DESIGN	FED.RD. DIV.NO.	PROJECT NO.			
MF	6	F 2B24(160),ETC			
GRAPHICS	STATE	CONT	SECT	JOB	HIGHWAY NO.
MF	TEXAS	0568	01	052,ETC.	SH 34
CHECK	CHECK	DIST	COUNTY		SHEET NO.
VM	JP	DAL	Ellis		1

FINAL PLANS

NAME OF CONTRACTOR: _____

DATE OF LETTING: _____

DATE WORK BEGAN: _____

DATE WORK COMPLETED: _____

DATE WORK ACCEPTED: _____

SUMMARY OF CHANGE ORDERS:

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT

F 2B24(160),ETC

CCSJ: 0568-01-052, ETC.

SH 34

ELLIS COUNTY

FUNCTIONAL CLASSIFICATION = MINOR ARTERIAL

DESIGN SPEEDS = 45 MPH (CSJ 0568-01-055)
= 55 MPH (CSJ 0568-01-056)
= 65 MPH (CSJ 0568-01-057)
= 60 MPH (CSJ 0568-01-058)

ADT (2024) = 10,900 (CCSJ 0568-01-052)
ADT (2044) = 14,900

ADT (2023) = 2,300 (CSJ 0568-01-055)
ADT (2043) = 3,200

ADT (2023) = 3,900 (CSJ 0568-01-056)
ADT (2043) = 5,400

ADT (2023) = 2,600 (CSJ 0568-01-057)
ADT (2043) = 3,550

ADT (2023) = 9,000 (CSJ 0568-01-058)
ADT (2043) = 12,400

ADT (2024) = 5,100 (CSJ 2984-01-017)
ADT (2044) = 7,000

CCSJ: 0568-01-052
LIMITS: US 77 TO BI 45-G

LENGTH OF ROADWAY = 96,505.60 FT = 18.278 MI.
LENGTH OF BRIDGE = 7,091.00 FT = 1.343 MI.
LENGTH OF PROJECT = 103,596.60 FT = 19.621 MI.

CSJ: 0568-01-055
LIMITS: AT FM 667

LENGTH OF ROADWAY = 1,481.00 FT = 0.280 MI.
LENGTH OF BRIDGE = 0.00 FT = 0.000 MI.
LENGTH OF PROJECT = 1,481.00 FT = 0.280 MI.

CSJ: 0568-01-056
LIMITS: 0.110 MILE EAST OF FM 985 TO 0.154 MILE WEST OF FM 985

LENGTH OF ROADWAY = 1,393.00 FT = 0.264 MI.
LENGTH OF BRIDGE = 0.00 FT = 0.000 MI.
LENGTH OF PROJECT = 1,393.00 FT = 0.264MI.

CSJ: 0568-01-057
LIMITS: 0.233 MILE EAST OF FM 877 TO 0.146 MILE WEST OF FM 877

LENGTH OF ROADWAY = 2,002.00 FT = 0.379 MI.
LENGTH OF BRIDGE = 0.00 FT = 0.000 MI.
LENGTH OF PROJECT = 2,002.00 FT = 0.379 MI.

CSJ: 0568-01-058
LIMITS: 0.127 MILE EAST OF FM 1181 TO 0.210 MILE WEST OF FM 1181

LENGTH OF ROADWAY = 1,779.00 FT = 0.337 MI.
LENGTH OF BRIDGE = 0.00 FT = 0.000 MI.
LENGTH OF PROJECT = 1,779.00 FT = 0.337 MI.

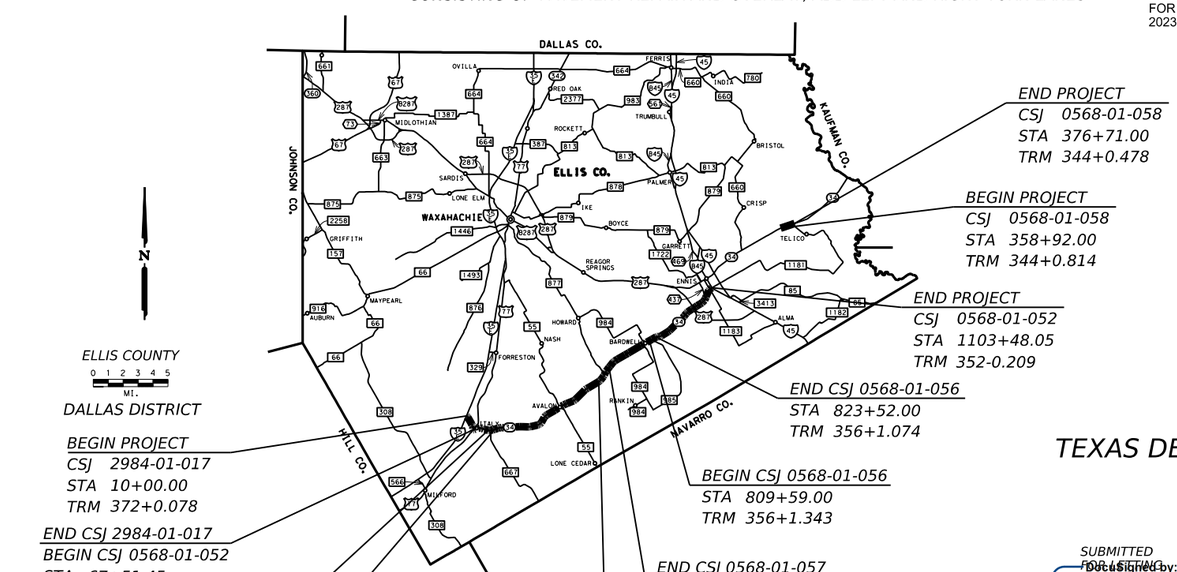
CSJ: 2984-01-017
LIMITS: US 77 TO IH 35E

LENGTH OF ROADWAY = 5,660.45 FT = 1.072 MI.
LENGTH OF BRIDGE = 91.00 FT = 0.017 MI.
LENGTH OF PROJECT = 5,751.45 FT = 1.089 MI.

TOTAL LENGTH OF PROJECT =

ROADWAY =	108,821.10 FT. =	20.610 MI.
BRIDGE =	7,182.00 FT. =	1.360 MI.
TOTAL =	116,003.10 FT. =	21.970 MI.

FOR THE CONSTRUCTION OF REPAIR ROADWAY AND SAFETY IMPROVEMENT PROJECTS
CONSISTING OF PAVEMENT REPAIR AND OVERLAY, ADD LEFT AND RIGHT TURN LANES



END PROJECT
CSJ 0568-01-058
STA 376+71.00
TRM 344+0.478

BEGIN PROJECT
CSJ 0568-01-058
STA 358+92.00
TRM 344+0.814

END PROJECT
CSJ 0568-01-052
STA 1103+48.05
TRM 352-0.209

END CSJ 0568-01-056
STA 823+52.00
TRM 356+1.074

BEGIN CSJ 0568-01-056
STA 809+59.00
TRM 356+1.343

END CSJ 0568-01-057
STA 609+15.00
TRM 360+1.022

BEGIN CSJ 0568-01-057
STA 589+13.00
TRM 360+1.399

END CSJ 0568-01-055
STA 135+97.00
TRM 368+1.822

BEGIN CSJ 0568-01-055
STA 121+16.00
TRM 370+0.099

BEGIN PROJECT
CSJ 2984-01-017
STA 10+00.00
TRM 372+0.078

END CSJ 2984-01-017
BEGIN CSJ 0568-01-052
STA 67+51.45
TRM 370+1.114

EQUATIONS: NONE
EXCEPTIONS: NONE
RAILROAD CROSSINGS: BNSF STA. 785+39.00
UPRR STA. 1097+34.00

NOTE:

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 1, 2014, AND THE CONTRACT PROVISIONS 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)

TEXAS DEPARTMENT OF TRANSPORTATION

SUBMITTED FOR LETTING
Docusigned by: Vanrajsinh Malida 4/5/2024
69568C3F215A470... , P.E.
DESIGN ENGINEER

RECOMMENDED FOR LETTING
Docusigned by: James P. Campbell 4/5/2024
9867ACD9E8A4C3... , P.E.
DIRECTOR OF TRANSPORTATION PLANNING & DEVELOPMENT

RECOMMENDED FOR LETTING
Docusigned by: Juan A. Paredes, P.E. 4/5/2024
4A97FFA3D3584AE... , P.E.
DISTRICT ENGINEER

APPROVED FOR LETTING
Docusigned by: Cesson Clemens 4/5/2024
A879E0D1D0C4467... , P.E.
DISTRICT ENGINEER

WORK WAS COMPLETED ACCORDING TO THE PLANS AND CONTRACT.

_____ , P.E.
Signature of Registrant & Date

2024/04/05
pw:\txdot.projectwiseonline.com:TxDOT5\Documents_DALLDesign Projects\0568010052_DesignPlan Set_General\Title_Sheet.dgn

DATE: _____

INDEX OF SHEETS

* STATEWIDE STANDARDS
** DALLAS DISTRICT STANDARDS

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

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

Vanrajsinh Mahida
05/06/2024
, P.E.
Signature of Registrant & Date

Texas Department of Transportation

INDEX OF SHEETS

DESIGN	FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
MF	6	(SEE TITLE SHEET)		SH 34
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
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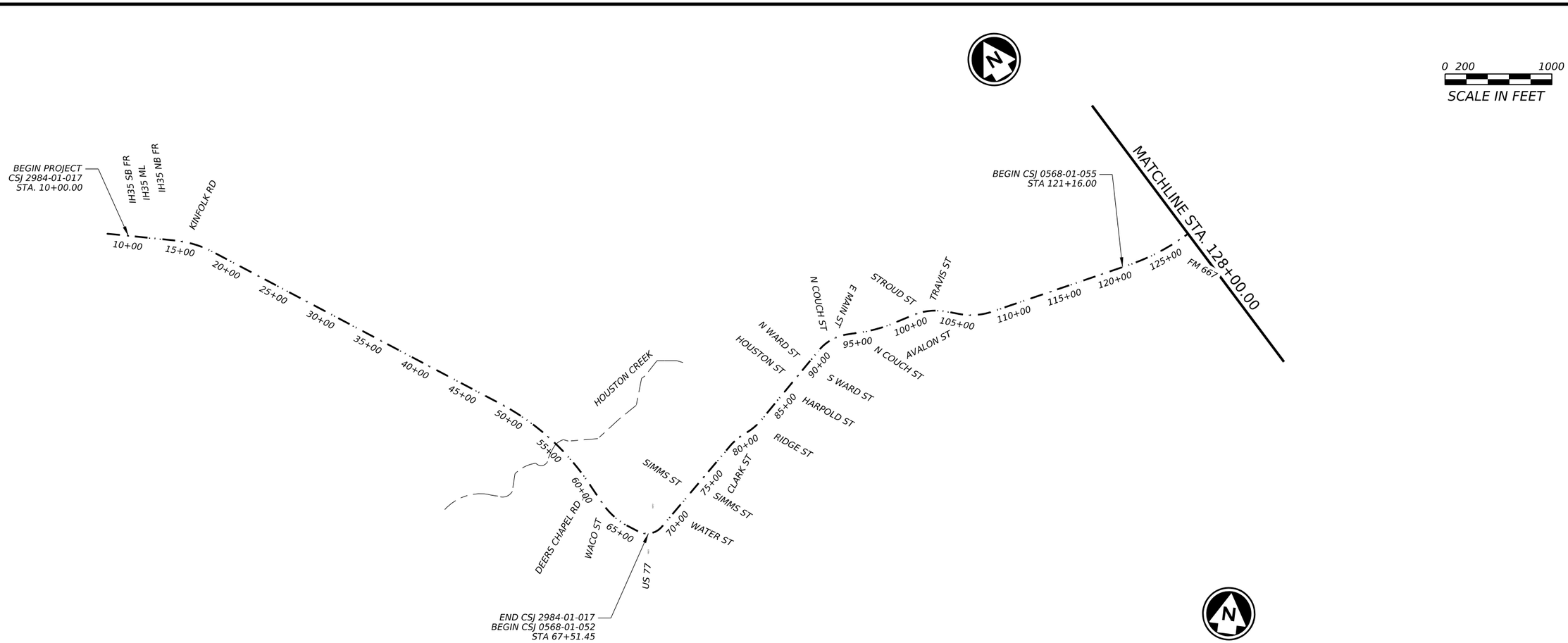
VM	0568	01	052,ETC.	
CHECK				
JP				



STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant & P.E. Date

Texas Department of Transportation

SH 34

PROJECT LAYOUT

SHEET 1 OF 5

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		3

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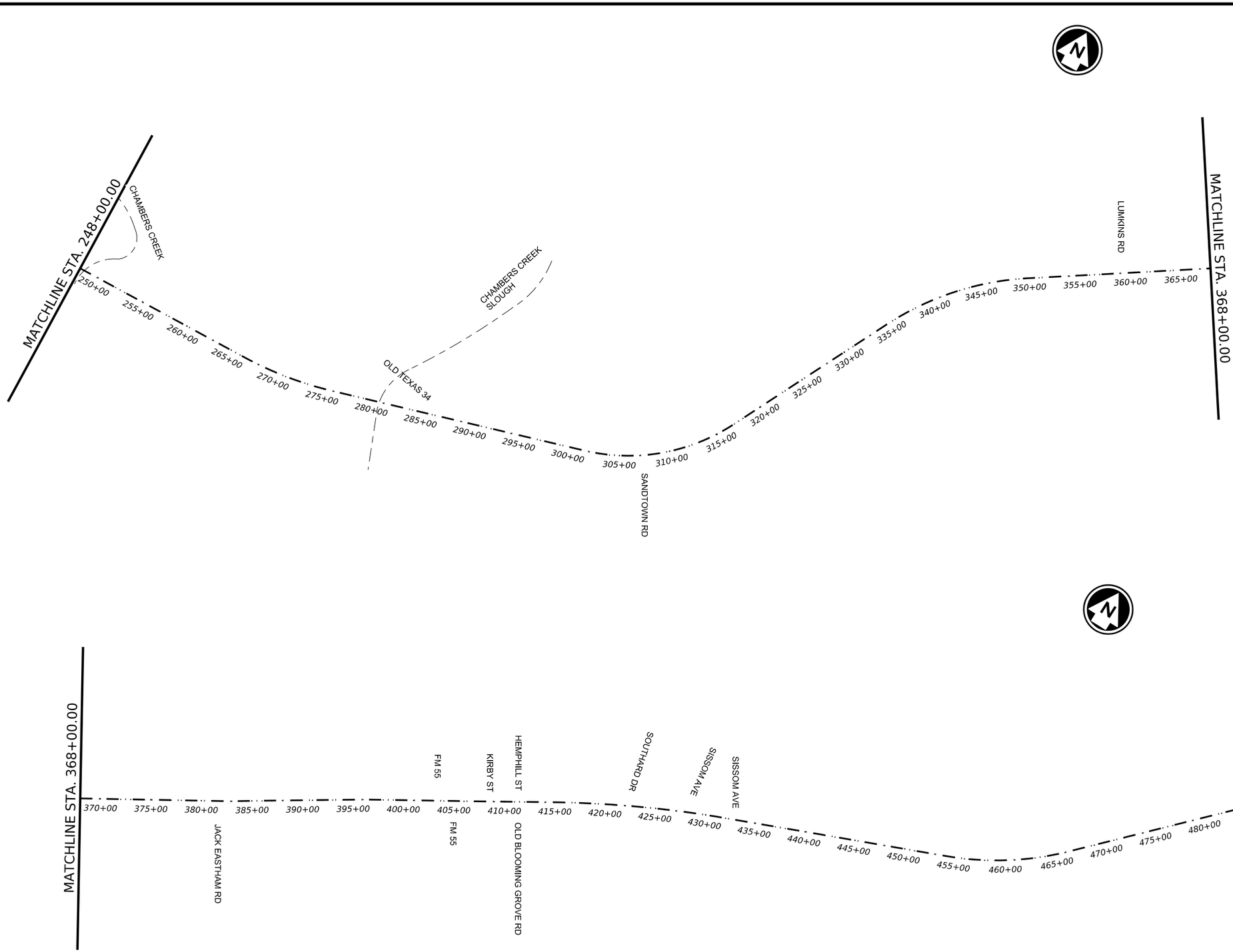

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SCALE IN FEET

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant & Date ,P.E.

Texas Department of Transportation

SH 34

PROJECT LAYOUT

SHEET 2 OF 5

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		4

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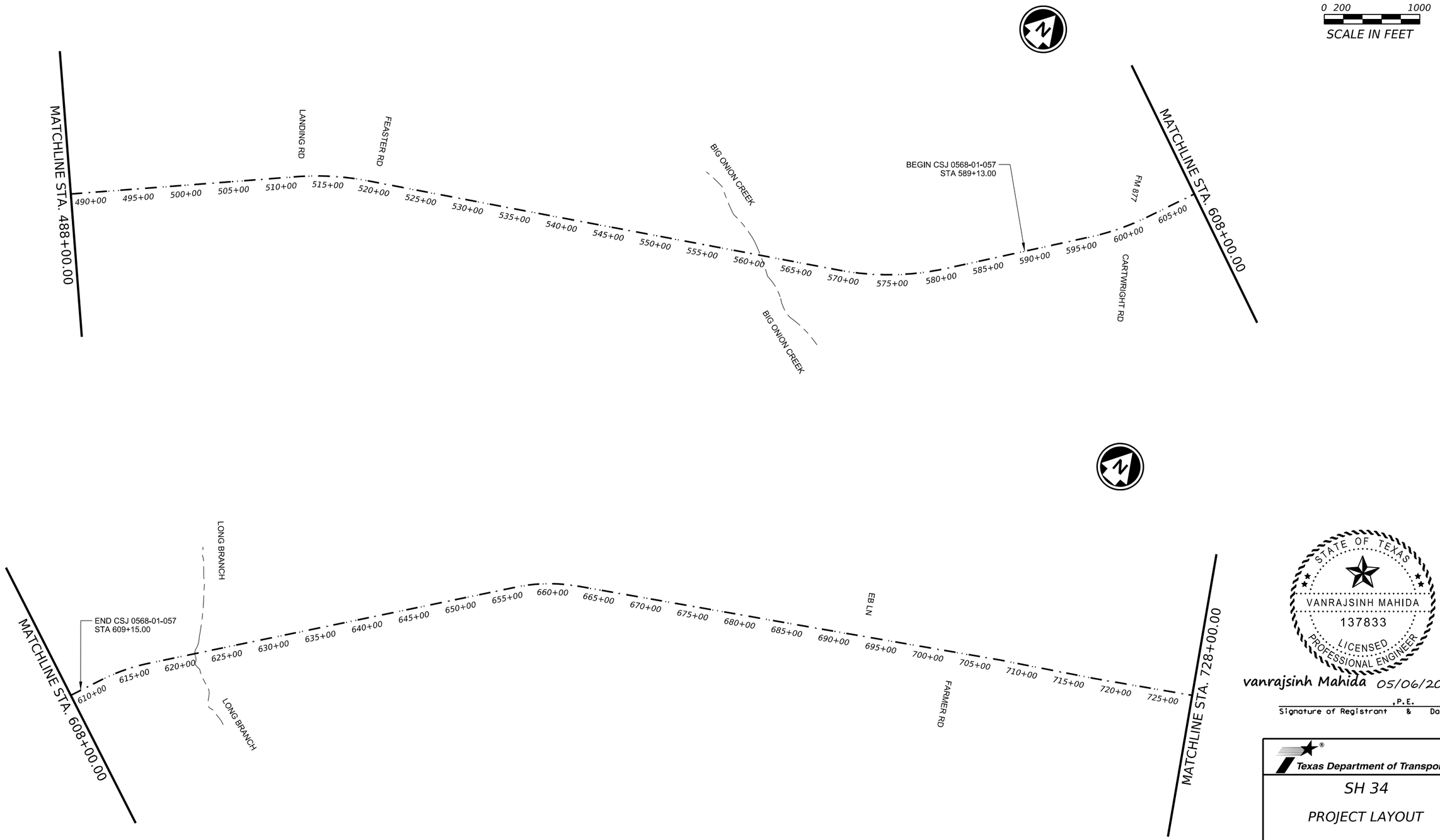

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PROJECT LAYOUT

SHEET 3 OF 5

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		5

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DW: CK: DW: CK:

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PROJECT LAYOUT

SHEET 4 OF 5

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		6

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STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant , P.E. & Date

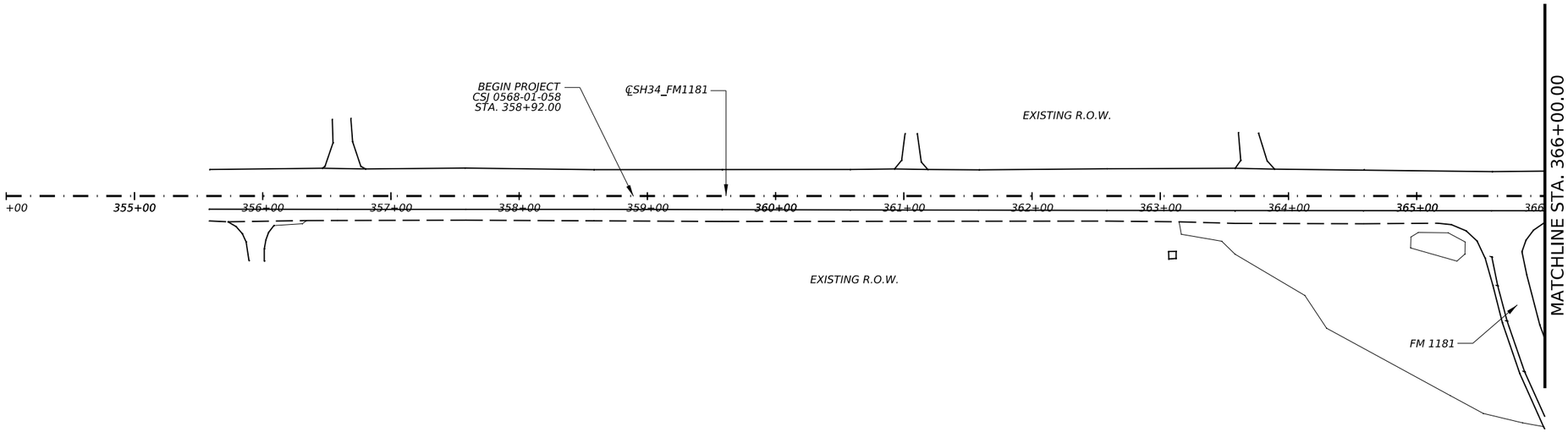
Texas Department of Transportation

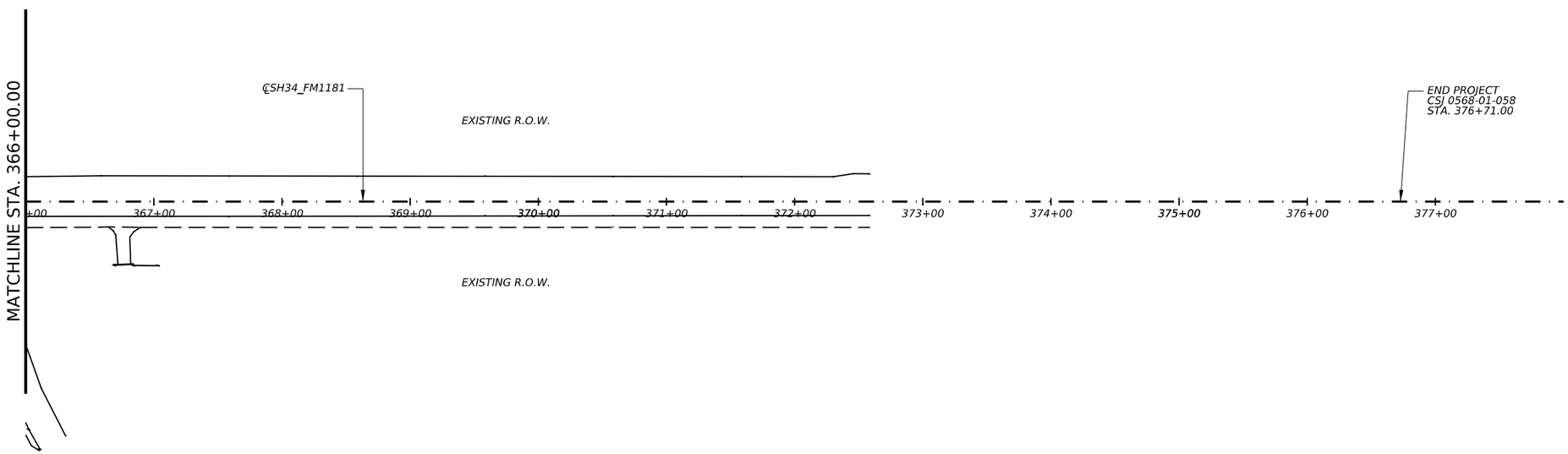
SH 34

PROJECT LAYOUT

SHEET 5 OF 5

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		7





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SCALE IN FEET

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PROJECT LAYOUT AT FM 1181

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		8

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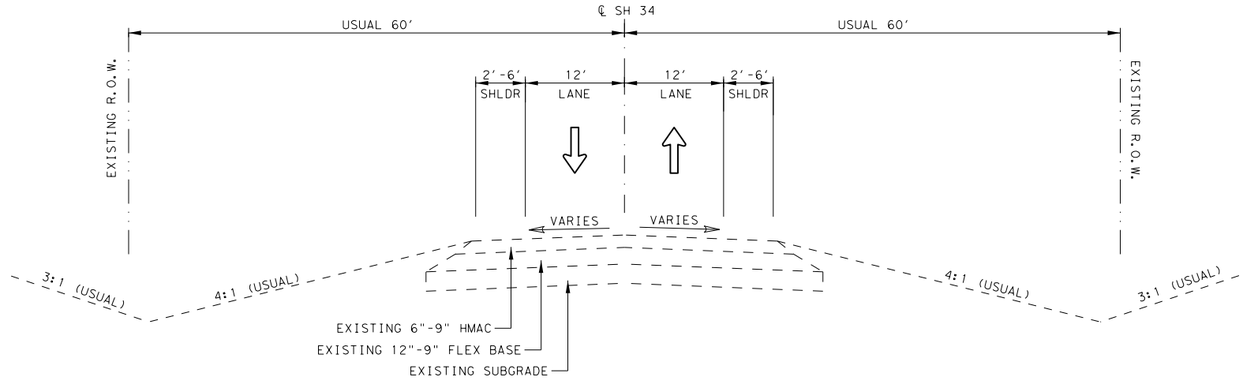
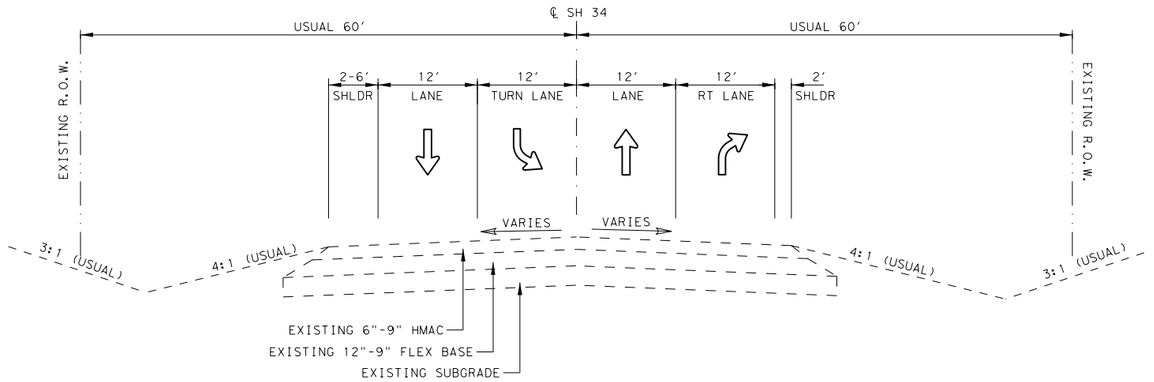


EXISTING TYPICAL
CSJ 2984-01-017
STA. 10+00.00 TO STA 15+00.00
STA. 26+00.00 TO STA 67+51.45



EXISTING TYPICAL
CSJ 2984-01-017
STA. 15+00 TO STA 26+00

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

EXISTING TYPICAL SECTIONS

SHEET 1 OF 4

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
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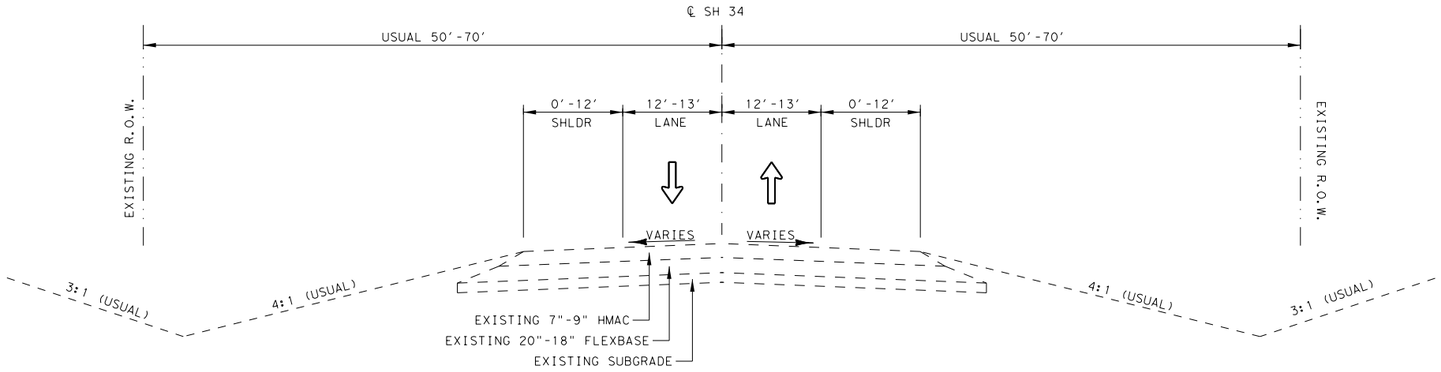
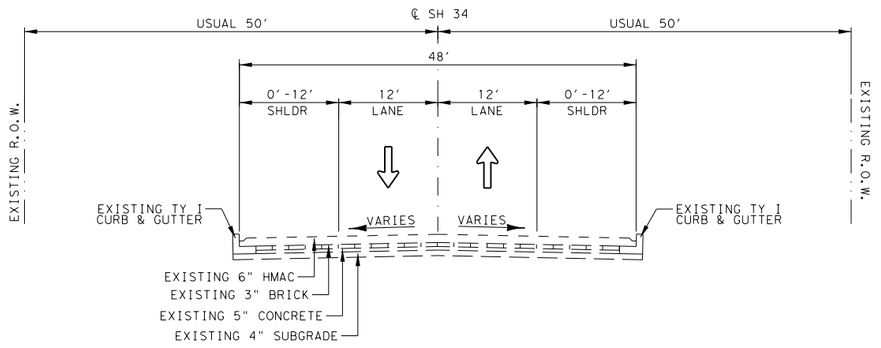


EXISTING TYPICAL

CCSJ 0568-01-052

STA. 67+51.45 TO STA. 71+94.00
STA. 80+88.00 TO STA. 82+55.00
STA. 90+61.00 TO STA. 823+86.00
STA. 829+86.00 TO STA. 883+49.00
STA. 936+12.00 TO STA. 995+45.00
STA. 1071+00.00 TO STA. 1086+00.00

FROM STA. 398+80 TO STA. 417+00 (CURB AND GUTTTER)
FROM STA. 773+00 TO STA. 795+00 (CURB AND GUTTTER)



EXISTING TYPICAL

CCSJ 0568-01-052

STA. 71+49.00 TO STA. 80+88.00
STA. 82+55.00 TO STA. 90+61.00

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant & ,P.E. Date

Texas Department of Transportation

SH 34

EXISTING TYPICAL SECTIONS

SHEET 2 OF 4

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		10

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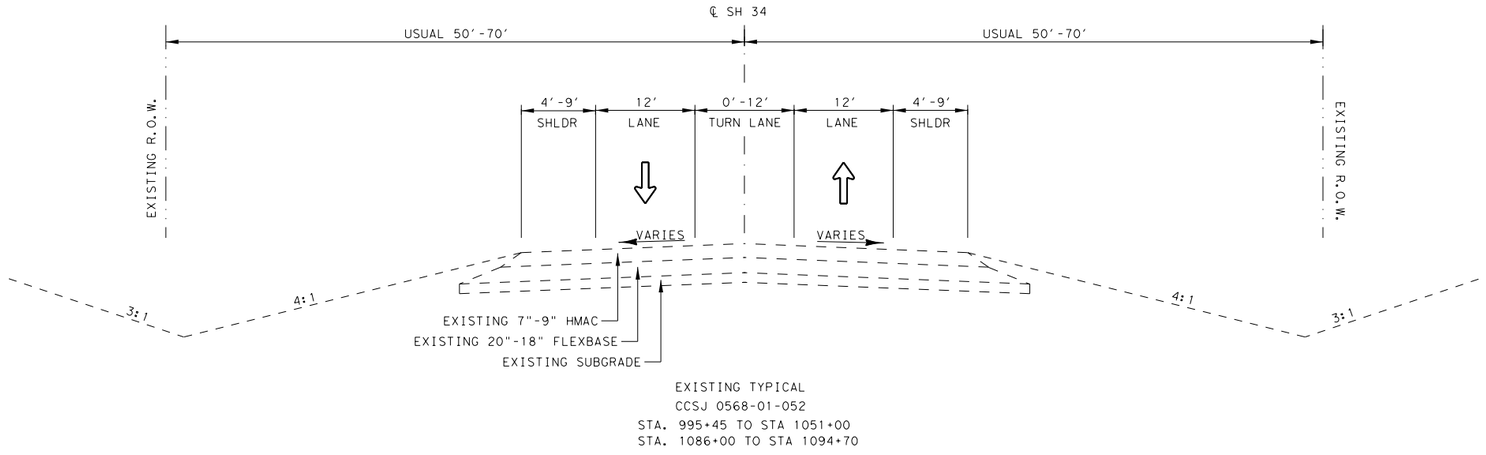
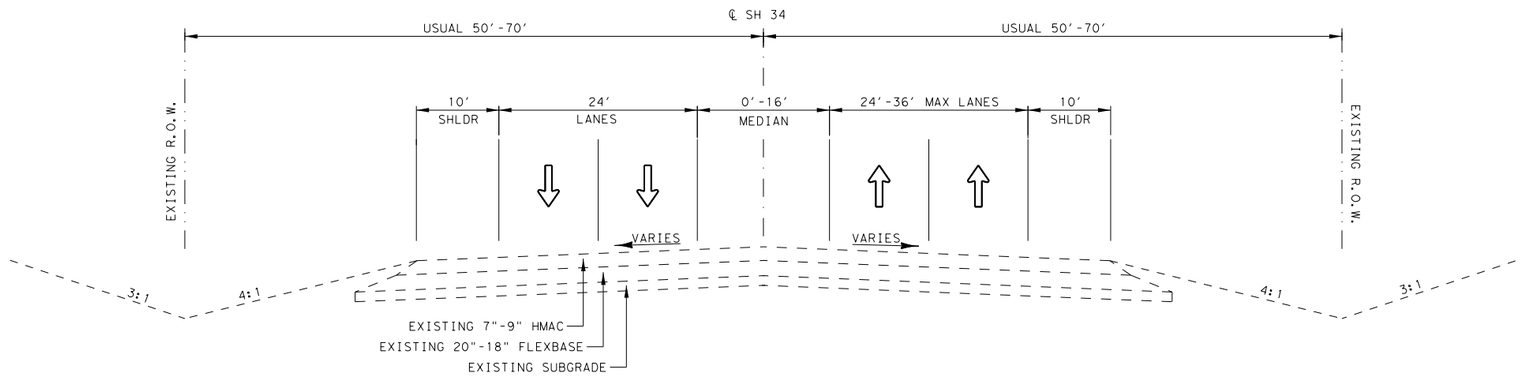


EXISTING TYPICAL
CCSJ 0568-01-052
STA. 995+45 TO STA 1051+00
STA. 1086+00 TO STA 1094+70



EXISTING TYPICAL
CCSJ 0568-01-052
STA. 1051+00 TO STA 1071+00

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

EXISTING TYPICAL SECTIONS

SHEET 3 OF 4

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		11

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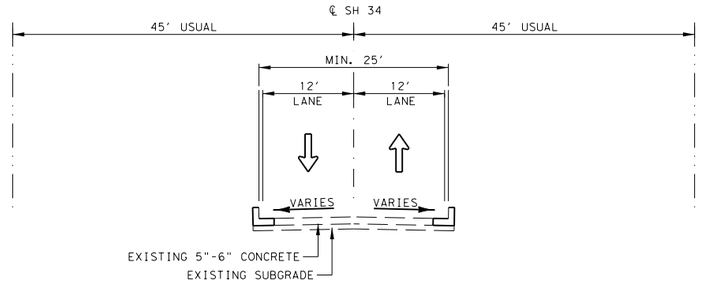

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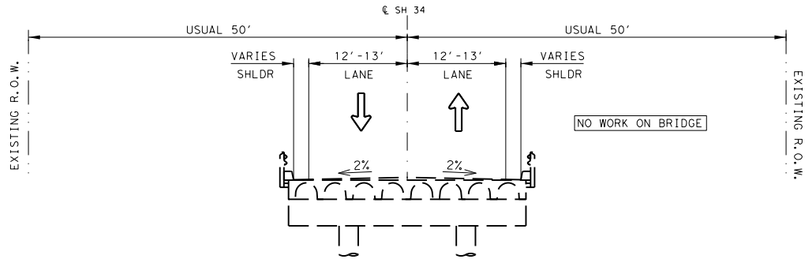
CSJ 0568-01-052
STA. 1094+70 TO STA 1103+48.05



EXISTING TYPICAL
CCSJ 0568-01-052

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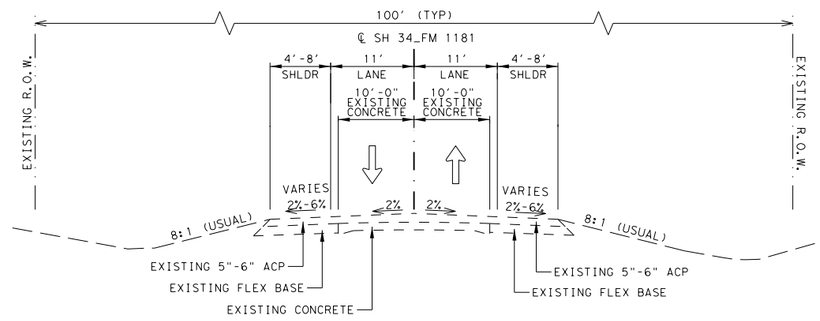
STA. 280+33.00 TO STA. 282+72.00 NBI: 18-071-0-0568-01-033
STA. 559+62.00 TO STA. 562+51.00 NBI: 18-071-0-0568-01-028
STA. 567+93.00 TO STA. 569+96.00 NBI: 18-071-0-0568-01-029
STA. 620+00.00 TO STA. 622+51.00 NBI: 18-071-0-0568-01-030
STA. 723+03.00 TO STA. 724+23.00 NBI: 18-071-0-0568-01-032
STA. 824+70.00 TO STA. 825+91.00 NBI: 18-071-0-0568-01-021
STA. 883+49.00 TO STA. 935+91.00 NBI: 18-071-0-0568-01-022



EXISTING TYPICAL
CSJ 0568-01-058 (FM 1181)
STA. 358+92.00 TO STA 376+53.00

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

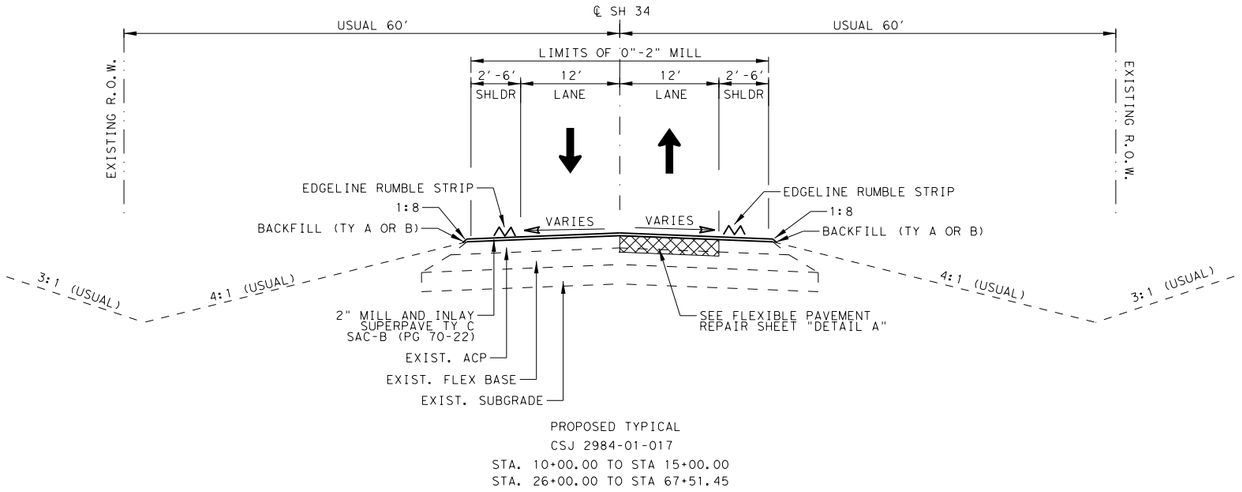
Texas Department of Transportation

SH 34

EXISTING
TYPICAL
SECTIONS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		12

DATE:
FILE:



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CSJ 2984-01-017
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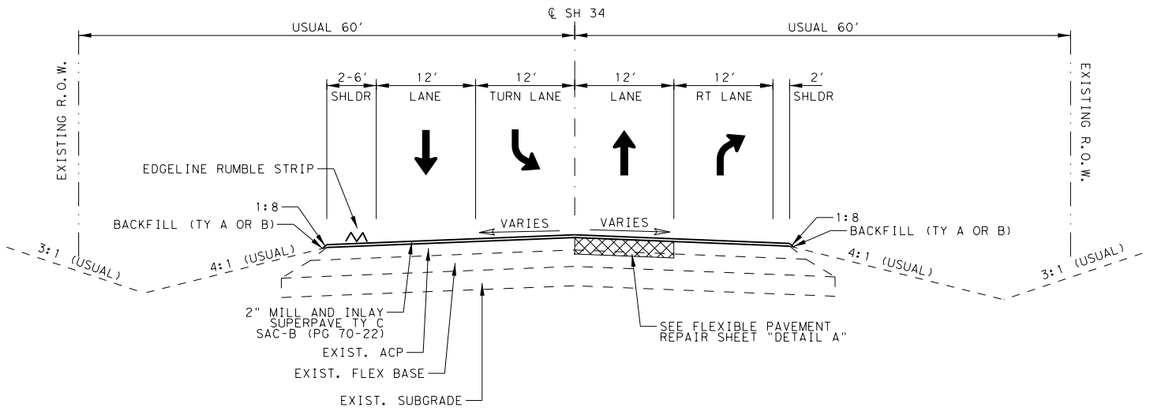
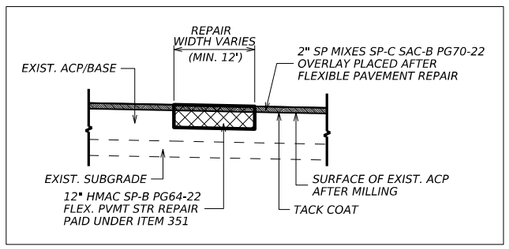
STA. 26+00.00 TO STA 67+51.45



PROPOSED TYPICAL
CSJ 2984-01-017
STA. 15+00 TO STA 26+00



DETAIL A
FLEXIBLE PAVEMENT REPAIR

NOTES:

1. NO CHANGE IN PGL OR CROSS SLOPE.
2. LOCATION OF FLEXIBLE PAVEMENT STRUCTURE REPAIR WILL BE MARKED AND DETERMINED IN THE FIELD BY THE ENGINEER. MINIMUM WIDTH IS 12'.
3. ENSURE NO TEMPORARY WORK ZONE PAVEMENT MARKINGS ARE ON THE ROADWAY PRIOR TO THE SURFACE OVERLAY.
4. BACKFILL PAVEMENT EDGES FOLLOWING THE FINAL 2" SP MIXES SP-C SAC-B PG70-22 INLAY (ITEM 134).

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

PROPOSED
TYPICAL
SECTIONS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		13

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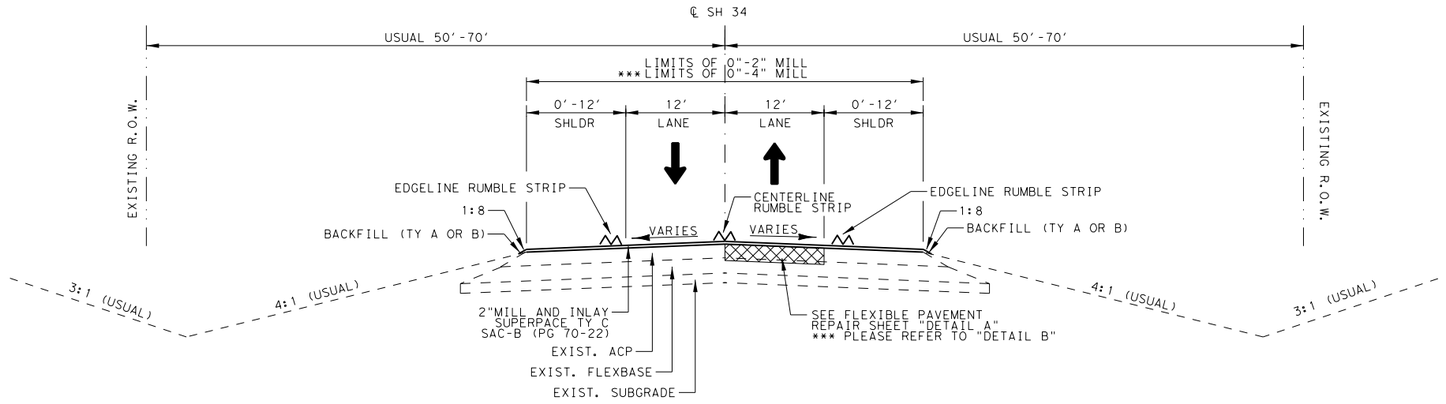
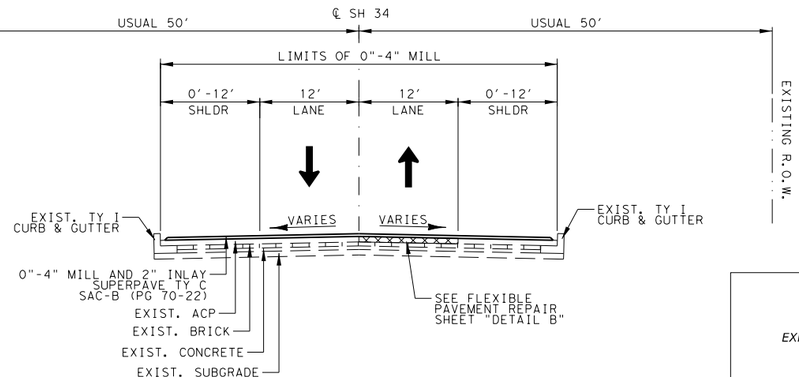


PROPOSED TYPICAL
CCSJ 0568-01-052

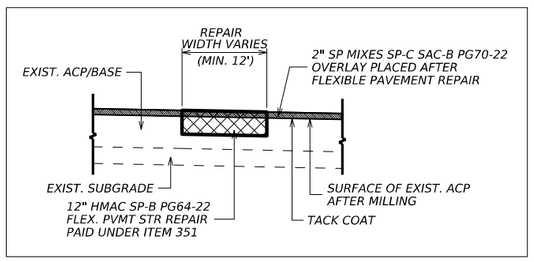
STA. 67+51.45 TO STA. 71+94.00
STA. 80+88.00 TO STA. 82+55.00
STA. 90+61.00 TO STA. 121+16.00
STA. 135+97.00 TO STA. 244+41.00
STA. 251+55.00 TO STA. 280+33.00
STA. 282+72.00 TO STA. 559+62.00
STA. 562+51.00 TO STA. 567+93.00
STA. 569+96.00 TO STA. 589+13.00
STA. 609+15.00 TO STA. 620+00.00
STA. 622+51.00 TO STA. 723+03.00
STA. 724+23.00 TO STA. 809+59.00
STA. 823+52.00 TO STA. 824+70.00
STA. 825+91.00 TO STA. 883+49.00
STA. 935+91.00 TO STA. 995+45.00
STA. 1071+00.00 TO STA. 1086+00.00

***FROM STA. 398+80 TO STA. 417+00 (CURB AND GUTTTER)
***FROM STA. 773+00 TO STA. 795+00 (CURB AND GUTTTER)
FROM STA. 348+34.00 TO STA. 352+62.00 (PROP. MBGF)
FROM STA. 395+34.00 TO STA. 399+64.00 (PROP. MBGF)
FROM STA. 658+06.00 TO STA. 662+39.00 (PROP. MBGF)
FROM STA. 845+21.00 TO STA. 847+97.00 (PROP. MBGF)
FROM STA. 993+30.00 TO STA. 996+06.00 (PROP. MBGF)

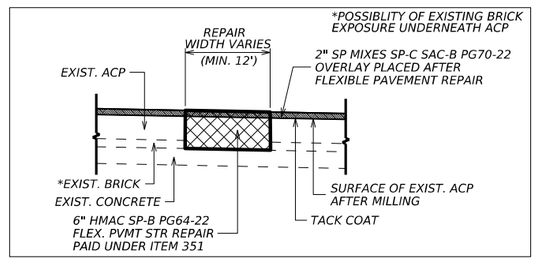


PROPOSED TYPICAL
CCSJ 0568-01-052

STA. 71+49.00 TO STA. 80+88.00
STA. 82+55.00 TO STA. 90+61.00



DETAIL A
FLEXIBLE PAVEMENT REPAIR



DETAIL B
FLEXIBLE PAVEMENT REPAIR

NOTES:

1. NO CHANGE IN PGL OR CROSS SLOPE.
2. LOCATION OF FLEXIBLE PAVEMENT STRUCTURE REPAIR WILL BE MARKED AND DETERMINED IN THE FIELD BY THE ENGINEER. MINIMUM WIDTH IS 12'.
3. ENSURE NO TEMPORARY WORK ZONE PAVEMENT MARKINGS ARE ON THE ROADWAY PRIOR TO THE SURFACE OVERLAY.
4. BACKFILL PAVEMENT EDGES FOLLOWING THE FINAL 2" SP MIXES SP-C SAC-B PG70-22 INLAY (ITEM 134).

*** PROPOSED 0"-4" MILL
AT CURB AND GUTTER AREAS (0"-4" MILL); PLEASE CONSULT WITH THE ENGINEER TO DETERMINE THE DEPTH OF MILLING.

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant & ,P.E. Date

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		14

DATE: 5/5/2024 4:10:32 AM
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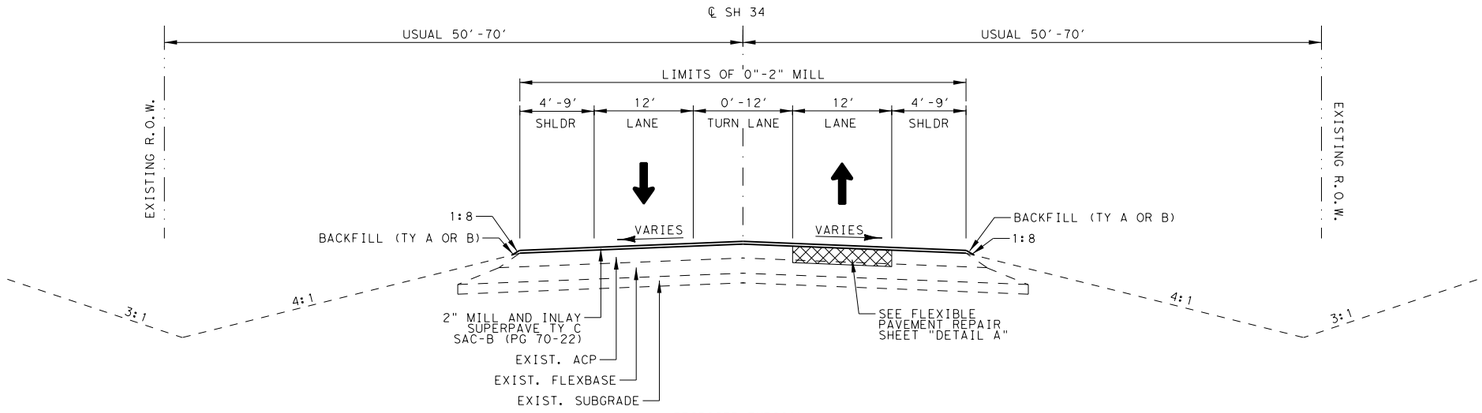
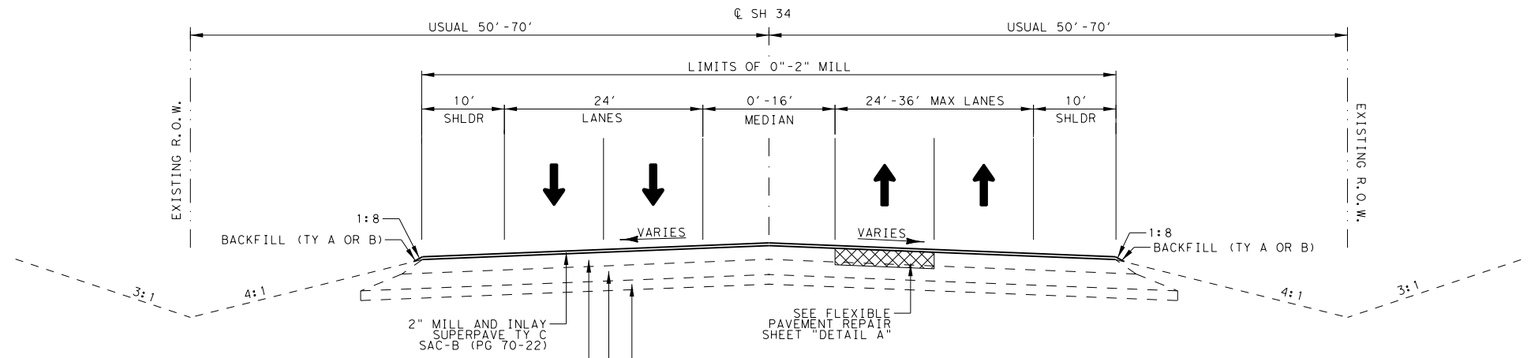
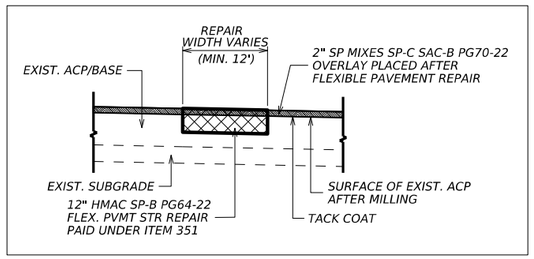


PROPOSED TYPICAL
CCSJ 0568-01-052
STA. 995+45 TO STA 1051+00
STA. 1086+00 TO STA 1094+70

FROM STA. 1040+29.00 TO STA. 1044+63.00 (PROP. MBGF)
FROM STA. 1073+00.00 TO STA. 1077+55.00 (PROP. MBGF)



PROPOSED TYPICAL
CCSJ 0568-01-052
STA. 1051+00 TO STA 1071+00
FROM STA. 1065+19.00 TO STA. 1069+82.00 (PROP. MBGF)



DETAIL A
FLEXIBLE PAVEMENT REPAIR

NOTES:

1. NO CHANGE IN PGL OR CROSS SLOPE.
2. LOCATION OF FLEXIBLE PAVEMENT STRUCTURE REPAIR WILL BE MARKED AND DETERMINED IN THE FIELD BY THE ENGINEER. MINIMUM WIDTH IS 12'.
3. ENSURE NO TEMPORARY WORK ZONE PAVEMENT MARKINGS ARE ON THE ROADWAY PRIOR TO THE SURFACE OVERLAY.
4. BACKFILL PAVEMENT EDGES FOLLOWING THE FINAL 2" SP MIXES SP-C SAC-B PG70-22 INLAY (ITEM 134).

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant & Date, P.E.

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

SHEET 3 OF 12

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		15

DATE: 5/5/2024 4:10:32 AM
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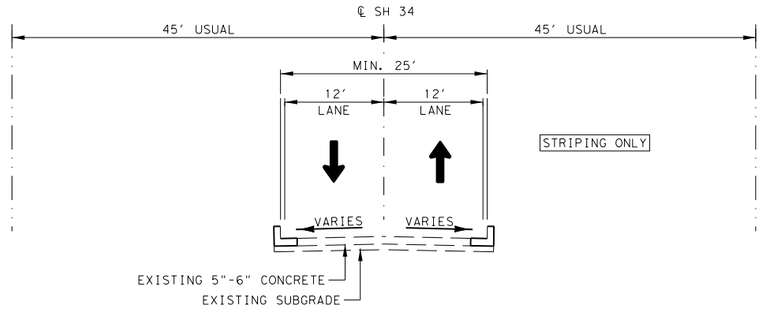
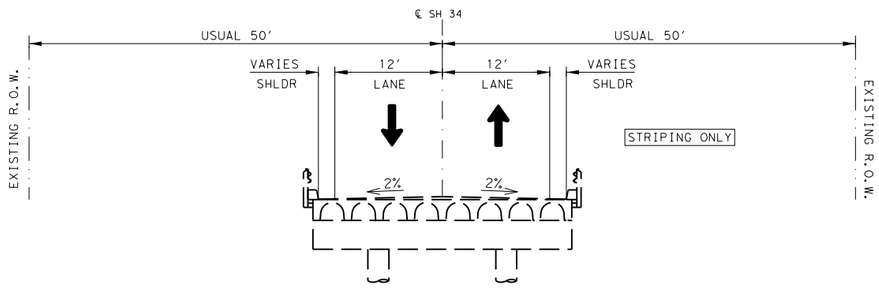


PROPOSED TYPICAL
CSJ 0568-01-052
STA. 1094+70 TO STA 1103+48.05



PROPOSED TYPICAL
CCSJ 0568-01-052

STA. 244+41.00 TO STA. 251+55.00 NBI: 18-071-0-0568-01-034
STA. 280+33.00 TO STA. 282+72.00 NBI: 18-071-0-0568-01-033
STA. 559+62.00 TO STA. 562+51.00 NBI: 18-071-0-0568-01-028
STA. 567+93.00 TO STA. 569+96.00 NBI: 18-071-0-0568-01-029
STA. 620+00.00 TO STA. 622+51.00 NBI: 18-071-0-0568-01-030
STA. 723+03.00 TO STA. 724+23.00 NBI: 18-071-0-0568-01-032
STA. 824+70.00 TO STA. 825+91.00 NBI: 18-071-0-0568-01-021
STA. 883+49.00 TO STA. 935+91.00 NBI: 18-071-0-0568-01-022

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
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PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

PROPOSED
TYPICAL
SECTIONS

2024 SHEET 4 OF 12

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		16

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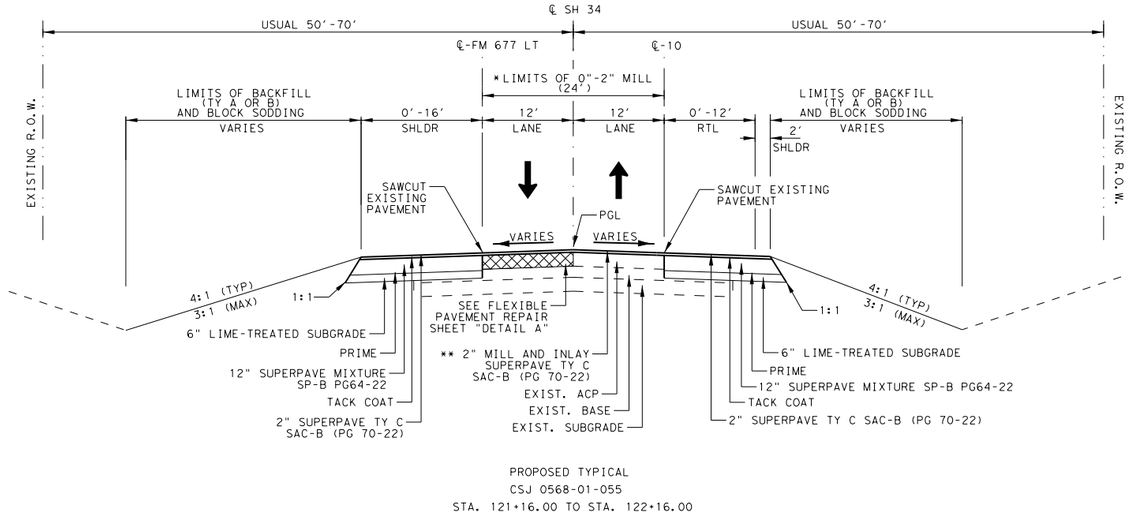
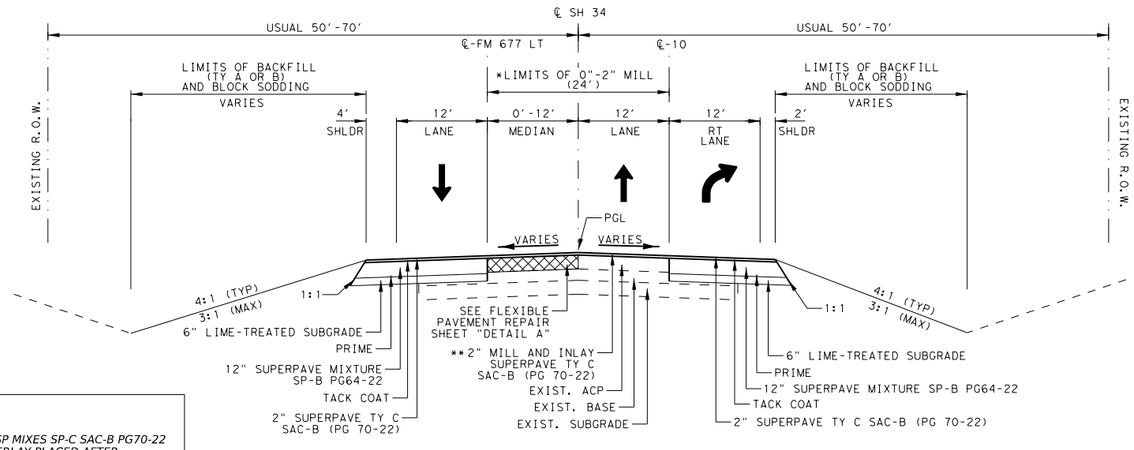
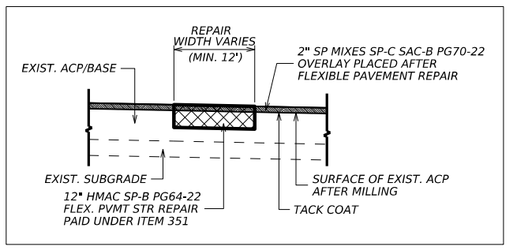


PROPOSED TYPICAL
CSJ 0568-01-055
STA. 121+16.00 TO STA. 122+16.00



PROPOSED TYPICAL
CSJ 0568-01-055
STA. 122+16.00 TO STA. 124+86.00



DETAIL A
FLEXIBLE PAVEMENT REPAIR

NOTES:
1. NO CHANGE IN PGL OR CROSS SLOPE.
2. MATCH WIDENING SECTIONS AND NEW SHOULDER CONSTRUCTION WITH EXISTING SUPERELEVATION VALUE AND PATTERN.
3. MILL 0"-2" EXISTING HMAC (ITEM 354).
4. SAWCUT AT EDGELINE LANE UNLESS OTHERWISE NOTED IN PLANS.
5. PREPARE EXISTING SUBGRADE (ITEM 260).
6. PRIME COAT TREATED SUBGRADE (ITEM 310).
7. PLACE 12" OF SP-B PG64-22 (ITEM 3077).
8. PERFORM FLEXIBLE PAVEMENT REPAIR (ITEM 351).
9. TACK AND OVERLAY 2" SP-C PG 70-22 (ITEM 3077) ACROSS FULL ROADWAY SURFACE.
10. PLACE BACKFILL (TY A OR B)(ITEM 134) AND BLOCK SODDING (ITEM 162).

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		17

DATE: 5/5/2024 4:10:33 AM
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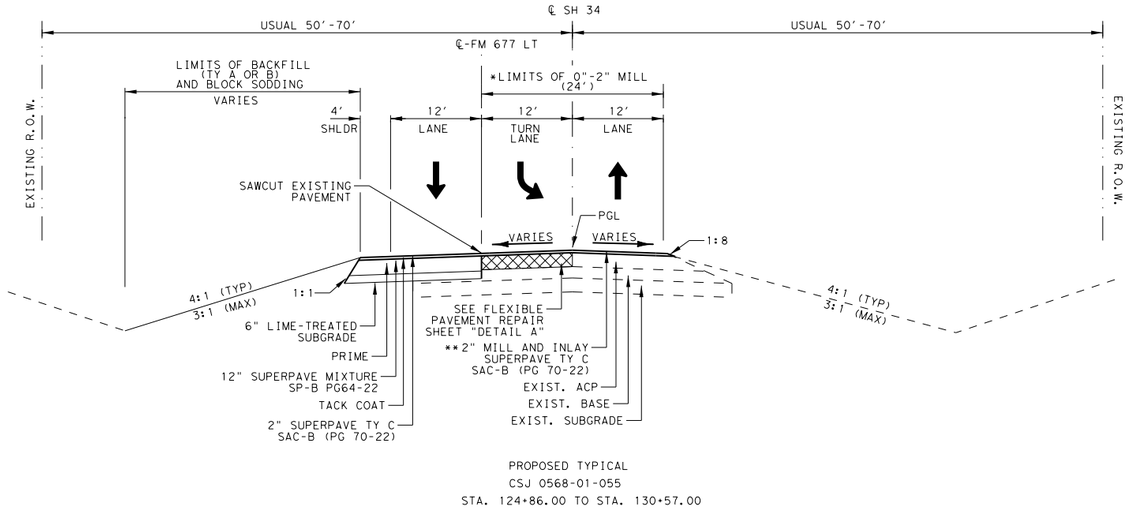
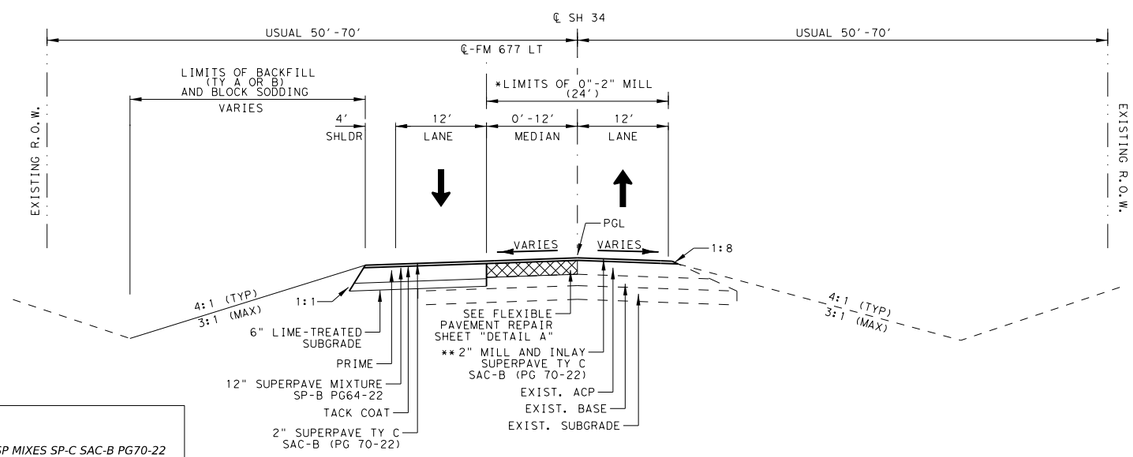
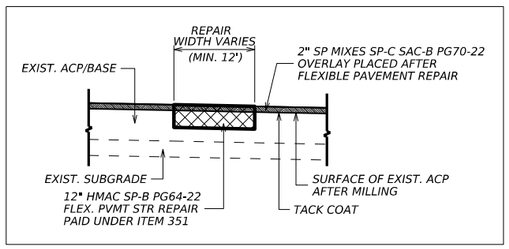


PROPOSED TYPICAL
CSJ 0568-01-055
STA. 124+86.00 TO STA. 130+57.00



PROPOSED TYPICAL
CSJ 0568-01-055
STA. 130+57.00 TO STA. 135+97.00



DETAIL A
FLEXIBLE PAVEMENT REPAIR

NOTES:
1. NO CHANGE IN PGL OR CROSS SLOPE.
2. MATCH WIDENING SECTIONS AND NEW SHOULDER CONSTRUCTION WITH EXISTING SUPERELEVATION VALUE AND PATTERN.
3. MILL 0"-2" EXISTING HMAC (ITEM 354).
4. SAWCUT AT EDGELINE LANE UNLESS OTHERWISE NOTED IN PLANS.
5. PREPARE EXISTING SUBGRADE (ITEM 260).
6. PRIME COAT TREATED SUBGRADE (ITEM 310).
7. PLACE 12" OF SP-B PG64-22 (ITEM 3077).
8. PERFORM FLEXIBLE PAVEMENT REPAIR (ITEM 351).
9. TACK AND OVERLAY 2" SP-C PG 70-22 (ITEM 3077) ACROSS FULL ROADWAY SURFACE.
10. PLACE BACKFILL (TY A OR B)(ITEM 134) AND BLOCK SODDING (ITEM 162).

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant & Date ,P.E.

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

SHEET 6 OF 12

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		18

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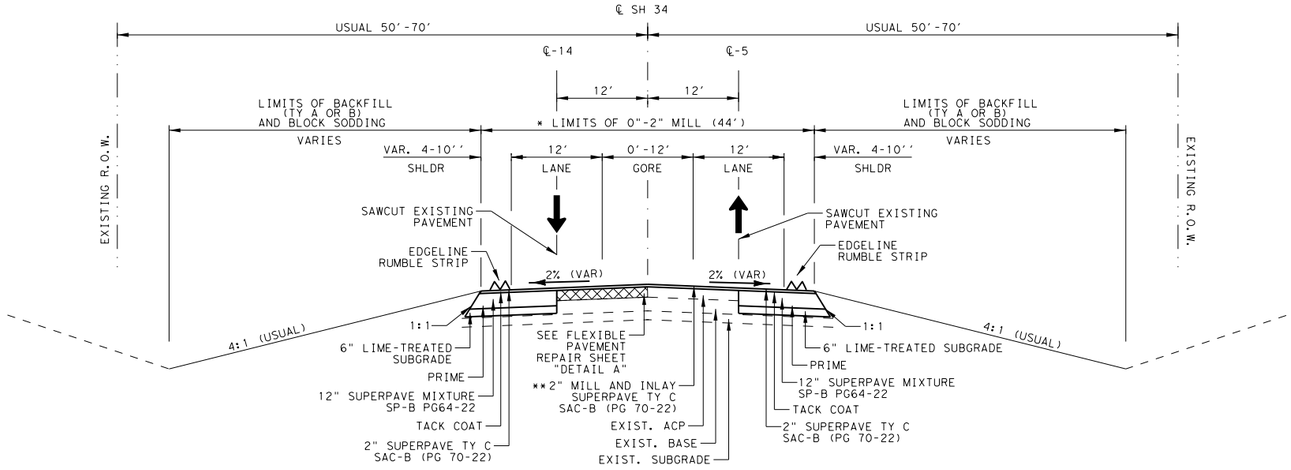
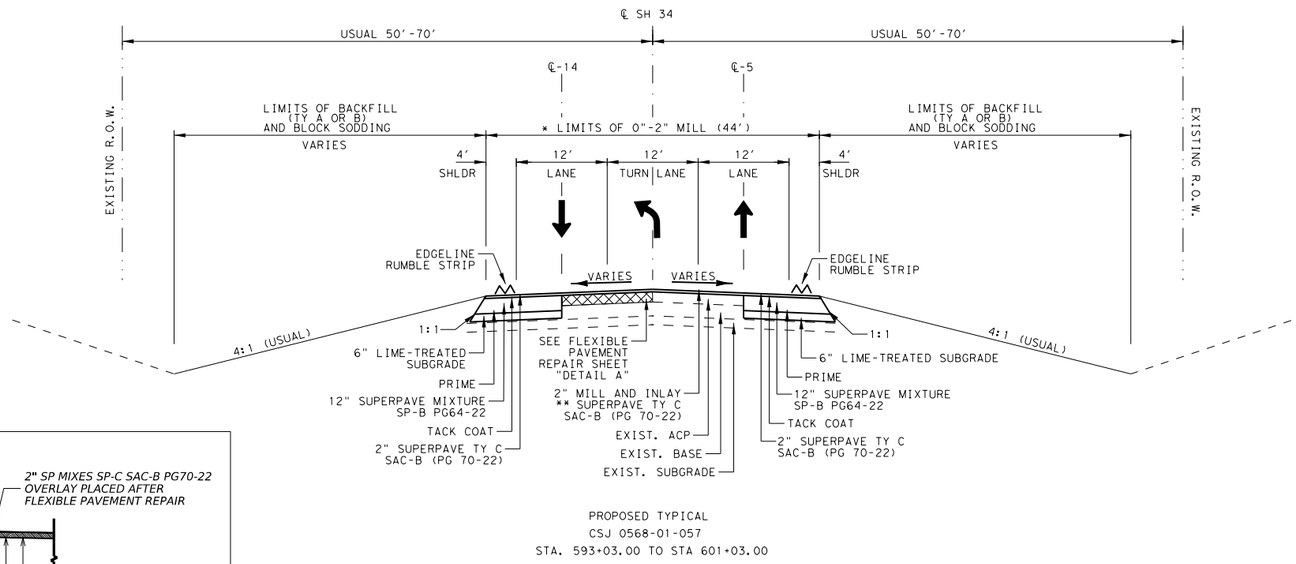
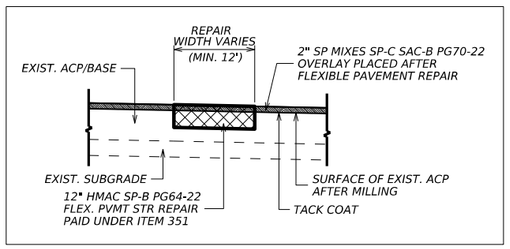


PROPOSED TYPICAL
CSJ 0568-01-057
STA. 589+13.00 TO STA. 593+03.00



PROPOSED TYPICAL
CSJ 0568-01-057
STA. 593+03.00 TO STA 601+03.00



DETAIL A
FLEXIBLE PAVEMENT REPAIR

NOTES:
1. NO CHANGE IN PGL OR CROSS SLOPE.
2. MATCH WIDENING SECTIONS AND NEW SHOULDER CONSTRUCTION WITH EXISTING SUPERELEVATION VALUE AND PATTERN.
3. MILL 0"-2" EXISTING HMAC (ITEM 354).
4. SAWCUT AT EDGELINE LANE UNLESS OTHERWISE NOTED IN PLANS.
5. PREPARE EXISTING SUBGRADE (ITEM 260).
6. PRIME COAT TREATED SUBGRADE (ITEM 310).
7. PLACE 12" OF SP-B PG64-22 (ITEM 3077).
8. PERFORM FLEXIBLE PAVEMENT REPAIR (ITEM 351).
9. TACK AND OVERLAY 2" SP-C PG 70-22 (ITEM 3077) ACROSS FULL ROADWAY SURFACE.
10. PLACE BACKFILL (TY A OR B)(ITEM 134) AND BLOCK SODDING (ITEM 162).

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant & ,P.E. Date

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

SHEET 7 OF 12

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		19

DATE: 5/5/2024 4:10:34 AM
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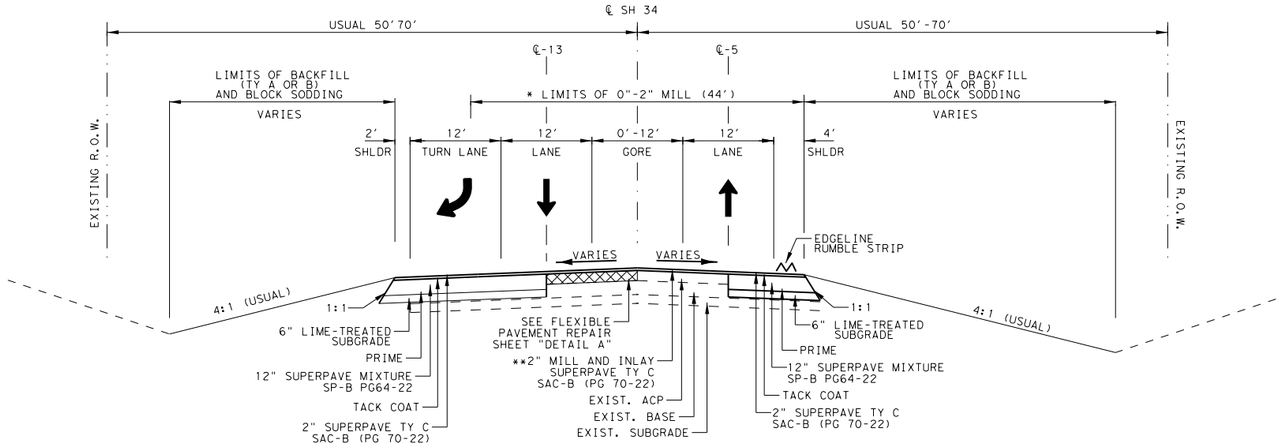
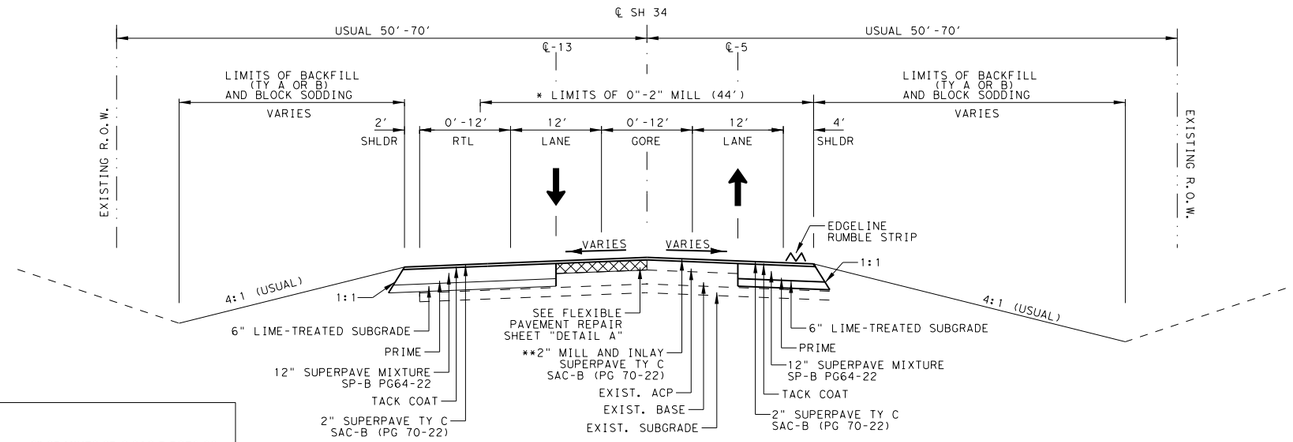
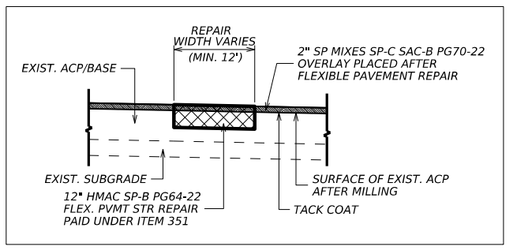


PROPOSED TYPICAL
CSJ 0568-01-057
STA. 601+03.00 TO STA. 607+90.00



PROPOSED TYPICAL
CSJ 0568-01-057
STA. 607+90.00 TO STA. 609+15.00



DETAIL A
FLEXIBLE PAVEMENT REPAIR

NOTES:
1. NO CHANGE IN PGL OR CROSS SLOPE.
2. MATCH WIDENING SECTIONS AND NEW SHOULDER CONSTRUCTION WITH EXISTING SUPERELEVATION VALUE AND PATTERN.
3. MILL 0"-2" EXISTING HMAC (ITEM 354).
4. SAWCUT AT EDGELINE LANE UNLESS OTHERWISE NOTED IN PLANS.
5. PREPARE EXISTING SUBGRADE (ITEM 260).
6. PRIME COAT TREATED SUBGRADE (ITEM 310).
7. PLACE 12" OF SP-B PG64-22 (ITEM 3077).
8. PERFORM FLEXIBLE PAVEMENT REPAIR (ITEM 351).
9. TACK AND OVERLAY 2" SP-C PG 70-22 (ITEM 3077) ACROSS FULL ROADWAY SURFACE.
10. PLACE BACKFILL (TY A OR B)(ITEM 134) AND BLOCK SODDING (ITEM 162).

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		20

DATE: 5/5/2024 4:10:34 AM
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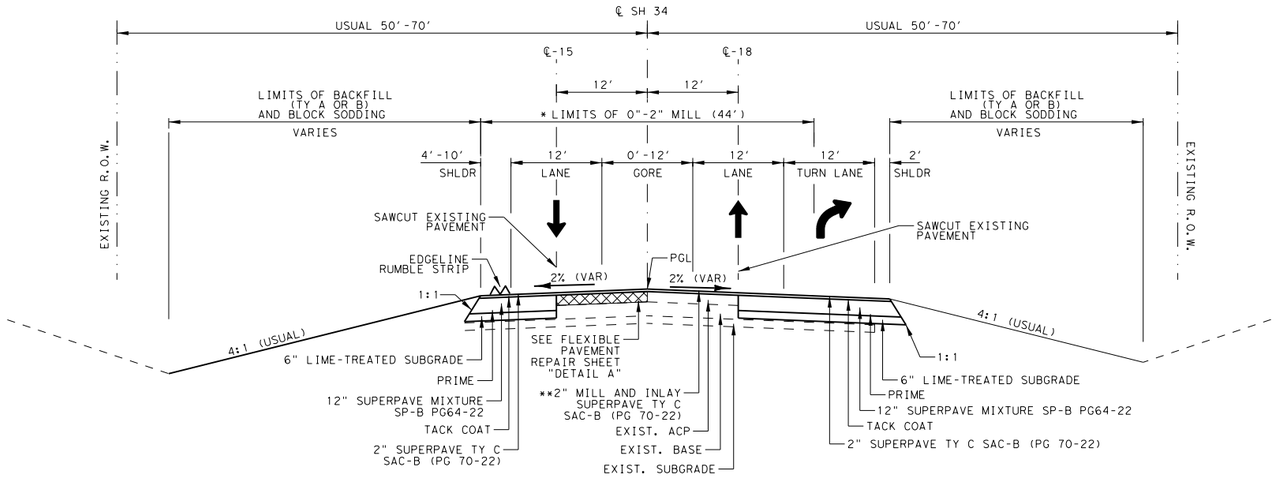
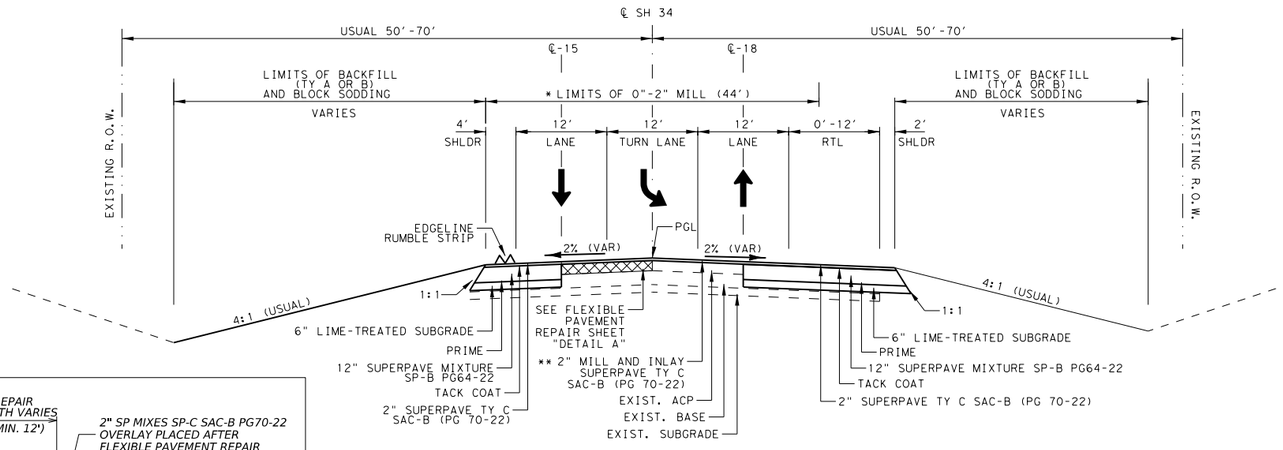
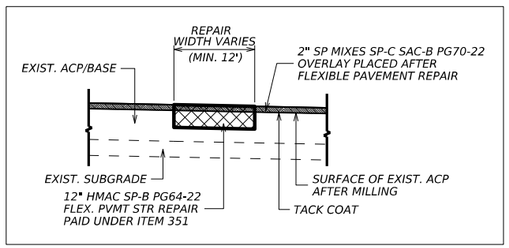


PROPOSED TYPICAL
CSJ 0568-01-056
STA. 809+59.00 TO STA. 814+94.00

NOTES:
1. NO CHANGE IN PGL OR CROSS SLOPE.
2. MATCH WIDENING SECTIONS AND NEW SHOULDER CONSTRUCTION WITH EXISTING SUPERELEVATION VALUE AND PATTERN.
3. MILL 0"-2" EXISTING HMAC (ITEM 354).
4. SAWCUT AT EDGELINE LANE UNLESS OTHERWISE NOTED IN PLANS.
5. PREPARE EXISTING SUBGRADE (ITEM 260).
6. PRIME COAT TREATED SUBGRADE (ITEM 310).
7. PLACE 12" OF SP-B PG64-22 (ITEM 3077).
8. PERFORM FLEXIBLE PAVEMENT REPAIR (ITEM 351).
9. TACK AND OVERLAY 2" SP-C PG 70-22 (ITEM 3077) ACROSS FULL ROADWAY SURFACE.
10. PLACE BACKFILL (TY A OR B)(ITEM 134) AND BLOCK SODDING (ITEM 162).



