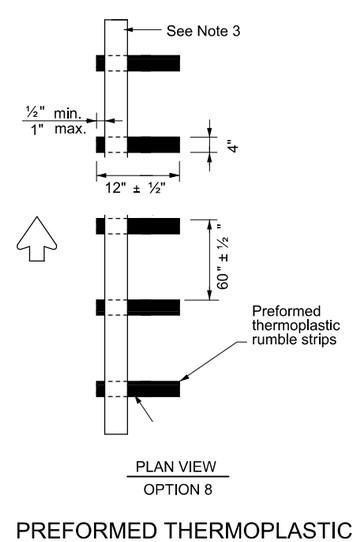
RAISED EDGE LINE (Rumble Strips)



PROFILE EDGE LINE MARKINGS (Rumble Strips)



PREFORMED THERMOPLASTIC EDGE LINE (Rumble Strips)



PREFORMED THERMOPLASTIC EDGE LINE (Rumble Strips)

SHOULDER WIDTH TABLE		
EQUAL TO OR LESS THAN 2 FEET	GREATER THAN 2 FEET LESS THAN 4 FEET	EQUAL TO OR GREATER THAN 4 FEET
Option 1, 5, 6 or 8	Option 1, 2, 3 5, 6 or 7	Option 2, 4, 5 6 or 7

GENERAL NOTES

1. Rumble strips and profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.
2. Milled rumble strips are preferred when adequate pavement depth is available. If pavement thickness is less than 2 inches, milled rumble strips shall not be used. Rumble strips shall not be milled or depressed into bridge decks.
3. Use Standard Sheet PM(2) and FPM(1) for positioning, dimensioning, and spacing of all reflective raised pavement markers, pavement markings, and profile markings.
4. See the Shoulder Width Table below for determining what options may be used for edge line rumble strips.
5. Breaks in edge line rumble strips shall occur at least 50 feet and no more than 150 feet in advance of bridges, railroad crossings, intersections, or driveways with high usage of large trucks when installed on conventional highways.
6. Rumble strips shall not be placed across exit or entrance ramps, acceleration or deceleration lanes, crossovers, gore areas, or intersections with other roadways.
7. Consideration should be given to noise levels when edgeline rumble strips are to be installed near residential areas, schools, churches, etc. A 3/8 inch deep (minimum) milled rumble strip may be considered in these areas.
8. Consideration shall be given to bicyclists. See RS(6).

WHEN INSTALLING MILLED DEPRESSION EDGE LINE RUMBLE STRIPS:

9. See dimensions for milled rumble strips. Other shapes and dimensions may be used if approved by the Traffic Safety Division.
10. Pavement markings can be applied over milled shoulder rumble strips to create an edge line rumble strip.

WHEN INSTALLING RAISED OR PROFILE EDGE LINE RUMBLE STRIPS:

11. Raised rumble strips consisting of non-reflective raised traffic buttons may be used. Non-reflective raised traffic buttons can be affixed to asphalt or concrete with bitumen or adhesives, as per the manufacturer's recommendations.
12. Non-reflective traffic buttons shall be placed adjacent to the pavement marking delineating the edge line when used as a rumble strip. The color of the button should match the color of the adjacent edge line marking (white or yellow). The buttons will be paid for under Item 672, "Raised Pavement Markers." Non-reflective traffic buttons must meet the requirements of DMS-4300.
13. Non-reflective traffic buttons shall not be placed across exit or entrance ramps, acceleration and deceleration lanes, crossovers, gore areas or intersections with other roadways.
14. The minimum distance between the edge line and the buttons should be used if the shoulder is less than 8 feet in width.
15. Raised profile thermoplastic markings used as edge lines may substitute for buttons.

Texas Department of Transportation

Traffic Safety Division Standard

EDGE LINE RUMBLE STRIPS ON UNDIVIDED OR TWO LANE HIGHWAYS RS(2)-23

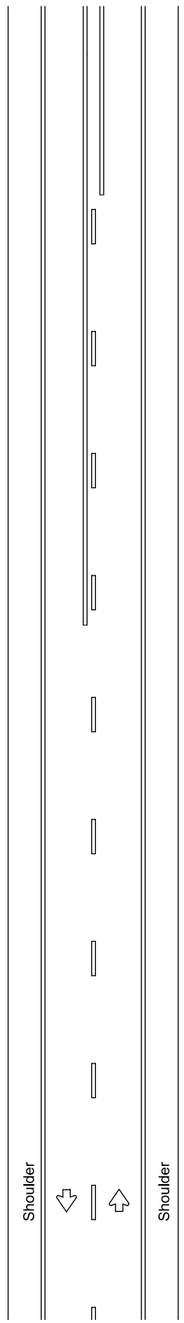
FILE: rs(2)-23.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT January 2023	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
10-13 1-23	DIST	COUNTY		SHEET NO.
	ABL	FISHER		139

DATE: 11/29/2023 1:40:58 PM
FILE: T:\rs(2)-23.dgn

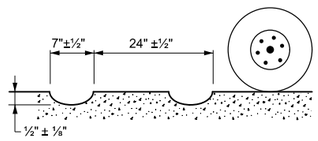
DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE: 11/29/2023 1:41:04 PM
FILE: 18_rs(4)-23.dgn

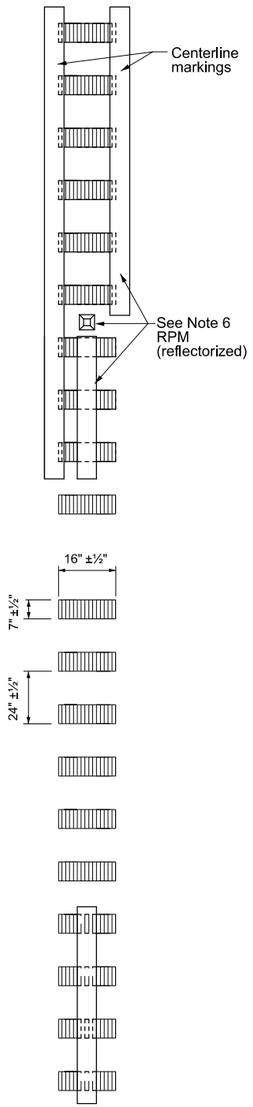
CENTERLINE RUMBLE STRIPS



TWO LANE TWO-WAY HIGHWAYS

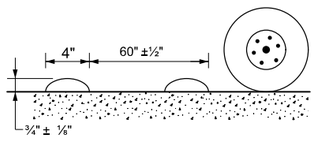


PROFILE VIEW

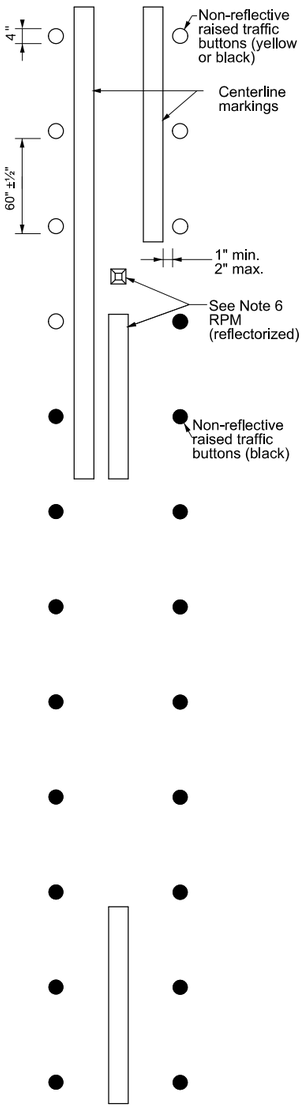


PLAN VIEW
OPTION 1

MILLED CENTERLINE RUMBLE STRIPS

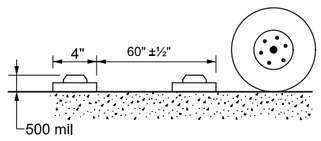


PROFILE VIEW

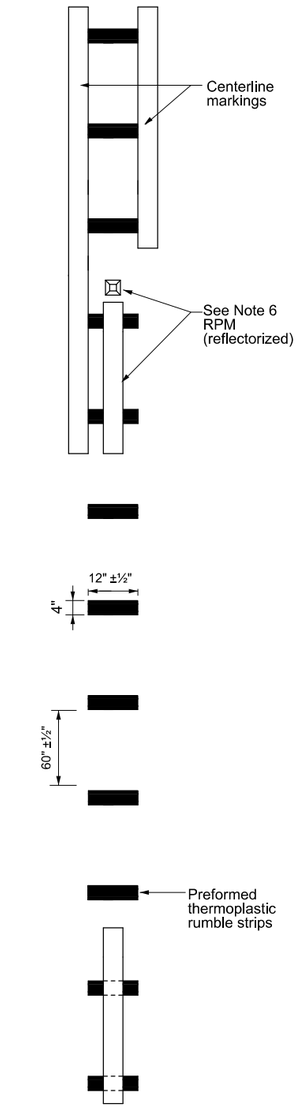


PLAN VIEW
OPTION 2

RAISED CENTERLINE RUMBLE STRIPS

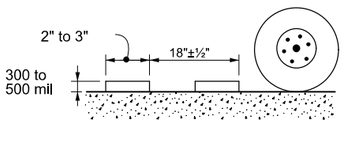


PROFILE VIEW

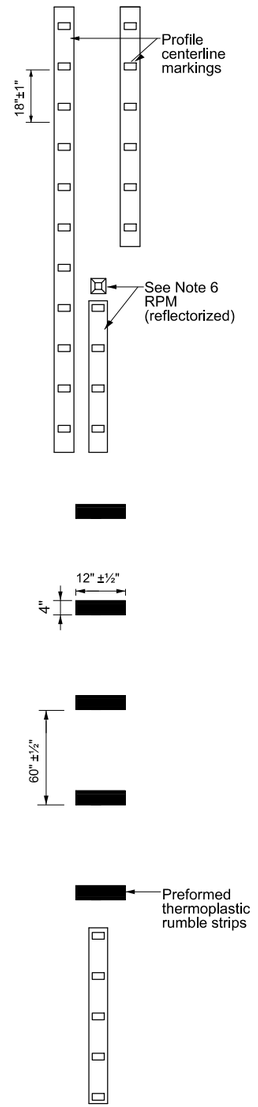


PLAN VIEW
OPTION 3

PREFORMED THERMOPLASTIC RUMBLE STRIPS



PROFILE VIEW



PLAN VIEW
OPTION 4

PROFILE CENTERLINE MARKINGS AND PREFORMED THERMOPLASTIC RUMBLE STRIPS

GENERAL NOTES

1. This standard sheet provides guidelines for installing centerline rumble strips on two-lane highways with or without shoulders.
2. Centerline and edge line rumble strips or profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.
3. Milled rumble strips are preferred when adequate pavement depth is available. If pavement thickness is less than 2 inches, milled rumble strips shall not be used. Rumble strips shall not be milled or depressed into bridge decks.
4. See dimensions for milled rumble strips. Other shapes and dimensions may be used if approved by the Traffic Safety Division.
5. Breaks in milled centerline rumble strips shall occur at least 50 feet and no more than 150 feet in advance of bridges, railroad crossings, intersections or driveways with high usage of large trucks.
6. Use standard sheet PM(2) for positioning, dimensioning, and spacing of all reflective raised pavement markers, pavement markings and profile markings.
7. Consideration should be given to noise levels when centerline rumble strips are to be installed near residential areas, schools, churches, etc. A 3/8 inch deep (minimum) milled rumble strip may be considered in these areas.
8. Pavement markings must be applied over milled centerline rumble strips.

WHEN INSTALLING CENTERLINE RUMBLE STRIPS:

9. Raised rumble strips consisting of non-reflective raised traffic buttons may be used. Non-reflective raised traffic buttons can be affixed to asphalt or concrete with bitumen or adhesives, as per manufacturer's recommendations.
10. When using non-reflective raised traffic buttons as a centerline rumble strip, the button shall be placed adjacent to the pavement marking delineating the centerline. The buttons will be paid for under Item 672, "Raised Pavement Markers." Non-reflective traffic buttons must meet the requirements of DMS-4300.
11. The color of the button should be yellow for a continuous no passing roadway. Black buttons should be used in areas where passing is allowed.
12. Consideration shall be given to bicyclists. See RS(6).

WHEN INSTALLING EDGE LINE RUMBLE STRIPS WITH OR WITHOUT CENTERLINE RUMBLE STRIPS ON UNDIVIDED HIGHWAYS:

13. See standard sheet RS(2).

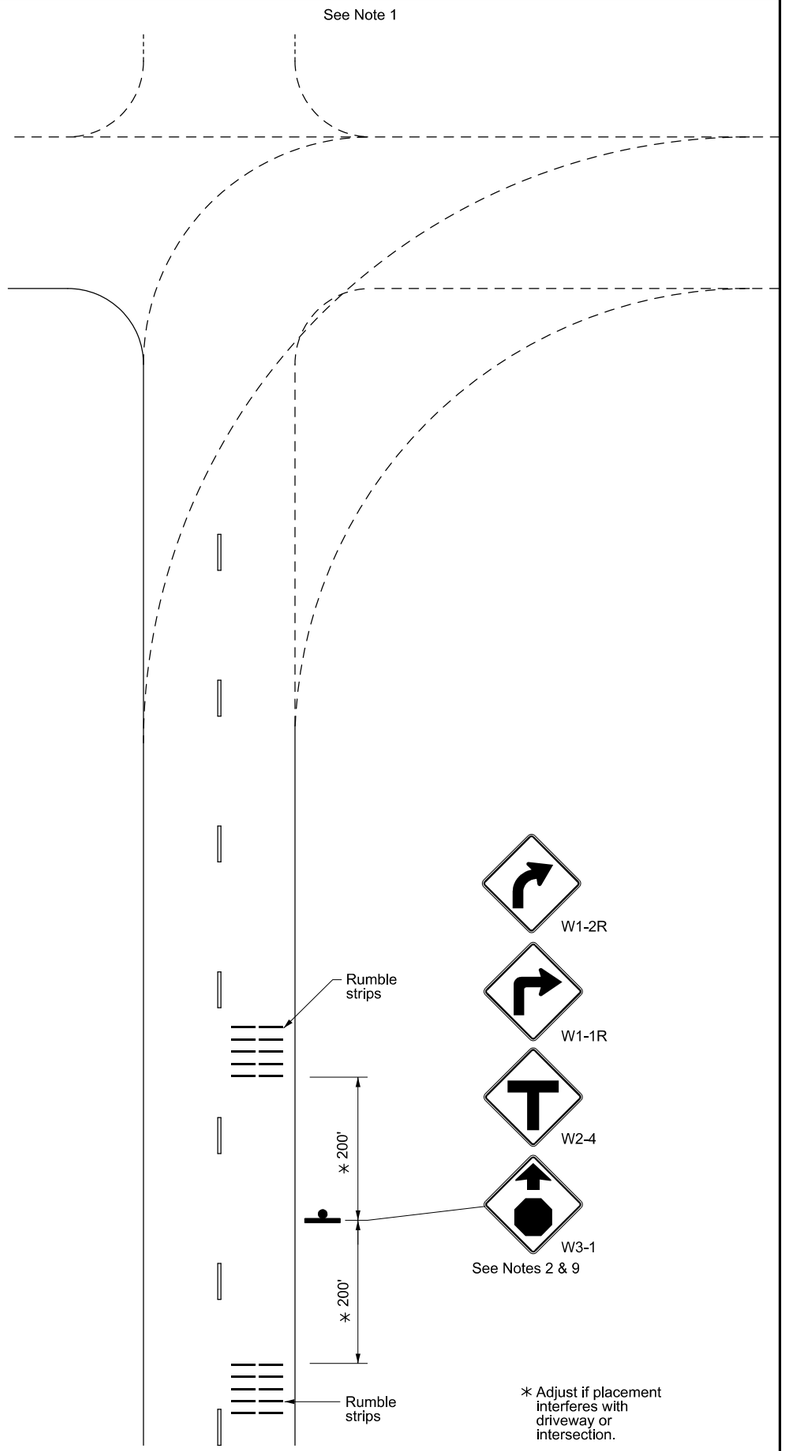
Texas Department of Transportation

Traffic Safety Division Standard

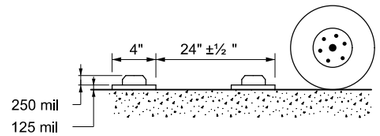
CENTERLINE RUMBLE STRIPS ON TWO LANE TWO-WAY HIGHWAYS RS(4)-23

FILE: rs(4)-23.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT January 2023	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
10-13	DIST	COUNTY		SHEET NO.
1-23	ABL	FISHER		140

RUMBLE STRIP TYPICAL APPLICATION

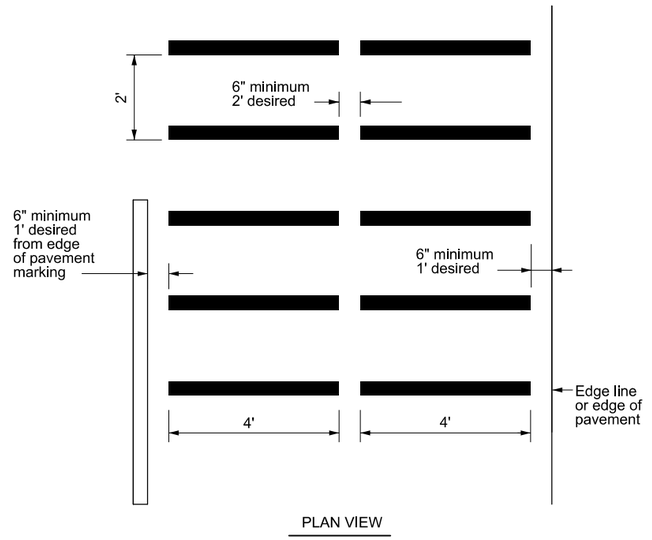


DATE: 11/29/2023 1:41:12 PM
FILE: 19_rs(5)-23.dgn



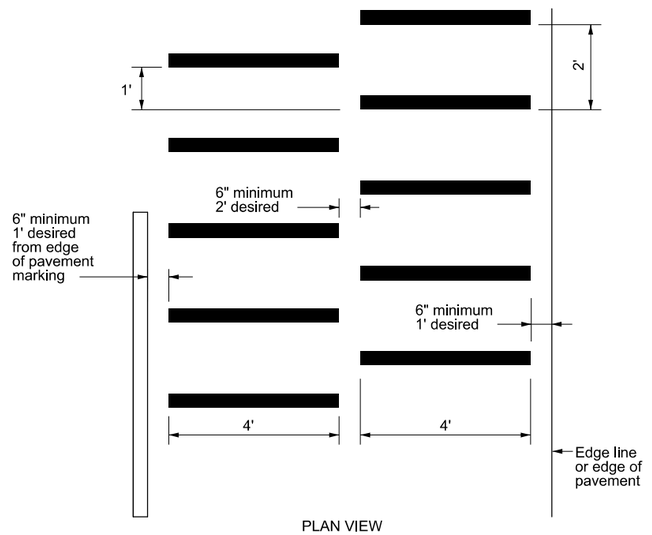
PROFILE VIEW

RUMBLE STRIP STANDARD PATTERN



PLAN VIEW

RUMBLE STRIP ALTERNATIVE PATTERN



PLAN VIEW

GENERAL NOTES

1. Transverse or in-lane rumble strips should only be used at high incident and special geometric locations. These special geometric locations may include: approaches to rural, high speed signalized or stop-controlled intersections with sight restrictions and/or high crash rates, approaches to unexpected urban intersections, approaches to newly installed stop or signalized controlled intersections, approaches to toll plazas, approaches to hazardous horizontal curves, and approaches to railroad grade crossings.
2. When used, the rumble strips shall be placed 200 feet upstream and downstream of the warning sign.
3. The use of rumble strips should not be widespread or indiscriminate.
4. Preformed black raised rumble strips should be used. They should be installed in accordance with the manufacturer's recommendations.
5. Please reference the TxDOT Material Producers List for approved rumble strips (transverse); http://www.txdot.gov/
6. Consideration should be given to noise levels when in-lane or transverse rumble strips are to be installed near residential areas, schools, churches, etc.
7. The RUMBLE STRIPS AHEAD (W17-2T) sign may be used in advance of in-lane or transverse rumble strips, based on engineering judgement. This sign is typically not necessary for rumble strip installations built to the guidelines on this standard sheet. When used, this sign should be spaced in advance of the rumble strips based on the Guidelines for Advance Placement of Warning Signs table of the Texas Manual on Uniform Traffic Control Devices.

W17-2T

8. Consideration shall be given to bicyclists. See RS(6).
9. Other signs can be used as conditions warrant.

Texas Department of Transportation

Traffic Safety Division Standard

TRANSVERSE OR IN-LANE RUMBLE STRIPS

RS(5)-23

FILE: rs(5)-23.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT January 2023	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-06 1-12 2-10 10-13	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		141

94

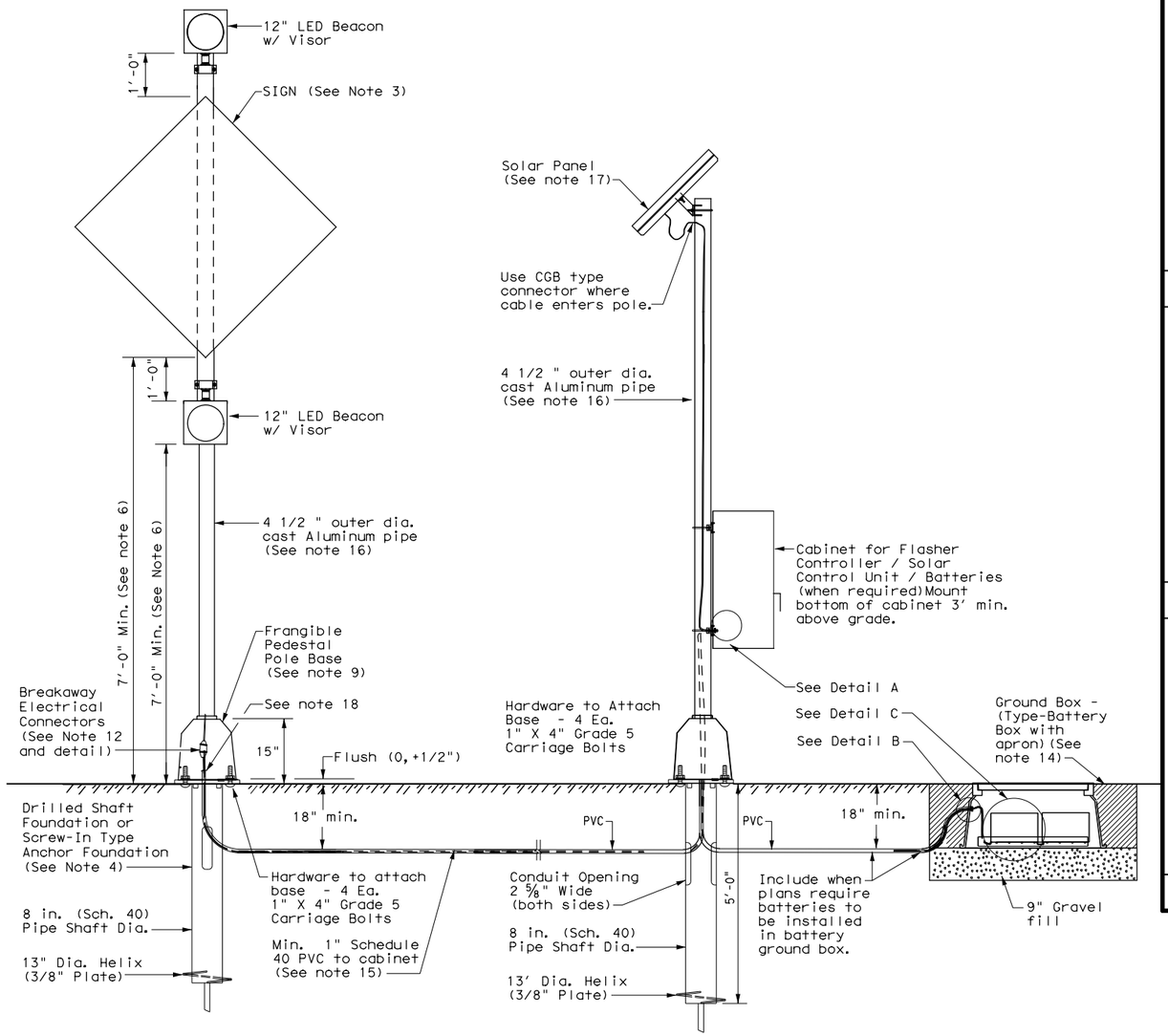
DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

GENERAL NOTES:

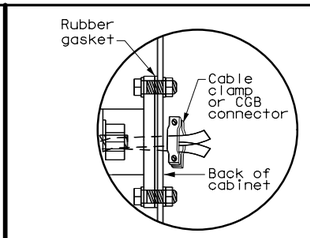
1. Details show a typical warning sign with two flashing beacon heads, other arrangements are possible. When only one beacon is required, install the upper beacon.
2. See Item 685, "Roadside Flashing Beacon Assemblies" for further requirements.
3. See SMD standard sheets for lateral and vertical clearances and sign mounting details. Install signs as shown on the sign layout sheets.
4. Use either a Screw-In Type Anchor Foundation or a Drilled Shaft Foundation as shown elsewhere in the plans. When plans require a Drilled Shaft Foundation, see standard sheet TS-FD. Install the Screw-In Type Anchor Foundation as per manufacturer's recommendations. On a slope, install one edge at ground level. Screw-In/Drilled Shaft Foundation is subsidiary to Item 685. Installation of a ground rod is not required for solar powered flashing beacon assemblies.
5. When used, provide Screw-In Type Anchor Foundations as shown on TxDOT's Material Producer List (MPL) in the file "Highway Traffic Signals".
6. Provide clearance as shown above the sidewalk or pavement grade at the edge of the road. When a bottom beacon is not used, mount the bottom of the sign at least 7 ft. above the sidewalk or pavement grade at the edge of the road.
7. Use materials specifically designed for attaching cabinets, beacon heads, solar panels, etc., to poles.
8. Conduit in foundation and within 6 in. of foundation is subsidiary to the Item 685, "Roadside Flashing Beacon Assemblies."
9. Per manufacturer's recommendations, engage all threads on the pedestal pole base and pipe unless the pipe is fully seated into base. In high winds, use a pole and base collar assembly to add strength and prevent loosening on connection.
10. Install beacon heads as shown here, as shown elsewhere on the plans, or as directed. Use hardware specifically designed for mounting beacon heads on poles.
11. Install the cable clamp in the bottom third of the back of the cabinet. See Detail A.
12. Provide single pole non-fused watertight breakaway electrical connectors for frangible pedestal pole bases, as shown on TxDOT's MPL in the file "Roadway Illumination and Electrical Supplies". Approved models are listed under Item 685. For ungrounded (hot) conductors, install a breakaway connector with a dummy fuse (slug). For grounded (neutral) conductors, install a breakaway connector with a white colored marking and a permanently installed dummy fuse (slug).
13. Install the batteries in a battery box. Place the batteries on a 3/16" thick plastic sheet and connect together. Place a plastic cover (battery bell jar) over the top of each battery and secure the battery bell jar to the battery with a strap. The batteries, bell jars, straps and 3/16 " plastic sheet are subsidiary to the Item 685, "Roadside Flashing Beacon Assemblies." When required, install batteries in the flasher cabinet. Wire batteries according to manufacturers recommendations. Provide the number of batteries as required by the manufacturer.
14. See standard sheet Electrical Details (ED) for additional requirements regarding the installation of ground boxes/battery boxes, conduit, and cabinets.
15. Unless otherwise shown on the plans or recommended by the manufacturer, use the following table to determine the wire size from cabinet to beacons.

Distance from Cabinet to Beacons (ft.)	Minimum Required Wire Size (AWG)
0 - 35	#14
35 - 60	#12
60 - 100	#10
> 100	#8

16. Unless otherwise shown on the plans, pole shaft shall be one piece, Schedule 40 Aluminum pipe, ASTM B429 or B221 (Alloy 6061-T6 only). Aluminum conduit will not develop the necessary strength and will not be allowed.
17. Orient solar panel for optimum exposure to sunlight (face to the south). Prior to installation, check the location to ensure there is no overhead obstruction that would block the solar panel from receiving full sunlight. Unless specified elsewhere, mount a minimum of 14' above grade.
18. Ensure height of conduit is below top of anchor bolts.

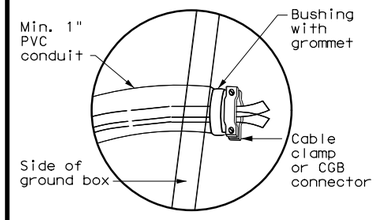


DETAIL FOR SOLAR PANEL, CABINET, AND BATTERIES LOCATED OUT OF CLEAR ZONE ON SEPARATE ALUMINUM POLE ASSEMBLY

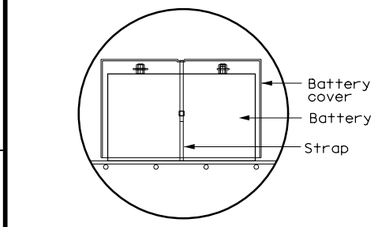


Pull conductors to remove slack in run between cabinet and ground box. Clamp cable at conduit end in ground box and in cabinet at entry as shown.

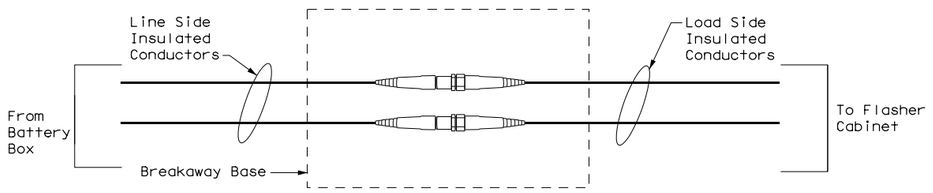
DETAIL A



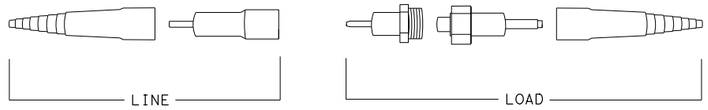
DETAIL B



DETAIL C



NON-FUSED BREAKAWAY ELECTRICAL CONNECTORS



NON-FUSED BREAKAWAY ELECTRICAL CONNECTORS EXPLODED VIEW

Texas Department of Transportation — Traffic Operations Division Standard

SOLAR POWERED ROADSIDE FLASHING BEACON ASSEMBLY DETAILS (ALUMINUM)

SPRFBA(3)-13

FILE: spb3-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT May 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
12-04	DIST	COUNTY		SHEET NO.
3-13	ABL	FISHER		142

75C

DATE: 11/29/2023 1:41:18 PM
FILE: 21_spb3-13.dgn

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

This SWP3 has been developed in accordance with the TPDES Construction General Permit TXR150000 (CGP). The Texas Department of Transportation (TxDOT) ensures that project specifications include adequate best management practices (BMPs) for this project.

This SWP3 is consistent with requirements specified in applicable stormwater plans and the projects environmental permits, issues, and commitments (EPICs). A copy of the CGP is included in Attachment 2.12 of the SWP3 binder.

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):
0317-01-043 (FM 57)

1.2 PROJECT LIMITS:

From: SH 70

To: PLUM CREEK

1.3 PROJECT COORDINATES:

BEGIN: (Lat) 32°38'22.32"N ,(Long) 100°22'32.51"W

END: (Lat) 32°40'35.69"N ,(Long) 100°18'31.38"W

1.4 TOTAL PROJECT AREA (Acres): 57.7

1.5 TOTAL AREA TO BE DISTURBED (Acres): 37.2

1.6 NATURE OF CONSTRUCTION ACTIVITY:
Excavation, embankment, widening, surface treatment, and final surface preparation and revegetation.

1.7 MAJOR SOIL TYPES:

Soil Type	Description
Paducah loam, 1 to 5 % slopes	Loam and clay loam, moderately well drained, low rate of runoff, slight erosion potential.
Westola fine sandy loam, 0 to 1 % slopes	Fine sandy loam, moderately well drained, low rate of runoff, slight erosion potential.
Wichita clay loam, 0 to 1 % slopes	Clay, moderately well drained, low rate of runoff, low erosion potential.
Woodward-Quinlan complex, 5 to 12 % slopes	Loam, moderately well drained, medium rate of runoff, slight erosion potential.

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):

PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below:

- ☐ PSLs determined during preconstruction meeting
- ☒ PSLs determined during construction
- ☐ No PSLs planned for construction

Type	Sheet #s
Material Storage Area	TBD

All off-ROW PSLs required by the Contractor are the Contractor's responsibility. The Contractor shall secure all permits required by local, state, federal laws for off-ROW PSLs. The contractor shall provide diagrams, areas of disturbance, acreage, and BMPs for all off-ROW PSLs within one mile of the project.

1.9 CONSTRUCTION ACTIVITIES:
(Use the following list as a starting point when developing the Construction Activity Schedule and Ceasing Record in Attachment 2.5.)

- ☒ Mobilization
- ☒ Install sediment and erosion controls
- ☒ Blade existing topsoil into windrows, prep ROW, clear and grub
- ☒ Remove existing pavement
- ☒ Grading operations, excavation, and embankment
- ☒ Excavate and prepare subgrade for proposed pavement widening
- ☐ Remove existing culverts, safety end treatments (SETs)
- ☐ Remove existing metal beam guard fence (MBGF), bridge rail
- ☒ Install proposed pavement per plans
- ☐ Install culverts, culvert extensions, SETs
- ☒ Install mow strip, MBGF, bridge rail
- ☒ Place flex base
- ☒ Rework slopes, grade ditches
- ☒ Blade windrowed material back across slopes
- ☒ Revegetation of unpaved areas
- ☒ Achieve site stabilization and remove sediment and erosion control measures
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.10 POTENTIAL POLLUTANTS AND SOURCES:

- ☒ Sediment laden stormwater from stormwater conveyance over disturbed area
- ☒ Fuels, oils, and lubricants from construction vehicles, equipment, and storage
- ☒ Solvents, paints, adhesives, etc. from various construction activities
- ☒ Transported soils from offsite vehicle tracking
- ☒ Construction debris and waste from various construction activities
- ☒ Contaminated water from excavation or dewatering pump-out water
- ☒ Sanitary waste from onsite restroom facilities
- ☒ Trash from various construction activities/receptacles
- ☒ Long-term stockpiles of material and waste
- ☒ Discharges from concrete washout activities, runoff from concrete cutting activities, and other concrete related activities.
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.11 RECEIVING WATERS:

Receiving waters must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. Include Segment # for receiving waters.

Tributaries	Classified Waterbody
Plum Creek	Clear Fork Brazos River (1232); Impaired for Bacteria
No TMDLs or I-Plans were identified	

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

- ☒ Development of plans and specifications
- ☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
- ☒ Post Construction Site Notice
- ☐ Submit NOI/CSN to local MS4
- ☒ Perform SWP3 inspections
- ☒ Maintain SWP3 records and update to reflect daily operations
- ☒ Complete and submit Notice of Termination to TCEQ
- ☒ Maintain SWP3 records for 3 years
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

- ☒ Day To Day Operational Control
- ☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
- ☒ Post Construction Site Notice
- ☐ Submit NOI/CSN to local MS4
- ☒ Maintain schedule of major construction activities
- ☒ Install, maintain and modify BMPs
- ☒ Complete and submit Notice of Termination to TCEQ
- ☒ Maintain SWP3 records for 3 years
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity
No MS4 receive stormwater discharge from the site

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 1 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	SEE TITLE SHEET		143
STATE	STATE DIST.	COUNTY	
TEXAS	ABL	FISHER	
CONT.	SECT.	JOB	HIGHWAY NO.
0317	01	043	FM 57

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

2.0 BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS, INSPECTION, AND MAINTENANCE

The Contractor shall be the responsible party for implementing the BMPs described herein and for complying with the SWP3 for control of erosion and sedimentation during day-to-day operations. The Contractor shall implement changes to this SWP3 approved by TxDOT within the times specified in this SWP3 or the CGP.