PROPOSED TYPICAL
CSJ 0568-01-056
STA. 814+94.00 TO STA 815+82.00



DETAIL A
FLEXIBLE PAVEMENT REPAIR

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		21

DATE: 5/5/2024 4:10:35 AM
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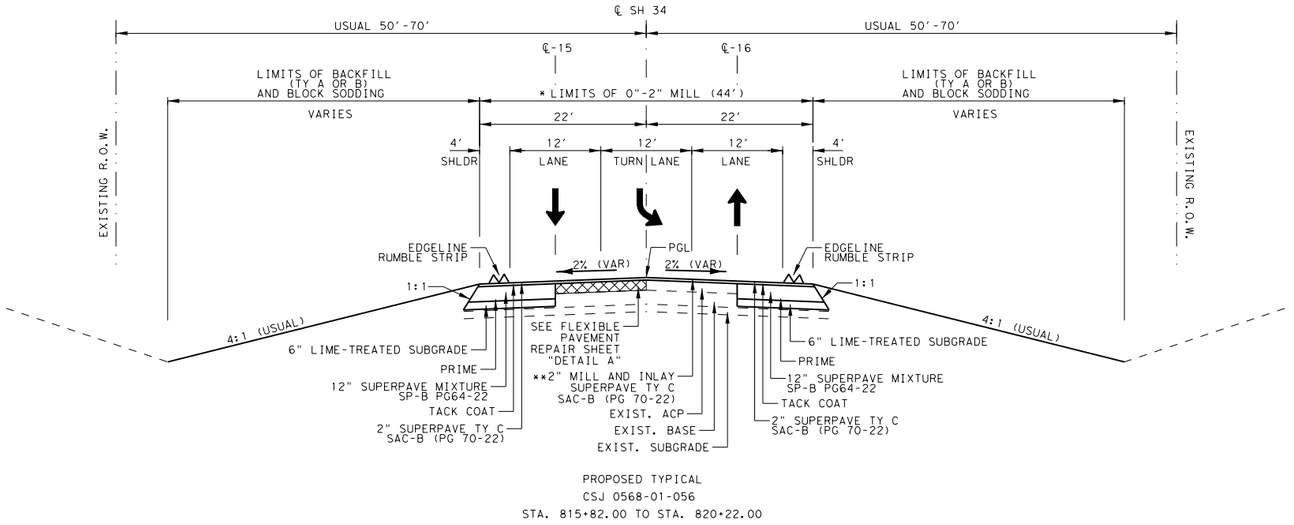
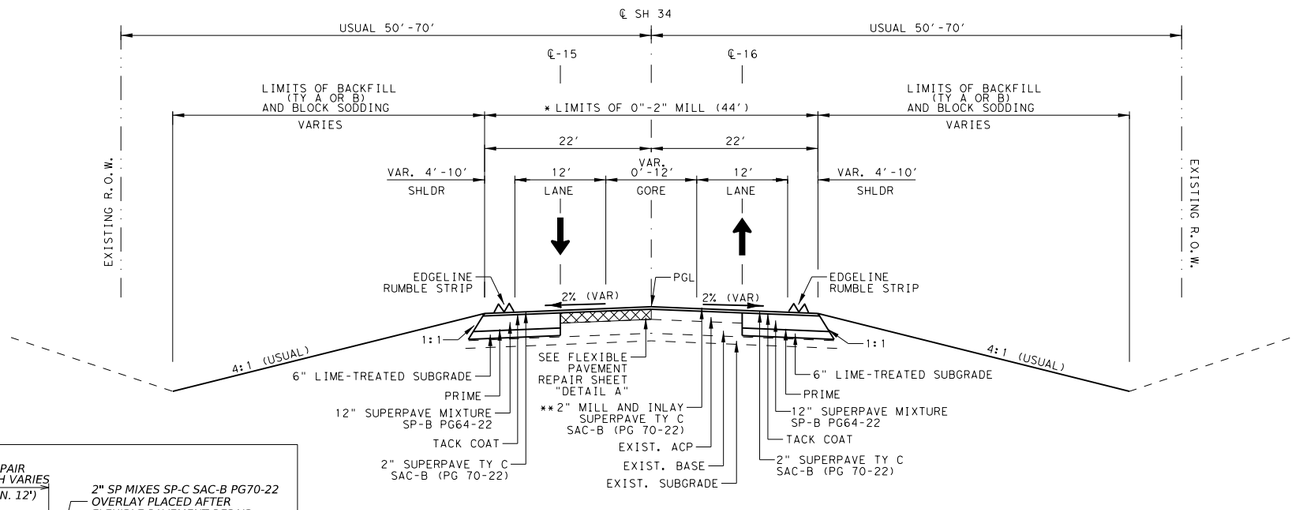
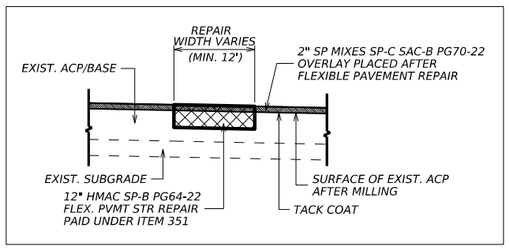


PROPOSED TYPICAL
CSJ 0568-01-056
STA. 815+82.00 TO STA. 820+22.00



PROPOSED TYPICAL
CSJ 0568-01-056
STA. 820+22.00 TO STA. 823+52.00



DETAIL A
FLEXIBLE PAVEMENT REPAIR

NOTES:
1. NO CHANGE IN PGL OR CROSS SLOPE.
2. MATCH WIDENING SECTIONS AND NEW SHOULDER CONSTRUCTION WITH EXISTING SUPERELEVATION VALUE AND PATTERN.
3. MILL 0"-2" EXISTING HMAC (ITEM 354).
4. SAWCUT AT EDGELINE LANE UNLESS OTHERWISE NOTED IN PLANS.
5. PREPARE EXISTING SUBGRADE (ITEM 260).
6. PRIME COAT TREATED SUBGRADE (ITEM 310).
7. PLACE 12" OF SP-B PG64-22 (ITEM 3077).
8. PERFORM FLEXIBLE PAVEMENT REPAIR (ITEM 351).
9. TACK AND OVERLAY 2" SP-C PG 70-22 (ITEM 3077) ACROSS FULL ROADWAY SURFACE.
10. PLACE BACKFILL (TY A OR B)(ITEM 134) AND BLOCK SODDING (ITEM 162).

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant & Date ,P.E.

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

SHEET 10 OF 12

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		22

DATE: 5/5/2024 4:10:35 AM
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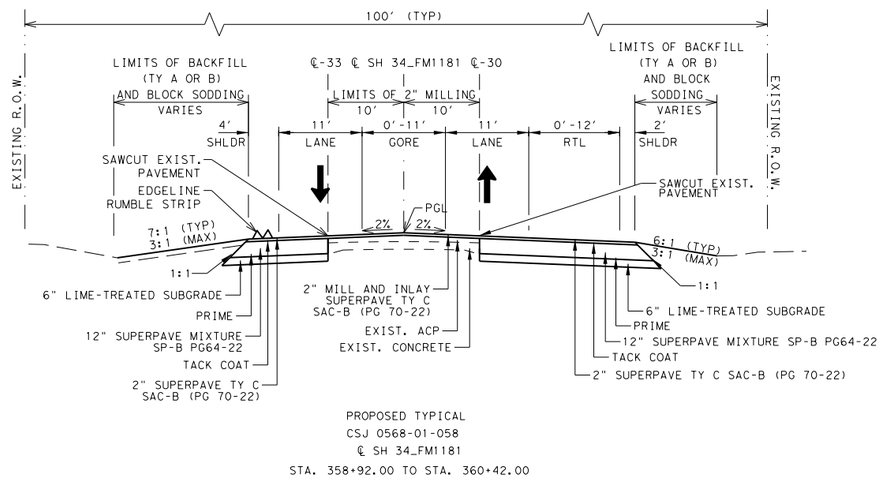
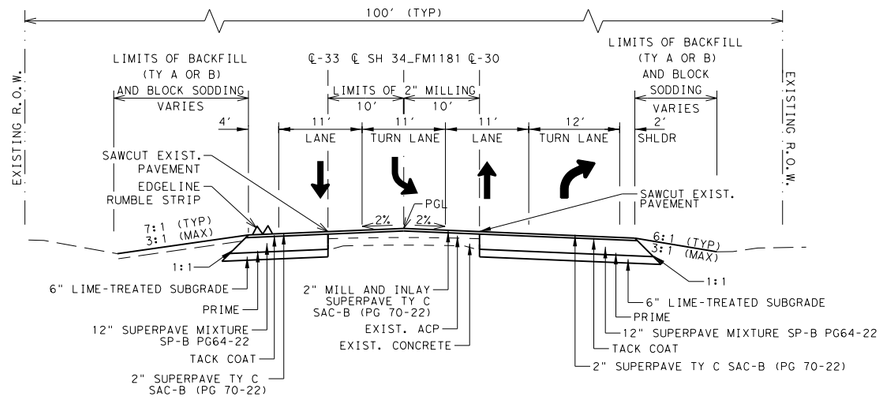


PROPOSED TYPICAL
CSJ 0568-01-058
℄ SH 34_FM1181
STA. 358+92.00 TO STA. 360+42.00



PROPOSED TYPICAL
CSJ 0568-01-058
℄ FM 34_FM1181
STA. 360+42.00 TO STA. 365+93.00

NOTES:
1. NO CHANGE IN PGL OR CROSS SLOPE.
2. MATCH WIDENING SECTIONS AND NEW SHOULDER CONSTRUCTION WITH EXISTING SUPERELEVATION VALUE AND PATTERN.
3. MILL 0"-2" EXISTING HMAC (ITEM 354).
4. SAWCUT AT EDGELINE LANE UNLESS OTHERWISE NOTED IN PLANS.
5. PREPARE EXISTING SUBGRADE (ITEM 260).
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vanrajsinh Mahida 05/06/2024

Signature of Registrant ,P.E. & Date

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

SHEET 11 OF 12

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		23

DATE: 5/5/2024 4:10:36 AM
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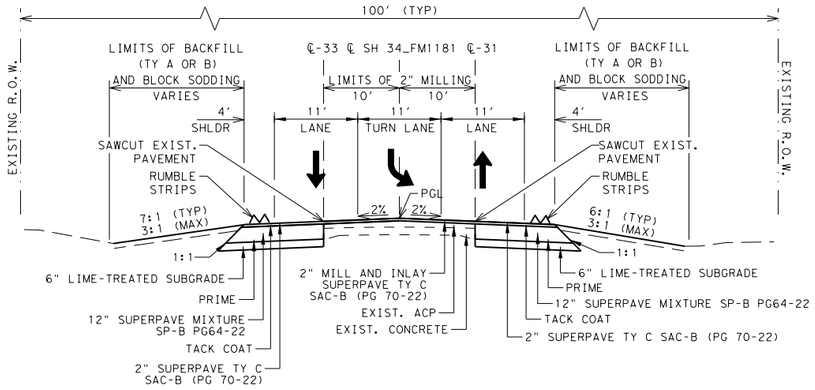
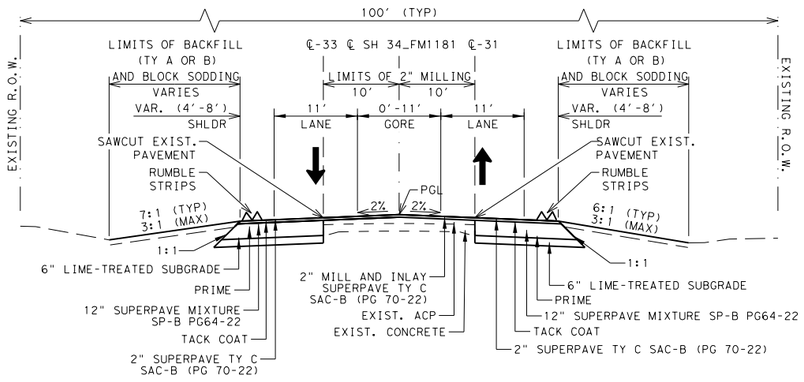


PROPOSED TYPICAL
CSJ 0568-01-058
℄ SH 34_FM1181
STA. 365+93.00 TO STA 373+11.00



PROPOSED TYPICAL
CSJ 0568-01-058
℄ SH 34_FM1181
STA. 373+11.00 TO STA. 376+71.00

NOTES:
1. NO CHANGE IN PGL OR CROSS SLOPE.
2. MATCH WIDENING SECTIONS AND NEW SHOULDER CONSTRUCTION WITH EXISTING SUPERELEVATION VALUE AND PATTERN.
3. MILL 0"-2" EXISTING HMAC (ITEM 354).
4. SAWCUT AT EDGELINE LANE UNLESS OTHERWISE NOTED IN PLANS.
5. PREPARE EXISTING SUBGRADE (ITEM 260).
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STATE OF TEXAS
VANRAJSINH MAHIDA
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vanrajsinh Mahida 05/06/2024

Signature of Registrant & ,P.E. Date

Texas Department of Transportation

SH 34

PROPOSED TYPICAL SECTIONS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		24

DATE: 5/5/2024 4:10:36 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/1. General/Typical Section.dgn

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SPECIFICATION DATA

Table 1: Soil Constants Requirements				
Item	Description	Plasticity Index		Note
		Max	Min	
132	EMBANKMENT (FINAL)(ORD COMP) (TY C)	40	8	1

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

Table 2: Basis of Estimate for Permanent Construction					
Item	Description	Thickness	Rate		Quantity
162	Block Sod	N/A	See Specifications		7149 SY
166 *	Fertilizer (12-6-6)	N/A	500	Lbs./Ac	0.37 Ton
168	Vegetative Watering (Warm)**	N/A	12	MG/Ac/Day	1068 MG
260	Hydrated Lime (slurry)			5% by wt.	270 Ton
310	Prime Coat	N/A	0.20	Gal/SY	3764 Gal
3077	SP MIXES SP-B SP MIXES SP-C	See Plans	110	Lbs./SY/In	11735 Ton 54936 Ton
3077	Tack Coat (Undiluted Application Rate)	New HMA Milled HMA	0.06 0.11	Gal/SY	52729 Gal

*For contractor's information only
**Use Summer rate for calculation, adjust for actual field conditions/temperatures as necessary. See Vegetation Establishment Plan Sheet for estimated daily rates.

Note: (1) Base material weight based on 1.50 Ton/CY (dry- compacted)
(2) Asphalt weight based on 110 Lbs./SY/In
(3) Subgrade weight based on 1.7 Ton/CY (dry-compacted)

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County: ELLIS

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Table 3: Basis of Estimate for Temporary Erosion Control Items				
Item	Description	Rate		Quantity
164	Drill Seeding (Temp) (Warm or Cool)	See Specifications		7149 SY
166*	Fertilizer (12-6-6)	500	Lb/Ac	0.37 Ton
168	Vegetative Watering (Warm)**	12	MG/Ac/Day	1068 MG

*For Contractor's Information Only.
**Use Summer rate for calculation, adjust for Actual Field Conditions/Temperatures as Necessary. See Vegetation Establishment Sheet for estimated daily rates.

GENERAL

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

The disturbed area for this project, as shown on the plans is 3.46 acres which includes:

- CSJ 0568-01-055 0.79 Acres
- CSJ 0568-01-056 0.57 Acres
- CSJ 0568-01-057 0.65 Acres
- CSJ 0568-01-058 0.86 Acres
- CSJ 0568-01-052 0.56 Acres
- CSJ 2984-01-017 0.03 Acres

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

This project required formal consultation and/or permits with environmental resources agencies. There is a high probability that an environmentally sensitive area could be encountered on the contractor designated Project-Specific Locations (PSL) for this project (haul roads, equipment staging areas, borrow pits, disposal sites, field offices, storage areas, parking areas, etc.). Item 7.6 "Project-Specific Locations", provides a listing of regulatory agencies that may need to be contacted regarding this project.

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

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

Questions may be submitted via the Letting Pre-Bid Q&A web page. This webpage can be accessed from the Notice to Contractors dashboard located at the following Address: https://tableau.txdot.gov/views/ProjectInformationDashboard/NoticetoContractors

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

Juan Paredes, P.E. *Juan.Paredes@txdot.gov*

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

All contractor questions will be reviewed by the Engineer. All questions and any corresponding responses that are generated will be posted through the same Letting Pre-Bid Q&A web page.

The Letting Pre-Bid Q&A web page for each project can be accessed by using 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.

Cross sections may be requested by posting a question to the above Letting Pre-Bid Q&A web page. This data is for non-construction purposes only and it is the responsibility of the prospective bidder to validate the enclosed data with appropriate plans, specifications and estimate for the project(s).

Item 5:
Underground utilities owned by the Texas Department of Transportation may be present within the Right-Of-Way on this project. For signal, illumination, surveillance, and communications & control maintained by TxDOT, call the TxDOT Traffic Signal Office (214-320-6682) for locates a minimum of 48 hours in advance of excavation. For irrigation systems, call TxDOT Landscape Office (214-320-6205) for locates a minimum of 48 hours in advance of excavation. If city or town owned irrigation facilities are present, call the appropriate department of the local city or town a minimum of 48 hours in advance of excavation. The Contractor is liable for all damages when utilities are damaged due to Contractor's negligence including, but not limited to, repair or replacement at the Contractor's expense.

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

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

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County: ELLIS

Highway: SH 34

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

Item 6:
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:
Repair or replace any structures and utilities that might have been damaged by negligence or a failure to have utility locates performed.

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

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

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

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

No significant traffic generator events identified.

Item 8:
This Project will be a Standard Workweek.

SP008-055 60 day delay is included for contractor mobilization.

Nighttime work is allowed in accordance with Article 8.3.3.

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

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

Item 104:
In those areas where the pavement is not to be overlaid, provide a smooth surface after the curb removal. Planing or grinding is considered an acceptable method at these locations. Measurement and payment is in accordance with this item.

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

Items 105 and 354:
Saw existing asphalt along neat lines where portions are to be left in place temporarily or permanently. Sawing is not paid for directly, but is subsidiary to this item.

Item 105:
Take possession of recycled asphalt pavement from the project and recycle the material. Properly dispose of unsalvageable material at your own expense.

Item 110:
Excavated shale is not an acceptable material for embankment.

Items 110 and 132:
Scarify and loosen the excavated areas, unpaved surface areas, except rock, to a depth of at least 8 inches and compact in accordance with the specifications.

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

Item 132:
Excavated material from the project site has not been determined to be suitable for embankment. The bidder assumes all risk for the use of excavated materials for embankment and is expected to meet all material requirements for embankment regardless of the source.

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

Earth embankment Type C, is mainly composed of material other than shale. Furnish material that is free from vegetation or other objectionable material and that conforms to the requirements of Table 1 (Sheet A). If necessary, treat material with lime slurry in accordance with Item 260, “Lime Treatment (Road-Mixed)” in order to meet these requirements. Use Tex-

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121-E, figure 1, page 4 to calculate the amount of lime required. When lime treated subgrade is specified, 3000 PPM is the maximum allowed sulfate content in the top 3 feet when material comes from borrow source. Follow recommendations of 260.4.4 for mixing and mellowing. The engineer will test material placed or excavated to a depth of one foot below and laterally to one foot outside the proposed treatment limit. Lime treatment of this material will not be paid for directly, but will be considered subsidiary to this item.

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

Item 134:
Start backfilling pavement edges as soon as possible after the surface course is started.

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

Use Type “A” or “B” material to backfill pavement edges as shown in plans. Type “A” or “B” material shall consist of suitable material that when compacted will support the pavement edge. Rap is considered suitable Type “A” or “B” material.

Blade the existing vegetation into a neat wind-row prior to overlay. After placing Ty A or Ty B backfill and placing seeding, the material from the wind-row shall be replaced on the completed slopes. Emulsion shall be placed at a 50/50 solution of water to emulsion over disturbed area. Emulsion rate=0.15 Gal/SY residual. This work, materials and equipment shall be subsidiary to Item 134.

Item 160:
Sequence construction operations to salvage topsoil from one location and spread on areas ready to receive topsoil. Keep stockpiling of topsoil to a minimum.

Use fertile clay or loam from the project site not more than six inches below natural grade as topsoil.

Item 161:
Provide tickets representing quantity of compost delivered to site.

Item 247:
Construct uniform layer thickness of 12 inches, or less with the required density and moisture content. Minimum PI is equal to three (3) for all grades.

Item 260:
Furnish and distribute MS-2 smoothly and evenly at the rate of 0.20 gallons per square yard to cure lime, as directed.

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

Items 354:
Take possession of recycled asphalt pavement from the project and recycle the material.

Properly dispose of unsalvageable material at your own expense.

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

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

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

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

Item 400:
Structural Excavation is not paid for directly but is considered subsidiary to pertinent Items. When placing concrete storm drain pipe on slopes of greater than 10 percent, provide cement stabilized backfill to a depth shown on the plans.

Item 421:
Furnish mix designs to the Engineer in a format compatible to the latest version of the Department's Construction Management System (Site Manager). Mix Design templates will be provided by the Engineer.

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

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

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

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

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

R-bars (I-beams, U-beams, X-Beams and TX Girders), Z-bars (boxes), and H-bars (Slab beams) are not required to be epoxy coated**.**
All ties, chairs and other appurtenances used with epoxy coated reinforcing shall be epoxy coated or non-metallic.

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

Item 464:
The concrete collars and the connections of pipes to existing or proposed concrete boxes or pipe will not be paid for directly but will be considered subsidiary to the various bid items.

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

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

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

Item 500:
Material On Hand (MOH) will not be used in calculating partial payments for Mobilization.

Item 502:
The Contractor Force Account "Safety Contingency" that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor's Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.

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

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

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

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

Provide rectangular shape (CW12-2a) Temporary Clearance Signs on all bridges where the existing vertical clearance has changed. Install Signs to the satisfaction of the Engineer prior to opening to traffic. Plywood sign blanks will have minimum dimensions of 84" X 24". Work performed and materials are subsidiary to this item.

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

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

As approved by the Engineer, provide uniformed off duty police officers and squad cars during lane or ramp closures, night time work or other situations that indicate a need for additional traffic control to protect the traveling public or the construction workforce. Provide documentation such as payroll, log sheets with signatures and badge number, or invoices from the government entity providing the officers for reimbursement. Complete the weekly tracking form provided by the department and submit invoices that agree with the tracking form for payment at the end of each month approved services were provided. Reimbursement will not be made for coordination fees charged by any party.

Patrol vehicles must be clearly marked to correspond with the officer's agency and equipped with appropriate lights to identify them as law enforcement. For patrol vehicles not owned by a law enforcement agency, markings will be retroreflective and legible from 100 ft. from both sides and the rear of the vehicle. Lights will be high intensity and visible from all angles.

Limit lane closures along SH 34 to the hours between 9:00 am and 3:30 pm and 9:00 pm and 6:00 am.

Traffic Control Plans with Lane Closures causing backups of 8 minutes or greater in duration will be modified by the Engineer up to and including removal of the lane closure and adjustment of lane closure times.

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

Item 506:
Take all practicable precautions to prevent debris from being discharged into the Waters of Texas or a designated wetland. Install Best Management Practices before demolition begins and maintain them during the demolition. Remove any debris or construction material that escapes containment devices and are discharged into the restricted areas, before the next rain event or within 24 hours of the discharge.

If temporary construction stream crossings are allowed under a Nationwide Permit, submit in writing for approval the type and location of each temporary stream crossing. Use temporary bridges, timber mats, or other structurally sound and non-eroding material for temporary stream crossings. A temporary culvert crossing will consist of storm sewer pipes and 4- to 8-inch nominal size rock. Temporary stream crossings must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal

CSJ: 0568-01-052, ETC **Sheet 25D**

County: ELLIS

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degradation of water quality. Remove the temporary stream crossings in their entirety and return the affected areas to their pre-existing elevation. All work and materials use for temporary construction stream crossings will not be paid for directly but are subsidiary to pertinent Items.

Provide SW3P Signs. Obtain from the Engineer a copy of the project's completed TPDES Storm Water Program Construction Site Notice and Contractor Site Notice. Laminate the sheets and bond with adhesive to 36" X 36" plywood sign blanks. Ensure the sheets remain dry. Apply Type C Blue reflective sheeting as the background and add the text "SW3P" in 5" white lettering, centered at the top. Attach the signs to approved temporary mounts and locate at each of the project limits just inside the right of way line at a readable height or as directed by the Engineer. If the sign cannot be placed outside the clear zone, it must adhere to the TMUTCD. SW3P signs, maintenance, and reposting (for replacement or as needed to ensure readability) will be subsidiary to Item 502.

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

Item 530:
Provide Class "HES" concrete for concrete intersections and driveways listed or shown on the plans.

Item 540:
Furnish one type of post throughout the project except as specifically noted in the plans.

Item 585:
Use Surface Test Type A on all intersections and driveways.

Use Surface Test Type B pay adjustment schedule 3 on the travel lanes.

Item 644:
Provide two (2) sets of shop drawings for signs. The shop drawings shall conform to the details shown on the plans. The shop drawings shall show the details of the panels, wind beams, stiffeners, joint backing plates, splices, fasteners, brackets, and sign support connections. The shop drawings shall show letter types and sizes, interline spacing and message arrangements.

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

Prior to taking elevations to determine lengths for fabrication of sign posts and/or sign support towers, obtain verification of all proposed locations.
All sign mounts shall have a clamp base system for all small roadside sign assemblies.

Removal of concrete foundations including steel shall be at full length for small and large sign assemblies, unless otherwise shown on the plans.

Item 658: Delineator and Object Marker Assemblies

GND Driveable posts shall be the three-piece Flexible Delineator Post System, utilizing a 2-3/8" round post with a square to round flexible joint. The Embedded Anchor shall be 2" x 12 gauge x 24" long steel perforated square tubing. The Posts shall be permanently sealed at the top and have a 3-1/2" wide x 13" flattened surface to accommodate up to a 3" x 12" reflective sheet on both sides.

SRF Surface Mount posts shall be the three-piece Flexible Delineator Post System, utilizing a 2-3/8" round post with a square to round flexible joint. The Base shall have 6 mounting holes to accommodate for mounting on narrow headwalls as well as all surfaces. The Posts shall be permanently sealed at the top and have a 3-1/2" wide x 13" flattened surface to accommodate up to a 3" x 12" reflective sheet on both sides.

GF2 Guard Fence Delineator posts shall be 33" in length and permanently sealed at the top and have a 3-1/2" wide x 13" flattened surface to accommodate up to a 3" x 12" reflective sheet on both sides. They shall be flattened on both ends and transition to 2-3/8" round in the center for 360-degree visibility.

Item 677:

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

Item 3077:

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

Provide PG binder 64-22 in Type SP-B mixture.

Provide PG binder 70-22 in Type SP-C mixture.

Item 6185:

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

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

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

CSJ: 0568-01-052, ETC **Sheet 25E**

County: ELLIS

Highway: SH 34

TCP 3 Series	Scenario			Required TMA/TA
(3-1)-13	All			2
(3-3)-14	A	B	D	2

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

The TMA/TA used for installation/removal of traffic control for a work area will be subsidiary to the TMA/TA used to perform the work.

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0568-01-052 **DISTRICT** Dallas **COUNTY** Ellis
HIGHWAY SH 34

				0568-01-052		0568-01-055		0568-01-056		0568-01-057		0568-01-058		2984-01-017	
		CONTROL SECTION JOB													
		PROJECT ID		A00066948		A00177014		A00177016		A00177019		A00177021		A00066993	
		COUNTY		Ellis		Ellis		Ellis		Ellis		Ellis		Ellis	
		HIGHWAY		SH 34		SH 34		SH 34		SH 34		SH 34		SH 34	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	104-6011	REMOVING CONC (MEDIANS)	SY					18.000		22.000					
	104-6017	REMOVING CONC (DRIVEWAYS)	SY			193.000									
	105-6045	REMOVING STAB BASE AND ASPH PAV (2"-8")	SY			51.000									
	105-6095	REMOVING STAB BASE & ASPH PAV (12"-14")	SY	140.000		330.000		2,985.000		4,360.000		3,558.000		78.000	
	110-6001	EXCAVATION (ROADWAY)	CY			1,459.000									
	132-6005	EMBANKMENT (FINAL)(ORD COMP)(TY C)	CY			349.000		198.000		212.000		215.000			
	134-6004	BACKFILL (TY A OR B)	STA	847.000		14.810		13.930		20.020		17.790		52.500	
	152-6001	ROAD GRADER WORK (ORD COMP)	STA	5.000		14.810		13.930		20.020		17.790		2.600	
	162-6002	BLOCK SODDING	SY	79.000		1,891.000		1,090.000		2,186.000		1,863.000		40.000	
	164-6051	DRILL SEED (TEMP)(WARM OR COOL)	SY	79.000		1,891.000		1,090.000		2,186.000		1,863.000		40.000	
	168-6001	VEGETATIVE WATERING	MG	26.000		564.000		326.000		652.000		556.000		12.000	
	260-6002	LIME (HYDRATED LIME (SLURRY))	TON	3.000		48.000		58.000		83.000		76.000		2.000	
	260-6079	LIME TRT (SUBGRADE)(6")	SY	140.000		3,359.000		4,046.000		5,824.000		5,358.000		78.000	
	310-6027	PRIME COAT(MC-30 OR AE-P)	GAL	29.000		672.000		810.000		1,165.000		1,072.000		16.000	
	351-6002	FLEXIBLE PAVEMENT STRUCTURE REPAIR(6")	SY	117.000											
	351-6008	FLEXIBLE PAVEMENT STRUCTURE REPAIR(12")	SY	1,945.000										890.000	
	354-6002	PLAN & TEXT ASPH CONC PAV(0" TO 2")	SY	396,069.000		4,437.000		6,967.000		10,155.000		8,062.000		25,466.000	
	354-6004	PLAN & TEXT ASPH CONC PAV(0" TO 4")	SY	29,817.000											
	400-6008	CUT & RESTORE ASPH PAVING	SY							41.000					
	432-6045	RIPRAP (MOW STRIP)(4 IN)	CY	350.300											
	464-6001	RC PIPE (CL III)(12 IN)	LF							256.000					
	464-6003	RC PIPE (CL III)(18 IN)	LF			80.000									
	467-6326	SET (TY II) (12 IN) (RCP) (6: 1) (P)	EA							8.000					
	467-6363	SET (TY II) (18 IN) (RCP) (6: 1) (P)	EA			8.000		4.000				2.000			
	496-6007	REMOV STR (PIPE)	LF			73.000				156.000					
	500-6001	MOBILIZATION	LS	0.740		0.050		0.040		0.060		0.060		0.050	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	17.000											
	506-6020	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY			78.000		78.000		78.000					
	506-6024	CONSTRUCTION EXITS (REMOVE)	SY			78.000		78.000		78.000					
	506-6038	TEMP SEDMT CONT FENCE (INSTALL)	LF	1,408.000		1,057.000		685.000		385.000		616.000		253.000	
	506-6039	TEMP SEDMT CONT FENCE (REMOVE)	LF	1,408.000		1,057.000		685.000		385.000		616.000		253.000	
	506-6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF			11.000									
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF			11.000									
	530-6005	DRIVEWAYS (ACP)	SY			97.000									
	530-6017	DRIVEWAYS (CONC) (HES)	SY			133.000									
	533-6003	RUMBLE STRIPS (SHOULDER) ASPHALT	LF	131,058.000				1,554.000		3,369.000		3,169.000		5,200.000	
	533-6004	RUMBLE STRIPS (CENTERLINE) ASPHALT	LF	67,814.000										2,600.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0568-01-052 **DISTRICT** Dallas **COUNTY** Ellis
HIGHWAY SH 34

				0568-01-052		0568-01-055		0568-01-056		0568-01-057		0568-01-058		2984-01-017	
		CONTROL SECTION JOB													
		PROJECT ID		A00066948		A00177014		A00177016		A00177019		A00177021		A00066993	
		COUNTY		Ellis		Ellis		Ellis		Ellis		Ellis		Ellis	
		HIGHWAY		SH 34		SH 34		SH 34		SH 34		SH 34		SH 34	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	540-6001	MTL W-BEAM GD FEN (TIM POST)	LF	4,000.000											
	544-6001	GUARDRAIL END TREATMENT (INSTALL)	EA	32.000											
	560-6011	MAILBOX INSTALL-S (TWW-POST) TY 4	EA			2.000		1.000				1.000			
	644-6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	6.000		2.000		2.000		3.000		2.000		2.000	
	644-6068	RELOCATE SM RD SN SUP&AM TY 10BWG	EA	2.000		5.000		9.000		7.000		8.000		3.000	
	644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	3.000		4.000		6.000		5.000		3.000			
	658-6014	INSTL DEL ASSM (D-SW)SZ (BRF)CTB (BI)	EA	184.000										6.000	
	658-6016	INSTL DEL ASSM (D-SW)SZ (BRF)GF1 (BI)	EA	105.000											
	662-6109	WK ZN PAV MRK SHT TERM (TAB)TY W	EA	393.000		62.000		78.000		124.000		98.000		92.000	
	662-6111	WK ZN PAV MRK SHT TERM (TAB)TY Y-2	EA	13,277.000		432.000		227.000		612.000		508.000		741.000	
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF	150.000		24.000		24.000		39.000		39.000			
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	2,860.000		610.000		775.000		1,230.000		965.000		808.000	
	666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	918.000				16.000		15.000		14.000		104.000	
	666-6054	REFL PAV MRK TY I (W)(ARROW)(100MIL)	EA	58.000		3.000		4.000		5.000		4.000		13.000	
	666-6078	REFL PAV MRK TY I (W)(WORD)(100MIL)	EA	18.000		3.000		4.000		5.000		4.000		7.000	
	666-6093	REFL PAV MRK TY I (W)(RR XING)(100MIL)	EA	4.000											
	666-6223	RE PM TY II(ACC PRK)(WHT)(SYMBOL ONLY)	EA	9.000											
	666-6225	PAVEMENT SEALER 6"	LF	20,815.000											
	666-6230	PAVEMENT SEALER 24"	LF	118.000											
	666-6242	PAVEMENT SEALER (RR XING)	EA	2.000											
	666-6303	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL)	LF	2,842.000											
	666-6306	RE PM W/RET REQ TY I (W)6"(BRK)(100MIL)	LF	320.000											
	666-6309	RE PM W/RET REQ TY I (W)6"(SLD)(100MIL)	LF	191,586.000		2,831.000		3,292.000		3,816.000		3,469.000		11,054.000	
	666-6318	RE PM W/RET REQ TY I (Y)6"(BRK)(100MIL)	LF	16,260.000										640.000	
	666-6321	RE PM W/RET REQ TY I (Y)6"(SLD)(100MIL)	LF	120,576.000		4,320.000		5,168.000		6,119.000		5,048.000		6,928.000	
	672-6007	REFL PAV MRKR TY I-C	EA	176.000		31.000		39.000		62.000		49.000		41.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA	2,977.000		216.000		259.000		306.000		254.000		168.000	
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	20,815.000											
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	118.000											
	677-6016	ELIM EXT PAV MRK & MRKS (RR XING)	EA	2.000											
	678-6002	PAV SURF PREP FOR MRK (6")	LF	20,815.000											
	678-6008	PAV SURF PREP FOR MRK (24")	LF	118.000											
	678-6020	PAV SURF PREP FOR MRK (RR XING)	EA	2.000											
	3077-6001	SP MIXES SP-B PG64-22	TON	93.000		2,110.000		2,518.000		3,623.000		3,339.000		52.000	
	3077-6023	SP MIXES SP-C SAC-B PG70-22	TON	48,271.000		827.000		844.000		1,195.000		988.000		2,811.000	
	3077-6075	TACK COAT	GAL	46,857.000		681.000		673.000		950.000		761.000		2,807.000	
	6001-6002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	2.000											

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0568-01-052 **DISTRICT** Dallas **COUNTY** Ellis
HIGHWAY SH 34

			CONTROL SECTION JOB	**0568-01-052**		**0568-01-055**		**0568-01-056**		**0568-01-057**		**0568-01-058**		**2984-01-017**	
			PROJECT ID	**A00066948**		**A00177014**		**A00177016**		**A00177019**		**A00177021**		**A00066993**	
			COUNTY	**Ellis**		**Ellis**		**Ellis**		**Ellis**		**Ellis**		**Ellis**	
			HIGHWAY	**SH 34**		**SH 34**		**SH 34**		**SH 34**		**SH 34**		**SH 34**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	6185-6002	TMA (STATIONARY)	DAY	64.000		28.000		28.000		32.000		28.000		11.000	
	6185-6003	TMA (MOBILE OPERATION)	HR	208.000		42.000		42.000		42.000		42.000		42.000	
	18	RAILROAD FLAGGING: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000											
		LAW ENFORCEMENT: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000											
		SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000											
		EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000											

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0568-01-052 **DISTRICT** Dallas **COUNTY** Ellis
HIGHWAY SH 34

			CONTROL SECTION JOB		TOTAL EST.	TOTAL FINAL
			PROJECT ID			
			COUNTY			
			HIGHWAY			
ALT	**BID CODE**	**DESCRIPTION**		**UNIT**		
	104-6011	REMOVING CONC (MEDIANS)		SY	40.000	
	104-6017	REMOVING CONC (DRIVEWAYS)		SY	193.000	
	105-6045	REMOVING STAB BASE AND ASPH PAV (2"-8")		SY	51.000	
	105-6095	REMOVING STAB BASE & ASPH PAV (12"-14")		SY	11,451.000	
	110-6001	EXCAVATION (ROADWAY)		CY	1,459.000	
	132-6005	EMBANKMENT (FINAL)(ORD COMP)(TY C)		CY	974.000	
	134-6004	BACKFILL (TY A OR B)		STA	966.050	
	152-6001	ROAD GRADER WORK (ORD COMP)		STA	74.150	
	162-6002	BLOCK SODDING		SY	7,149.000	
	164-6051	DRILL SEED (TEMP)(WARM OR COOL)		SY	7,149.000	
	168-6001	VEGETATIVE WATERING		MG	2,136.000	
	260-6002	LIME (HYDRATED LIME (SLURRY))		TON	270.000	
	260-6079	LIME TRT (SUBGRADE)(6")		SY	18,805.000	
	310-6027	PRIME COAT(MC-30 OR AE-P)		GAL	3,764.000	
	351-6002	FLEXIBLE PAVEMENT STRUCTURE REPAIR(6")		SY	117.000	
	351-6008	FLEXIBLE PAVEMENT STRUCTURE REPAIR(12")		SY	2,835.000	
	354-6002	PLAN & TEXT ASPH CONC PAV(0" TO 2")		SY	451,156.000	
	354-6004	PLAN & TEXT ASPH CONC PAV(0" TO 4")		SY	29,817.000	
	400-6008	CUT & RESTORE ASPH PAVING		SY	41.000	
	432-6045	RIPRAP (MOW STRIP)(4 IN)		CY	350.300	
	464-6001	RC PIPE (CL III)(12 IN)		LF	256.000	
	464-6003	RC PIPE (CL III)(18 IN)		LF	80.000	
	467-6326	SET (TY II) (12 IN) (RCP) (6: 1) (P)		EA	8.000	
	467-6363	SET (TY II) (18 IN) (RCP) (6: 1) (P)		EA	14.000	
	496-6007	REMOV STR (PIPE)		LF	229.000	
	500-6001	MOBILIZATION		LS	1.000	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING		MO	17.000	
	506-6020	CONSTRUCTION EXITS (INSTALL) (TY 1)		SY	234.000	
	506-6024	CONSTRUCTION EXITS (REMOVE)		SY	234.000	
	506-6038	TEMP SEDMT CONT FENCE (INSTALL)		LF	4,404.000	
	506-6039	TEMP SEDMT CONT FENCE (REMOVE)		LF	4,404.000	
	506-6041	BIODEG EROSN CONT LOGS (INSTL) (12")		LF	11.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)		LF	11.000	
	530-6005	DRIVEWAYS (ACP)		SY	97.000	
	530-6017	DRIVEWAYS (CONC) (HES)		SY	133.000	
	533-6003	RUMBLE STRIPS (SHOULDER) ASPHALT		LF	144,350.000	
	533-6004	RUMBLE STRIPS (CENTERLINE) ASPHALT		LF	70,414.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0568-01-052 **DISTRICT** Dallas **COUNTY** Ellis
HIGHWAY SH 34

ALT	BID CODE	DESCRIPTION	UNIT	TOTAL EST.	TOTAL FINAL
		CONTROL SECTION JOB			
		PROJECT ID			
		COUNTY			
		HIGHWAY			
	540-6001	MTL W-BEAM GD FEN (TIM POST)	LF	4,000.000	
	544-6001	GUARDRAIL END TREATMENT (INSTALL)	EA	32.000	
	560-6011	MAILBOX INSTALL-S (TWW-POST) TY 4	EA	4.000	
	644-6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	17.000	
	644-6068	RELOCATE SM RD SN SUP&AM TY 10BWG	EA	34.000	
	644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	21.000	
	658-6014	INSTL DEL ASSM (D-SW)SZ (BRF)CTB (BI)	EA	190.000	
	658-6016	INSTL DEL ASSM (D-SW)SZ (BRF)GF1 (BI)	EA	105.000	
	662-6109	WK ZN PAV MRK SHT TERM (TAB)TY W	EA	847.000	
	662-6111	WK ZN PAV MRK SHT TERM (TAB)TY Y-2	EA	15,797.000	
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF	276.000	
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	7,248.000	
	666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	1,067.000	
	666-6054	REFL PAV MRK TY I (W)(ARROW)(100MIL)	EA	87.000	
	666-6078	REFL PAV MRK TY I (W)(WORD)(100MIL)	EA	41.000	
	666-6093	REFL PAV MRK TY I (W)(RR XING)(100MIL)	EA	4.000	
	666-6223	RE PM TY II(ACC PRK)(WHT)(SYMBOL ONLY)	EA	9.000	
	666-6225	PAVEMENT SEALER 6"	LF	20,815.000	
	666-6230	PAVEMENT SEALER 24"	LF	118.000	
	666-6242	PAVEMENT SEALER (RR XING)	EA	2.000	
	666-6303	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL)	LF	2,842.000	
	666-6306	RE PM W/RET REQ TY I (W)6"(BRK)(100MIL)	LF	320.000	
	666-6309	RE PM W/RET REQ TY I (W)6"(SLD)(100MIL)	LF	216,048.000	
	666-6318	RE PM W/RET REQ TY I (Y)6"(BRK)(100MIL)	LF	16,900.000	
	666-6321	RE PM W/RET REQ TY I (Y)6"(SLD)(100MIL)	LF	148,159.000	
	672-6007	REFL PAV MRKR TY I-C	EA	398.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA	4,180.000	
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	20,815.000	
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	118.000	
	677-6016	ELIM EXT PAV MRK & MRKS (RR XING)	EA	2.000	
	678-6002	PAV SURF PREP FOR MRK (6")	LF	20,815.000	
	678-6008	PAV SURF PREP FOR MRK (24")	LF	118.000	
	678-6020	PAV SURF PREP FOR MRK (RR XING)	EA	2.000	
	3077-6001	SP MIXES SP-B PG64-22	TON	11,735.000	
	3077-6023	SP MIXES SP-C SAC-B PG70-22	TON	54,936.000	
	3077-6075	TACK COAT	GAL	52,729.000	
	6001-6002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	2.000	

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0568-01-052 **DISTRICT** Dallas **COUNTY** Ellis
HIGHWAY SH 34

		CONTROL SECTION JOB		TOTAL EST.	TOTAL FINAL
		PROJECT ID			
		COUNTY			
		HIGHWAY			
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**		
	6185-6002	TMA (STATIONARY)	DAY	191.000	
	6185-6003	TMA (MOBILE OPERATION)	HR	418.000	
	18	RAILROAD FLAGGING: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000	
		LAW ENFORCEMENT: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000	
		SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000	
		EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000	

BID CODE	DESCRIPTION	UNIT	0568-01-052	0568-01-055	0568-01-056	0568-01-057	0568-01-058	2984-01-017	TOTAL
104-6011	REMOVING CONC (MEDIANS)	SY			18.000	22.000			40.000
104-6017	REMOVING CONC (DRIVEWAYS)	SY		193.000					193.000
105-6045	REMOVING STAB BASE AND ASPH PAV (2"-8")	SY		51.000					51.000
105-6095	REMOVING STAB BASE & ASPH PAV (12"-14")	SY	140.000	330.000	2,985.000	4,360.000	3,558.000	78.000	11,451.000
110-6001	EXCAVATION (ROADWAY)	CY		1,459.000					1,459.000
132-6005	EMBANKMENT (FINAL)(ORD COMP)(TY C)	CY		349.000	198.000	212.000	215.000		974.000
134-6004	BACKFILL (TY A OR B)	STA	847.000	14.810	13.930	20.020	17.790	52.500	966.050
152-6001	ROAD GRADER WORK (ORD COMP)	STA	5.000	14.810	13.930	20.020	17.790	2.600	74.150
162-6002	BLOCK SODDING	SY	79.000	1,891.000	1,090.000	2,186.000	1,863.000	40.000	7,149.000
164-6051	DRILL SEED (TEMP)(WARM OR COOL)	SY	79.000	1,891.000	1,090.000	2,186.000	1,863.000	40.000	7,149.000
168-6001	VEGETATIVE WATERING	MG	26.000	564.000	326.000	652.000	556.000	12.000	2,136.000
260-6002	LIME (HYDRATED LIME (SLURRY))	TON	3.000	48.000	58.000	83.000	76.000	2.000	270.000
260-6079	LIME TRT (SUBGRADE)(6")	SY	140.000	3,359.000	4,046.000	5,824.000	5,358.000	78.000	18,805.000
310-6027	PRIME COAT(MC-30 OR AE-P)	GAL	29.000	672.000	810.000	1,165.000	1,072.000	16.000	3,764.000
351-6002	FLEXIBLE PAVEMENT STRUCTURE REPAIR(6")	SY	117.000						117.000
351-6008	FLEXIBLE PAVEMENT STRUCTURE REPAIR(12")	SY	1,945.000					890.000	2,835.000
354-6002	PLAN & TEXT ASPH CONC PAV(0" TO 2")	SY	396,069.000	4,437.000	6,967.000	10,155.000	8,062.000	25,466.000	451,156.000
354-6004	PLAN & TEXT ASPH CONC PAV(0" TO 4")	SY	29,817.000						29,817.000
400-6008	CUT & RESTORE ASPH PAVING	SY				41.000			41.000
432-6045	RIPRAP (MOW STRIP)(4 IN)	CY	350.300						350.300
464-6001	RC PIPE (CL III)(12 IN)	LF				256.000			256.000
464-6003	RC PIPE (CL III)(18 IN)	LF		80.000					80.000
467-6326	SET (TY II) (12 IN) (RCP) (6: 1) (P)	EA				8.000			8.000
467-6363	SET (TY II) (18 IN) (RCP) (6: 1) (P)	EA		8.000	4.000		2.000		14.000
496-6007	REMOV STR (PIPE)	LF		73.000		156.000			229.000
500-6001	MOBILIZATION	LS	0.740	0.050	0.040	0.060	0.060	0.050	1.000
502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	17.000						17.000
506-6020	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY		78.000	78.000	78.000			234.000
506-6024	CONSTRUCTION EXITS (REMOVE)	SY		78.000	78.000	78.000			234.000
506-6038	TEMP SEDMT CONT FENCE (INSTALL)	LF	1,408.000	1,057.000	685.000	385.000	616.000	253.000	4,404.000
506-6039	TEMP SEDMT CONT FENCE (REMOVE)	LF	1,408.000	1,057.000	685.000	385.000	616.000	253.000	4,404.000
506-6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF		11.000					11.000
506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF		11.000					11.000
530-6005	DRIVEWAYS (ACP)	SY		97.000					97.000
530-6017	DRIVEWAYS (CONC) (HES)	SY		133.000					133.000
533-6003	RUMBLE STRIPS (SHOULDER) ASPHALT	LF	131,058.000		1,554.000	3,369.000	3,169.000	5,200.000	144,350.000
533-6004	RUMBLE STRIPS (CENTERLINE) ASPHALT	LF	67,814.000					2,600.000	70,414.000
540-6001	MTL W-BEAM GD FEN (TIM POST)	LF	4,000.000						4,000.000
544-6001	GUARDRAIL END TREATMENT (INSTALL)	EA	32.000						32.000
560-6011	MAILBOX INSTALL-S (TWW-POST) TY 4	EA		2.000	1.000		1.000		4.000
644-6001	IN SM RD SN SUP&AM TY10BWG(1)SA(P)	EA	6.000	2.000	2.000	3.000	2.000	2.	17.000
644-6068	RELOCATE SM RD SN SUP&AM TY 10BWG	EA	2.000	5.000	9.000	7.000	8.000	3.	34.000
644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	3.000	4.000	6.000	5.000	3.000		21.000
658-6014	INSTL DEL ASSM (D-SW)SZ (BRF)CTB (BI)	EA	184.000					6.000	190.000
658-6016	INSTL DEL ASSM (D-SW)SZ (BRF)GF1 (BI)	EA	105.000						105.000

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

, P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

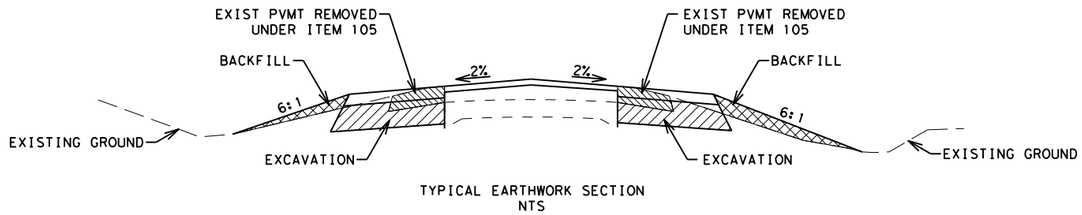
SUMMARY SHEETS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		27

CK: DW: CK: DW:

DATE: 5/4/2024 9:57:48 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/1. General/Summary Sheet.dgn

BID CODE	DESCRIPTION	UNIT	0568-01-052	0568-01-055	0568-01-056	0568-01-057	0568-01-058	2984-01-017	TOTAL
662-6109	WK ZN PAV MRK SHT TERM (TAB)TY W	EA	393.000	62.000	78.000	124.000	98.000	92.00	847.000
662-6111	WK ZN PAV MRK SHT TERM (TAB)TY Y-2	EA	13,277.000	432.000	227.000	612.000	508.000	741.	15,797.000
666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF	150.000	24.000	24.000	39.000	39.000		276.000
666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	2,860.000	610.000	775.000	1,230.000	965.000	808.	7,248.000
666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	918.000		16.000	15.000	14.000	104.	1,067.000
666-6054	REFL PAV MRK TY I (W)(ARROW)(100MIL)	EA	58.000	3.000	4.000	5.000	4.000	13.00	87.000
666-6078	REFL PAV MRK TY I (W)(WORD)(100MIL)	EA	18.000	3.000	4.000	5.000	4.000	7.	41.000
666-6093	REFL PAV MRK TY I (W)(RR XING)(100MIL)	EA	4.000						4.000
666-6223	RE PM TY II(ACC PRK)(WHT)(SYMBOL ONLY)	EA	9.000						9.000
666-6225	PAVEMENT SEALER 6"	LF	20,815.000						20,815.000
666-6230	PAVEMENT SEALER 24"	LF	118.000						118.000
666-6242	PAVEMENT SEALER (RR XING)	EA	2.000						2.000
666-6303	RE PM W/RET REQ TY I (W)4"(SLD)(100MIL)	LF	2,842.000						2,842.000
666-6306	RE PM W/RET REQ TY I (W)6"(BRK)(100MIL)	LF	320.000						320.000
666-6309	RE PM W/RET REQ TY I (W)6"(SLD)(100MIL)	LF	191,586.000	2,831.000	3,292.000	3,816.000	3,469.000	11,054.000	216,048.000
666-6318	RE PM W/RET REQ TY I (Y)6"(BRK)(100MIL)	LF	16,260.000					640.	16,900.000
666-6321	RE PM W/RET REQ TY I (Y)6"(SLD)(100MIL)	LF	120,576.000	4,320.000	5,168.000	6,119.000	5,048.000	6,928.00	148,159.000
672-6007	REFL PAV MRKR TY I-C	EA	176.000	31.000	39.000	62.000	49.000	41.00	398.000
672-6009	REFL PAV MRKR TY II-A-A	EA	2,977.000	216.000	259.000	306.000	254.000	168.	4,180.000
677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	20,815.000						20,815.000
677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	118.000						118.000
677-6016	ELIM EXT PAV MRK & MRKS (RR XING)	EA	2.000						2.000
678-6002	PAV SURF PREP FOR MRK (6")	LF	20,815.000						20,815.000
678-6008	PAV SURF PREP FOR MRK (24")	LF	118.000						118.000
678-6020	PAV SURF PREP FOR MRK (RR XING)	EA	2.000						2.000
3077-6001	SP MIXES SP-B PG64-22	TON	93.000	2,110.000	2,518.000	3,623.000	3,339.000	52.00	11,735.000
3077-6023	SP MIXES SP-C SAC-B PG70-22	TON	48,271.000	827.000	844.000	1,195.000	988.000	2,811.000	54,936.000
3077-6075	TACK COAT	GAL	46,857.000	681.000	673.000	950.000	761.000	2,807.000	52,729.000
6001-6002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	2.000						2.000
6185-6002	TMA (STATIONARY)	DAY	64.000	28.000	28.000	32.000	28.000	11.000	191.000
6185-6003	TMA (MOBILE OPERATION)	HR	208.000	42.000	42.000	42.000	42.000	42.000	418.000
18	RAILROAD FLAGGING: CONTRACTOR FORCE	LS	1.000						1.000
	LAW ENFORCEMENT: CONTRACTOR FORCE	LS	1.000						1.000
	SAFETY CONTINGENCY: CONTRACTOR FORCE	LS	1.000						1.000
	EROSION CONTROL MAINTENANCE:	LS	1.000						1.000



TYPICAL EARTHWORK SECTION
NTS

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant & Date, P.E.

Texas Department of Transportation

SH 34

SUMMARY
SHEETS

SHEET 2 OF 2

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		28

DATE: 5/4/2024 9:57:49 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/1. General/Summary Sheet.dgn

SUMMARY OF SMALL SIGNS

SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)

PLAN SHEET NO. (1 of 47)	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS INCHES	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	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE: TY N, TY S
1	1	R1-1	STOP	36 x 36	X		RELOCATE TY 10BWG					
		R1-3P	ALL WAY	18 x 6	X							
1	2	D14-4T	ADOPT A HIGHWAY NEXT 2 MILES MEMBERS OF CENTRAL BAPTIST CHURCH	48 x 48	X		RELOCATE TY 10BWG					
1	3	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG					
		M1-6T	(34) TEXAS	24 x 24	X							
		D10-3	372	10 x 36	X							
2	1	W8-13aT	BRIDGE MAY ICE IN COLD WEATHER	36 x 36	X		10BWG	1	SA	P		
2	2	W8-13aT	BRIDGE MAY ICE IN COLD WEATHER	36 x 36	X		10BWG	1	SA	P		
3	1	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-4A2	<US SHIELD> U.S. ROUTE (ROUTE 77)	24 x 24	X							
3	2	M1-4A2	<US SHIELD> U.S. ROUTE (ROUTE 77)	24 x 12	X		EXISTING SIGN TO REMAIN					
		M6-4	DIRECTIONAL ARROW	21 x 15	X							
3	3	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-4A2	<US SHIELD> U.S. ROUTE (ROUTE 77)	24 x 24	X							
5	1	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-4A2	<US SHIELD> U.S. ROUTE (ROUTE 667)	24 x 24	X							
5	2	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG					
		M1-6T	(34) TEXAS	24 x 24	X							
5	3	W1-7T	CHEVRON/TWO-DIRECTION LARGE ARROW	96 x 36	X		RELOCATE TY S80					
5	4	M1-6T	(34) TEXAS	24 x 24	X		RELOCATE TY 10BWG					
		M6-4	DIRECTIONAL ARROW	21 x 15	X							
5	5	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 667)	24 x 24	X							
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
5	6	R2-1	SPEED LIMIT (SPEED)	30 x 36	X		RELOCATE TY 10BWG					
5	7	R3-5R	RIGHT TURN ONLY SYMBOL	30 x 36	X		10BWG	1	SA	P		
5	8	R3-5R	RIGHT TURN ONLY SYMBOL	30 x 36	X		10BWG	1	SA	P		
5	9	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 667)	24 x 24	X							
		M6-1R	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
5	10	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG					
		M1-6T	(34) TEXAS	24 x 24	X							
		D10-3	370	10 x 36	X							
6	1	S3-1	SCHOOL BUS STOP AHEAD	36 x 36	X		RELOCATE TY 10BWG					

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).

SHEET 1 OF 8

Texas Department of Transportation

Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS

FILE: sums16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
4-16	DIST	COUNTY		SHEET NO.
8-16	DAL	ELLIS		29

TB

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DATE:
FILE:

SUMMARY OF SMALL SIGNS

PLAN SHEET NO. (1 of 47)	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS INCHES	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX) 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	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE (TY N, TY S)
6	2	D1-2	↑ ITALY ← FROST	VAR x 30	X		RELOCATE TY S80					
6	3	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-4A2	<US SHIELD> U.S. ROUTE (ROUTE 667)	24 x 24	X							
16	1	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 55)	24 x 24	X							
17	1	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 55)	24 x 24	X							
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
17	2	R1-5b	STOP HERE FOR PEDS	36 x 36	X		10BWG	1	SA	P		
17	3	S1-1	SCHOOL	36 x 36	X		EXISTING SIGN TO REMAIN					
		SW16-9P	AHEAD	30 x 18	X							
17	4	S5-1	SCHOOL SPEED LIMIT XX WHEN FLASHING	24 x 48	X		EXISTING SIGN TO REMAIN					
		S7-1T	CELL PHONE USE PROHIBITED	24 x 18	X							
17	5	R1-5b	STOP HERE FOR PEDS	36 x 36	X		10BWG	1	SA	P		
17	6	S1-1	SCHOOL	36 x 36	X		EXISTING SIGN TO REMAIN					
		SW16-7P	DIAGONAL ARROW	24 x 18	X							
17	7	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 55)	24 x 24	X							
		M6-1R	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
17	8	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 55)	24 x 24	X							
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 55)	24 x 24	X							
		M5-1R	<ARROW - ADVANCE TURN RIGHT> <AUXILIARY SIGN>	21 x 15	X							
17	9	D1-2	← Blooming Grove Waxahachie →	VAR x 30	X		EXISTING SIGN TO REMAIN					
17	10	S1-1	SCHOOL	36 x 36	X		EXISTING SIGN TO REMAIN					
		SW16-7P	DIAGONAL ARROW	24 x 18	X							
17	11	R1-5b	STOP HERE FOR PEDS	36 x 36	X		10BWG	1	SA	P		
17	12	R3-1	MOVEMENT PROHIBITED	24 x 24	X		EXISTING SIGN TO REMAIN					
17	13	S5-1	SCHOOL SPEED LIMIT XX WHEN FLASHING	24 x 48	X		EXISTING SIGN TO REMAIN					
		S7-1T	CELL PHONE USE PROHIBITED	24 x 18	X							
17	14	S1-1	SCHOOL	36 x 36	X		EXISTING SIGN TO REMAIN					
		SW16-9P	AHEAD	30 x 18	X							
17	15	R1-5b	STOP HERE FOR PEDS	36 x 36	X		10BWG	1	SA	P		

DATE:
FILE:

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"

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3. For Sign Support Descriptive Codes, see Sign Mounting Details Small Roadside Signs General Notes & Details SMD(GEN).

Texas Department of Transportation

Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS

FILE:	sums16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT	May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS		0568	01	052,ETC.	SH 34
4-16		DIST	COUNTY		SHEET NO.
8-16		DAL	ELLIS		30

18

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SUMMARY OF SMALL SIGNS

PLAN SHEET NO. 1 of 47	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS INCHES	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX) POST TYPE	POSTS	ANCHOR TYPE	MOUNTING DESIGNATION PREFABRICATED	MOUNTING DESIGNATION 1EXT or 2EXT = # of Ext BM = Extruded Wind Beam WC = 1.12 #/ft Wing Channel EXAL= Extruded Alum Sign Panels	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE
							FRP = Fiberglass TWT = Thin-Wall 10BWG = 10 BWG S80 = Sch 80	1 or 2	UA=Universal Conc UB=Universal Bolt SA=Slipbase-Conc SB=Slipbase-Bolt WS=Wedge Steel WP=Wedge Plastic	P = "Plain" T = "T" U = "U"		TY N TY S
17	16	S1-1	SCHOOL	36 x 36	X		EXISTING SIGN TO REMAIN					
		SW16-7P	DIAGONAL ARROW	24 x 18	X							
		R3-2	MOVEMENT PROHIBITED	24 x 24	X							
17	17	S5-2	END SCHOOL ZONE	24 x 30	X		EXISTING SIGN TO REMAIN					
		R2-1	SPEED LIMIT (SPEED)	30 x 36	X							
18	1	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHILED> FARM ROAD (ROUTE 55)	24 x 24	X							
25	1	R2-1	SPEED LIMIT (SPEED)	30 x 36	X		RELOCATE TY 10BWG					
25	2	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHILED> FARM ROAD (ROUTE 877)	24 x 24	X							
25	3	D1-2	← Howard	VAR x 30	X		RELOCATE TY S80					
			← Waxahachie									
25	4	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG					
		M1-6T	(34) TEXAS	24 x 24	X							
25	5	R1-1	STOP	36 x 36	X		RELOCATE TY 10BWG					
		W4-4P	CROSS TRAFFIC DOES NOT STOP	36 x 18	X							
25	6	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 877)	24 x 24	X							
		M6-1R	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
25	7	R3-5R	RIGHT TURN ONLY SYMBOL	30 x 36	X		10BWG	1	SA	P		
25	8	D1-2	Howard →	VAR x 30	X		RELOCATE TY S80					
			Waxahachie →									
25	9	D3-1	CARTWRIGHT RD	24 x 12	X		RELOCATE TY 10BWG					
		R1-1	STOP	36 x 36	X							
25	10	R3-5R	RIGHT TURN ONLY SYMBOL	30 x 36	X		10BWG	1	SA	P		
25	11	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 877)	24 x 24	X							
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
25	12	M1-6T	(34) TEXAS	24 x 24	X		RELOCATE TY 10BWG					
		M6-4	DIRECTIONAL ARROW	21 x 15	X							
25	13	W1-7T	CHEVRON/TWO-DIRECTION LARGE ARROW	96 x 36	X		RELOCATE TY S80					
25	14	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG					
		M1-6T	(34) TEXAS	24 x 24	X							
25	15	R2-1	SPEED LIMIT (SPEED)	30 x 36	X		RELOCATE TY 10BWG					
26	1	R3-5R	RIGHT TURN ONLY SYMBOL	30 x 36	X		10BWG	1	SA	P		

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"

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Texas Department of Transportation

Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS

FILE:	sums16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT	May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS		0568	01	052,ETC.	SH 34
4-16		DIST	COUNTY		SHEET NO.
8-16		DAL	ELLIS		31

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SUMMARY OF SMALL SIGNS

SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)

- XXXXX: POST TYPE
- (X): POSTS
- XX: ANCHOR TYPE
- (X-XXXX): MOUNTING DESIGNATION

PLAN SHEET NO. (1 of 47)	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS INCHES	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	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE: TY N, TY S
26	2	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHILED> FARM ROAD (ROUTE 877)	24 x 24	X							
32	1	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHILED> FARM ROAD (ROUTE 984)	24 x 24	X							
33	1	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 984)	24 x 24	X							
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
33	2	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-6T	(34) TEXAS	24 x 24	X							
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 984)	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 24	X							
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 984)	24 x 24	X							
		M6-1R	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
33	3	W10-1	GRADE CROSSING ADVANCE WARNING	30 DIA.	X		EXISTING SIGN TO REMAIN					
33	4	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 984)	24 x 24	X							
		M5-1L	<ARROW - ADVANCE TURN LEFT> <AUXILIARY SIGN>	21 x 15	X							
33	5	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 984)	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 984)	24 x 24	X							
		M6-1R	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
33	6	W10-1	GRADE CROSSING ADVANCE WARNING	30 DIA.	X		EXISTING SIGN TO REMAIN					
34	1	W3-5	REDUCED SPEED LIMIT AHEAD	36 x 36	X		RELOCATE TY 10BWG					
34	2	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG					
		M1-6T	(34) TEXAS	24 x 24	X							
34	3	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHILED> FARM ROAD (ROUTE 985)	24 x 24	X							
34	4	R3-5R	RIGHT TURN ONLY SYMBOL	30 x 36	X		10BWG	1	SA	P		
34	5	D1-2	↑ ENNIS RANKIN →	VAR x 30	X		RELOCATE TY S80					
34	6	D1-1	MOTT PARK →	VAR x 18	X		RELOCATE TY 10BWG					
34	7	R3-5R	RIGHT TURN ONLY SYMBOL	30 x 36	X		10BWG	1	SA	P		
34	8	W1-7T	CHEVRON/TWO-DIRECTION LARGE ARROW	96 x 36	X		RELOCATE TY S80					
34	9	M1-6T	(34) TEXAS	24 x 24	X		RELOCATE TY 10BWG					
		M6-4	DIRECTIONAL ARROW	21 x 15	X							

DATE:
FILE:

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"

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Texas Department of Transportation

Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS

FILE: sums16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
4-16	DIST	COUNTY		SHEET NO.
8-16	DAL	ELLIS		32

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SUMMARY OF SMALL SIGNS

SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)

PLAN SHEET NO. (1 of 47)	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS INCHES	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	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE: TY N, TY S
34	10	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 985)	24 x 24	X							
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
34	11	D1-1	← MOTT PARK	VAR x 18	X		RELOCATE TY 10BWG					
34	12	D1-2	↑ BARDWELL ← RANKIN	VAR x 30	X		RELOCATE TY S80					
34	13	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 985)	24 x 24	X							
		M6-1R	<ARROW - HORZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
34	14	R1-1	STOP	36 x 36	X		RELOCATE TY 10BWG					
		W4-4P	CROSS TRAFFIC DOES NOT STOP	36 x 18	X							
34	15	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG					
		M1-6T	(34) TEXAS	24 x 24	X							
34	16	W8-13aT	BRIDGE MAY ICE IN COLD WEATHER	36 x 36	X		RELOCATE TY 10BWG					
34	17	R2-1	SPEED LIMIT (SPEED)	30 x 36	X		RELOCATE TY 10BWG					
34	18	D2-2	ENNIS 6 KAUFMAN 31	VAR x 30	X		RELOCATE TY S80					
35	1	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 985)	24 x 24	X							
41	1	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-4A3	<US SHIELD> U.S. ROUTE (ROUTE 287)	30 x 24	X							
42	1	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-4A3	<US SHIELD> U.S. ROUTE (ROUTE 287)	30 x 24	X							
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
42	2	D1-2	↑ WAXAHACHIE CORSICANA →	VAR x 30	X		RELOCATE TY S80					
42	3	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-4A3	<US SHIELD> U.S. ROUTE (ROUTE 287)	30 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X							
		M1-4A3	<US SHIELD> U.S. ROUTE (ROUTE 287)	30 x 24	X							
		M6-1R	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	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"

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DATE:
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SHEET 5 OF 8

Texas Department of Transportation

Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS

FILE: sums16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS	0568	01	052,ETC.	SH 34
4-16	DIST	COUNTY		SHEET NO.
8-16	DAL	ELLIS		33

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SUMMARY OF SMALL SIGNS

PLAN SHEET NO. (1 of 47)	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS INCHES	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX) POST TYPE	POSTS	ANCHOR TYPE	MOUNTING DESIGNATION PREFABRICATED	MOUNTING DESIGNATION 1EXT or 2EXT = # of Ext BM = Extruded Wind Beam WC = 1.12 #/ft Wing Channel EXAL= Extruded Alum Sign Panels	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE
							FRP = Fiberglass TWT = Thin-Wall 10BWG = 10 BWG S80 = Sch 80	1 or 2	UA=Universal Conc UB=Universal Bolt SA=Slipbase-Conc SB=Slipbase-Bolt WS=Wedge Steel WP=Wedge Plastic	P = "Plain" T = "T" U = "U"		TY N TY S
42	4	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-4A3	<US SHIELD> U.S. ROUTE (ROUTE 287)	30 x 24	X							
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
42	5	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-4A3	<US SHIELD> U.S. ROUTE (ROUTE 287)	30 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X							
		M1-4A3	<US SHIELD> U.S. ROUTE (ROUTE 287)	30 x 24	X							
		M6-1R	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
42	6	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-4A3	<US SHIELD> U.S. ROUTE (ROUTE 287)	30 x 24	X							
43	1	S5-2	END SCHOOL ZONE	24 x 30	X		EXISTING SIGN TO REMAIN					
		R2-1	SPEED LIMIT (SPEED)	30 x 36	X							
43	2	S5-1	SCHOOL SPEED LIMIT XX WHEN FLASHING	24 x 48	X		EXISTING SIGN TO REMAIN					
		S7-1T	CELL PHONE USE PROHIBITED	24 x 18	X							
43	3	S1-1	SCHOOL	36 x 36	X		EXISTING SIGN TO REMAIN					
		SW16-7P	DIAGONAL ARROW	24 x 18	X							
43	4	R1-5b	STOP HERE FOR PEDS	36 x 36	X		10BWG	1	SA	P		
43	5	S1-1	SCHOOL	36 x 36	X		EXISTING SIGN TO REMAIN					
		SW16-9P	AHEAD	30 x 18	X							
43	6	S5-1	SCHOOL SPEED LIMIT XX WHEN FLASHING	24 x 48	X		EXISTING SIGN TO REMAIN					
		S7-1T	CELL PHONE USE PROHIBITED	24 x 18	X							
43	7	S1-1	SCHOOL	36 x 36	X		EXISTING SIGN TO REMAIN					
		SW16-9P	AHEAD	30 x 18	X							
43	8	R1-5b	STOP HERE FOR PEDS	36 x 36	X		10BWG	1	SA	P		
43	9	S1-1	SCHOOL	36 x 36	X		EXISTING SIGN TO REMAIN					
		SW16-7P	DIAGONAL ARROW	24 x 18	X							
43	10	R2-1	SPEED LIMIT (SPEED)	30 x 36	X		EXISTING SIGN TO REMAIN					
		S5-2	END SCHOOL ZONE	24 x 30	X							
44	1	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN					
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6S3	SPUR (437)	24 x 24	X							
		M6-1R	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
44	2	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN					
		M1-6S3	SPUR (437)	30 x 24	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"

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Texas Department of Transportation

Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

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©TxDOT May 1987	CONT	SECT	JOB	HIGHWAY
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TB

SUMMARY OF SMALL SIGNS

PLAN SHEET NO. (1 of 47)	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS INCHES	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)				BRIDGE MOUNT CLEARANCE SIGNS (See Note 2)
							POST TYPE	POSTS	ANCHOR TYPE	MOUNTING DESIGNATION	TY = TYPE
							FRP = Fiberglass TWT = Thin-Wall 10BWG = 10 BWG S80 = Sch 80	1 or 2	UA=Universal Conc UB=Universal Bolt SA=Slipbase-Conc SB=Slipbase-Bolt WS=Wedge Steel WP=Wedge Plastic	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	TY N TY S
44	3	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN				
		M1-6S3	SPUR (437)	24 x 24	X						
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X						
		M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X						
		M1-6T	(34) TEXAS	24 x 24	X						
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X						
45	1	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN				
		M1-6S3	SPUR (437)	30 x 24	X						
46	1	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		EXISTING SIGN TO REMAIN				
		M1-6T	(34) TEXAS	24 x 24	X						
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X						
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 1183)	24 x 24	X						
		M6-4	DIRECTIONAL ARROW	21 x 15	X						
46	2	R8-8	DO NOT STOP ON TRACKS	24 x 30	X		EXISTING SIGN TO REMAIN				
46	3	W10-1	GRADE CROSSING ADVANCE WARNING	30 DIA.	X		EXISTING SIGN TO REMAIN				
		W10-5	LOW GROUND CLEARANCE	36 x 36	X						
		W10-5P	LOW GROUND CLEARANCE (PLAQUE)	30 x 24	X						
46	4	M2-1	JUNCTION	21 x 15	X		EXISTING SIGN TO REMAIN				
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 1183)	24 x 24	X						
46	5	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG				
		M1-6T	(34) TEXAS	24 x 24	X						
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X						
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 1183)	24 x 24	X						
		M6-4	DIRECTIONAL ARROW	21 x 15	X						
46	6	M1-6T	(34) TEXAS	24 x 24	X		RELOCATE TY 10BWG				
		M6-4	DIRECTIONAL ARROW	21 x 15	X						
		M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X						
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 1183)	24 x 24	X						
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X						
46	7	W10-1	GRADE CROSSING ADVANCE WARNING	30 DIA.	X		EXISTING SIGN TO REMAIN				
		W10-5	LOW GROUND CLEARANCE	36 x 36	X						
		W10-5P	LOW GROUND CLEARANCE (PLAQUE)	30 x 24	X						
46	8	R8-8	DO NOT STOP ON TRACKS	24 x 30	X		EXISTING SIGN TO REMAIN				
46	9	M1-6T	(34) TEXAS	24 x 24	X		EXISTING SIGN TO REMAIN				
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X						
		M1-1B2	<INTERSTATE SHIELD> BUSINESS (ROUTE 45)	24 x 24	X						
		M6-4	DIRECTIONAL ARROW	21 x 15	X						
47	1	R2-1	SPEED LIMIT (SPEED)	30 x 36	X		RELOCATE TY 10BWG				
47	2	M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG				
		M1-6T	(34) TEXAS	24 x 24	X						
47	3	W1-7T	CHEVRON/TWO-DIRECTION LARGE ARROW	96 x 36	X		RELOCATE TY S80				
47	4	M1-6T	(34) TEXAS	24 x 24	X		RELOCATE TY 10BWG				
		M6-4	DIRECTIONAL ARROW	21 x 15	X						

DATE:
FILE:

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).

Texas Department of Transportation

Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS

FILE: sums16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
4-16 8-16	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		35

TB

SUMMARY OF SMALL SIGNS

PLAN SHEET NO. (1 of 47)	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS INCHES	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX) POST TYPE	POSTS	ANCHOR TYPE	MOUNTING DESIGNATION PREFABRICATED	MOUNTING DESIGNATION	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE
							FRP = Fiberglass TWT = Thin-Wall 10BWG = 10 BWG S80 = Sch 80	1 or 2	UA=Universal Conc UB=Universal Bolt SA=Slipbase-Conc SB=Slipbase-Bolt WS=Wedge Steel WP=Wedge Plastic	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	TY N TY S
47	5	M3-4	WEST <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 1181)	24 x 24	X							
		M6-1L	<ARROW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-3	SOUTH <AUXILIARY SIGN>	24 x 12	X							
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
47	6	R3-5R	RIGHT TURN ONLY SYMBOL	30 x 36	X		10BWG	1	SA	P		
47	7	R3-5R	RIGHT TURN ONLY SYMBOL	30 x 36	X		10BWG	1	SA	P		
47	8	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY S80					
		M1-6T	(34) TEXAS	24 x 24	X							
		M6-3	<ARROW - STRGHT> <AUXILIARY SIGN>	21 x 15	X							
		M3-4	WEST <AUXILIARY SIGN>	24 x 12	X							
		M1-6F	<FM SHIELD> FARM ROAD (ROUTE 1181)	24 x 24	X							
		M6-1R	<ARRW - HORIZ. STRGHT> <AUXILIARY SIGN>	21 x 15	X							
47	9	R1-1	STOP	36 x 36	X		RELOCATE TY 10BWG					
		W4-4P	CROSS TRAFFIC DOES NOT STOP	36 x 18	X							
47	10	D1-2	↑ ENNIS ← TELICO	VAR x 30	X		RELOCATE TY 10BWG					
47	11	M3-1	NORTH <AUXILIARY SIGN>	24 x 12	X		RELOCATE TY 10BWG					
		M1-6T	(34) TEXAS	24 x 24	X							
47	12	R2-1	SPEED LIMIT (SPEED)	30 x 36	X		RELOCATE TY 10BWG					
47	13	D2-2	SCURRY 13 KAUFMAN 18	VAR x 30	X		RELOCATE TY 10BWG					

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).

DATE:
FILE:

SHEET 8 OF 8

Texas Department of Transportation

Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS

FILE: sums16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
4-16	DIST	COUNTY		SHEET NO.
8-16	DAL	ELLIS		36

18

DW: | CK: | DW: | CK:

THE FOLLOWING SEQUENCE OF WORK IS THE SUGGESTED METHOD OF PROSECUTION OF THE CONSTRUCTION ACTIVITIES OF THIS PROJECT. THIS SEQUENCE OF WORK MAY BE REVISED WITH THE APPROVAL OF THE ENGINEER.

GENERAL

1. LIMIT LANE CLOSURES ALONG THE HIGHWAY AND AT CROSS STREETS TO THE HOURS BETWEEN 9:00 AM AND 3:30 PM AND FROM 9:00 PM AND 6:00 AM, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. ALL PAVEMENT EDGE DROP-OFFS SHALL BE BACK FILLED BY A SUITABLE MATERIAL AT THE END OF EACH WORKDAY. EDGE CONDITIONS SHALL BE RESTORED IN ACCORDANCE WITH THE EDGE CONDITION SHEET. PAVEMENT EDGE DROP-OFFS WILL NOT BE ALLOWED TO REMAIN OVERNIGHT.
3. ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES AND CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.
4. TRAFFIC CONTROL AND LANE CLOSURES WILL BE IN ACCORDANCE WITH THE PLANS, BC, TCP, AND WZ STANDARDS AND AS DIRECTED BY THE ENGINEER. OVERNIGHT LANE CLOSURES WILL BE PERMITTED, AS APPROVED BY THE ENGINEER. LIMIT LANE CLOSURES TO 1-MILE IN LENGTH.
5. THE CONTRACTOR WILL PROVIDE AND MAINTAIN SKILLED FLAGGERS EQUIPPED WITH TWO-WAY RADIOS TO HANDLE TRAFFIC THROUGH THE WORK AREAS.
6. COMPLY WITH TCP (7-1)-13 WHICH INCLUDES PROVISIONS FOR CERTAIN SIGNS TO BE INSTALLED AND TO REMAIN UNTIL PERMANENT PAVEMENT MARKINGS ARE IN PLACE. THESE SIGNS ARE IN ADDITION TO SIGNS THAT MAY BE REQUIRED BY THE VARIOUS BC, TCP, AND WZ STANDARDS.
7. TEMPORARY STORM WATER POLLUTION PREVENTION PLAN (SWP3) EROSION CONTROL MEASURES SHALL BE INSTALLED ONLY IN LOCATIONS WHERE CONSTRUCTION ACTIVITIES ARE EXPECTED TO OCCUR WITHIN TWO WEEKS.
8. TEMPORARY SWP3 EROSION CONTROL MEASURES ARE TO BE REMOVED WITHIN TWO WEEKS OF VEGETATION ESTABLISHMENT OR AS APPROVED BY THE ENGINEER.

PHASE 1- AT FM 667, FM 985, FM 877, AND FM 1181 (WIDENING SECTIONS)

1. SET BARRICADES AND ADVANCE WARNING SIGNS.
2. PRIOR TO ANY CONSTRUCTION IMPLEMENT ANY REQUIRED STORM WATER POLLUTION PREVENTION PLAN (SWP3) ITEMS AS SHOWN ON THE SWP3 LAYOUTS AND STANDARD SHEETS. ALL OUTFALL DRAINAGE CHANNEL WORK MUST BE COMPLETED PRIOR TO BEGINNING OTHER CONSTRUCTION.
3. PERFORM 2" MILLING.
4. PLACE VERTICAL PANELS AND CONSTRUCT WIDENING FOR EASTBOUND RIGHT TURN LANE. DO NOT PLACE FINAL 2" SP-C SURFACE UNTIL NEXT STAGE.
5. CONSTRUCT CULVERT REPLACEMENT ONE SIDE AT A TIME WITHOUT INTERRUPTION OF TRAFFIC FLOW.
6. CONSTRUCT DRIVEWAYS AND DRIVEWAY CULVERTS.
7. GRADE DITCHES BEFORE MOVING TO NEXT MILE SECTION. SEED DISTURBED AREA AFTER GRADING IS COMPLETED.
8. CONSTRUCT 2" OVERLAY OF ENTIRE ROADWAY AND RIGHT TURN LANE. INSTALL SHORT TERM PAVEMENT MARKINGS (TABS) ON SAME DAY AFTER PLACEMENT OF OVERLAY.
9. INSTALL PERMANENT PAVEMENT MARKINGS. SHORT TERM PAVEMENT MARKINGS SHALL BE REPLACED BY PERMANENT PAVEMENT MARKINGS NO LATER THAN 14 CALENDAR DAYS FOLLOWING PLACEMENT OF THE SURFACE.
10. REGRADE FRONT SLOPES AT WIDENING FOR RIGHT TURN LANE AS NECESSARY.
11. INSTALL PERMANENT EROSION CONTROL MEASURES FOR STABILIZATION OF DISTURBED SOILS.
12. RELOCATE EXISTING SMALL SIGNS AND INSTALL NEW SIGNS.
13. FINAL CLEAN UP. REMOVE BARRICADES AND WARNING SIGNS.

PHASE 2 - AT MAIN LANE SECTION

1. SET BARRICADES AND ADVANCE WARNING SIGNS.
2. INSTALL AND MAINTAIN STORM WATER POLLUTION PREVENTION PLAN (SWP3) ITEMS TO PROTECT STORM DRAINS, RECEIVING WATERS, AND ADJACENT ACTIVE ROADWAYS AS NEEDED, AS AUTHORIZED OR DIRECTED BY THE ENGINEER.
3. PERFORM FULL DEPTH PAVEMENT STRUCTURE REPAIR AT LOCATIONS AS DIRECTED BY THE ENGINEER.
4. PERFORM 2" MILLING AND OVERLAY SUCH THAT THE ENTIRE LENGTH OF EACH LANE IS MILLED AND OVERLAYED TO COMPLETION PRIOR TO BEGINNING WORK IN OTHER LANES.
5. INSTALL MBGF AND MOW STRIP.

PHASE 3 - AT MAIN LANE SECTION

1. INSTALL PERMANENT PAVEMENT MARKINGS IN MILL AND INLAY AREAS. SHORT TERM PAVEMENT MARKINGS SHALL BE REPLACED BY PERMANENT MARKINGS NO LATER THAN 14 CALENDAR DAYS FOLLOWING PLACEMENT OF THE SURFACE. RESTRIPE PAVEMENT MARKINGS FOR THE ENTIRE PROJECT LIMITS IN AREAS OUTSIDE OF MILL AND OVERLAY OPERATIONS.
2. ONCE CONSTRUCTION IS COMPLETE AND DISTURBED SOIL ACHIEVES FINAL STABILIZATION IN THEIR CONTROL AREA, REMOVE SWP3 DEVICES.
3. FINAL CLEAN UP.
4. REMOVE BARRICADES AND WARNING SIGNS.