2.1 EROSION CONTROL AND SOIL STABILIZATION BMPs:

T / P

- ☒ ☒ Protection of Existing Vegetation
- ☒ ☒ Vegetated Buffer Zones
- ☐ ☒ Soil Retention Blankets
- ☐ ☐ Geotextiles
- ☐ ☐ Mulching/ Hydromulching
- ☐ ☐ Soil Surface Treatments
- ☒ ☐ Temporary Seeding
- ☐ ☒ Permanent Planting, Sodding or Seeding
- ☒ ☐ Biodegradable Erosion Control Logs
- ☒ ☐ Rock Filter Dams/ Rock Check Dams
- ☒ ☐ Vertical Tracking
- ☐ ☐ Interceptor Swale
- ☐ ☐ Riprap
- ☐ ☐ Diversion Dike
- ☐ ☐ Temporary Pipe Slope Drain
- ☐ ☐ Embankment for Erosion Control
- ☐ ☐ Paved Flumes
- ☐ ☒ Other: Vegetative Lined Ditches
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

2.2 SEDIMENT CONTROL BMPs:

T / P

- ☒ ☐ Biodegradable Erosion Control Logs
- ☒ ☐ Dewatering Controls
- ☐ ☐ Inlet Protection
- ☒ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Sandbag Berms
- ☒ ☐ Sediment Control Fence
- ☒ ☐ Stabilized Construction Exit
- ☐ ☐ Floating Turbidity Barrier
- ☒ ☒ Vegetated Buffer Zones
- ☐ ☐ Vegetated Filter Strips
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

Sediment control BMPs requiring design capacity calculations (See SWP3 Attachment 1.3.):

T / P

- ☐ ☐ Sediment Trap
  - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
  - ☐ 3,600 cubic feet of storage per acre drained
- ☐ ☐ Sedimentation Basin
  - ☐ Not required (<10 acres disturbed)
  - ☐ Required (>10 acres) and implemented.
    - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
    - ☐ 3,600 cubic feet of storage per acre drained
  - ☒ Required (>10 acres), but not feasible due to:
    - ☒ Available area/Site geometry
    - ☐ Site slope/Drainage patterns
    - ☐ Site soils/Geotechnical factors
    - ☐ Public safety
    - ☐ Other: _____

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Stationing	
	From	To

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

- ☒ Excess dirt/mud on road removed daily
- ☒ Haul roads dampened for dust control
- ☒ Loaded haul trucks to be covered with tarpaulin
- ☒ Stabilized construction exit
- ☒ Daily street sweeping
- ☒ Other: Dampen disturbed soil areas as needed for dust control
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

2.5 POLLUTION PREVENTION MEASURES:

- ☒ Chemical Management
- ☒ Concrete and Materials Waste Management
- ☒ Debris and Trash Management
- ☒ Dust Control
- ☒ Sanitary Facilities
- ☒ Other: Avoid storing portable sanitary units, concrete washouts or chemicals within 50 feet upgradient of a receiving water or drainage conveyance w/o pollution control
- ☒ Other: Capture saw-cutting debris and concrete slurry for proper disposal
- ☒ Other: Maintain paved surfaces free of project sedimentation and debris

2.6 VEGETATED BUFFER ZONES:

Natural vegetated buffers shall be maintained as feasible to protect adjacent surface waters. If vegetated natural buffer zones are not feasible due to site geometry, the appropriate additional sediment control measures have been incorporated into this SWP3.

Type	Stationing	
	From	To

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- ☒ Fire hydrant flushings
- ☒ Irrigation drainage
- ☒ Pavement washwater (where spills or leaks have not occurred, and detergents are not used)
- ☒ Potable water sources
- ☒ Springs
- ☒ Uncontaminated groundwater
- ☒ Water used to wash vehicles or control dust
- ☒ Other allowable non-stormwater discharges as allowed by TPDES GP TXR150000.

2.8 DEWATERING:

Dewatering discharges of accumulated stormwater, groundwater, and surface water including discharges from dewatering of trenches, excavations, foundations, vaults, and other points of accumulation are prohibited unless managed by appropriate controls to prevent and minimize the offsite discharge of sediment and other pollutants.

2.9 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

When dewatering activities are present, a daily inspection will be conducted once per day during those activities and documented in accordance with CGP and TxDOT requirements.

2.10 MAINTENANCE:

Control measures shall be properly installed according to specifications. If it is determined that a BMP or control measure is not operating effectively, maintenance must be accomplished as soon as possible and before the next anticipated rain event, but in no case later than 7 calendar days after being able to access the site. Maintenance shall be performed by the Contractor as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER

11/29/2023

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 2 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	SEE TITLE SHEET		144
STATE	STATE DIST.	COUNTY	
TEXAS	ABL	FISHER	
CONT.	SECT.	JOB	HIGHWAY NO.
0317	01	043	FM 57

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

I. STORM WATER POLLUTION PREVENTION-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Storm water 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 506.

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

1.

☐ No Action Required ☒ Required Action

Action No.

1. The project disturbs five or more acres of surface area: TxDOT must file a NOI and coordinate with TCEQ for CGP. The contractor is responsible for the PSL as defined in the Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges (2014 Edition, Section 7.6., Page 44). The total disturbed acreage is the combined acreage to be disturbed on the project and the contractors PSL. This includes, as required, posting a site notice and NOI for the PSL.
2. TxDOT must file a NOT for the project when final stabilization has been achieved.
3. Prevent storm water pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000
4. Comply with the SWP3 and revise when necessary to control pollution or required by the Engineer.
5. Post Construction Site Notice (CSN) with SWP3 information on or near the site, accessible to the public and TCEQ, EPA or other inspectors.

II. WORK IN OR NEAR STREAMS, WATER BODIES 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. Plum Creek

2. Clear Fork of Brazos River

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	Sedimentation	Post-Construction TSS
☒ Temporary Vegetation	☒ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☐ Rock Berm	☐ Retention/Irrigation Systems
☐ Mulch	☐ Triangular Filter Dike	☐ Sedimentation Basin
☐ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw & Hay Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost & Mulch
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☐ Sand Filter Systems
☒ Temporary Erosion Control Logs (BIOLOGS)	☒ Temporary Erosion Control Logs (BIOLOGS)	☐ Temporary Erosion Control Logs (BIOLOGS)
☒ Preservation of Natural Resources	☐ Sediment Traps	☒ Permanent Vegetation (Planting, Sodding, or Seeding)
☒ Construction Exits	☐ Sediment Basins	☐ 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

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical.
Contractor must adhere to Construction Specification Requirements Specs 162, 164, 192, 193, 506, 730, 751, 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

☐ No Action Required ☒ Required Action

Action No.

1. Comply with EO 13112 on use of native vegetation.

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

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 caves or sinkholes are discovered, cease work in the immediate area, and contact the Engineer immediately.

☐ No Action Required ☒ Required Action

Action No.

1. Comply with MBTA when encountering nests.

2. Please refer to the general notes for BMPs.

LIST OF ABBREVIATIONS

BMP:	Best Management Practice	SPCC:	Spill Prevention Control and Countermeasure
CGP:	Construction General Permit	SWP3:	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 Storm water 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.

VII. OTHER ENVIRONMENTAL ISSUES

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

☒ No Action Required ☐ Required Action

Action No.

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

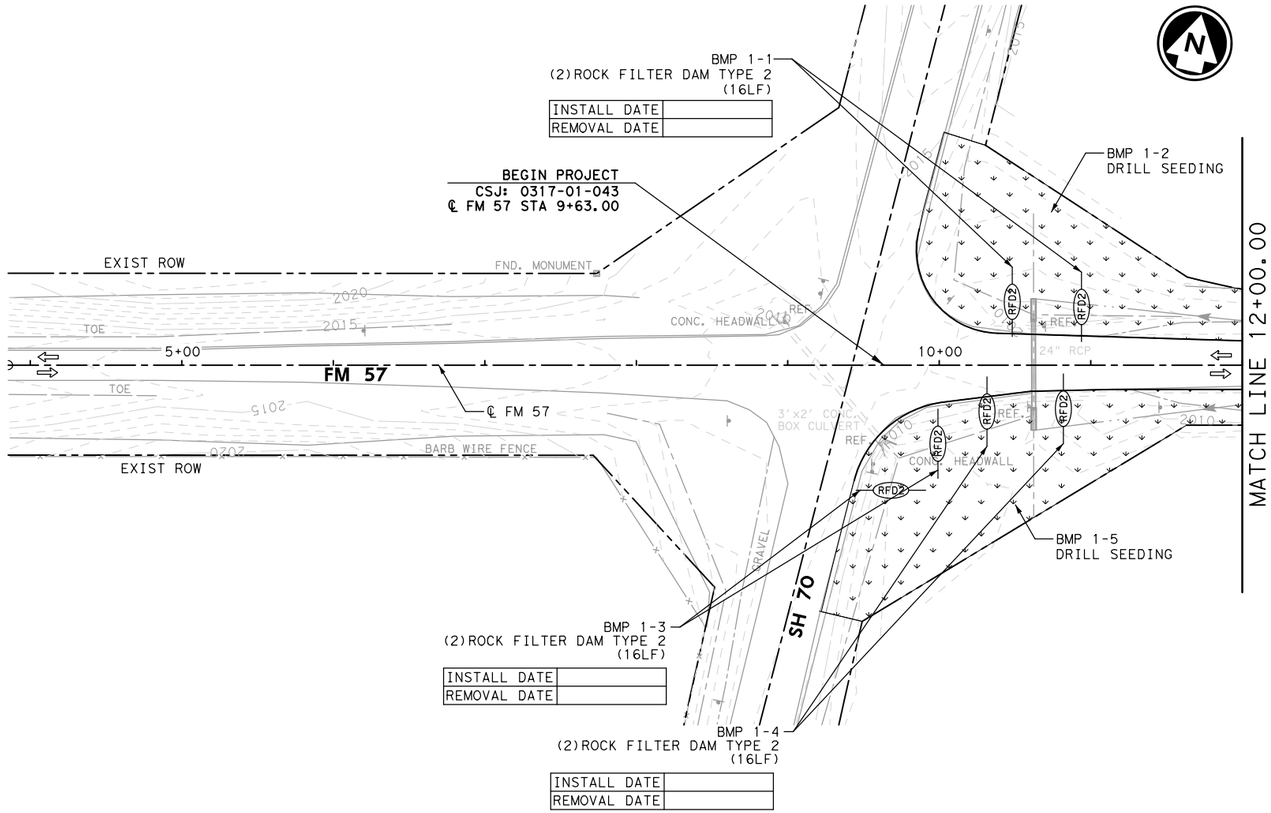
FM 57
ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS
EPIC

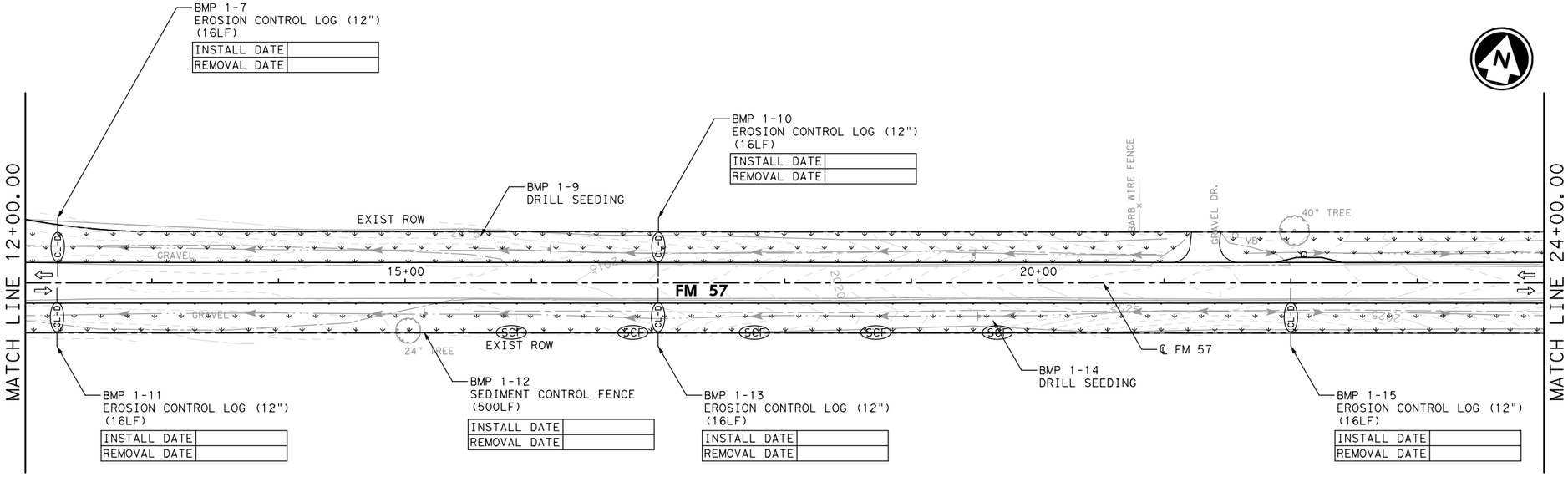
Texas Department of Transportation

NO SCALE SHEET 01 OF 01

FHWA DIVISION	PROJECT NO.		HIGHWAY NO.
6	SEE TITLE SHEET		FM 57
STATE	COUNTY		SHEET NO.
TEXAS	FISHER		145
DISTRICT	CONTROL	SECTION	JOB
ABL	0317	01	043

PREPARED BY (NAME OF DESIGNER)
DATE: 11/29/2023
FILE: FM57*SWP3*EPIC.dgn
REV. DATE: 02/2015





LEGEND:

- DIRECTION OF TRAFFIC
- CL-D — EROSION CONTROL LOG
- RFD2 — ROCK FILTER DAM TYPE 2
- SCF — SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES,PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

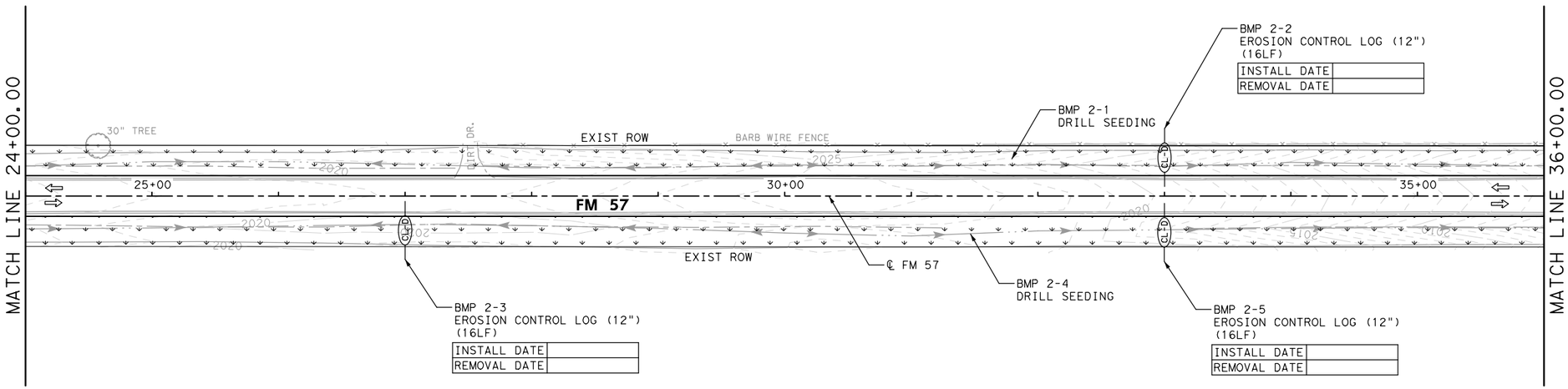
SH 70 TO PLUM CREEK

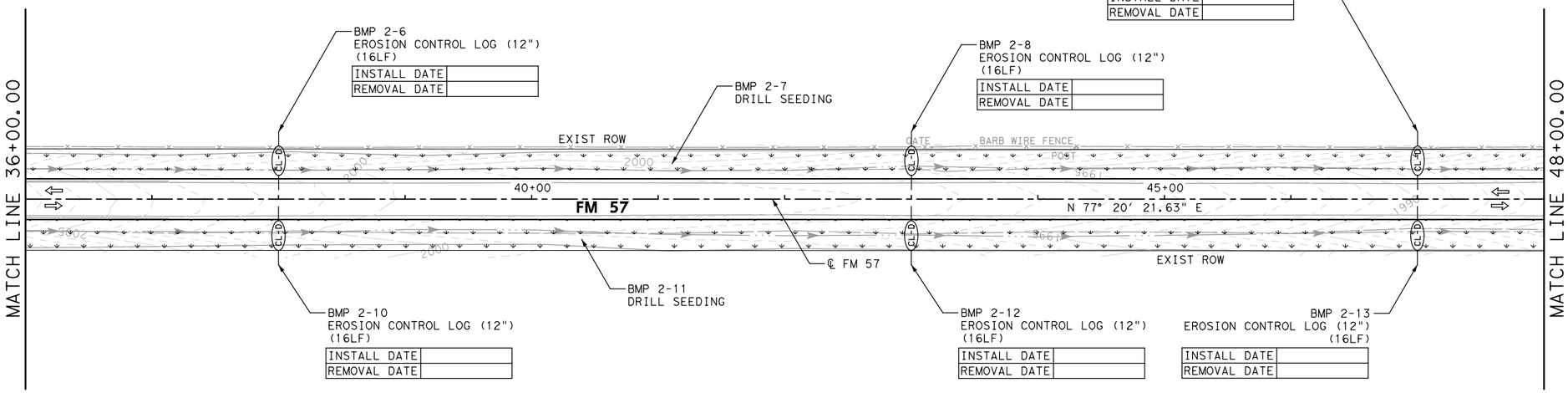
FM 57
SWP3 SITE PLANS
STA 9+63 TO STA 24+00