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

TCP NARRATIVE

2024 SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		37

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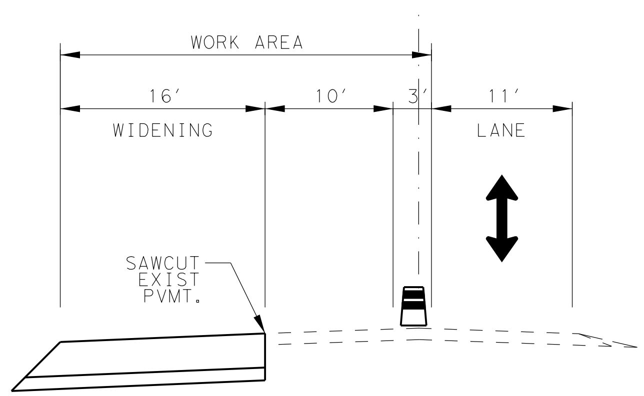

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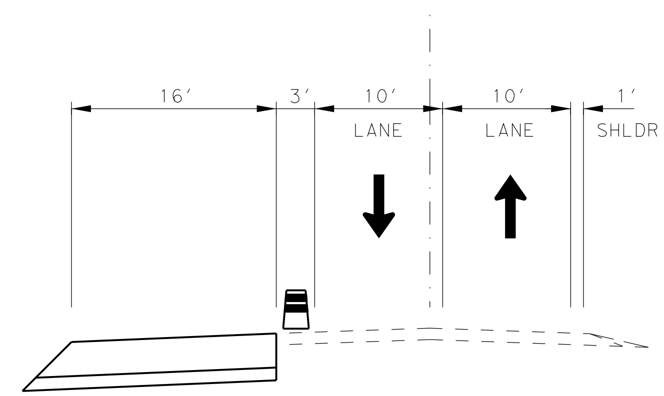

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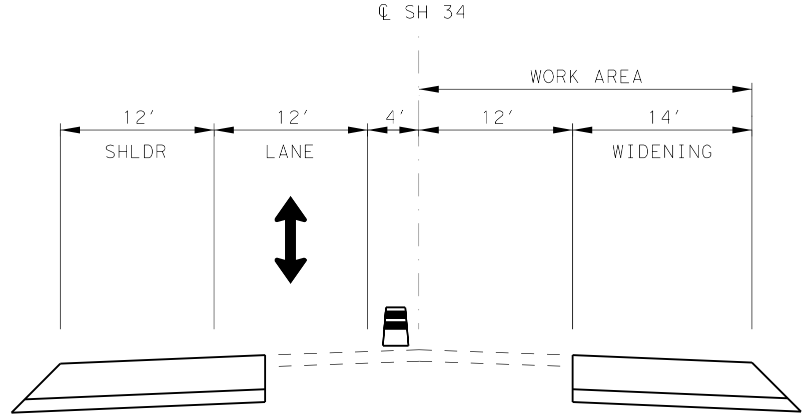

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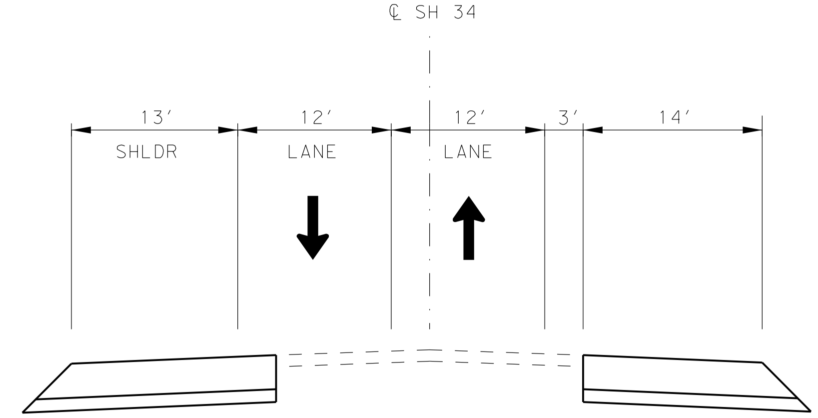

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STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
, P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

TCP TYPICAL
SECTIONS
AT FM 667

SHEET 1 OF 4

CONT	SECT	JOB	HIGHWAY
0568	01	052	SH0034
DIST	COUNTY		SHEET NO.
DAL	Ellis		38

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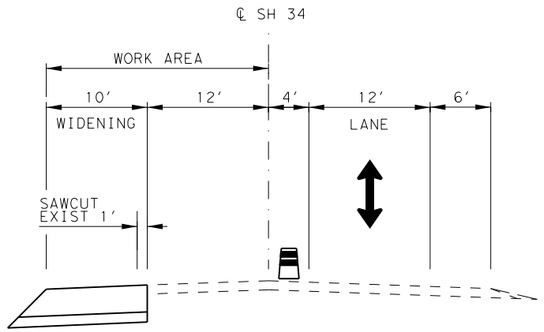

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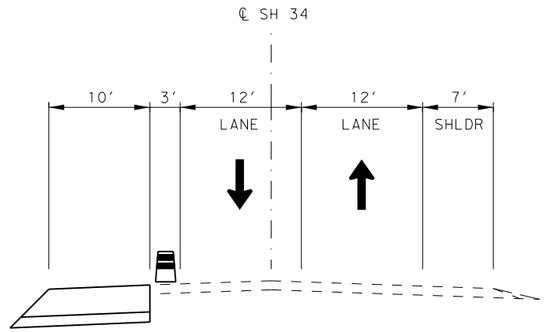

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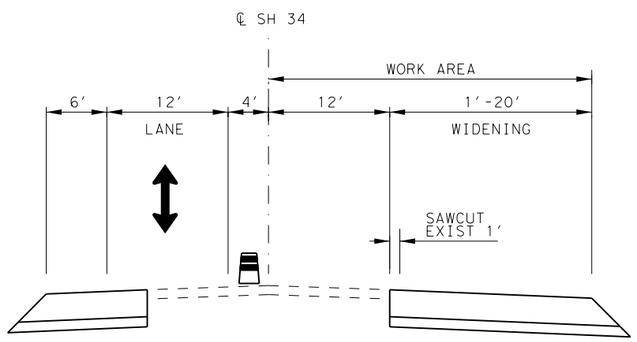

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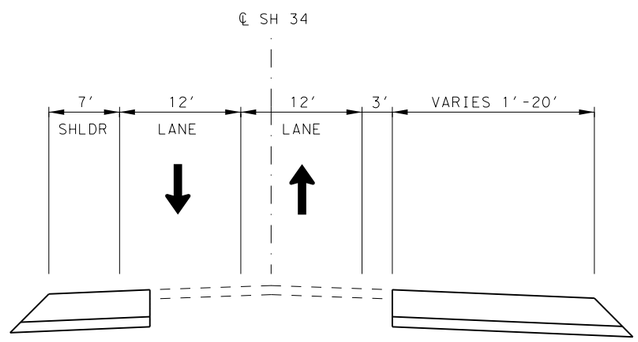

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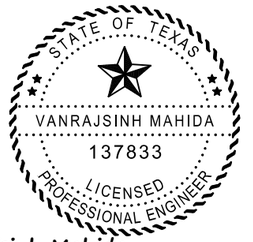

vanrajsinh Mahida 05/06/2024
Signature of Registrant & ,P.E. Date

Texas Department of Transportation

SH 34

TCP TYPICAL SECTIONS AT FM 985

SHEET 2 OF 4

CONT	SECT	JOB	HIGHWAY
0568	01	052	SH0034
DIST	COUNTY		SHEET NO.
DAL	Ellis		39

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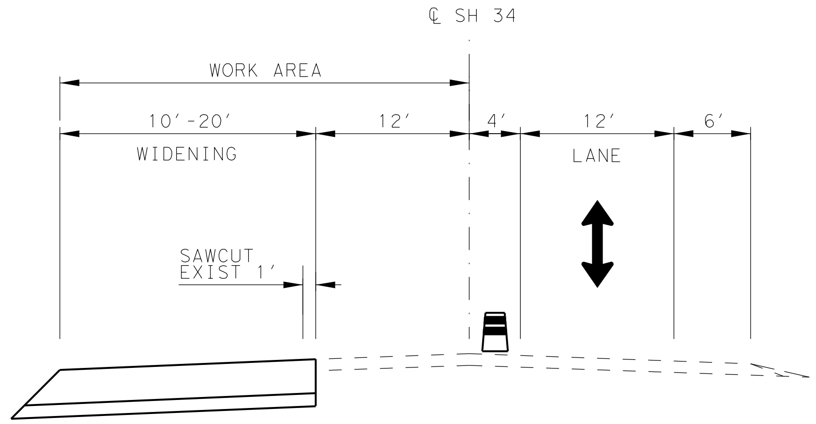

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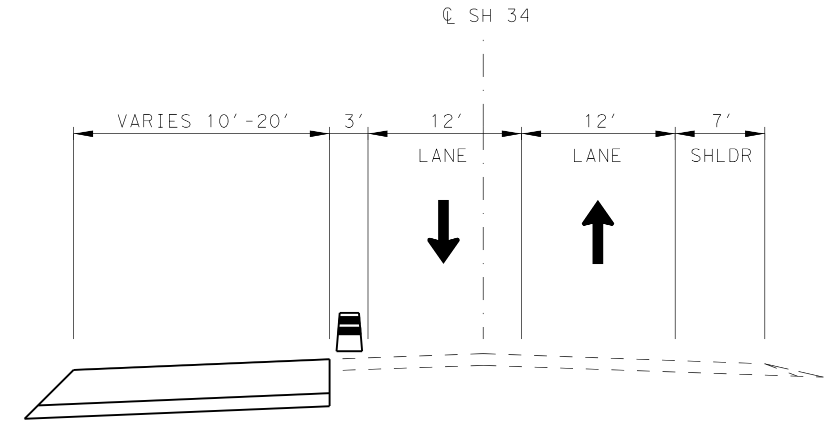

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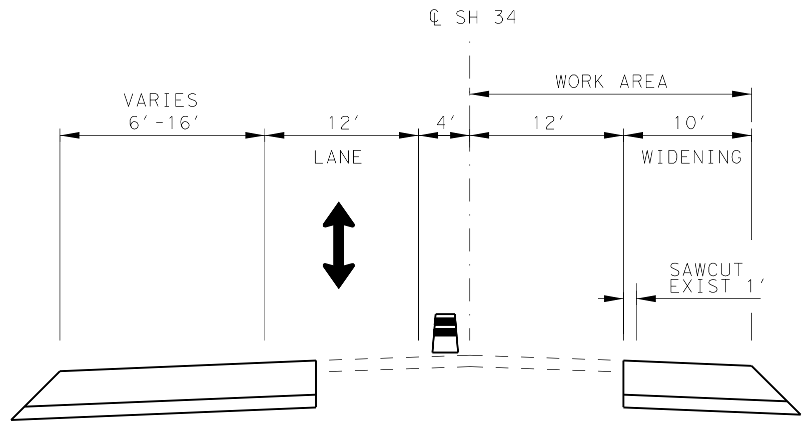

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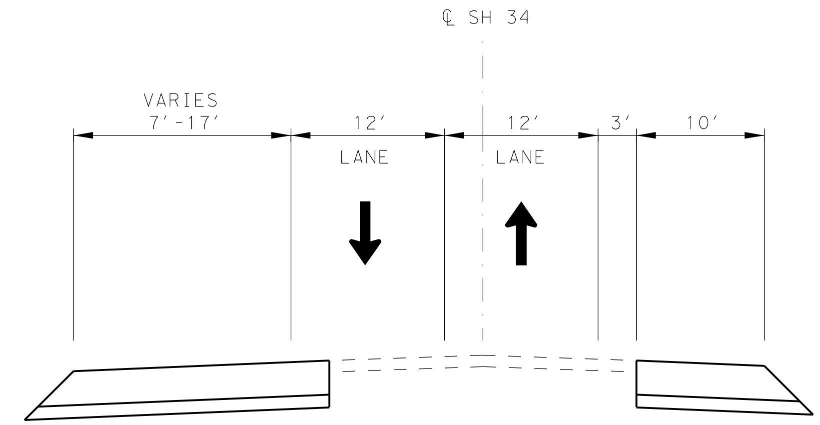

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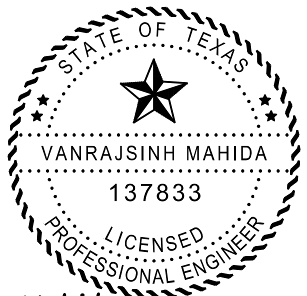

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

TCP TYPICAL
SECTIONS
AT FM 877

SHEET 3 OF 4

CONT	SECT	JOB	HIGHWAY
0568	01	052	SH0034
DIST	COUNTY		SHEET NO.
DAL	Ellis		40

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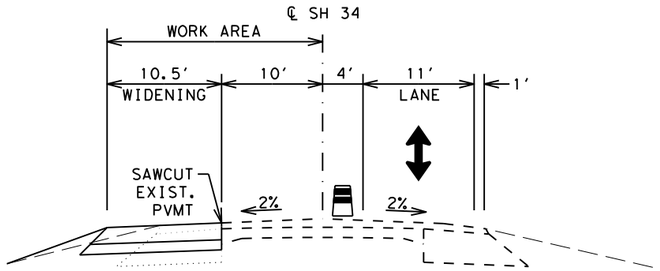

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CSJ 0568-01-058
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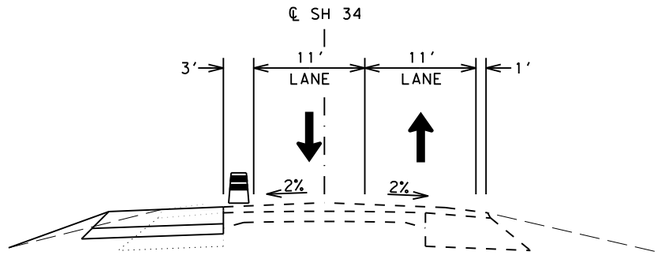
STA. 360+07.00 TO STA 376+53.00



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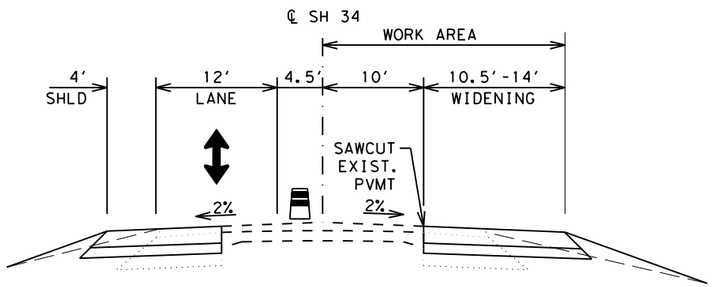

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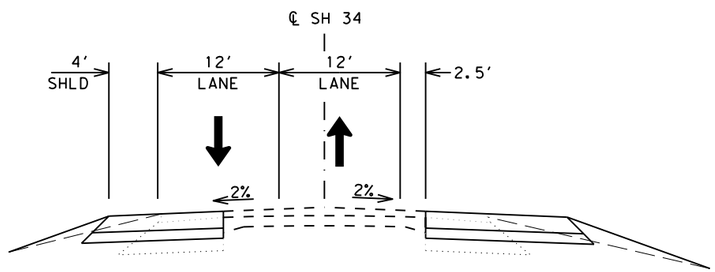

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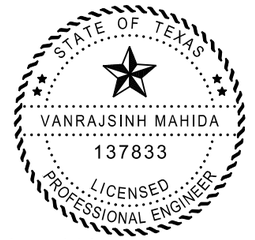

vanrajsinh Mahida 05/06/2024
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Texas Department of Transportation

SH 34

TCP TYPICAL SECTIONS AT FM 1181

SHEET 4 OF 4

CONT	SECT	JOB	HIGHWAY
0568	01	052	SH0034
DIST	COUNTY		SHEET NO.
DAL	Ellis		41

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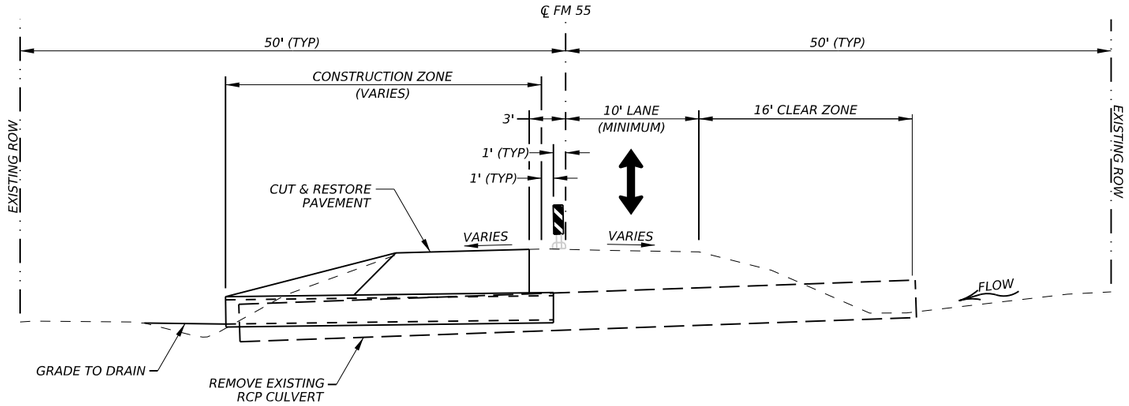
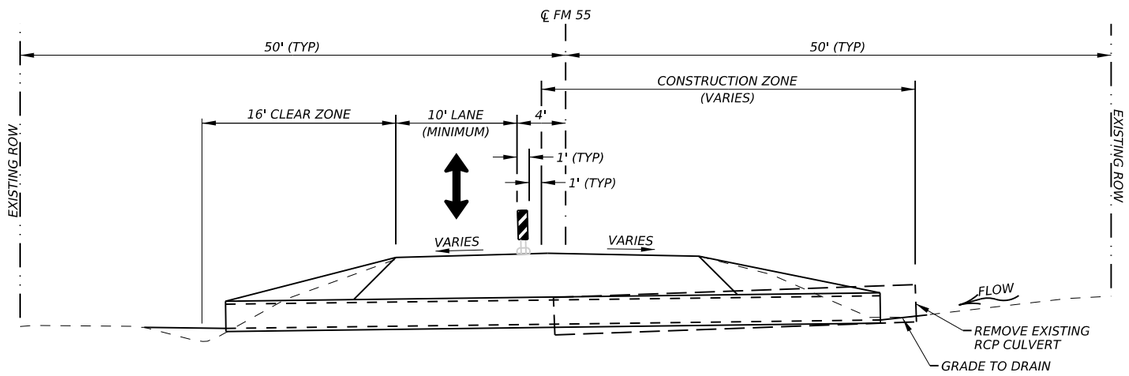


TYPICAL TCP FOR CULVERT REPLACEMENT

STEP 1



TYPICAL TCP FOR CULVERT REPLACEMENT

STEP 2

NOTES:

1. INSTALL ADVANCE WARNING SIGNS. SEE BC & TCP STANDARDS AND TCP NARRATIVE FOR ADDITIONAL INFORMATION.
2. SEE CULVERT LAYOUTS FOR ADDITIONAL INFORMATION.
3. USE FLAGGERS AND PILOT VEHICLE TO HANDLE TRAFFIC FLOW.
4. CENTERLINE CHANNELIZATION DEVICES MAY BE OMITTED WHEN A PILOT CAR IS LEADING TRAFFIC IN ACCORDANCE WITH TCP(2-2)-18.
5. COMPLETE EACH CULVERT REPLACEMENT OR EXTENSION WITHOUT INTERRUPTION.
6. IF NEEDED, PROVIDE TEMPORARY DETOUR WITH APPROVAL OF THE ENGINEER.
7. PROVIDE AND MAINTAIN A SMOOTH SURFACE AND PAVEMENT MARKINGS AS NEEDED AFTER CULVERT REPLACEMENT/EXTENSION.

LEGEND

VERTICAL PANEL

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant & ,P.E. Date

Texas Department of Transportation

SH 34

TCP CULVERT REPLACEMENT

2024 SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		42

DATE: 5/4/2024 9:58:46 PM
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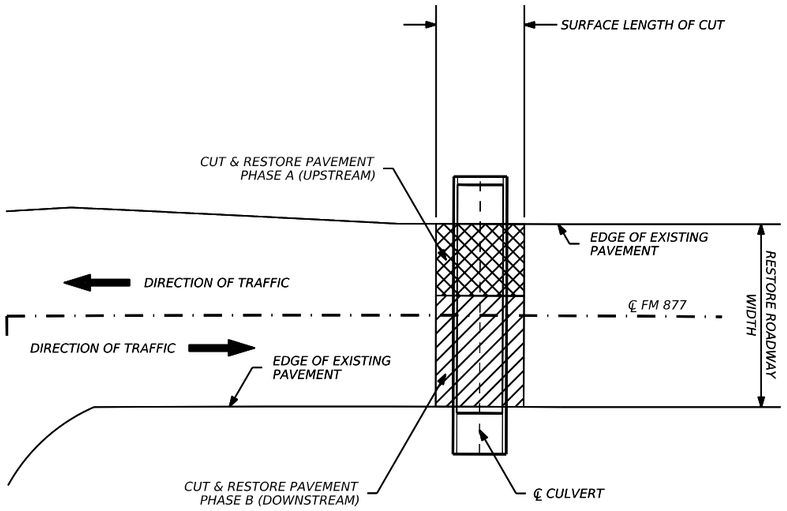
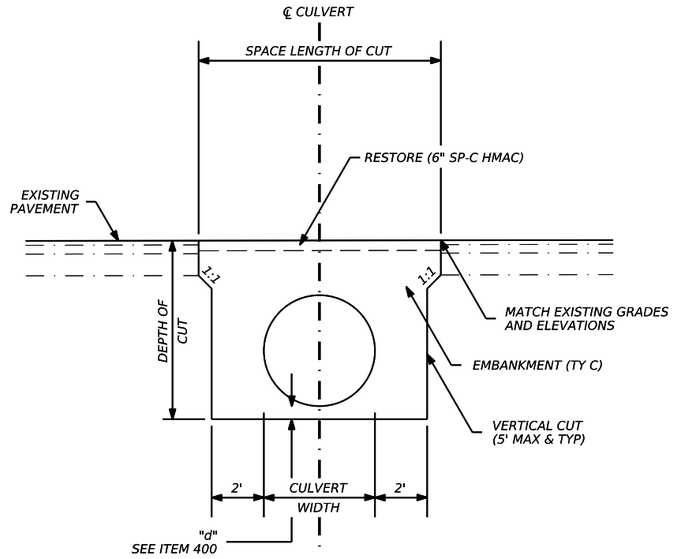


CUT & RESTORE DETAIL

PLAN VIEW
NTS
EXISTING CULVERT TO BE REMOVED



CUT & RESTORE DETAIL

PROFILE VIEW
NTS
EXISTING CULVERT TO BE REMOVED

CULVERT NO.	LOCATION	AREA
		SY
1	STA. 601+43.00 AT FM 877	41

NOTE: EXISTING CULVERT AT THE INDICATED LOCATION WILL BE REMOVED AND REPLACED

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant & ,P.E. Date

Texas Department of Transportation

SH 34

PAVEMENT
CUT & RESTORE
DETAILS

2024 SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		43

DATE: 5/4/2024 9:58:59 PM
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DATE: 5/4/2024 9:59:12 PM
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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

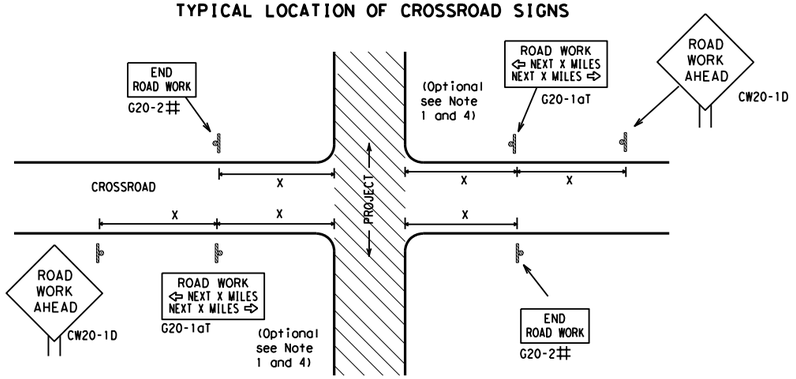
BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
4-03 7-13	DIST	COUNTY		SHEET NO.
9-07 8-14	DAL	ELLIS		44
5-10 5-21				

DATE: 5/4/2024 9:59:12 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design Plan Set/2. TCP/Standards/bc-21(1).dgn

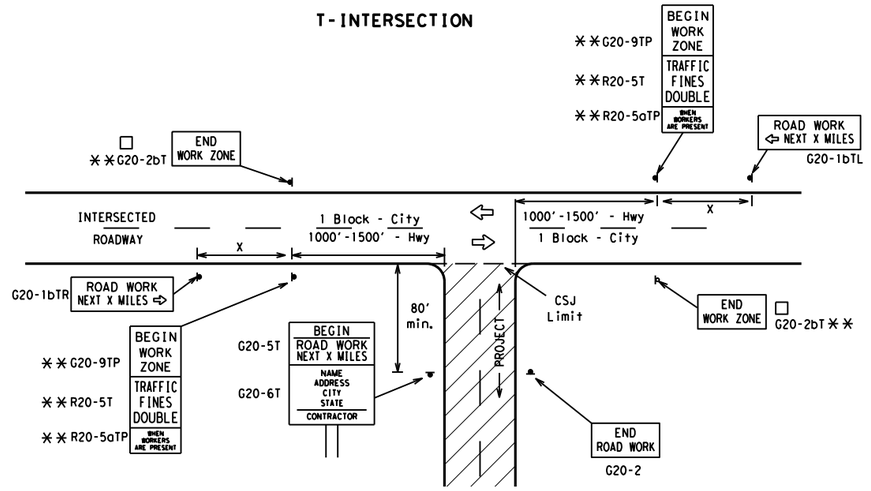
TYPICAL LOCATION OF CROSSROAD SIGNS



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]

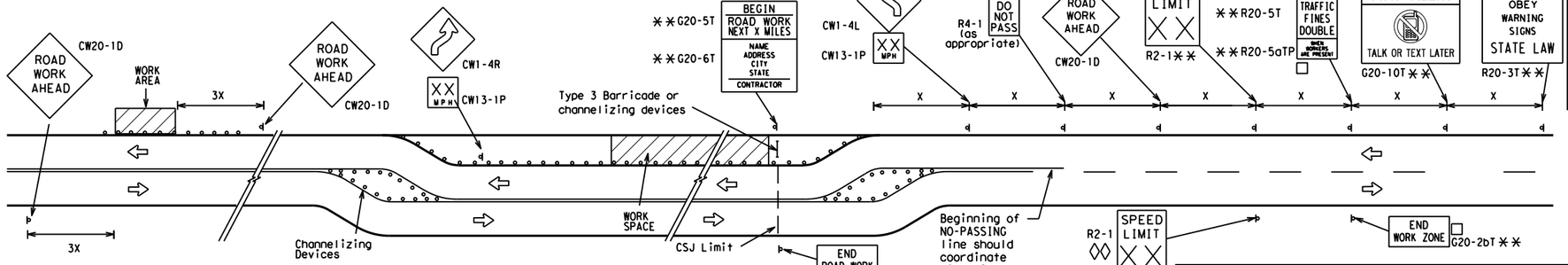
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ 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.

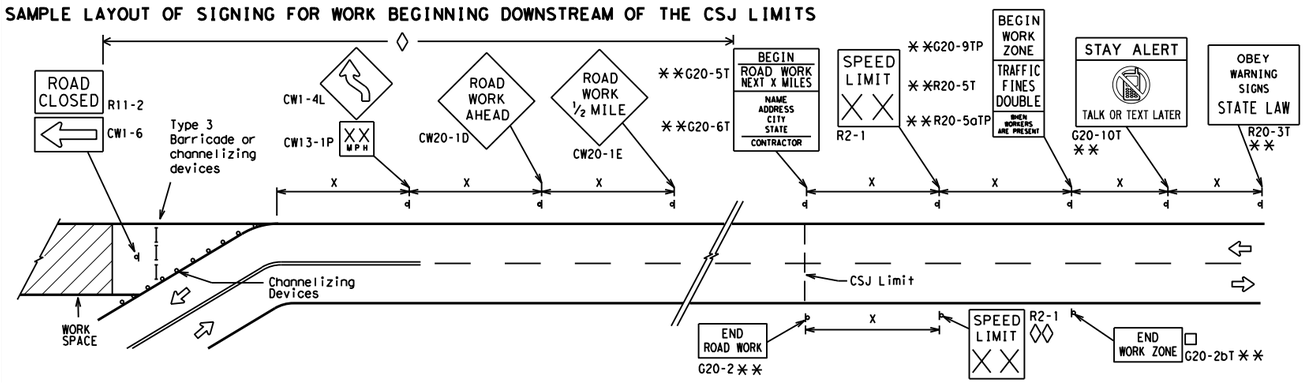
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



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 AT THE CSJ LIMITS

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	0568	01	052,ETC.	SH 34
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	DAL	ELLIS		45

DATE: 5/4/2024 9:59:13 PM
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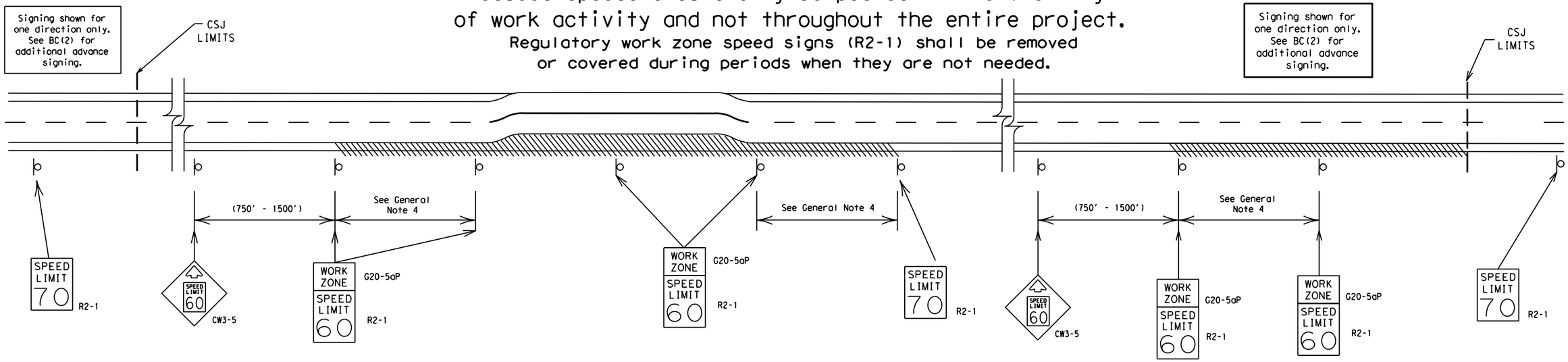
TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

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

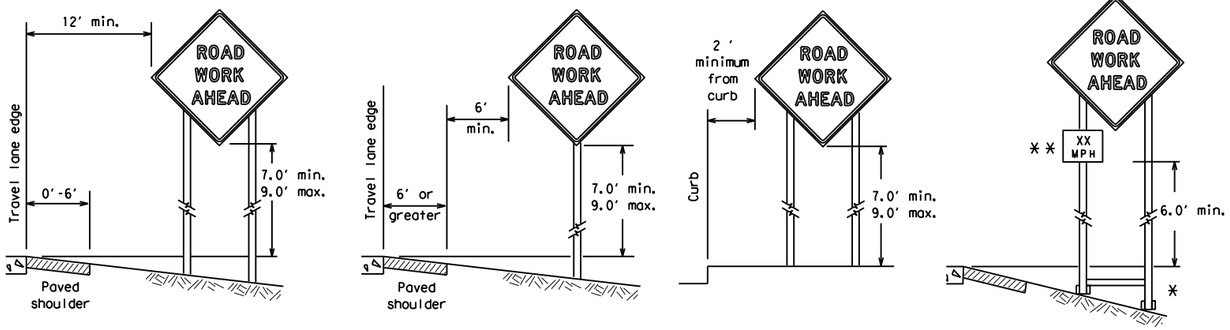
BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

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	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		46

DATE: 5/4/2024 9:59:13 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/056801052/4 - Design/Plan Set/2. TCP/Standards/bc-21 (1).dgn

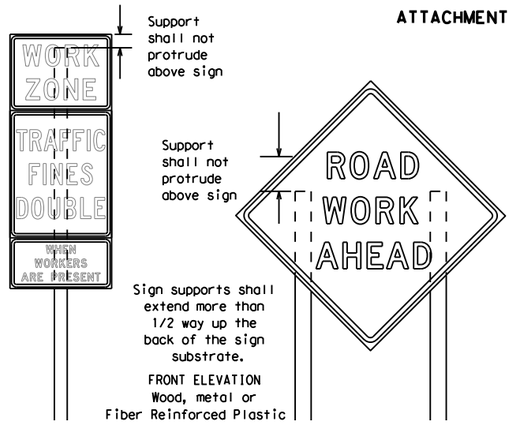
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS

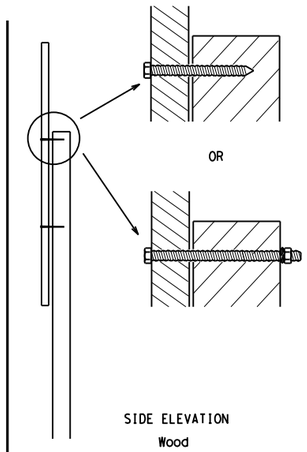


* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** 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





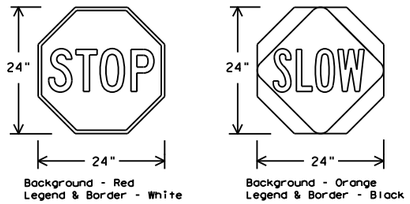
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

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.



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
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9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	DAL	ELLIS		47

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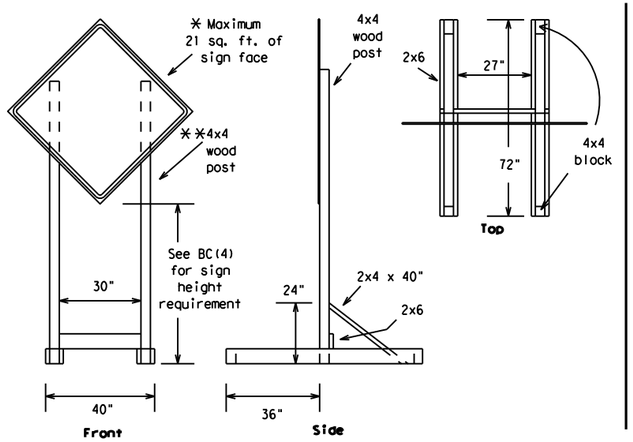
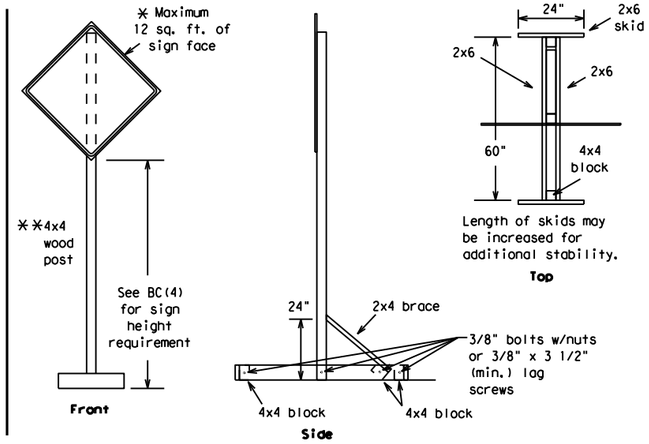
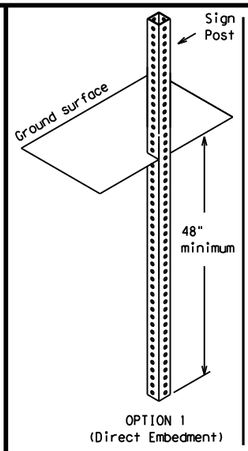
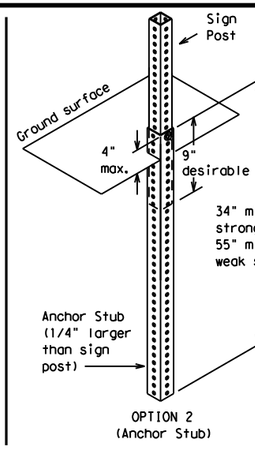


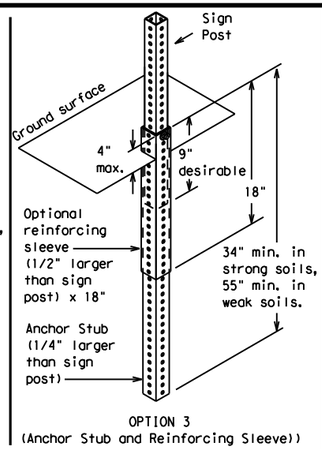


SKID MOUNTED WOOD SIGN SUPPORTS

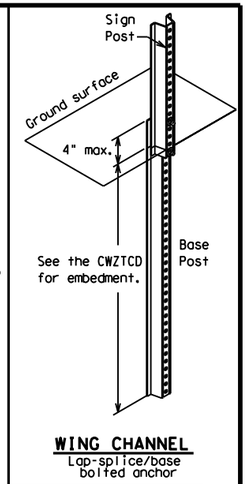
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS







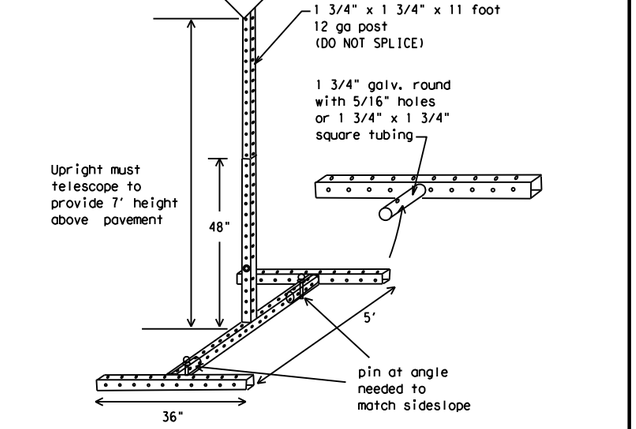
PERFORATED SQUARE METAL TUBING

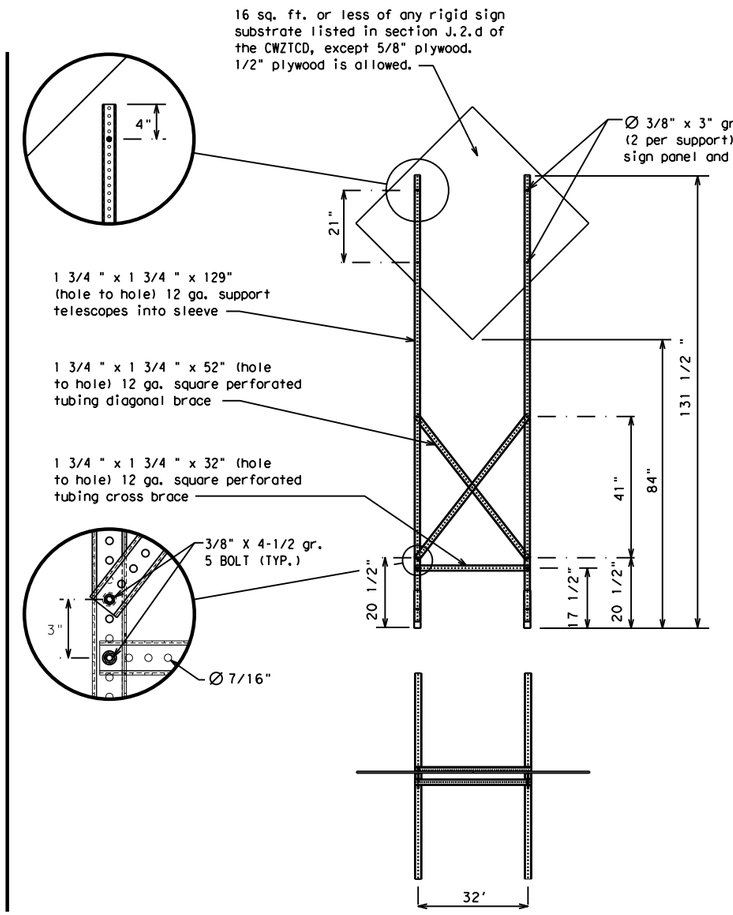


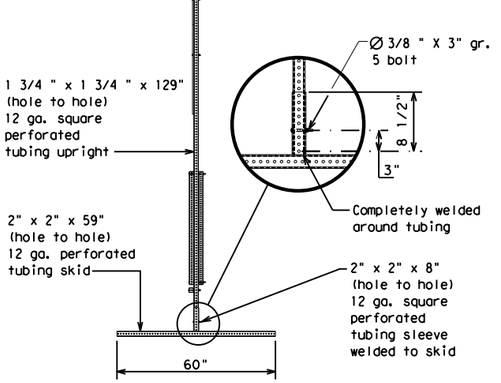
WING CHANNEL
Lap-splice/base bolted anchor

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	0568	01	052,ETC.	SH 34
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	DAL	ELLIS		48

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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		Other Condition List	
FREEWAY CLOSED X MILE	FRONTAGE ROAD CLOSED	ROADWORK XXX FT	ROAD REPAIRS XXXX FT
ROAD CLOSED AT SH XXX	SHOULDER CLOSED XXX FT	FLAGGER XXXX FT	LANE NARROWS XXXX FT
ROAD CLSD AT FM XXXX	RIGHT LN CLOSED XXX FT	RIGHT LN NARROWS XXXX FT	TWO-WAY TRAFFIC XX MILE
RIGHT X LANES CLOSED	RIGHT X LANES OPEN	MERGING TRAFFIC XXXX FT	CONST TRAFFIC XXX FT
CENTER LANE CLOSED	DAYTIME LANE CLOSURES	LOOSE GRAVEL XXXX FT	UNEVEN LANES XXXX FT
NIGHT LANE CLOSURES	I-XX SOUTH EXIT CLOSED	DETOUR X MILE	ROUGH ROAD XXXX FT
VARIOUS LANES CLOSED	EXIT XXX CLOSED X MILE	ROADWORK PAST SH XXXX	ROADWORK NEXT FRI-SUN
EXIT CLOSED	RIGHT LN TO BE CLOSED	BUMP XXXX FT	US XXX EXIT X MILES
MALL DRIVEWAY CLOSED	X LANES CLOSED TUE - FRI	TRAFFIC SIGNAL XXXX FT	LANES SHIFT *
XXXXXXXX BLVD CLOSED			

* 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		Location List	Warning List	** Advance Notice List
MERGE RIGHT	FORM X LINES RIGHT	AT FM XXXX	SPEED LIMIT XX MPH	TUE-FRI XX AM- X PM
DETOUR NEXT X EXITS	USE XXXXX RD EXIT	BEFORE RAILROAD CROSSING	MAXIMUM SPEED XX MPH	APR XX-XX X PM-X AM
USE EXIT XXX	USE EXIT I-XX NORTH	NEXT X MILES	MINIMUM SPEED XX MPH	BEGINS MONDAY
STAY ON US XXX SOUTH	USE I-XX E TO I-XX N	PAST US XXX EXIT	ADVISORY SPEED XX MPH	BEGINS MAY XX
TRUCKS USE US XXX N	WATCH FOR TRUCKS	XXXXXXX TO XXXXXXX	RIGHT LANE EXIT	MAY X-X XX PM - XX AM
WATCH FOR TRUCKS	EXPECT DELAYS	US XXX TO FM XXXX	USE CAUTION	NEXT FRI-SUN
EXPECT DELAYS	PREPARE TO STOP		DRIVE SAFELY	XX AM TO XX PM
REDUCE SPEED XXX FT	END SHOULDER USE		DRIVE WITH CARE	NEXT TUE AUG XX
USE OTHER ROUTES	WATCH FOR WORKERS			TONIGHT XX PM- XX AM
STAY IN LANE *				

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

** 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

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7-13 5-21	DAL	ELLIS		49

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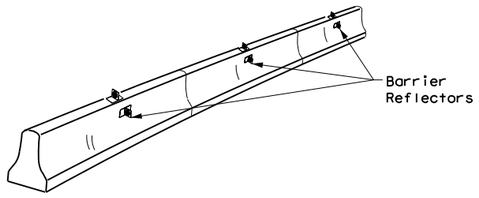
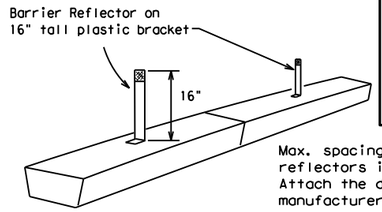
1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost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

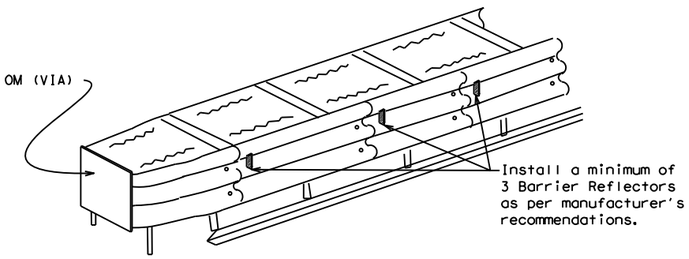


Max. spacing of barrier reflectors is 20 feet. Attach the delineators as per manufacturer's recommendations.

LOW PROFILE CONCRETE BARRIER (LPCB) 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.

LOW PROFILE CONCRETE BARRIER (LPCB)

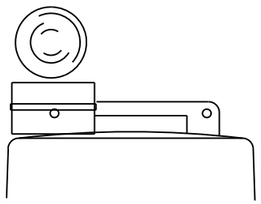


DELINEATION OF END TREATMENTS

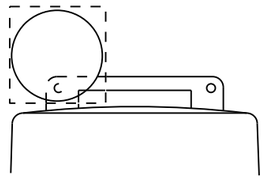
END TREATMENTS FOR CTB'S USED IN WORK ZONES

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

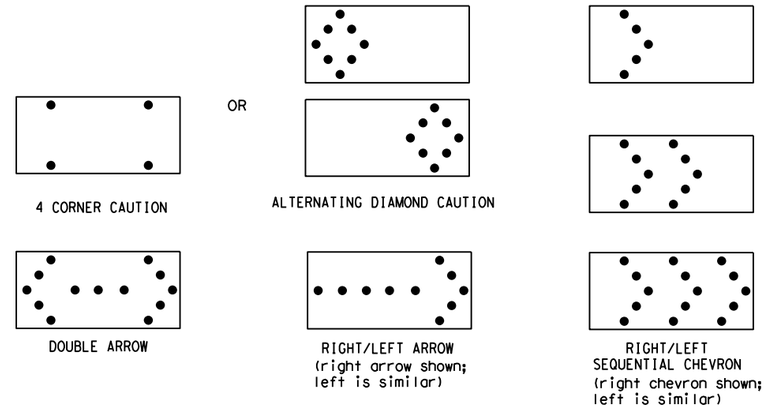
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing 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:



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	0568	01	052,ETC.	SH 34
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	DAL	ELLIS		50

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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:

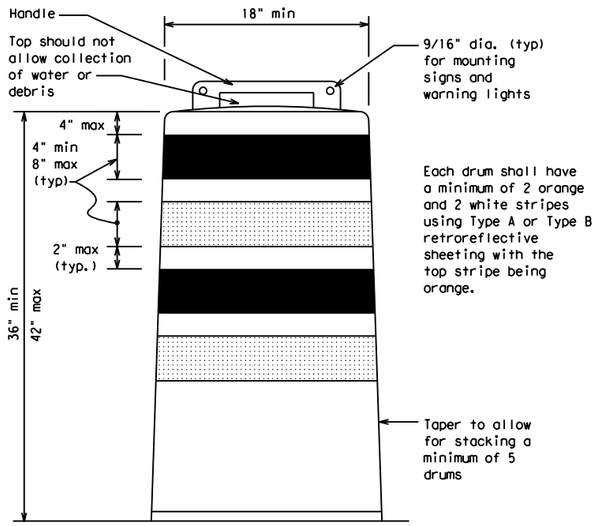
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents 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.

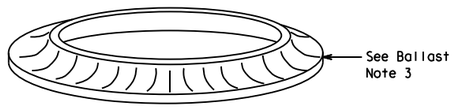
RETROREFLECTIVE SHEETING

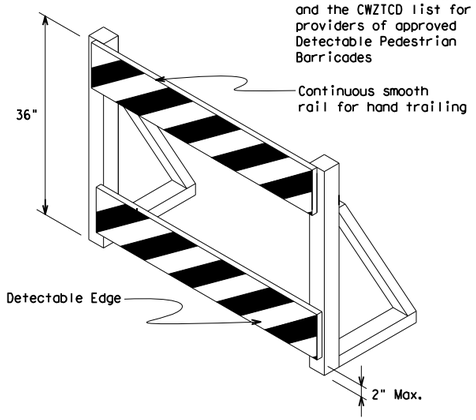
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials," Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall 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.

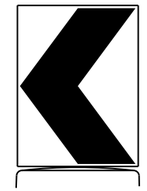




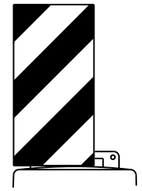


DETECTABLE PEDESTRIAN BARRICADES

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	0568	01	052,ETC.	SH 34
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21	DAL	ELLIS		51
7-13				

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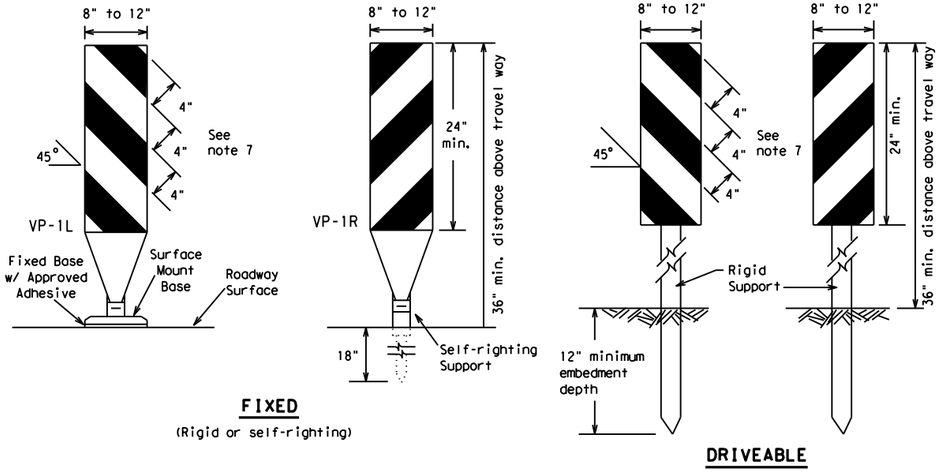
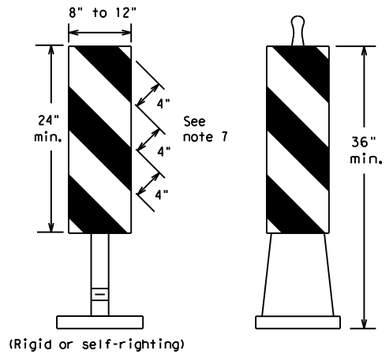


FIXED
(Rigid or self-righting)

DRIVEABLE

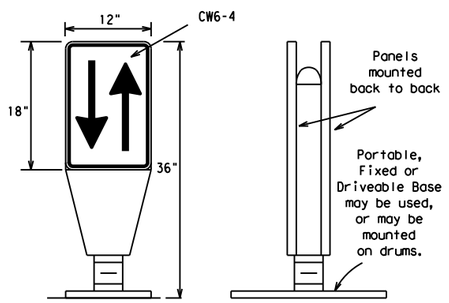


(Rigid or self-righting)

PORTABLE

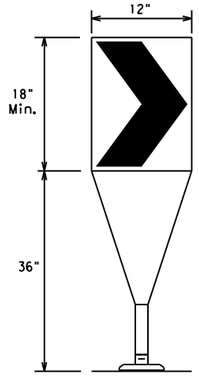
1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is 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.

VERTICAL PANELS (VPs)



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.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)



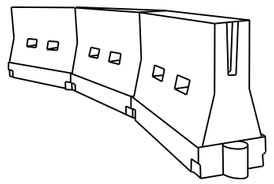
Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

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

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.



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

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

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REVISIONS	0568	01	052,ETC.	SH 34
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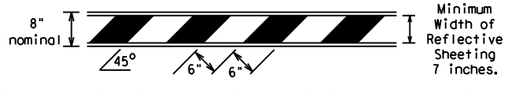
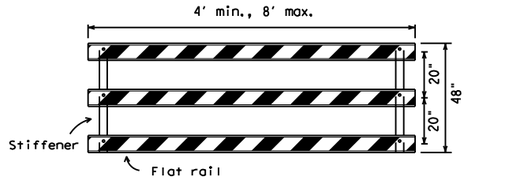
TYPE 3 BARRICADES

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.



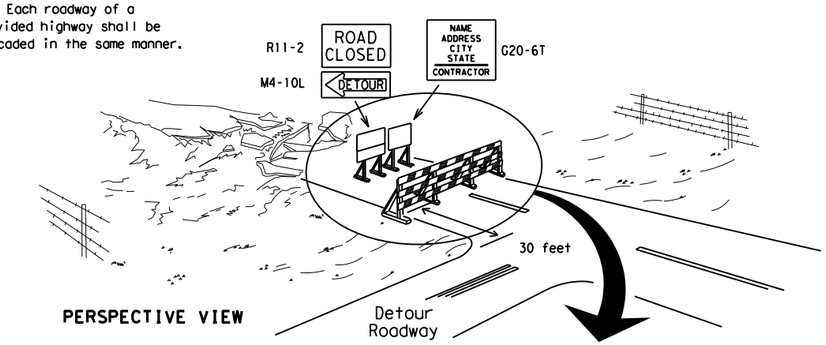
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



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

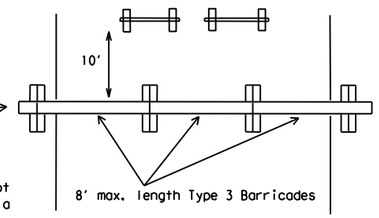
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

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



PERSPECTIVE VIEW

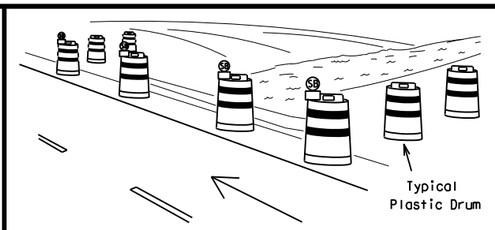
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

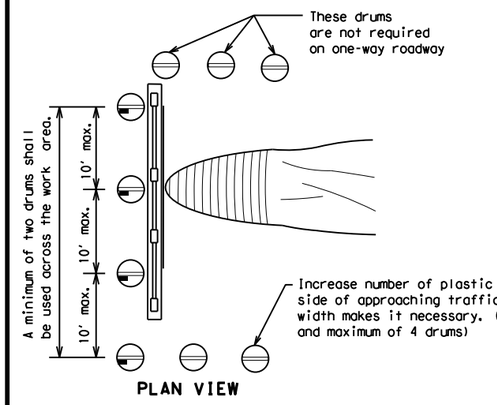
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

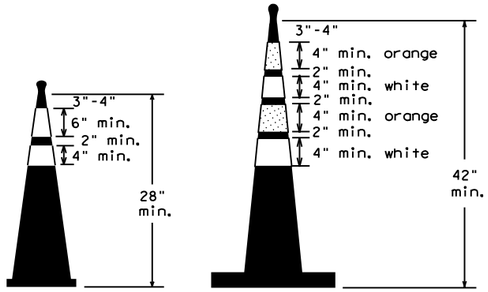
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder 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.



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

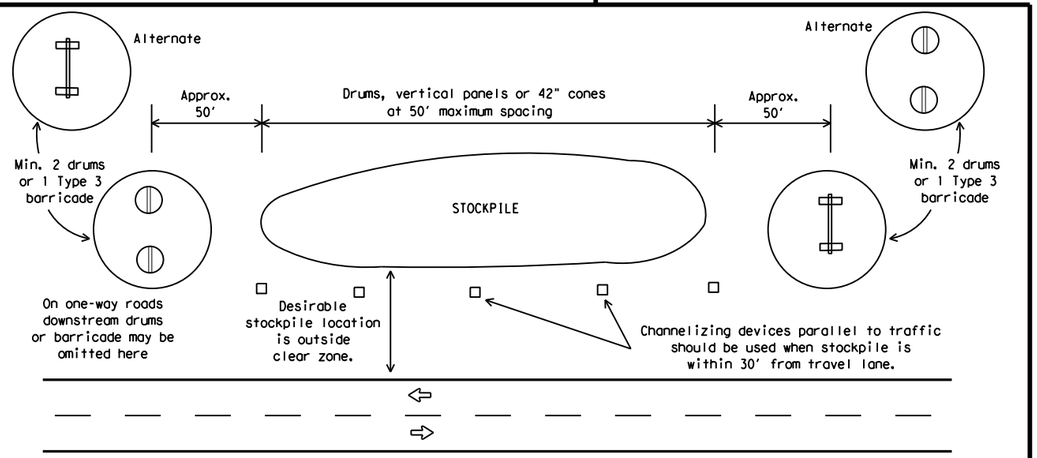
PLAN VIEW

CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



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
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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.

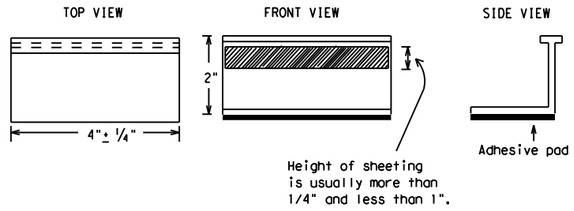
MAINTAINING WORK ZONE PAVEMENT MARKINGS

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

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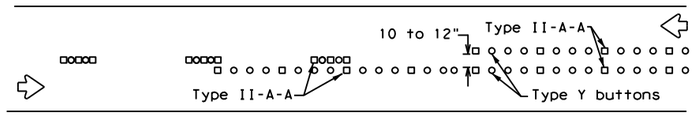
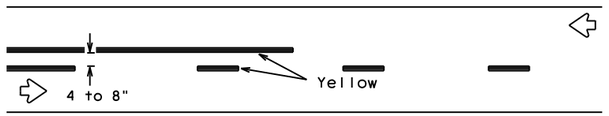
PAVEMENT MARKING PATTERNS

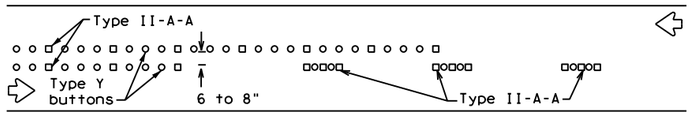
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



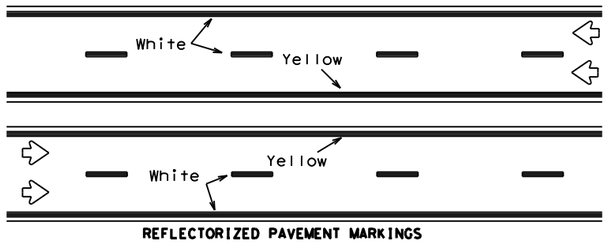
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



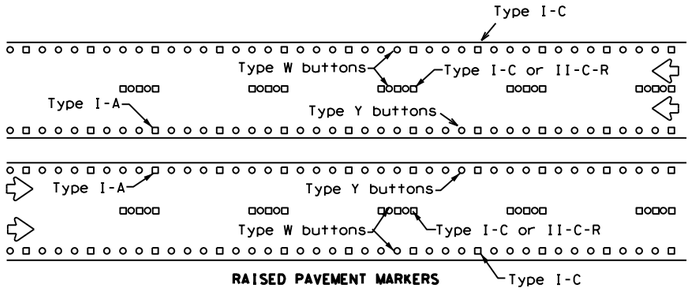
RAISED PAVEMENT MARKERS - PATTERN B

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



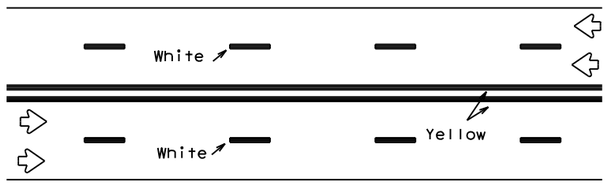
REFLECTORIZED PAVEMENT MARKINGS



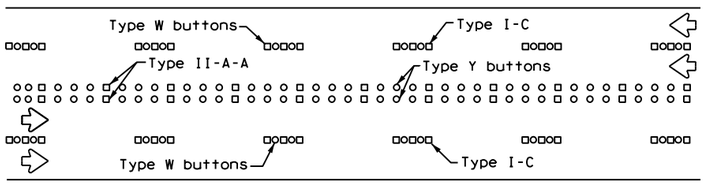
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



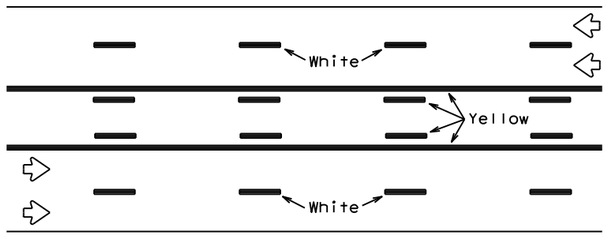
REFLECTORIZED PAVEMENT MARKINGS



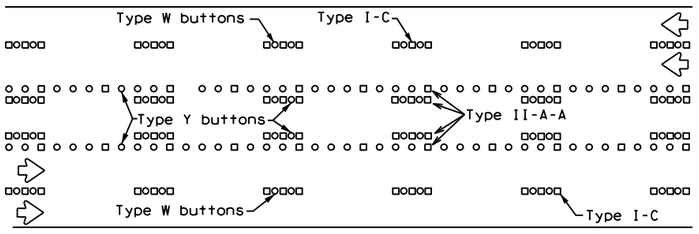
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

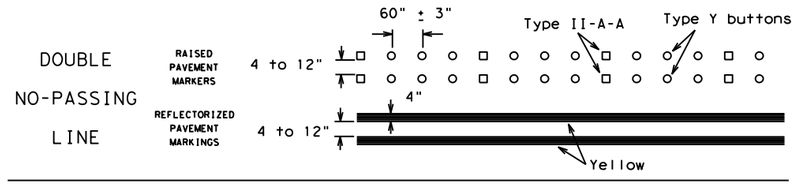
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

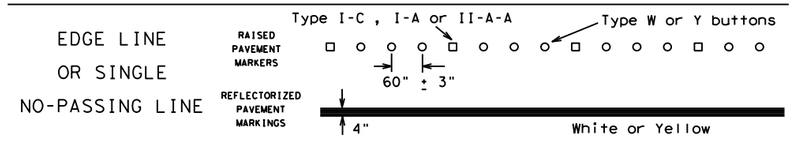
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

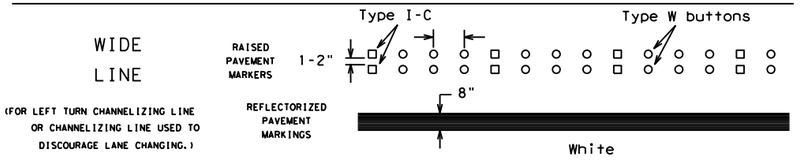


EDGE LINE OR SINGLE NO-PASSING LINE



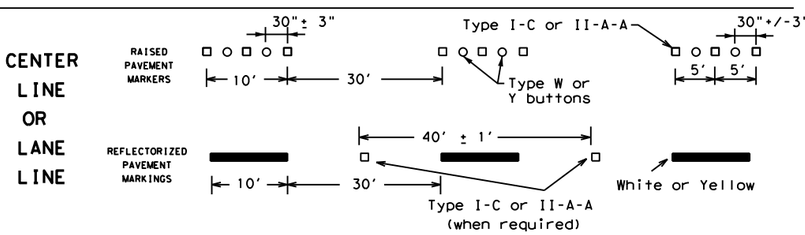
WIDE LINE

(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)

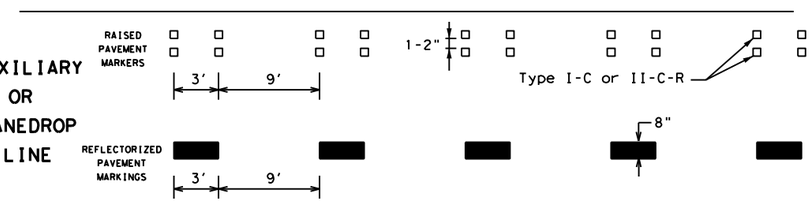


BROKEN LINES

CENTER LINE OR LANE LINE

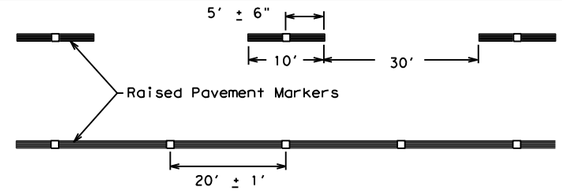


AUXILIARY OR LANEDROP LINE



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."

SHEET 12 OF 12

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-21

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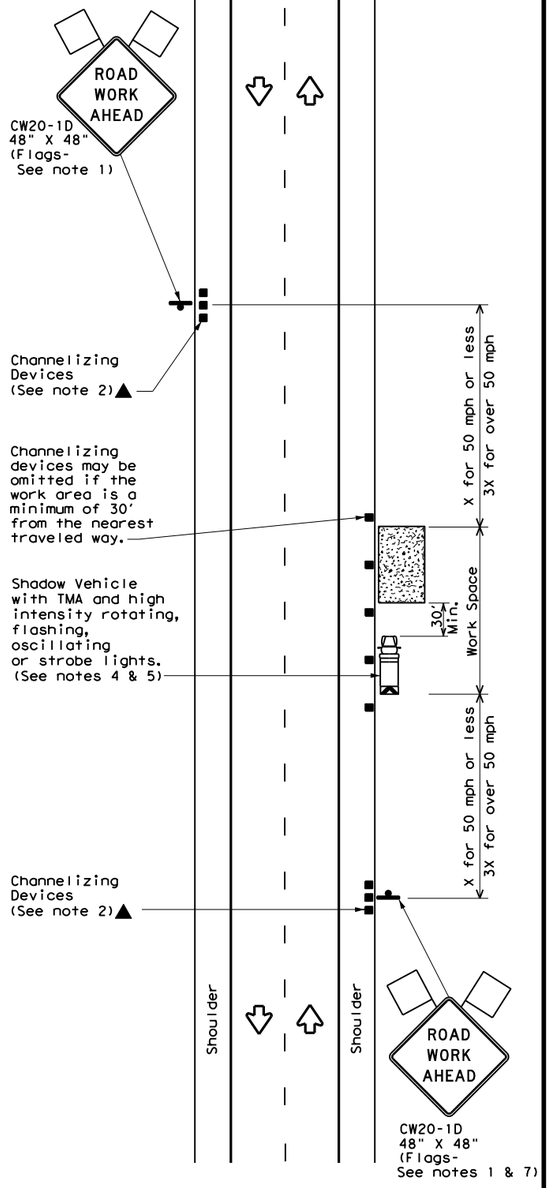
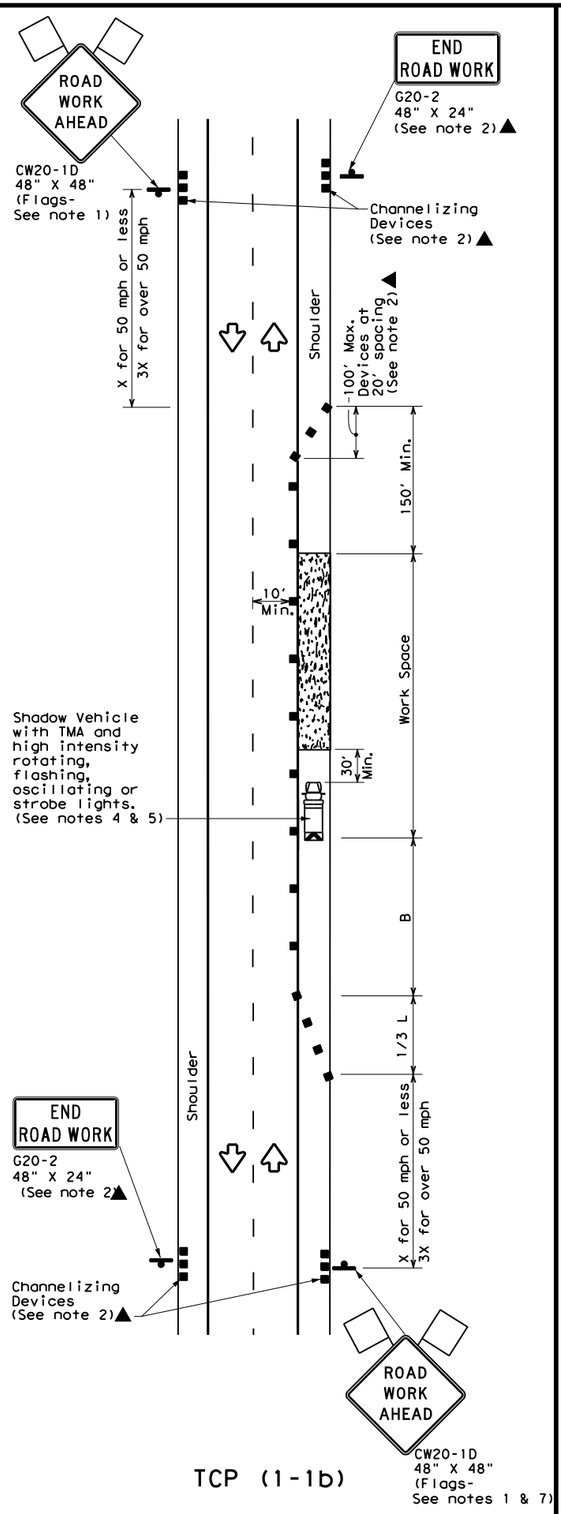


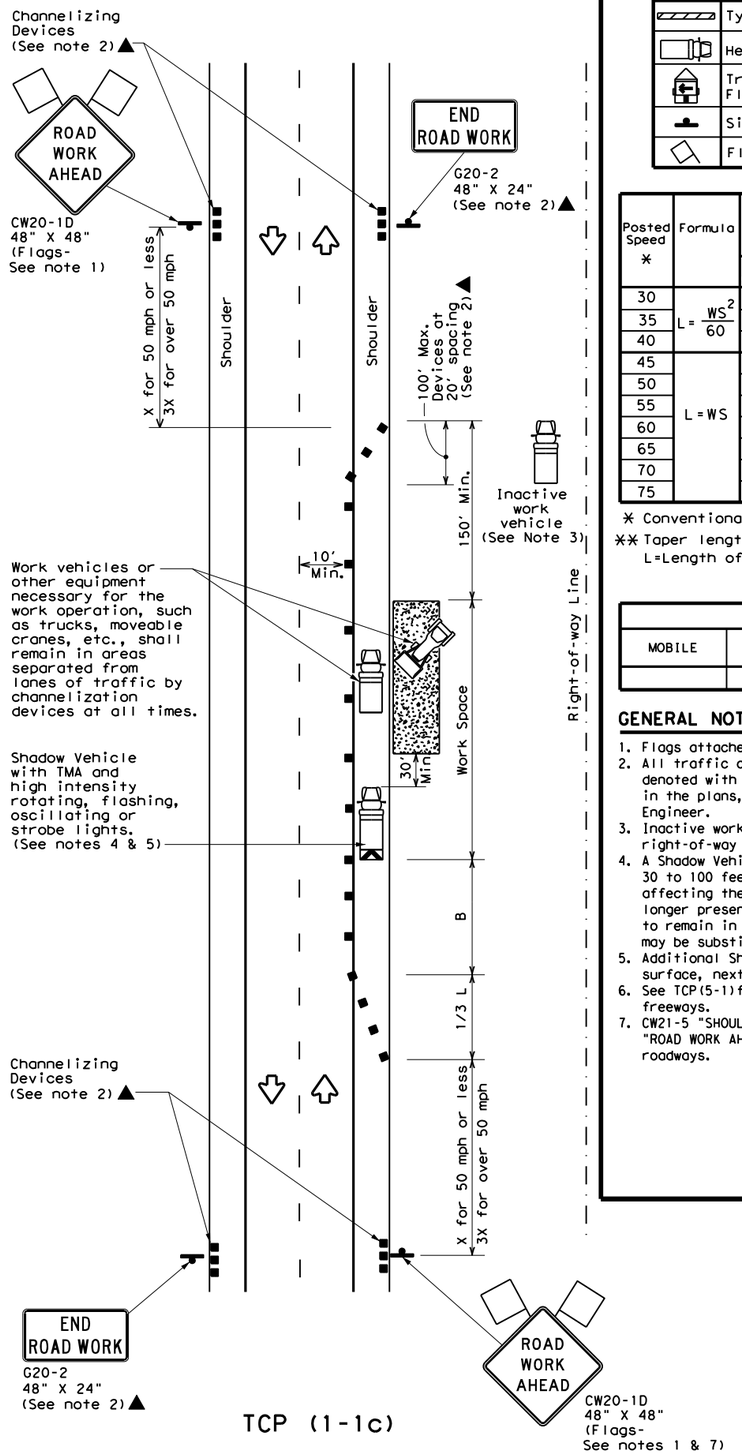
TCP (1-1a)

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	0568	01	052,ETC.	SH 34
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12	DAL	ELLIS		56
1-97 2-18				

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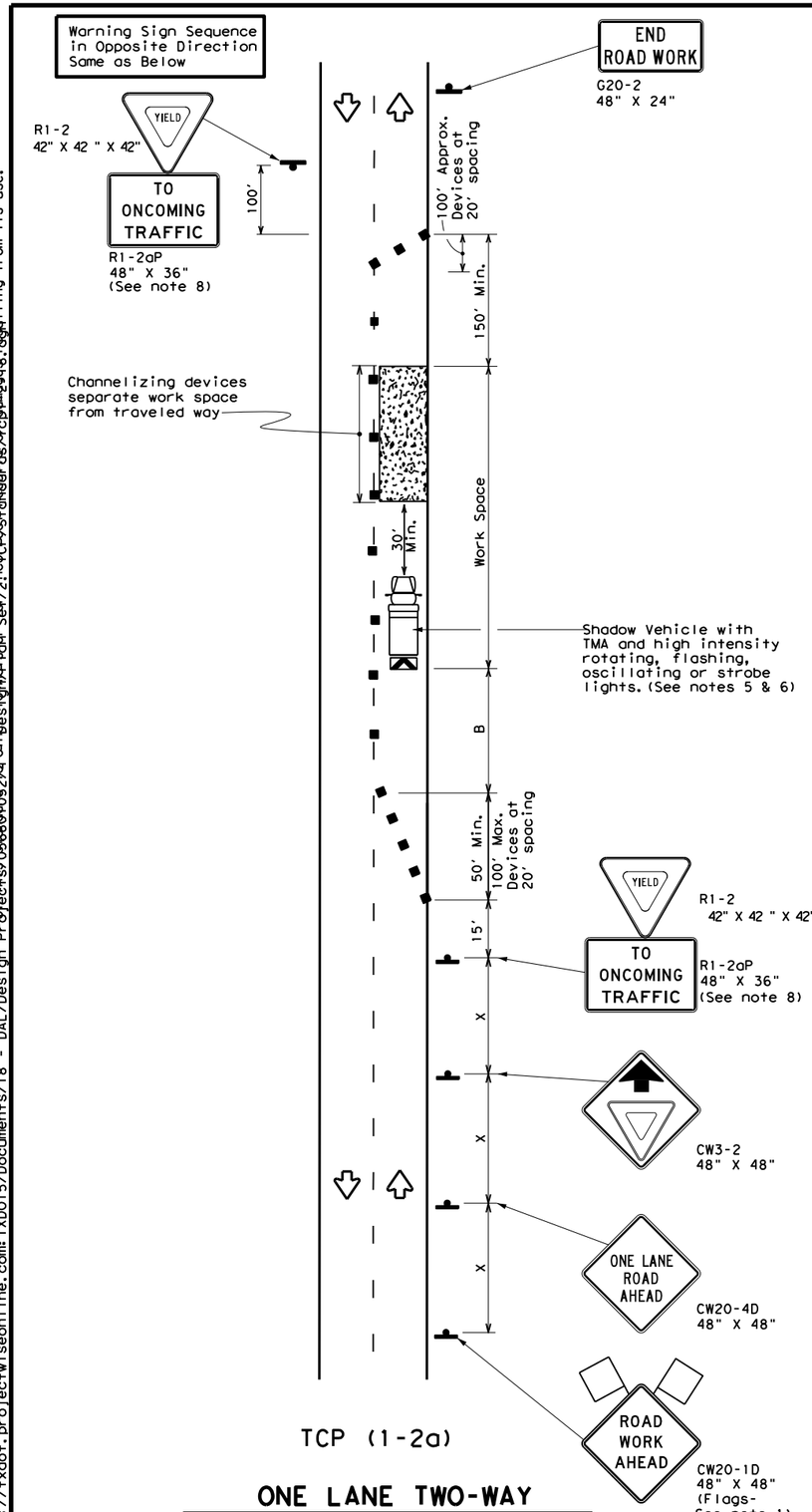
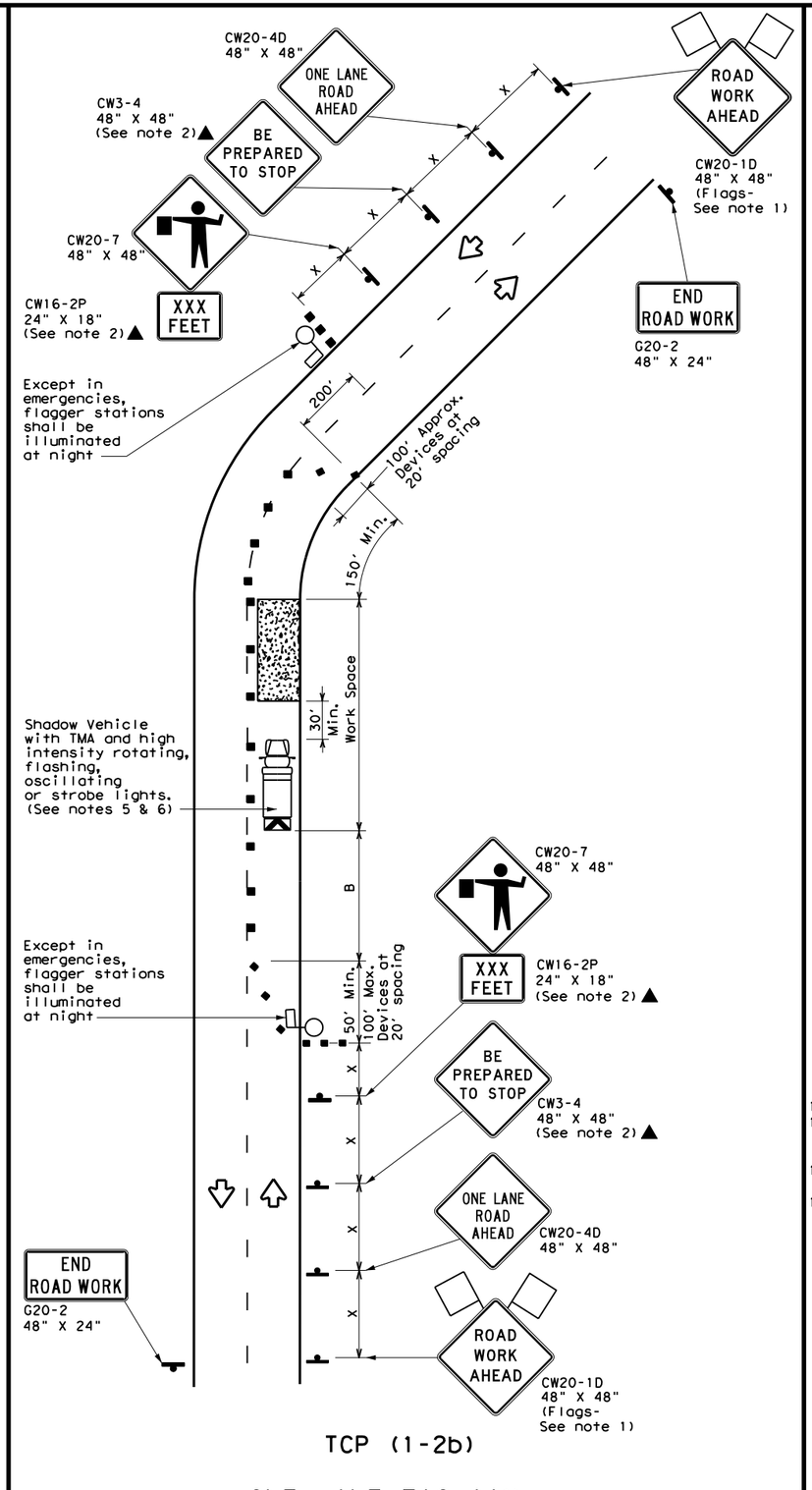


TCP (1-2a)

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.

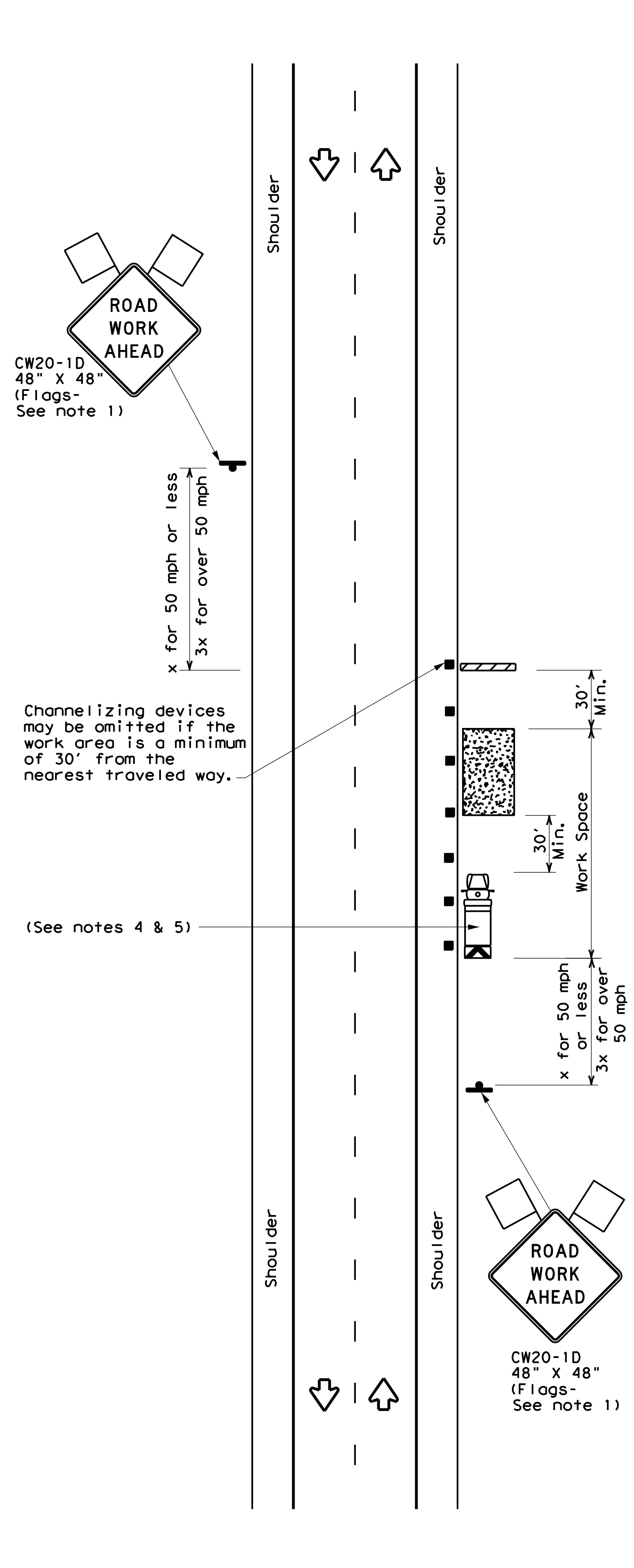
Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP(1-2)-18

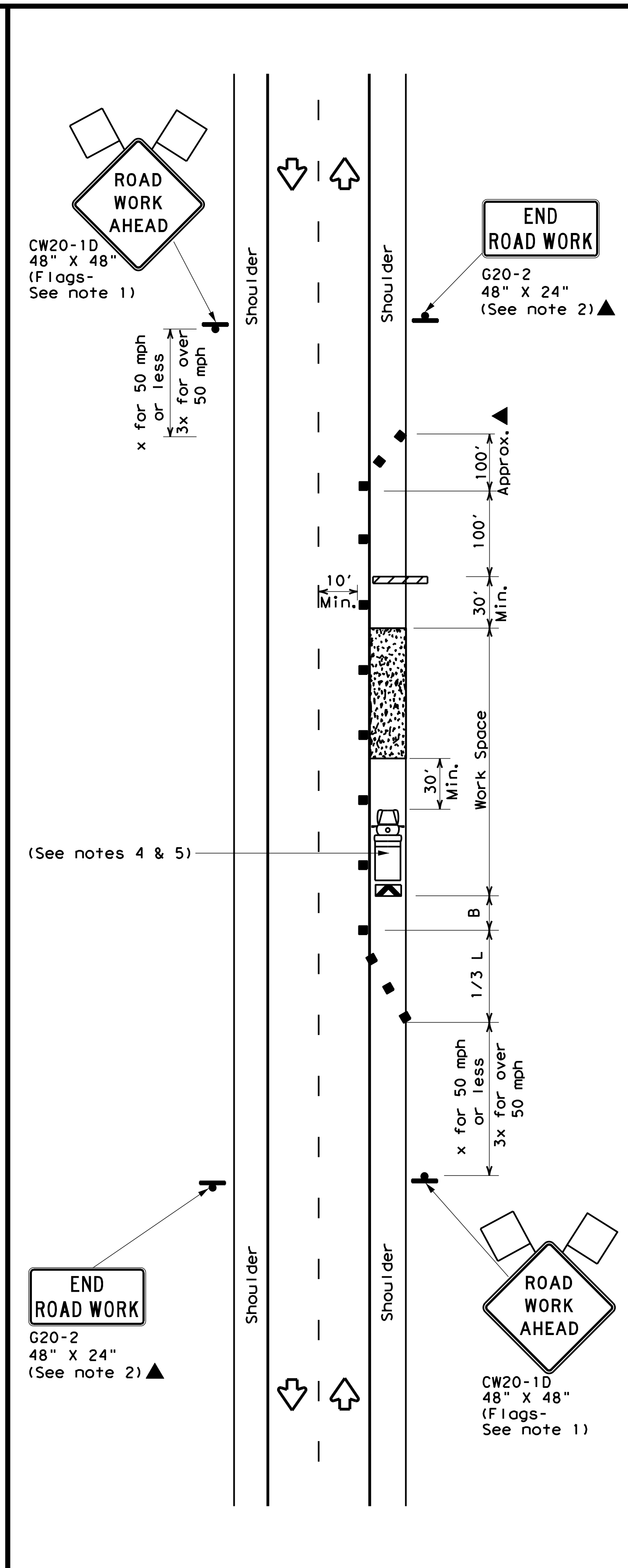
FILE: tcp1-2-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-90 4-98 2-94 2-12 1-97 2-18	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		57



TCP (2-1a)

WORK SPACE NEAR SHOULDER

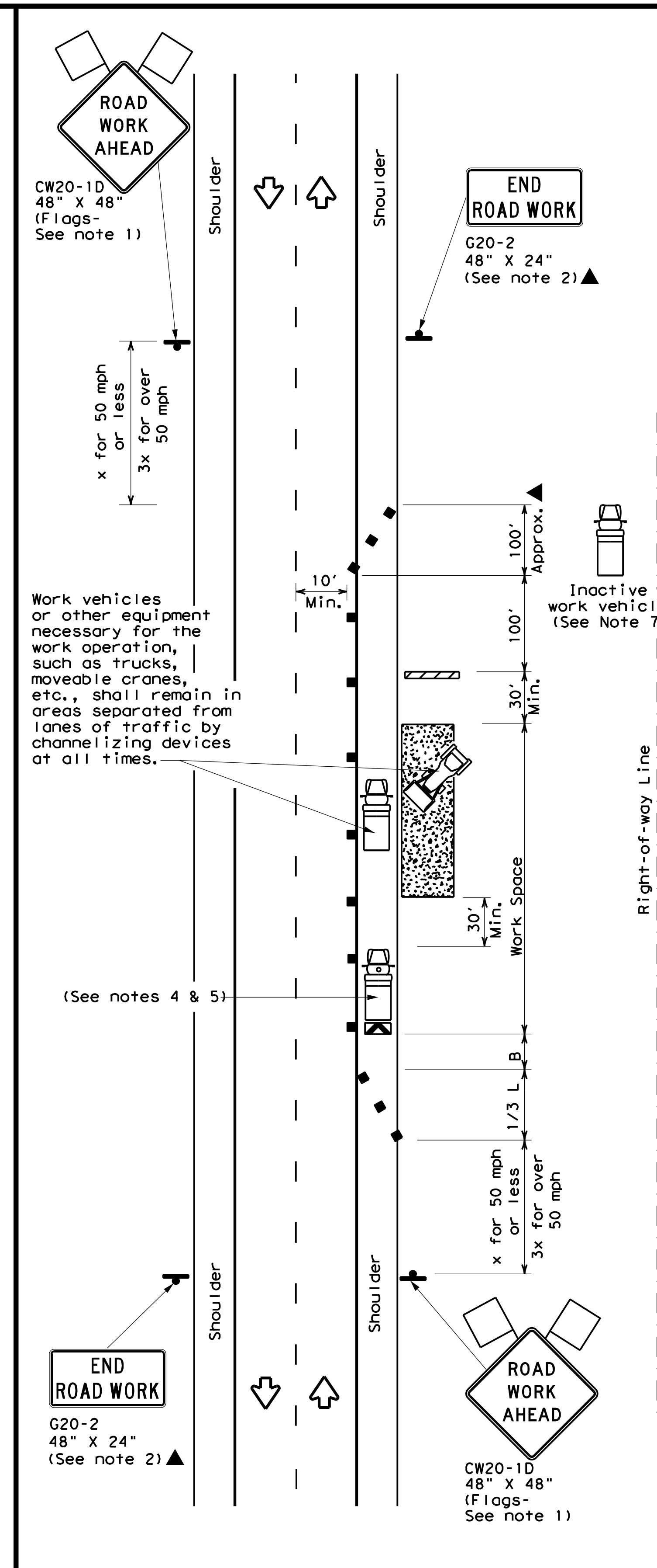
Conventional Roads



TCP (2-1b)

WORK SPACE ON SHOULDER

Conventional Roads



TCP (2-1c)

WORK VEHICLES ON SHOULDER

Conventional Roads

LEGEND

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

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
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

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© TxDOT December 1985	CONT 0568	SECT 01	JOB 052,ETC.	HIGHWAY SH 34
REVISIONS 2-94 4-98 8-95 2-12 1-97 2-18	DIST DAL		COUNTY ELLIS	SHEET NO. 58

161

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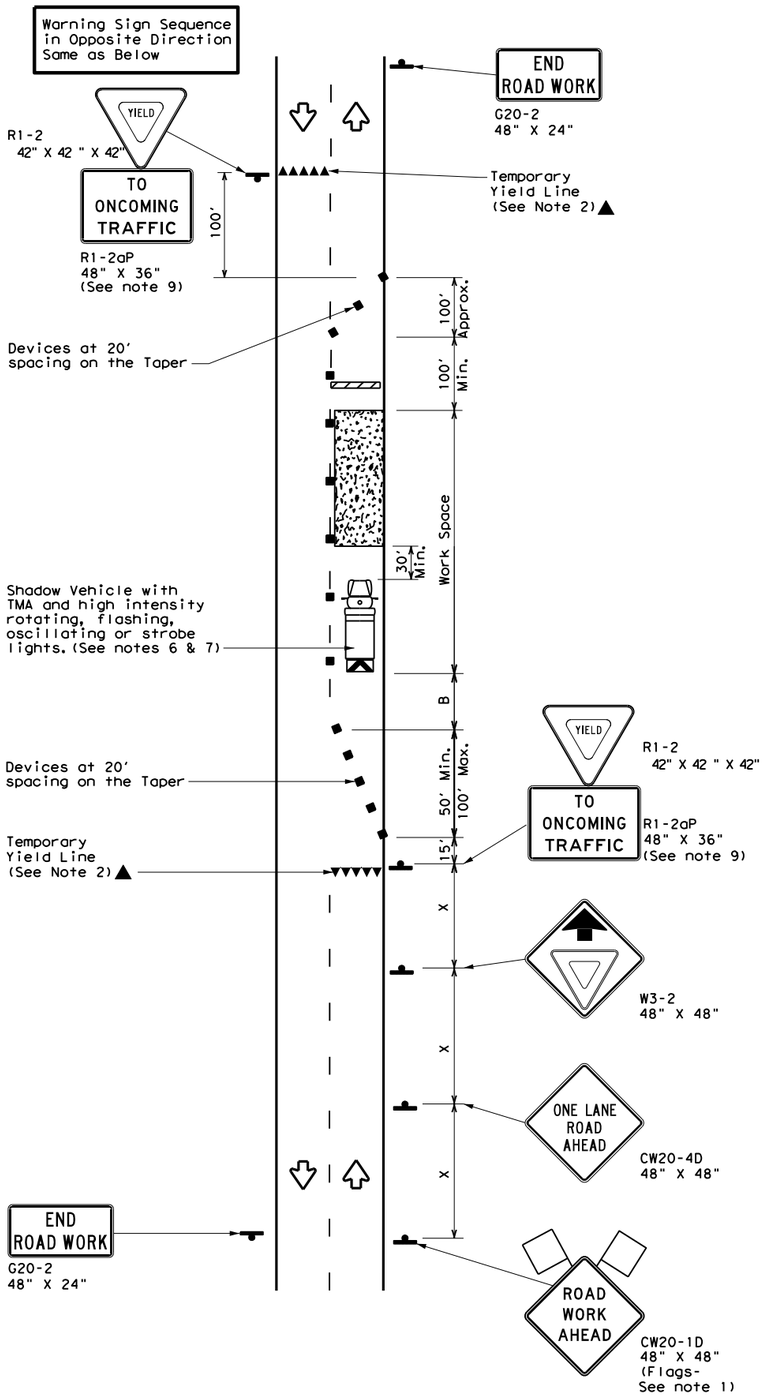
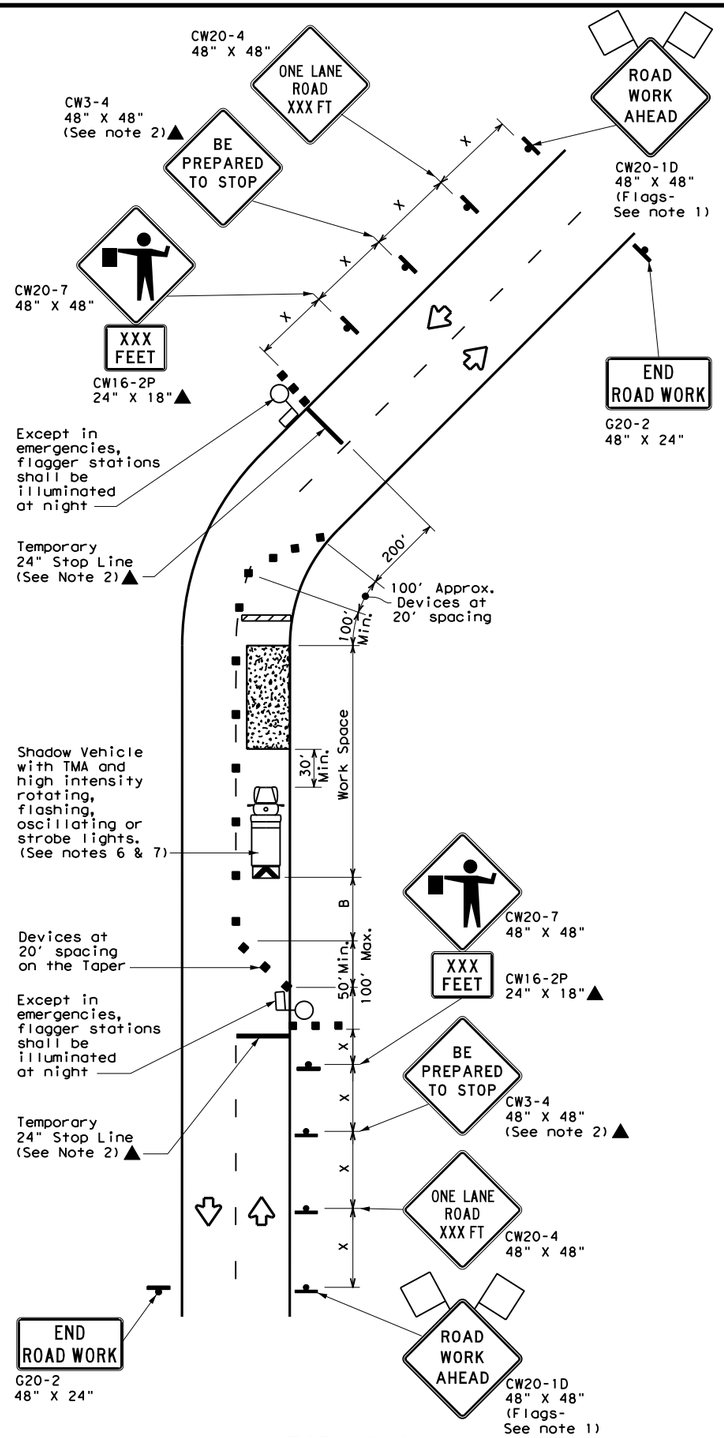


TCP (2-2a)
2-LANE ROADWAY WITHOUT PAVED SHOULDERS
ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
(Less than 2000 ADT - See Note 9)



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

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©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 8-95 3-03 1-97 2-12 4-98 2-18	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		59

DATE:
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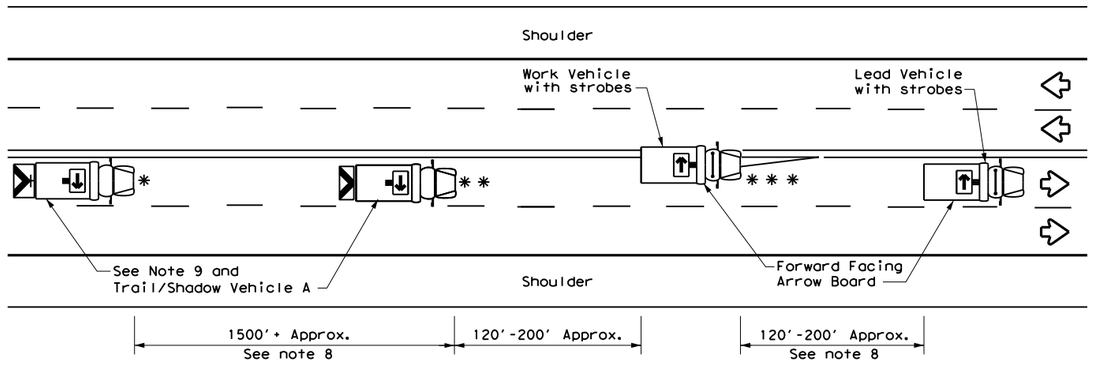
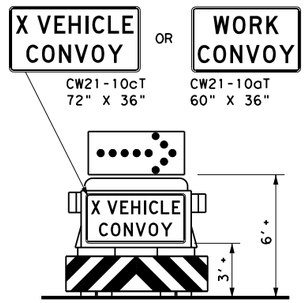


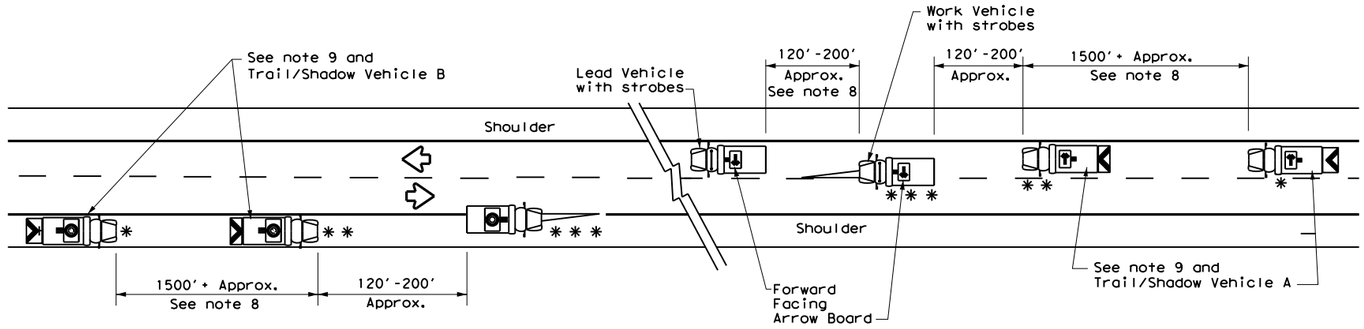
TCP (3-1a)

UNDIVIDED MULTILANE ROADWAY



TRAIL/SHADOW VEHICLE A

with RIGHT Directional display Flashing Arrow Board

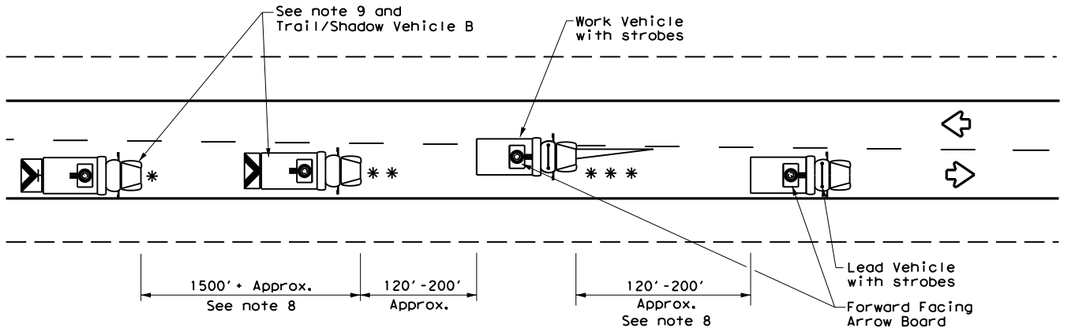


WORK ON SHOULDER

WORK ON TRAVEL LANE

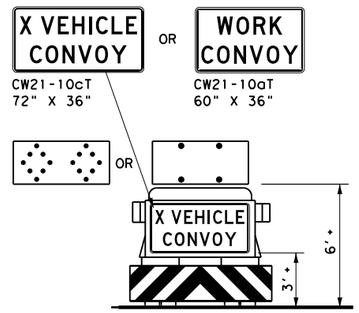
TCP (3-1b)

TWO-WAY ROADWAY WITH PAVED SHOULDERS



TCP (3-1c)

TWO-WAY ROADWAY WITHOUT PAVED SHOULDERS



TRAIL/SHADOW VEHICLE B

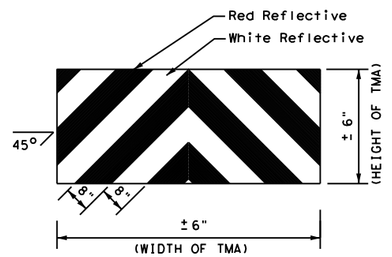
with Flashing Arrow Board in CAUTION display

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	0568	01	052,ETC.	SH 34
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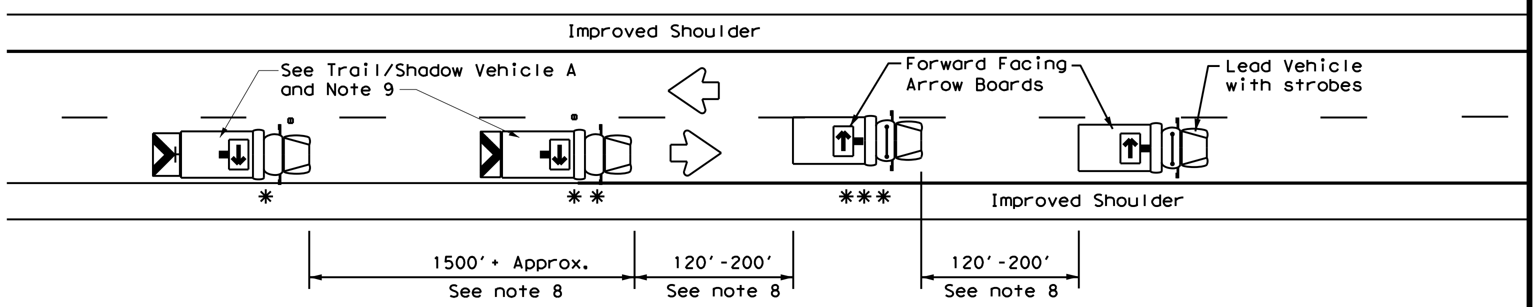
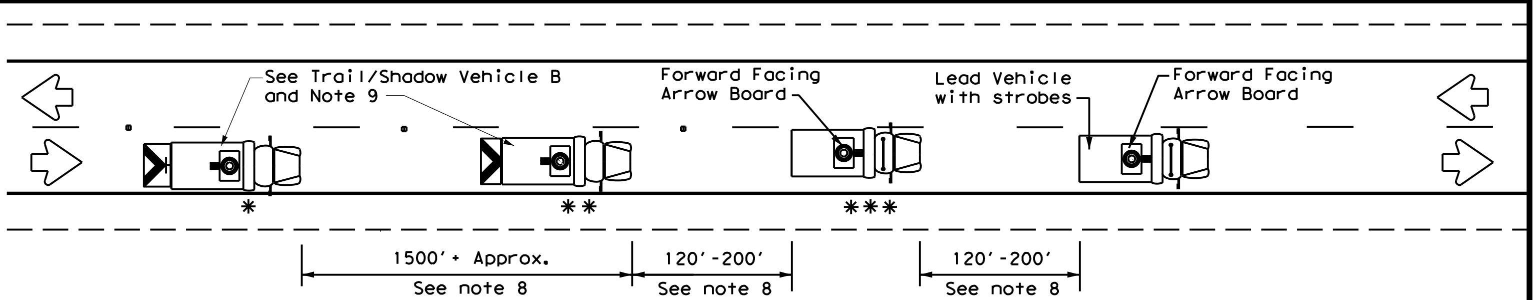
	DAL	ELLIS		60



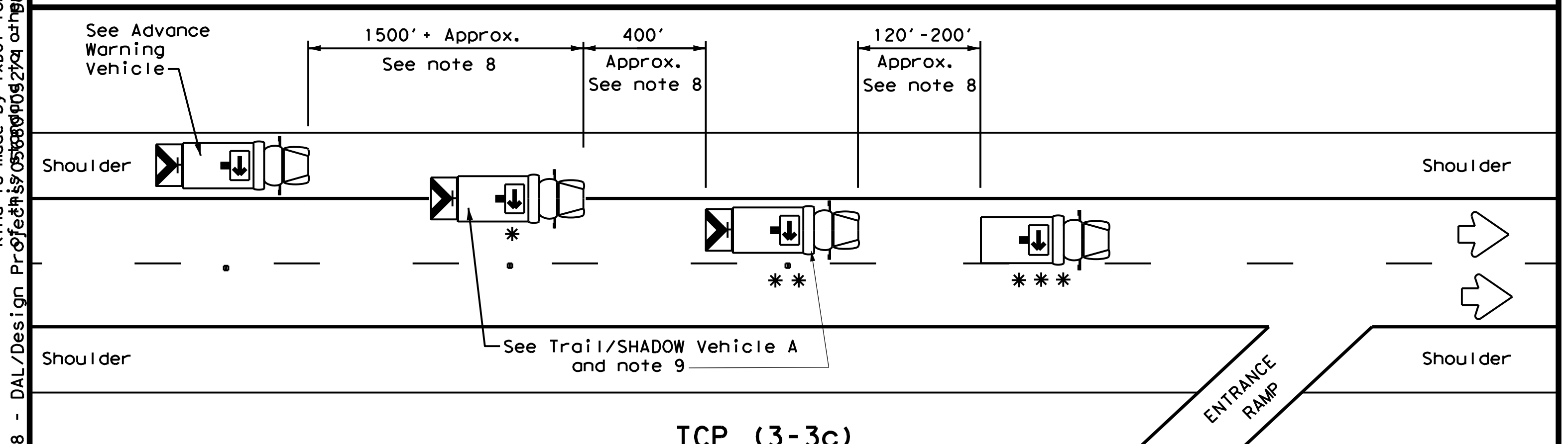
TCP (3-3a)

TWO LANE HIGHWAY WITH PAVED SHOULDERS
(WORK ON TRAVEL LANE)



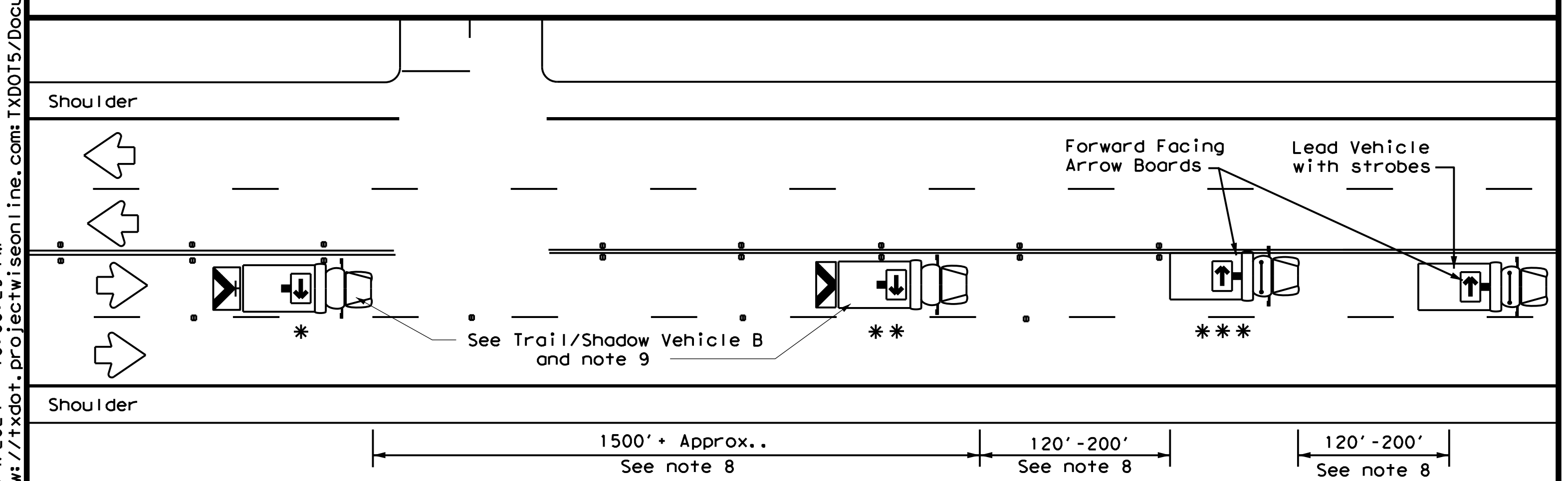
TCP (3-3b)

TWO LANE HIGHWAY WITHOUT PAVED SHOULDERS
(WORK ON TRAVEL LANE)



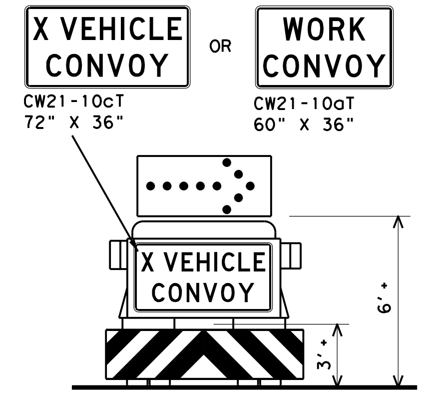
TCP (3-3c)

DIVIDED MULTILANE HIGHWAY



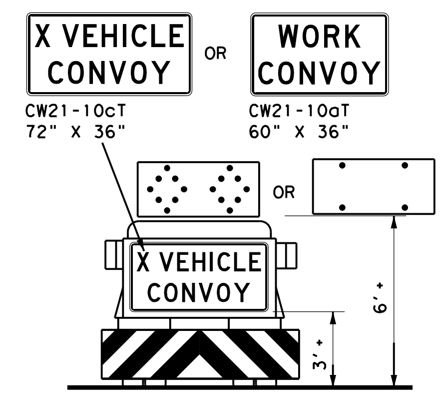
TCP (3-3d)

UNDIVIDED MULTILANE HIGHWAY



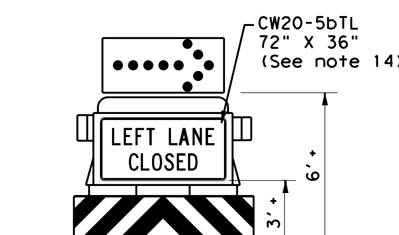
TRAIL/SHADOW VEHICLE A

with RIGHT Directional display Flashing Arrow Board

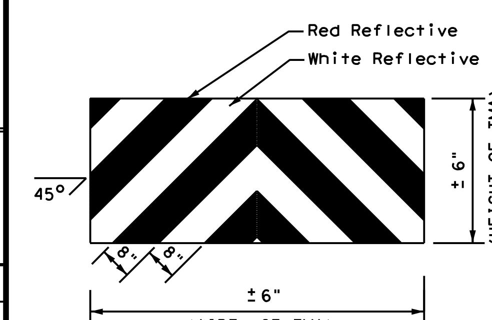


TRAIL/SHADOW VEHICLE B

with Flashing Arrow Board in Caution Mode



ADVANCE WARNING VEHICLE



STRIPING FOR TMA

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 on two way roads the WORK vehicle must have an arrow board. For divided roadways, the arrow board on the WORK vehicle is optional based on the type of work being performed. 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, ADVANCE WARNING 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 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. For divided highways with two or three lanes in one direction, the appropriate LEFT LANE CLOSED (CW20-5bTL), RIGHT LANE CLOSED (CW20-5bTR), or CENTER LANE CLOSED (CW20-5dT) sign should be used on the Advance Warning Vehicle. As an option, a portable changeable message sign (PCMS) or truck mounted changeable message sign (TMCMS) with a minimum character height of 12", and displaying the same legend may be substituted for these signs. An appropriate directional arrow display, simulating the size and legibility of the flashing arrow board may be used in the second phase of the PCMS/TMCMS message. When this is done, the arrow board will not be required on the Advance Warning Vehicle.
11. A double arrow shall not be displayed on the arrow board on the Advance Warning Vehicle.
12. For divided highways with three or four lanes in each direction, use TCP(3-2).
13. Standard diamond shape versions of the CW20-5 series signs may be used as an option if the rectangular signs shown are not available.
14. The Advance Warning Vehicle may straddle the edgeline when Shoulder width makes it necessary.
15. 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.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
MOBILE OPERATIONS
RAISED PAVEMENT MARKER INSTALLATION/ REMOVAL
TCP(3-3)-14

FILE: tcp3-3.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT September 1987	CONT	SECT	JOB	HIGHWAY
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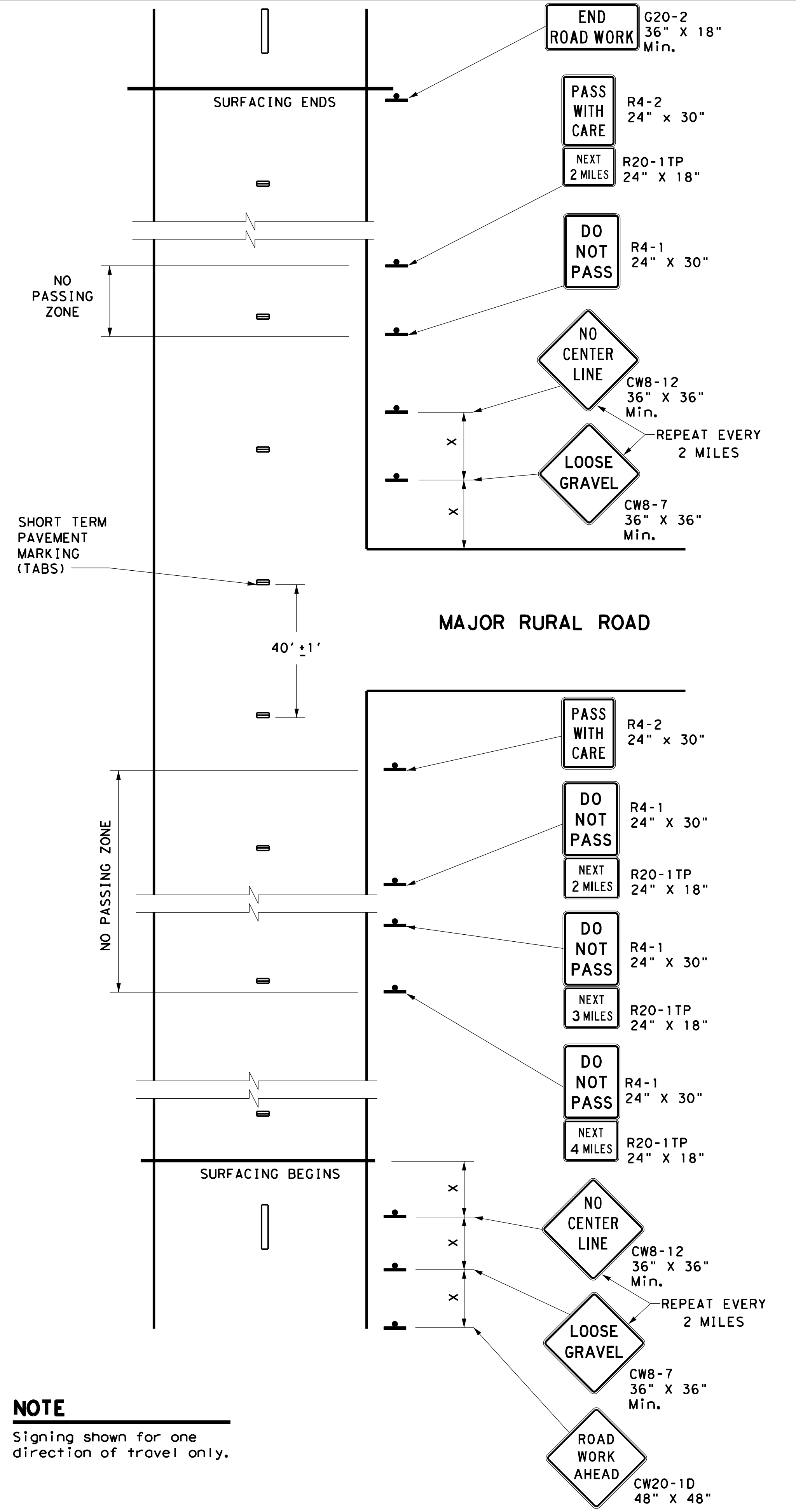
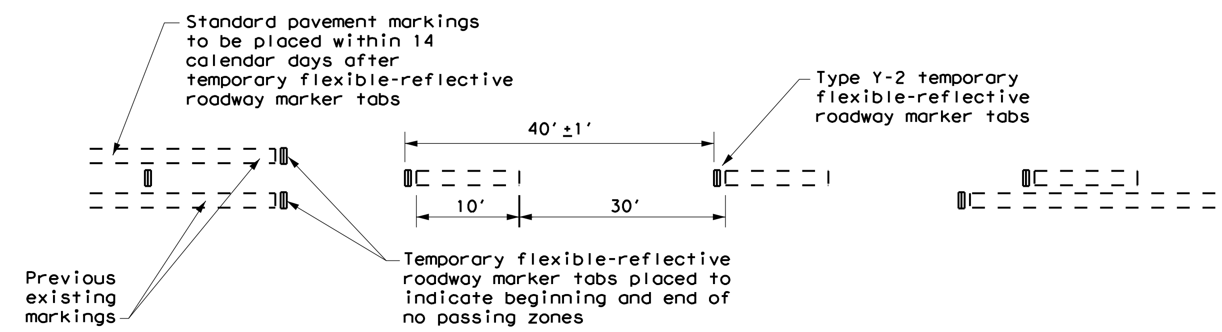


NOTE

Signing shown for one direction of travel only.

NO PASSING ZONES ON TWO-LANE TWO-WAY ROADS



TABS ON CENTERLINES OF TWO-LANE TWO-WAY ROADS

For seal coat, micro-surface or similar operations

"DO NOT PASS" SIGN (R4-1) 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 prohibited 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 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 windshield 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 days 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. R4-1 and R4-2 are to remain in place until standard pavement markings are installed.

"NO CENTER LINE" SIGN (CW8-12)

A. Center line markings are yellow pavement markings that delineate the separation of travel 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 centerline), a NO CENTER LINE (CW8-12) sign should be erected at the beginning of the work area, at approximately 2 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 standard pavement markings are installed.

"LOOSE GRAVEL" SIGN (CW8-7)

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 2 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.

PAVEMENT MARKINGS

A. Temporary markings for surfacing projects shall be Temporary Flexible-reflective Roadway Marker Tabs 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 (2) days before the surfacing is applied. After the surfacing is rolled and swept, the cover over the reflective strip shall be removed.

B. Tabs shall not be used to simulate edge lines.

C. Tab placement for overlay/inlay operations shall be as shown on the WZ(STPM) standard sheet.

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 in the sequence shown following the OBEY WARNING SIGNS STATE LAW (R20-3T) and the TRAFFIC FINES DOUBLE (R20-5T) sign, and 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 signs will then be repeated as described above.

Posted Speed *	Minimum Sign Spacing "X" Distance
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. The traffic control devices detailed on this sheet will be furnished and erected as directed by the Engineer on sections of roadway where tabs must be placed prior to the surfacing operation which will cover or obliterate the existing pavement markings.

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 Long-Term / Intermediate-Term 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 will 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 Operations Division Standard

TRAFFIC CONTROL DETAILS FOR SURFACING OPERATIONS

TCP(7-1)-13

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©TxDOT March 1991	CONT 0568	SECT 01	JOB 052,ETC.	HIGHWAY SH 34
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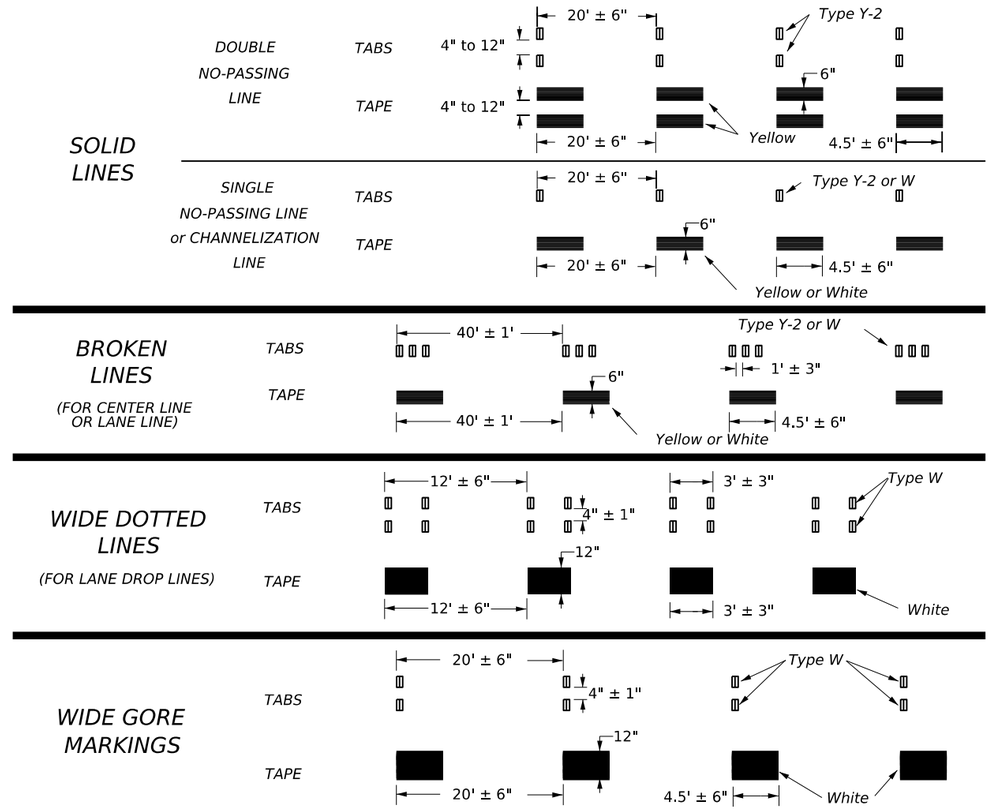
WORK ZONE SHORT TERM PAVEMENT MARKINGS DETAILS



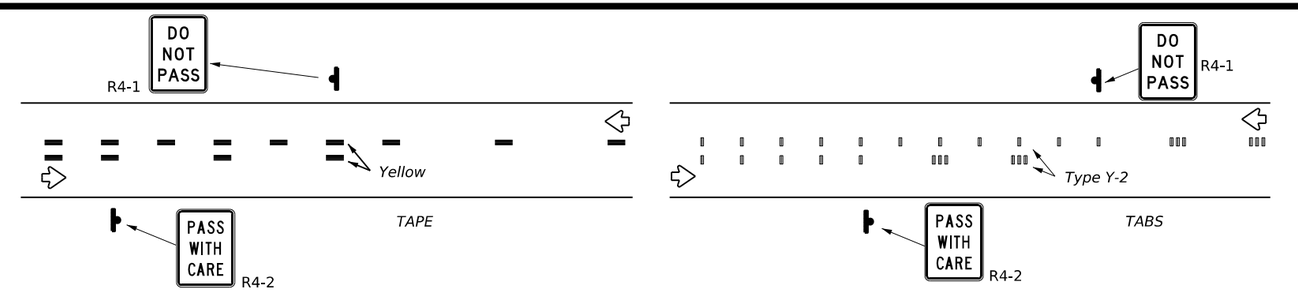
NOTES:

1. Short term pavement markings may be prefabricated markings (stick down tape) or temporary flexible reflective roadway marker tabs unless otherwise specified elsewhere in plans.
2. Short term pavement markings shall NOT be used to simulate edge lines.
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.
4. Temporary flexible-reflective roadway marker tabs will require normal maintenance replacement when used on roadways with an ADT per lane of up to 7500 vehicles with no more than 10% truck mix. When roadways exceed these values, additional maintenance replacement of devices should be planned.
5. No segment of roadway open to traffic shall remain without permanent pavement markings for a period greater than 14 calendar days. 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.
6. For two lane, two-way roadways, DO NOT PASS signs shall be erected to mark the beginning of sections where passing is prohibited and PASS WITH CARE signs shall be erected to mark the beginning of sections where passing is permitted. Signs shall be in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and may be used to indicate the limits of no-passing zones for up to 14 calendar days. Permanent pavement markings should then be placed.
7. For low volume two lane, two-way roadways of 4000 ADT or less, no-passing lines may be omitted when approved by the Engineer. DO NOT PASS and PASS WITH CARE signs shall be erected (see note 6).
8. 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 allowed for this purpose.

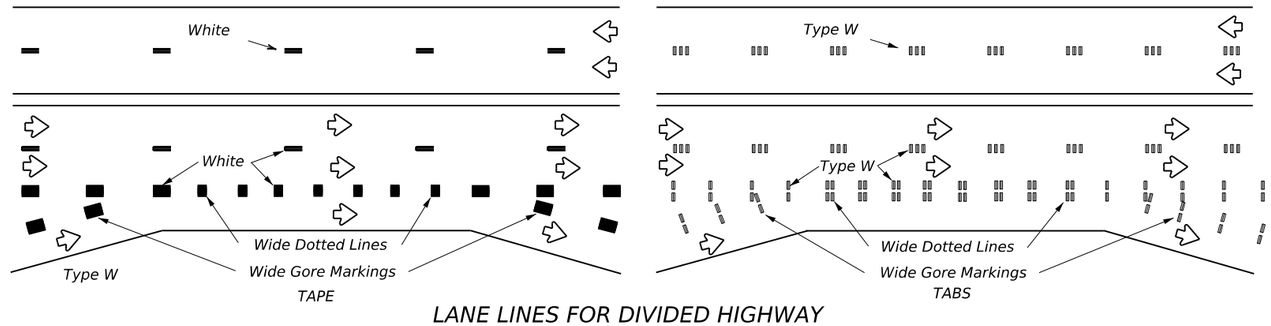
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS (TABS)

1. Temporary flexible-reflective roadway marker tabs detailed on this sheet will be designated Type Y-2 (two amber reflective surfaces with 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).
2. Tabs shall meet requirements of Departmental Material Specification DMS-8242.
3. 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.
4. 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 3.

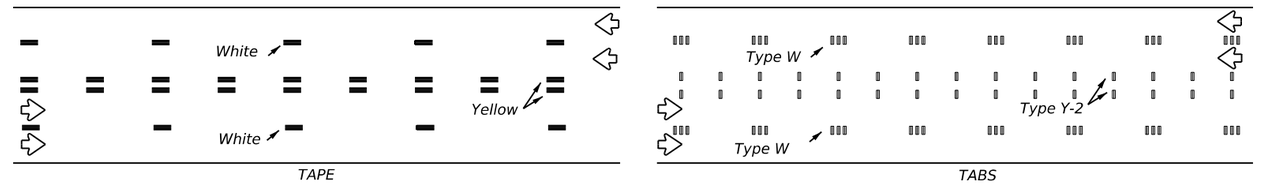
WORK ZONE SHORT TERM PAVEMENT MARKINGS PATTERNS



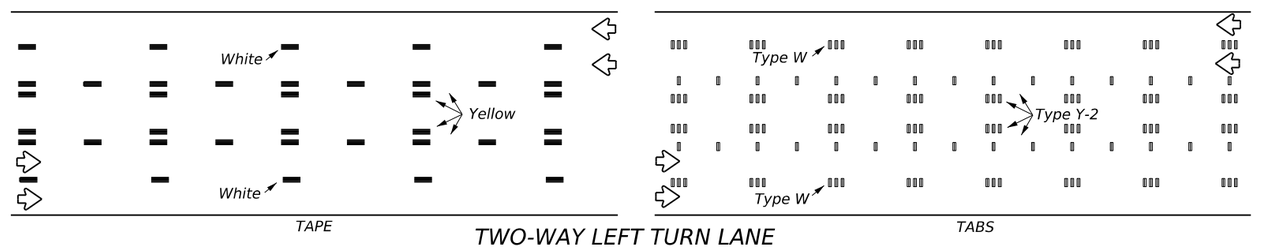
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO LANE TWO-WAY HIGHWAYS



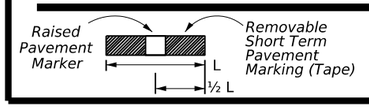
LANE LINES FOR DIVIDED HIGHWAY



LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



TWO-WAY LEFT TURN LANE



If raised pavement markers are used to supplement REMOVABLE short term markings, the markers shall be applied to the top of the tape at the approximate mid length of the tape. This allows an easier removal of raised markers and tape.

PREFABRICATED PAVEMENT MARKINGS

1. Temporary Removable Prefabricated Pavement Markings shall meet the requirements of DMS-8241.
2. Non-removable Prefabricated Pavement Markings shall meet the requirements of either DMS-8240 "Permanent Prefabricated Pavement Markings" or DMS-8243 "Temporary Costruction-Grade Prefabricated Pavement Markings."

RAISED PAVEMENT MARKERS

1. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and DMS-4200.

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

1. DMSs referenced above can be found along with embedded links to their respective MPLs at the following website:

http://www.txdot.gov/business/contractors_consultants/material_specifications/default.htm

Texas Department of Transportation

Traffic Safety Division Standard

WORK ZONE SHORT TERM PAVEMENT MARKINGS

WZ(STPM)-23

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©TxDOT February 2023	CONT	SECT	JOB	HIGHWAY
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1-97 2-23	DAL	ELLIS		63
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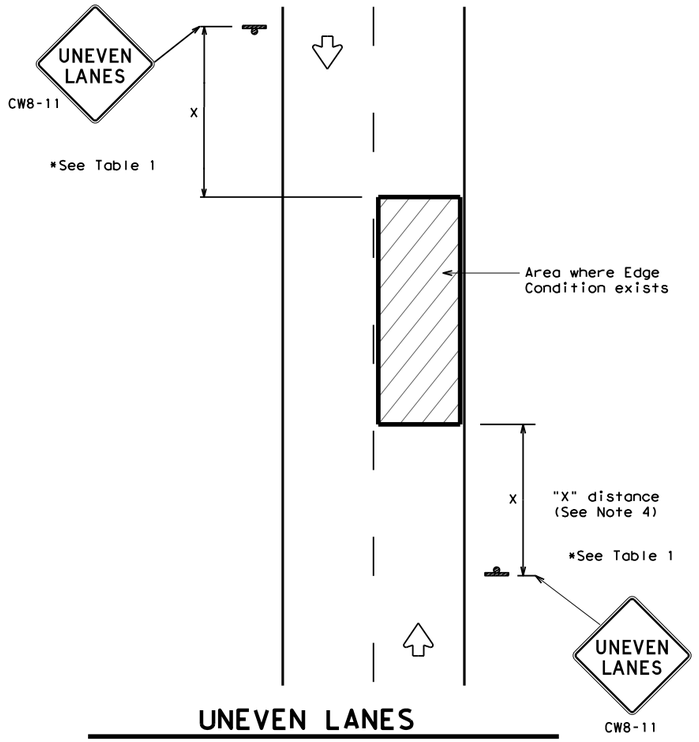
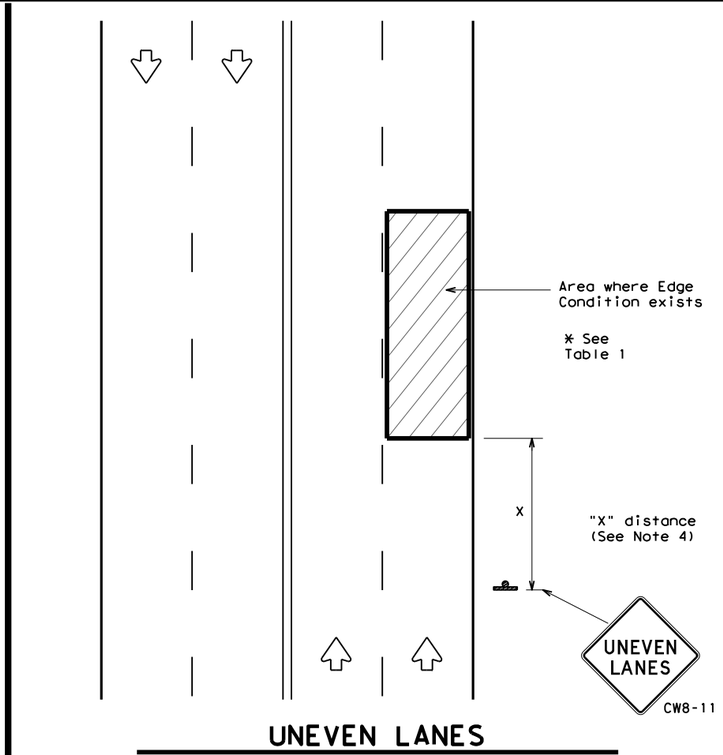
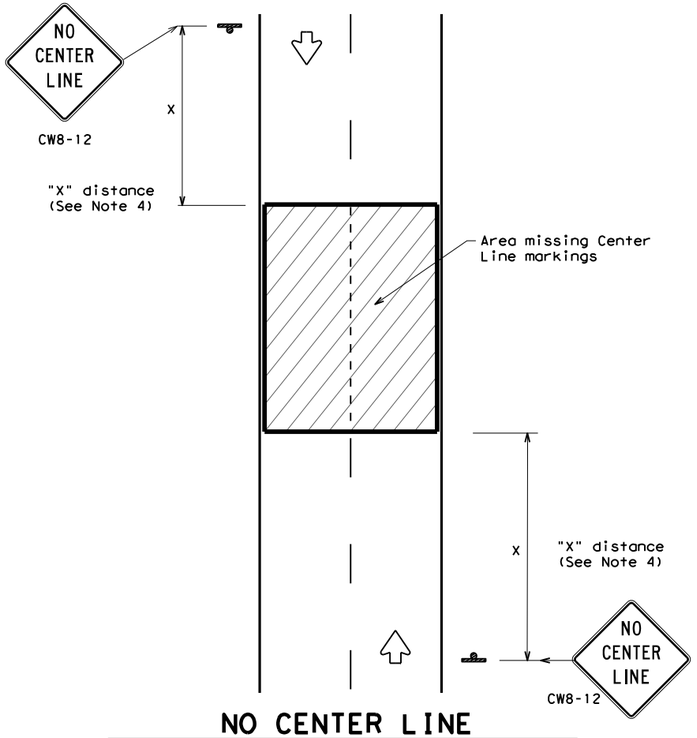


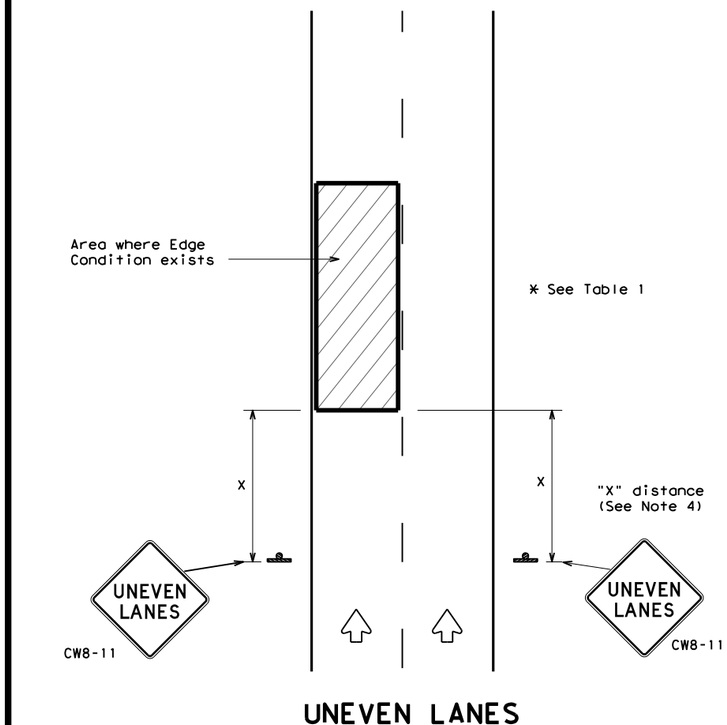
UNEVEN LANES
TWO LANE CONVENTIONAL ROAD



UNEVEN LANES
FOUR LANE CONVENTIONAL ROAD



NO CENTER LINE
TWO LANE CONVENTIONAL ROAD



UNEVEN LANES
DIVIDED ROADWAY

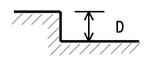
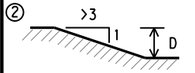
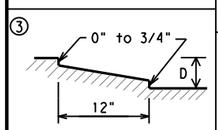
DEPARTMENTAL MATERIAL SPECIFICATIONS	
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY (REMOVABLE) PREFABRICATED PAVEMENT MARKINGS	DMS-8241
SIGN FACE MATERIALS	DMS-8300

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
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8-95 2-98 7-13	DIST	COUNTY		SHEET NO.
1-97 3-03	DAL	ELLIS		64

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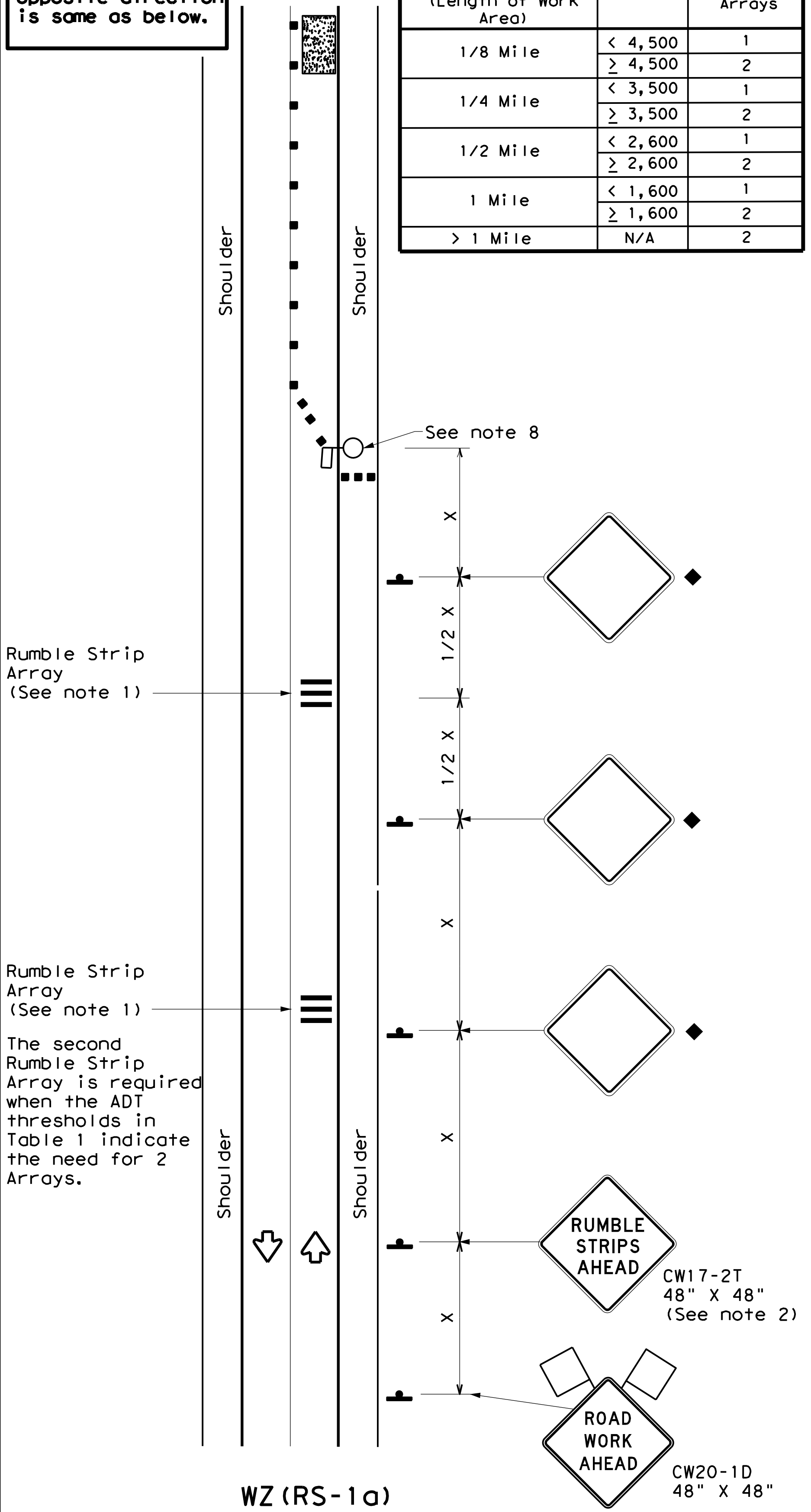
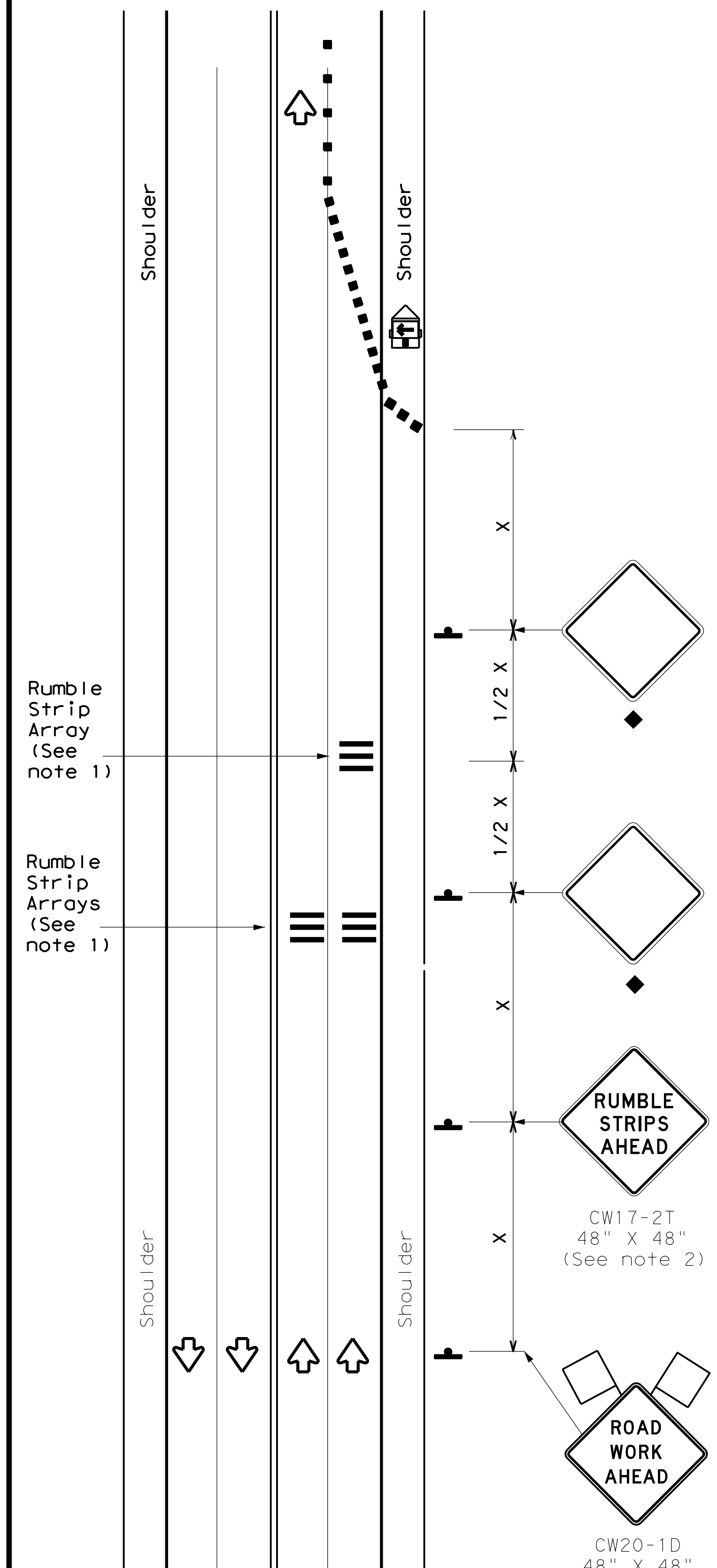
Warning sign and rumble strip sequence in opposite direction is same as below.

TABLE 1		
Flagger to Flagger (Length of Work Area)	ADT	# of Rumble Strip Arrays
1/8 Mile	< 4,500	1
	≥ 4,500	2
1/4 Mile	< 3,500	1
	≥ 3,500	2
1/2 Mile	< 2,600	1
	≥ 2,600	2
1 Mile	< 1,600	1
	≥ 1,600	2
> 1 Mile	N/A	2



WZ(RS-1a)

RUMBLE STRIPS ON ONE-LANE TWO-WAY APPLICATION



WZ(RS-1b)

RUMBLE STRIPS FOR LANE CLOSURE ON CONVENTIONAL ROADWAY

GENERAL NOTES

1. Each Rumble Strip Array should consist of three rumble strips spaced center to center at the spacing shown in Table 2, placed transverse across the lane at locations shown.
2. The CW17-2T "RUMBLE STRIPS AHEAD" sign should be located after the CW20-1D "ROAD WORK AHEAD sign and spaced as shown. If traffic is observed to be queuing, or is expected to queue beyond the Rumble Strips, the CW17-2T sign and the first Rumble Strip Array may be located upstream of the CW20-1D sign as necessary to provide needed warning.
3. Temporary Rumble Strips will be considered subsidiary to Item 502, and shall be a product listed on the Compliant Work Zone Traffic Control Devices.
4. Remove Temporary Rumble Strips before removing the advanced warning signs.
5. Temporary Rumble Strips should not be used on horizontal curves, loose gravel, soft or bleeding asphalt, heavily rutted pavements or unpaved surfaces.
6. Temporary Rumble Strips shall be installed and maintained as per manufacturer's recommendations.
7. This standard sheet shall be used in conjunction with other appropriate TCP standard, TMUTCD typical application or project specific detail for the project.
8. The one-lane two-way application may utilize a flagger, an Automated Flagger Assistance Device (AFAD) or a Portable Traffic Signal (PTS).
9. Replace defective Temporary Rumble Strips as directed by the Engineer.
10. Temporary Rumble Strips may be used on freeways or expressways based on engineering judgment and written direction from the Engineer.

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

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
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
	✓	✓		

◆ Signs are for illustrative purposes only. Signs required may vary depending on the TCP, TMUTCD Typical Application, or project specific details for the project.

* For posted speeds in excess of 65 MPH, it is recommended that spacing is increased as speed limits increase. Increasing space between rumble strips will improve effectiveness.

TABLE 2	
Speed	Approximate distance between strips in an array
≤ 40 MPH	10'
> 40 MPH & ≤ 55 MPH	15'
= 60 MPH	20'
≥ 65 MPH	* 35'+

Texas Department of Transportation

Traffic Safety Division Standard

TEMPORARY RUMBLE STRIPS

WZ(RS)-22

FILE: wzrs22.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2012	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-14 1-22 4-16	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		65

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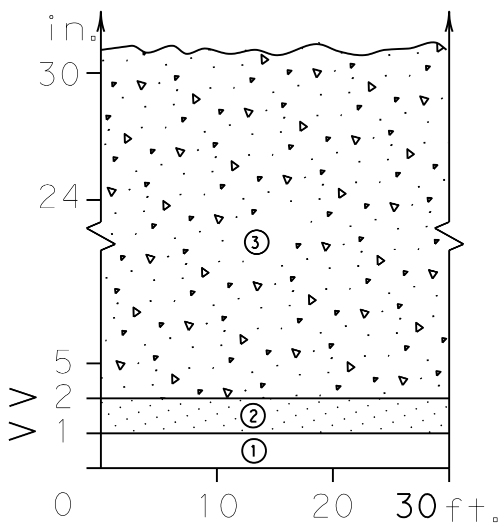
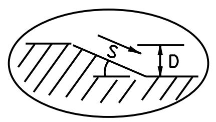
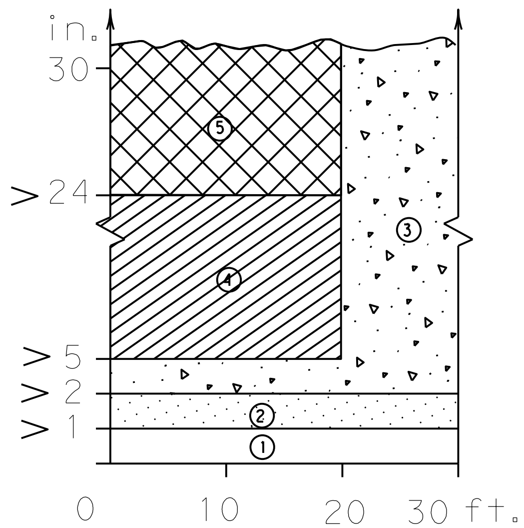
DEFINITION OF TREATMENT ZONES FOR VARIOUS EDGE CONDITIONS

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

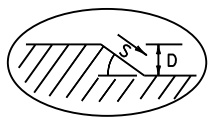


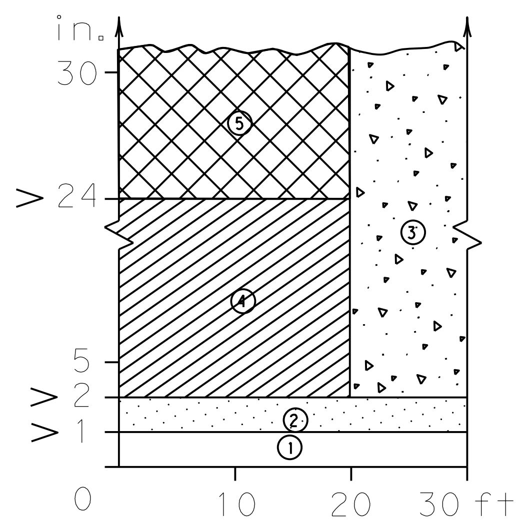
Edge Condition I
S = (3:1) (or flatter)





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





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

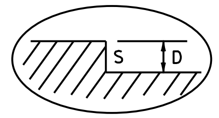
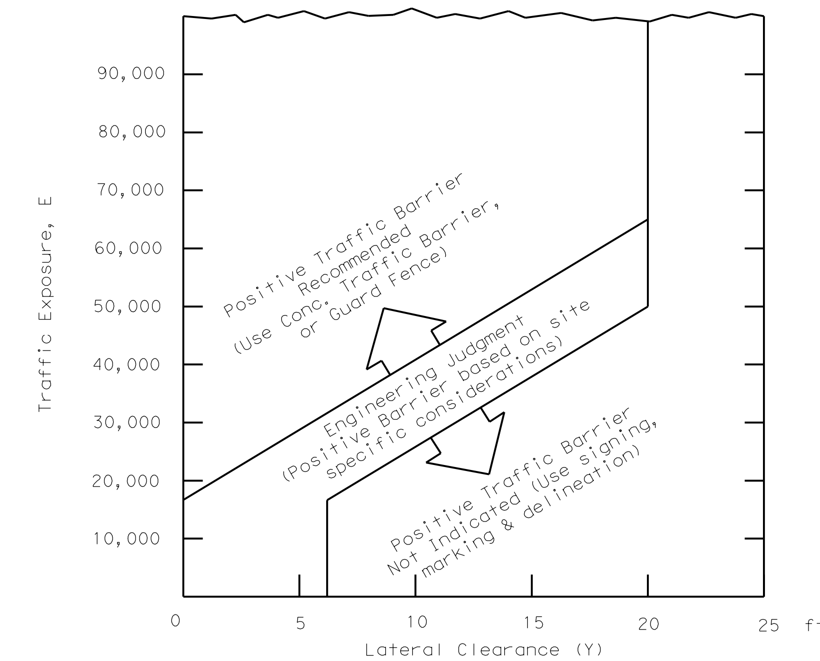
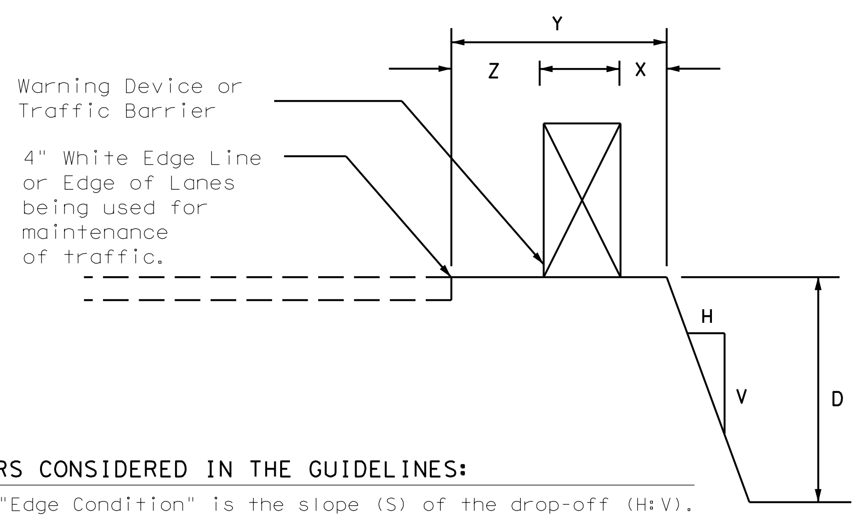


FIGURE-1: CONDITIONS INDICATING USE OF POSITIVE BARRIER FOR ZONE 5 ( )



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.



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.

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.

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.

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.

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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 03-01 08-01 9-21	0568	01	052,ETC.	SH 34
	DIST		COUNTY	SHEET NO.
	DAL		ELLIS	66

TSIT Project No: 2099999-2
TxDOT CSJ: 2984-01-017
Location: SH 34 from US 77 to SH 45, Ennis, Texas

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
PC-A	Westbound	32.19501871	-96.89795636	Approx. 400ft E. of IH35E		11.00	0 - 7.0	Hot Mix Asphalt Concrete
							7.0 - 11.00	Flexbase
							11.0 - 37.50	Subgrade
PC-B	Westbound	32.19501099	-96.89797667	Approx. 400ft E. of IH35E		18.00	0 - 6.0	Hot Mix Asphalt Concrete
							6.0 - 18.00	Flexbase
							18.0 - 38.00	Subgrade
PC-1	Eastbound	32.19170454	-96.89578932	Approx. 1800ft E. of IH35E		15.00	0 - 5.0	Hot Mix Asphalt Concrete
							5.0 - 15.00	Flexbase
							15.0 - 34.50	Subgrade
PC-2	Eastbound	32.19171136	-96.89576678	Approx. 1800ft E. of IH35E		16.00	0 - 7.0	Hot Mix Asphalt Concrete
							7.0 - 16.00	Flexbase
							16.0 - 35.00	Subgrade
PC-3	Westbound	32.18674283	-96.89242849	Approx. 3850ft E. of IH35E		17.00	0 - 7.0	Hot Mix Asphalt Concrete
							7.0 - 17.00	Flexbase
							17.0 - 23.00	Subgrade
PC-4	Westbound	32.18673568	-96.89245411	Approx. 3850ft E. of IH35E		25.00	0 - 9.0	Hot Mix Asphalt Concrete
							9.0 - 25.00	Flexbase
							25.0 - 27.00	Subgrade
PC-D	Eastbound	32.18343288	-96.89181708	Approx. 5100ft E. of IH35E		17.00	0 - 9.0	Hot Mix Asphalt Concrete
							9.0 - 17.00	Flexbase
							17.0 - 22.00	Subgrade
PC-E	Eastbound	32.18343974	-96.89179645	Approx. 500ft E. of US77		18.00	0 - 9.0	Hot Mix Asphalt Concrete
							9.0 - 18.00	Flexbase
							18.0 - 32.00	Subgrade

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SH 34

CORE DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		67

TSIT Project No: 2099999-2
TxDOT CSJ: 0568-01-052
Location: SH 34 from US 77 to SH 45, Ennis, Texas

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
PC-5	Westbound	32.18310002	-96.88969506	Approx. 500ft E. of US77		15.00	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 15.00	Concrete
PC-6	Eastbound	32.18311564	-96.8897027	Approx. 500ft E. of US77		14.00	0 - 6.0	Hot Mix Asphalt Concrete
							6.0 - 9.00	Brick
							9.0 - 14.00	Concrete
							14.0 - 18.00	Subgrade
PC-7	Eastbound	32.1846221	-96.88367684	Approx. 2500ft E. of US77		22.50	0 - 5.0	Hot Mix Asphalt Concrete
							5.0 - 22.50	Flexbase
							22.5 - 29.50	Subgrade
PC-8	Westbound	32.18460276	-96.88367052	Approx. 2500ft E. of US77		18.00	0 - 18.0	Hot Mix Asphalt Concrete
							18.0 - 30.00	Subgrade
PC-9	Eastbound	32.18269853	-96.87741672	Approx. 4500ft E. of US77		60.00	0 - 12.0	Hot Mix Asphalt Concrete
							12.0 - 60.00	Flexbase
PC-10	Eastbound	32.18271444	-96.87741152	Approx. 4500ft E. of US77		60.00	0 - 13.0	Hot Mix Asphalt Concrete
							13.0 - 60.00	Flexbase
PC-11	Westbound	32.18231155	-96.87123951	Approx. 1.23mi E. of US77		29.75	0 - 12.0	Hot Mix Asphalt Concrete
							12.0 - 29.75	Flexbase
							29.8 - 47.00	Subgrade
PC-12	Westbound	32.18229325	-96.87123307	Approx. 1.23mi E. of US77		22.50	0 - 12.8	Hot Mix Asphalt Concrete
							12.8 - 22.50	Flexbase
							22.5 - 33.50	Subgrade
PC-13	Eastbound	32.18375458	-96.8647954	Approx. 1.62mi E. of US77		14.75	0 - 9.8	Hot Mix Asphalt Concrete
							9.8 - 14.75	Flexbase

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CORE DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		68

DATE: 5/4/2024 10:01:46 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH 34 Core Data.dgn

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
							14.8 - 43.00	Subgrade
PC-14	Eastbound	32.18377503	-96.86480573	Approx. 1.62mi E. of US77		19.25	0 - 11.8	Hot Mix Asphalt Concrete
							11.8 - 19.25	Flexbase
							19.3 - 47.00	Subgrade
PC-15	Westbound	32.18479843	-96.85848542	Approx. 2.00mi E. of US77		29.00	0 - 3.5	Hot Mix Asphalt Concrete
							3.5 - 29.00	Flexbase
							29.0 - 38.00	Subgrade
PC-16	Westbound	32.18477133	-96.85848845	Approx. 2.00mi E. of US77		21.00	0 - 12.5	Hot Mix Asphalt Concrete
							12.5 - 21.00	Flexbase
							21.0 - 31.25	Subgrade
PC-17	Eastbound	32.18485112	-96.85202242	Approx. 2.38mi E. of US77		14.00	0 - 4.5	Hot Mix Asphalt Concrete
							4.5 - 14.00	Flexbase
							14.0 - 43.00	Subgrade
PC-18	Eastbound	32.18488533	-96.85203238	Approx. 2.38mi E. of US77		50.00	0 - 13.0	Hot Mix Asphalt Concrete
							13.0 - 50.00	Flexbase
							50.0 - 55.75	Subgrade
PC-19	Westbound	32.18541912	-96.84560004	Approx. 2.76mi E. of US77		17.25	0 - 3.3	Hot Mix Asphalt Concrete
							3.3 - 17.25	Flexbase
							17.3 - 24.50	Subgrade
PC-20	Westbound	32.18539268	-96.84559669	Approx. 2.76mi E. of US77		21.50	0 - 14.0	Hot Mix Asphalt Concrete
							14.0 - 21.50	Flexbase
							21.5 - 31.75	Subgrade
PC-21	Eastbound	32.1855652	-96.8390152	Approx. 3.14mi E. of US77		10.50	0 - 5.5	Hot Mix Asphalt Concrete
							5.5 - 10.50	Flexbase
							10.5 - 43.75	Subgrade
PC-22	Eastbound	32.18559075	-96.83901472	Approx. 3.14mi E. of US77		29.00	0 - 13.0	Hot Mix Asphalt Concrete
							13.0 - 29.00	Flexbase
							29.0 - 43.75	Subgrade
PC-23	Westbound	32.1855474	-96.82991843	Approx. 3.67mi E. of US77		15.00	0 - 3.5	Hot Mix Asphalt Concrete
							3.5 - 15.00	Flexbase
							15.0 - 28.00	Subgrade

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SH 34

CORE DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		69

DATE: 5/4/2024 10:01:48 PM
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Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
PC-24	Westbound	32.18552112	-96.82991773	Approx. 3.67mi E. of US77		17.50	0 - 12.0	Hot Mix Asphalt Concrete
							12.0 - 17.50	Flexbase
							17.5 - 28.50	Subgrade
PC-25	Eastbound	32.18652796	-96.82139655	Approx. 4.18mi E. of US77		9.25	0 - 4.3	Hot Mix Asphalt Concrete
							4.3 - 9.25	Flexbase
							9.3 - 40.25	Subgrade
PC-26	Eastbound	32.18655613	-96.82141055	Approx. 4.18mi E. of US77		24.50	0 - 11.5	Hot Mix Asphalt Concrete
							11.5 - 24.50	Flexbase
							24.5 - 48.25	Subgrade
PC-27	Westbound	32.18776035	-96.81629176	Approx. 4.49mi E. of US77		15.75	0 - 12.0	Hot Mix Asphalt Concrete
							12.0 - 15.75	Flexbase
							15.8 - 22.75	Subgrade
PC-28	Westbound	32.18773324	-96.81627529	Approx. 4.49mi E. of US77		20.75	0 - 11.5	Hot Mix Asphalt Concrete
							11.5 - 20.75	Flexbase
							20.8 - 28.75	Subgrade
PC-29	Eastbound	32.19178499	-96.81208253	Approx. 4.87mi E. of US77		26.50	0 - 13.0	Hot Mix Asphalt Concrete
							13.0 - 26.50	Flexbase
PC-30	Eastbound	32.19179675	-96.81211266	Approx. 4.87mi E. of US77		19.25	0 - 12.5	Hot Mix Asphalt Concrete
							12.5 - 19.25	Flexbase
							19.3 - 45.00	Subgrade
PC-31	Westbound	32.1963343	-96.80849332	Approx. 5.25mi E. of US77		11.00	0 - 3.5	Hot Mix Asphalt Concrete
							3.5 - 11.00	Flexbase
					X		11.0 - 19.00	Subgrade
PC-32	Westbound	32.19631763	-96.80847339	Approx. 5.25mi E. of US77		20.00	0 - 11.0	Hot Mix Asphalt Concrete
							11.0 - 20.00	Flexbase
							20.0 - 29.00	Subgrade
PC-33	Eastbound	32.19913478	-96.80292649	Approx. 5.63mi E. of US77		9.00	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 9.00	Flexbase
							9.0 - 20.75	Subgrade
PC-34	Eastbound	32.19915338	-96.8029397	Approx. 5.63mi E. of US77		21.00	0 - 12.3	Hot Mix Asphalt Concrete

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SH 34

CORE DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		70

DATE: 5/4/2024 10:01:49 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/056801052/4 - Design/Plan Set/3. Roadway/SH 34_Core_Data.dgn

DW: CK: DW: CK:

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[2]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
PC-34	Eastbound	32.19915338	-96.8029397	Approx. 5.63mi E. of US77		21.00	12.3 - 21.00	Flexbase
PC-35	Westbound	32.20198113	-96.7973882	Approx. 6.01mi E. of US77		12.00	0 - 2.5	Hot Mix Asphalt Concrete
							2.5 - 12.00	Flexbase
							12.0 - 26.50	Subgrade
PC-36	Westbound	32.20195884	-96.79737274	Approx. 6.01mi E. of US77		19.50	0 - 11.3	Hot Mix Asphalt Concrete
							11.3 - 19.50	Flexbase
							19.5 - 29.50	Subgrade
PC-37	Eastbound	32.20452439	-96.79226803	Approx. 6.36mi E. of US77		19.25	0 - 10.0	Hot Mix Asphalt Concrete
							10.0 - 19.25	Flexbase
							19.3 - 24.50	Subgrade
PC-38	Eastbound	32.20454067	-96.79228234	Approx. 6.36mi E. of US77		22.25	0 - 11.0	Hot Mix Asphalt Concrete
							11.0 - 22.25	Flexbase
					X		22.3 - 22.00	Lime Treated Subgrade
PC-39	Westbound	32.20752	-96.78612977	Approx. 6.77mi E. of US77		15.00	0 - 2.5	Hot Mix Asphalt Concrete
							2.5 - 15.00	Flexbase
					X		15.0 - 20.00	Lime Treated Subgrade
PC-40	Westbound	32.20749658	-96.78611488	Approx. 6.77mi E. of US77		18.00	0 - 10.8	Hot Mix Asphalt Concrete
							10.8 - 18.00	Flexbase
					X		18.0 - 23.00	Lime Treated Subgrade
PC-41	Westbound	32.20954916	-96.77996597	Approx. 7.16mi E. of US77		14.00	0 - 2.5	Hot Mix Asphalt Concrete
							2.5 - 14.00	Flexbase
					X		14.0 - 14.00	Lime Treated Subgrade
PC-42	Westbound	32.20957652	-96.77998023	Approx. 7.16mi E. of US77		15.75	0 - 9.8	Hot Mix Asphalt Concrete
							9.8 - 15.75	Flexbase
					X		15.8 - 15.75	Lime Treated Subgrade
PC-43	Westbound	32.21210175	-96.77442599	Approx. 7.53mi E. of US77		18.75	0 - 4.5	Hot Mix Asphalt Concrete
							4.5 - 18.75	Flexbase
							18.8 - 30.00	Subgrade
PC-44	Westbound	32.21208338	-96.77440461	Approx. 7.53mi E. of US77		19.50	0 - 14.8	Hot Mix Asphalt Concrete
							14.8 - 19.50	Flexbase

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SH 34

CORE DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		71

DATE: 5/4/2024 10:01:50 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3_Roadway/SH 34_Core_Data.dgn

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
					X		19.5 - 24.50	Lime Treated Subgrade
PC-45	Westbound	32.21600345	-96.76986676	Approx. 7.91mi E. of US77		15.75	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 15.75	Flexbase
					X		15.8 - 21.75	Lime Treated Subgrade
PC-46	Westbound	32.21598114	-96.76984385	Approx. 7.91mi E. of US77		17.50	0 - 11.5	Hot Mix Asphalt Concrete
							11.5 - 17.50	Flexbase
							17.5 - 24.25	Subgrade
PC-47	Eastbound	32.21999024	-96.76506191	Approx. 8.30mi E. of US77		10.25	0 - 2.5	Hot Mix Asphalt Concrete
							2.5 - 10.25	Flexbase
							10.3 - 16.75	Subgrade
PC-48	Eastbound	32.22000755	-96.76508529	Approx. 8.30mi E. of US77		18.00	0 - 12.0	Hot Mix Asphalt Concrete
							12.0 - 18.00	Flexbase
					X		18.0 - 25.00	Lime Treated Subgrade
PC-49	Westbound	32.22334497	-96.76000305	Approx. 8.68mi E. of US77		19.50	0 - 3.8	Hot Mix Asphalt Concrete
							3.8 - 19.50	Flexbase
							19.5 - 26.25	Subgrade
PC-50	Westbound	32.22331497	-96.75997617	Approx. 8.68mi E. of US77		22.00	0 - 11.0	Hot Mix Asphalt Concrete
							11.0 - 22.00	Flexbase
					X		22.0 - 27.00	Lime Treated Subgrade
PC-51	Eastbound	32.22602544	-96.75432303	Approx. 9.06mi E. of US77		15.00	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 15.00	Flexbase
					X		15.0 - 26.00	Lime Treated Subgrade
PC-52	Eastbound	32.22605862	-96.75434388	Approx. 9.06mi E. of US77		19.00	0 - 9.8	Hot Mix Asphalt Concrete
							9.8 - 19.00	Flexbase
					X		19.0 - 31.25	Lime Treated Subgrade
PC-53	Westbound	32.22973526	-96.74712197	Approx. 9.55mi E. of US77		18.00	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 18.00	Flexbase
					X		18.0 - 25.00	Lime Treated Subgrade
PC-54	Westbound	32.22971012	-96.74710095	Approx. 9.55mi E. of US77		18.00	0 - 10.5	Hot Mix Asphalt Concrete
							10.5 - 18.00	Flexbase
					X		18.0 - 27.00	Lime Treated Subgrade

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SH 34

CORE DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		72

DATE: 5/4/2024 10:01:51 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH 34 Core Data.dgn

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
PC-55	Eastbound	32.23381661	-96.74285666	Approx. 9.93mi E. of US77		15.50	0 - 4.5	Hot Mix Asphalt Concrete
							4.5 - 15.50	Flexbase
					X		15.5 - 24.75	Lime Treated Subgrade
PC-56	Eastbound	32.23383382	-96.7428869	Approx. 9.93mi E. of US77		17.50	0 - 10.0	Hot Mix Asphalt Concrete
							10.0 - 17.50	Flexbase
					X		17.5 - 24.50	Lime Treated Subgrade
PC-57	Westbound	32.23870367	-96.73990708	Approx. 10.31mi E. of US77		19.75	0 - 4.4	Hot Mix Asphalt Concrete
							4.4 - 19.75	Flexbase
					X		19.8 - 23.50	Lime Treated Subgrade
PC-58	Westbound	32.23868979	-96.73988693	Approx. 10.31mi E. of US77		21.50	0 - 10.5	Hot Mix Asphalt Concrete
							10.5 - 21.50	Flexbase
							21.5 - 24.00	Subgrade
PC-59	Eastbound	32.24364606	-96.73538579	Approx. 10.74mi E. of US77		17.50	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 17.50	Flexbase
					X		17.5 - 21.25	Lime Treated Subgrade
PC-60	Eastbound	32.24367178	-96.73542453	Approx. 10.74mi E. of US77		19.75	0 - 12.0	Hot Mix Asphalt Concrete
							12.0 - 19.75	Flexbase
					X		19.8 - 26.25	Lime Treated Subgrade
PC-61	Westbound	32.24798373	-96.73150494	Approx. 11.12mi E. of US77		17.00	0 - 6.0	Hot Mix Asphalt Concrete
							6.0 - 17.00	Flexbase
					X		17.0 - 20.50	Lime Treated Subgrade
PC-62	Westbound	32.24796625	-96.73146932	Approx. 11.12mi E. of US77		20.00	0 - 12.0	Hot Mix Asphalt Concrete
							12.0 - 20.00	Flexbase
					X		20.0 - 25.00	Lime Treated Subgrade
PC-63	Eastbound	32.25107766	-96.72601193	Approx. 11.51mi E. of US77		19.50	0 - 8.8	Hot Mix Asphalt Concrete
							8.8 - 19.50	Flexbase
					X		19.5 - 23.50	Lime Treated Subgrade
PC-64	Eastbound	32.25110398	-96.72602826	Approx. 11.51mi E. of US77		22.50	0 - 10.3	Hot Mix Asphalt Concrete
							10.3 - 22.50	Flexbase
					X		22.5 - 22.50	Lime Treated Subgrade
PC-65	Westbound	32.25408845	-96.72012043	Approx. 11.91mi E. of US77		18.00	0 - 4.0	Hot Mix Asphalt Concrete

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SH 34

CORE DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		73

DATE: 5/4/2024 10:01:52 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH 34_Core_Data.dgn

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
							4.0 - 18.00	Flexbase
					X		18.0 - 22.00	Lime Treated Subgrade
PC-66	Westbound	32.25405766	-96.72009651	Approx. 11.91mi E. of US77		20.50	0 - 10.0	Hot Mix Asphalt Concrete
							10.0 - 20.50	Flexbase
					X		20.5 - 24.00	Lime Treated Subgrade
PC-67	Eastbound	32.25673487	-96.71435678	Approx. 12.29mi E. of US77		14.00	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 14.00	Flexbase
							14.0 - 28.00	Subgrade
PC-68	Eastbound	32.25676381	-96.71437646	Approx. 12.29mi E. of US77		23.75	0 - 11.0	Hot Mix Asphalt Concrete
							11.0 - 23.75	Flexbase
					X		23.8 - 26.25	Lime Treated Subgrade
PC-69	Westbound	32.25956054	-96.70884608	Approx. 12.67mi E. of US77		18.00	0 - 7.0	Hot Mix Asphalt Concrete
							7.0 - 18.00	Flexbase
					X		18.0 - 25.00	Lime Treated Subgrade
PC-70	Westbound	32.25953387	-96.70882158	Approx. 12.67mi E. of US77		20.00	0 - 12.0	Hot Mix Asphalt Concrete
							12.0 - 20.00	Flexbase
					X		20.0 - 27.00	Lime Treated Subgrade
PC-71	Eastbound	32.26226771	-96.70314791	Approx. 13.05mi E. of US77		19.00	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 19.00	Flexbase
					X		19.0 - 22.25	Lime Treated Subgrade
PC-72	Eastbound	32.26230378	-96.70317626	Approx. 13.05mi E. of US77		21.00	0 - 10.5	Hot Mix Asphalt Concrete
							10.5 - 21.00	Flexbase
					X		21.0 - 24.00	Lime Treated Subgrade
PC-73	Westbound	32.26515147	-96.69752123	Approx. 13.44mi E. of US77		22.00	0 - 10.5	Hot Mix Asphalt Concrete
							10.5 - 22.00	Flexbase
					X		22.0 - 25.00	Lime Treated Subgrade
PC-74	Westbound	32.2651254	-96.69750322	Approx. 13.44mi E. of US77		18.50	0 - 10.5	Hot Mix Asphalt Concrete
							10.5 - 18.50	Flexbase
					X		18.5 - 24.00	Lime Treated Subgrade
PC-75	Eastbound	32.26779831	-96.69181686	Approx. 13.82mi E. of US77		18.00	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 18.00	Flexbase