SHEET 01 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	146
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:41:41 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:3937.01





LEGEND:

- DIRECTION OF TRAFFIC
- EROSION CONTROL LOG
- ROCK FILTER DAM TYPE 2
- SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES,PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

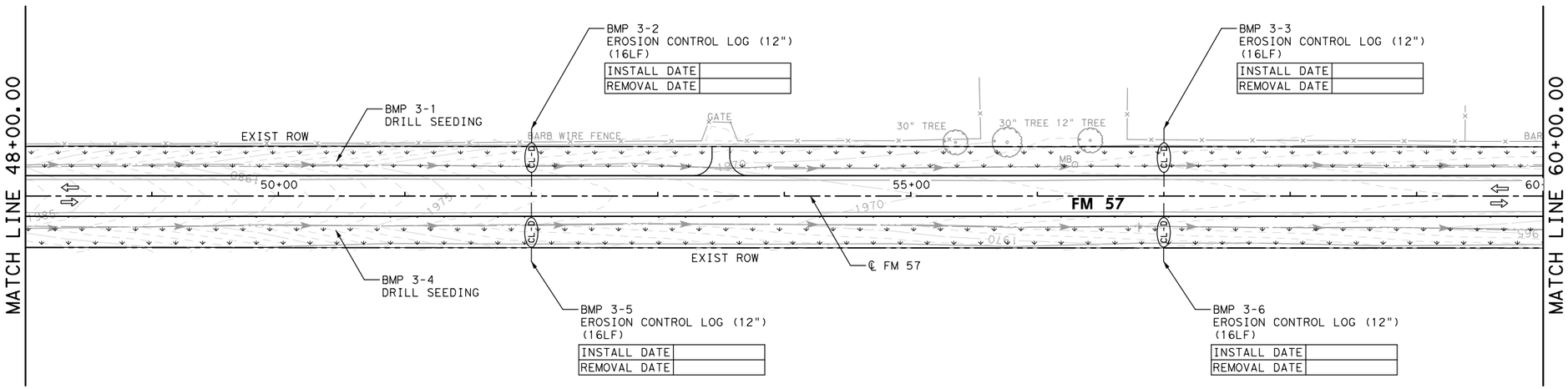
SH 70 TO PLUM CREEK

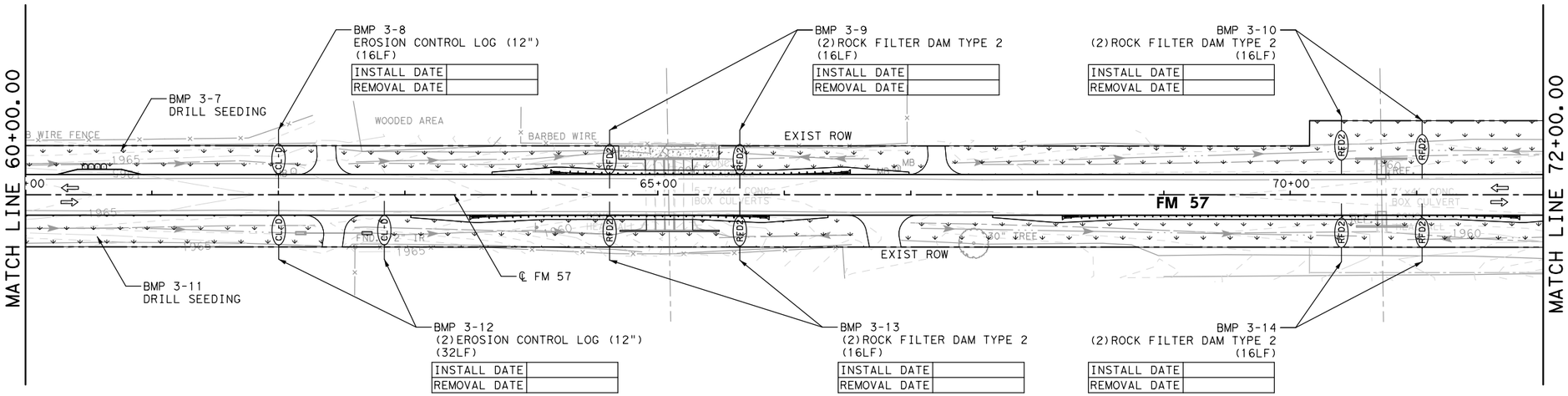
FM 57
SWP3 SITE PLANS
STA 24+00 TO STA 48+00

SHEET 02 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	147
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:41:47 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:3937.01





LEGEND:

- DIRECTION OF TRAFFIC
- CL-D — EROSION CONTROL LOG
- RFD2 — ROCK FILTER DAM TYPE 2
- SCF — SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES,PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

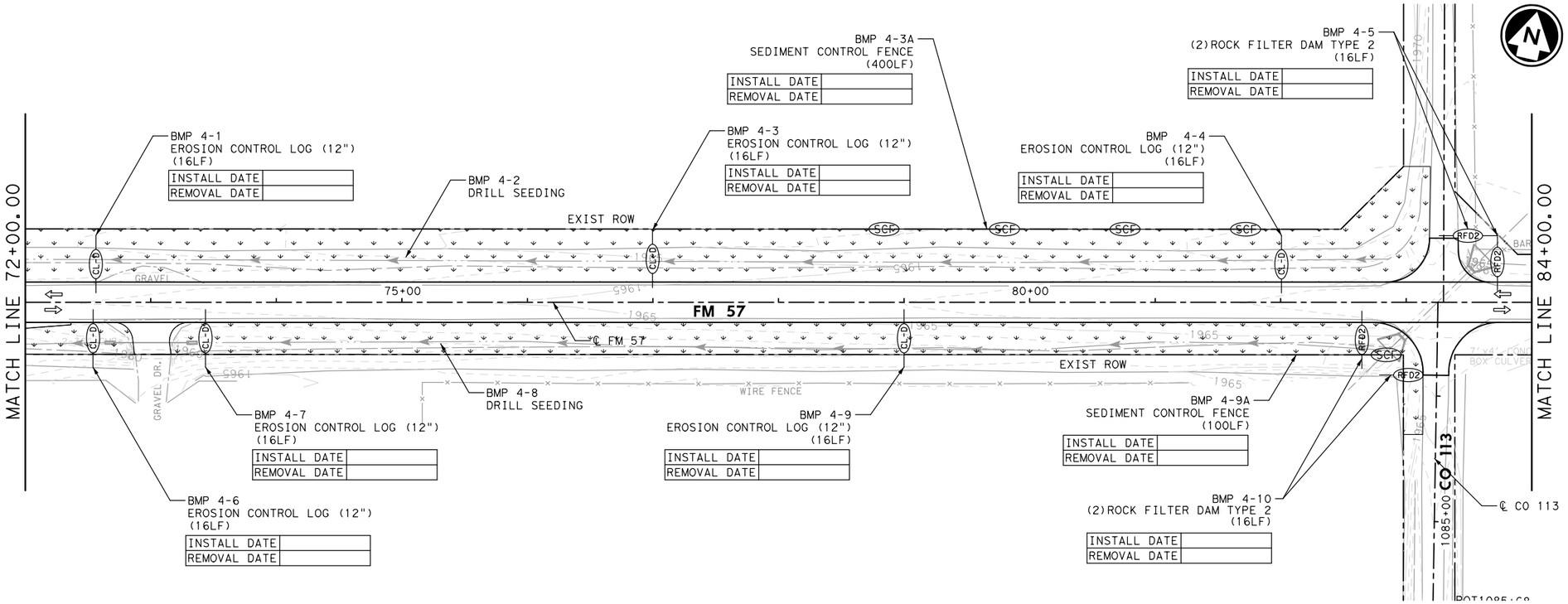
SH 70 TO PLUM CREEK

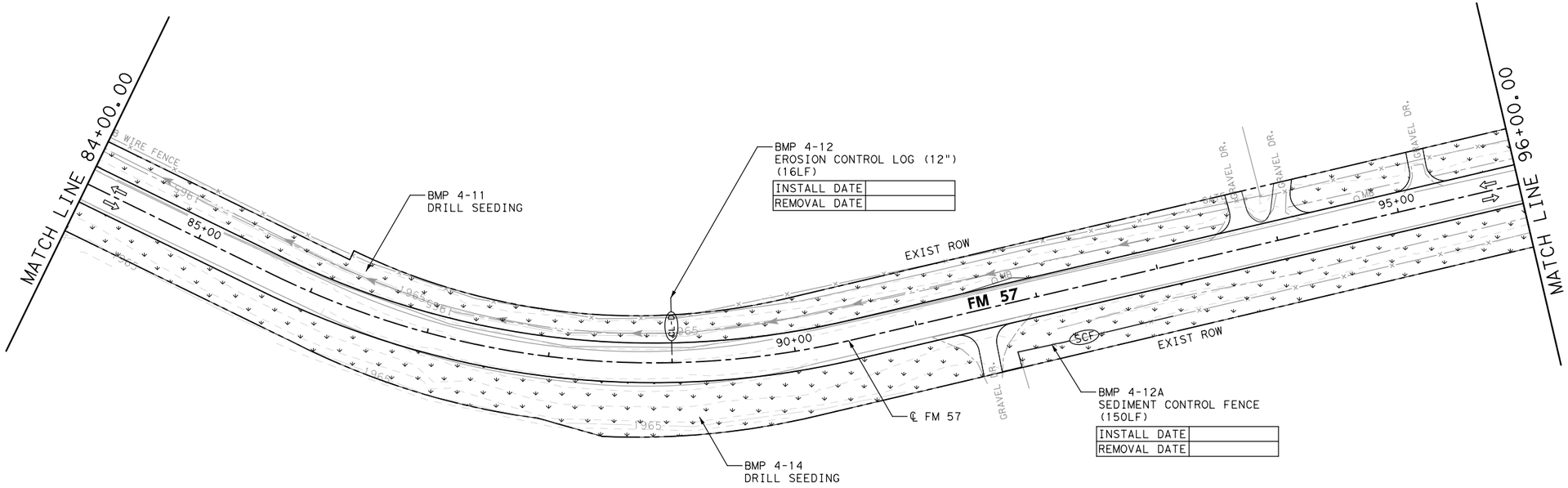
FM 57
SWP3 SITE PLANS
STA 48+00 TO STA 72+00

SHEET 03 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	148
CHECK IEI	CONTROL 0317	SECTION 01	JOB 043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:41:52 PM
SCALE: 1:3937.01
PENTABLE: FM57_REVISE.tbl





LEGEND:

- DIRECTION OF TRAFFIC
- CL-D — EROSION CONTROL LOG
- RFD2 — ROCK FILTER DAM TYPE 2
- SCF — SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES, PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED PROFESSIONAL ENGINEER

11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

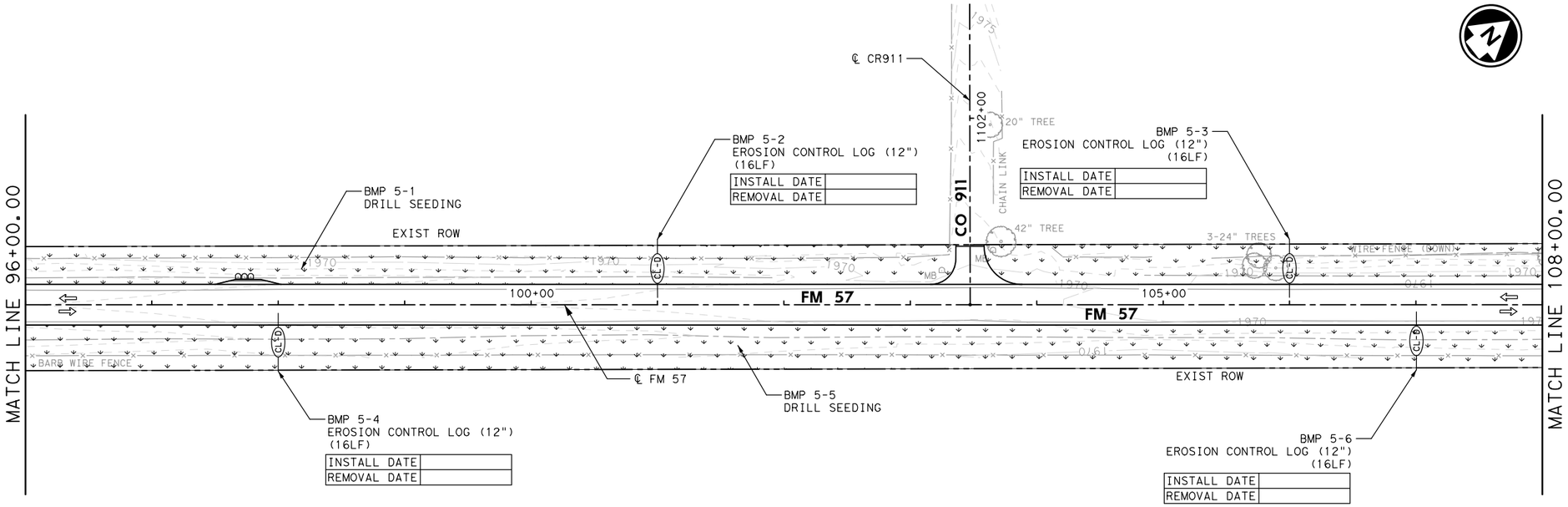
SH 70 TO PLUM CREEK

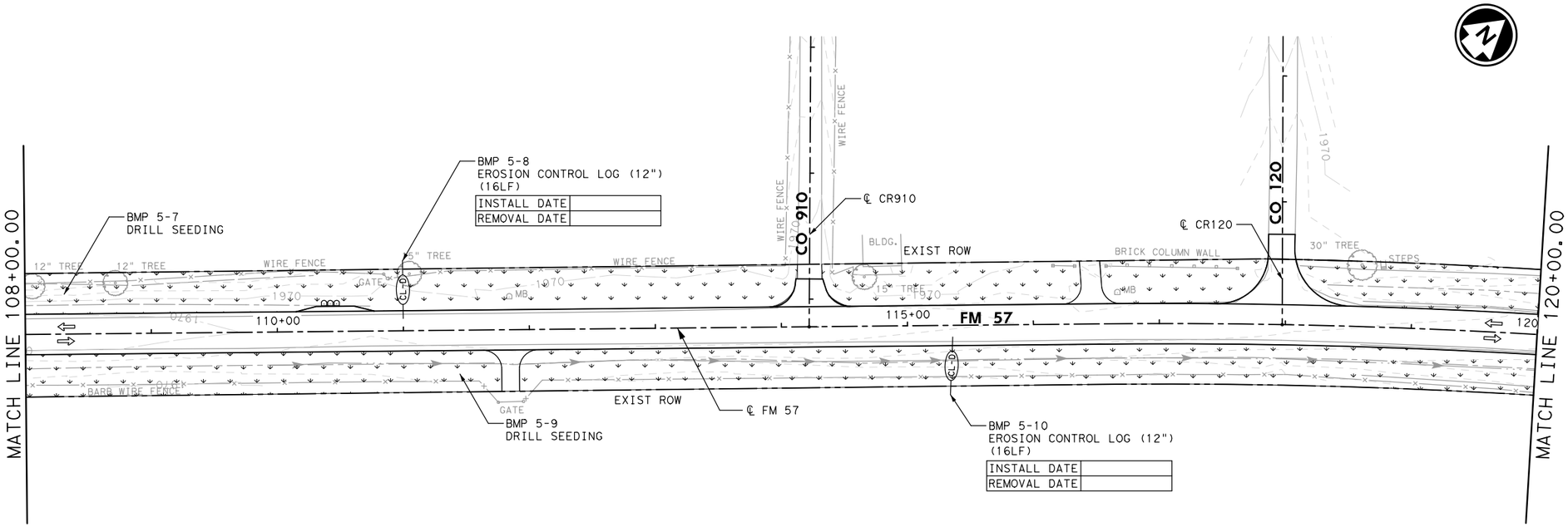
FM 57
SWP3 SITE PLANS
STA 72+00 TO STA 96+00

SHEET 04 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	149
CHECK IEI	CONTROL 0317	SECTION 01	JOB 043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
PENTABLE: FM57_REVISE.tbl
DATE: 11/29/2023
TIME: 1:41:57 PM
SCALE: 1:3937.01





LEGEND:

- DIRECTION OF TRAFFIC
- CL-D — EROSION CONTROL LOG
- RFD2 — ROCK FILTER DAM TYPE 2
- SCF — SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES,PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation

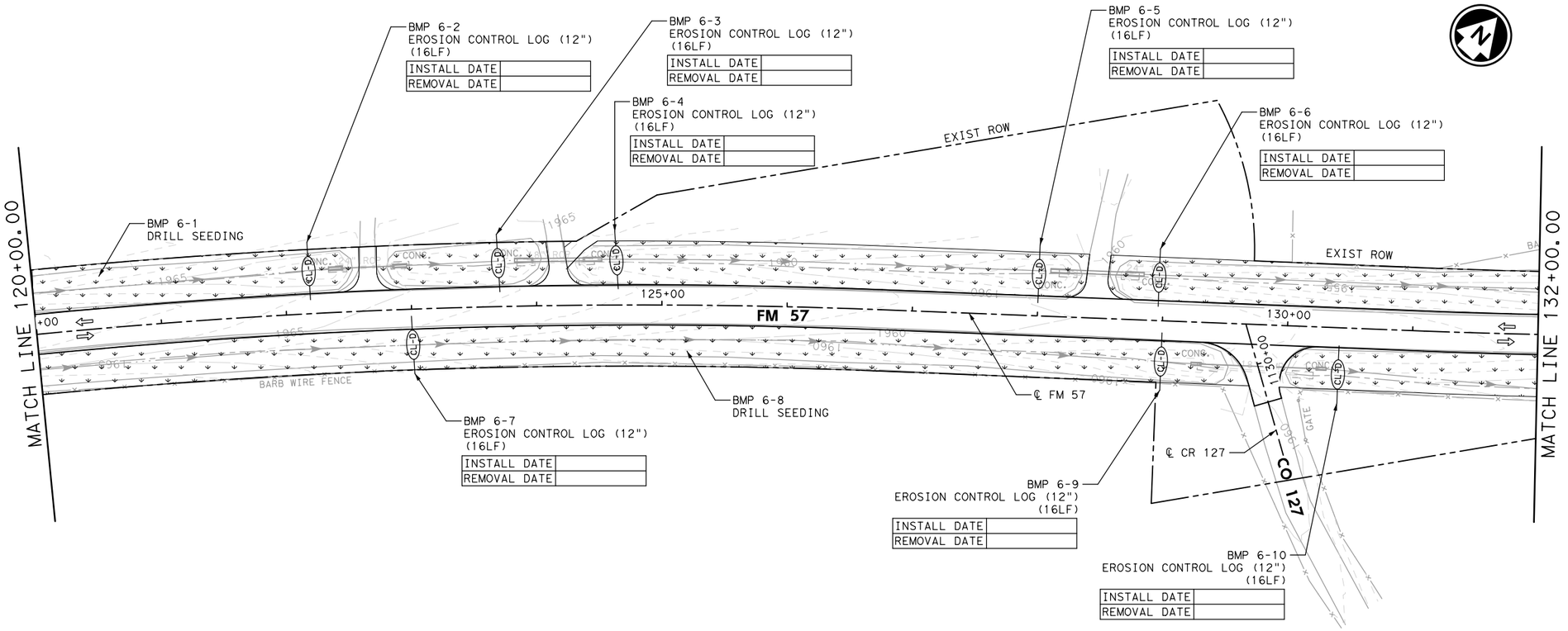
SH 70 TO PLUM CREEK

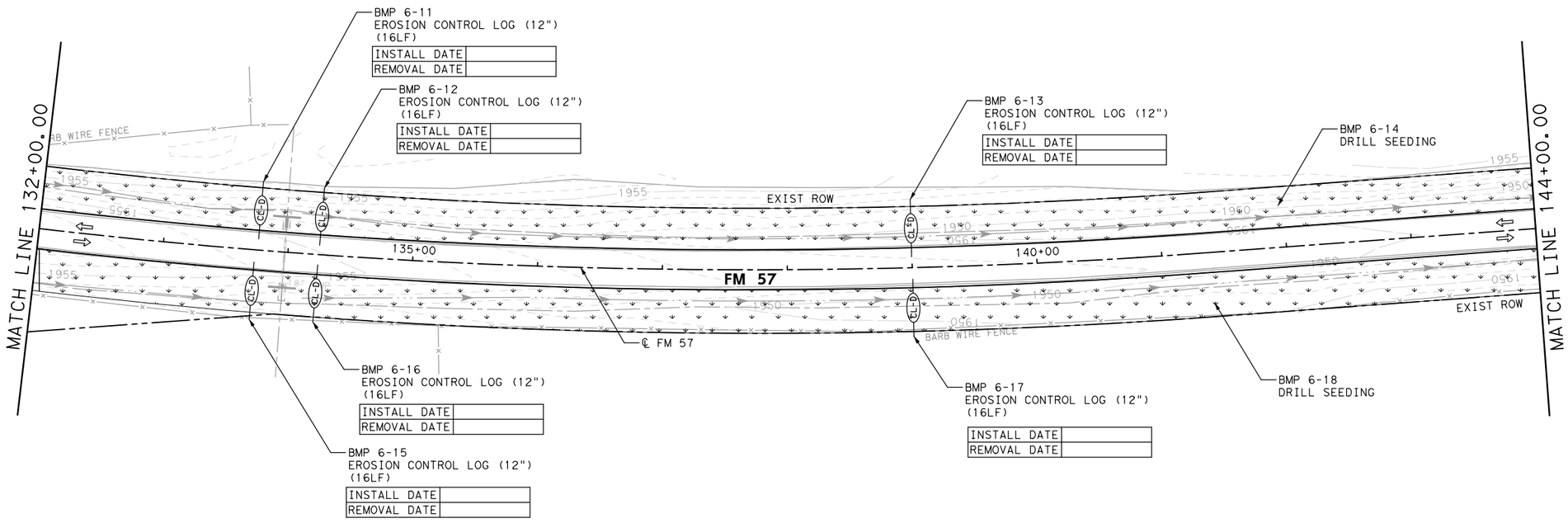
FM 57
SWP3 SITE PLANS
STA 96+00 TO STA 120+00

SHEET 05 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	150
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:42:03 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:3937.01





LEGEND:

- DIRECTION OF TRAFFIC
- CL-D — EROSION CONTROL LOG
- RFD2 — ROCK FILTER DAM TYPE 2
- SCF — SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES, PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

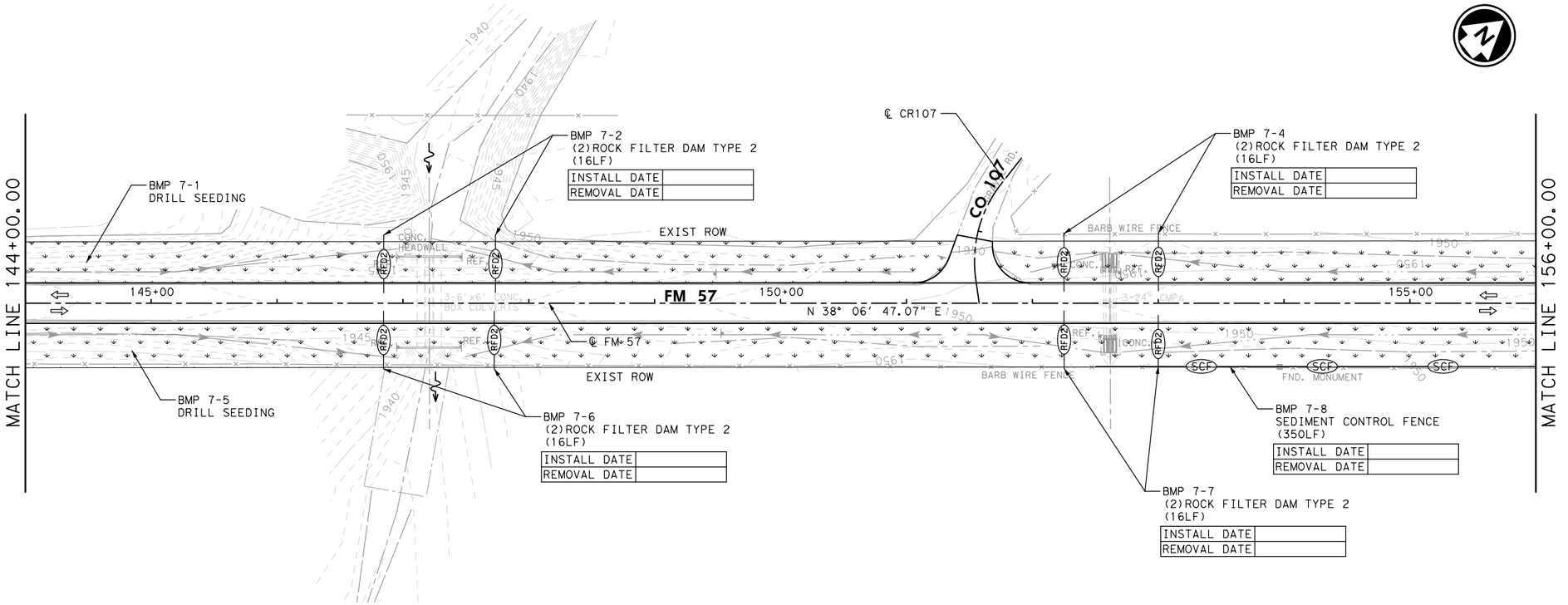
SH 70 TO PLUM CREEK

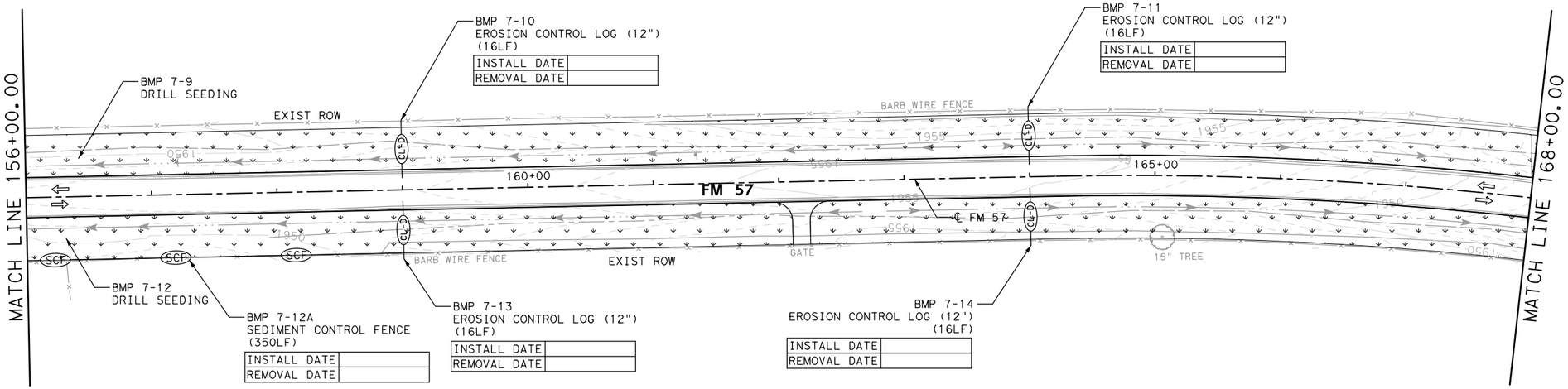
FM 57
SWP3 SITE PLANS
STA 120+00 TO STA 144+00

SHEET 06 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	151
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:42:08 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:3937.01





LEGEND:

- DIRECTION OF TRAFFIC
- CL-D — EROSION CONTROL LOG
- RFD2 — ROCK FILTER DAM TYPE 2
- SCF — SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES,PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

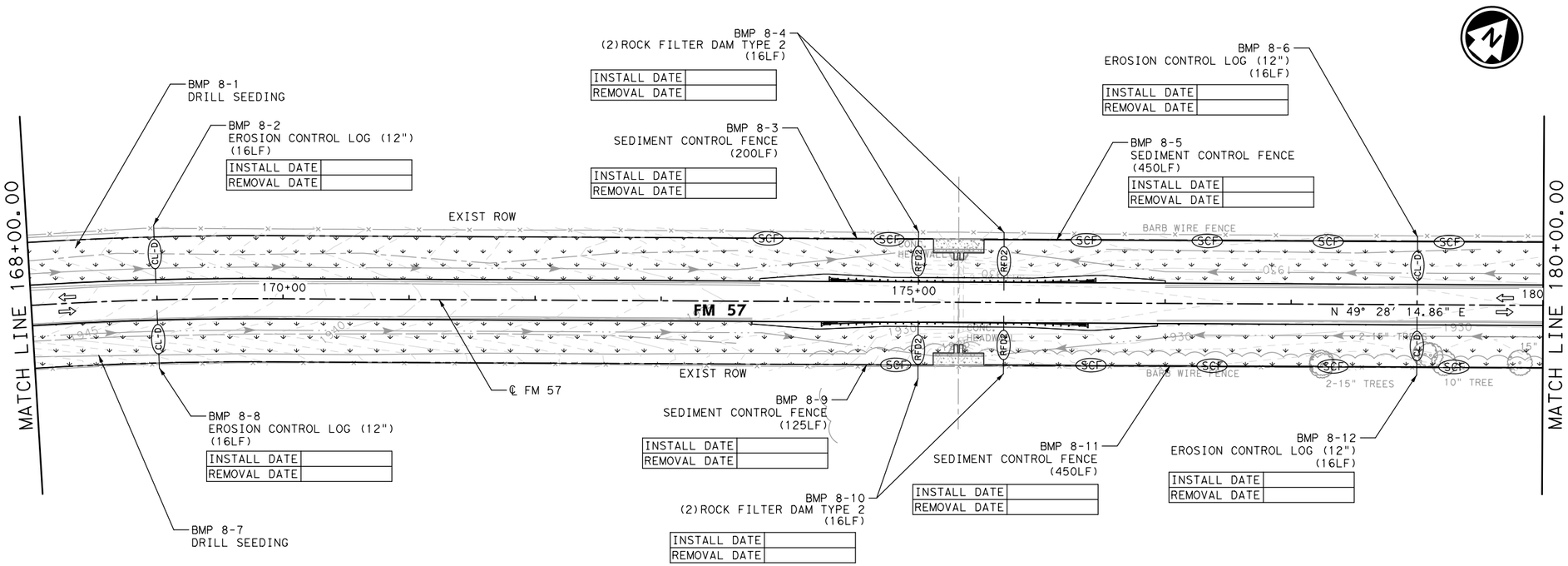
SH 70 TO PLUM CREEK

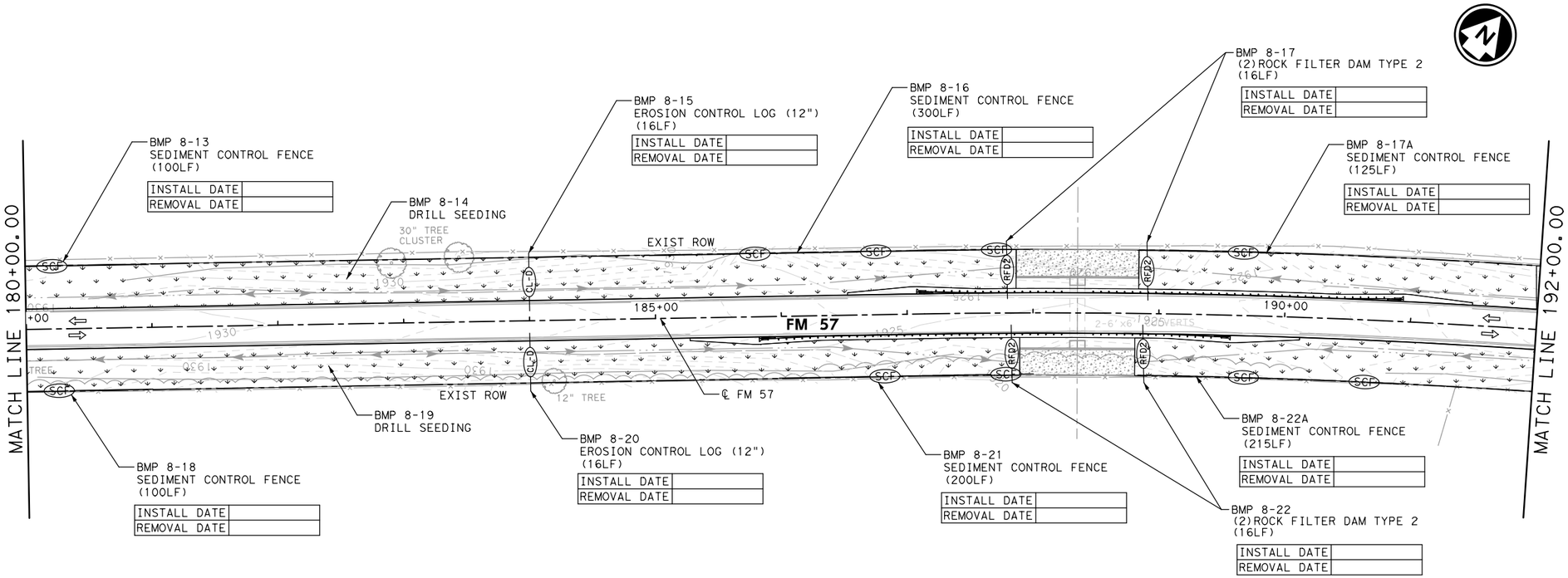
FM 57
SWP3 SITE PLANS
STA 144+00 TO STA 168+00

SHEET 07 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	152
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:42:13 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:3937.01





LEGEND:

- DIRECTION OF TRAFFIC
- EROSION CONTROL LOG
- ROCK FILTER DAM TYPE 2
- SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES, PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