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SH 34

CORE DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		74

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
					X		18.0 - 24.00	Lime Treated Subgrade
PC-76	Eastbound	32.26781882	-96.69183188	Approx. 13.82mi E. of US77		20.50	0 - 10.3	Hot Mix Asphalt Concrete
							10.3 - 20.50	Flexbase
					X		20.5 - 20.50	Lime Treated Subgrade
PC-77	Westbound	32.27059723	-96.68621587	Approx. 14.20mi E. of US77		20.88	0 - 4.4	Hot Mix Asphalt Concrete
							4.4 - 20.88	Flexbase
					X		20.9 - 25.38	Lime Treated Subgrade
PC-78	Westbound	32.27056818	-96.68619494	Approx. 14.20mi E. of US77		21.50	0 - 10.3	Hot Mix Asphalt Concrete
							10.3 - 21.50	Flexbase
					X		21.5 - 26.00	Lime Treated Subgrade
PC-79	Eastbound	32.27299709	-96.67987733	Approx. 14.61mi E. of US77		17.75	0 - 4.5	Hot Mix Asphalt Concrete
							4.5 - 17.75	Flexbase
					X		17.8 - 22.00	Lime Treated Subgrade
PC-80	Eastbound	32.27302297	-96.67987466	Approx. 14.61mi E. of US77		19.50	0 - 10.0	Hot Mix Asphalt Concrete
							10.0 - 19.50	Flexbase
					X		19.5 - 25.00	Lime Treated Subgrade
PC-81	Westbound	32.27478868	-96.67395304	Approx. 15.00mi E. of US77		17.00	0 - 5.0	Hot Mix Asphalt Concrete
							5.0 - 17.00	Flexbase
							17.0 - 23.00	Subgrade
PC-82	Westbound	32.27476206	-96.67393319	Approx. 15.00mi E. of US77		19.50	0 - 9.0	Hot Mix Asphalt Concrete
							9.0 - 19.50	Flexbase
					X		19.5 - 20.50	Lime Treated Subgrade
PC-83	Eastbound	32.27744373	-96.6688032	Approx. 15.34mi E. of US77		18.75	0 - 7.0	Hot Mix Asphalt Concrete
							7.0 - 18.75	Flexbase
							18.8 - 22.25	Subgrade
PC-84	Eastbound	32.27746445	-96.66882139	Approx. 15.34mi E. of US77		17.50	0 - 10.3	Hot Mix Asphalt Concrete
							10.3 - 17.50	Flexbase
							17.5 - 23.25	Subgrade
PC-85	Westbound	32.29124801	-96.65158005	Approx. 16.73mi E. of US77		13.00	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 13.00	Flexbase
					X		13.0 - 15.00	Lime Treated Subgrade

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SH 34

CORE DATA

SHEET 9 OF 11

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		75

DATE: 5/4/2024 10:01:53 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3. Roadway/SH 34 Core Data.dgn

DW: CK: DW: CK:

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
PC-86	Westbound	32.29122608	-96.65155801	Approx. 16.73mi E. of US77		16.00	0 - 12.5	Hot Mix Asphalt Concrete
							12.5 - 16.00	Flexbase
					X		16.0 - 23.50	Lime Treated Subgrade
PC-87	Eastbound	32.29548876	-96.6474211	Approx. 17.11mi E. of US77		19.75	0 - 7.0	Hot Mix Asphalt Concrete
							7.0 - 19.75	Flexbase
							19.8 - 19.75	Subgrade
PC-88	Eastbound	32.29550526	-96.64745625	Approx. 17.11mi E. of US77		22.00	0 - 15.3	Hot Mix Asphalt Concrete
							15.3 - 22.00	Flexbase
PC-89	Westbound	32.29875527	-96.64237922	Approx. 17.49mi E. of US77		17.50	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 17.50	Flexbase
							17.5 - 23.00	Subgrade
PC-90	Westbound	32.29872956	-96.64235948	Approx. 17.49mi E. of US77		19.50	0 - 12.0	Hot Mix Asphalt Concrete
							12.0 - 19.50	Flexbase
					X		19.5 - 23.50	Lime Treated Subgrade
PC-91	Eastbound	32.30171939	-96.63690423	Approx. 17.86mi E. of US77		18.25	0 - 5.0	Hot Mix Asphalt Concrete
							5.0 - 18.25	Flexbase
							18.3 - 25.50	Subgrade
PC-92	Eastbound	32.30174352	-96.63693559	Approx. 17.86mi E. of US77		16.00	0 - 10.3	Hot Mix Asphalt Concrete
							10.3 - 16.00	Flexbase
					X		16.0 - 21.50	Lime Treated Subgrade
PC-93	Westbound	32.30476832	-96.63129512	Approx. 18.26mi E. of US77		19.00	0 - 5.5	Hot Mix Asphalt Concrete
							5.5 - 19.00	Flexbase
					X		19.0 - 23.50	Lime Treated Subgrade
PC-94	Westbound	32.30474689	-96.63127679	Approx. 18.26mi E. of US77		18.25	0 - 9.3	Hot Mix Asphalt Concrete
							9.3 - 18.25	Flexbase
					X		18.3 - 23.75	Lime Treated Subgrade
PC-95	Eastbound	32.30837556	-96.62641503	Approx. 18.64mi E. of US77		19.50	0 - 5.5	Hot Mix Asphalt Concrete
							5.5 - 19.50	Flexbase
							19.5 - 25.25	Subgrade
PC-96	Eastbound	32.30838838	-96.6264348	Approx. 18.64mi E. of US77		19.00	0 - 11.3	Hot Mix Asphalt Concrete

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SH 34

CORE DATA

SHEET 10 OF 11

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		76

DATE: 5/4/2024 10:01:55 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH 34_Core_Data.dgn

Core ID	Roadway Direction	Lat.	Long.	Nominal Location	Phenol. Reaction[3]	Total Pavement Thickness (in)	Layer Profile (in)	Layer Description
							11.3 - 19.00	Flexbase
					X		19.0 - 23.00	Lime Treated Subgrade
PC-97	Westbound	32.31318339	-96.62409502	Approx. 19.00mi E. of US77		19.25	0 - 4.0	Hot Mix Asphalt Concrete
							4.0 - 19.25	Flexbase
							19.3 - 26.50	Subgrade
PC-98	Westbound	32.31317493	-96.62405925	Approx. 19.00mi E. of US77		18.00	0 - 10.3	Hot Mix Asphalt Concrete
							10.3 - 18.00	Flexbase
							18.0 - 23.50	Subgrade
PC-99	Eastbound	32.3184571	-96.62111121	Approx. 19.40mi E. of US77		18.50	0 - 5.0	Hot Mix Asphalt Concrete
							5.0 - 18.50	Flexbase
							18.5 - 24.50	Subgrade
PC-100	Eastbound	32.31847304	-96.62113179	Approx. 19.40mi E. of US77		20.75	0 - 11.5	Hot Mix Asphalt Concrete
							11.5 - 20.75	Flexbase
							20.8 - 24.50	Subgrade
PC-101	Westbound	32.32143641	-96.61551773	Approx. 19.79mi E. of US77		10.00	0 - 10.0	Hot Mix Asphalt Concrete
							10.0 - 16.00	Subgrade
PC-102	Westbound	32.32141939	-96.61550529	Approx. 19.79mi E. of US77		10.00	0 - 10.0	Hot Mix Asphalt Concrete
							10.0 - 15.50	Subgrade
PC-103	Eastbound	32.3238626	-96.61048025	Approx. 20.13mi E. of US77		10.00	0 - 10.0	Hot Mix Asphalt Concrete
							10.0 - 17.00	Subgrade
PC-104	Eastbound	32.32388001	-96.61049512	Approx. 20.13mi E. of US77		5.00	0 - 5.0	Hot Mix Asphalt Concrete
							5.0 - 9.75	Subgrade

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SH 34

CORE DATA

SHEET 11 OF 11

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		77

DATE: 5/4/2024 10:01:55 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/056801052/4 - Design/Plan Set/3. Roadway/SH 34_Core_Data.dgn

FOR CONTRACTORS INFORMATION ONLY

HORIZONTAL ALIGNMENT REPORT

Alignment name: CL_SH 34
Alignment description:
Report Created: Thursday, December 14, 2023
Time: 1:33:49 PM

	STATION	X	Y
POT	0+00.000	2462859.630	6759269.542
PC	14+32.457	2464007.181	6758412.186
Tangential Direction:	S53°14'09.365"E		
Tangential Length:	1432.457		
PC	14+32.457	2464007.181	6758412.186
PI	16+28.221	2464164.009	6758295.017
CC		2463408.660	6757611.079
PT	18+19.095	2464265.078	6758127.361
Radius:	1000.000		
Delta:	22°09'09.767" Right		
Degree of Curvature(Arc):	05°43'46.481"		
Length:	386.638		
Tangent:	195.764		
Chord:	384.234		
Middle Ordinate:	18.628		
External:	18.982		
Tangent Back Direction:	S53°14'09.365"E		
Radial Direction:	S36°45'50.635"W		
Chord Direction:	S42°09'34.482"E		
Radial Direction:	S58°55'00.402"W		
Tangent Ahead Direction:	S31°04'59.598"E		
PT	18+19.095	2464265.078	6758127.361
PC	48+55.839	2465832.896	6755526.638
Tangential Direction:	S31°04'59.598"E		
Tangential Length:	3036.744		
PC	48+55.839	2465832.896	6755526.638
PI	54+30.929	2466129.805	6755034.121
CC		2463863.134	6754339.189
PT	59+82.910	2466159.968	6754459.823
Radius:	2300.000		
Delta:	28°04'36.089" Right		
Degree of Curvature(Arc):	02°29'28.035"		
Length:	1127.071		
Tangent:	575.090		
Chord:	1115.828		
Middle Ordinate:	68.693		
External:	70.807		
Tangent Back Direction:	S31°04'59.598"E		
Radial Direction:	S58°55'00.402"W		
Chord Direction:	S17°02'41.554"E		
Radial Direction:	S86°59'36.491"W		
Tangent Ahead Direction:	S03°00'23.509"E		
PT	59+82.910	2466159.968	6754459.823
PC	62+11.537	2466171.960	6754231.510
Tangential Direction:	S03°00'23.509"E		
Tangential Length:	228.627		
PC	62+11.537	2466171.960	6754231.510
PI	63+76.117	2466180.592	6754067.157
CC		2466821.065	6754265.603
PT	65+33.922	2466266.398	6753926.715
Radius:	650.000		
Delta:	28°25'02.567" Left		
Degree of Curvature(Arc):	08°48'53.047"		
Length:	322.385		
Tangent:	164.580		
Chord:	319.091		
Middle Ordinate:	19.885		
External:	20.512		
Tangent Back Direction:	S03°00'23.509"E		
Radial Direction:	S86°59'36.491"W		
Chord Direction:	S17°12'54.793"E		
Radial Direction:	S58°34'33.924"W		
Tangent Ahead Direction:	S31°25'26.076"E		
PT	65+33.922	2466266.398	6753926.715
PC	66+42.957	2466323.245	6753833.672
Tangential Direction:	S31°25'26.076"E		
Tangential Length:	109.035		
PI	67+86.951	2466398.319	6753710.797
CC		2466476.845	6753927.518
PT	68+85.856	2466534.678	6753757.061
Radius:	180.000		
Delta:	77°19'02.129" Left		
Degree of Curvature(Arc):	31°49'51.559"		
Length:	242.899		
Tangent:	143.994		
Chord:	224.884		
Middle Ordinate:	39.441		
External:	50.509		
Tangent Back Direction:	S31°25'26.076"E		
Radial Direction:	S58°34'33.924"W		
Chord Direction:	S70°04'57.141"E		
Radial Direction:	S18°44'28.205"E		
Tangent Ahead Direction:	N71°15'31.795"E		
PT	68+85.856	2466534.678	6753757.061
PC	78+80.298	2467476.394	6754076.569
Tangential Direction:	N71°15'31.795"E		
Tangential Length:	994.442		
PC	78+80.298	2467476.394	6754076.569
PI	79+44.183	2467536.892	6754097.095
CC		2467620.976	6753650.428
PT	80+07.220	2467600.713	6754099.972
Radius:	450.000		
Delta:	16°09'36.846" Right		
Degree of Curvature(Arc):	12°43'56.624"		
Length:	126.922		
Tangent:	63.885		
Chord:	126.502		
Middle Ordinate:	4.467		
External:	4.512		
Tangent Back Direction:	N71°15'31.795"E		
Radial Direction:	S18°44'28.205"E		
Chord Direction:	N79°20'20.218"E		
Radial Direction:	S02°34'51.359"E		
Tangent Ahead Direction:	N87°25'08.641"E		
PT	80+07.220	2467600.713	6754099.972
PC	81+11.008	2467704.395	6754104.645
Tangential Direction:	N87°25'08.641"E		
Tangential Length:	103.788		
PC	81+11.008	2467704.395	6754104.645
PI	81+85.007	2467778.320	6754107.977
CC		2467681.880	6754604.138
PT	82+57.940	2467848.110	6754132.579
Radius:	500.000		
Delta:	16°50'14.022" Left		
Degree of Curvature(Arc):	11°27'32.961"		
Length:	146.933		
Tangent:	74.000		
Chord:	146.404		
Middle Ordinate:	5.388		
External:	5.446		
Tangent Back Direction:	N87°25'08.641"E		
Radial Direction:	S02°34'51.359"E		
Chord Direction:	N79°00'01.629"E		
Radial Direction:	S19°25'05.382"E		
Tangent Ahead Direction:	N70°34'54.618"E		
PT	82+57.940	2467848.110	6754132.579
PC	91+05.413	2468647.376	6754414.330
Tangential Direction:	N70°34'54.618"E		
Tangential Length:	847.473		
PC	91+05.413	2468647.376	6754414.330
PI	92+63.879	2468796.827	6754467.014
CC		2468787.009	6754018.221
PT	94+08.472	2468943.832	6754407.844
Radius:	420.000		
Delta:	41°20'34.386" Right		
Degree of Curvature(Arc):	13°38'30.668"		
Length:	303.059		
Tangent:	158.466		

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
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vanrajsinh Mahida 05/06/2024

Signature of Registrant ,P.E. & Date

Texas Department of Transportation

SH 34

HORIZONTAL ALIGNMENT DATA

SHEET 1 OF 6

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		78

DATE: 5/4/2024 10:02:10 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3_Roadway/SH34_Horizontal Data.dgn

DW: DW: CK: CK:

Radial Direction:	S19°25'05.382"E		
Chord Direction:	S88°44'48.189"E		
Radial Direction:	S21°55'29.004"W		
Tangent Ahead Direction:	S68°04'30.996"E		
PT	94+08.472	2468943.832	6754407.844
PC	95+63.810	2469087.935	6754349.843
Tangential Direction:	S68°04'30.996"E		
Tangential Length:	155.338		
PC	95+63.810	2469087.935	6754349.843
PI	97+18.367	2469231.314	6754292.134
CC		2469573.340	6755555.821
PT	98+71.479	2469384.226	6754269.650
Radius:	1300.000		
Delta:	13°33'36.445" Left		
Degree of Curvature(Arc):	04°24'26.524"		
Length:	307.669		
Tangent:	154.557		
Chord:	306.952		
Middle Ordinate:	9.091		
External:	9.155		
Tangent Back Direction:	S68°04'30.996"E		
Radial Direction:	S21°55'29.004"W		
Chord Direction:	S74°51'19.218"E		
Radial Direction:	S08°21'52.559"W		
Tangent Ahead Direction:	S81°38'07.441"E		
PT	98+71.479	2469384.226	6754269.650
PC	100+63.440	2469574.145	6754241.725
Tangential Direction:	S81°38'07.441"E		
Tangential Length:	191.961		
PC	100+63.440	2469574.145	6754241.725
PI	102+29.187	2469738.129	6754217.613
CC		2469494.136	6753697.576
PT	103+85.413	2469861.485	6754106.909
Radius:	550.000		
Delta:	33°32'28.599" Right		
Degree of Curvature(Arc):	10°25'02.692"		
Length:	321.973		
Tangent:	165.747		
Chord:	317.395		
Middle Ordinate:	23.393		
External:	24.432		
Tangent Back Direction:	S81°38'07.441"E		
Radial Direction:	S08°21'52.559"W		
Chord Direction:	S64°51'53.141"E		
Radial Direction:	S41°54'21.158"W		
Tangent Ahead Direction:	S48°05'38.842"E		
PT	103+85.413	2469861.485	6754106.909
PC	105+03.777	2469949.577	6754027.853
Tangential Direction:	S48°05'38.842"E		
Tangential Length:	118.364		
PC	105+03.777	2469949.577	6754027.853
PI	106+62.844	2470067.961	6753921.611
CC		2470350.322	6754474.399
PT	108+14.756	2470223.430	6753887.971
Radius:	600.000		
Delta:	29°41'46.832" Left		
Degree of Curvature(Arc):	09°32'57.468"		
Length:	310.979		
Tangent:	159.067		
Chord:	307.510		
Middle Ordinate:	20.035		
External:	20.727		
Tangent Back Direction:	S48°05'38.842"E		
Radial Direction:	S41°54'21.158"W		
Chord Direction:	S62°56'32.258"E		
Radial Direction:	S12°12'34.326"W		
Tangent Ahead Direction:	S77°47'25.674"E		
PT	108+14.756	2470223.430	6753887.971
PC	121+72.019	2471549.992	6753600.927
Tangential Direction:	S77°47'25.674"E		
Tangential Length:	1357.263		
PC	121+72.019	2471549.992	6753600.927
PI	126+50.975	2472018.115	6753499.633
CC		2471972.967	6755555.688
PT	131+12.225	2472481.340	6753621.377
Radius:	2000.000		
Delta:	26°56'05.660" Left		
Degree of Curvature(Arc):	02°51'53.240"		
Length:	940.206		
Tangent:	478.956		
Chord:	931.572		
Middle Ordinate:	54.995		
External:	56.550		
Tangent Back Direction:	S77°47'25.674"E		
Radial Direction:	S12°12'34.326"W		
Chord Direction:	N88°44'31.496"E		
Radial Direction:	S14°43'31.334"E		
Tangent Ahead Direction:	N75°16'28.666"E		
PT	131+12.225	2472481.340	6753621.377
PI	135+45.100	2472899.997	6753731.408
Tangential Direction:	N75°16'28.666"E		
Tangential Length:	432.875		
PI	135+45.100	2472899.997	6753731.408
PC	139+29.777	2473276.051	6753812.401
Tangential Direction:	N77°50'44.061"E		
Tangential Length:	384.677		
PC	139+29.777	2473276.051	6753812.401
PI	142+69.697	2473608.352	6753883.970
CC		2472223.315	6758700.319
PT	146+08.573	2473927.908	6753999.855
Radius:	5000.000		
Delta:	07°46'42.343" Left		
Degree of Curvature(Arc):	01°08'45.296"		
Length:	678.796		
Tangent:	339.920		
Chord:	678.275		
Middle Ordinate:	11.515		
External:	11.541		
Tangent Back Direction:	N77?50'44.061"E		
Radial Direction:	S12?09'15.939"E		
Chord Direction:	N73?57'22.890"E		
Radial Direction:	S19?55'58.281"E		
Tangent Ahead Direction:	N70?04'01.719"E		
PT	146+08.573	2473927.908	6753999.855
PC	156+16.571	2474875.520	6754343.501
Tangential Direction:	N70°04'01.719"E		
Tangential Length:	1007.998		
PC	156+16.571	2474875.520	6754343.501
PI	165+29.744	2475733.987	6754654.819
CC		2476426.700	6750066.079
PT	174+18.972	2476646.098	6754610.786
Radius:	4550.000		
Delta:	22°41'48.080" Right		
Degree of Curvature(Arc):	01°15'33.292"		
Length:	1802.400		
Tangent:	913.173		
Chord:	1790.639		
Middle Ordinate:	88.957		
External:	90.731		
Tangent Back Direction:	N70°04'01.719"E		
Radial Direction:	S19°55'58.281"E		
Chord Direction:	N81°24'55.759"E		
Radial Direction:	S02°45'49.799"W		
Tangent Ahead Direction:	S87°14'10.201"E		
PT	174+18.972	2476646.098	6754610.786
PC	179+90.856	2477217.317	6754583.210
Tangential Direction:	S87°14'10.201"E		
Tangential Length:	571.884		
PC	179+90.856	2477217.317	

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Texas Department of Transportation

SH 34

HORIZONTAL ALIGNMENT DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		79

DATE: 5/4/2024 10:02:11 PM
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DW: CK: DW: CK:

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PI	182+20.438	2477446.632	6754572.140
CC		2477352.331	6757379.953
PT	184+48.995	2477674.687	6754598.571
Radius:	2800.000		
Delta:	09°22'29.279" Left		
Degree of Curvature(Arc):	02°02'46.600"		
Length:	458.139		
Tangent:	229.582		
Chord:	457.628		
Middle Ordinate:	9.365		
External:	9.396		
Tangent Back Direction:	S87°14'10.201"E		
Radial Direction:	S02°45'49.799"W		
Chord Direction:	N88°04'35.160"E		
Radial Direction:	S06°36'39.479"E		
Tangent Ahead Direction:	N83°23'20.521"E		

PT	184+48.995	2477674.687	6754598.571
PI	196+07.008	2478825.000	6754731.890
Tangential Direction:	N83°23'20.521"E		
Tangential Length:	1158.013		

PI	196+07.008	2478825.000	6754731.890
PC	207+25.996	2479936.897	6754857.667
Tangential Direction:	N83°32'46.226"E		
Tangential Length:	1118.988		

PC	207+25.996	2479936.897	6754857.667
PI	209+44.201	2480153.719	6754882.194
CC		2480836.117	6746908.365
PT	211+62.297	2480371.555	6754894.865
Radius:	8000.000		
Delta:	03°07'29.183" Right		
Degree of Curvature(Arc):	00°42'58.310"		
Length:	436.301		
Tangent:	218.204		
Chord:	436.247		
Middle Ordinate:	2.974		
External:	2.975		
Tangent Back Direction:	N83°32'46.226"E		
Radial Direction:	S06°27'13.774"E		
Chord Direction:	N85°06'30.818"E		
Radial Direction:	S03°19'44.590"E		
Tangent Ahead Direction:	N86°40'15.410"E		

PT	211+62.297	2480371.555	6754894.865
PC	234+83.230	2482688.571	6755029.642
Tangential Direction:	N86°40'15.410"E		
Tangential Length:	2320.933		

PC	234+83.230	2482688.571	6755029.642
PI	238+14.970	2483019.752	6755048.906
CC		2483269.274	6745046.517
PT	241+46.468	2483351.482	6755046.179
Radius:	10000.000		
Delta:	03°48'00.270" Right		
Degree of Curvature(Arc):	00°34'22.648"		
Length:	663.238		
Tangent:	331.741		
Chord:	663.117		
Middle Ordinate:	5.498		
External:	5.501		
Tangent Back Direction:	N86°40'15.410"E		
Radial Direction:	S03°19'44.590"E		
Chord Direction:	N88°34'15.545"E		
Radial Direction:	S00°28'15.679"W		
Tangent Ahead Direction:	S89°31'44.321"E		

PT	241+46.468	2483351.482	6755046.179
PC	266+44.490	2485849.420	6755025.643
Tangential Direction:	S89°31'44.321"E		
Tangential Length:	2498.022		

PC	266+44.490	2485849.420	6755025.643
PI	271+22.605	2486327.518	6755021.713
CC		2485879.014	6758625.522
PT	275+95.156	2486790.069	6755142.710
Radius:	3600.000		
Delta:	15°07'49.144" Left		
Degree of Curvature(Arc):	01°35'29.578"		
Length:	950.666		
Tangent:	478.115		
Chord:	947.906		
Middle Ordinate:	31.335		
External:	31.610		
Tangent Back Direction:	S89°31'44.321"E		
Radial Direction:	S00°28'15.679"W		
Chord Direction:	N82°54'21.107"E		
Radial Direction:	S14°39'33.465"E		
Tangent Ahead Direction:	N75°20'26.535"E		

PT	275+95.156	2486790.069	6755142.710
PC	301+46.216	2489258.086	6755788.308
Tangential Direction:	N75°20'26.535"E		
Tangential Length:	2551.060		

PC	301+46.216	2489258.086	6755788.308
PI	309+61.558	2490046.887	6755994.647
CC		2488777.252	6757626.459
PT	316+86.589	2490440.799	6756708.521
Radius:	1900.000		
Delta:	46°27'03.549" Left		
Degree of Curvature(Arc):	03°00'56.042"		
Length:	1540.373		
Tangent:	815.342		
Chord:	1498.533		
Middle Ordinate:	153.976		
External:	167.555		
Tangent Back Direction:	N75°20'26.535"E		
Radial Direction:	S14°39'33.465"E		
Chord Direction:	N52°06'54.761"E		
Radial Direction:	S61°06'37.014"E		
Tangent Ahead Direction:	N28°53'22.986"E		

PT	316+86.589	2490440.799	6756708.521
PC	334+98.449	2491316.154	6758294.897
Tangential Direction:	N28°53'22.986"E		
Tangential Length:	1811.860		

PC	334+98.449	2491316.154	6758294.897
PI	342+63.581	2491685.809	6758964.809
CC		2493811.475	6756917.990
PT	349+93.460	2492341.277	6759359.509
Radius:	2850.000		
Delta:	30°03'19.409" Right		
Degree of Curvature(Arc):	02°00'37.362"		
Length:	1495.012		
Tangent:	765.132		
Chord:	1477.930		
Middle Ordinate:	97.468		
External:	100.920		
Tangent Back Direction:	N28°53'22.986"E		
Radial Direction:	S61°06'37.014"E		
Chord Direction:	N43°55'02.690"E		
Radial Direction:	S31°03'17.605"E		
Tangent Ahead Direction:	N58°56'42.395"E		

PT	349+93.460	2492341.277	6759359.509
PI	382+81.867	2495158.368	6761055.864
Tangential Direction:	N58°56'42.395"E		
Tangential Length:	3288.406		

PI	382+81.867	2495158.368	6761055.864
PI	396+23.074	2496285.891	6761782.175
Tangential Direction:	N57°12'42.268"E		
Tangential Length:	1341.207		

PI	396+23.074	2496285.891	6761782.175
PI	407+55.506	2497255.017	6762368.005
Tangential Direction:	N58°50'50.437"E		
Tangential Length:	1132.432		

PI	407+55.506	2497255.017	6762368.005
PC	414+68.536	2497863.667	6762739.431
Tangential Direction:	N58°36'23.717"E		
Tangential Length:	713.030		

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SH 34

HORIZONTAL ALIGNMENT DATA

SHEET 3 OF 6

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		80

DATE: 5/4/2024 10:02:12 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3_Roadway/SH34_Horizontal Data.dgn

DW: CK: DW: CK:

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PC	414+68.536	2497863.667	6762739.431
PI	423+40.460	2498607.951	6763193.626
CC		2503593.693	6753349.713
PT	432+08.746	2499414.495	6763524.894
Radius:	11000.000		
Delta:	09°03'51.276" Right		
Degree of Curvature(Arc):	00°31'15.135"		
Length:	1740.210		
Tangent:	871.924		
Chord:	1738.396		
Middle Ordinate:	34.395		
External:	34.503		
Tangent Back Direction:	N58°36'23.717"E		
Radial Direction:	S31°23'36.283"E		
Chord Direction:	N63°08'19.355"E		
Radial Direction:	S22°19'45.007"E		
Tangent Ahead Direction:	N67°40'14.993"E		

PT	432+08.746	2499414.495	6763524.894
PC	454+23.935	2501463.582	6764366.504
Tangential Direction:	N67°40'14.993"E		
Tangential Length:	2215.190		

PC	454+23.935	2501463.582	6764366.504
PI	460+35.378	2502029.176	6764598.808
CC		2500361.793	6767049.052
PT	466+29.167	2502452.834	6765039.687
Radius:	2900.000		
Delta:	23°48'43.080" Left		
Degree of Curvature(Arc):	01°58'32.580"		
Length:	1205.232		
Tangent:	611.442		
Chord:	1196.577		
Middle Ordinate:	62.386		
External:	63.758		
Tangent Back Direction:	N67°40'14.993"E		
Radial Direction:	S22°19'45.007"E		
Chord Direction:	N55°45'53.453"E		
Radial Direction:	S46°08'28.087"E		
Tangent Ahead Direction:	N43°51'31.913"E		

PT	466+29.167	2502452.834	6765039.687
PC	511+60.344	2505592.415	6768306.886
Tangential Direction:	N43°51'31.913"E		
Tangential Length:	4531.176		

PC	511+60.344	2505592.415	6768306.886
PI	515+40.931	2505856.118	6768581.308
CC		2507647.404	6766332.166
PT	519+17.041	2506182.589	6768776.919
Radius:	2850.000		
Delta:	15°12'44.931" Right		
Degree of Curvature(Arc):	02°00'37.362"		
Length:	756.697		
Tangent:	380.587		
Chord:	754.477		
Middle Ordinate:	25.077		
External:	25.299		
Tangent Back Direction:	N43°51'31.913"E		
Radial Direction:	S46°08'28.087"E		
Chord Direction:	N51°27'54.378"E		
Radial Direction:	S30°55'43.157"E		
Tangent Ahead Direction:	N59°04'16.843"E		

PT	519+17.041	2506182.589	6768776.919
PI	535+66.192	2507597.244	6769624.533
Tangential Direction:	N59°04'16.843"E		
Tangential Length:	1649.151		

PI	535+66.192	2507597.244	6769624.533
PC	569+41.137	2510488.460	6771365.546
Tangential Direction:	N58°56'41.197"E		
Tangential Length:	3374.946		

PC	569+41.137	2510488.460	6771365.546
PI	575+11.664	2510977.213	6771659.860
CC		2509044.041	6773764.224

PT	580+66.782	2511311.843	6772121.947
Radius:	2800.000		
Delta:	23°02'01.723" Left		
Degree of Curvature(Arc):	02°02'46.600"		
Length:	1125.644		
Tangent:	570.527		
Chord:	1118.080		
Middle Ordinate:	56.376		
External:	57.534		
Tangent Back Direction:	N58°56'41.197"E		
Radial Direction:	S31°03'18.803"E		
Chord Direction:	N47°25'40.335"E		
Radial Direction:	S54°05'20.526"E		
Tangent Ahead Direction:	N35°54'39.474"E		

PT	580+66.782	2511311.843	6772121.947
PC	596+09.264	2512216.551	6773371.249
Tangential Direction:	N35°54'39.474"E		
Tangential Length:	1542.482		

PC	596+09.264	2512216.551	6773371.249
PI	599+33.086	2512406.482	6773633.521
CC		2510029.742	6774954.872
PT	602+53.829	2512529.007	6773933.269
Radius:	2700.000		
Delta:	13°40'41.158" Left		
Degree of Curvature(Arc):	02°07'19.437"		
Length:	644.565		
Tangent:	323.822		
Chord:	643.036		
Middle Ordinate:	19.212		
External:	19.349		
Tangent Back Direction:	N35°54'39.474"E		
Radial Direction:	S54°05'20.526"E		
Chord Direction:	N29°04'18.895"E		
Radial Direction:	S67°46'01.684"E		
Tangent Ahead Direction:	N22°13'58.316"E		

PT	602+53.829	2512529.007	6773933.269
PC	611+57.058	2512870.763	6774769.346
Tangential Direction:	N22°13'58.316"E		
Tangential Length:	903.229		

PC	611+57.058	2512870.763	6774769.346
PI	614+24.097	2512971.803	6775016.532
CC		2514722.070	6774012.602
PT	616+87.996	2513134.156	6775228.549
Radius:	2000.000		
Delta:	15°12'36.934" Right		
Degree of Curvature(Arc):	02°51'53.240"		
Length:	530.938		
Tangent:	267.039		
Chord:	529.381		
Middle Ordinate:	17.593		
External:	17.749		
Tangent Back Direction:	N22°13'58.316"E		
Radial Direction:	S67°46'01.684"E		
Chord Direction:	N29°50'16.783"E		
Radial Direction:	S52°33'24.750"E		
Tangent Ahead Direction:	N37°26'35.250"E		

PT	616+87.996	2513134.156	6775228.549
PC	656+07.364	2515517.028	6778340.360
Tangential Direction:	N37°26'35.250"E		
Tangential Length:	3919.368		

PC	656+07.364	2515517.028	6778340.360
PI	659+42.882	2515721.014	6778606.747
CC		2516906.453	6777276.406
PT	662+70.355	2516009.060	6778778.799
Radius:	1750.000		
Delta:	21°42'23.760" Right		
Degree of Curvature(Arc):	03°16'26.560"		
Length:	662.990		
Tangent:	335.518		
Chord:	659.033		
Middle Ordinate:	31.303		
External:	31.873		
Tangent Back Direction:	N37°26'35.250"E		
Radial Direction:	S52°33'24.750"E		
Chord Direction:	N48°17'47.130"E		
Radial Direction:	S30°51'00.990"E		
Tangent Ahead Direction:	N59°08'59.010"E		

STATE OF TEXAS
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137833
LICENSED
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vanrajsinh Mahida 05/06/2024

Signature of Registrant ,P.E. & Date

Texas Department of Transportation

SH 34

HORIZONTAL ALIGNMENT DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		81

DATE: 5/4/2024 10:02:13 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/056801052/4 - Design/Plan Set/3. Roadway/SH34_Horizontal Data.dgn

PT	662+70.355	2516009.060	6778778.799
PI	691+62.464	2518491.965	6780261.862
Tangential Direction:	N59°08'59.010"E		
Tangential Length:	2892.109		
PI	691+62.464	2518491.965	6780261.862
PI	707+57.789	2519859.409	6781083.543
Tangential Direction:	N58°59'55.836"E		
Tangential Length:	1595.326		
PI	707+57.789	2519859.409	6781083.543
PI	717+67.942	2520736.440	6781584.768
Tangential Direction:	N60°15'07.039"E		
Tangential Length:	1010.153		
PI	717+67.942	2520736.440	6781584.768
PI	733+49.578	2522091.061	6782401.206
Tangential Direction:	N58°55'20.538"E		
Tangential Length:	1581.635		
PI	733+49.578	2522091.061	6782401.206
PI	770+16.784	2525225.816	6784304.286
Tangential Direction:	N58°44'18.475"E		
Tangential Length:	3667.206		
PI	770+16.784	2525225.816	6784304.286
PI	796+94.892	2527532.911	6785664.278
Tangential Direction:	N59°28'53.024"E		
Tangential Length:	2678.108		
PI	796+94.892	2527532.911	6785664.278
PI	816+11.931	2529184.196	6786638.084
Tangential Direction:	N59°28'15.681"E		
Tangential Length:	1917.039		
PI	816+11.931	2529184.196	6786638.084
PI	827+57.987	2530161.661	6787236.420
Tangential Direction:	N58°31'40.584"E		
Tangential Length:	1146.056		
PI	827+57.987	2530161.661	6787236.420
PC	831+17.507	2530466.679	6787426.730
Tangential Direction:	N58°02'19.610"E		
Tangential Length:	359.520		
PC	831+17.507	2530466.679	6787426.730
PI	835+57.067	2530839.606	6787659.409
CC		2531220.996	6786217.751
PT	839+70.236	2531278.804	6787641.578
Radius:	1425.000		
Delta:	34°17'10.245" Right		
Degree of Curvature(Arc):	04°01'14.723"		
Length:	852.730		
Tangent:	439.561		
Chord:	840.063		
Middle Ordinate:	63.310		
External:	66.254		
Tangent Back Direction:	N58°02'19.610"E		
Radial Direction:	S31°57'40.390"E		
Chord Direction:	N75°10'54.732"E		
Radial Direction:	S02°19'29.855"W		
Tangent Ahead Direction:	S87°40'30.145"E		
PT	839+70.236	2531278.804	6787641.578
PC	842+42.845	2531551.188	6787630.519
Tangential Direction:	S87°40'30.145"E		
Tangential Length:	272.608		
PC	842+42.845	2531551.188	6787630.519
PI	847+09.066	2532017.026	6787611.605
CC		2531610.011	6789079.325
PT	851+45.011	2532406.591	6787867.731
Radius:	1450.000		
Delta:	35°38'54.563" Left		
Degree of Curvature(Arc):	03°57'05.159"		
Length:	902.166		
Tangent:	466.221		
Chord:	887.685		
Middle Ordinate:	69.600		
External:	73.109		
Tangent Back Direction:	S87°40'30.145"E		
Radial Direction:	S02°19'29.855"W		
Chord Direction:	N74°30'02.573"E		
Radial Direction:	S33°19'24.708"E		
Tangent Ahead Direction:	N56°40'35.292"E		
PT	851+45.011	2532406.591	6787867.731
PC	880+40.497	2534826.007	6789458.413
Tangential Direction:	N56°40'35.292"E		
Tangential Length:	2895.486		
PC	880+40.497	2534826.007	6789458.413
PI	882+46.719	2534998.323	6789571.705
CC		2533727.275	6791129.576
PT	884+51.490	2535143.895	6789717.774
Radius:	2000.000		
Delta:	11°46'26.693" Left		
Degree of Curvature(Arc):	02°51'53.240"		
Length:	410.993		
Tangent:	206.223		
Chord:	410.270		
Middle Ordinate:	10.548		
External:	10.604		
Tangent Back Direction:	N56°40'35.292"E		
Radial Direction:	S33°19'24.708"E		
Chord Direction:	N50°47'21.945"E		
Radial Direction:	S45°05'51.401"E		
Tangent Ahead Direction:	N44°54'08.599"E		
PT	884+51.490	2535143.895	6789717.774
PI	892+56.721	2535712.309	6790288.128
Tangential Direction:	N44°54'08.599"E		
Tangential Length:	805.232		
PI	892+56.721	2535712.309	6790288.128
PI	913+72.382	2537214.802	6791777.603
Tangential Direction:	N45°14'57.435"E		
Tangential Length:	2115.660		
PI	913+72.382	2537214.802	6791777.603
PI	931+05.334	2538446.583	6792996.552
Tangential Direction:	N45°18'00.021"E		
Tangential Length:	1732.952		
PI	931+05.334	2538446.583	6792996.552
PI	937+00.563	2538870.829	6793414.061
Tangential Direction:	N45°27'30.585"E		
Tangential Length:	595.230		
PI	937+00.563	2538870.829	6793414.061
PC	953+87.478	2540066.072	6794604.470
Tangential Direction:	N45°06'57.979"E		
Tangential Length:	1686.914		
PC	953+87.478	2540066.072	6794604.470
PI	958+28.006	2540378.203	6794915.339
CC		2537102.248	6797580.331
PT	962+65.324	2540619.038	6795284.207
Radius:	4200.000		
Delta:	11°58'31.639" Left		
Degree of Curvature(Arc):	01°21'51.067"		
Length:	877.847		
Tangent:	440.528		
Chord:	876.250		
Middle Ordinate:	22.914		
External:	23.040		

STATE OF TEXAS
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Texas Department of Transportation

SH 34

HORIZONTAL ALIGNMENT DATA

SHEET 5 OF 6

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		82

DW: CK: DW: CK:

DATE: 5/4/2024 10:02:14 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_Horizontal Data.dgn

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Tangent Back Direction:	N45°06'57.979"E		
Radial Direction:	S44°53'02.021"E		
Chord Direction:	N39°07'42.159"E		
Radial Direction:	S56°51'33.660"E		
Tangent Ahead Direction:	N33°08'26.340"E		
PT	962+65.324	2540619.038	6795284.207
PC	968+40.912	2540933.710	6795766.164
Tangential Direction:	N33°08'26.340"E		
Tangential Length:	575.588		
PC	968+40.912	2540933.710	6795766.164
PI	974+20.009	2541250.300	6796251.061
CC		2543278.237	6794235.415
PT	979+83.004	2541733.263	6796570.593
Radius:	2800.000		
Delta:	23°22'13.383" Right		
Degree of Curvature(Arc):	02°02'46.600"		
Length:	1142.092		
Tangent:	579.097		
Chord:	1134.192		
Middle Ordinate:	58.029		
External:	59.258		
Tangent Back Direction:	N33°08'26.340"E		
Radial Direction:	S56°51'33.660"E		
Chord Direction:	N44°49'33.032"E		
Radial Direction:	S33°29'20.277"E		
Tangent Ahead Direction:	N56°30'39.723"E		
PT	979+83.004	2541733.263	6796570.593
PI	987+20.470	2542348.304	6796977.509
Tangential Direction:	N56°30'39.723"E		
Tangential Length:	737.466		
PI	987+20.470	2542348.304	6796977.509
PI	995+65.132	2543053.000	6797443.189
Tangential Direction:	N56°32'32.531"E		
Tangential Length:	844.662		
PI	995+65.132	2543053.000	6797443.189
PI	1013+47.055	2544515.005	6798461.908
Tangential Direction:	N55°07'52.955"E		
Tangential Length:	1781.922		
PI	1013+47.055	2544515.005	6798461.908
PC	1031+75.196	2546061.877	6799436.221
Tangential Direction:	N57°47'41.258"E		
Tangential Length:	1828.141		
PC	1031+75.196	2546061.877	6799436.221
PI	1034+18.363	2546267.632	6799565.818
CC		2544196.541	6802397.728
PT	1036+60.750	2546453.489	6799722.623
Radius:	3500.000		
Delta:	07°56'55.081" Left		
Degree of Curvature(Arc):	01°38'13.280"		
Length:	485.554		
Tangent:	243.167		
Chord:	485.165		
Middle Ordinate:	8.417		
External:	8.437		
Tangent Back Direction:	N57°47'41.258"E		
Radial Direction:	S32°12'18.742"E		
Chord Direction:	N53°49'13.717"E		
Radial Direction:	S40°09'13.823"E		
Tangent Ahead Direction:	N49°50'46.177"E		
PT	1036+60.750	2546453.489	6799722.623
PC	1042+53.563	2546906.585	6800104.893
Tangential Direction:	N49°50'46.177"E		
Tangential Length:	592.813		
PC	1042+53.563	2546906.585	6800104.893
PI	1050+03.015	2547479.403	6800588.171
CC		2545036.543	6802321.409
PT	1057+20.374	2547746.347	6801288.470
Radius:	2900.000		
Delta:	28°58'48.063" Left		
Degree of Curvature(Arc):	01°58'32.580"		
Length:	1466.810		
Tangent:	749.451		
Chord:	1451.225		
Middle Ordinate:	92.245		
External:	95.276		
Tangent Back Direction:	N49°50'46.177"E		
Radial Direction:	S40°09'13.823"E		
Chord Direction:	N35°21'22.146"E		
Radial Direction:	S69°08'01.886"E		
Tangent Ahead Direction:	N20°51'58.114"E		
PT	1057+20.374	2547746.347	6801288.470
PC	1087+20.628	2548814.995	6804091.953
Tangential Direction:	N20°51'58.114"E		
Tangential Length:	3000.254		
PC	1087+20.628	2548814.995	6804091.953
PI	1091+21.268	2548957.697	6804466.318
CC		2549889.572	6803682.339
PT	1094+91.665	2549302.122	6804670.975
Radius:	1150.000		
Delta:	38°24'53.815" Right		
Degree of Curvature(Arc):	04°58'56.070"		
Length:	771.037		
Tangent:	400.641		
Chord:	756.677		
Middle Ordinate:	64.017		
External:	67.790		
Tangent Back Direction:	N20°51'58.114"E		
Radial Direction:	S69°08'01.886"E		
Chord Direction:	N40°04'25.022"E		
Radial Direction:	S30°43'08.071"E		
Tangent Ahead Direction:	N59°16'51.929"E		
PT	1094+91.665	2549302.122	6804670.975
PI	1104+98.166	2550167.394	6805185.123
Tangential Direction:	N59°16'51.929"E		
Tangential Length:	1006.501		
PI	1104+98.166	2550167.394	6805185.123
PI	1112+12.983	2550773.459	6805564.132
Tangential Direction:	N57°58'47.011"E		
Tangential Length:	714.817		
PI	1112+12.983	2550773.459	6805564.132
PI	1118+70.944	2551336.575	6805904.446
Tangential Direction:	N58°51'13.648"E		
Tangential Length:	657.962		
PI	1118+70.944	2551336.575	6805904.446
PI	1123+16.817	2551717.317	6806136.475
Tangential Direction:	N58°38'28.856"E		
Tangential Length:	445.872		
PI	1123+16.817	2551717.317	6806136.475
PI	1127+40.929	2552080.588	6806355.348
Tangential Direction:	N58°55'50.551"E		
Tangential Length:	424.112		
PI	1127+40.929	2552080.588	6806355.348
PI	1130+70.885	2552359.430	6806531.751
Tangential Direction:	N57°40'53.532"E		
Tangential Length:	329.956		
PI	1130+70.885	2552359.430	6806531.751
POT	1133+58.484	2552592.857	6806699.754
Tangential Direction:	N54°15'22.987"E		
Tangential Length:	287.599		

STATE OF TEXAS
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137833
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vanrajsinh Mahida 05/06/2024

_____,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

HORIZONTAL ALIGNMENT DATA

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		83

DW: CK: DW: CK:

DATE: 5/4/2024 10:02:15 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/056801052/4 - Design/Plan Set/3. Roadway/SH34_Horizontal Data.dgn

Alignment Name: SH34_AT1181
Alignment Description:
Alignment Style: Alignment\Baseline

		Station	Northing	Easting
Element: Linear				
POT	( )	354+00.000 R1	6827482.91	2576548.20
PI	( )	364+00.000 R1	6827829.12	2577486.36
Tangential Direction:		N69°44'40.073"E		
Tangential Length:		1000		
Element: Linear				
PI	( )	364+00.000 R1	6827829.12	2577486.36
POT	( )	378+00.000 R1	6828313.81	2578799.78
Tangential Direction:		N69°44'40.073"E		
Tangential Length:		1400		

STATE OF TEXAS
VANRAJSINH MAHIDA
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SH 34

HORIZONTAL ALIGNMENT DATA AT FM 1181

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		84

DATE: 5/4/2024 10:02:29 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34 AT FM1181 Horizontal Data.dgn

DW: | CK: | DW: | CK:

FOR CONTRACTORS INFORMATION ONLY

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-10
Alignment description:
Report Created: Friday, March 8, 2024
Time: 12:42:24 PM

	STATION	X	Y
POT	1000.000 R1	2471373.866	6753627.683
PC	1212.383 R1	2471581.808	6753584.480
Tangential Direction:	S78.263°E		
Tangential Length:	212.383		
PC	1212.383 R1	2471581.808	6753584.480
PI	1327.376 R1	2471694.397	6753561.088
CC		2471953.446	6755373.243
PT	1442.067 R1	2471809.031	6753551.998
Radius:	1826.961		
Delta:	7.203° Left		
Degree of Curvature(Arc):	3.136°		
Length:	229.685		
Tangent:	114.994		
Chord:	229.533		
Middle Ordinate:	3.608		
External:	3.615		
Tangent Back Direction:	S78.263°E		
Radial Direction:	S11.737°W		
Chord Direction:	S81.865°E		
Radial Direction:	S4.534°W		
Tangent Ahead Direction:	S85.466°E		
PT	1442.067 R1	2471809.031	6753551.998
PC	1467.469 R1	2471834.354	6753549.991
Tangential Direction:	S85.466°E		
Tangential Length:	25.402		
PC	1467.469 R1	2471834.354	6753549.991
PI	1536.804 R1	2471903.471	6753544.510
CC		2471823.770	6753416.515
PT	1595.421 R1	2471938.883	6753484.901
Radius:	133.894		
Delta:	54.753° Right		
Degree of Curvature(Arc):	42.792°		
Length:	127.952		
Tangent:	69.335		
Chord:	123.139		
Middle Ordinate:	14.996		
External:	16.887		
Tangent Back Direction:	S85.466°E		
Radial Direction:	S4.534°W		
Chord Direction:	S58.090°E		
Radial Direction:	S59.287°W		
Tangent Ahead Direction:	S30.713°E		
PT	1595.421 R1	2471938.883	6753484.901
POT	1642.632 R1	2471962.996	6753444.312
Tangential Direction:	S30.713°E		
Tangential Length:	47.211		

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL- FM 667 LT
Alignment description:
Report Created: Friday, March 8, 2024
Time: 12:45:06 PM

	STATION	X	Y
POT	1000.000 R1	2471372.658	6753650.558
PC	1229.498 R1	2471597.213	6753603.187
Tangential Direction:	S78.088°E		
Tangential Length:	229.498		
PC	1229.498 R1	2471597.213	6753603.187
PI	1680.211 R1	2472038.911	6753513.489
CC		2471976.020	6755468.527
PT	2114.622 R1	2472473.931	6753631.390
Radius:	1903.415		
Delta:	26.644° Left		
Degree of Curvature(Arc):	3.010°		
Length:	885.125		
Tangent:	450.714		
Chord:	877.171		
Middle Ordinate:	51.219		
External:	52.635		
Tangent Back Direction:	S78.521°E		
Radial Direction:	S11.479°W		
Chord Direction:	N88.157°E		
Radial Direction:	S15.164°E		
Tangent Ahead Direction:	N74.836°E		
PT	2114.622 R1	2472473.931	6753631.390
PIBL CL-11	2547.387 R1	2472892.656	6753740.727
Tangential Direction:	N75.366°E		
Tangential Length:	432.765		
PI	2547.387 R1	2472892.656	6753740.727
POT	2634.528 R1	2472977.511	6753760.557
Tangential Direction:	N76.846°E		
Tangential Length:	87.141		

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SH 34

SAWCUT LINE
HORIZONTAL ALIGNMENT
DATA AT
FM 667

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		85

DATE: 5/4/2024 10:02:42 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/056801052/4 - Design/Plan Set/3. Roadway/SAWCUT Horizontal Alignment.dgn

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HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-13
Alignment description:
Report Created: Wednesday, February 28, 2024
Time: 8:55:05 AM

	STATION	X	Y
POT	2247.000 R1	2512394.987	6773896.514
PC	2299.378 R1	2512440.628	6773870.818
Tangential Direction:	S60.620°E		
Tangential Length:	52.378		
PC	2299.378 R1	2512440.628	6773870.818
PI	2343.665 R1	2512479.219	6773849.090
CC		2512460.252	6773905.673
PT	2366.275 R1	2512496.918	6773889.687
Radius:	40.000		
Delta:	95.824° Left		
Degree of Curvature(Arc):	143.239°		
Length:	66.897		
Tangent:	44.287		
Chord:	59.369		
Middle Ordinate:	13.189		
External:	19.677		
Tangent Back Direction:	S60.620°E		
Radial Direction:	S29.380°W		
Chord Direction:	N71.468°E		
Radial Direction:	S66.444°E		
Tangent Ahead Direction:	N23.556°E		
PT	2366.275 R1	2512496.918	6773889.687
PI	2418.772 R1	2512517.899	6773937.809
Tangential Direction:	N23.556°E		
Tangential Length:	52.497		
PI	2418.772 R1	2512517.899	6773937.809
POT	3079.943 R1	2512768.067	6774549.824
Tangential Direction:	N22.233°E		
Tangential Length:	661.171		

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-14
Alignment description:
Report Created: Wednesday, February 28, 2024
Time: 8:52:08 AM

	STATION	X	Y
POT	1000.000 R1	2511798.454	6772814.362
PC	1696.264 R1	2512206.832	6773378.287
Tangential Direction:	N35.911°E		
Tangential Length:	696.264		
PC	1696.264 R1	2512206.832	6773378.287
PI	1951.258 R1	2512356.393	6773584.814
CC		2510029.742	6774954.872
PT	2204.730 R1	2512464.451	6773815.780
Radius:	2688.000		
Delta:	10.838° Left		
Degree of Curvature(Arc):	2.132°		
Length:	508.466		
Tangent:	254.994		
Chord:	507.708		
Middle Ordinate:	12.014		
External:	12.068		
Tangent Back Direction:	N35.911°E		
Radial Direction:	S54.089°E		
Chord Direction:	N30.492°E		
Radial Direction:	S64.927°E		
Tangent Ahead Direction:	N25.073°E		

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-5
Alignment description:
Report Created: Wednesday, February 28, 2024
Time: 4:46:41 PM

	STATION	X	Y
POT	1000.000 R1	2511817.892	6772800.286
PI	1441.423 R1	2512076.799	6773157.807
Tangential Direction:	N35.911°E		
Tangential Length:	441.423		
PI	1441.423 R1	2512076.799	6773157.807
PC	1696.264 R1	2512226.270	6773364.210
Tangential Direction:	N35.911°E		
Tangential Length:	254.841		
PC	1696.264 R1	2512226.270	6773364.210
PI	2021.525 R1	2512417.045	6773627.649
CC		2510029.743	6774954.872
PT	2343.694 R1	2512540.114	6773928.728
Radius:	2711.999		
Delta:	13.678° Left		
Degree of Curvature(Arc):	2.113°		
Length:	647.430		
Tangent:	325.261		
Chord:	645.894		
Middle Ordinate:	19.297		
External:	19.435		
Tangent Back Direction:	N35.911°E		
Radial Direction:	S54.089°E		
Chord Direction:	N29.072°E		
Radial Direction:	S67.767°E		
Tangent Ahead Direction:	N22.233°E		
PT	2343.694 R1	2512540.114	6773928.728
POT	3004.865 R1	2512790.345	6774540.718
Tangential Direction:	N22.239°E		
Tangential Length:	661.171		

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

SAWCUT LINE
HORIZONTAL ALIGNMENT
DATA AT
FM 877

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		86

DATE: 5/4/2024 10:02:43 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SAWCUT Horizontal Alignment.dgn

FOR CONTRACTOR'S INFORMATION ONLY

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-16
Alignment description:
Report Created: Thursday, February 15, 2024
Time: 12:57:32 PM

	STATION	X	Y
POT	1951.000 R1	2529175.707	6786619.147
PI	1968.030 R1	2529190.376	6786627.798
Tangential Direction:	N59.471°E		
Tangential Length:	17.030		
PI	1968.030 R1	2529190.376	6786627.798
POT	2825.944 R1	2529922.087	6787075.700
Tangential Direction:	N58.528°E		
Tangential Length:	857.914		

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-15
Alignment description:
Report Created: Thursday, February 29, 2024
Time: 11:43:42 AM

	STATION	X	Y
POT	2000.000 R1	2528615.683	6786316.748
PI	2652.833 R1	2529178.015	6786648.370
Tangential Direction:	N59.471°E		
Tangential Length:	652.833		
PI	2652.833 R1	2529178.015	6786648.370
POT	3510.550 R1	2529909.558	6787096.170
Tangential Direction:	N58.528°E		
Tangential Length:	857.718		

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-18
Alignment description:
Report Created: Thursday, February 29, 2024
Time: 11:42:41 AM

	STATION	X	Y
POT	2000.000 R1	2528627.874	6786296.075
PC	2518.382 R1	2529074.394	6786559.400
Tangential Direction:	N59.471°E		
Tangential Length:	518.382		
PC	2518.382 R1	2529074.394	6786559.400
PI	2557.336 R1	2529107.948	6786579.188
CC		2529094.713	6786524.945
PT	2580.154 R1	2529128.618	6786546.169
Radius:	40.000		
Delta:	88.482° Right		
Degree of Curvature(Arc):	143.239°		
Length:	61.772		
Tangent:	38.954		
Chord:	55.814		
Middle Ordinate:	11.344		
External:	15.834		
Tangent Back Direction:	N59.471°E		
Radial Direction:	S30.529°E		
Chord Direction:	S76.288°E		
Radial Direction:	S57.953°W		
Tangent Ahead Direction:	S32.047°E		
PT	2580.154 R1	2529128.618	6786546.169
POT	2635.924 R1	2529158.209	6786498.898
Tangential Direction:	S32.047°E		
Tangential Length:	55.770		

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Texas Department of Transportation

SH 34

SAWCUT LINE
HORIZONTAL ALIGNMENT
DATA AT
FM 985

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		87

CK: DW: CK: DW:

DATE: 5/4/2024 10:02:44 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SAWCUT Horizontal Alignment.dgn

FOR CONTRACTOR'S INFORMATION ONLY

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-33
Alignment description:
Report Created: Thursday, February 29, 2024
Time: 1:03:31 PM

	STATION	X	Y
POT	3000.000 R1	2576920.003	6827630.781
POT	5000.000 R1	2578796.319	6828323.196
Tangential Direction:	N69.744°E		
Tangential Length:	2000.000		

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-31
Alignment description:
Report Created: Thursday, February 29, 2024
Time: 1:05:20 PM

	STATION	X	Y
POT	3811.000 R1	2577687.773	6827892.792
POT	5000.000 R1	2578803.243	6828304.433
Tangential Direction:	N69.744°E		
Tangential Length:	1189.000		

HORIZONTAL ALIGNMENT REPORT

Alignment name: BL CL-30
Alignment description:
Report Created: Thursday, February 29, 2024
Time: 1:02:31 PM

	STATION	X	Y
POT	3000.000 R1	2576926.927	6827612.017
PC	3714.756 R1	2577597.482	6827859.472
Tangential Direction:	N69.744°E		
Tangential Length:	714.756		
PC	3714.756 R1	2577597.482	6827859.472
PI	3745.836 R1	2577626.639	6827870.232
CC		2577611.330	6827821.945
PT	3767.601 R1	2577644.271	6827844.637
Radius:	40.000		
Delta:	75.694° Right		
Degree of Curvature(Arc):	143.239°		
Length:	52.844		
Tangent:	31.080		
Chord:	49.084		
Middle Ordinate:	8.414		
External:	10.655		
Tangent Back Direction:	N69.744°E		
Radial Direction:	S20.256°E		
Chord Direction:	S72.408°E		
Radial Direction:	S55.439°W		
Tangent Ahead Direction:	S34.561°E		
PT	3767.601 R1	2577644.271	6827844.637
POT	3842.607 R1	2577686.821	6827782.868
Tangential Direction:	S34.561°E		
Tangential Length:	75.006		

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Texas Department of Transportation

SH 34

SAWCUT LINE HORIZONTAL ALIGNMENT DATA AT FM 1181

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		88

DW: CK: DW: CK:

DATE: 5/4/2024 10:02:45 PM
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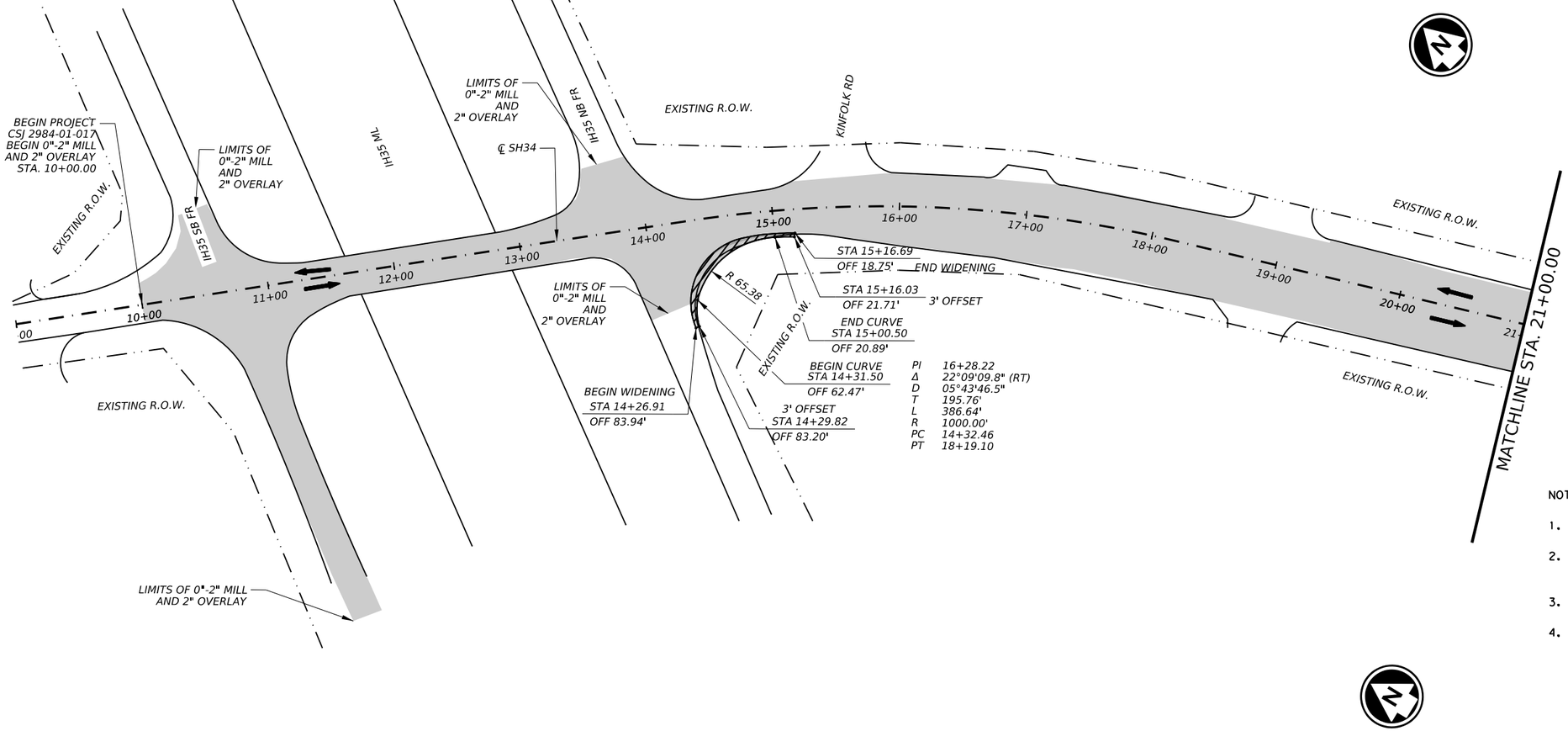

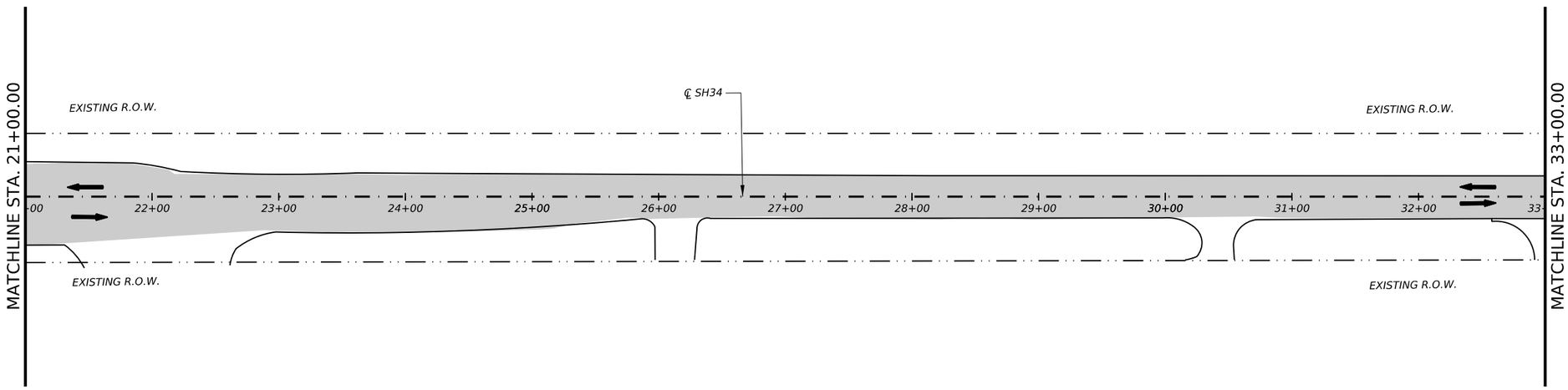

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.

STATE OF TEXAS
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PROFESSIONAL ENGINEER

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Signature of Registrant , P.E. & Date

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SH 34

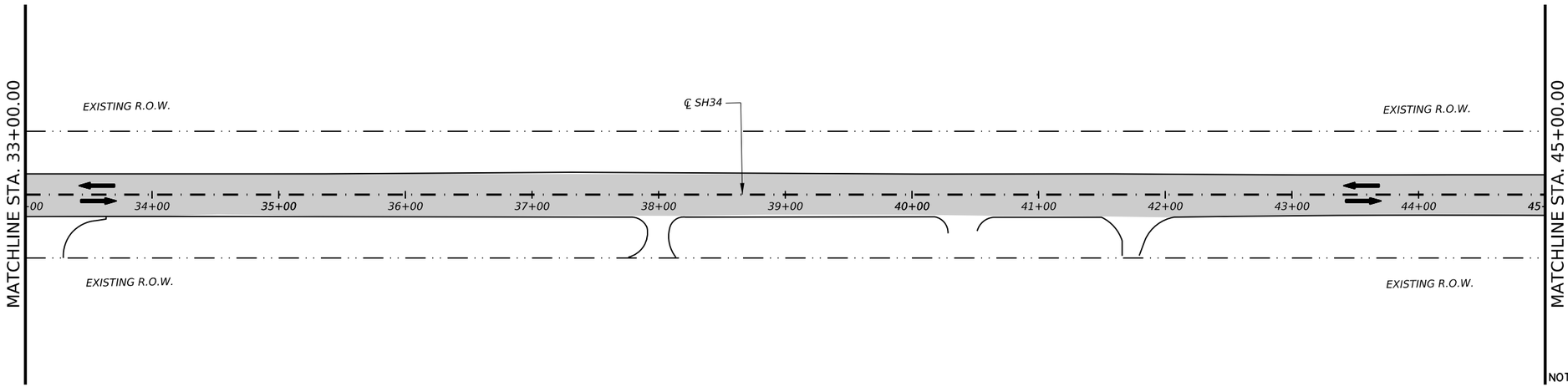
PLAN
LAYOUTS

SHEET 1 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		89

DATE: 5/5/2024 3:11:12 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-1.dgn

CK
DW
CK
DW



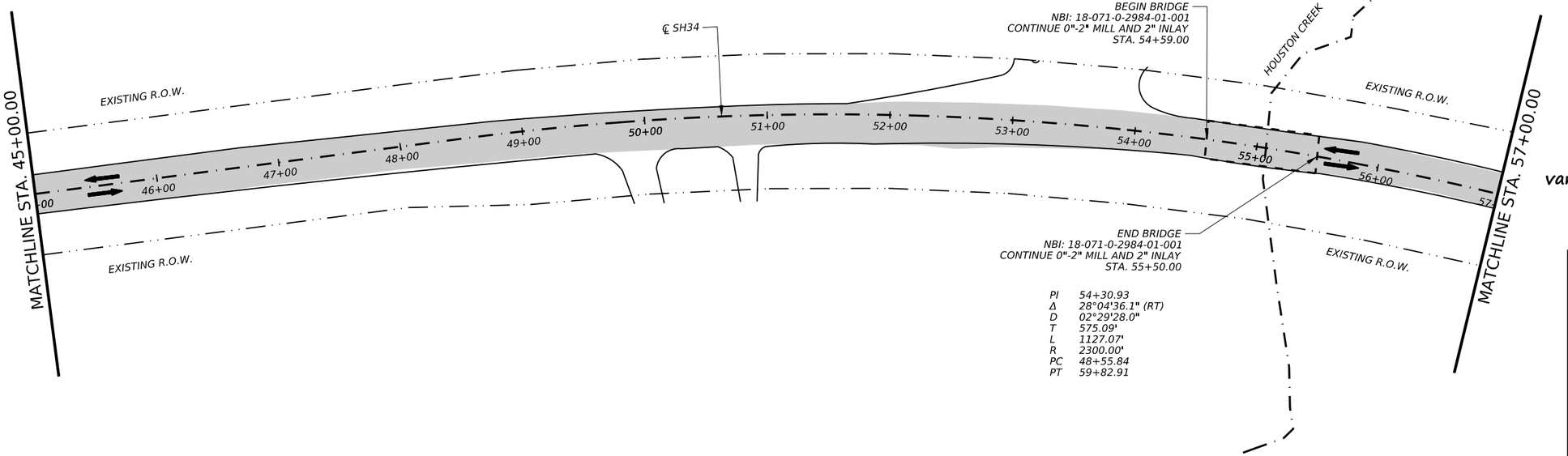
0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



PI	54+30.93
Δ	28°04'36.1" (RT)
D	02°29'28.0"
T	575.09'
L	1127.07'
R	2300.00'
PC	48+55.84
PT	59+82.91

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Texas Department of Transportation

SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		90

DATE: 5/5/2024 3:11:25 AM
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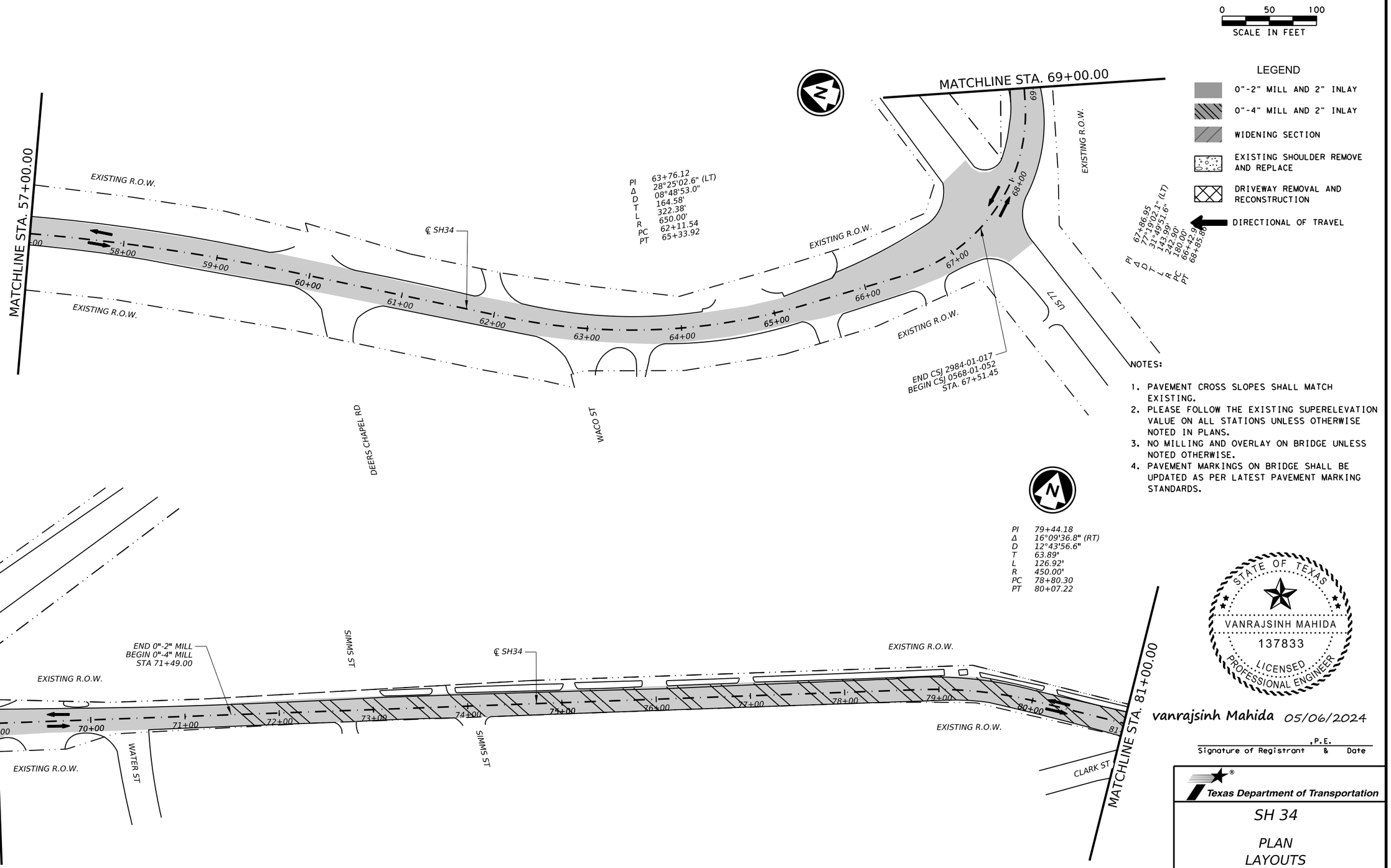

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Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 3 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		91

DATE: 5/5/2024 3:11:38 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3_Roadway/SH34_PLAN LAYOUT-3.dgn

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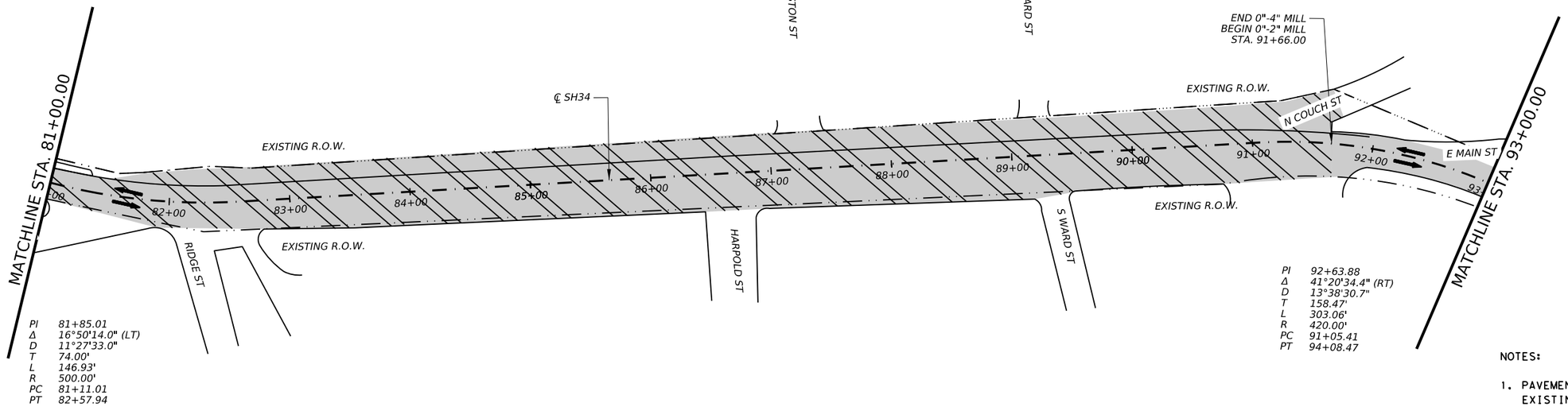

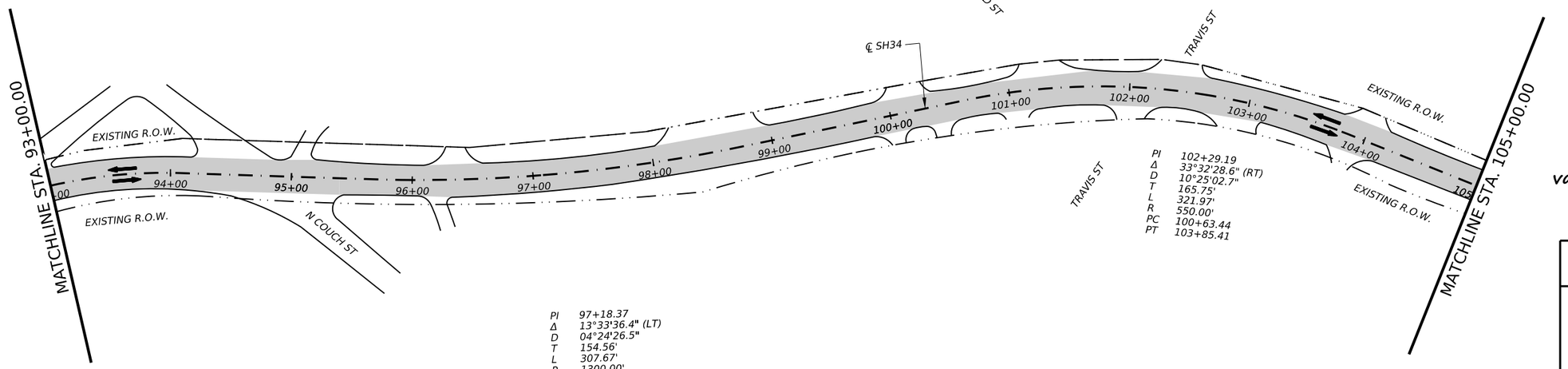

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.

STATE OF TEXAS
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Signature of Registrant & Date ,P.E.

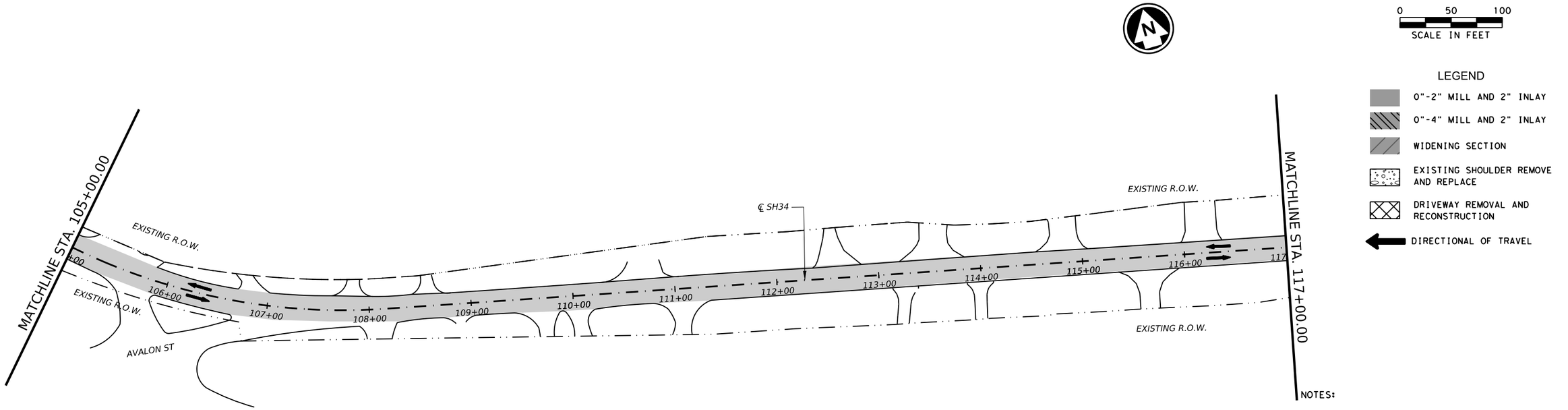
Texas Department of Transportation

SH 34

PLAN
LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		92

DATE: 5/5/2024 3:11:51 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3. Roadway/SH34 PLAN LAYOUT-4.dgn



PI 106+62.84
Δ 29°41'46.8" (LT)
D 09°32'57.5"
T 159.07'
L 310.98'
R 600.00'
PC 105+03.78
PT 108+14.76

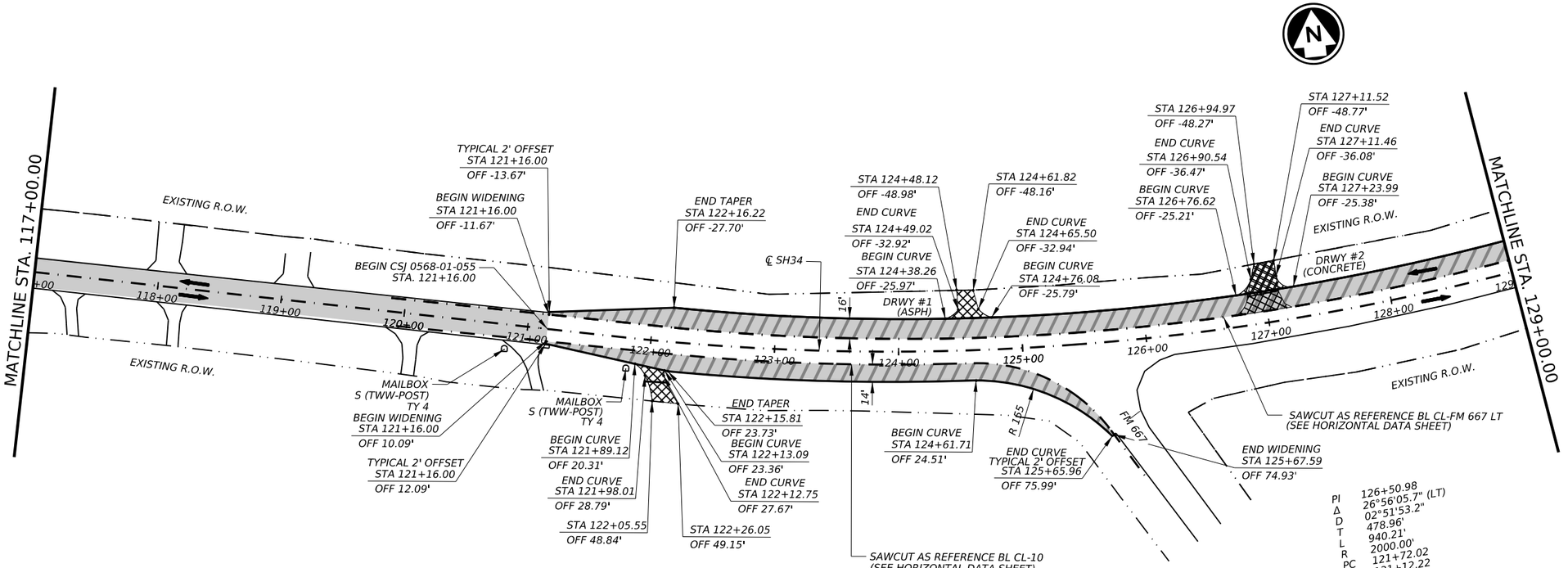
0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



PI 126+50.98
Δ 26°56'05.7" (LT)
D 02°51'53.2"
T 478.96'
L 940.21'
R 2000.00'
PC 121+72.02
PT 131+12.22

STATE OF TEXAS
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Signature of Registrant , P.E. & Date

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SH 34

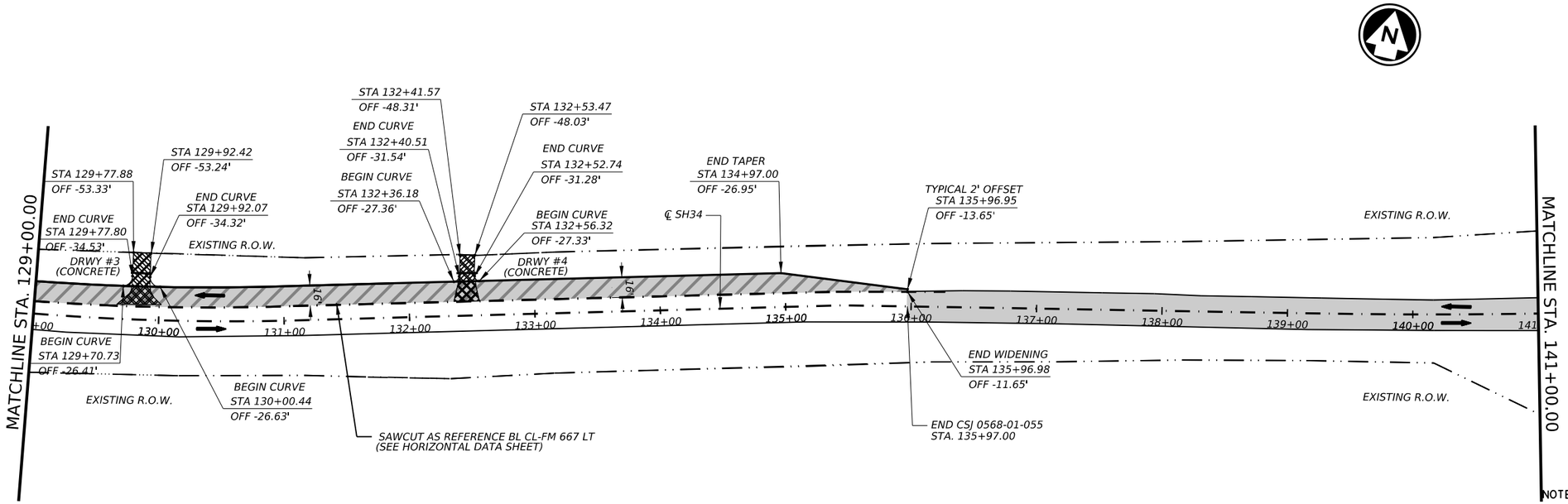
PLAN LAYOUTS

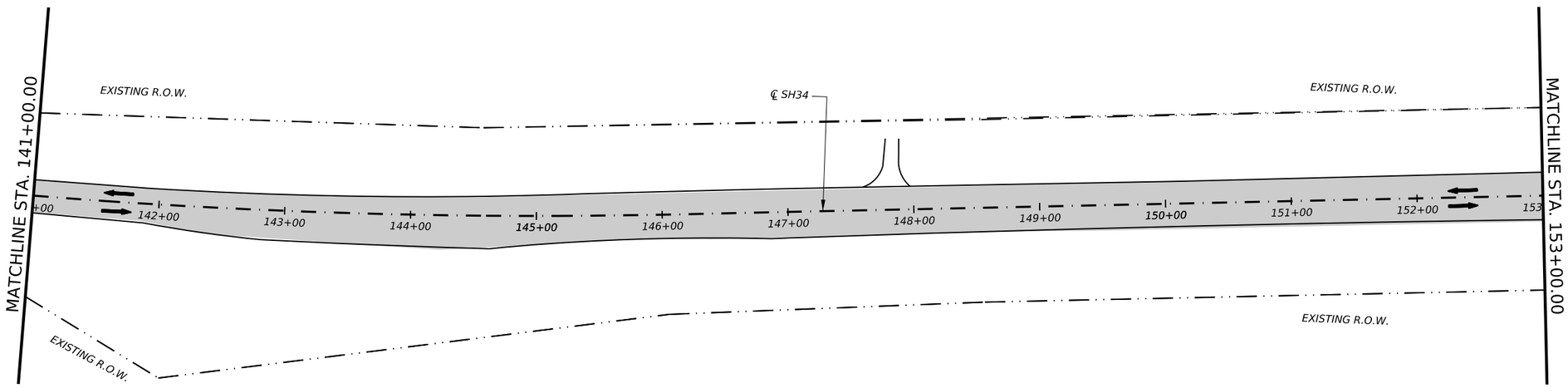
SHEET 5 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		93

DATE: 5/5/2024 3:12:04 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-5.dgn

CK: DW: CK: DW:





PI 142+69.70
Δ 07°46'42.3" (LT)
D 01°08'45.3"
T 339.92'
L 678.80'
R 5000.00'
PC 139+29.78
PT 146+08.57

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY *
- WIDENING SECTION *
- EXISTING SHOULDER REMOVE AND REPLACE *
- DRIVEWAY REMOVAL AND RECONSTRUCTION *
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.