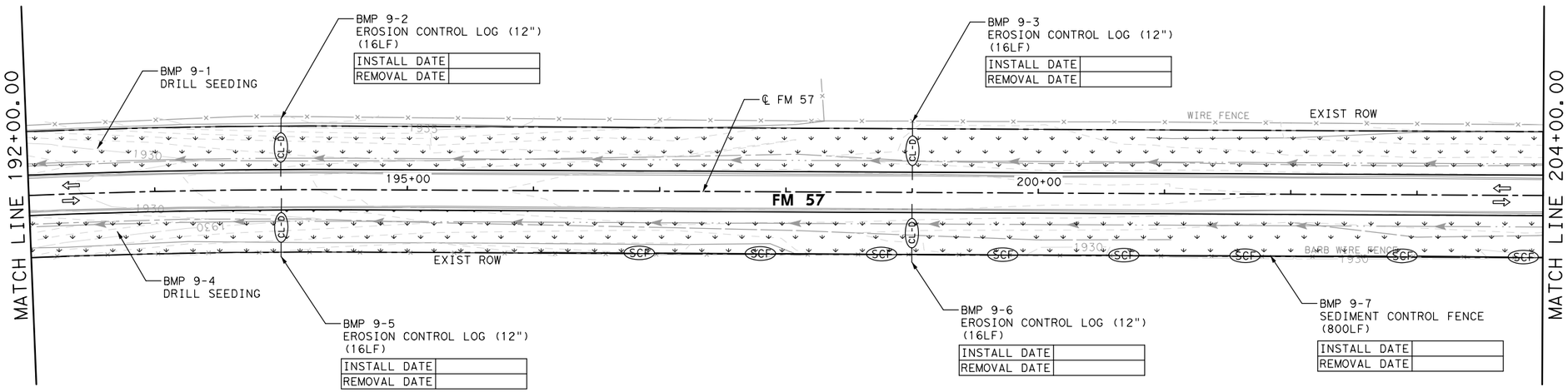
SH 70 TO PLUM CREEK

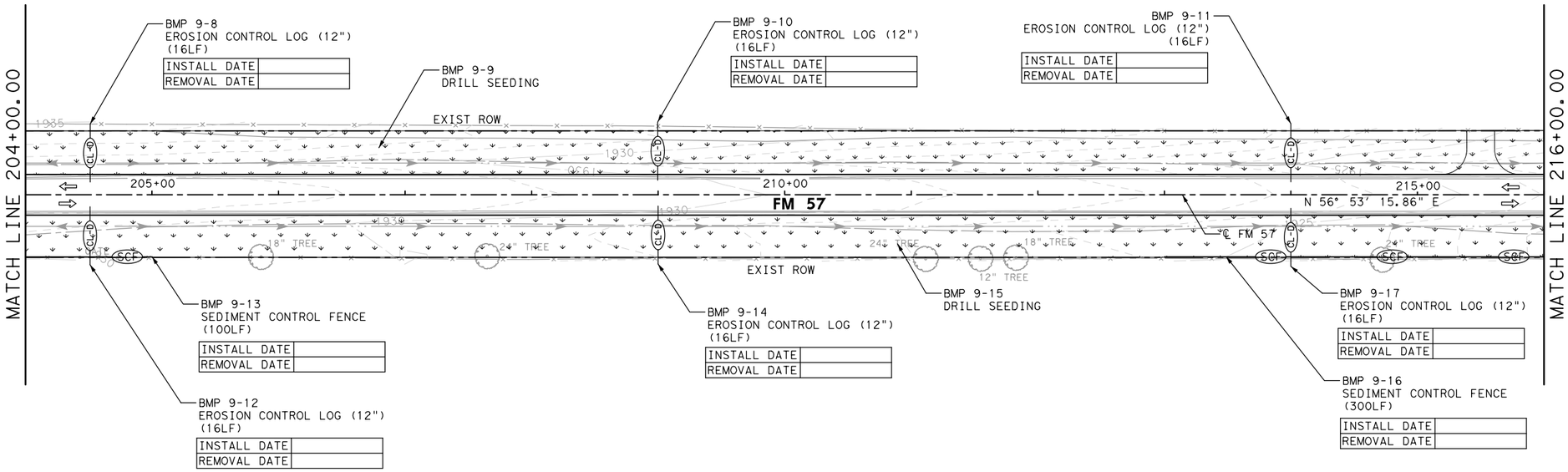
FM 57
SWP3 SITE PLANS
STA 168+00 TO STA 192+00

SHEET 08 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	153
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:42:18 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:3937.01





LEGEND:

- DIRECTION OF TRAFFIC
- CL-D — EROSION CONTROL LOG
- RFD2 — ROCK FILTER DAM TYPE 2
- SCF — SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES, PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

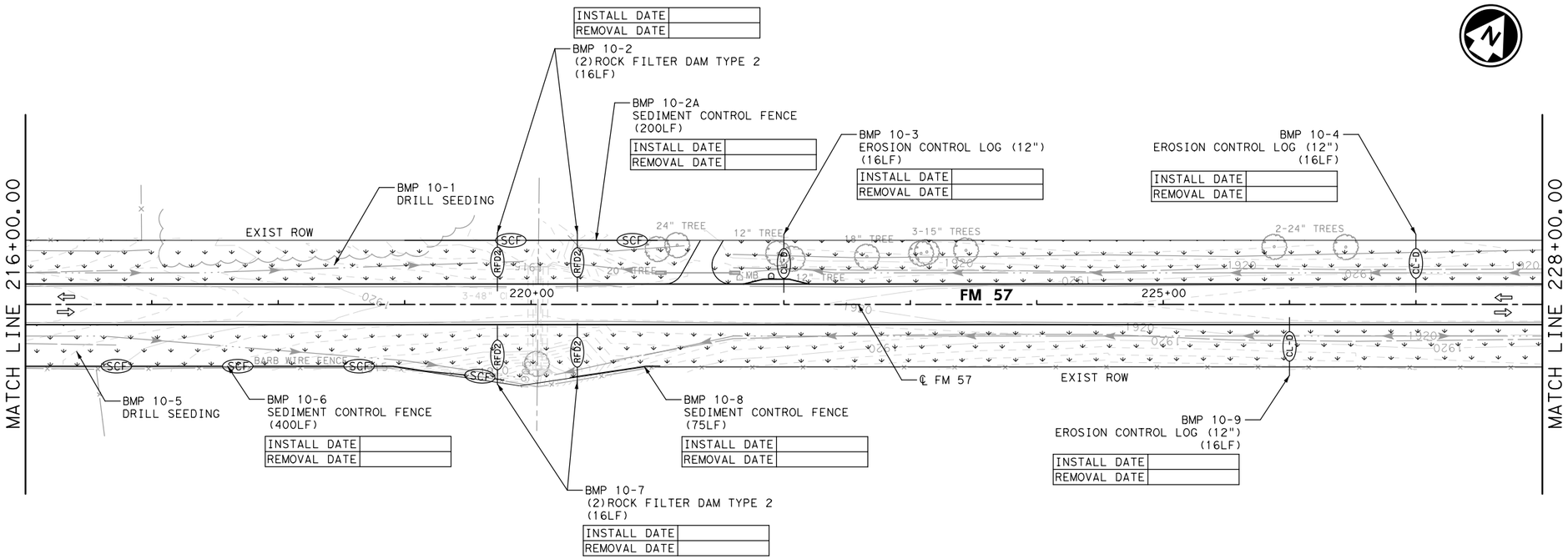
SH 70 TO PLUM CREEK

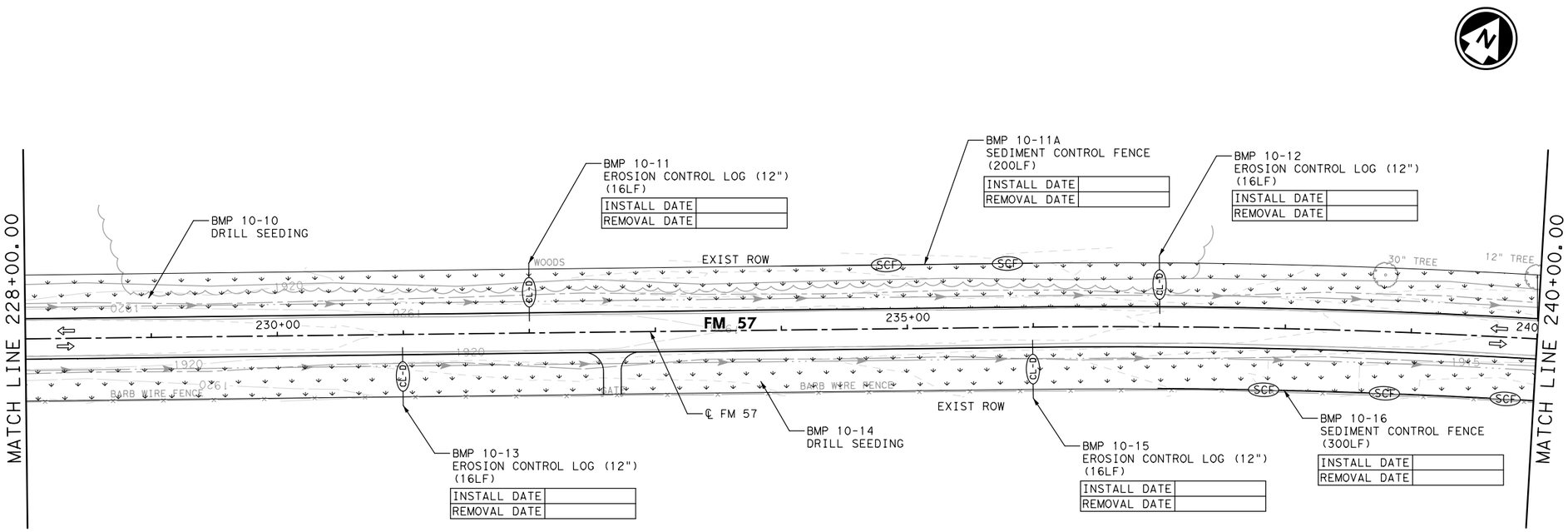
FM 57
SWP3 SITE PLANS
STA 192+00 TO STA 216+00

SHEET 09 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	154
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg
USER: Rdos
DATE: 11/29/2023
TIME: 1:42:24 PM
PENTABLE: FM57_REVISE.tbl
SCALE: 1:3937.01





LEGEND:

- DIRECTION OF TRAFFIC
- EROSION CONTROL LOG
- ROCK FILTER DAM TYPE 2
- SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES,PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

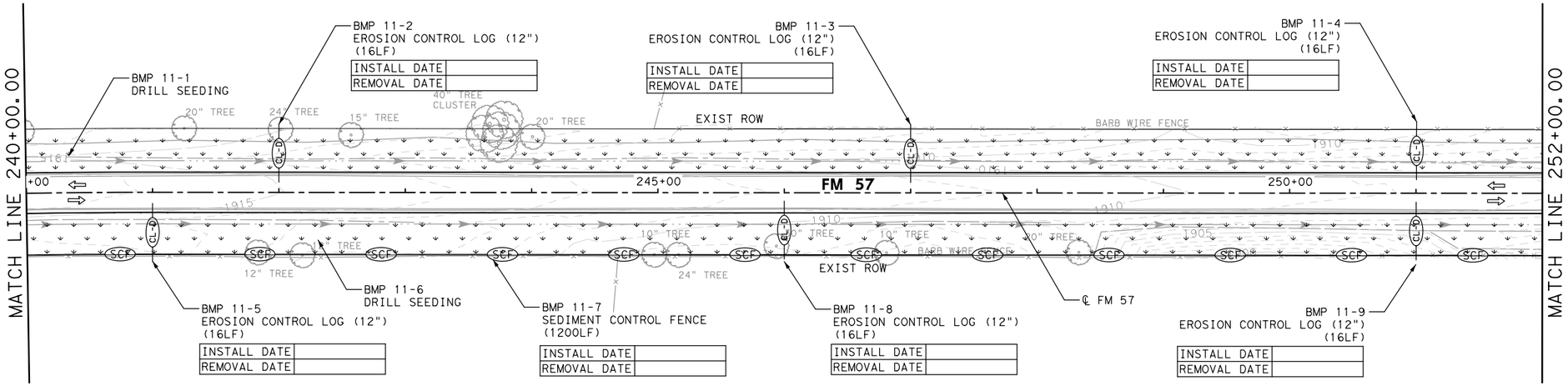
SH 70 TO PLUM CREEK

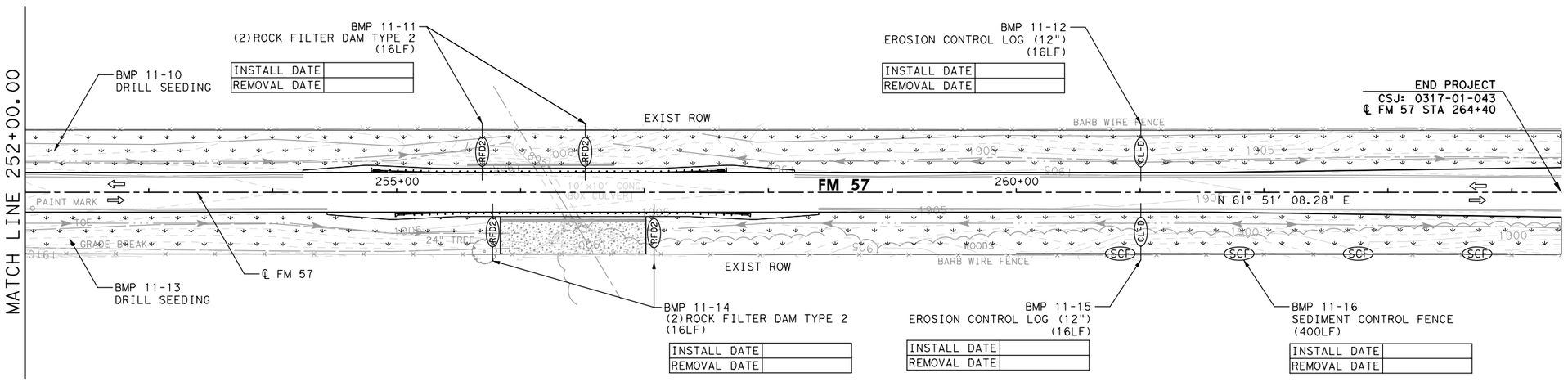
FM 57
SWP3 SITE PLANS
STA 216+00 TO STA 240+00

SHEET 10 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	155
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:42:29 PM SCALE: 1:3937.01





LEGEND:

- DIRECTION OF TRAFFIC
- EROSION CONTROL LOG
- ROCK FILTER DAM TYPE 2
- SEDIMENT CONTROL FENCE
- DRILL SEEDING
- EXIST RIPRAP TO REMAIN
- DITCH FLOW LINE

NOTES:

1. LOCATIONS OF EROSION CONTROL DEVICE ARE APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE IN PLACE PRIOR TO COMMENCING ANY SOIL DISTURBING ACTIVITY.
3. CONSTRUCTION EXITS AND TRUCK WASHOUT AREAS WILL BE DETERMINED IN CONSULTATION WITH THE ENGINEER AND DEFINED (REDLINED) AT THE TIME OF CONSTRUCTION.
4. SEDIMENT CONTROL FENCE (SCF) SHALL BE PLACES IN SUCH A MANNER TO INTERCEPT FLOW AT ALL DRAINAGE STRUCTURES, AS SHOWS ON THE PLANS.
5. ROCK FILTER DAMS (RDF2) ARE TO BE PLACED IN DITCHES, CHANNELS AND OTHER AREAS OF CONCENTRATED FLOW AS SHOWN IN THE PLANS.
6. PLACE EROSION CONTROL LOGS ACROSS SWALES,PERPENDICULAR TO DIRECTION OF FLOW. EROSION CONTROL LOGS SHALL EXTEND ACROSS THE ENTIRE WIDTH OF DITCH: FROM TOP OF BANK TO TOP OF BANK.

0 50 100
SCALE IN FEET

STATE OF TEXAS
KHANDAKER N. ASHFAQUE
147636
LICENSED
PROFESSIONAL ENGINEER
11/29/2023

NO.	DATE	REVISION	APPROVED

infraTECH
Engineers & Innovators, LLC
TBPE REGISTRATION NO. F-18368

Texas Department of Transportation
© 2023

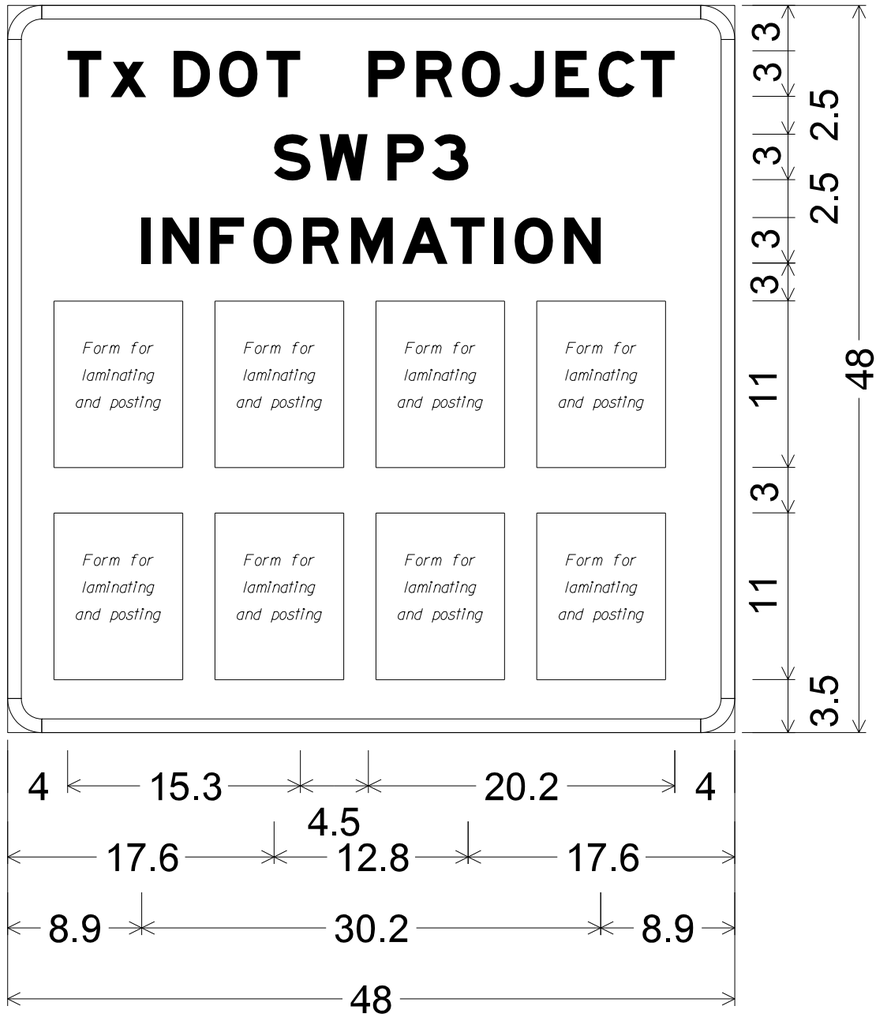
SH 70 TO PLUM CREEK

FM 57
SWP3 SITE PLANS
STA. 240+00 TO END

SHEET 11 OF 11

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
IEI	6	(SEE THE TITLE SHEET)		FM 57
GRAPHICS IEI	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK IEI	TEXAS	ABL	FISHER	156
CHECK IEI	CONTROL	SECTION	JOB	
	0317	01	043	

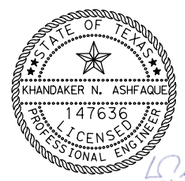
PLOT DRIVER: PDF_H_G.pltcfg PENTABLE: FM57_REVISE.tbl
USER: Rdos DATE: 11/29/2023 TIME: 1:42:36 PM SCALE: 1:100



2.3" Radius, 0.9" Border, White on Blue;
[TxDOT PROJECT] E Mod;
[SWP3] E Mod;
[INFORMATION] E Mod;

NOTE:

The Forms needed for laminating and posting to the SWP3 Notification Board will be provided by the Engineer. The total number of forms may vary. Notification Boards are to be constructed from Plywood, ½ or ⅝-inch thick, in accordance with TxDOT Departmental Material Specification (DMS)-7100. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The sign will be placed at a location within the right-of-way but outside the clear zone as directed by the Engineer. This work will not be paid for directly, but will be considered subsidiary to other items.



11/29/2023

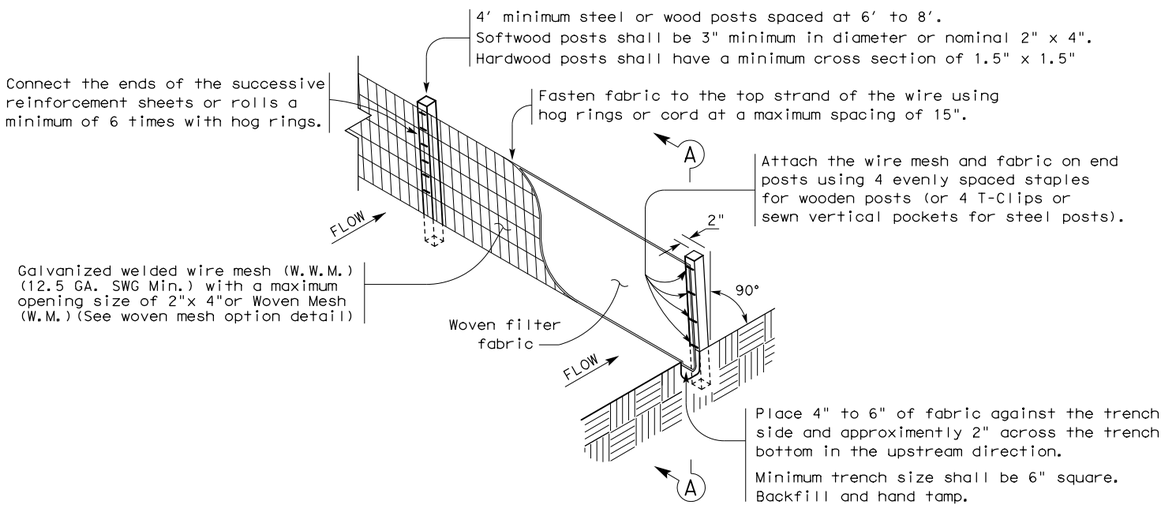
SWP3 NOTIFICATION BOARD DETAIL

Texas Department of Transportation

NO SCALE SHEET 1 OF 1

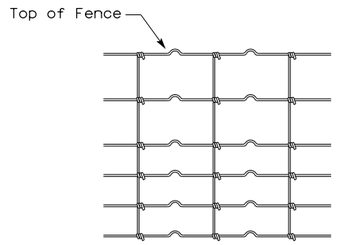
FHWA DIVISION	PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		FM 57
STATE	COUNTY		SHEET NO.
TEXAS	FISHER		157
DISTRICT	CONTROL	SECTION	JOB
ABL	0317	01	043

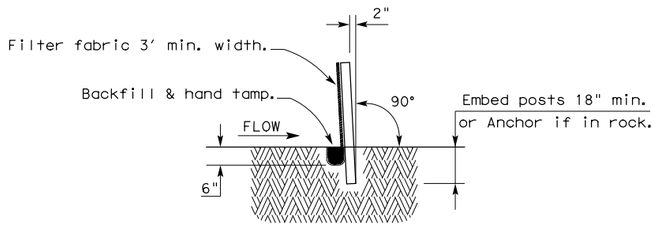
FILE: FM 57*SWP3*NB.dgn
DATE: 11/29/20231:42:41 PM



TEMPORARY SEDIMENT CONTROL FENCE

SCF





SECTION A-A

HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

Galvanized hinge joint knot woven mesh (12.5 GA.SWG Min.) requires a minimum of five horizontal wires spaced at a maximum of 12 inches apart and all vertical wires spaced at a maximum of 12 inches apart.

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

Sediment control fence should be sized to filter a maximum flow through rate of 100 GPM/FT^2. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

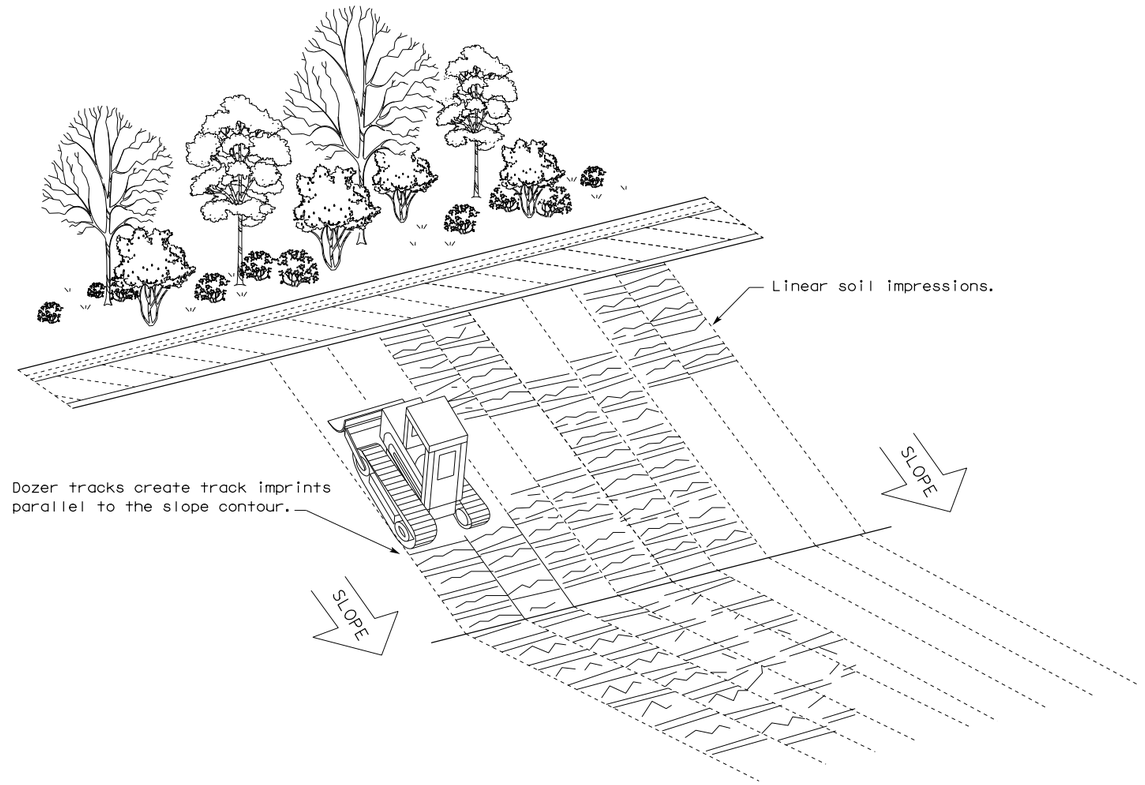
LEGEND

Sediment Control Fence

SCF

GENERAL NOTES

1. Vertical tracking is required on projects where soil distributing activities have occurred unless otherwise approved.
2. Perform vertical tracking on slopes to temporarily stabilize soil.
3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" to 4" in width by 1/2" to 2" in depth.
4. Do not exceed 12" between track impressions.
5. Install continous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.



VERTICAL TRACKING

Texas Department of Transportation

Design Division Standard

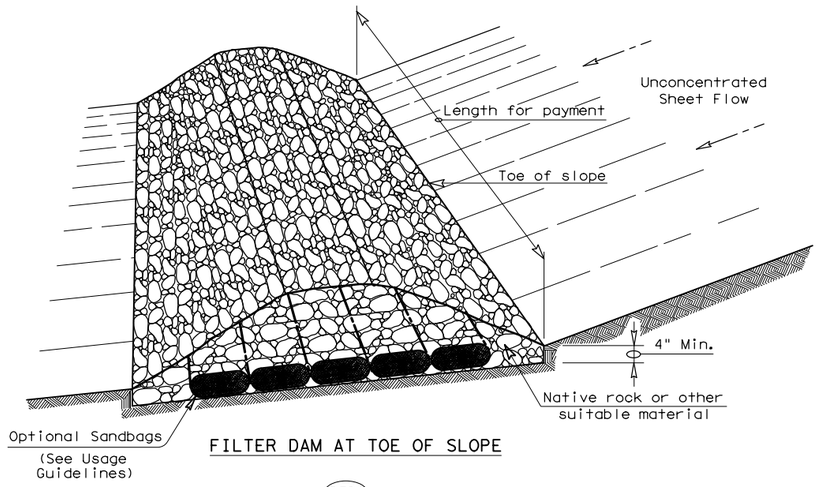
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCE & VERTICAL TRACKING

EC(1)-16

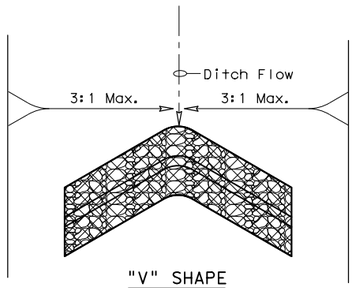
FILE: ec116	DN: TxDOT	CK: KM	DW: VP	DN/CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		158

10/27/2023
eEIE.dgn

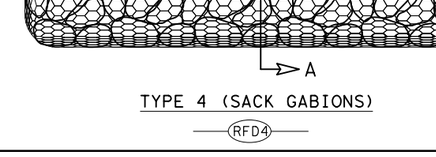


FILTER DAM AT TOE OF SLOPE

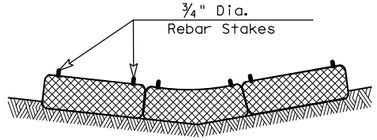
RFD1



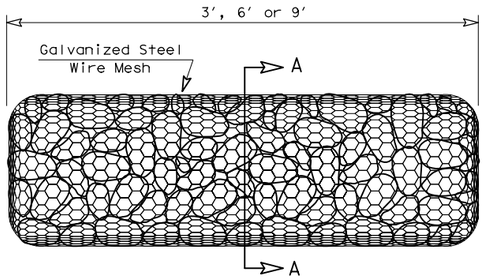
"V" SHAPE
PLAN VIEW



PLAN VIEW

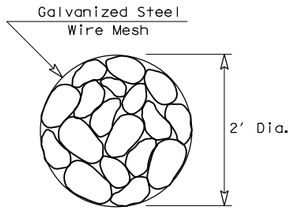


SECTION B-B

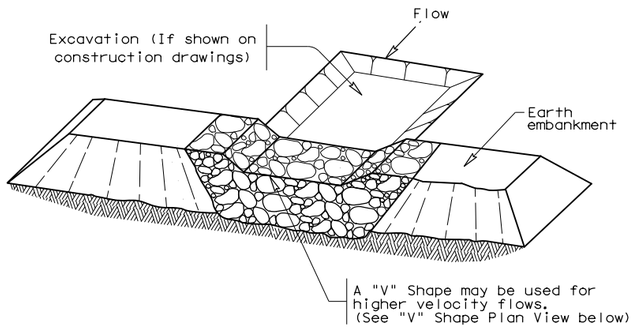


TYPE 4 (SACK GABIONS)

RFD4

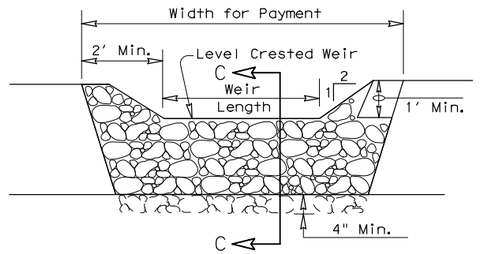


SECTION A-A

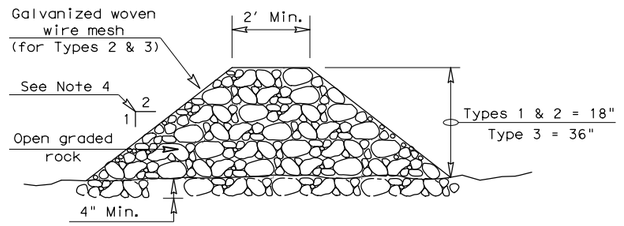


FILTER DAM AT SEDIMENT TRAP

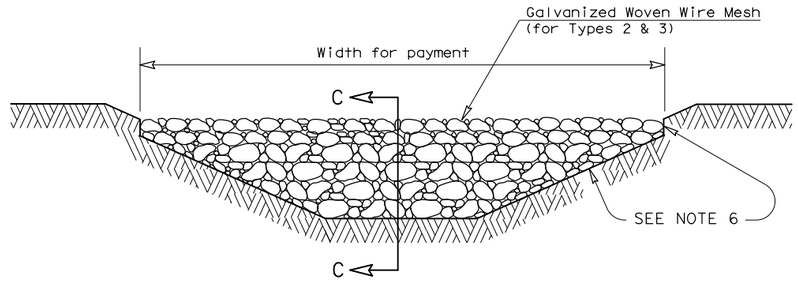
RFD1 OR RFD2



PROFILE



SECTION C-C



FILTER DAM AT CHANNEL SECTIONS

RFD1 OR RFD2 OR RFD3

ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT^2 of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

Type 1 (18" high with no wire mesh) (3" to 6" aggregate): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approximently 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh) (3" to 6" aggregate): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh) (4" to 8" aggregate): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions) (3" to 6" aggregate): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

Type 5: Provide rock filter dams as shown on plans.

GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. For in stream use, the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with ¾" dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 ½" x 3 ¼"
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

PLAN SHEET LEGEND

Type 1 Rock Filter Dam	RFD1
Type 2 Rock Filter Dam	RFD2
Type 3 Rock Filter Dam	RFD3
Type 4 Rock Filter Dam	RFD4

Texas Department of Transportation

Design Division Standard

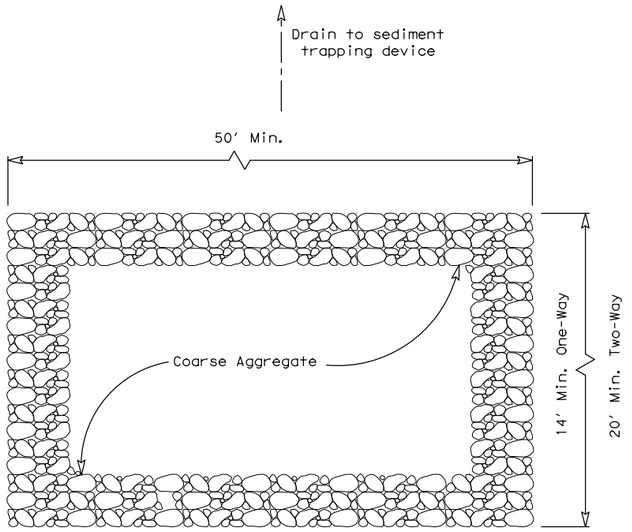
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

ROCK FILTER DAMS

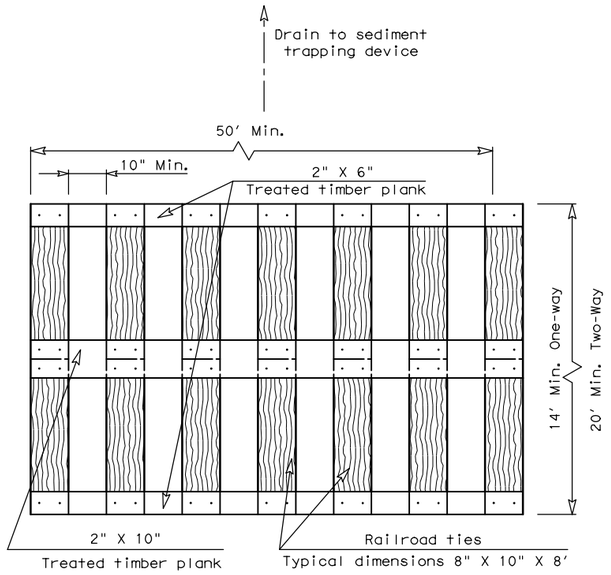
EC(2)-16

FILE: ec216	DN: TxDOT		CK: KM		DW: VP		DN/CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY		
REVISIONS	0317	01	043		FM 57		
	DIST	COUNTY			SHEET NO.		
	ABL	FISHER			159		

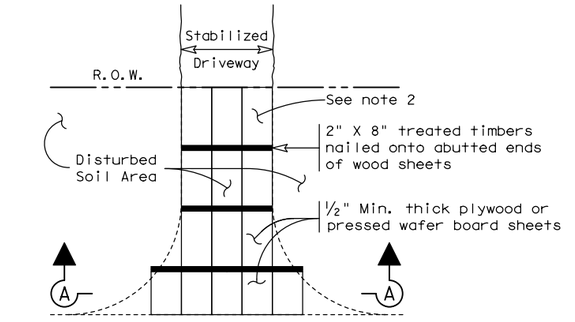
DATE: 11/29/2023
FILE: ec216.dgn



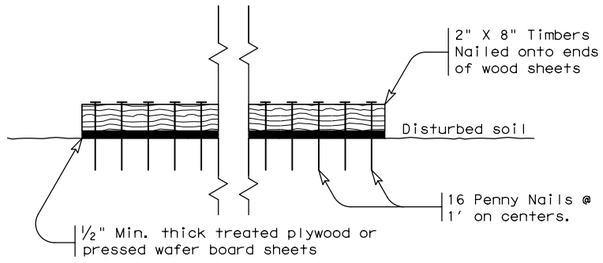
PLAN VIEW



PLAN VIEW



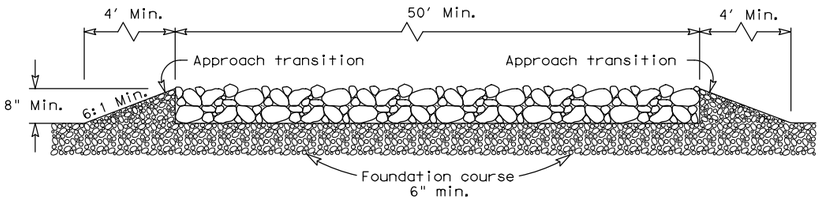
PLAN VIEW



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

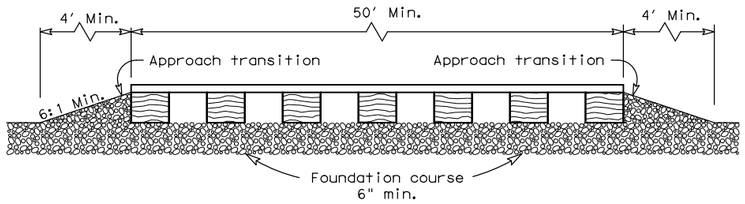
SHORT TERM



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 1)

ROCK CONSTRUCTION (LONG TERM)



ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 2)

TIMBER CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50′.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materialas approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 2)

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50′.
2. The treated timber planks shall be attached to the railroad ties with ½"x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
8. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.