*THESE SECTIONS ARE PAID UNDER CSJ 0568-01-055.

THE OTHER SECTION IS PAID UNDER CSJ 0568-01-052.

STATE OF TEXAS
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Texas Department of Transportation

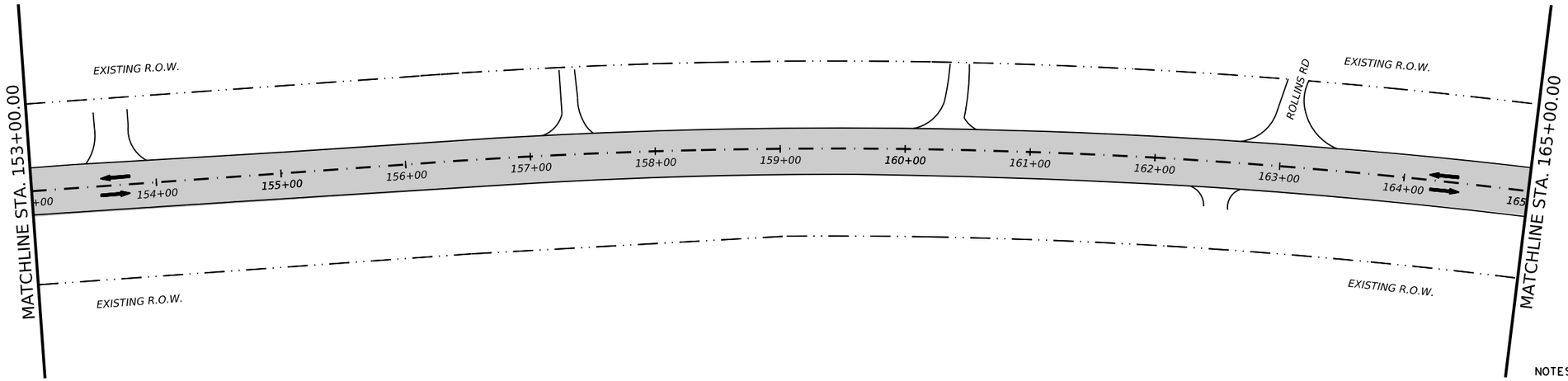
SH 34

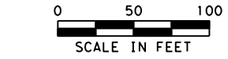
PLAN
LAYOUTS

SHEET 6 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		94

DATE: 5/5/2024 3:12:20 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-6.dgn



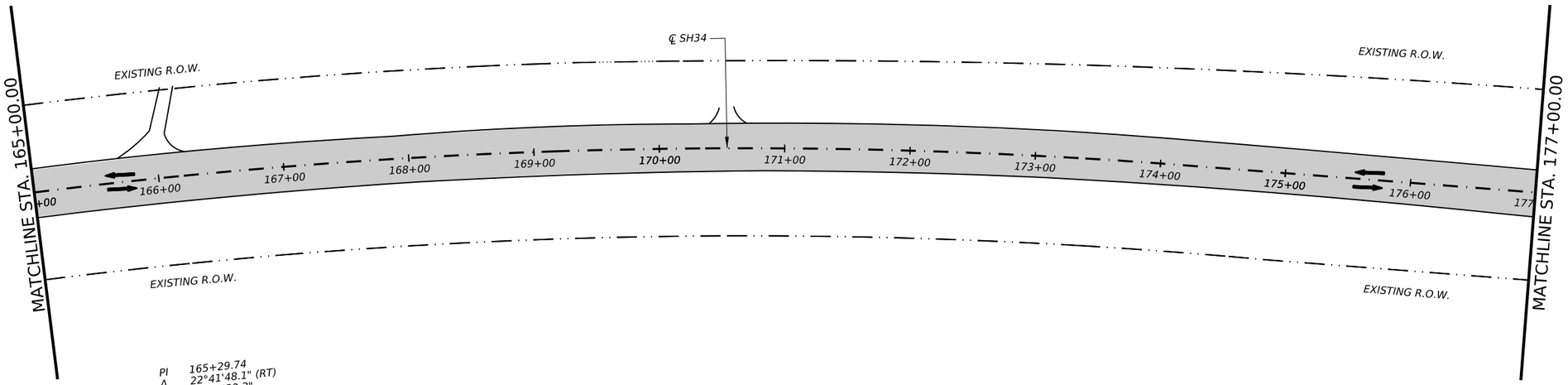


LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



PI 165+29.74
Δ 22°41'48.1" (RT)
D 01°15'33.3"
T 913.17'
L 1802.40'
R 4550.00'
PC 156+16.57
PT 174+18.97

STATE OF TEXAS
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PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant ,P.E. & Date

Texas Department of Transportation

SH 34

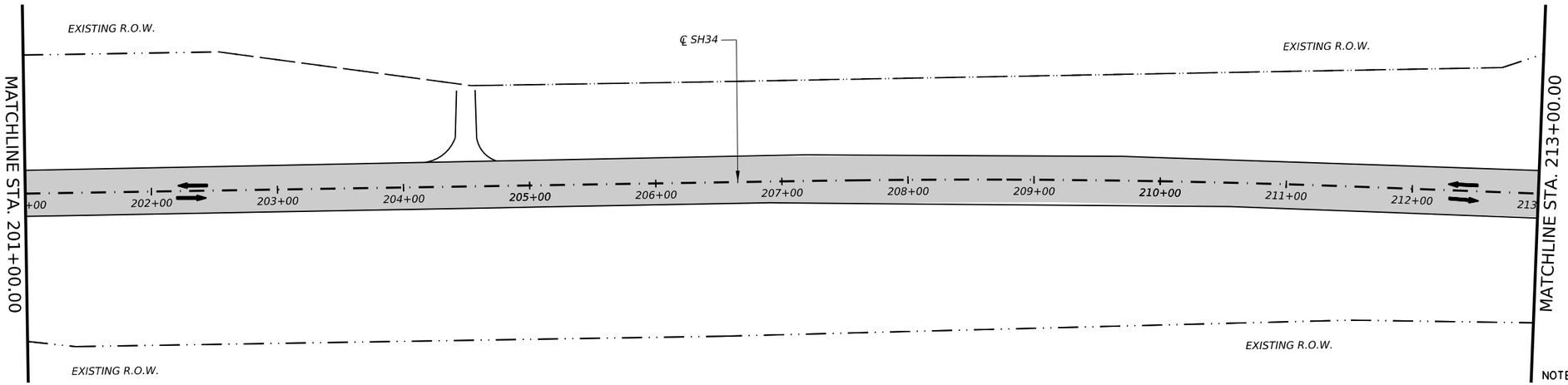
PLAN LAYOUTS

SHEET 7 OF 46

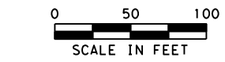
CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		95

DATE: 5/5/2024 3:12:33 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-7.dgn

CK: DW: CK: DW:



PI 209+44.20
Δ 03°07'29.2" (RT)
D 00°42'58.3"
T 218.20'
L 436.30'
R 8000.00'
PC 207+26.00
PT 211+62.30

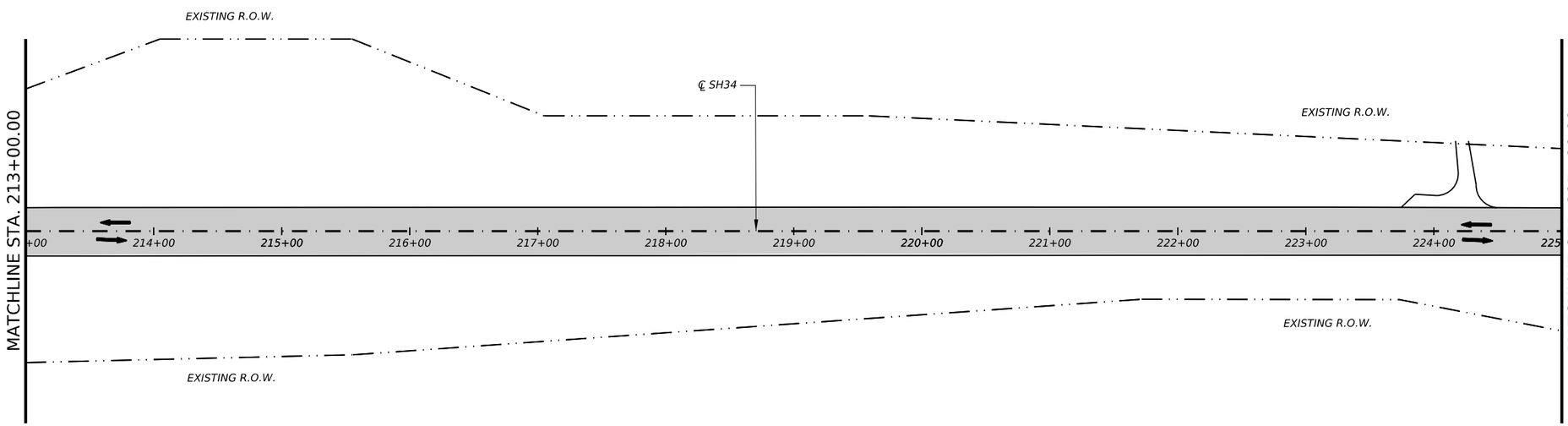


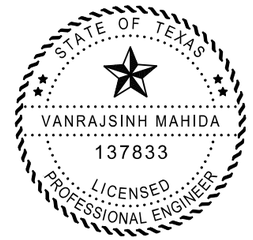
LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.





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SH 34

PLAN LAYOUTS

SHEET 9 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		96

DATE: 5/5/2024 3:12:45 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-9.dgn

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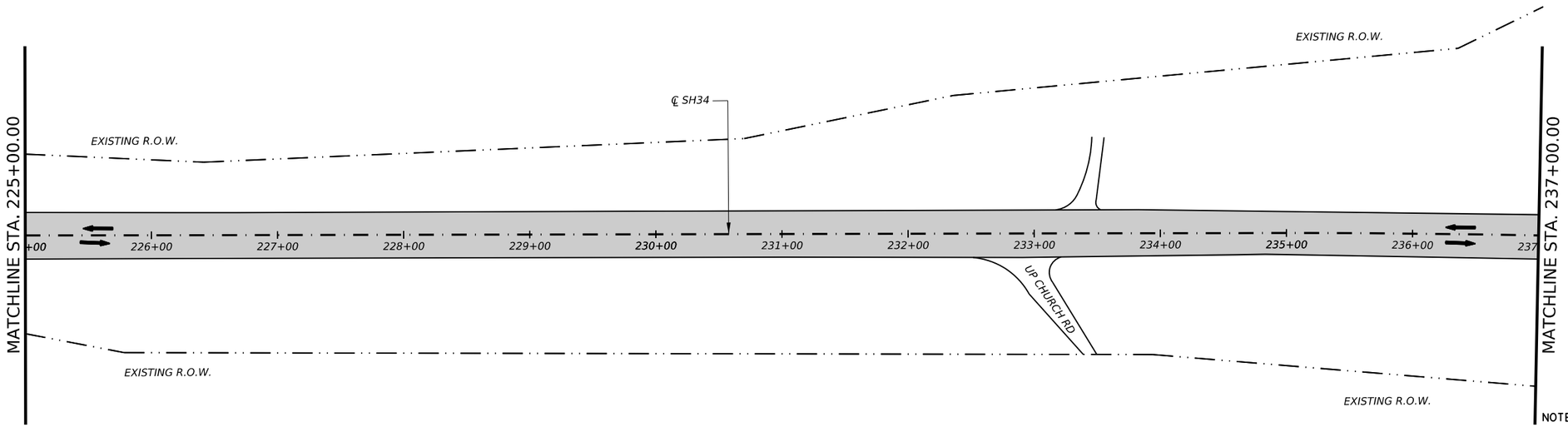


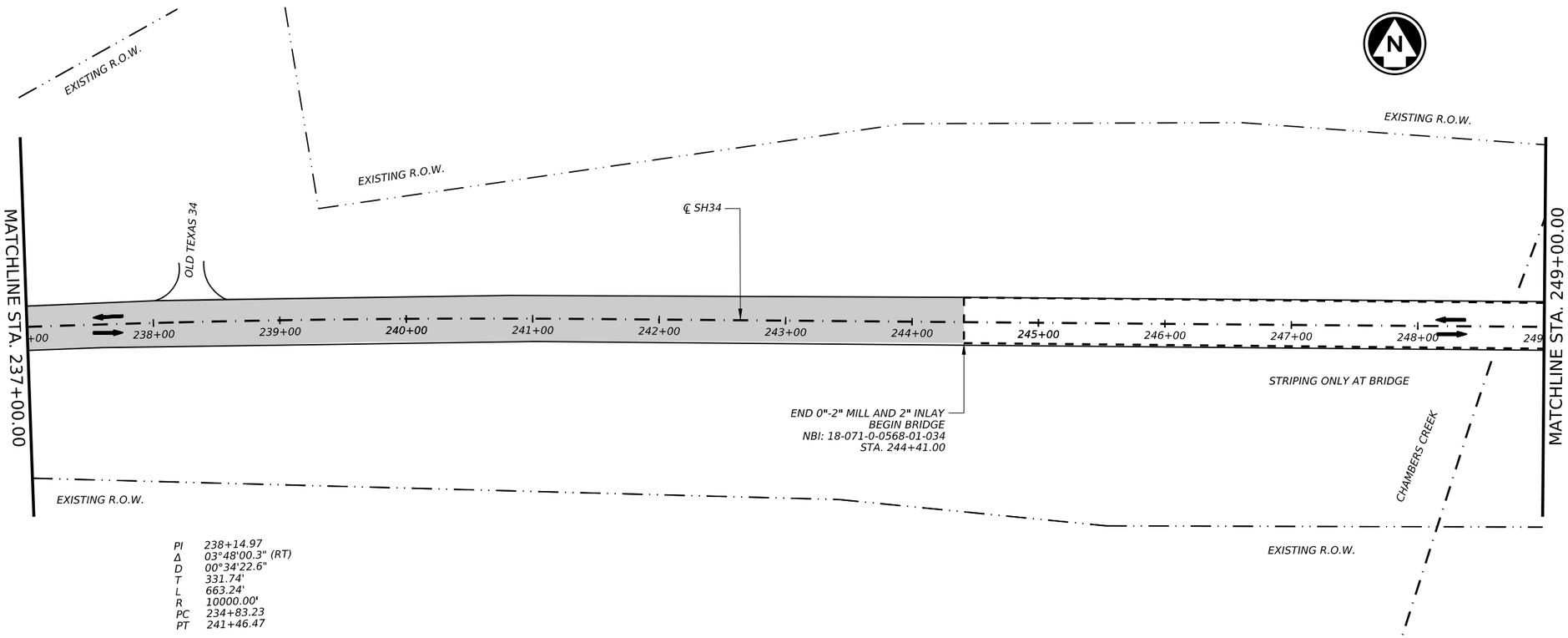
0 50 100
SCALE IN FEET

LEGEND

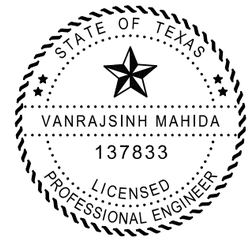
- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



PI	238+14.97
Δ	03°48'00.3" (RT)
D	00°34'22.6"
T	331.74'
L	663.24'
R	10000.00'
PC	234+83.23
PT	241+46.47



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Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 10 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		97

DATE: 5/5/2024 3:13:00 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-10.dgn

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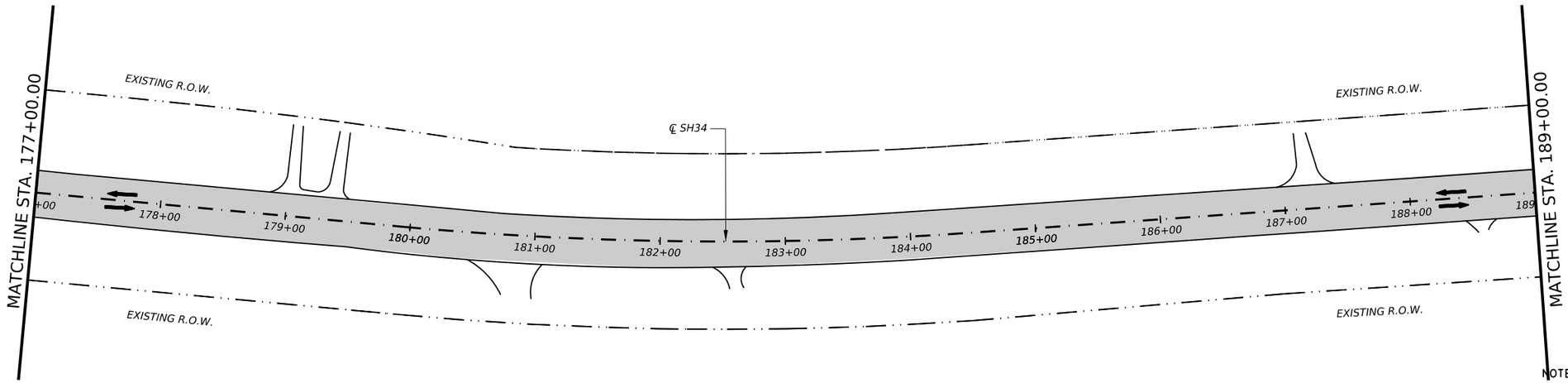


PI	182+20.44
Δ	09°22'29.3" (LT)
D	02°02'46.6"
T	229.58'
L	458.14'
R	2800.00'
PC	179+90.86
PT	184+48.99

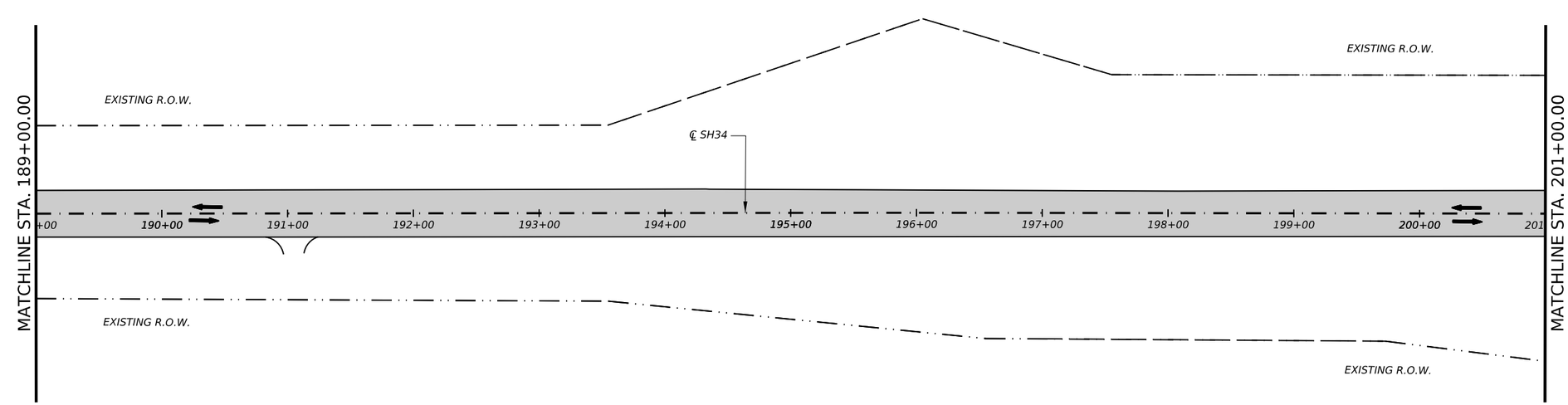
0 50 100
SCALE IN FEET

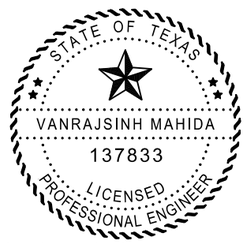
LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.





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SH 34

PLAN LAYOUTS

SHEET 8 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		98

DATE: 5/5/2024 3:13:12 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-8.dgn

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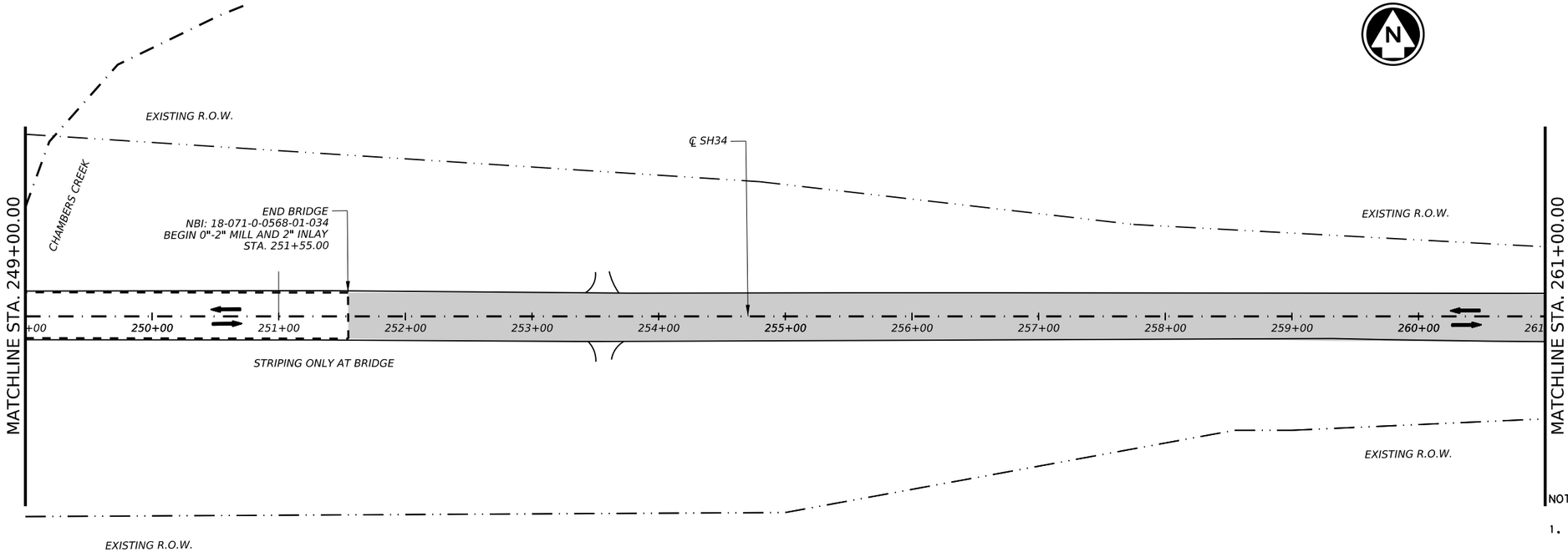

NOTES:

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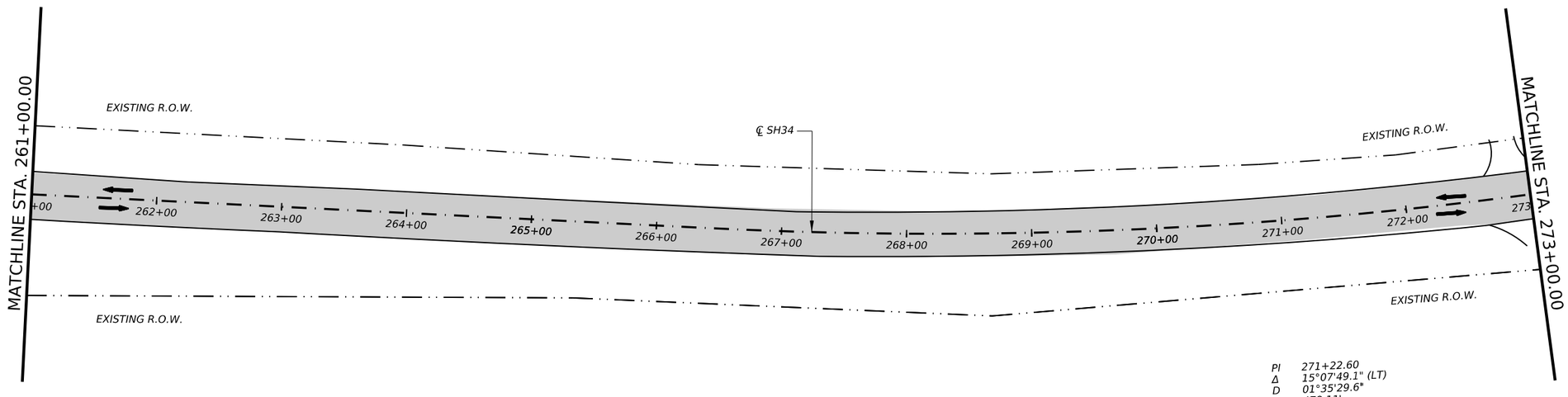
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



PI 271+22.60
Δ 15°07'49.1" (LT)
D 01°35'29.6"
T 478.11'
L 950.67'
R 3600.00'
PC 266+44.49
PT 275+95.16

STATE OF TEXAS
VANRAJSINH MAHIDA
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SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		99

DATE: 5/5/2024 3:13:27 AM
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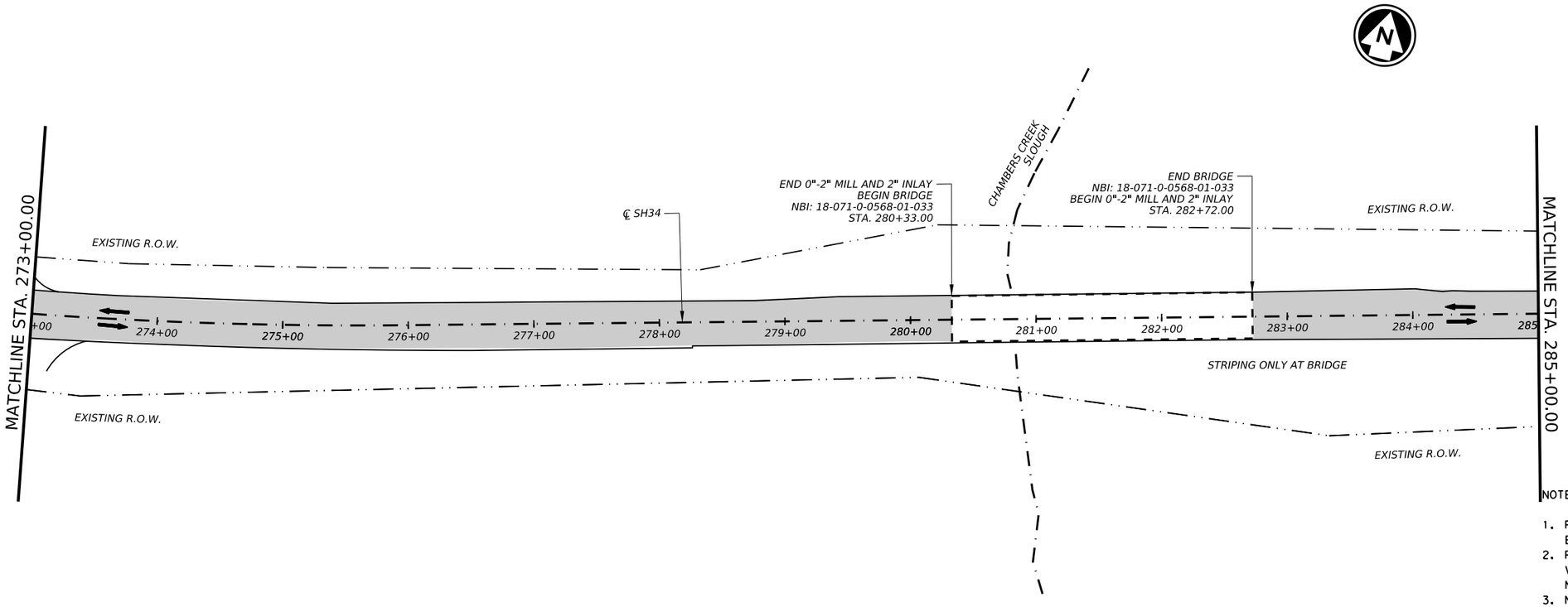

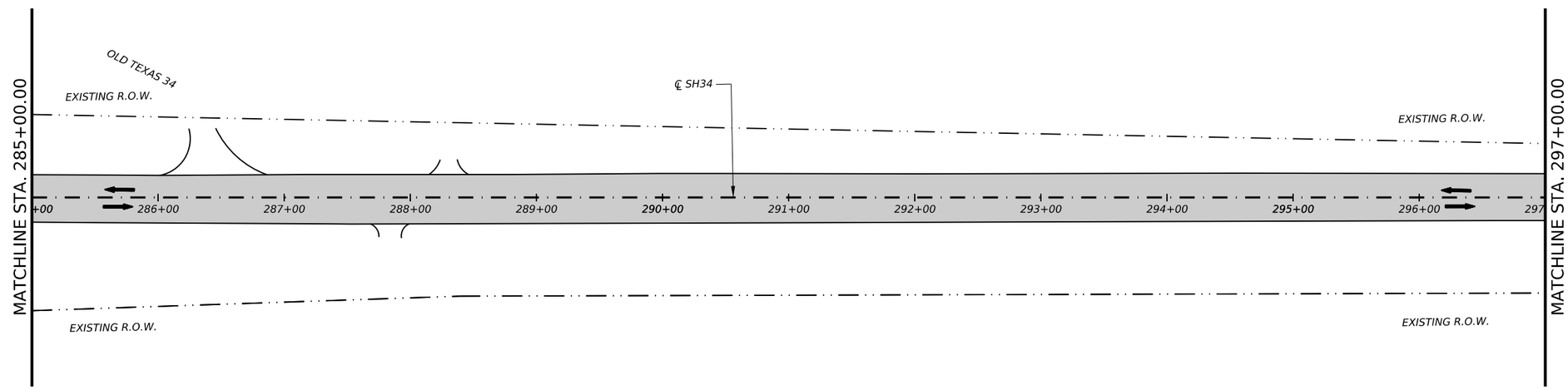

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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STATE OF TEXAS
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137833
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PROFESSIONAL ENGINEER

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Texas Department of Transportation

SH 34

PLAN
LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		100

DATE: 5/5/2024 3:13:39 AM
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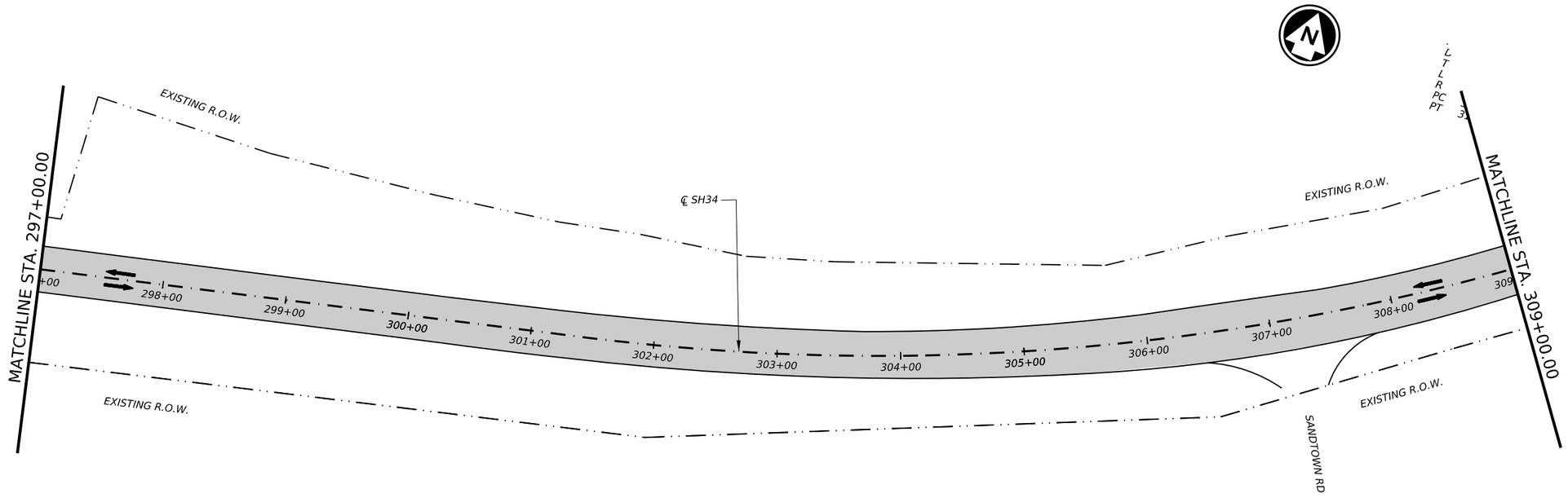

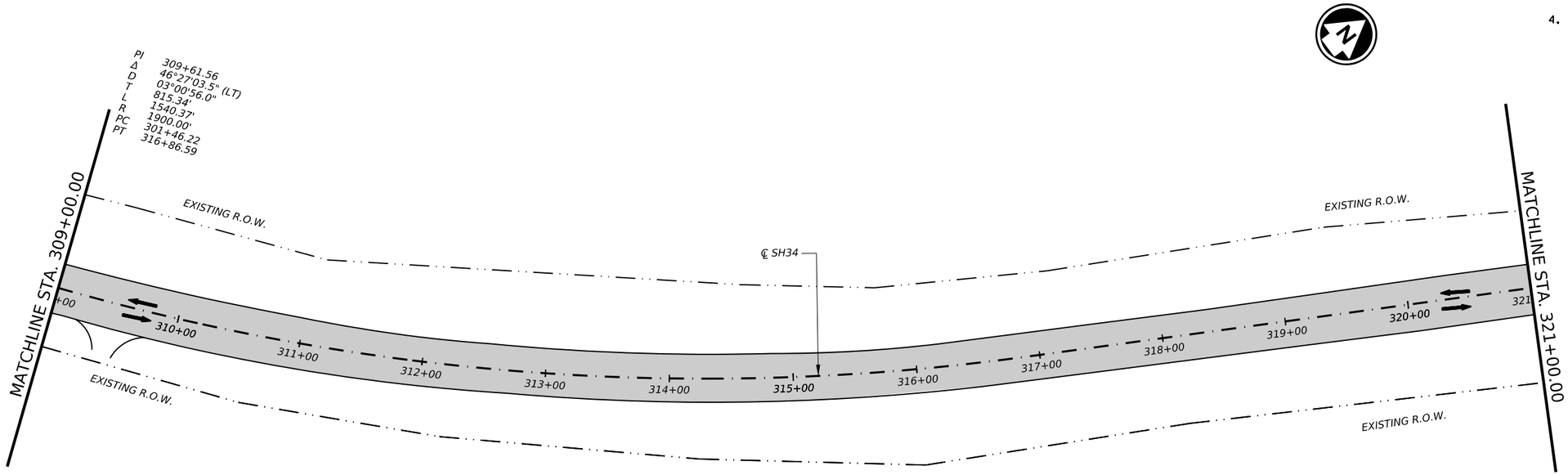

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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STATE OF TEXAS
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Signature of Registrant & Date

Texas Department of Transportation

SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		101

DATE: 5/5/2024 3:13:51 AM
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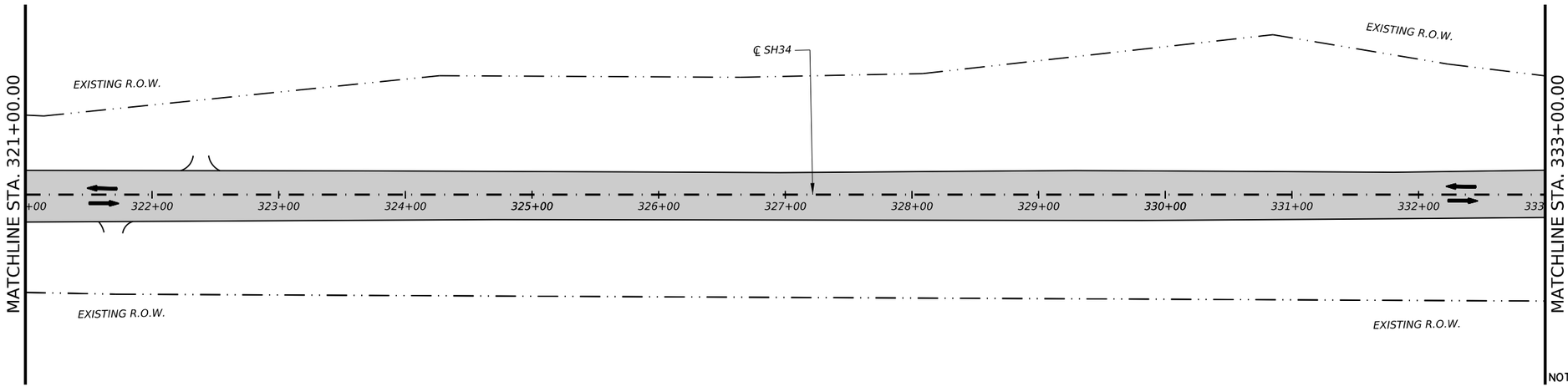

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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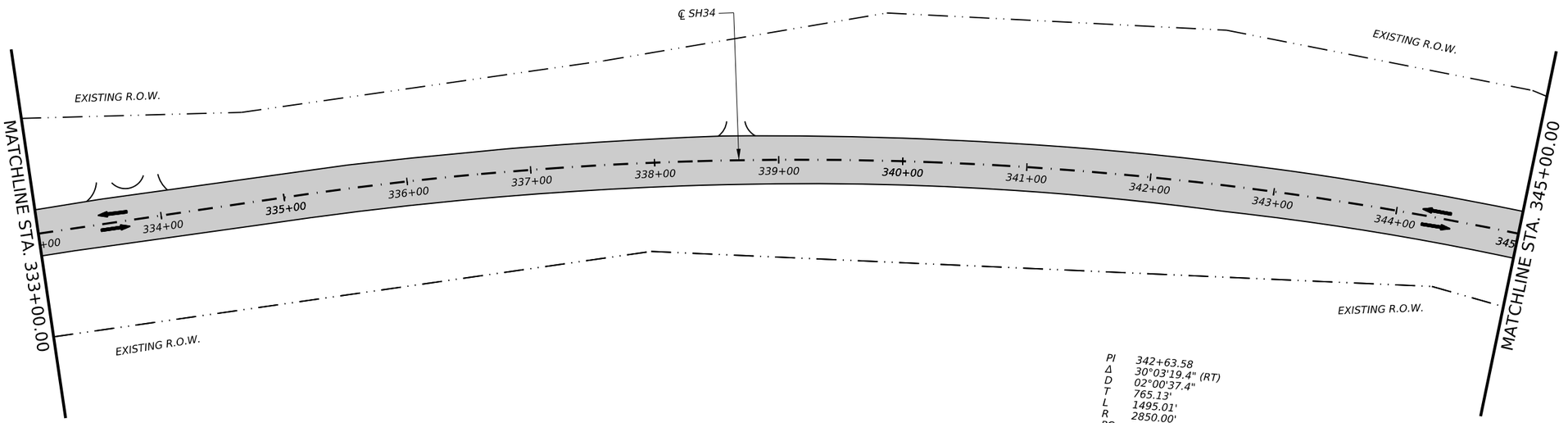
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



PI 342+63.58
Δ 30°03'19.4" (RT)
D 02°00'37.4"
T 765.13'
L 1495.01'
R 2850.00'
PC 334+98.45
PT 349+93.46

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Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 14 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		102

CK: DW: CK: DW:

DATE: 5/5/2024 3:14:04 AM
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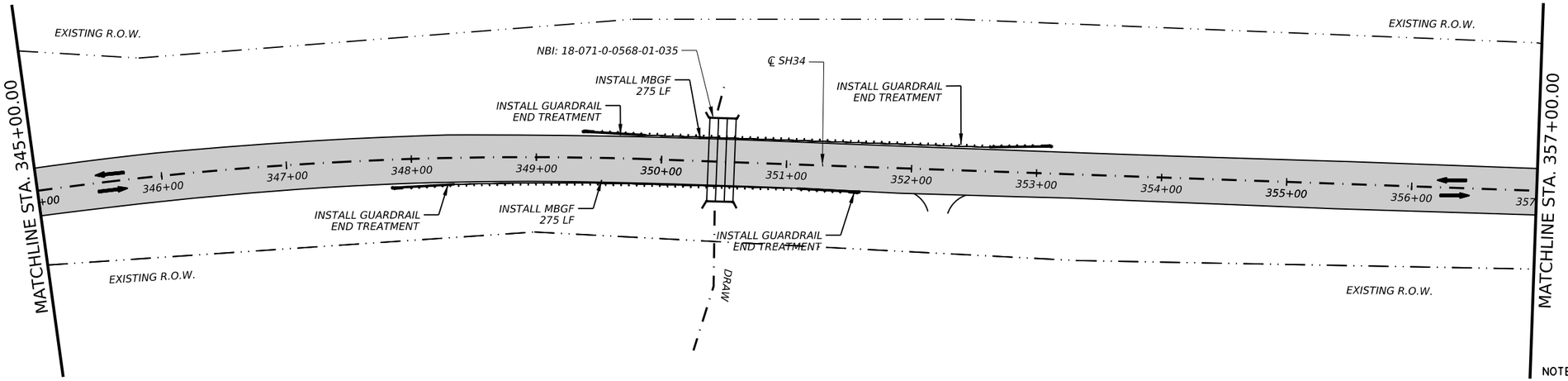

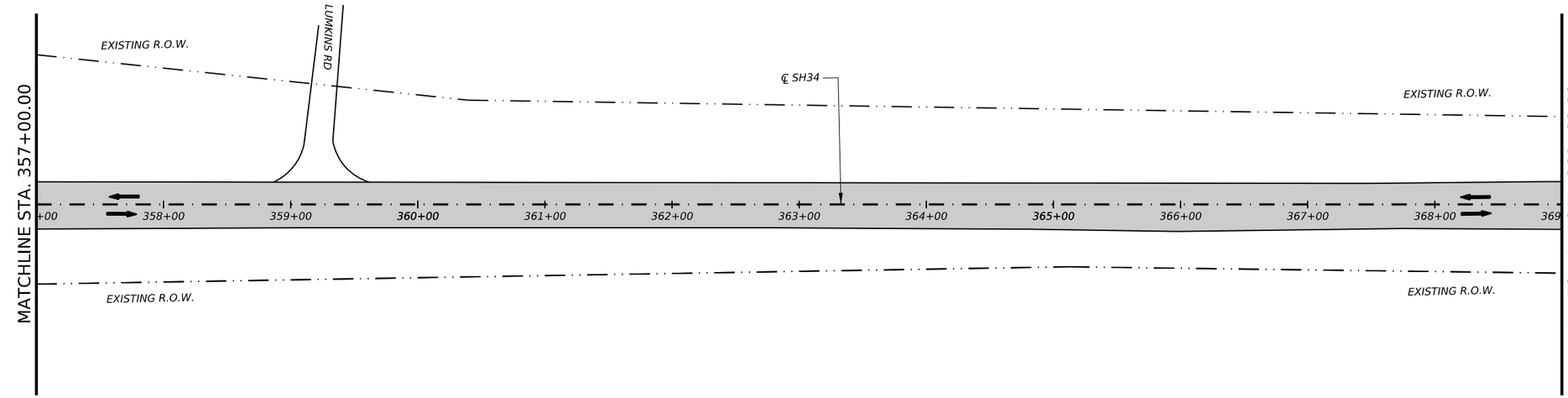

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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SH 34

PLAN LAYOUTS

SHEET 15 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		103

DATE: 5/5/2024 3:14:50 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-15.dgn

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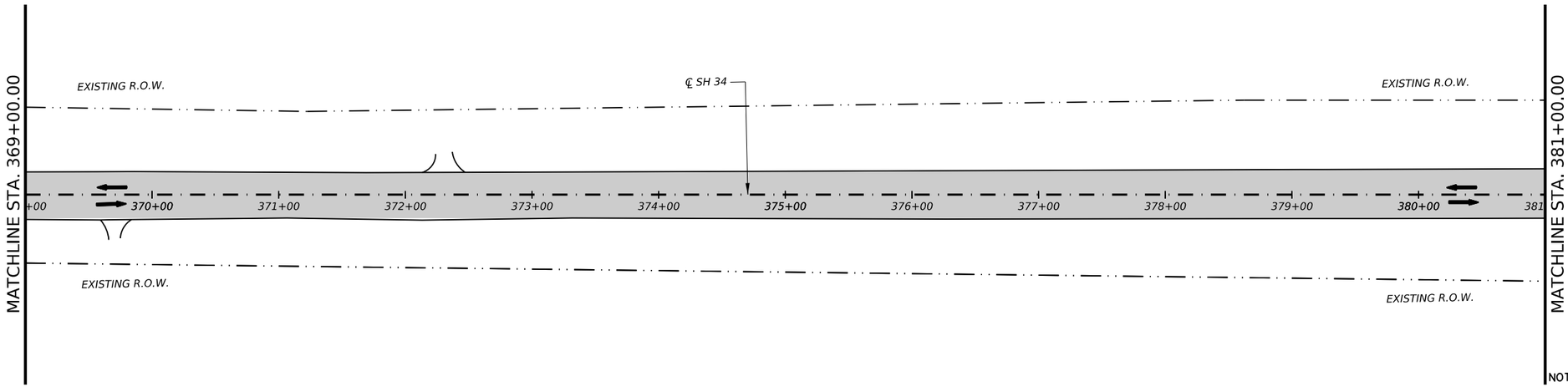

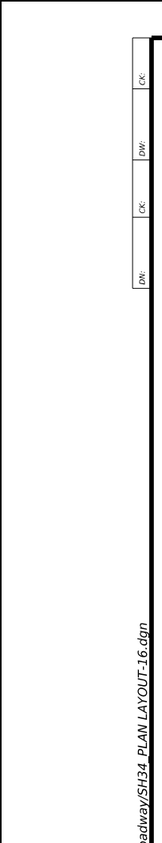

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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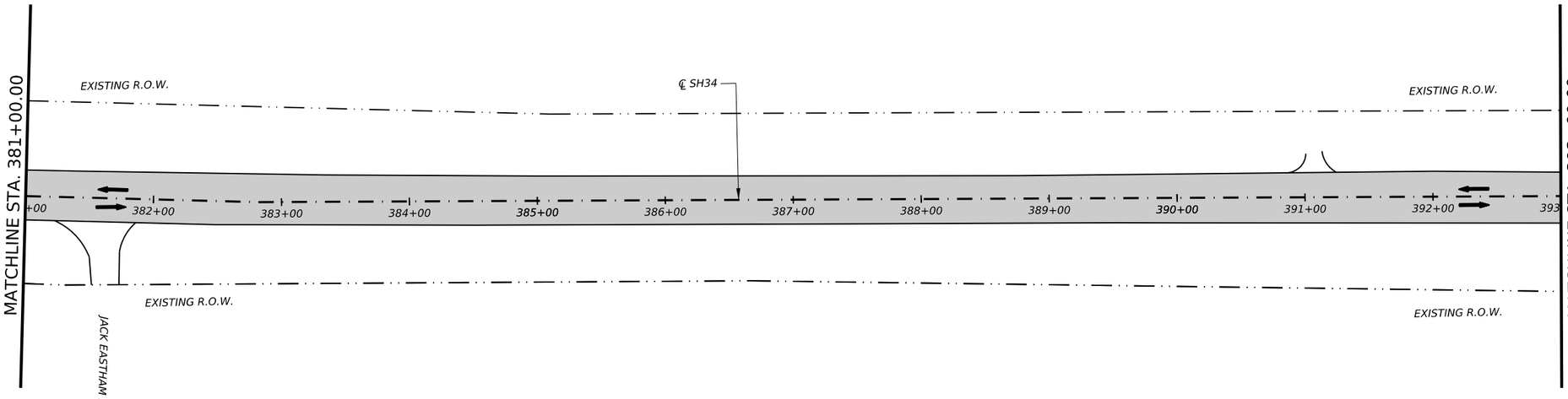
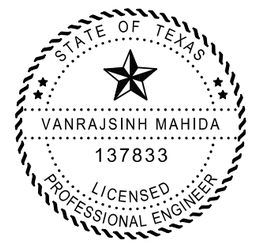
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.





vanrajsinh Mahida 05/06/2024

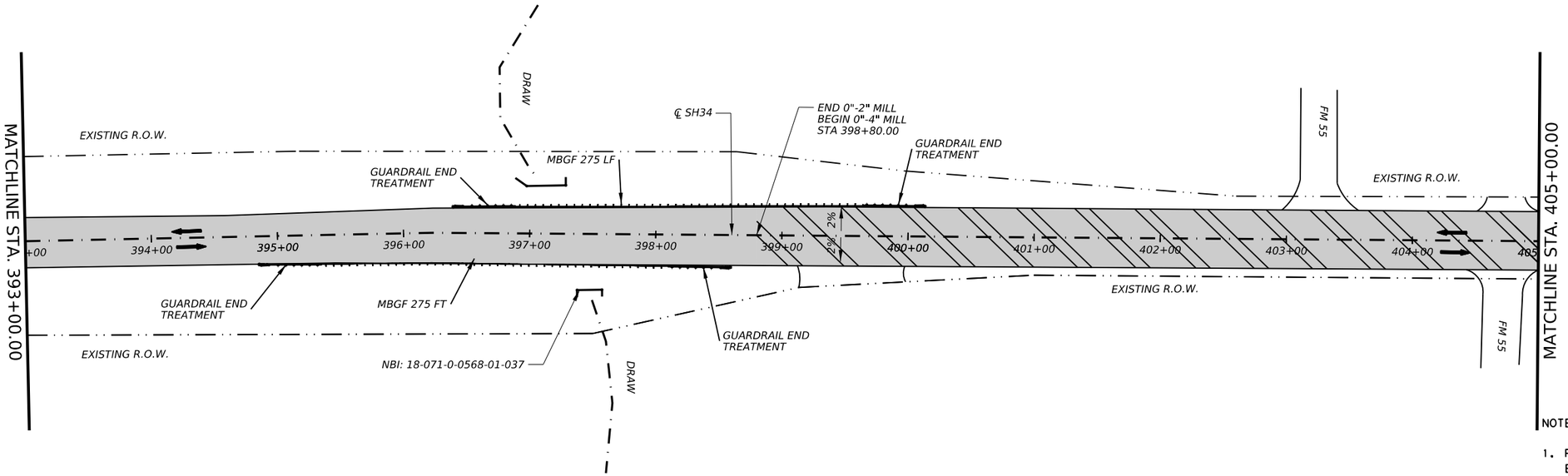
,P.E.
Signature of Registrant & Date

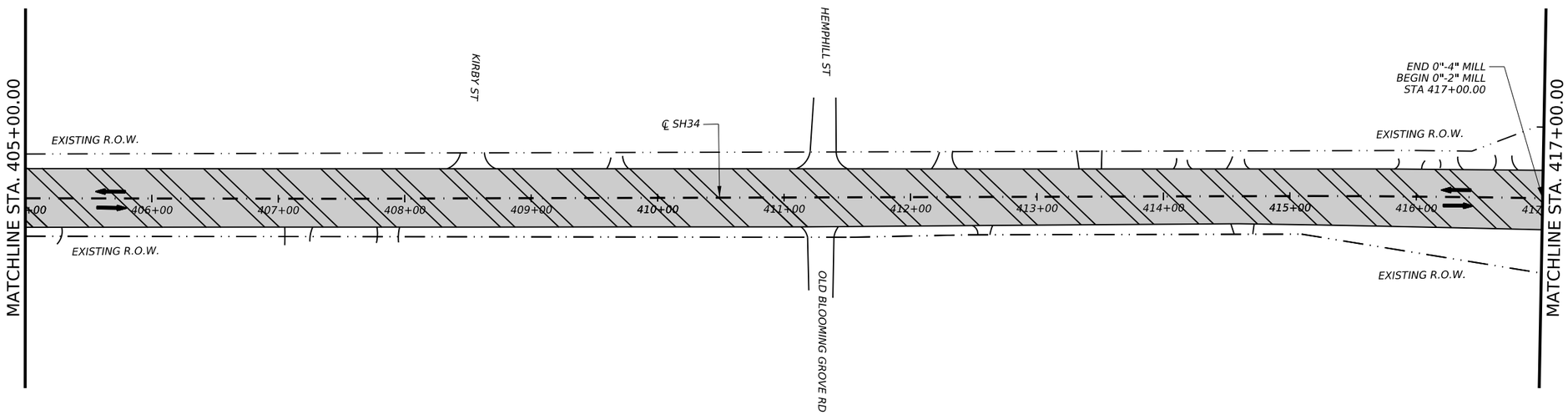
Texas Department of Transportation

SH 34

PLAN
LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		104





0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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STATE OF TEXAS
VANRAJSINH MAHIDA
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vanrajsinh Mahida 05/06/2024

Signature of Registrant & ,P.E. Date

Texas Department of Transportation

SH 34

PLAN
LAYOUTS

SHEET 17 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		105

DATE: 5/5/2024 3:15:37 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-17.dgn

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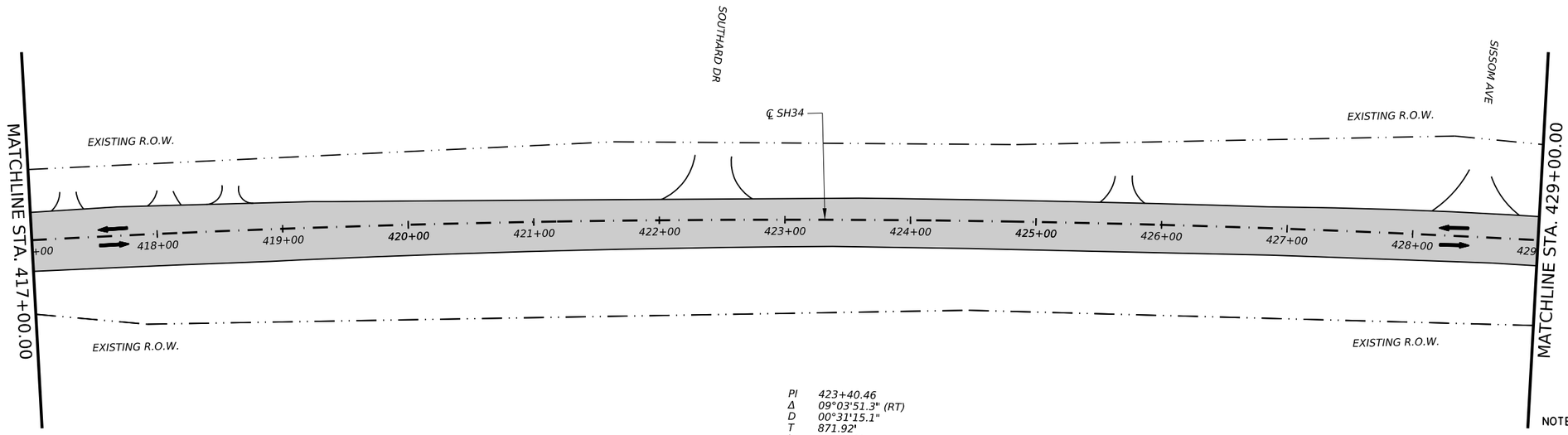
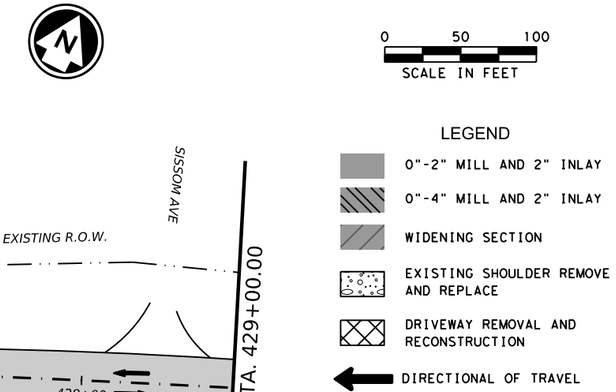


PI 423+40.46
Δ 09°03'51.3" (RT)
D 00°31'15.1"
T 871.92'
L 1740.21'
R 11000.00'
PC 414+68.54
PT 432+08.75



NOTES:

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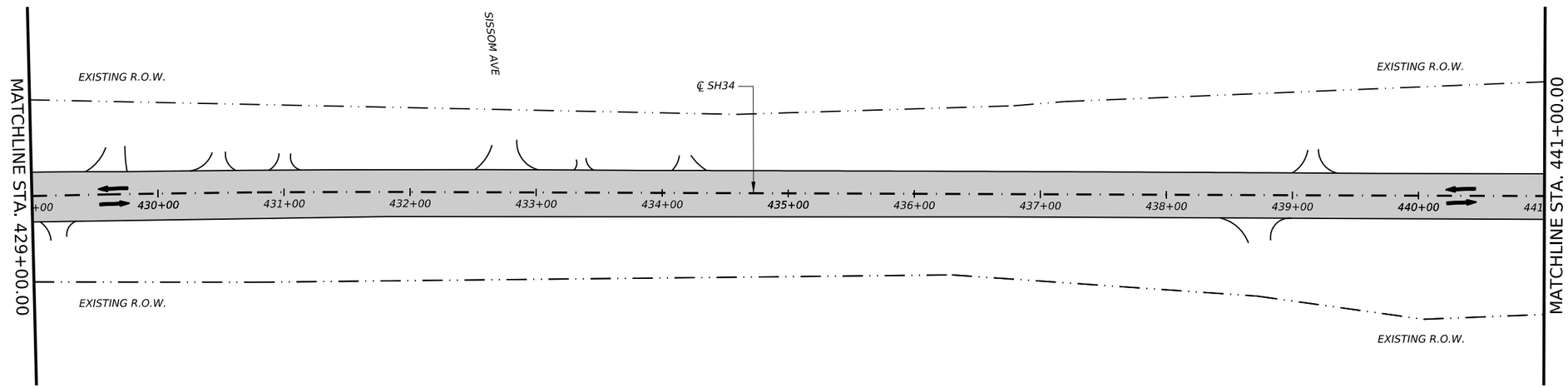
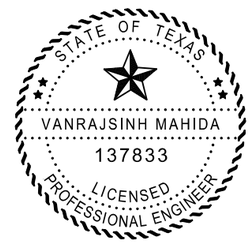
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.





vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 18 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		106

DATE: 5/5/2024 3:15:49 AM
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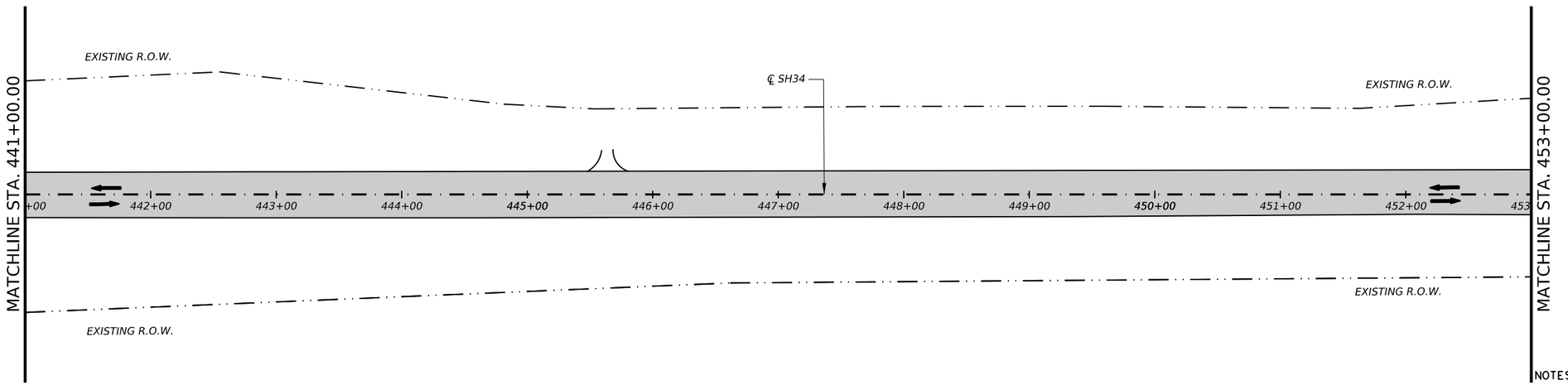

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
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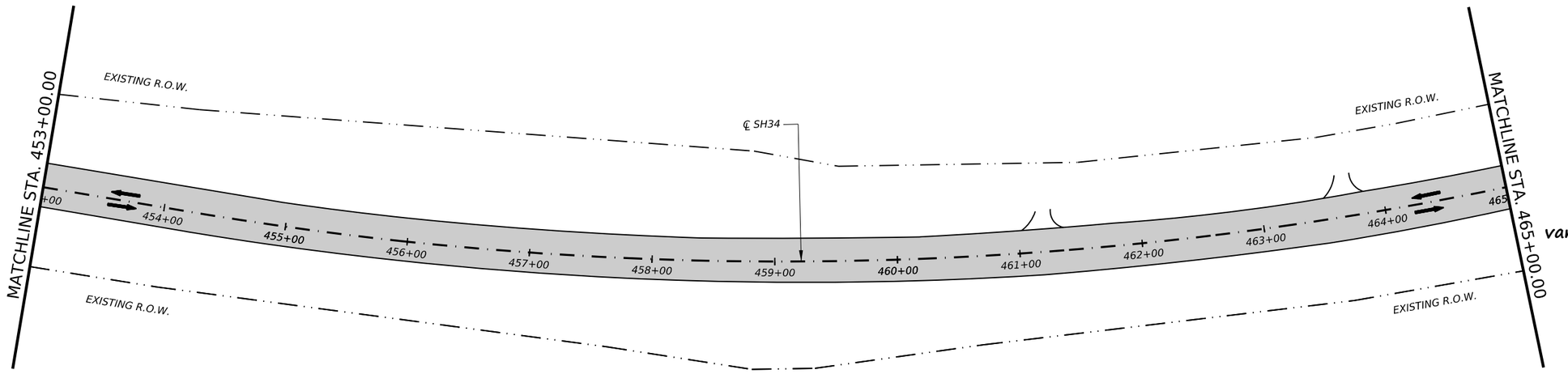
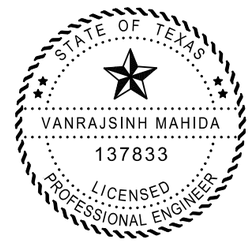


PI 460+35.38
Δ 23°48'43.1" (LT)
D 01°58'32.6"
T 611.44'
L 1205.23'
R 2900.00'
PC 454+23.94
PT 466+29.17



vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		107

DATE: 5/5/2024 3:16:01 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3. Roadway/SH34 PLAN LAYOUT-19.dgn

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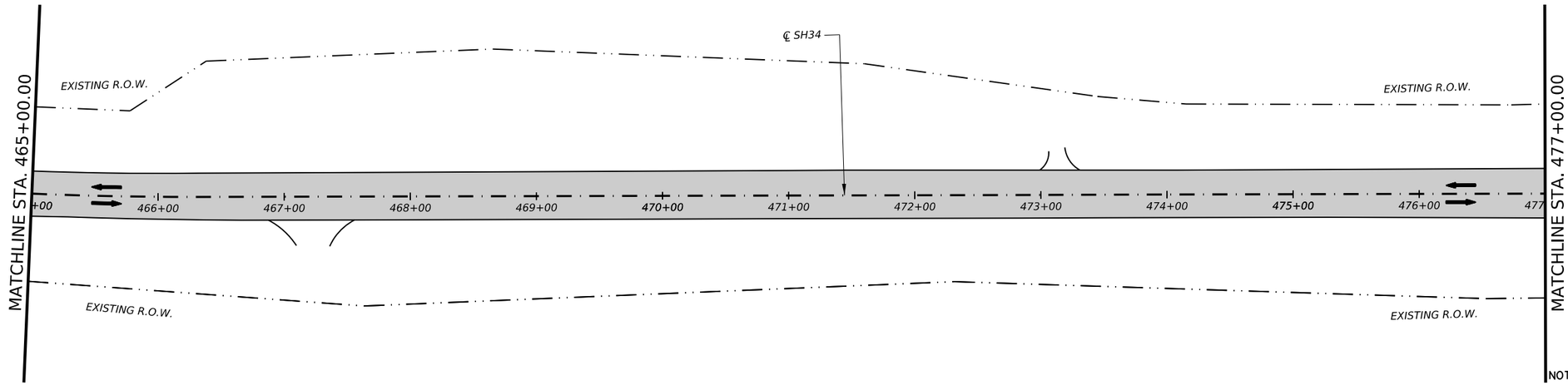
DW:
CK:
DW:



0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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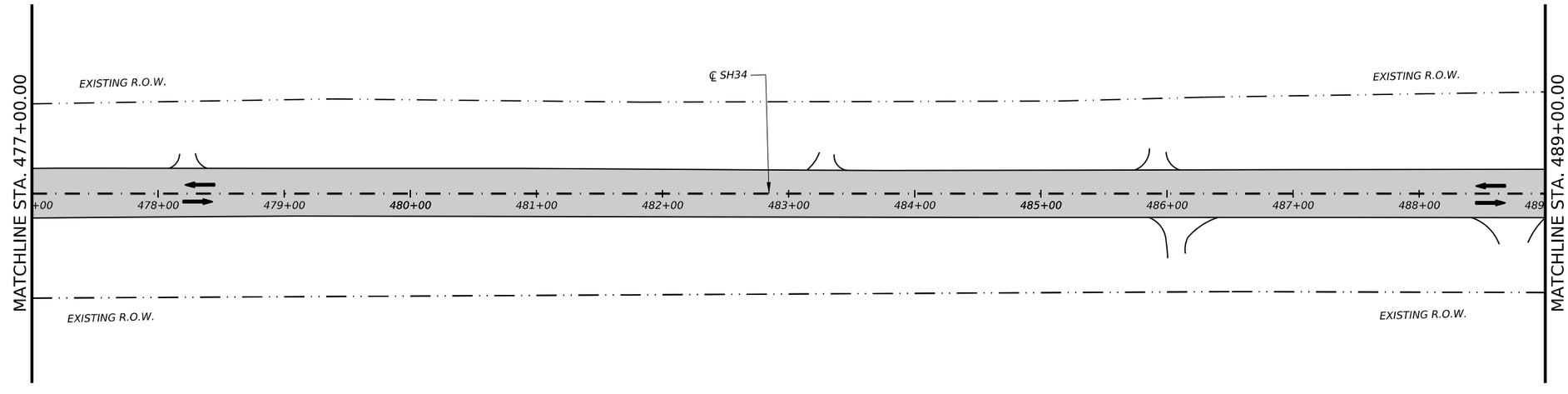

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
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SH 34

PLAN LAYOUTS

SHEET 20 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		108

DATE: 5/5/2024 3:16:33 AM
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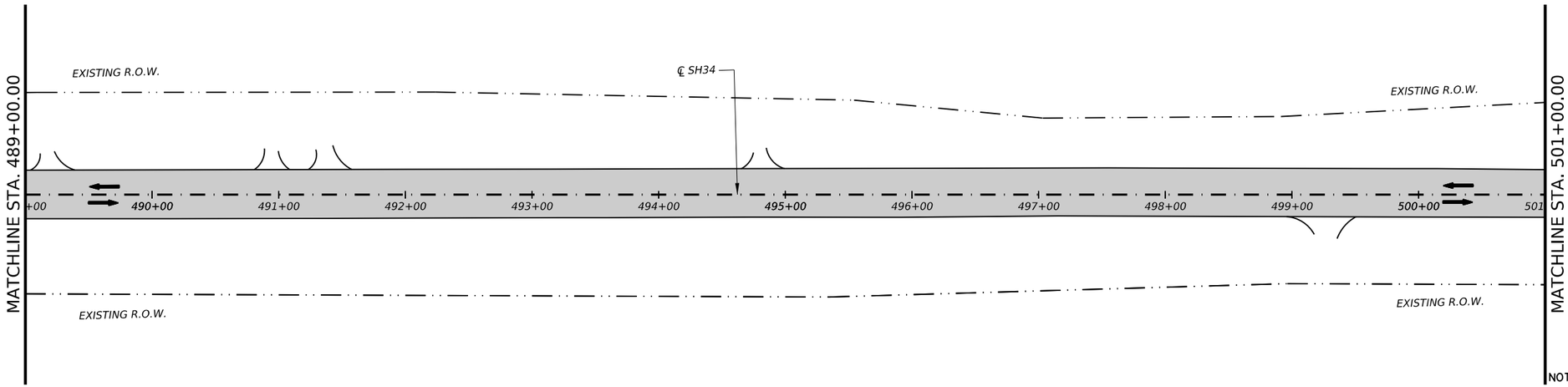

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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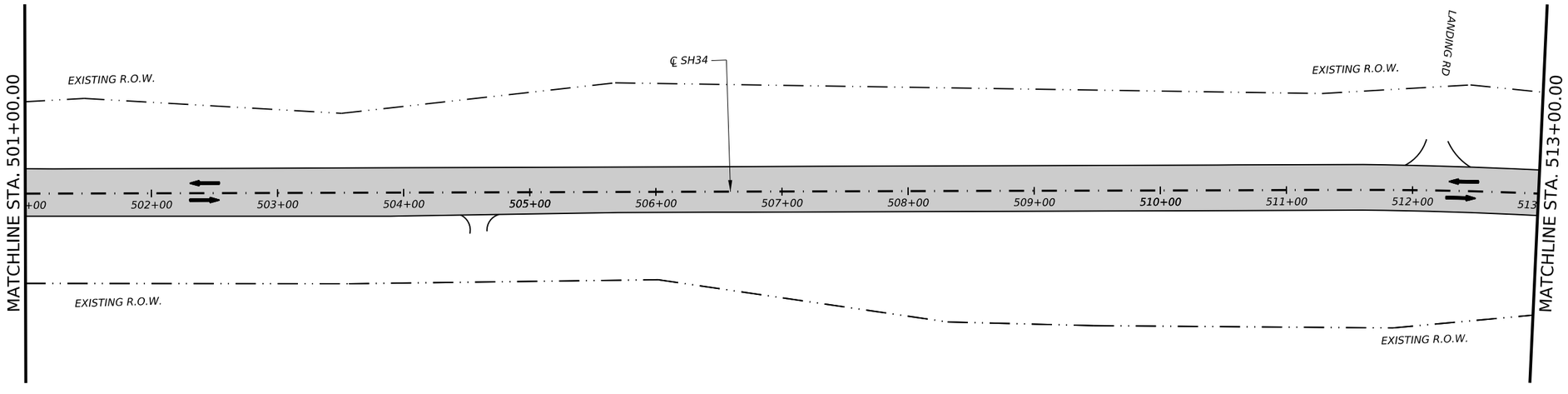

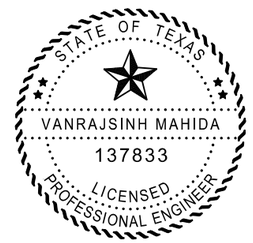

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,P.E.

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Texas Department of Transportation

SH 34

PLAN LAYOUTS

2024 SHEET 21 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		109

DATE: 5/5/2024 3:16:39 AM
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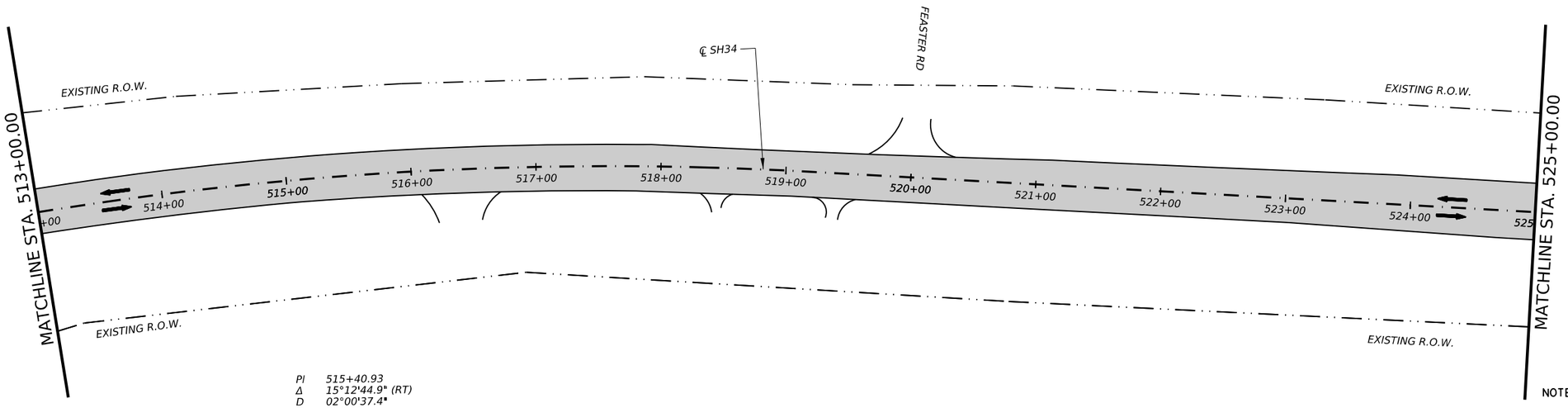

PI 515+40.93
Δ 15°12'44.9" (RT)
D 02°00'37.4"
T 380.59'
L 756.70'
R 2850.00'
PC 511+60.34
PT 519+17.04

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

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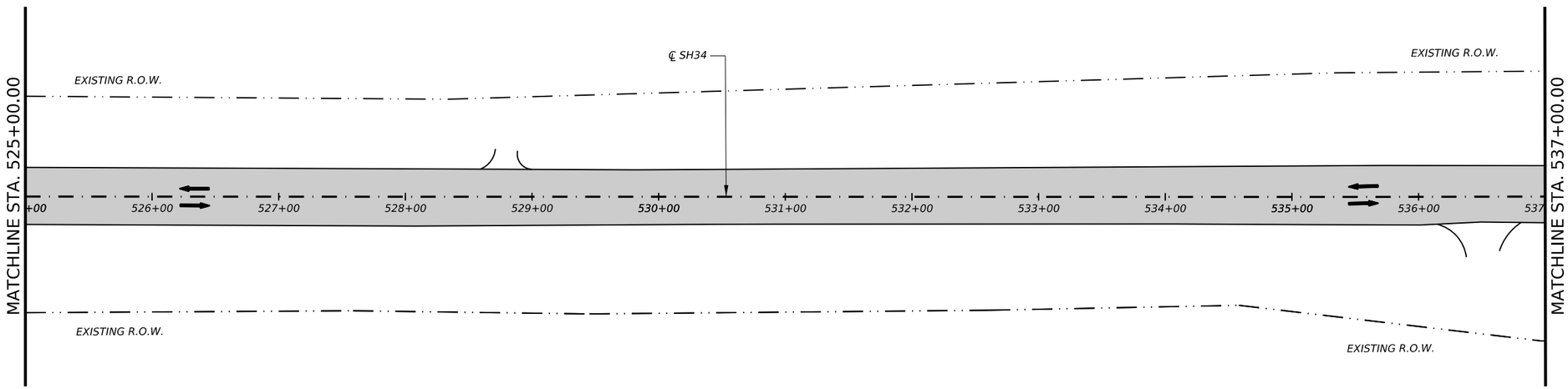

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
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Signature of Registrant ,P.E. & Date

Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 22 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		110

DATE: 5/5/2024 3:16:43 AM
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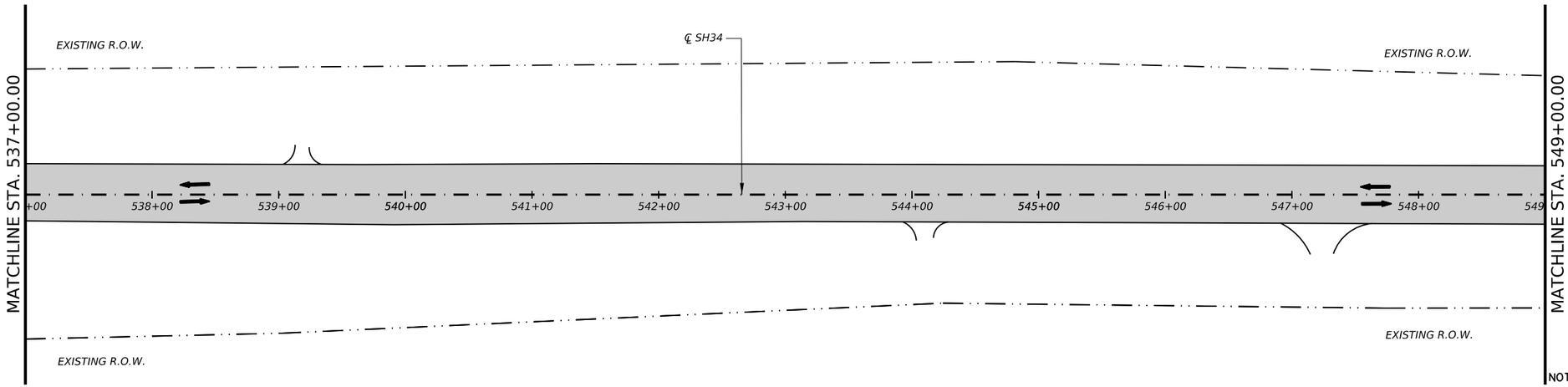

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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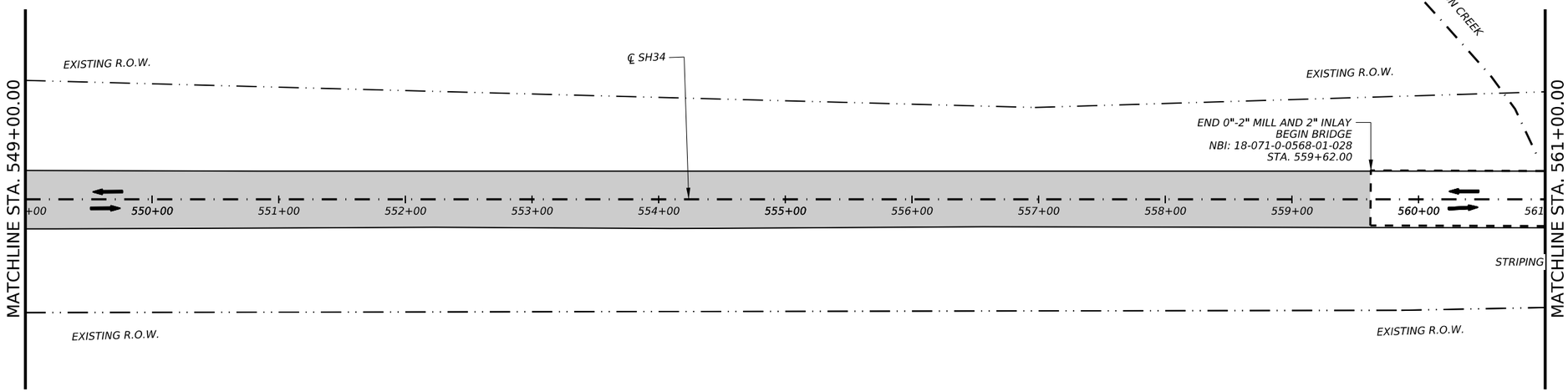

STATE OF TEXAS
VANRAJSINH MAHIDA
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vanrajsinh Mahida 05/06/2024

Signature of Registrant & Date, P.E.

Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 23 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		111

DATE: 5/5/2024 3:17:26 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-23.dgn

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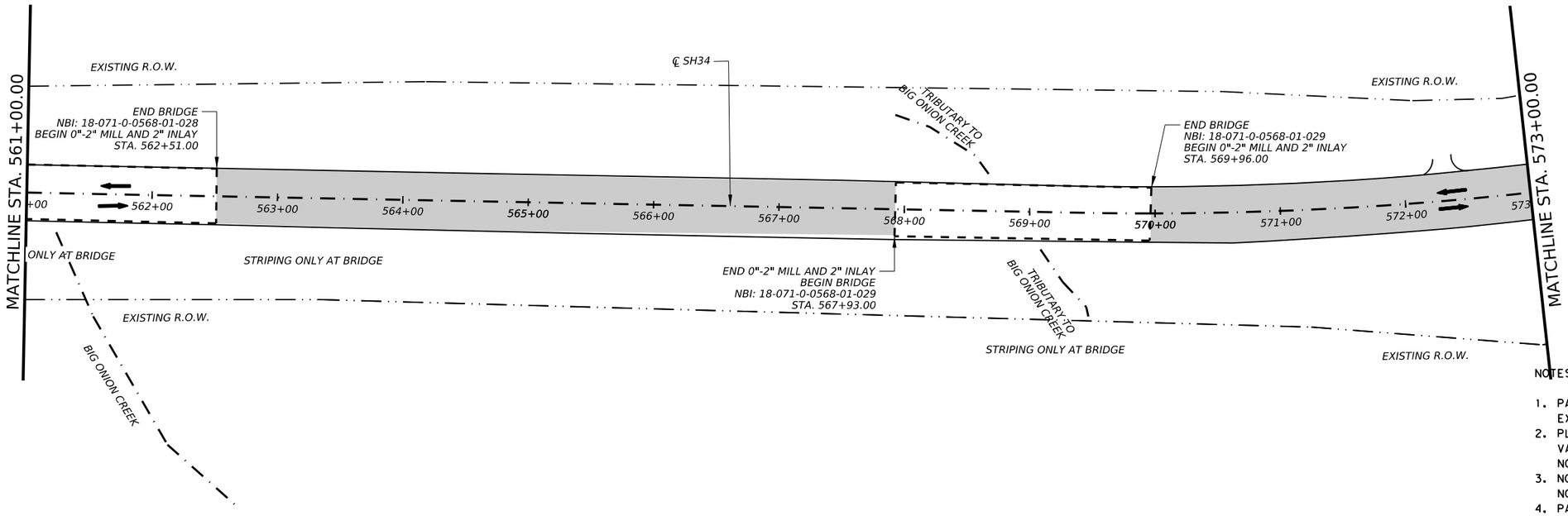

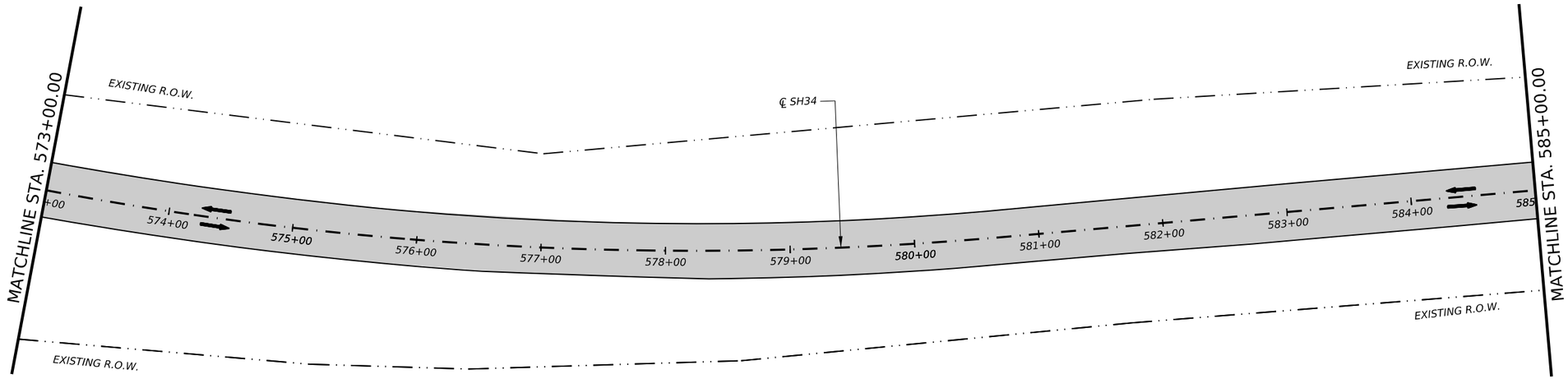

PI 575+11.66
Δ 23°02'01.7" (LT)
D 02°02'46.6"
T 570.53'
L 1125.64'
R 2800.00'
PC 569+41.14
PT 580+66.78

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

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STATE OF TEXAS
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vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		112

DATE: 5/5/2024 3:17:56 AM
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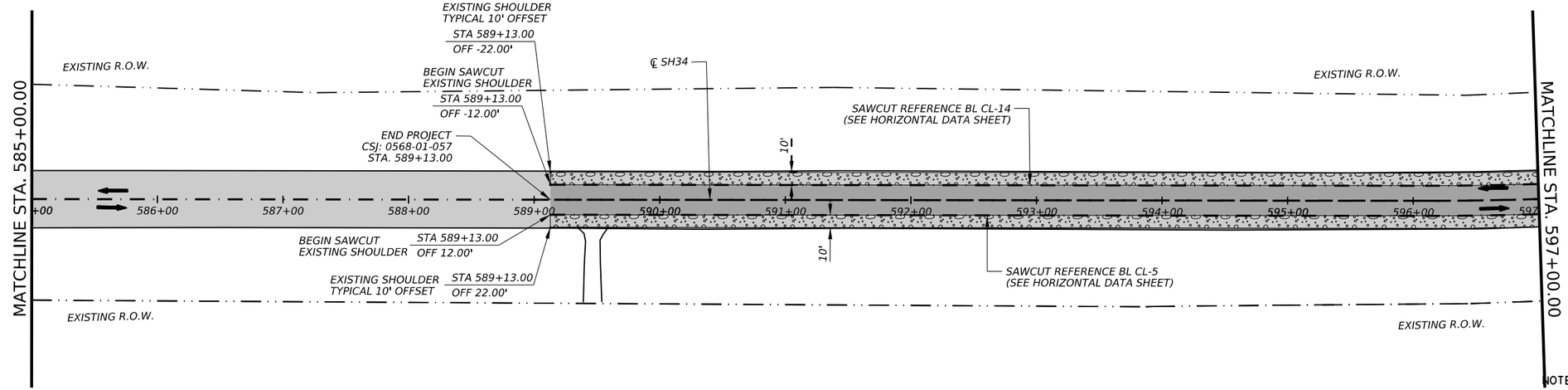

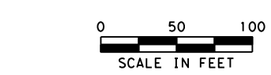

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

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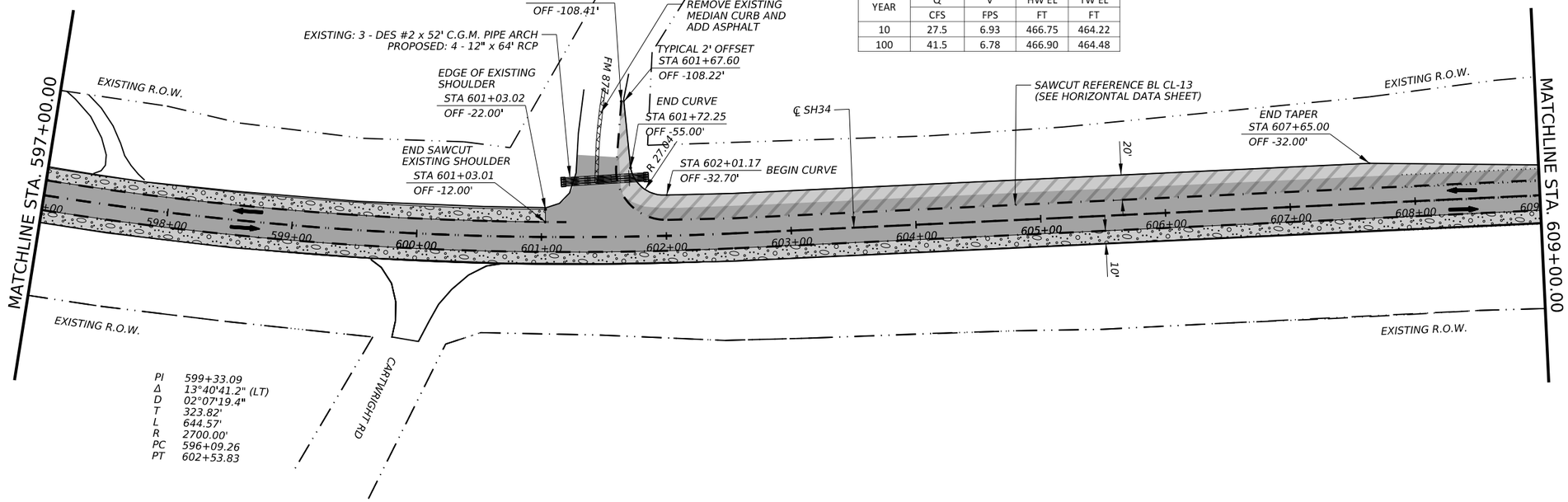

HYDRAULIC DATA				
PROPOSED STRUCTURE				
YEAR	Q	V	HW EL	TW EL
	CFS	FPS	FT	FT
10	27.5	6.93	466.75	464.22
100	41.5	6.78	466.90	464.48

PI	599+33.09
Δ	13°40'41.2" (LT)
D	02°07'19.4"
T	323.82'
L	644.57'
R	2700.00'
PC	596+09.26
PT	602+53.83

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

PLAN
LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		113

DATE: 5/5/2024 3:18:38 AM
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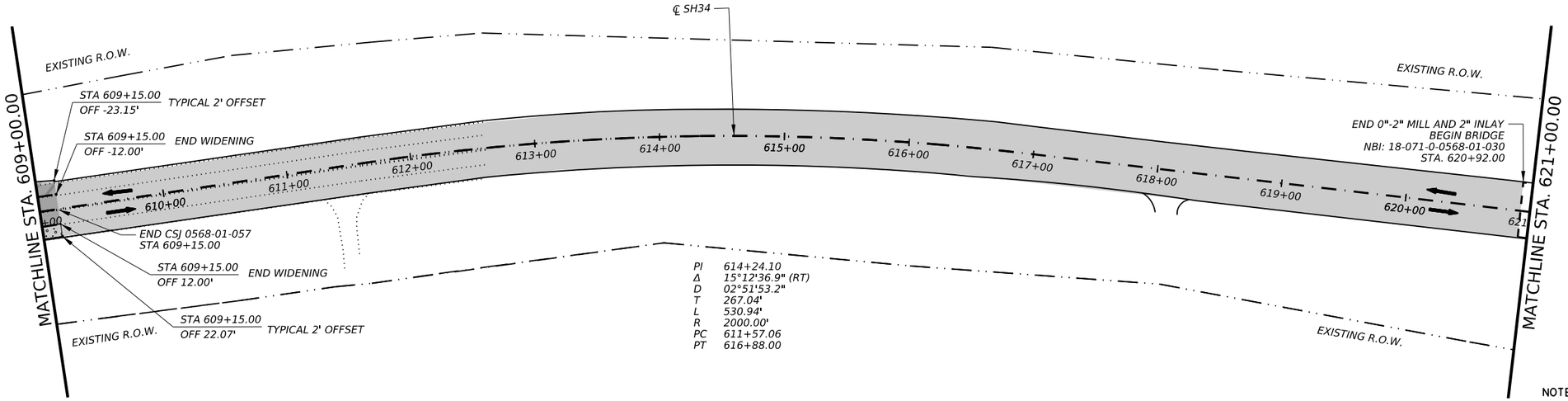

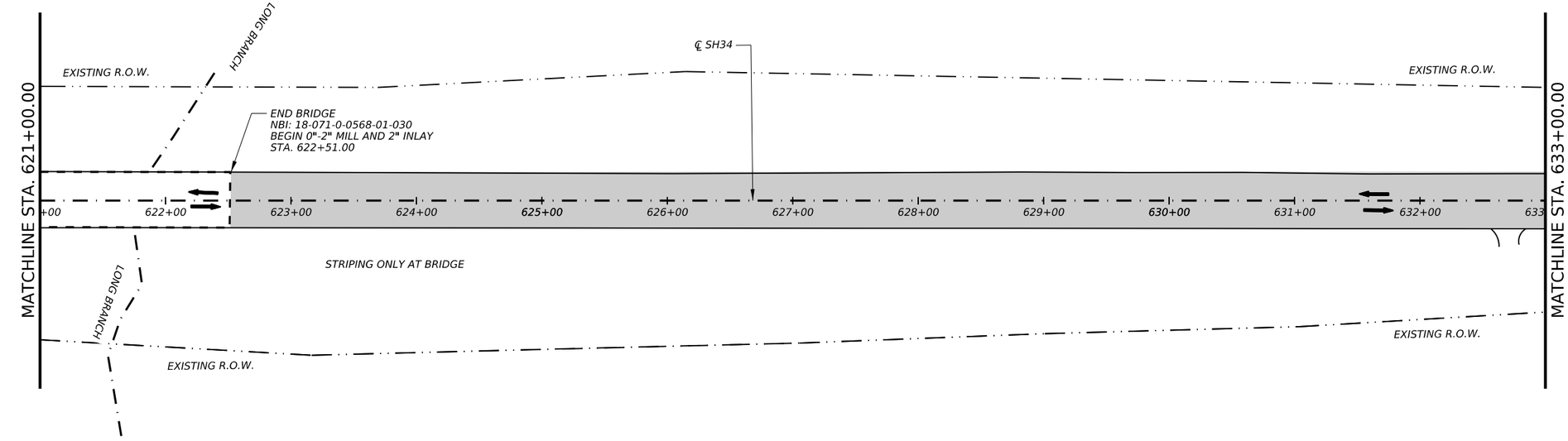

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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STATE OF TEXAS
VANRAJSINH MAHIDA
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vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 26 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		114

DATE: 5/5/2024 3:19:11 AM
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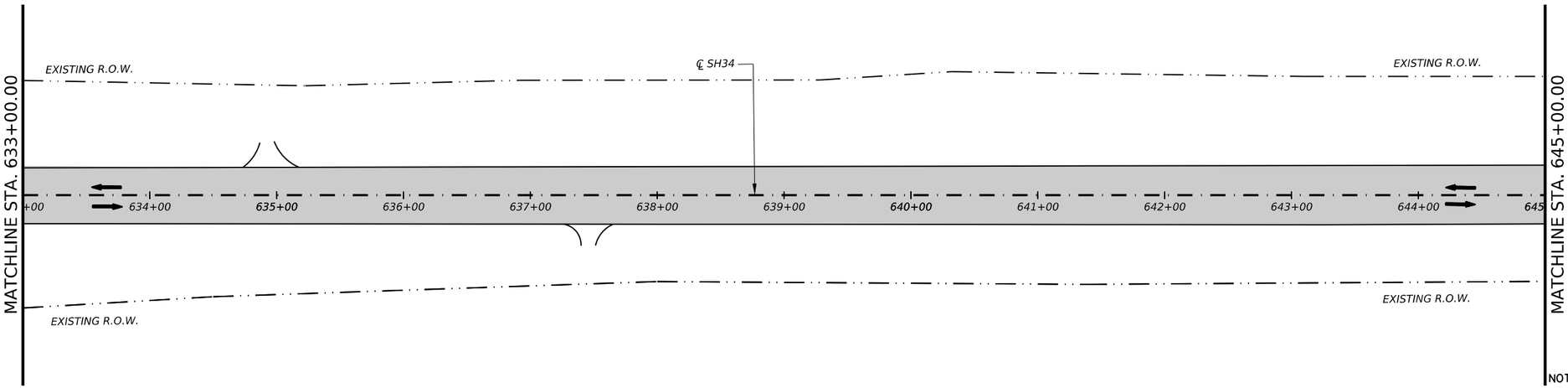

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
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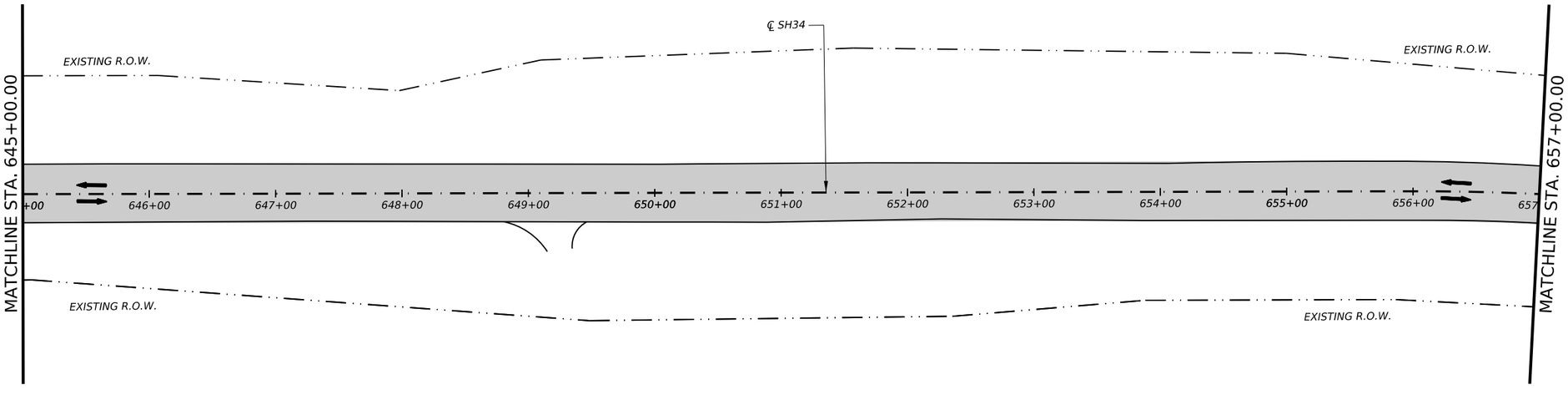

STATE OF TEXAS
VANRAJSINH MAHIDA
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Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 27 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		115

DATE: 5/5/2024 3:20:06 AM
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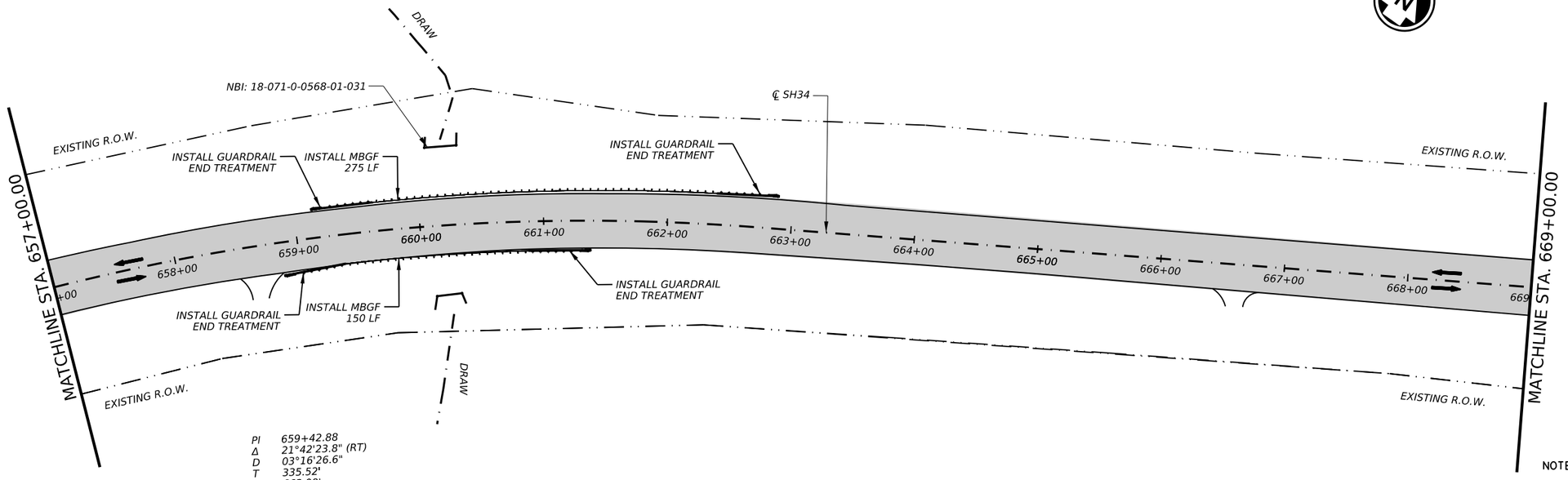
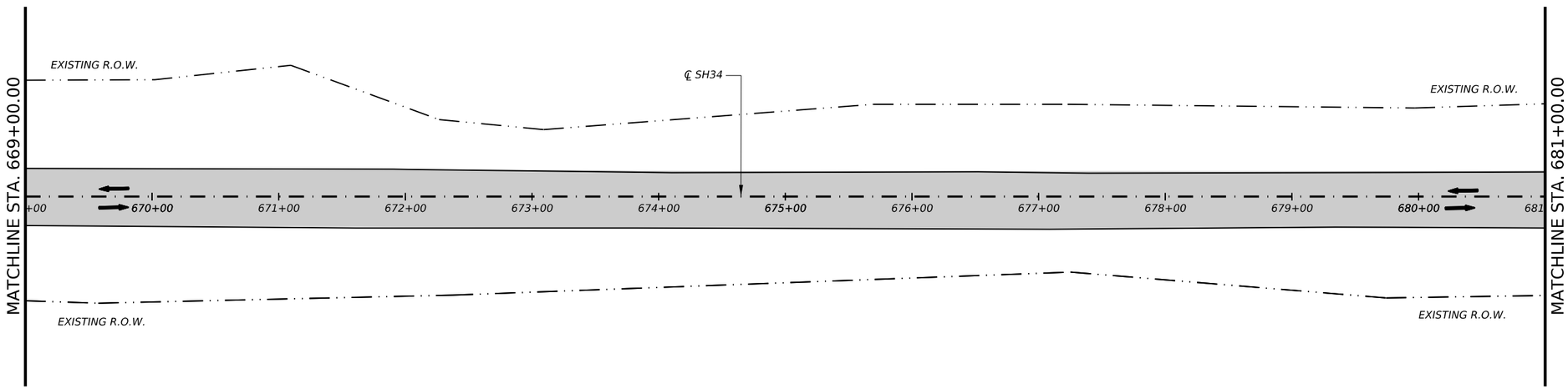


PI 659+42.88
Δ 21°42'23.8" (RT)
D 03°16'26.6"
T 335.52'
L 662.99'
R 1750.00'
PC 656+07.36
PT 662+70.35



0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
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STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

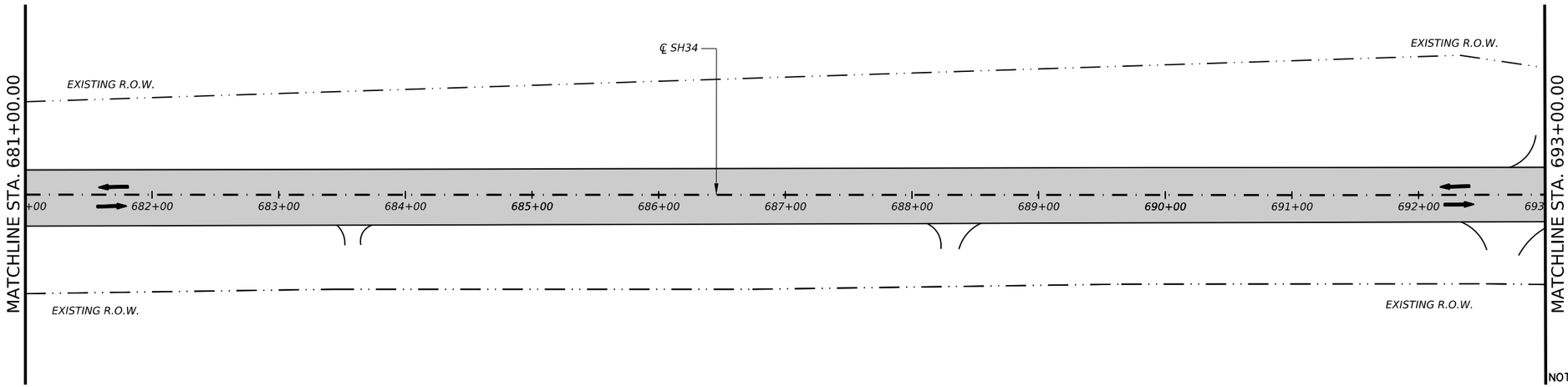
Texas Department of Transportation

SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		116

DATE: 5/5/2024 3:20:39 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-28.dgn



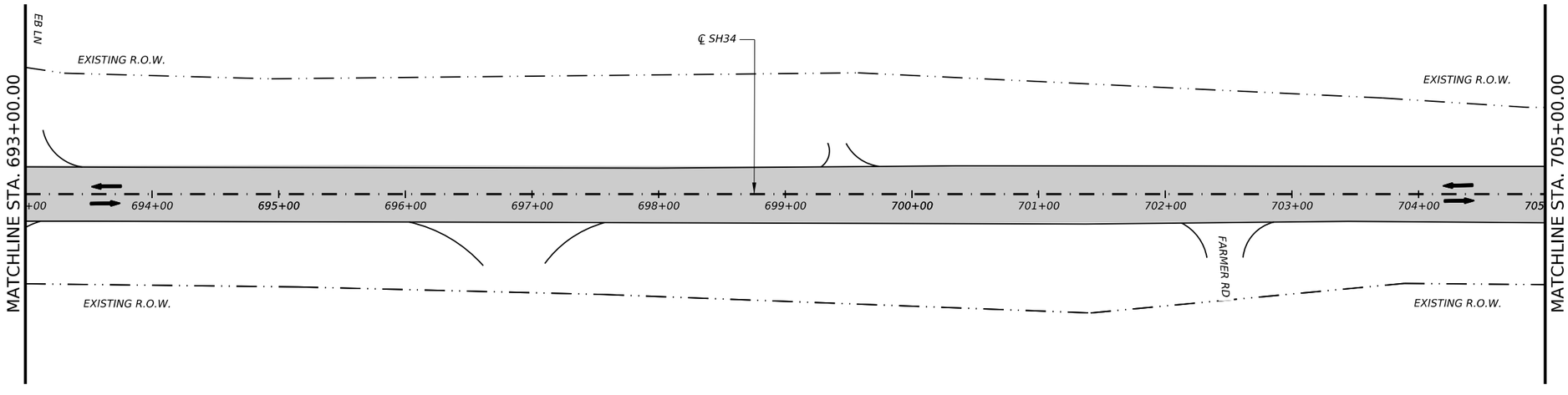
0 50 100
SCALE IN FEET

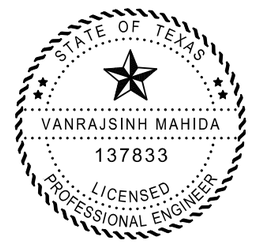
LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.





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Signature of Registrant ,P.E. & Date

Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 29 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		117

DATE: 5/5/2024 3:20:44 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-29.dgn

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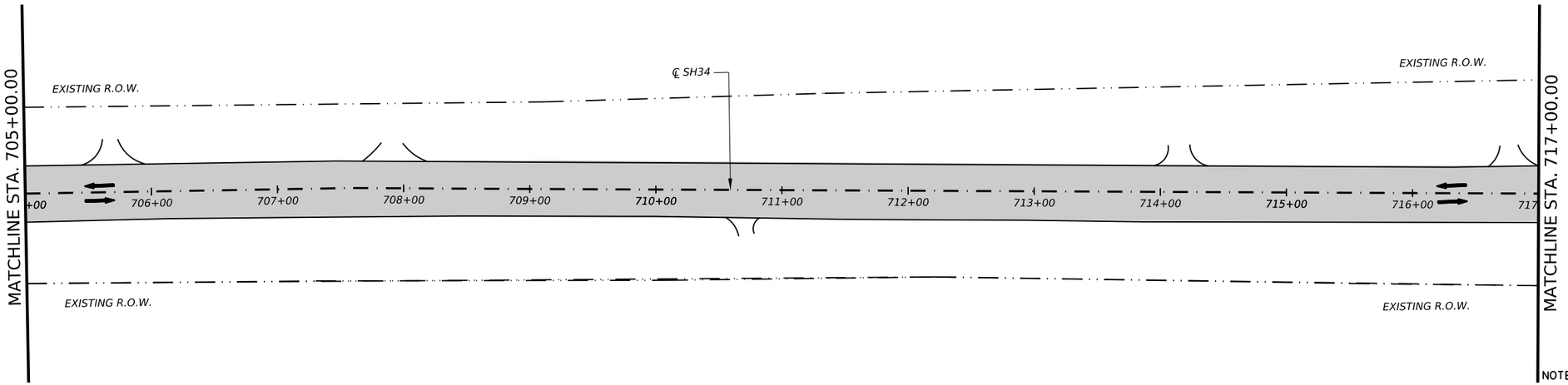

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
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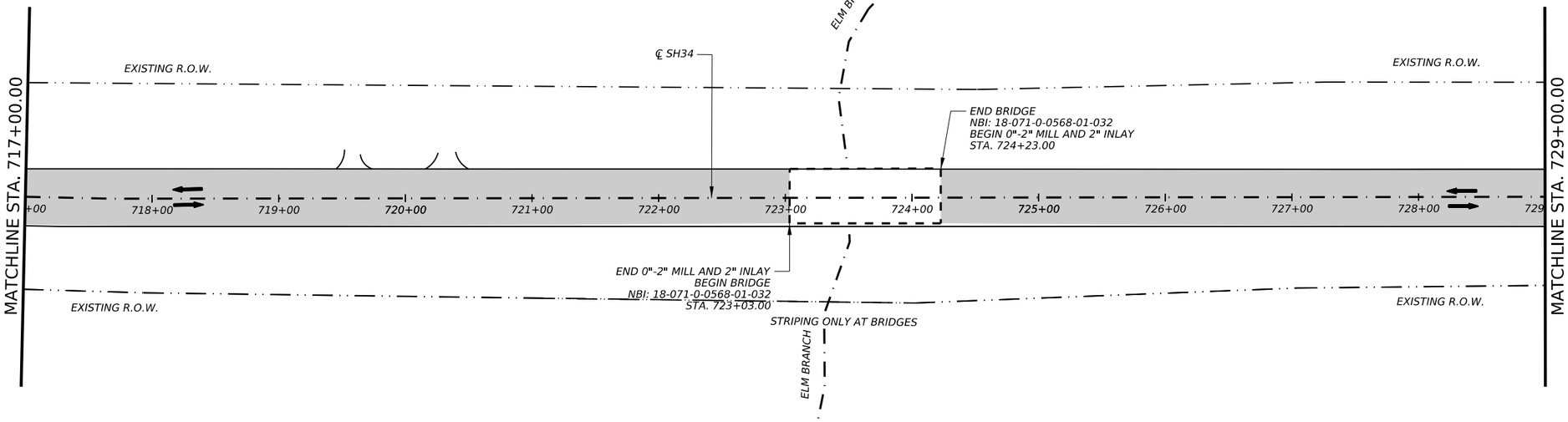
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



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137833
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,P.E.
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Texas Department of Transportation

SH 34

PLAN
LAYOUTS

SHEET 30 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		118

DATE: 5/5/2024 3:20:49 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-30.dgn

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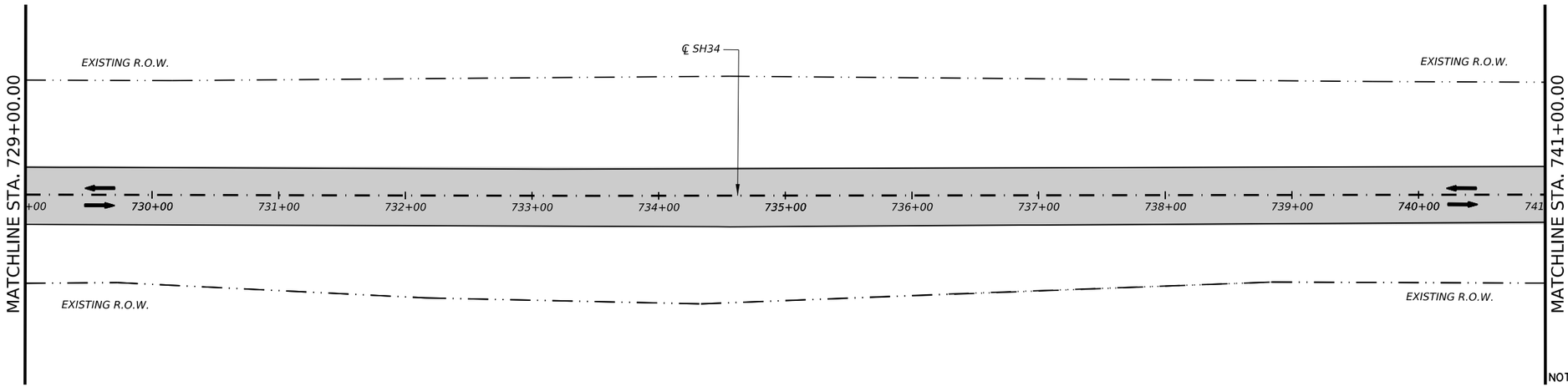

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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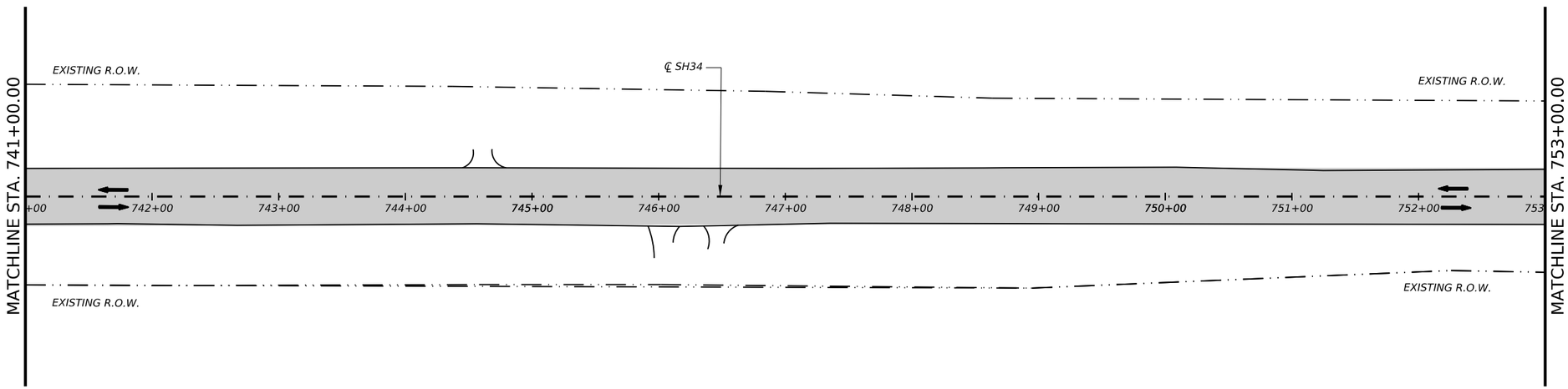
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



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SH 34

PLAN LAYOUTS

SHEET 31 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		119

DATE: 5/5/2024 3:21:31 AM
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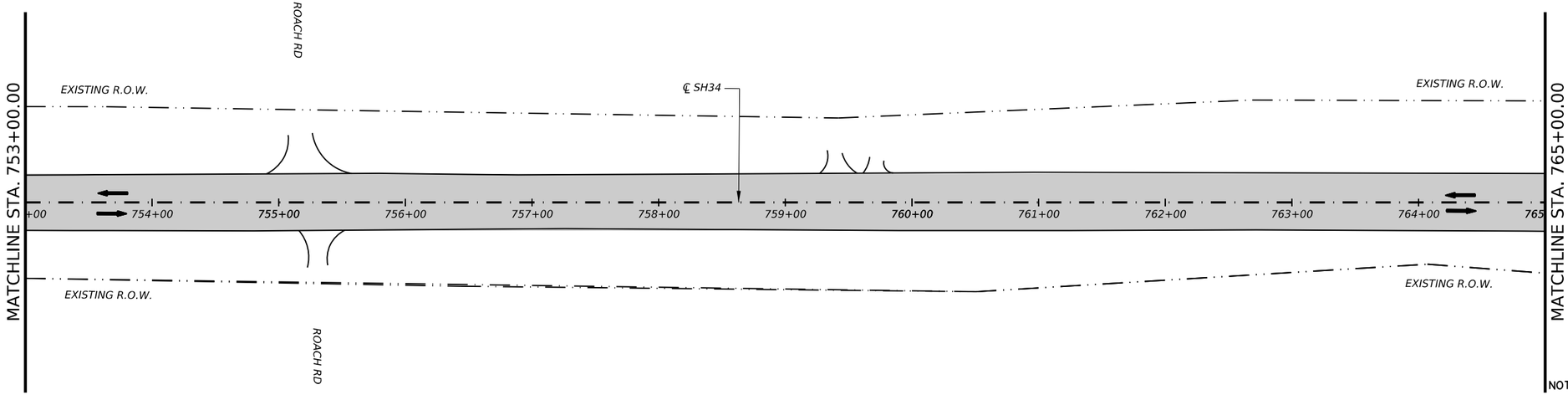

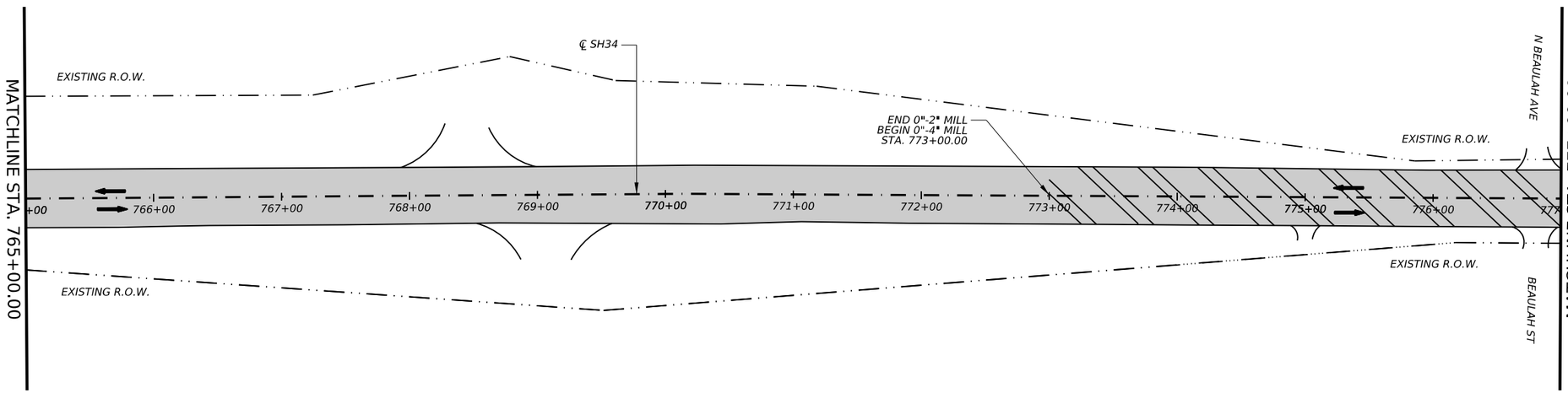

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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SH 34

PLAN LAYOUTS

SHEET 32 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		120

DATE: 5/5/2024 3:21:44 AM
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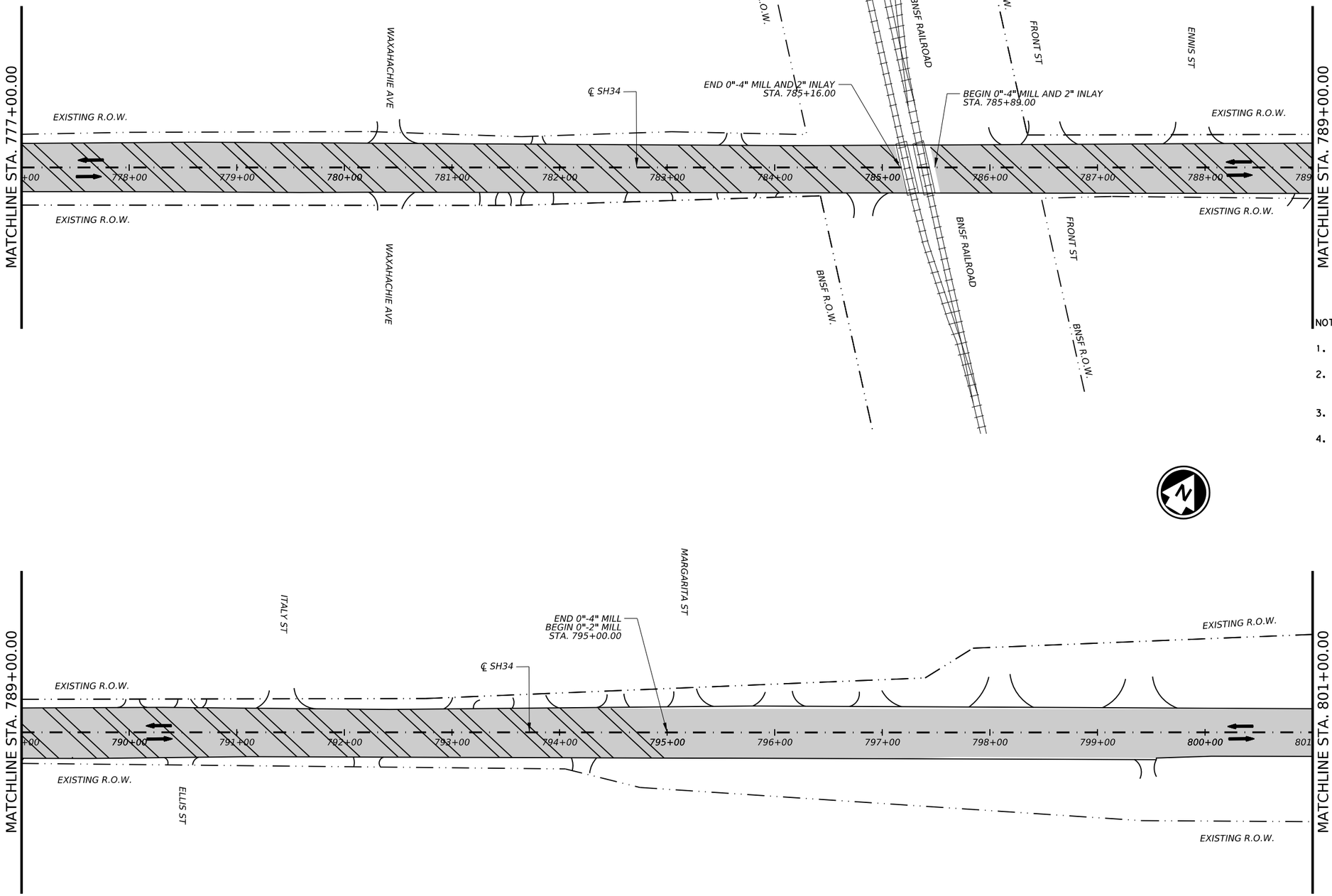

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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SH 34

PLAN
LAYOUTS

SHEET 33 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		121

DATE: 5/5/2024 3:21:55 AM
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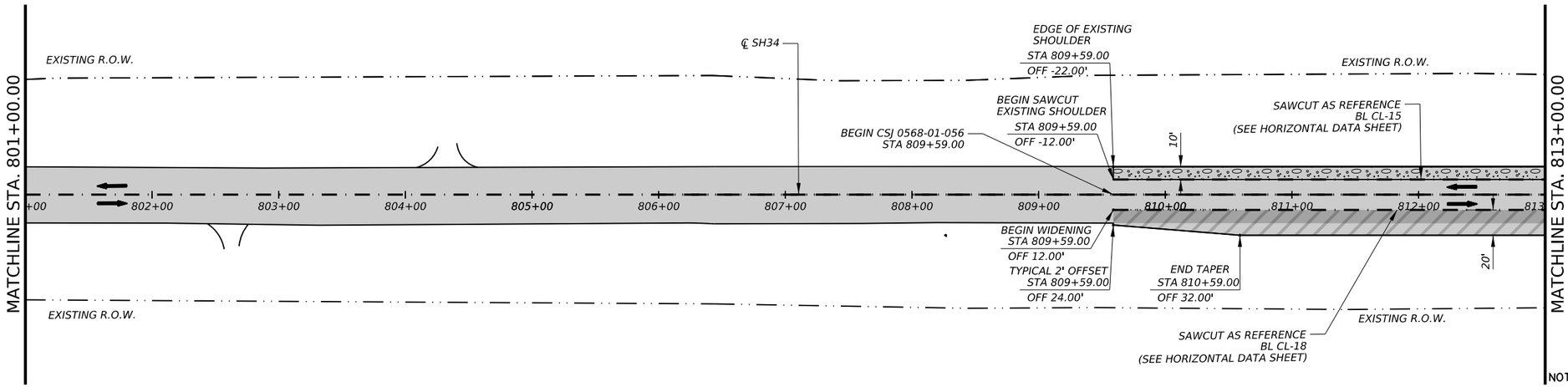

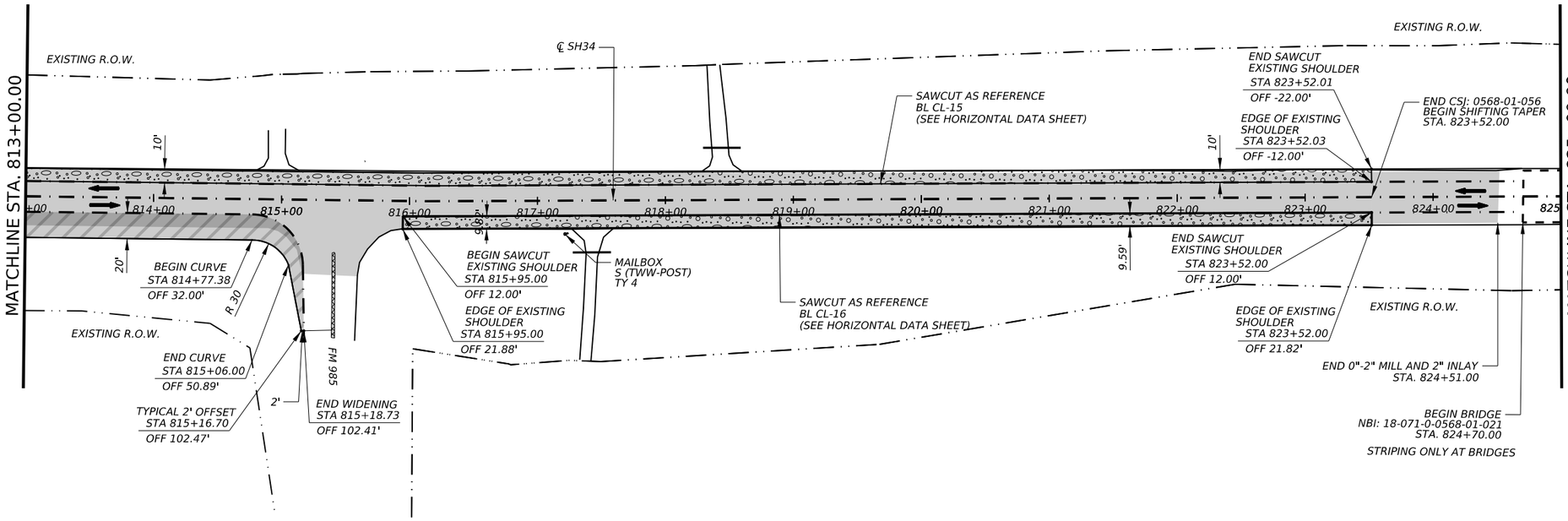

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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SH 34

PLAN LAYOUTS

SHEET 34 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		122

DATE: 5/5/2024 3:22:28 AM
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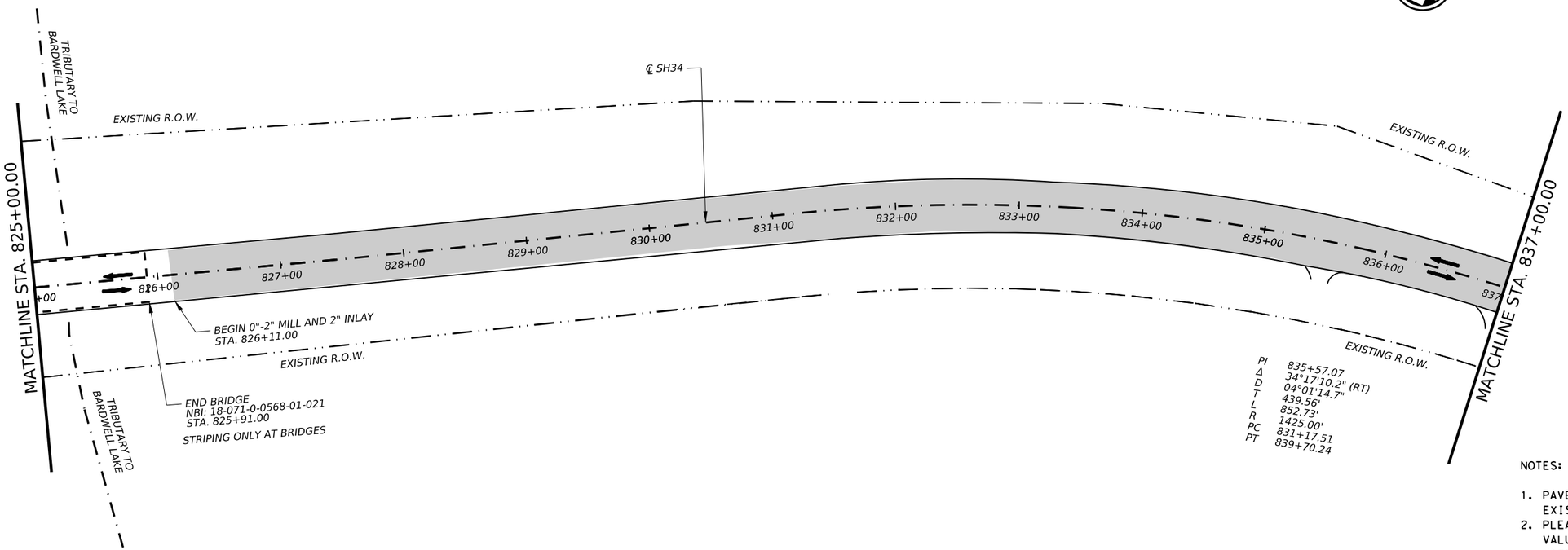

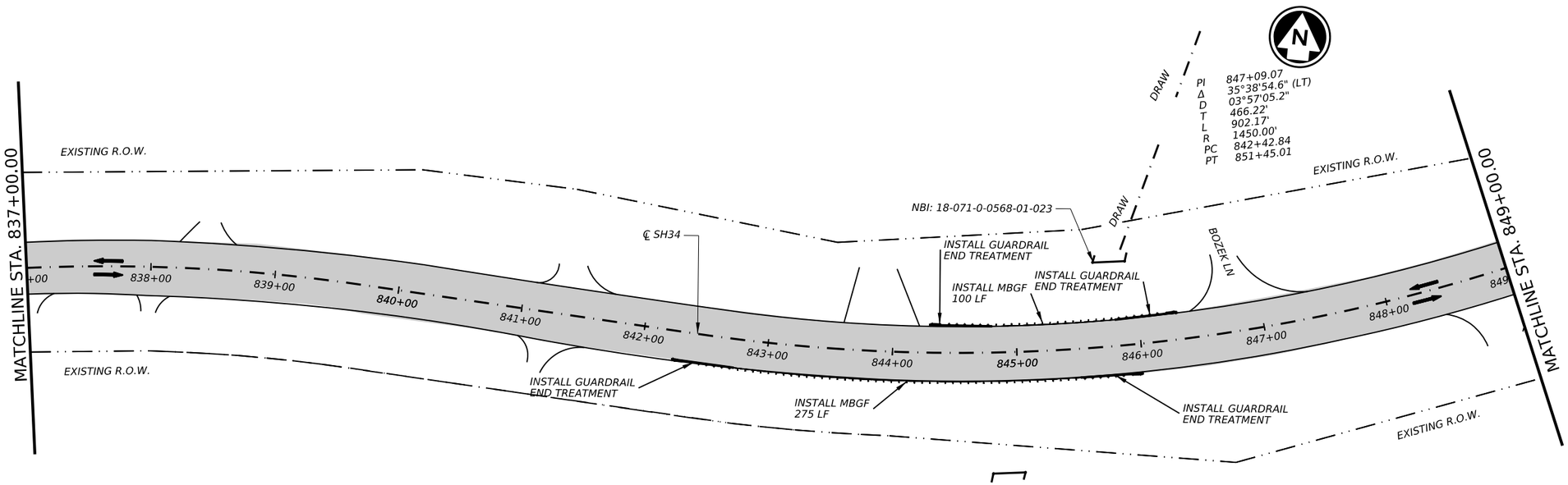

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		123

DATE: 5/5/2024 3:22:34 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-35.dgn

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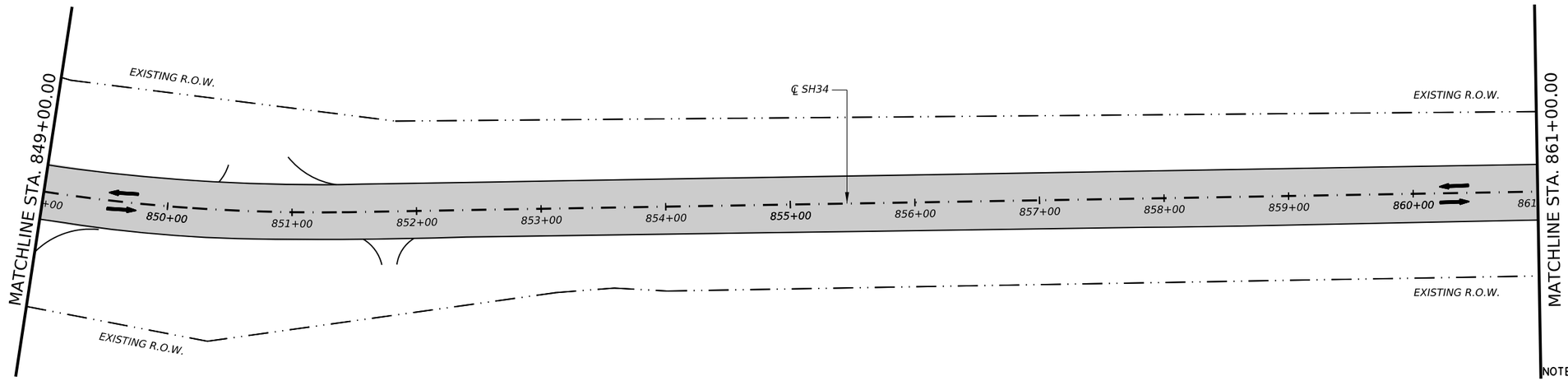

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
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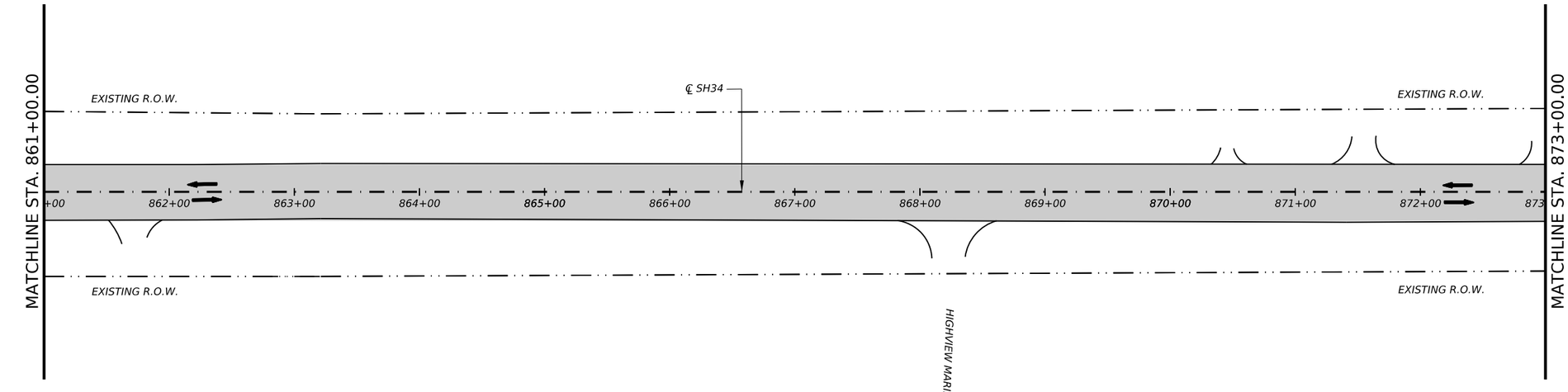
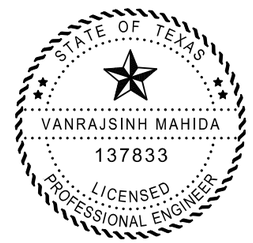
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.





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Texas Department of Transportation

SH 34

PLAN
LAYOUTS

SHEET 36 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		124

DATE: 5/5/2024 3:22:38 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-36.dgn

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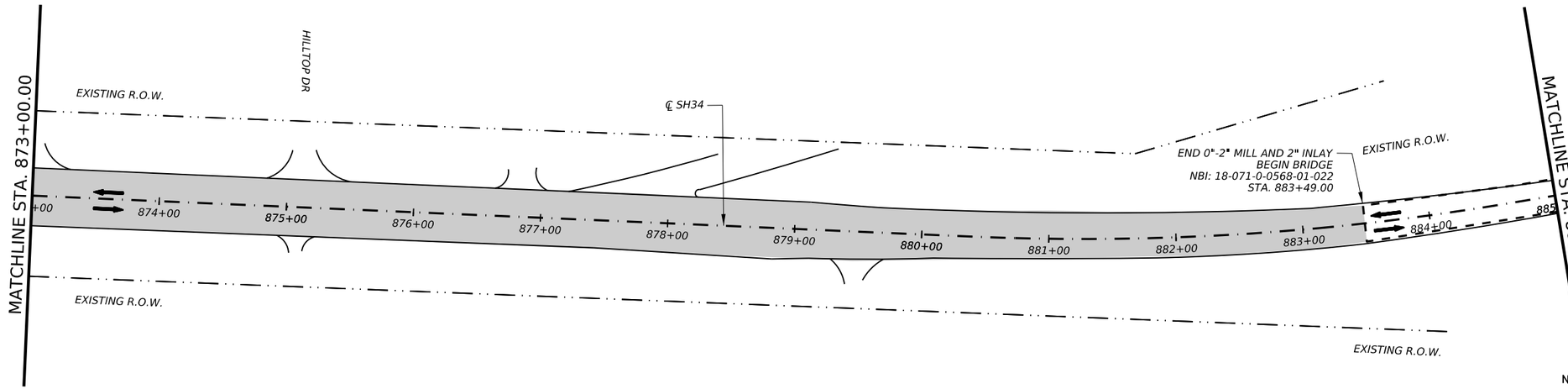

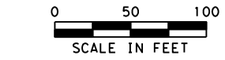

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

PI	882+46.72
Δ	11°46'26.7" (LT)
D	02°51'53.2"
T	206.22'
L	410.99'
R	2000.00'
PC	880+40.50
PT	884+51.49

NOTES:

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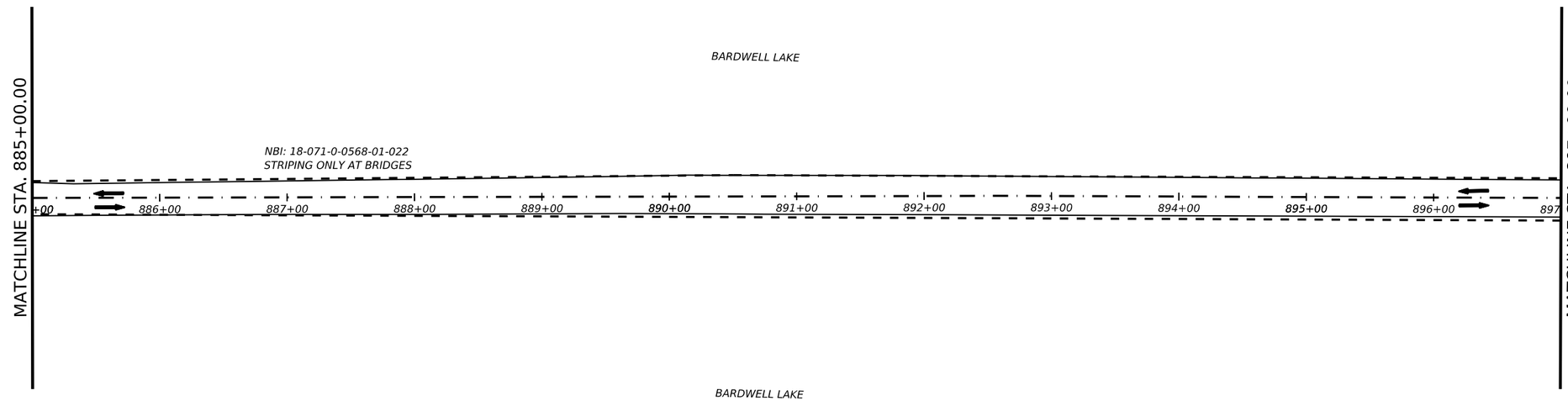
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

,P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

PLAN
LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		125

DATE: 5/5/2024 3:23:19 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-37.dgn

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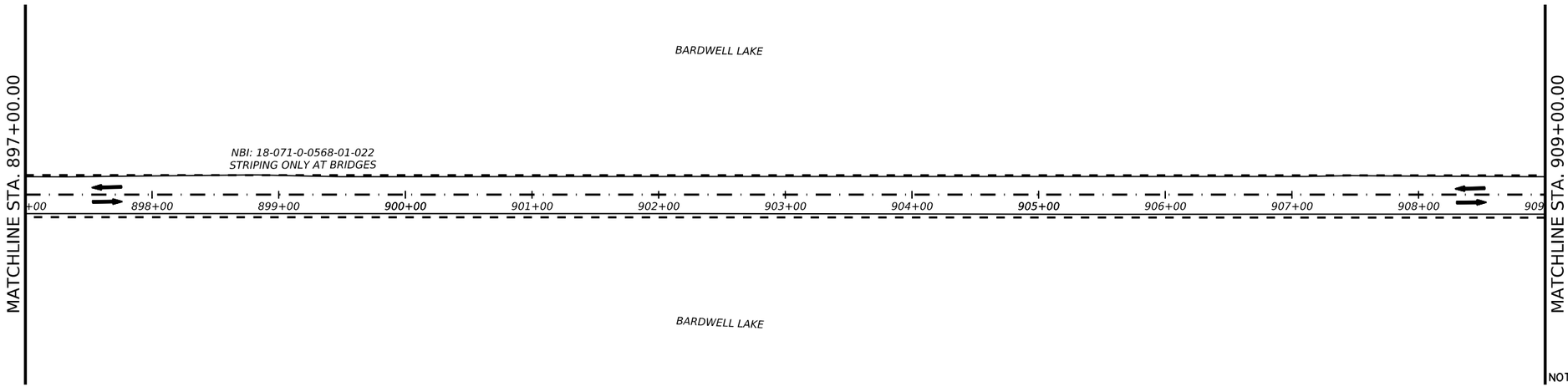

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

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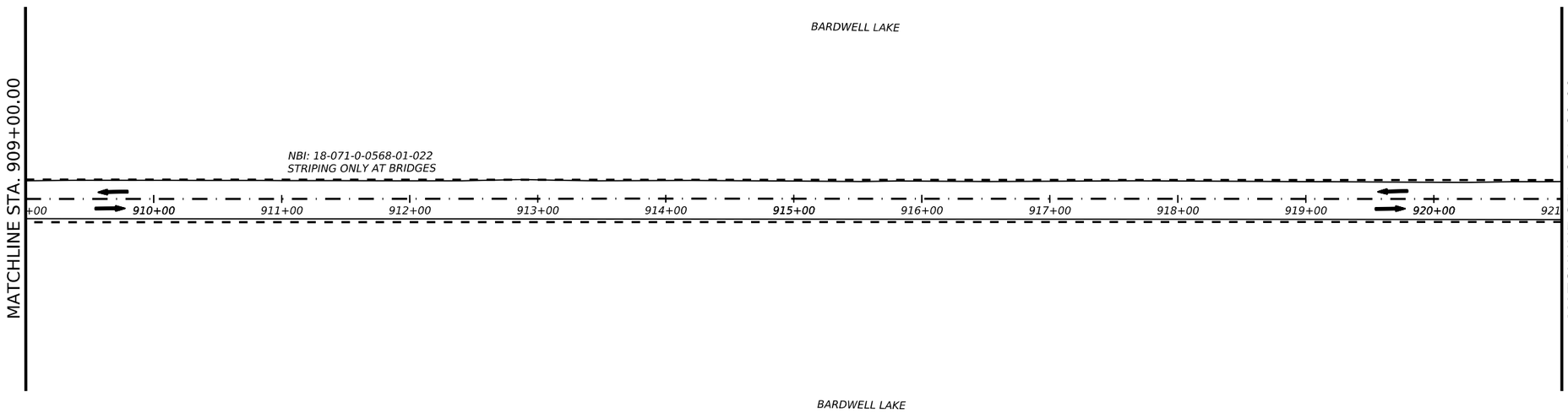

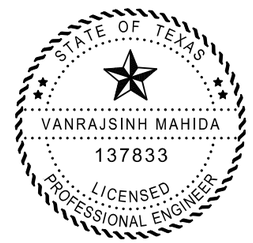

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Texas Department of Transportation

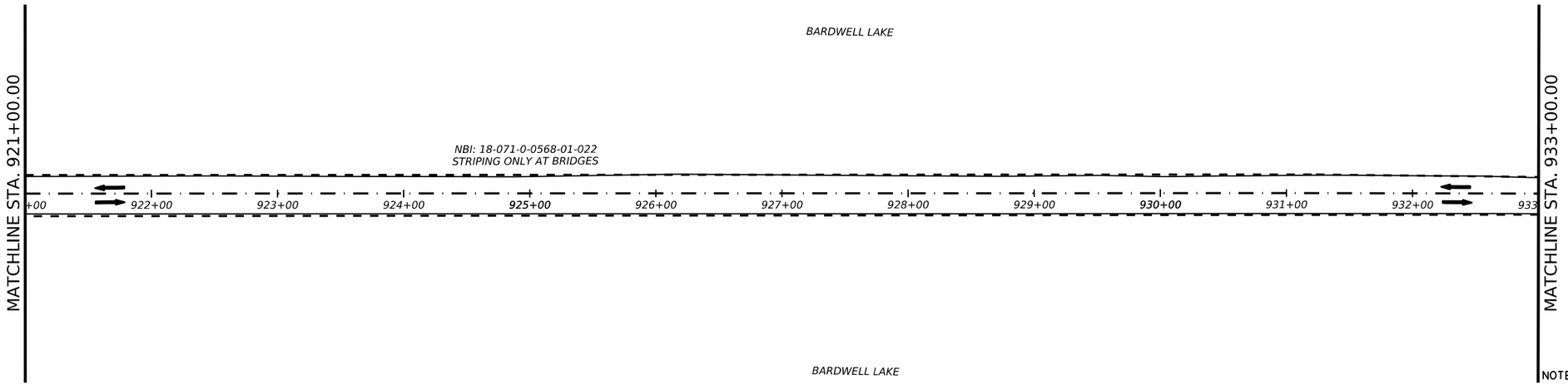
SH 34

PLAN LAYOUTS

SHEET 38 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		126

DATE: 5/5/2024 3:23:49 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/SH34_PLAN LAYOUT-38.dgn



0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
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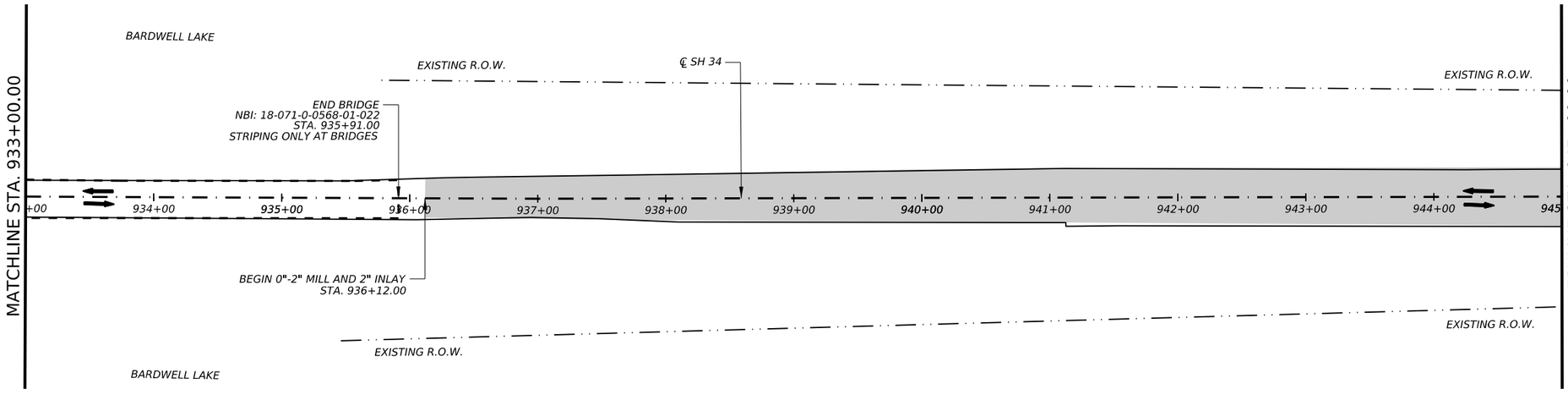

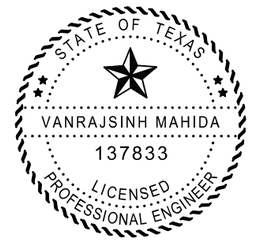

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SH 34

PLAN
LAYOUTS

SHEET 39 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		127

DATE: 5/5/2024 3:23:55 AM
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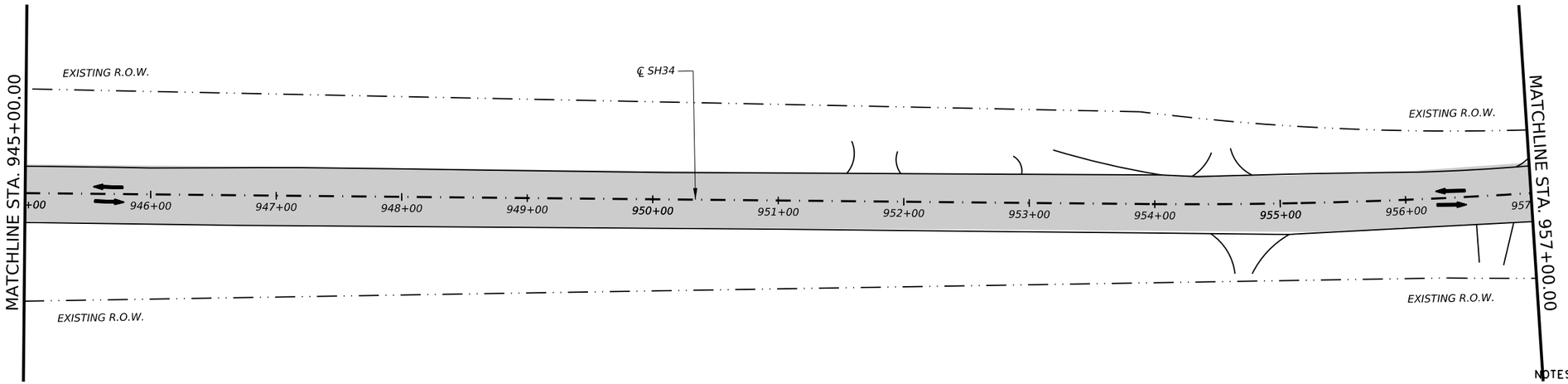
DW: CK: DW: CK:



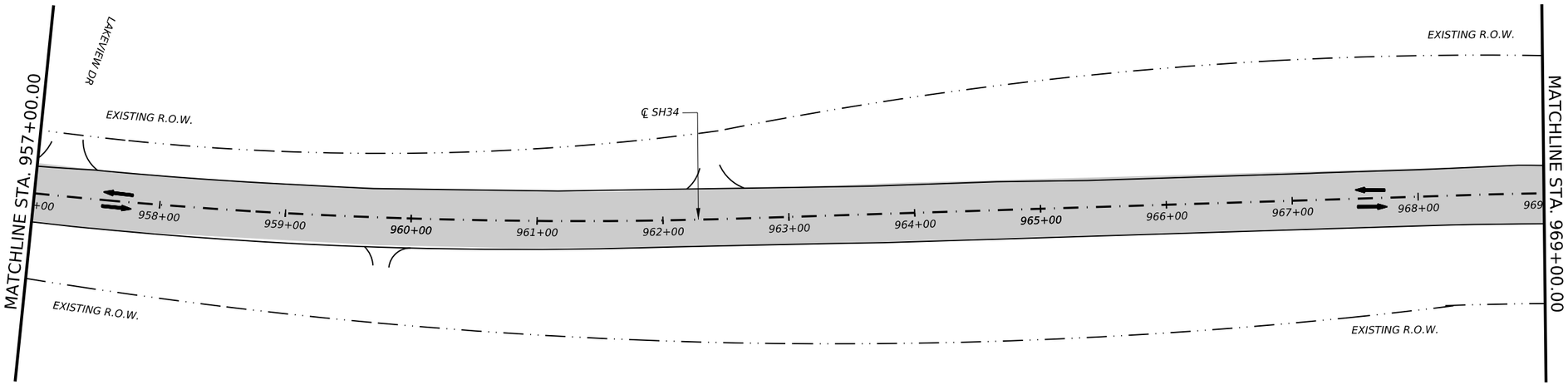
0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

1. PAVEMENT CROSS SLOPES SHALL MATCH EXISTING.
2. PLEASE FOLLOW THE EXISTING SUPERELEVATION VALUE ON ALL STATIONS UNLESS OTHERWISE NOTED IN PLANS.
3. NO MILLING AND OVERLAY ON BRIDGE UNLESS NOTED OTHERWISE.
4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.



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Δ 11°58'31.6" (LT)
D 01°21'51.1"
T 440.53'
L 877.85'
R 4200.00'
PC 953+87.48
PT 962+65.32

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant & Date ,P.E.

Texas Department of Transportation

SH 34

PLAN
LAYOUTS

SHEET 40 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		128

DATE: 5/5/2024 3:24:37 AM
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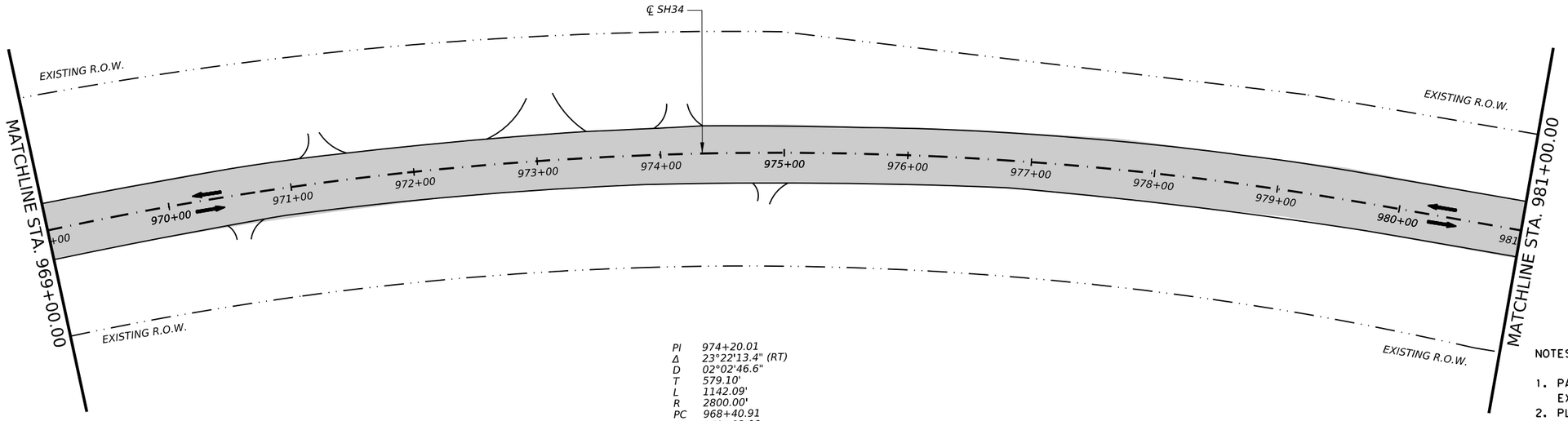

PI 974+20.01
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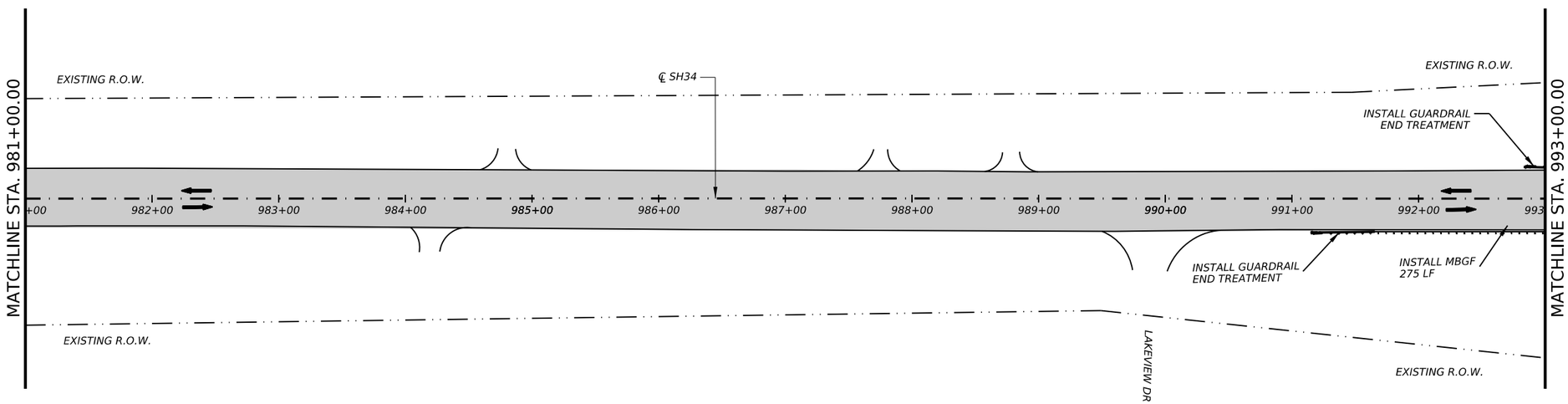
L 1142.09'
R 2800.00'
PC 968+40.91
PT 979+83.00



0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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4. PAVEMENT MARKINGS ON BRIDGE SHALL BE UPDATED AS PER LATEST PAVEMENT MARKING STANDARDS.

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SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		129

DATE: 5/5/2024 3:24:50 AM
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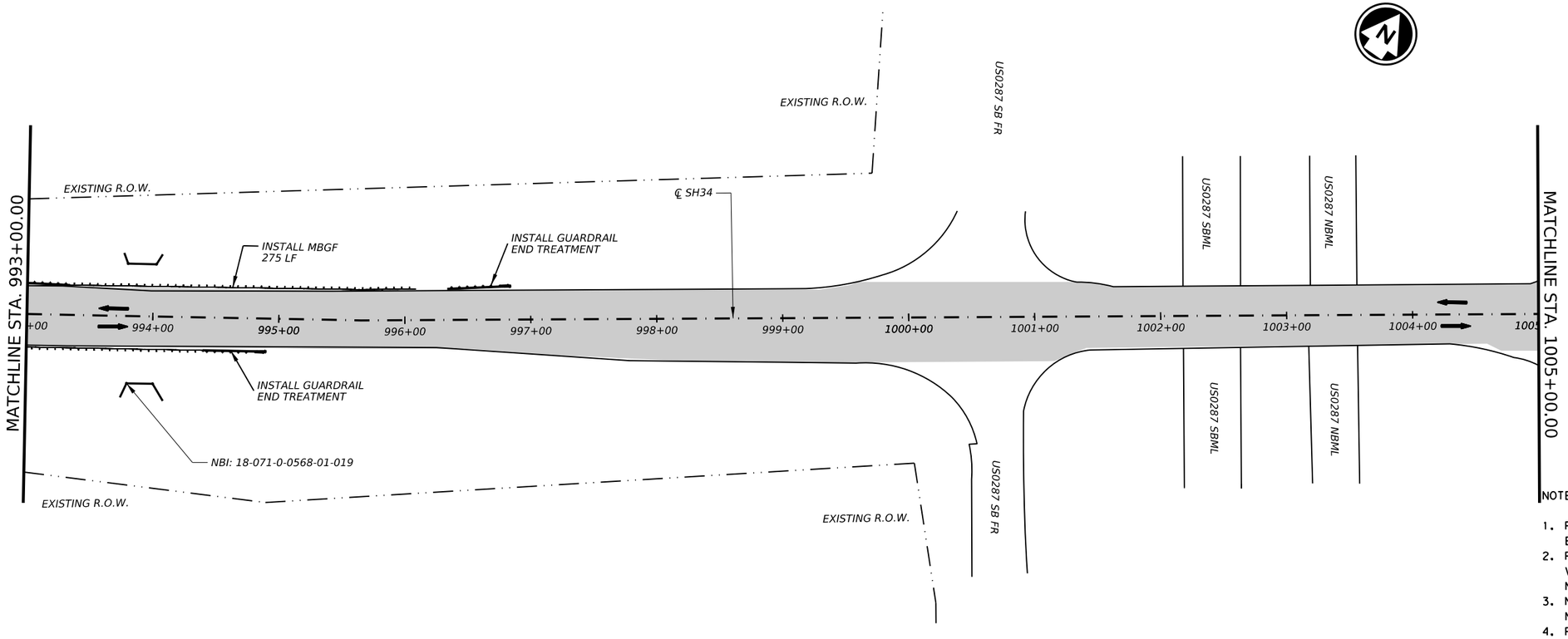

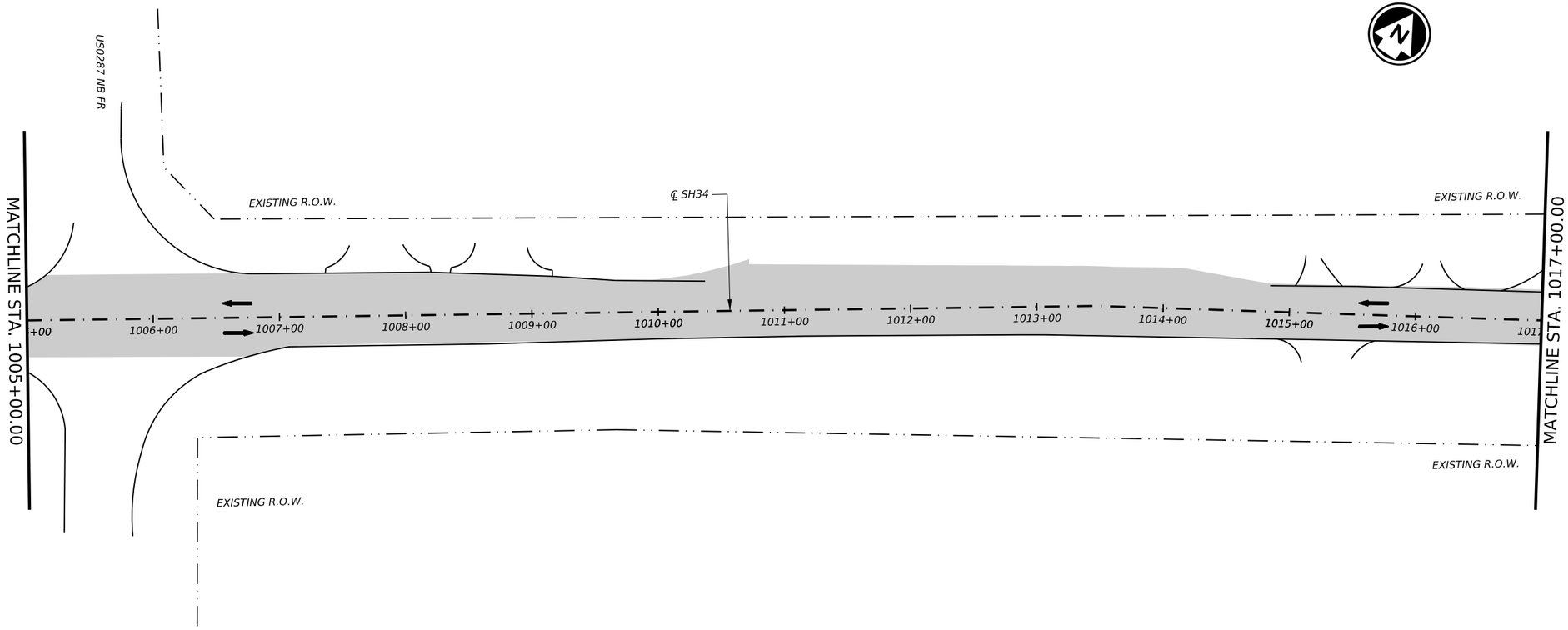

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

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SH 34

PLAN
LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		130

DATE: 5/5/2024 3:25:03 AM
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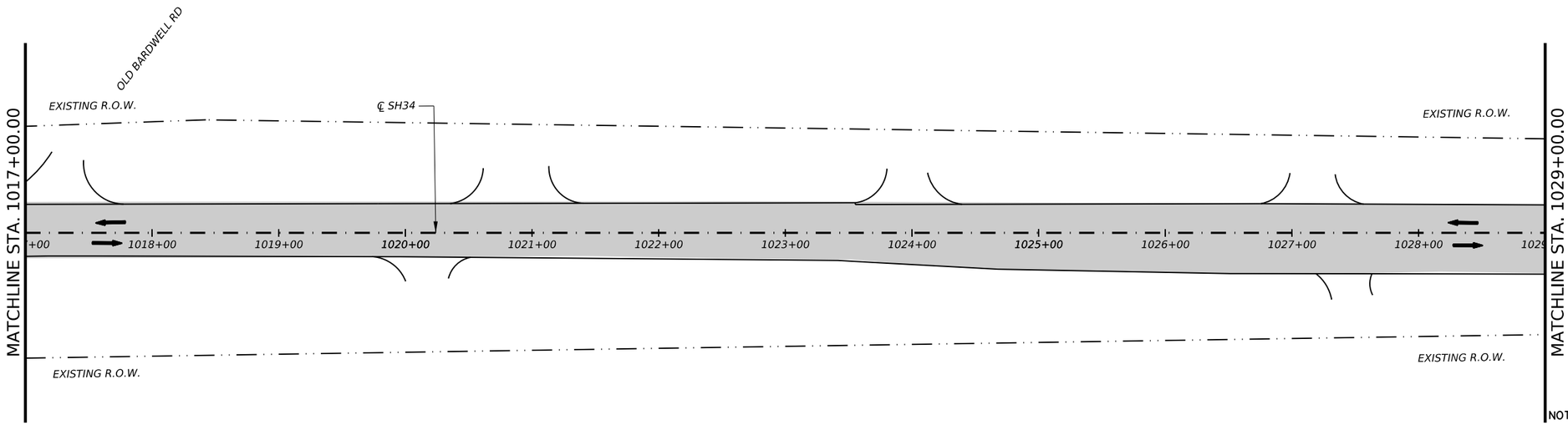

PI 1034+18.36
Δ 07°56'55.1" (LT)
D 01°38'13.3"
T 243.17'
L 485.55'
R 3500.00'
PC 1031+75.20
PT 1036+60.75

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

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SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		131

CK:
DW:
CK:
DW:

DATE: 5/5/2024 3:25:35 AM
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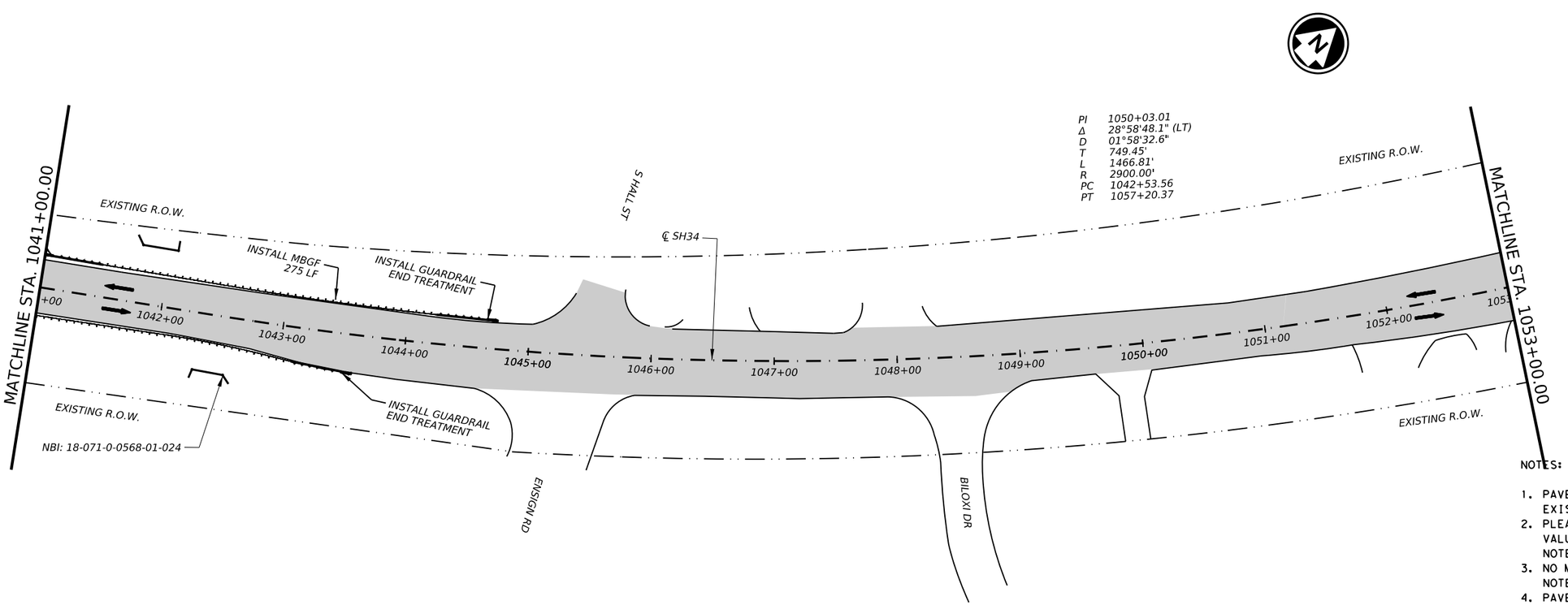

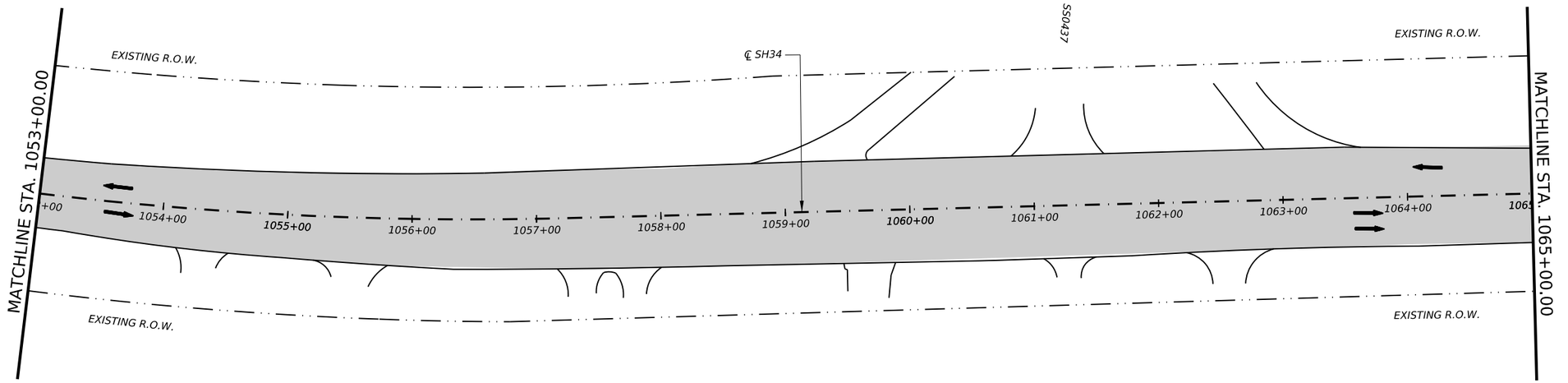

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

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SH 34

PLAN
LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		132

DATE: 5/5/2024 3:26:16 AM
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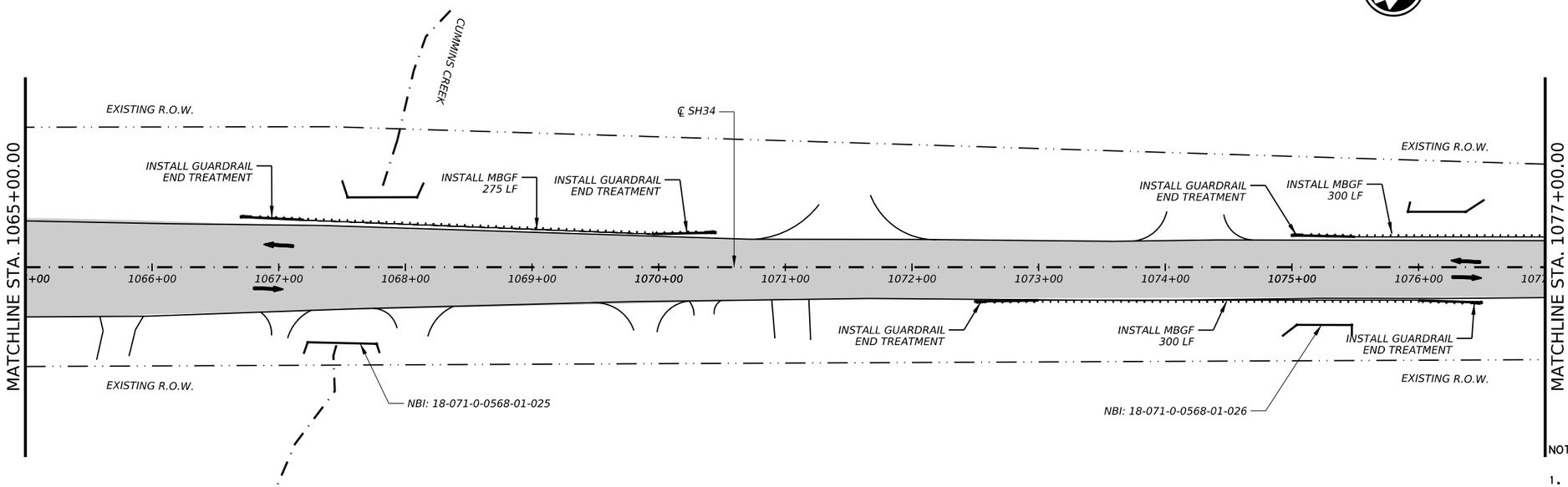