GENERAL NOTES (TYPE 3)

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation

Design Division Standard

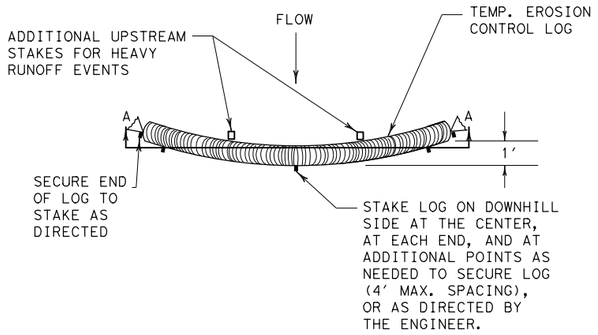
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

CONSTRUCTION EXITS

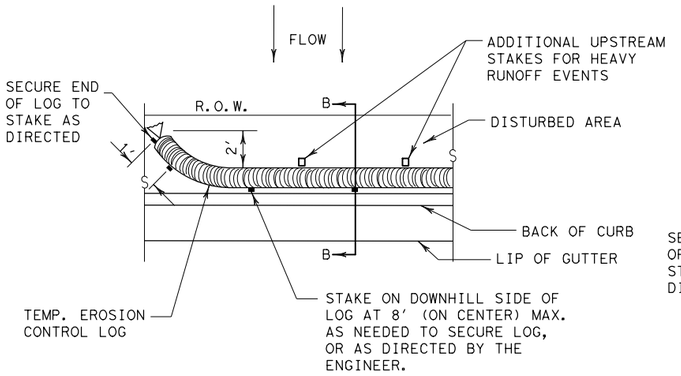
EC(3)-16

FILE: ec316	DN: TxDOT	CK: KM	DW: VP	DN/CK: LS
©TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		160

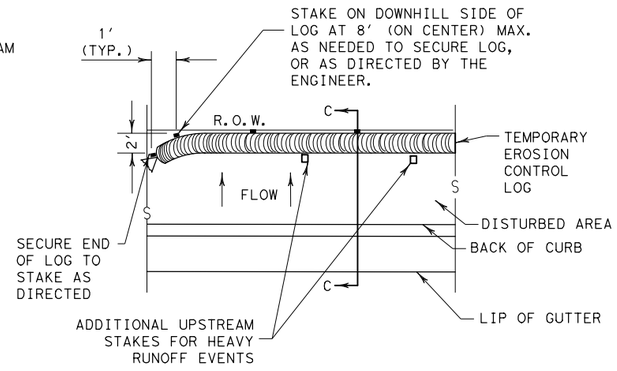
DATE: 11/29/2023
FILE: ec316.dgn



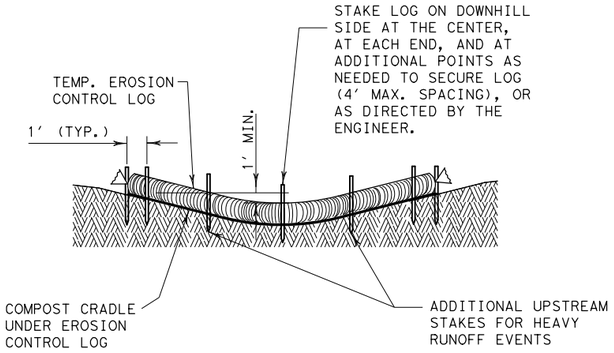
PLAN VIEW



PLAN VIEW



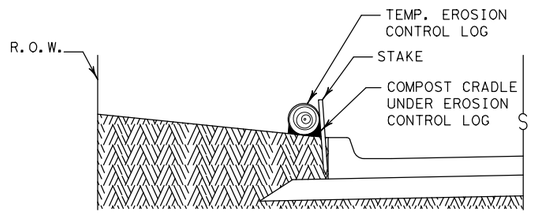
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

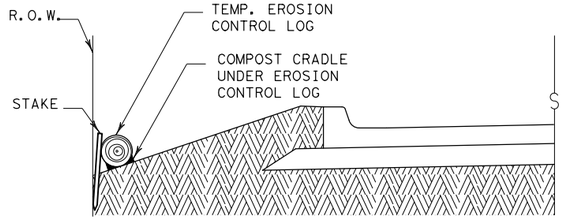
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

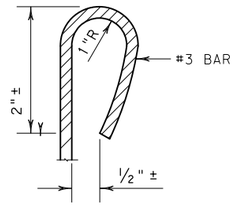
CL-BOC



SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW



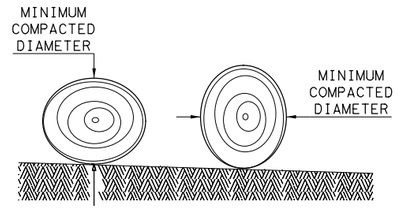
REBAR STAKE DETAIL

LEGEND

- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY
- CL-SST — EROSION CONTROL LOGS ON SLOPES STAKE AND TRENCHING ANCHORING
- CL-SSL — EROSION CONTROL LOGS ON SLOPES STAKE AND LASHING ANCHORING
- CL-DI — EROSION CONTROL LOG AT DROP INLET
- CL-CI — EROSION CONTROL LOG AT CURB INLET
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

Texas Department of Transportation

Design Division Standard

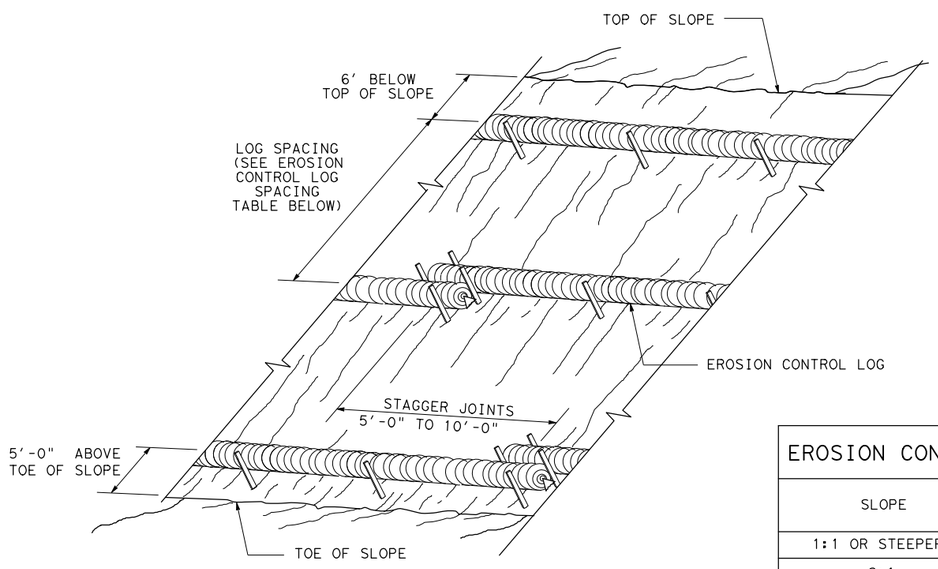
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

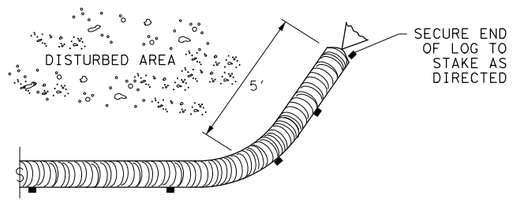
FILE: ec916	DN: TxDOT		CK: KM		DW: LS/PT		CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY		
REVISIONS	0317	01	043		FM 57		
	DIST	COUNTY			SHEET NO.		
	ABL	FISHER			161		

DATE: 11/29/2023
FILE: ec916.dgn



EROSION CONTROL LOGS ON SLOPES
STAKE AND TRENCHING ANCHORING

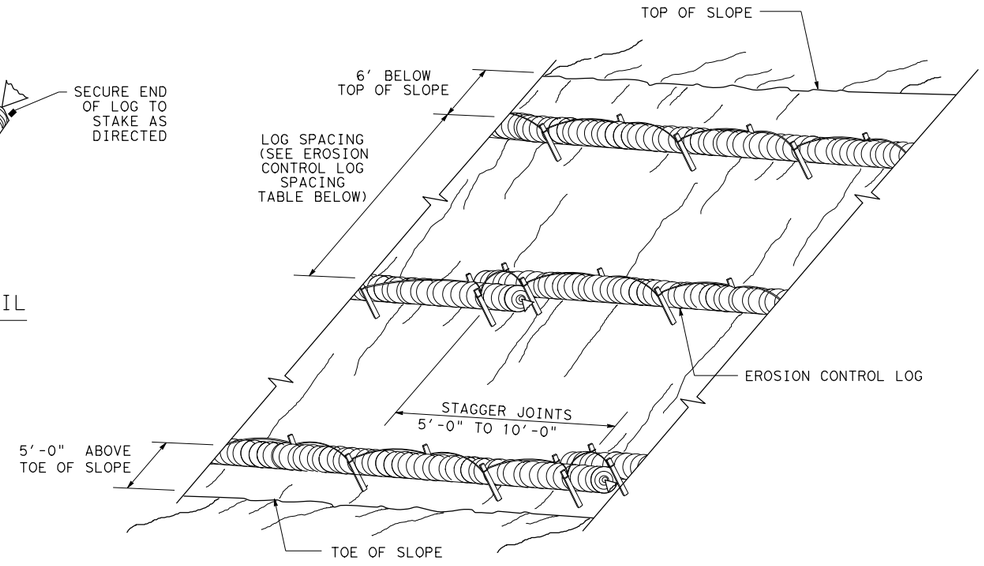
CL-SST



END SECTION RAP DETAIL

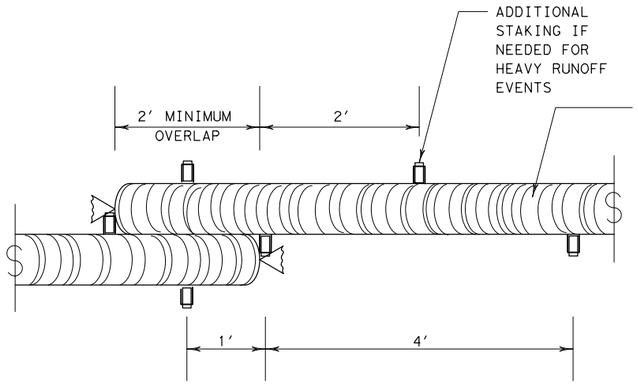
EROSION CONTROL LOG SPACING TABLE				
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5′	10′	15′	20′
2:1	10′	20′	30′	40′
3:1	15′	30′	45′	60′
4:1 OR FLATTER	20′	40′	60′	80′

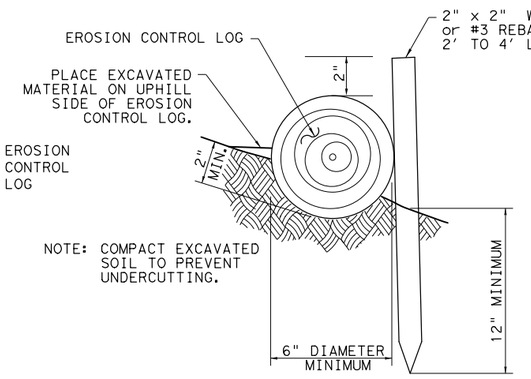
* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:
SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;
HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



EROSION CONTROL LOGS ON SLOPES
STAKE AND LASHING ANCHORING

CL-SSL

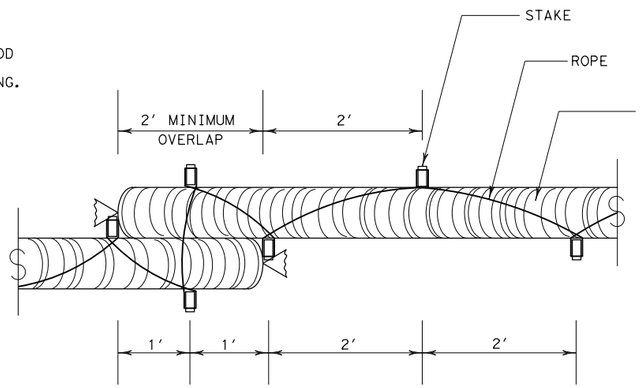


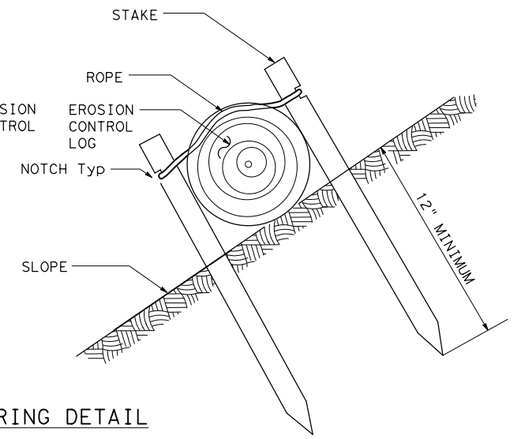


STAKE AND TRENCHING ANCHORING DETAIL

CL-SST

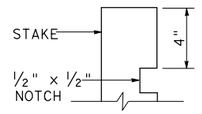
TRENCH DEPTH TABLE	
LOG DIAMETER	DEPTH
6"	2"
8"	3"
12"	4"
18"	5"





STAKE AND LASHING ANCHORING DETAIL

CL-SSL



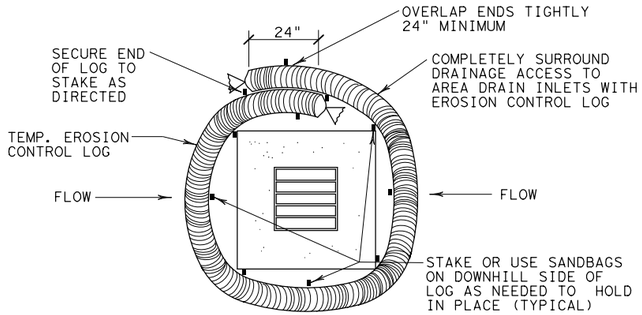
STAKE NOTCH DETAIL

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
EROSION CONTROL LOG
EC(9)-16

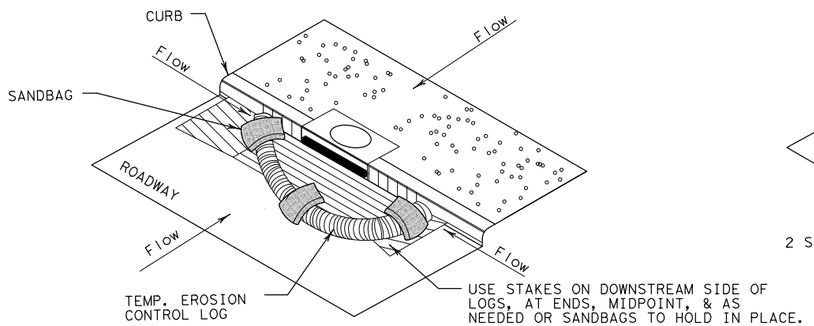
FILE: ec116	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0317	01	043	FM 57
	DIST	COUNTY		SHEET NO.
	ABL	FISHER		162

DATE: 11/29/2023
FILE: ec916.dgn



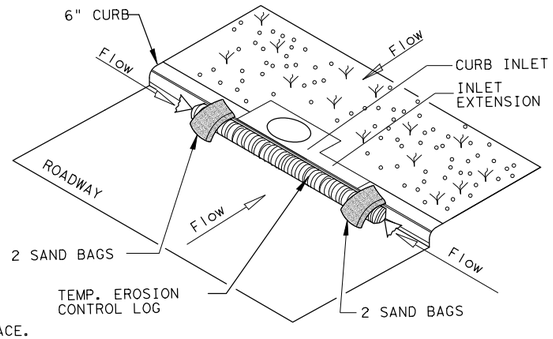
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

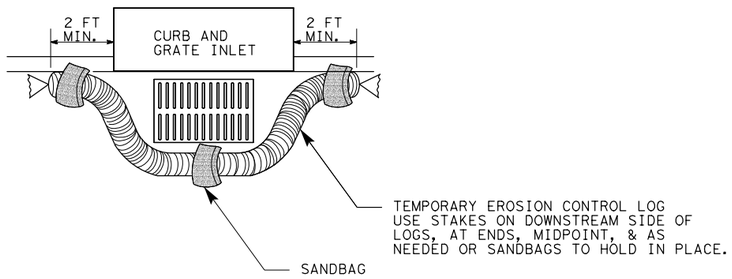
CL-CI



EROSION CONTROL LOG AT CURB INLET

CL-CI

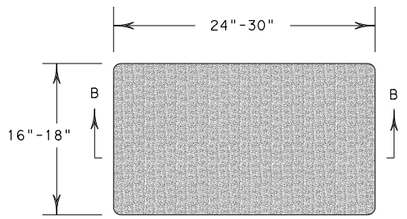
NOTE:
EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



EROSION CONTROL LOG AT CURB & GRADE INLET

CL-GI

SECTION B-B



SANDBAG DETAIL

SHEET 3 OF 3

Texas Department of Transportation | Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT		CK: KM		DW: LS/PT		CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY		
REVISIONS	0317	01	043		FM 57		
	DIST	COUNTY			SHEET NO.		
	ABL	FISHER			163		

DATE: 11/29/2023
FILE: ec916.dgn