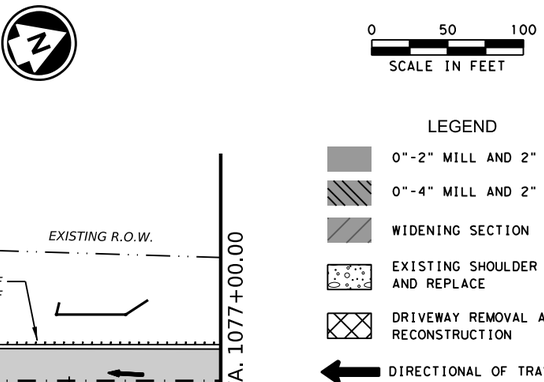

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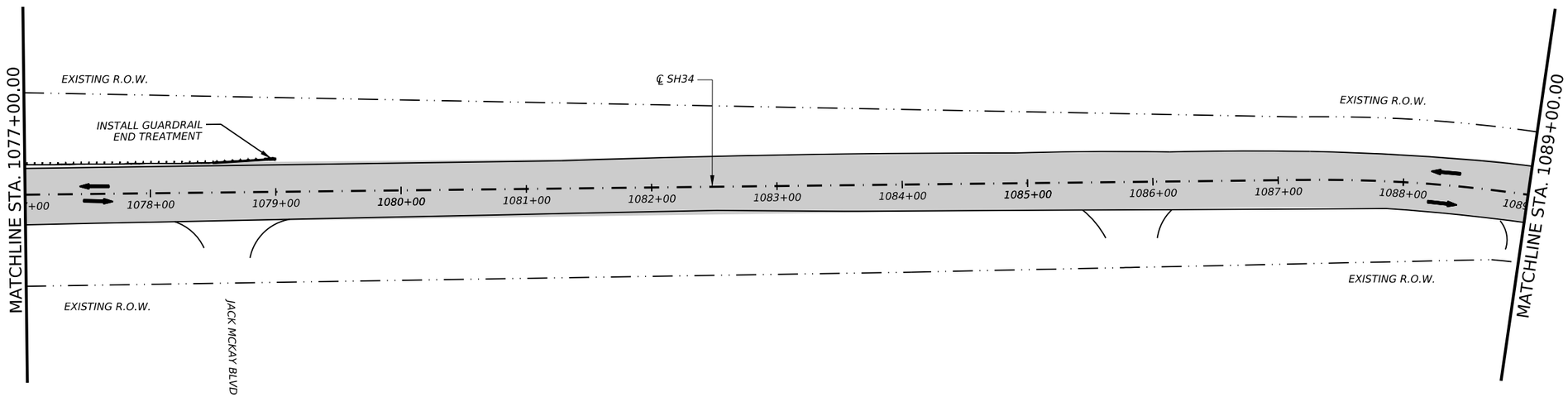

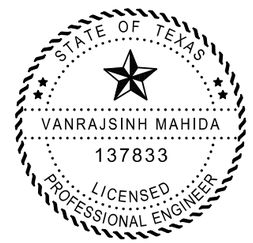

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Texas Department of Transportation

SH 34

PLAN LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		133

DATE: 5/5/2024 3:26:49 AM
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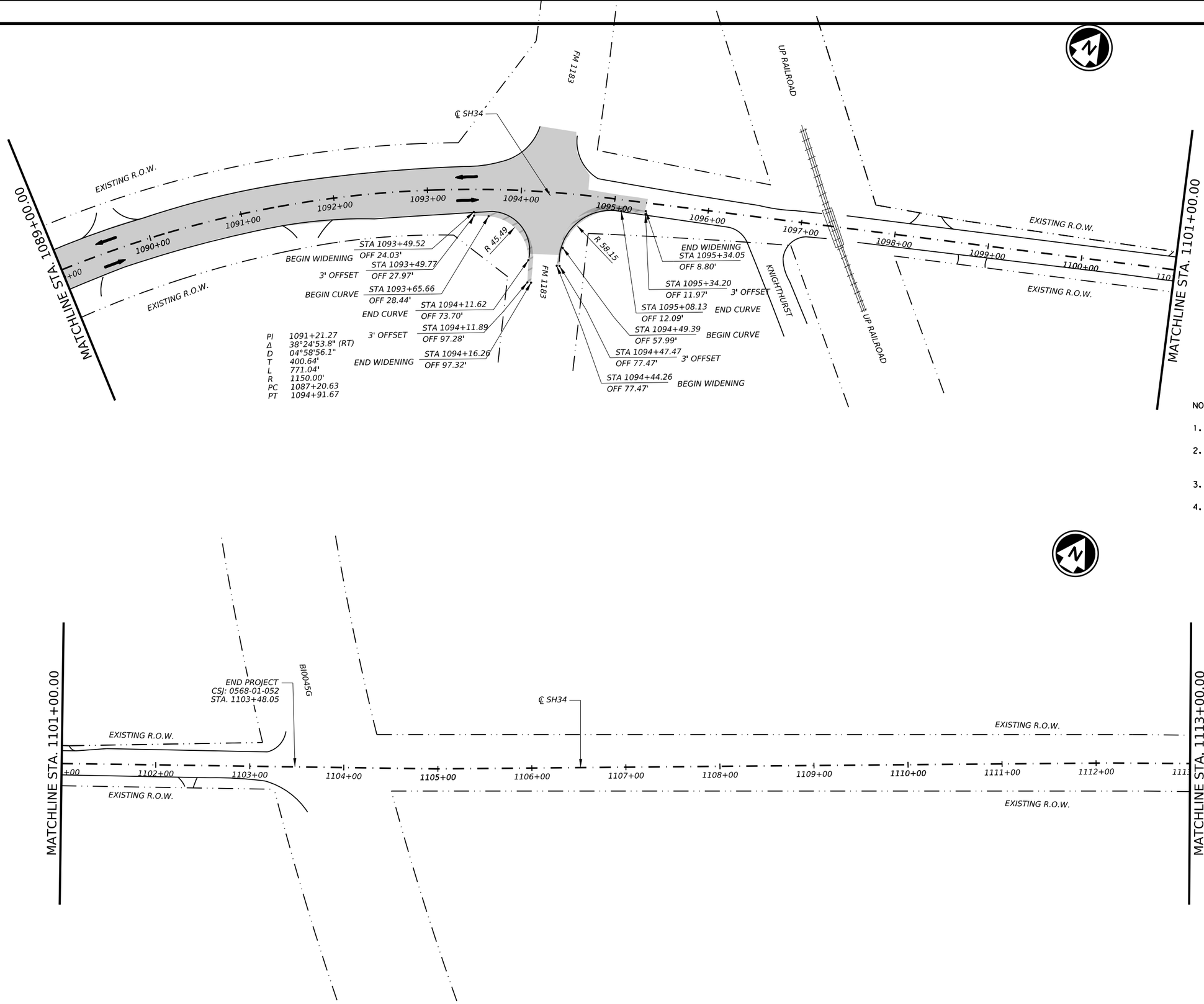

NOTES:

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STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant ,P.E. & Date

Texas Department of Transportation

SH 34

PLAN LAYOUTS

SHEET 46 OF 46

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		134

DATE: 5/5/2024 3:26:55 AM
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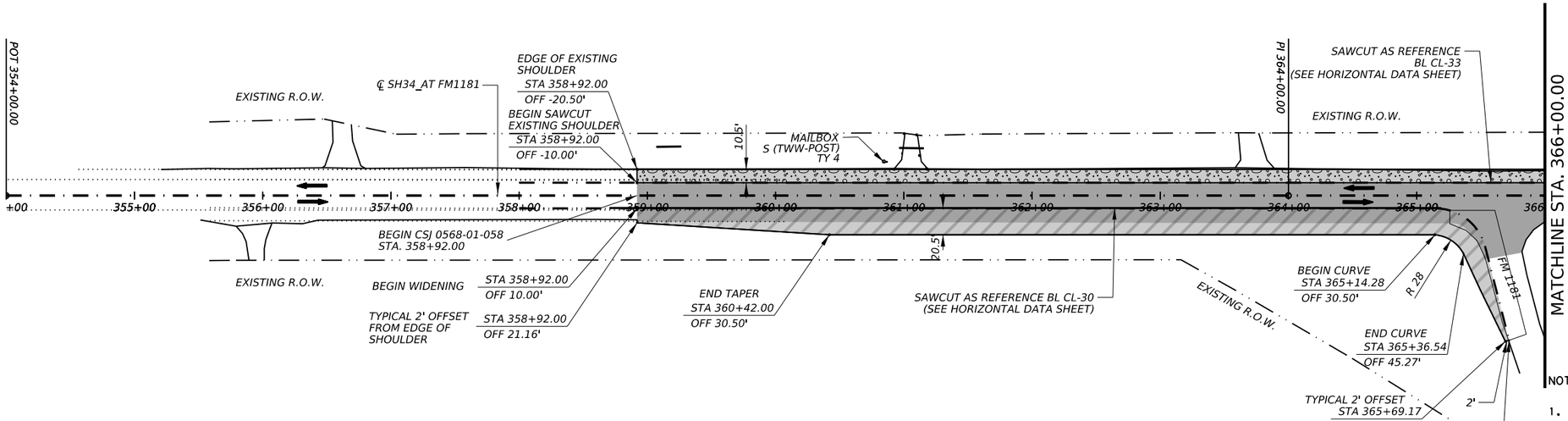

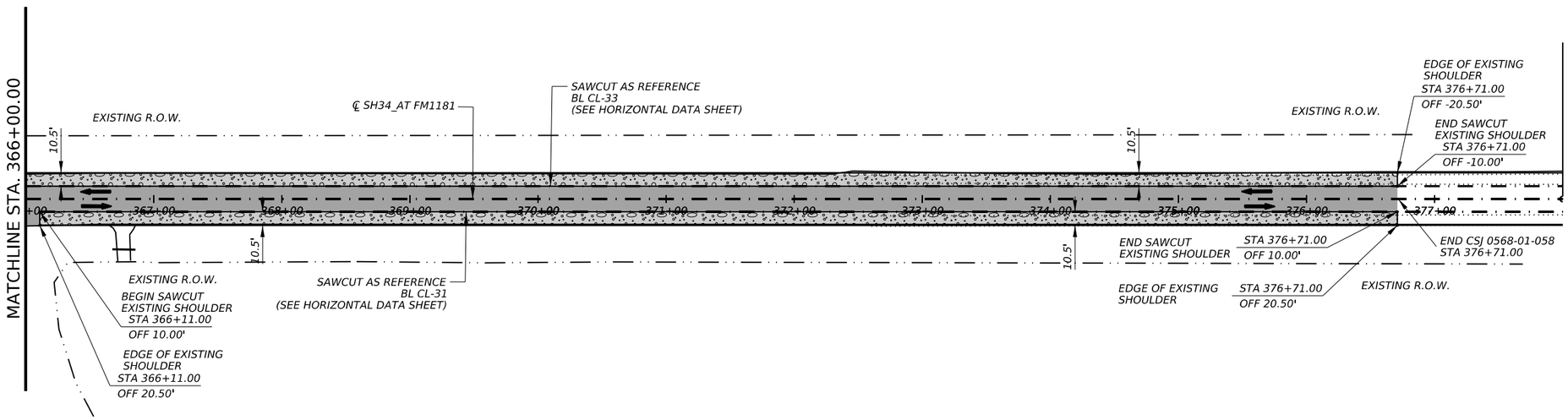

0 50 100
SCALE IN FEET

LEGEND

- 0"-2" MILL AND 2" INLAY
- 0"-4" MILL AND 2" INLAY
- WIDENING SECTION
- EXISTING SHOULDER REMOVE AND REPLACE
- DRIVEWAY REMOVAL AND RECONSTRUCTION
- DIRECTIONAL OF TRAVEL

NOTES:

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vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PLAN LAYOUT AT FM 1181

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		135

DATE: 5/5/2024 3:35:16 AM
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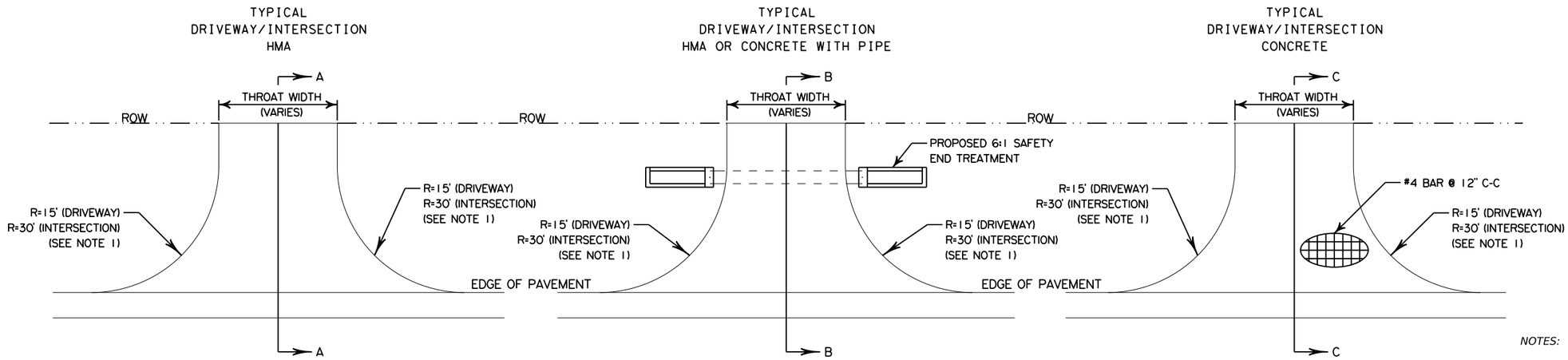
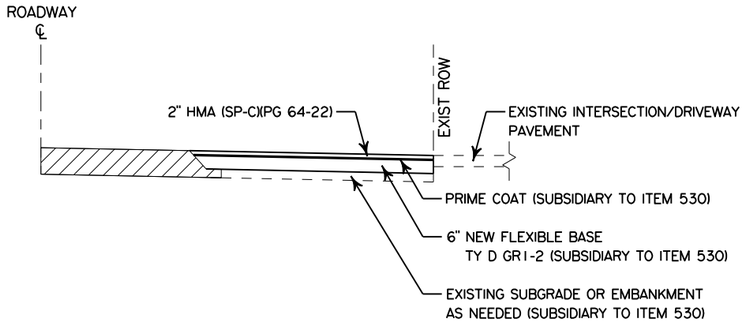


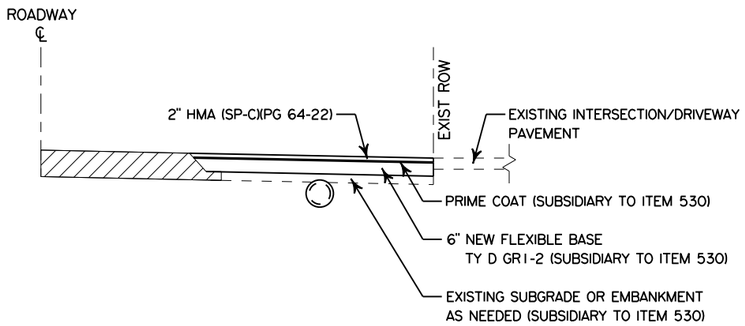
NOTES:

1. DRIVEWAY RETURN RADIUS IS 15` FOR RESIDENTAIL DRIVEWAY OR 30` FOR CROSS STREET INTERSECTIONS UNLESS OTHERWISE NOTED IN THE PLAN SHEETS.

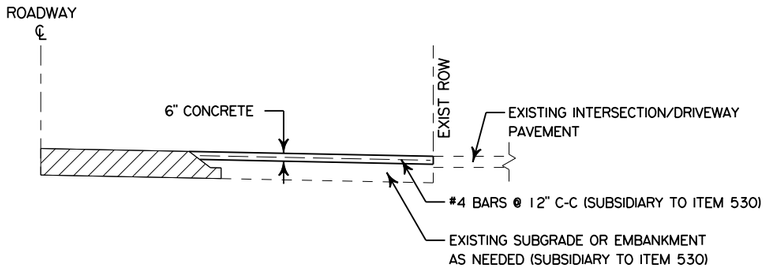
2. DRIVEWAY LOCATIONS MAY BE SHIFTED AT TIME OF CONSTRUCTION AS DIRECTED BY THE ENGINEER TO MATCH EXISTING CONDITIONS.



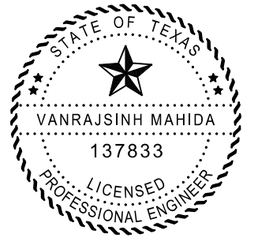
INTERSECTION/DRIVEWAY
SECTION A-A HMA



INTERSECTION/DRIVEWAY
SECTION B-B HMA



DRIVEWAY
SECTION C-C CONCRETE



vanrajsinh Mahida 05/06/2024

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Signature of Registrant & Date

Texas Department of Transportation

SH 34

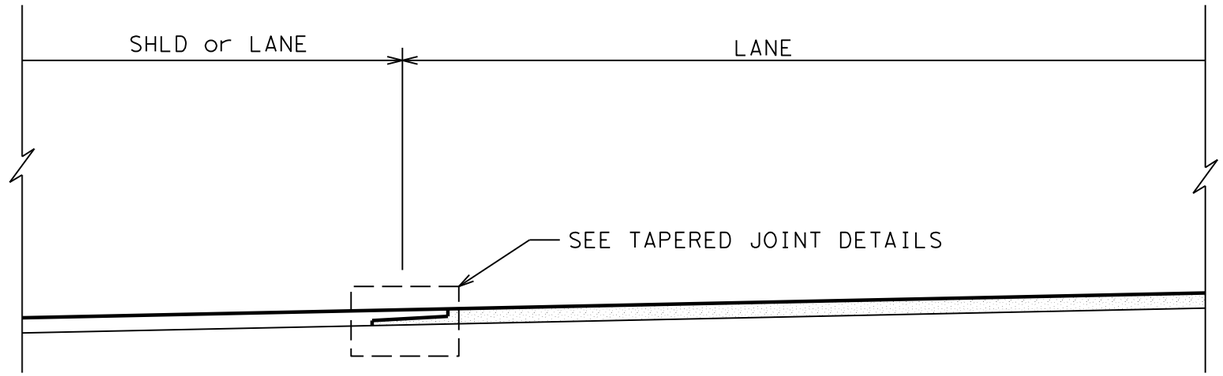
DRIVEWAY DETAILS

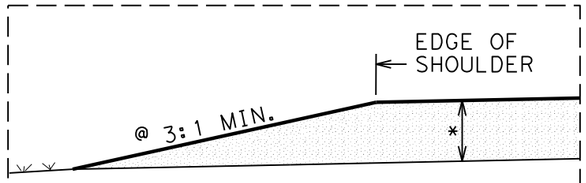
SHEET1 OF 1

CONT	SECT	JOB	HIGHWAY
0568	01	052	SH0034
DIST	COUNTY		SHEET NO.
DAL	Ellis		136

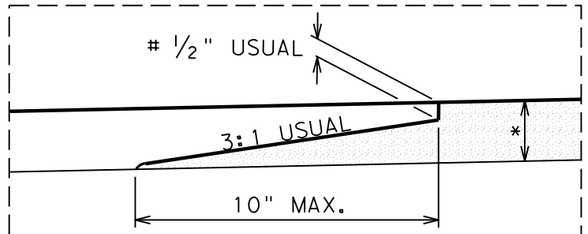
DW: CK: DW: CK:

DATE: 5/4/2024 10:20:29 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/3. Roadway/DRIVEWAY DETAILS

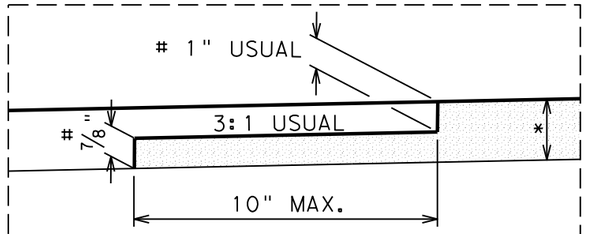




TAPERED OUTSIDE EDGE DETAIL



TAPERED JOINT DETAIL 1.5" TO 4" LIFTS



TAPERED JOINT DETAIL OVER 4" LIFTS

@ IF BACKFILLED SLOPE IS LESS THAN 3:1, COVER WEDGE WITH APPROVED BACKFILL.

* SEE TYPICAL SECTION FOR DEPTH AND TYPE OF HMA.
# NOTCH DEPTH SHALL NOT BE LESS THAN NOMINAL AGGREGATE SIZE.

NOTES:

1. THE ABOVE DETAILS SHALL BE CONSTRUCTED BY TAPERING THE BITUMINOUS MAT. THE TAPERED PORTION SHALL EXTEND BEYOND THE NORMAL LANE WIDTH AND BE LAID MONOLITHICALLY WITH ADJOINING MAT. THE TAPERED PORTION OF THE MAT SHALL BE CONSTRUCTED BY THE USE OF AN APPROVED STRIKE-OFF DEVICE THAT WILL PROVIDE A UNIFORM SLOPE AND WILL NOT RESTRICT THE MAIN SCREED. CLEAN WEDGE PRIOR TO PLACEMENT OF TACK COAT. TACK COAT SHALL BE APPLIED UNIFORMLY TO THE IN-PLACE TAPER WITH A DISTRIBUTOR BEFORE THE ADJACENT MAT IS PLACED. FINAL DENSITY REQUIREMENTS FOR THE ENTIRE PAVEMENT, INCLUDING THE TAPER AREA, WILL REMAIN UNCHANGED. COMPACTION OF THE INITIAL TAPER SECTION WILL BE REQUIRED AS NEAR TO FINAL DENSITY AS POSSIBLE. ROLL ADJACENT MAT FROM HOT SIDE TO COLD.

2. THE TYPE OF DEVICE TO PRODUCE ABOVE REFERENCED DETAILS SHALL PROVIDE INITIAL COMPACTION EQUIVALENT TO LAYDOWN MACHINE, WITH FINAL DENSITY ADHERING TO NOTE 1, AND BE APPROVED BY THE ENGINEER.

3. HOT MIX MATERIAL AND PLACEMENT SHALL BE PAID FOR UNDER THE PERTINENT ITEM. ANY ADDITIONAL SURFACE PREPARATION, TACK COAT, TACK COAT PLACEMENT, EQUIPMENT, LABOR, TOOLS AND INCIDENTALS TO PRODUCE TAPERED EDGE AND JOINTS AS DESCRIBED ABOVE SHALL BE CONSIDERED SUBSIDIARY TO THE HOT MIX ITEM.

4. THE TAPERED JOINT DETAIL IS NOT INTENDED FOR USE ON 2 WAY 2 LANE ROADBED CENTERLINE WITH LESS THAN 22' OVERALL WIDTH.

5. FULL PAVING OF ALL LANES AND SHOULDRS BY THE END OF EACH DAY PRODUCTION WILL NOT REQUIRE A TAPERED JOINT.

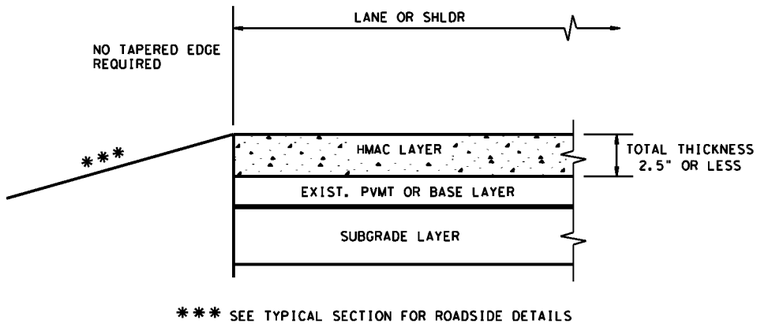
HOT MIX EDGE AND LONGITUDINAL JOINT DETAILS DALLAS DISTRICT STANDARD

LJD(1-1)-07

FED. RD. DIV. NO.	PROJECT NUMBER		SHEET NUMBER
18			137
STATE	DISTRICT	COUNTY	
TEXAS	DAL	ELLIS	
CONTROL	SECTION	JOB	HIGHWAY NUMBER
0568	01	052,ETC.	SH 34

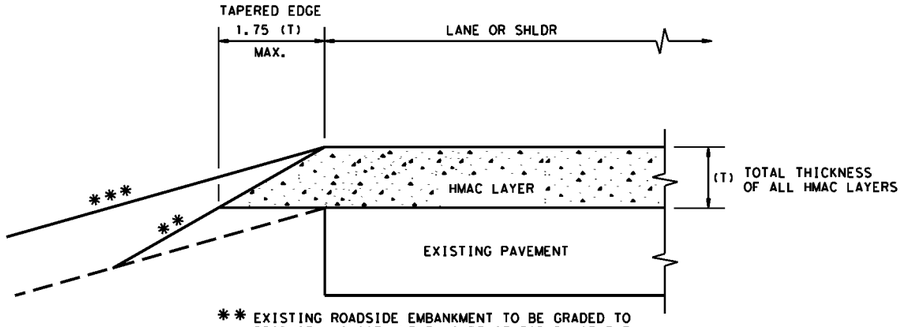
REVISED ON 9/10/08

DATE:
FILE:



*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

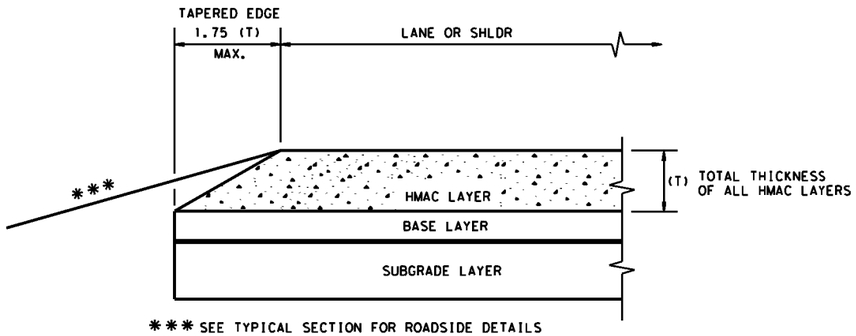
CONDITION - 1
THIN HMAC SURFACES OR HMAC OVERLAY WITH THICKNESS OF 2.5" OR LESS



** EXISTING ROADSIDE EMBANKMENT TO BE GRADED TO PRODUCE A SMOOTH LEVEL SURFACE FOR PLACEMENT OF TAPERED EDGE. THIS WORK IS SUBSIDIARY TO THE VARIOUS BID ITEMS.

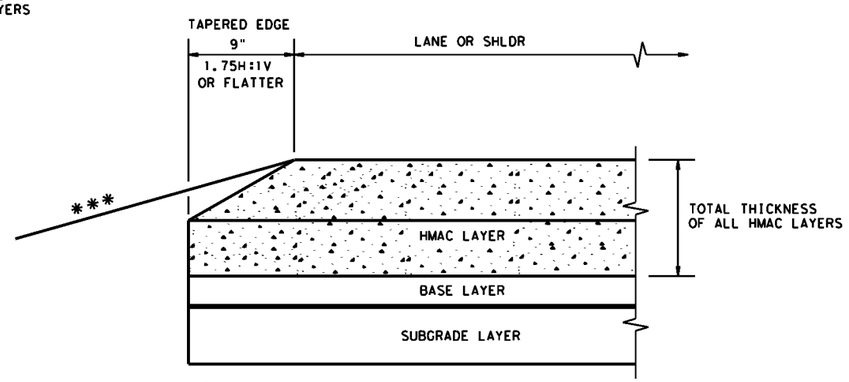
*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 2
OVERLAY OF EXISTING PAVEMENT HMAC THICKNESS 2.5" TO 5"



*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 3
NEW OR RECONSTRUCTED PAVEMENT HMAC THICKNESS 2.5" TO 5"



*** SEE TYPICAL SECTION FOR ROADSIDE DETAILS

CONDITION - 4
NEW OR RECONSTRUCTED PAVEMENT HMAC THICKNESS 5" OR GREATER

(NOT TO SCALE)

GENERAL NOTES

1. UNLESS OTHERWISE SHOWN IN THE PLANS, A VERTICAL EDGE IS PERMISSIBLE FOR HMAC PLACED GREATER THAN 5" BELOW THE EDGE OF PAVEMENT AND FOR THICKNESS OF HMAC LESS THAN 2.5".
2. FOR FURTHER INFORMATION REGARDING THE ROADSIDE AND PAVEMENT DETAILS, SEE TYPICAL SECTIONS.
3. PAYMENT FOR TAPERED EDGE WILL BE IN ACCORDANCE WITH APPLICABLE ITEMS IN THE CONTRACT.
4. THE SLOPE OF THE TAPERED EDGE SHALL BE 1.75H:1V OR FLATTER.
5. THE TAPERED EDGE SHALL BE PRODUCED BY USE OF A SCREED ATTACHMENT CAPABLE OF PRODUCING A SMOOTH COMPACTED SURFACE. ADDITIONAL COMPACTING EFFORT BEHIND THE SCREED IS NOT REQUIRED.

Texas Department of Transportation

Design Division Standard

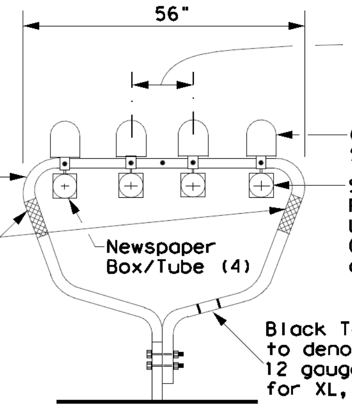
TAPERED EDGE DETAILS
HMAC PAVEMENT

TE(HMAC)-11

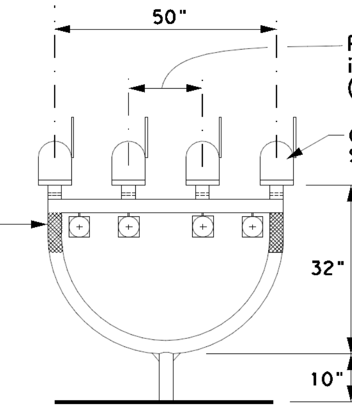
FILE: tehmac11.dgn	DN: TxDOT	CK: RL	DW: KB	CK:	
©TxDOT January 2011	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0568	01	052,ETC.	SH 34	
	DIST	COUNTY		SHEET NO.	
	DAL	ELLIS		138	

DATE: 5/4/2024 10:21:05 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/...

TYPE 1 - MULTIPLE



TYPE 4 - MULTIPLE



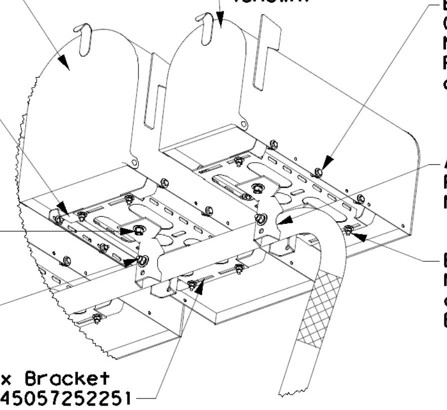
MAILBOX SIZES

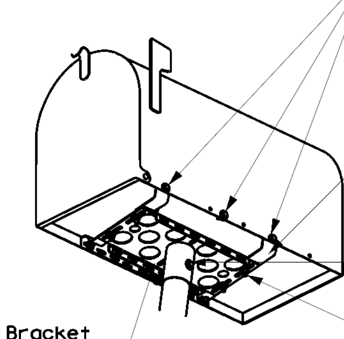
MAILBOX SIZE	TYPICAL DIMENSIONS LENGTH	WIDTH	HEIGHT	MAX ** WEIGHT
SMALL	19 ½"	6"	7"	6 LBS
MEDIUM	22 ½" *	8" *	11 ½" *	8 LBS
LARGE	23 ½"	11 ½"	13 ½"	11 LBS
EXTRA LARGE	18"	14"	12"	13 LBS
LOCKABLE	18"	11 ½"	15"	23 LBS

* See Note 1.
** Excluding Molded Plastic on 4 X 4 Post

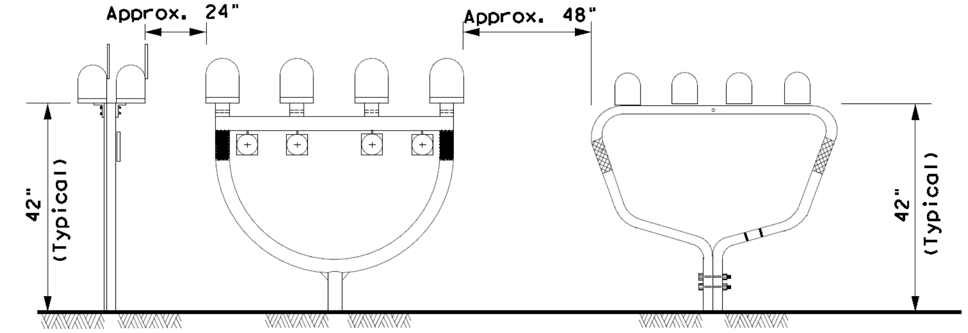
GENERAL NOTES:

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.





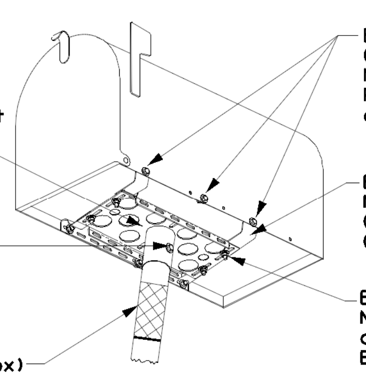
TYPICAL INSTALLATION MEASUREMENTS

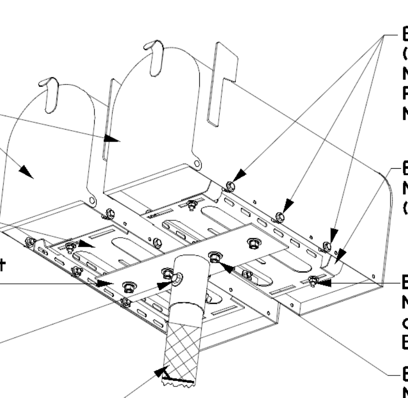


NOTE:

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

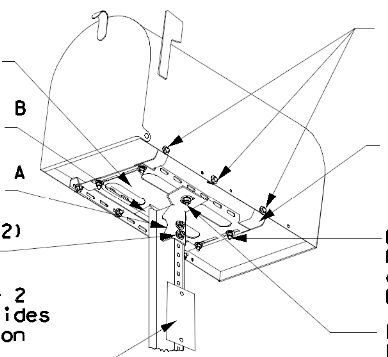


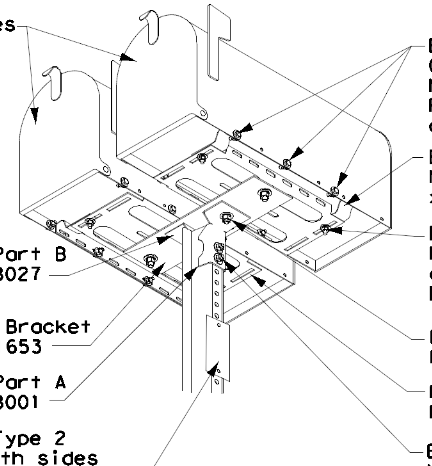


NOTE:

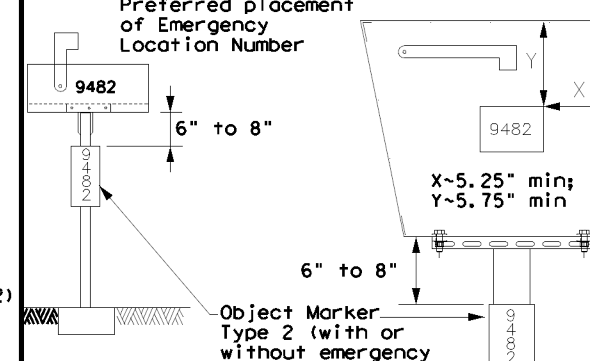
Double mailbox mounts are not allowed with a type 4 multiple mailbox installation

TYPE 3 - SINGLE/DOUBLE





PLACEMENT OF EMERGENCY LOCATION NUMBER

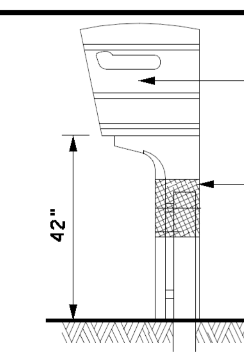


NOTES:

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

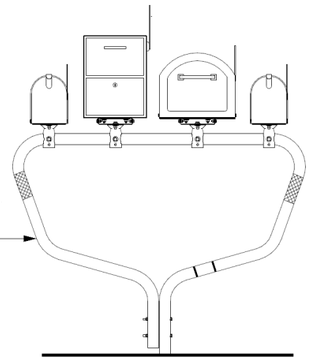
MAILBOX MOUNTING AND ASSEMBLY

MB(1)-21

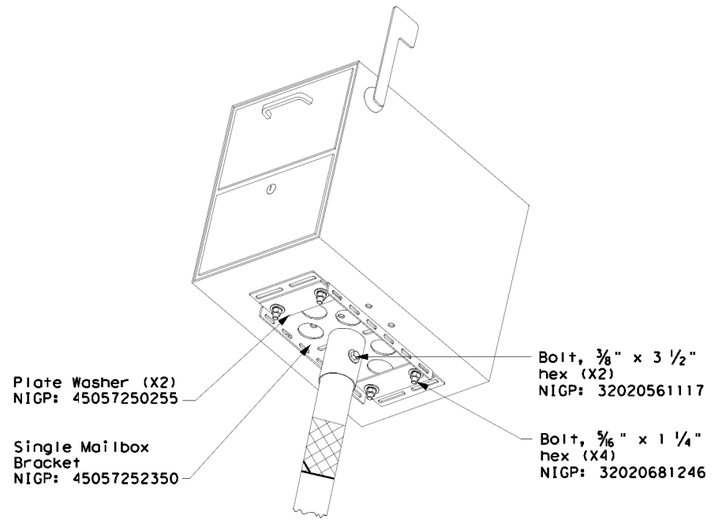
FILE: MB-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0568	01	052,ETC.	SH 34
	DIST		COUNTY	SHEET NO.
	DAL		ELLIS	139

DATE: 5/4/2024 10:21:07 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568-01-052/24 sheets/MB-21.dgn

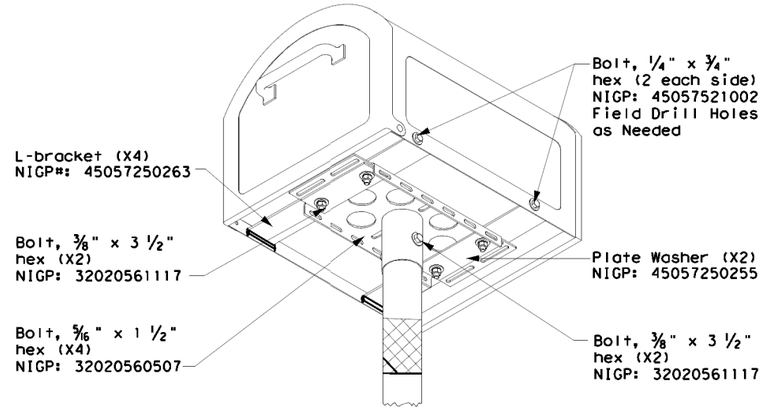
TYPE 1- MULTI LOCKABLE AND XL MAILBOX



TYPE 2/4 - SINGLE LOCKABLE MAILBOX

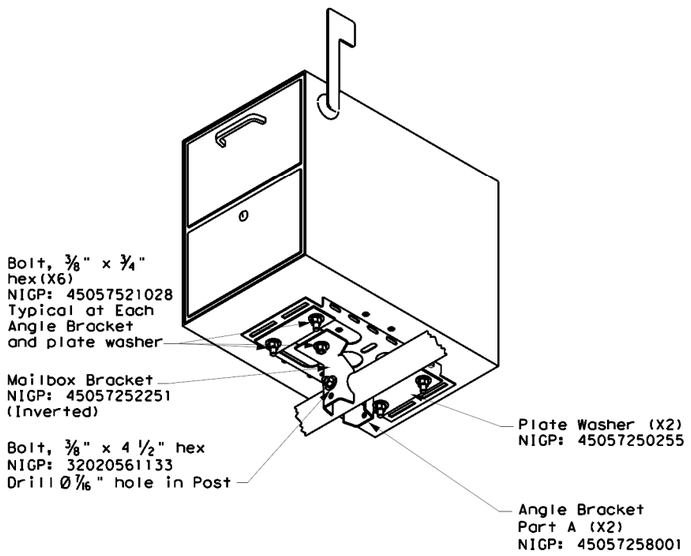


TYPE 2/4 - SINGLE XL MAILBOX

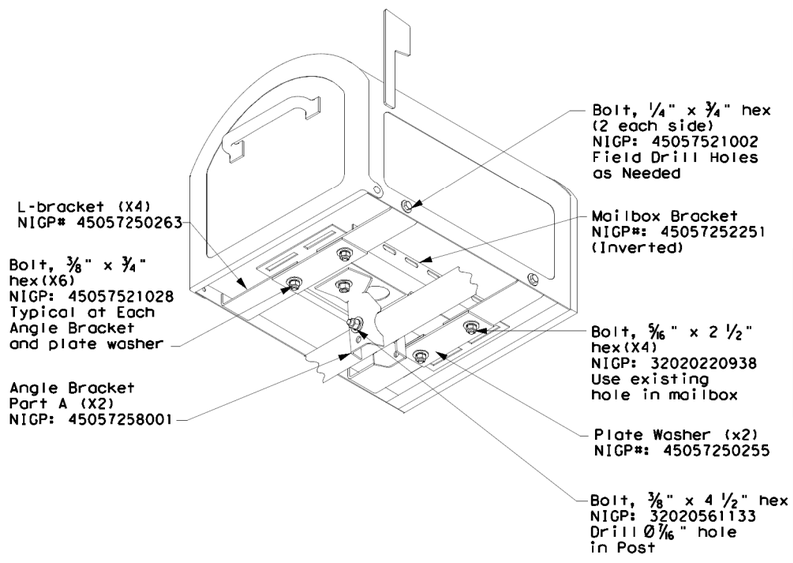


NOTE:
Follow same configuration when mounting an XL mailbox on a Type 4 multi post.

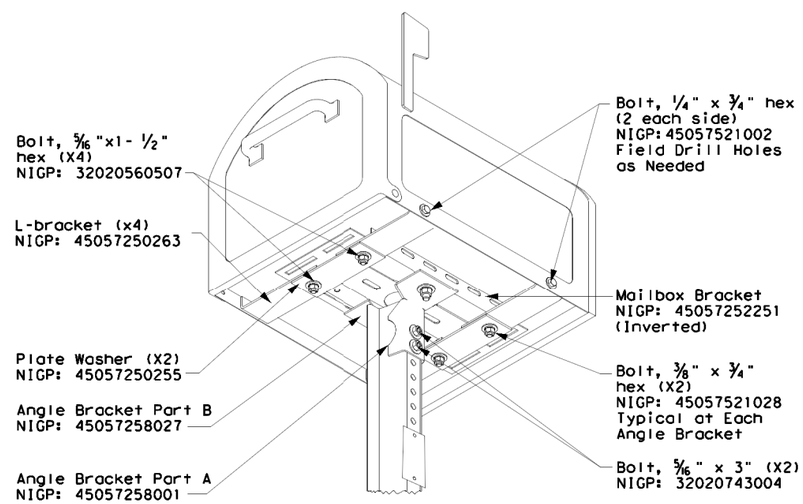
TYPE 1 MULTI - LOCKABLE ARCHITECTURAL (LA)



TYPE 1 MULTI - XL MAILBOX



TYPE 3 - XL MAILBOX MOUNTING



Texas Department of Transportation | Maintenance Division Standard

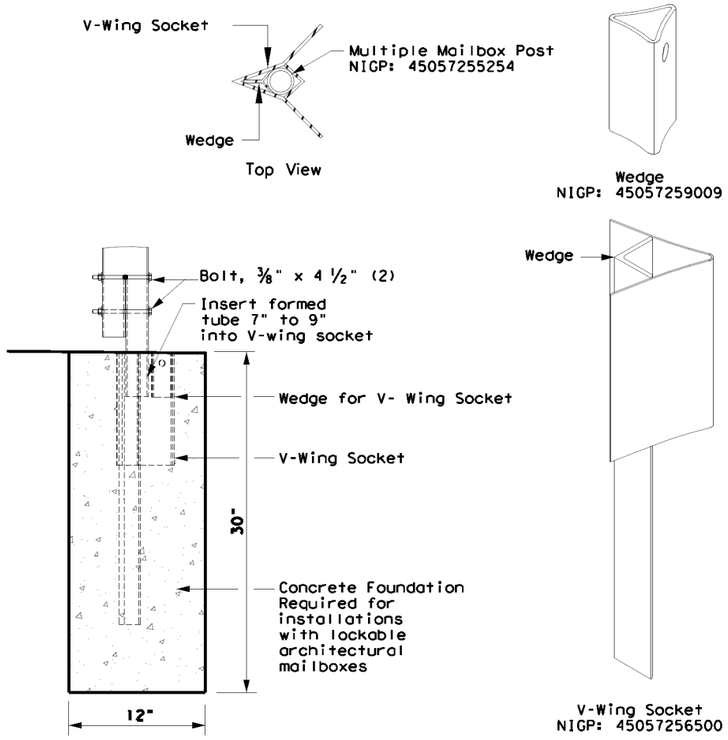
XL AND LOCKABLE ARCHITECTURAL MAILBOX ASSEMBLY

MB(2)-21

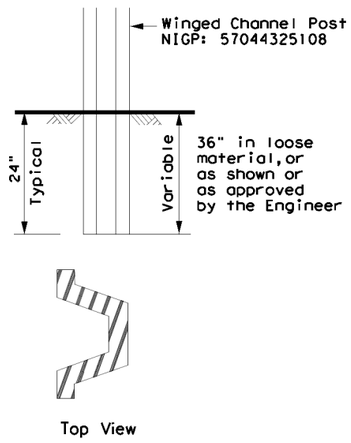
FILE: MB-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT March 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0568	01	052, ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		140

DATE: 5/4/2024 10:22:19 PM
FILE: pw://txdot.bentleycloud.com:pw-server/Documents/Projects/0568-01-052/Design/DAL/Design/MB-21.dgn

TYPE 1 - SUPPORT/FOUNDATION
Thin Wall Tube w/ V-LOC Anchorage

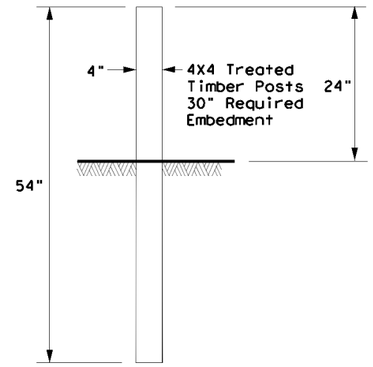


TYPE 3 - SUPPORT/FOUNDATION

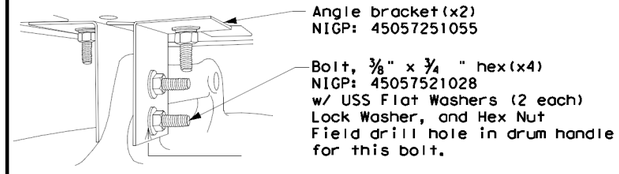


NOTES:
1. Attach Object Marker (OM) facing direction of traffic.
2. OM will also be required on opposite side if installed on a 2-Lane, 2-Way roadway.

TYPE 5 - SUPPORT/FOUNDATION



TYPE 6 - TEMPORARY MAILBOX SUPPORT

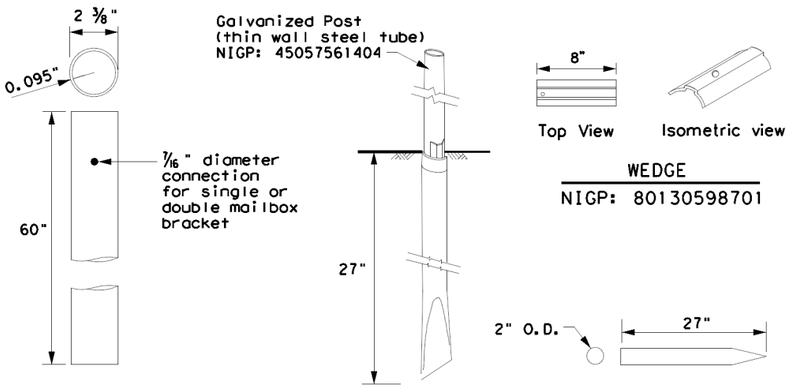


Plastic Drum NIGP: 55093383655
Rubber Collar NIGP: 55093387102

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

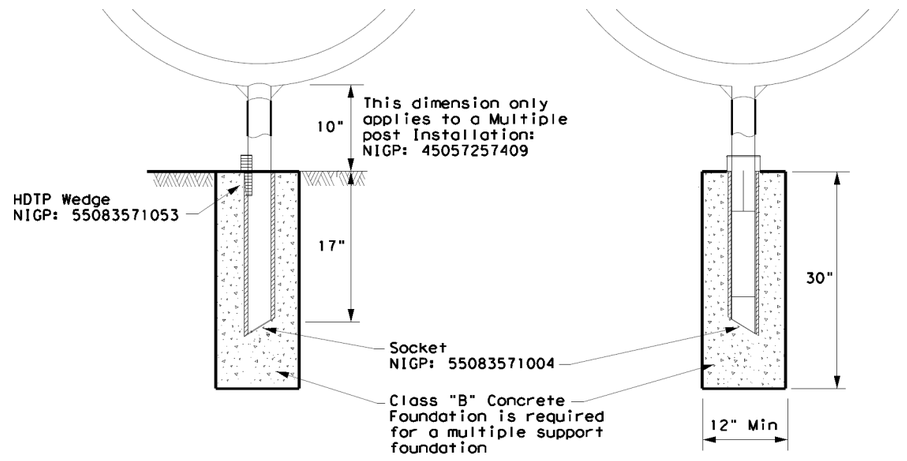
TYPE 2 - SUPPORT/FOUNDATION
Thin Wall Steel Tube w/Wedge Anchor System



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:
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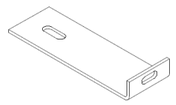
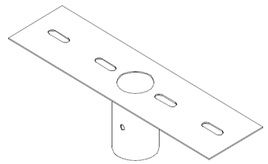
REVISIONS 2/2005 11/2009 4/2015 6/2005 1/2011 11/2006 7/2014	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		141

DATE: 5/4/2024 10:21:11 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568090052XX MB-21.dgn

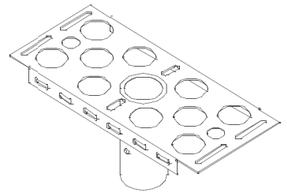
TYPE	TYPE 1	TYPE 2	TYPE 3	TYPE 4			TYPE 5	TYPE 6
Configuration	Multiple	Single or Double	Single or Double	Single	Double	Multiple	Single	Single
Mailbox Size NIGP #	Outside Position: S or M Inside Position: S, M, L, XL, or LA	Single: S, M, L, XL, or LA Double: SS, SM, MM	Single: S, M, L, or XL Double: 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



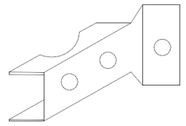
NIGP: 45057250263
L-Bracket x4 for
XL sized mailboxes



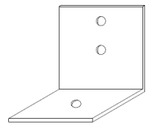
NIGP: 45057252343
Double Mailbox Bracket
For Type 2 and Type 4
double mount



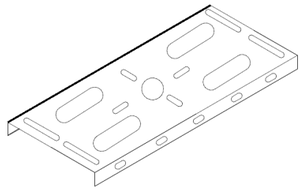
NIGP: 45057252350
Single Mailbox Bracket
For Type 2 single and for
Type 4 single and multi mount



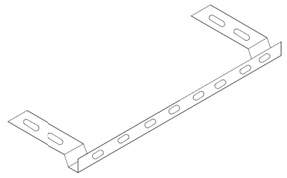
NIGP: 45057258001
Part "A" Angle Bracket
For Type 1 multi (2 per mailbox)
and Type 3 single and double



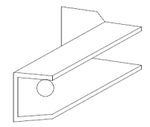
NIGP: 45057251055
Type 6 Angle Bracket
(2 per mailbox)



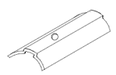
NIGP: 45057252251
Mailbox Bracket
For Type 1 multi and
any double mount (use 2)



NIGP: 45057253002
Bracket Extension
Use 1 for a medium Mailbox
Use 2 for a Large Mailbox



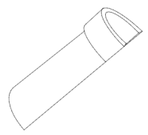
NIGP: 45057258027
Part "B" Angle Bracket
For Type 3 single
and double



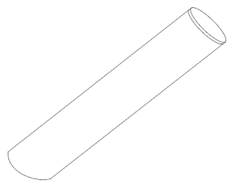
NIGP: 80130598701
Wedge for Type 2

NIGP: 45057250255
Plate Washer for Architecural
and XL Mailboxes

NIGP: 45057541653
Type 3 double mailbox bracket

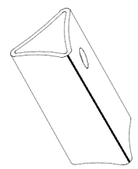


NIGP: 55083571053
Type 4 Mailbox Wedge

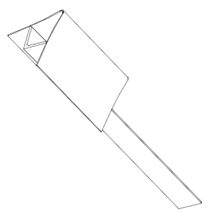


NIGP: 55083571004
Type 4 Mailbox Socket

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

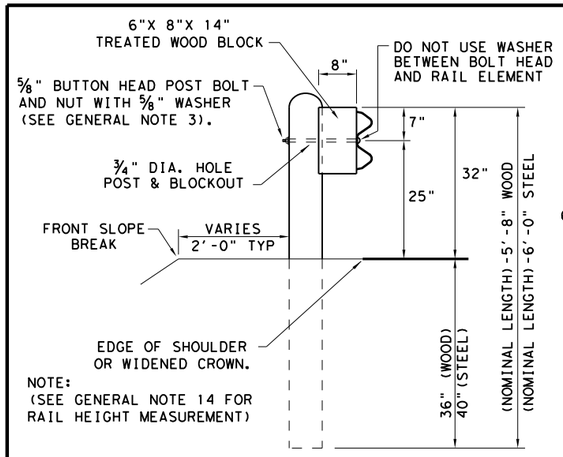
Texas Department of Transportation — Maintenance Division Standard

NIGP PARTS LIST AND COMPATIBILITY

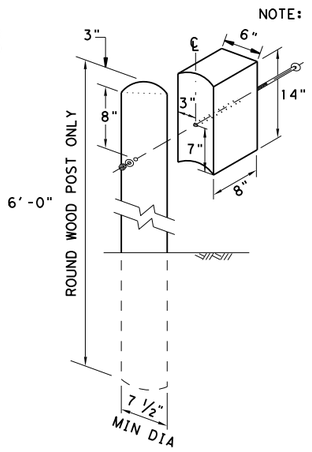
MB(4)-21

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	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		142

DATE:
FILE:

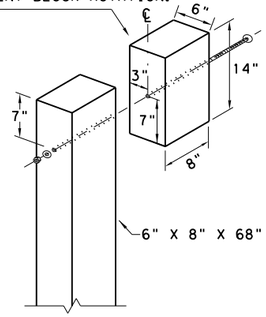


TYPICAL POST PLACEMENT

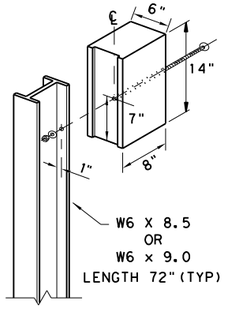


WOOD BLOCK TO ROUND WOOD POST

NOTE: TOENAIL WITH ONE 16D GALV. NAIL TO PREVENT BLOCK ROTATION.

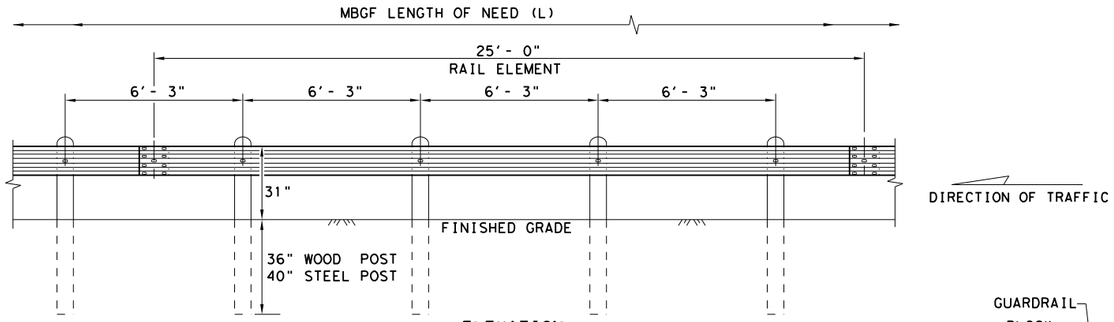


WOOD BLOCK TO RECTANGULAR WOOD POST



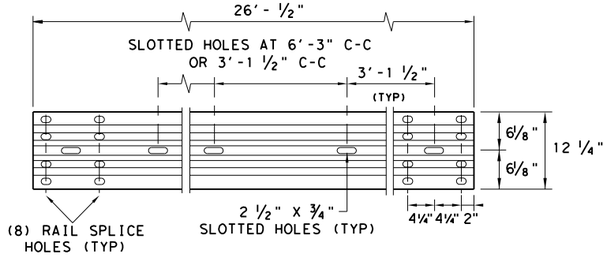
ROUTED WOOD BLOCK TO I-BEAM STEEL POST

NOTE: ** "WOOD" INDICATES DIMENSIONS FOR BOTH ROUND AND RECTANGULAR WOOD POST SYSTEMS.



ELEVATION
MID-SPAN RAIL SPLICE

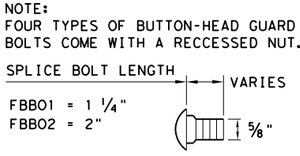
SHOWING A 25'- 0" SECTION OF W-BEAM RAIL. (SEE GENERAL NOTE 2)



ELEVATION 25'- 0" (NOM.) W-BEAM SECTION

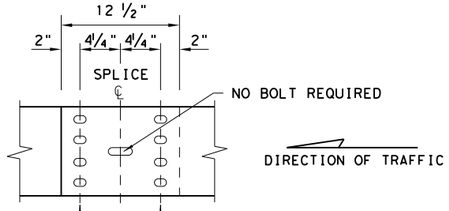
NOTES: SEE GENERAL NOTE 2 FOR ALLOWABLE RAIL TYPES.
SEE RAIL SPLICE DETAIL FOR REQUIRED HARDWARE.

NOTE:
FOUR TYPES OF BUTTON-HEAD GUARD RAIL BOLTS COME WITH A RECCESSED NUT.



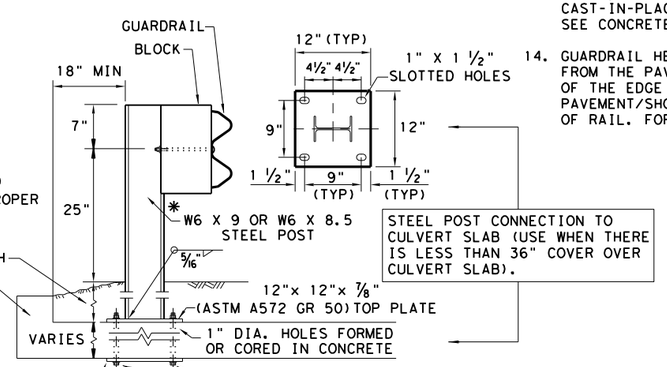
BUTTON HEAD BOLT

NOTE: SEE GENERAL NOTE 3 FOR SPLICE & POST BOLT DETAILS.



MID-SPAN RAIL SPLICE DETAIL

NOTE: GF(31), MID-SPAN RAIL SPLICES ARE REQUIRED WITH 6'-3" POST SPACINGS.



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: 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.

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.

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	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		143

DATE:
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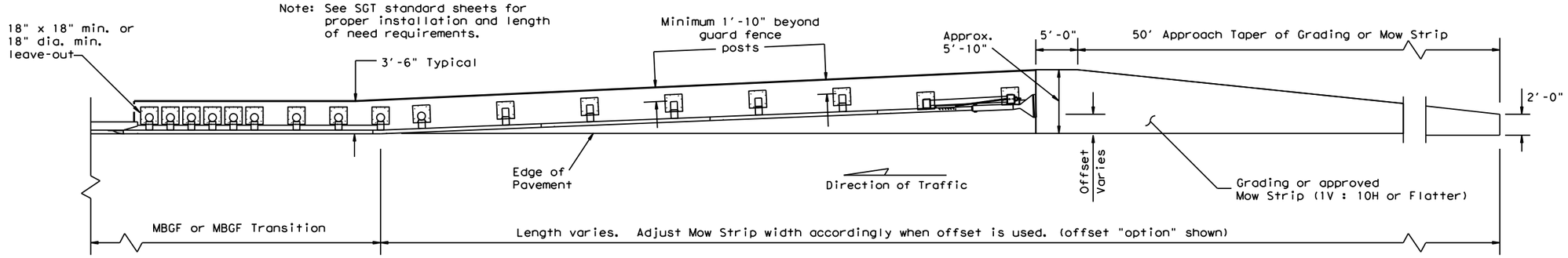
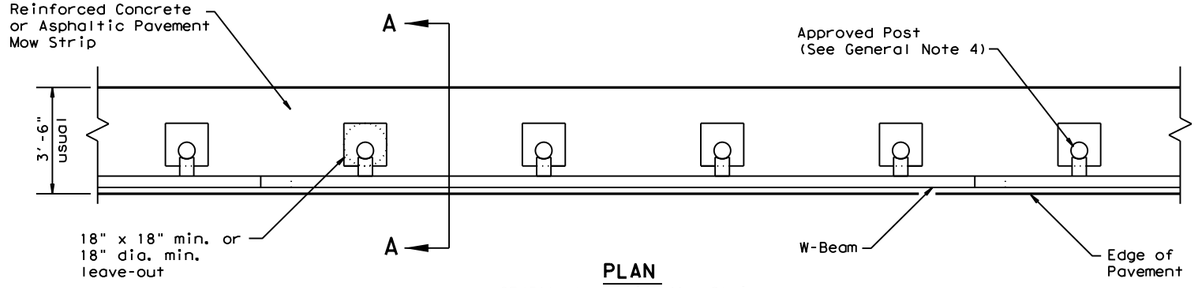
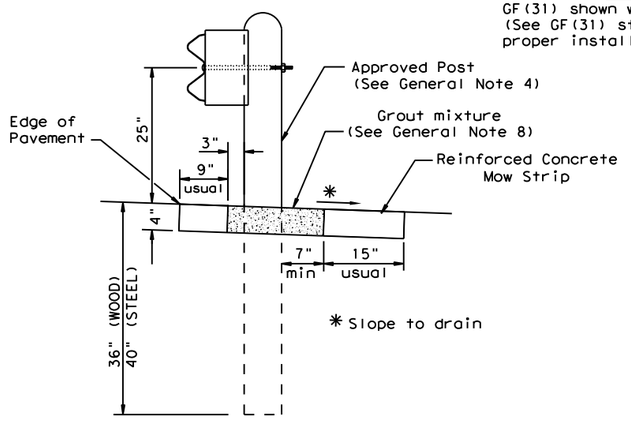


GRADING AND MOW STRIP AT GUARDRAIL END TREATMENTS



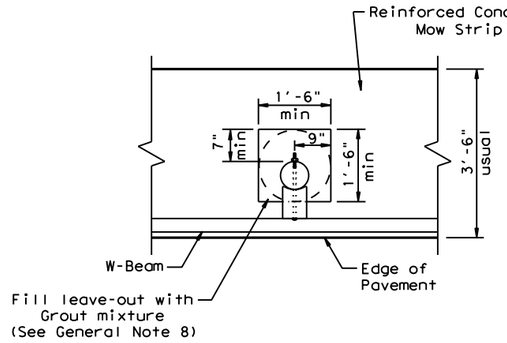
PLAN

GF(31) shown with Mow Strip
(See GF(31) standard sheet for proper installation)



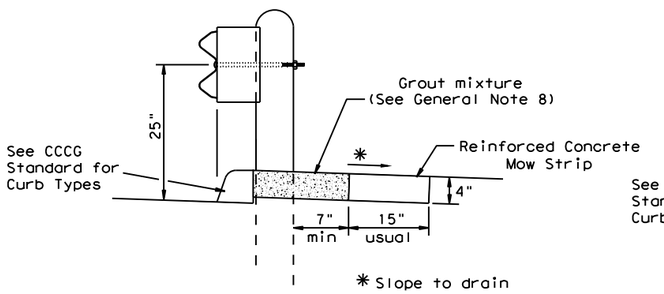
SECTION A-A

Typical



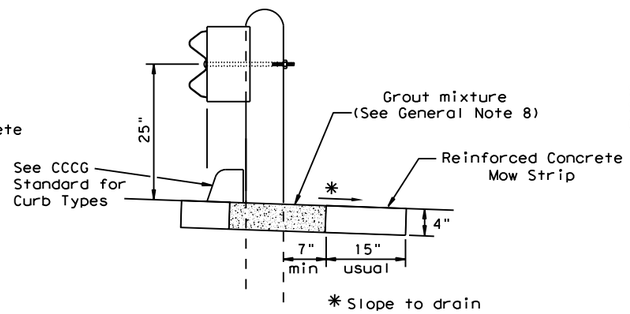
MOW STRIP DETAIL

Reinforced Concrete Mow Strip
with 18" x 18" Square or
18" Dia. minimum leave-out.



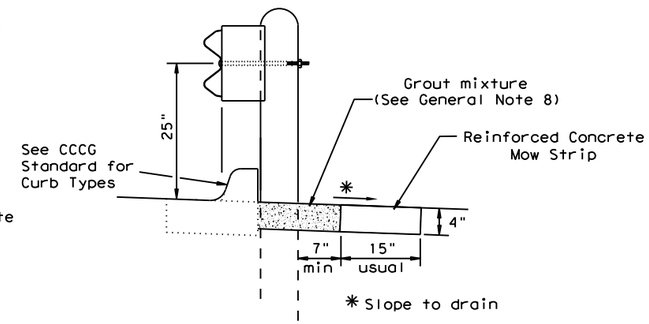
CURB OPTION (1)

This option will increase the post embedment throughout the system.



CURB OPTION (2)

Curb shown on top of mow strip



CURB OPTION (3)

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.

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	0568	01	052,ETC.		SH 34	
	DIST	COUNTY			SHEET NO.	
	DAL	ELLIS			144	

DATE:
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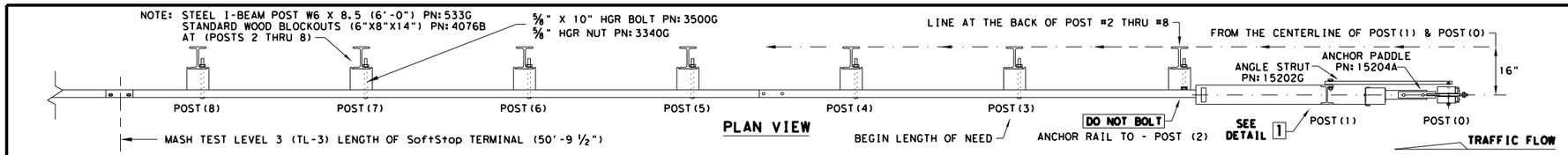
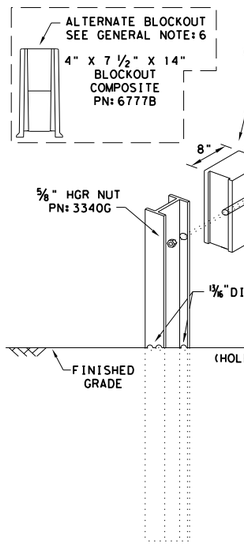
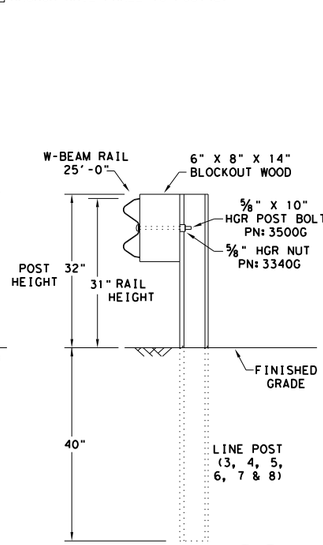




ISOMETRIC VIEW POST(1 & 2)

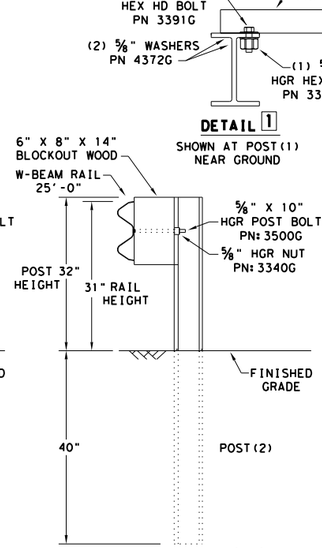
W6 X 8.5 I-BEAM POST SHOWING STANDARD WOOD BLOCKOUT

NOTE: NO BLOCKOUT INSTALLED AT POST(1)



SECTION VIEW B-B

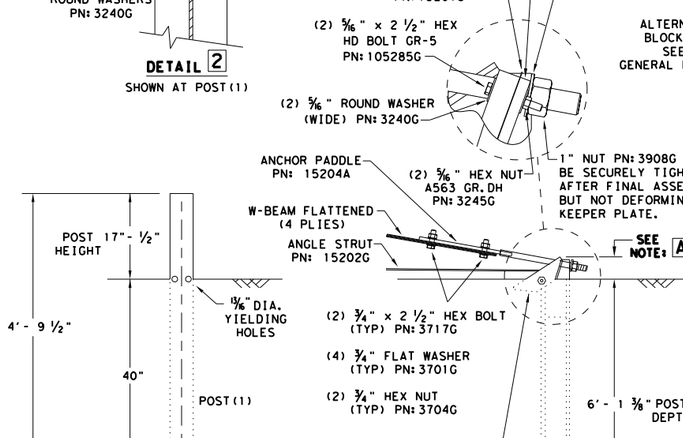
6'-0" (W6 X 8.5)
I-BEAM POST PN: 533G



SECTION VIEW A-A

6'-0" (W6 X 8.5)
(SYTP) I-BEAM POST PN: 15000G

NOTE: DO NOT BOLT ANCHOR RAIL PANEL TO POST(2)



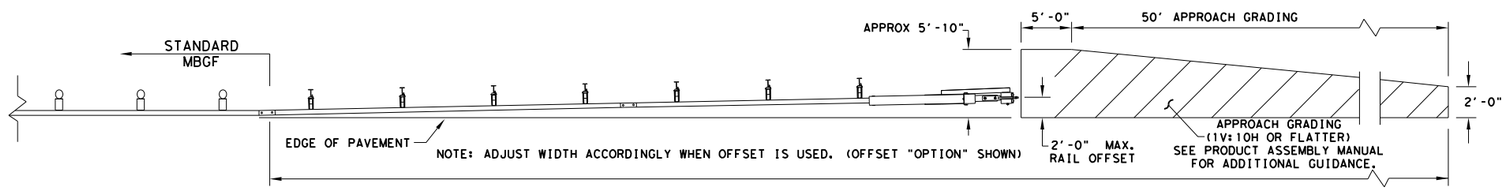
DETAIL 3
AT POST(0)

6'-5 ⅜" (W6 X 15)
I-BEAM POST PN: 15205A

FRONT VIEW POST(1)

4'-9 ½" (W6 X 8.5)
(SYTP) I-BEAM POST PN: 15203G

NOTE: NO BLOCKOUT INSTALLED AT POST(1)



APPROACH GRADING AT GUARDRAIL END TREATMENTS

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 3-¾" 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 ⅜")
15203G	1	POST #1 - (SYTP) (4'- 9 ½")
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 ½" x 14")
15204A	1	ANCHOR PADDLE
15207G	1	ANCHOR KEEPER PLATE (24 GA)
15206G	1	ANCHOR PLATE WASHER (½" 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	¾" x 2 ½" HEX BOLT A325
3701G	4	¾" ROUND WASHER F436
3704G	2	¾" HEAVY HEX NUT A563 GR.DH
3360G	16	⅝" x 1 ¼" W-BEAM RAIL SPLICE BOLTS HGR
3340G	25	⅝" W-BEAM RAIL SPLICE NUTS HGR
3500G	7	⅝" x 10" HGR POST BOLT A307
3391G	1	⅝" x 1 ¾" HEX HD BOLT A325
4489G	1	⅝" x 9" HEX HD BOLT A325
4372G	4	⅝" WASHER F436
105285G	2	⅝" x 2 ½" HEX HD BOLT GR-5
105286G	1	⅝" x 1 ½" HEX HD BOLT GR-5
3240G	6	⅝" ROUND WASHER (WIDE)
3245G	3	⅝" 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	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		145

DATE:
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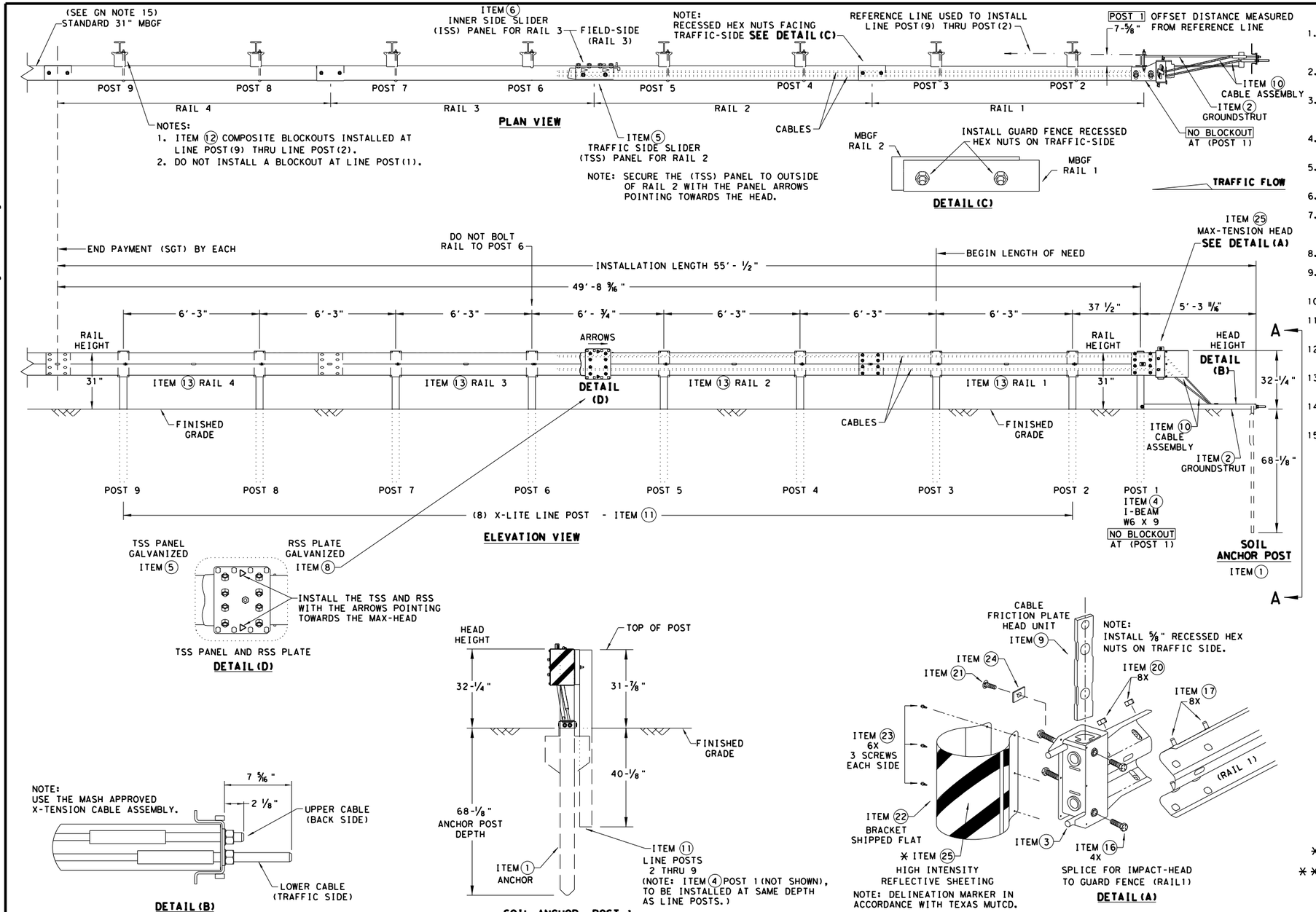

GENERAL NOTES

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	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		146

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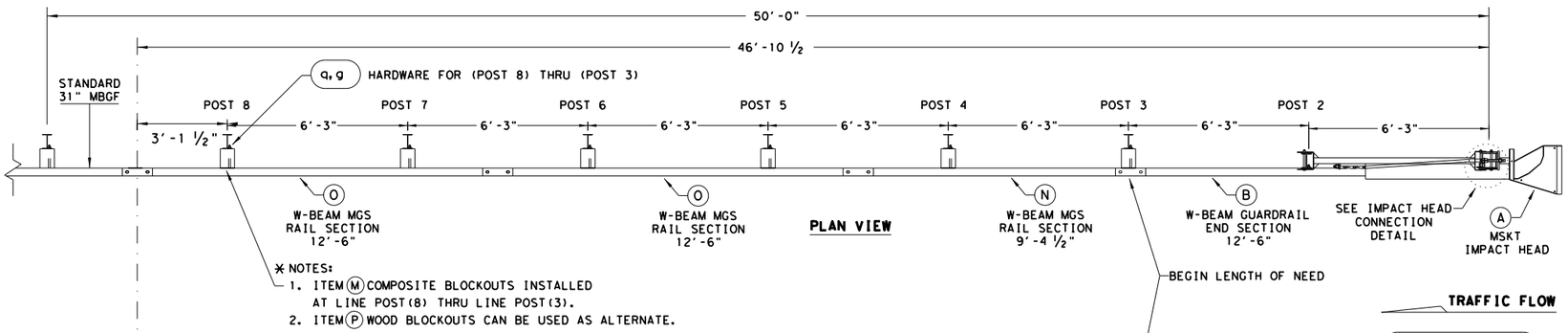


NOTE: SEE (GENERAL NOTE 14) FOR DRIVING CAP INFORMATION.

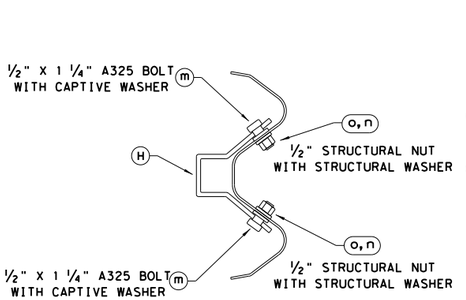
GENERAL NOTES

1. FOR SPECIFIC INFORMATION REGARDING INSTALLATION AND TECHNICAL GUIDANCE OF THE SYSTEM, CONTACT: ROAD SYSTEMS, INC. (432)263-2435. 3616 OLD HOWARD COUNTY AIRPORT, BIG SPRING, TX 79720
2. FOR INSTALLATION, REPAIR AND MAINTENANCE REFER TO THE; MSKT END TERMINAL, PRODUCT DESCRIPTION ASSEMBLY MANUAL (PUBLICATION~062717).
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. SYSTEM SHOWN USING STEEL WIDE FLANGE POSTS WITH COMPOSITE BLOCKOUTS.
7. A COMPOSITE MATERIAL BLOCKOUTS 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.
8. IF SOLID ROCK IS ENCOUNTERED IN THE AREA OF (POST 1) AND / OR (POST 2) CONTACT THE MANUFACTURER, & REFER TO THE LATEST ROADWAY MBGF STANDARD FOR INSTALLATION GUIDANCE.
9. POSTS SHALL NOT BE SET IN CONCRETE.
10. SYSTEM MUST BE ATTACHED TO STANDARD 31" MBGF.
11. UNDER NO CIRCUMSTANCES SHALL THE GUARDRAIL WITHIN THE MSKT 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.
13. THE SYSTEM IS SHOWN WITH TWO 12'-6" MBGF PANELS, ONE 25'-0" MBGF PANEL IS ALSO ALLOWED IN THEIR PLACE.
14. A DRIVING CAP WITH A TIMBER OR PLASTIC INSERT SHALL BE USED WHEN DRIVING POSTS 3-8 TO PREVENT DAMAGE TO THE GALVANIZING ON TOP OF THE POST. SPECIAL DRIVING CAP TO BE USED ON LOWER POSTS 1 & 2 TO PREVENT DAMAGE TO THE WELDED PLATES.

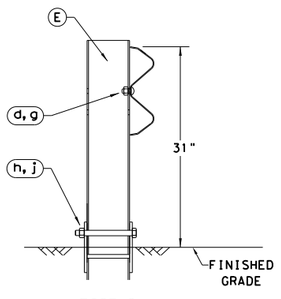
ITEM	QTY	MAIN SYSTEM COMPONENTS	ITEM NUMBERS
A	1	MSKT IMPACT HEAD	MS3000
B	1	W-BEAM GUARDRAIL END SECTION, 12 Ga.	SF1303
C	1	POST 1 - TOP (6" X 6" X 1/8" TUBE)	MTPHP1A
D	1	POST 1 - BOTTOM (6' W6X15)	MTPHP1B
E	1	POST 2 - ASSEMBLY TOP	UHP2A
F	1	POST 2 - ASSEMBLY BOTTOM (6' W6X9)	HP2B
G	1	BEARING PLATE	E750
H	1	CABLE ANCHOR BOX	S760
J	1	BCT CABLE ANCHOR ASSEMBLY	E770
K	1	GROUND STRUT	MS785
L	6	W6x9 OR W6x8.5 STEEL POST	P621
M	6	COMPOSITE BLOCKOUTS	CBSP-14
N	1	W-BEAM MGS RAIL SECTION (9'-4 1/2")	G12025
O	2	W-BEAM MGS RAIL SECTION (12'-6")	G1203A
P	6	WOOD BLOCKOUT 6" X 8" X 14"	P675
Q	1	W-BEAM MGS RAIL SECTION (25'-0")	G1209
		SMALL HARDWARE	
a	2	5/16" x 1" HEX BOLT (GRD 5)	B5160104A
b	4	5/16" WASHER	W0516
c	2	5/16" HEX NUT	N0516
d	25	5/8" Dia. x 1 1/4" SPLICE BOLT (POST 2)	B580122
e	2	5/8" Dia. x 9" HEX BOLT (GRD A449)	B580904A
f	3	5/8" WASHER	W050
g	33	5/8" Dia. H.G.R NUT	N050
h	1	3/4" Dia. x 8 1/2" HEX BOLT (GRD A449)	B340854A
j	1	3/4" Dia. HEX NUT	N030
k	2	1 ANCHOR CABLE HEX NUT	N100
l	2	1 ANCHOR CABLE WASHER	W100
m	8	1/2" x 1 1/4" A325 BOLT WITH CAPTIVE WASHER	SB12A
n	8	1/2" STRUCTURAL NUTS	N012A
o	8	1 1/16" O.D. x 3/16" I.D. STRUCTURAL WASHERS	W012A
p	1	BEARING PLATE RETAINER TIE	CT-100ST
q	6	5/8" x 10" H.G.R. BOLT	B581002
r	1	OBJECT MARKER 18" X 18"	E3151

SEE NOTES: *

ALTERNATIVE ITEMS NOT SHOWN. **
* ITEM(P) 8" WOOD-BLOCKOUT
** ITEM(Q) 25'GUARD FENCE PANEL



SECTION B-B
ANCHOR BRACKET



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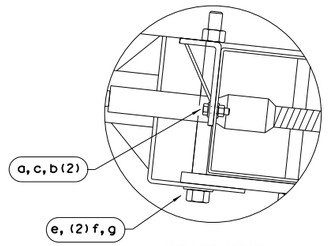
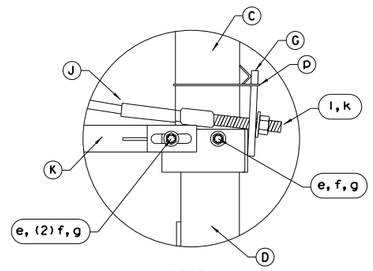
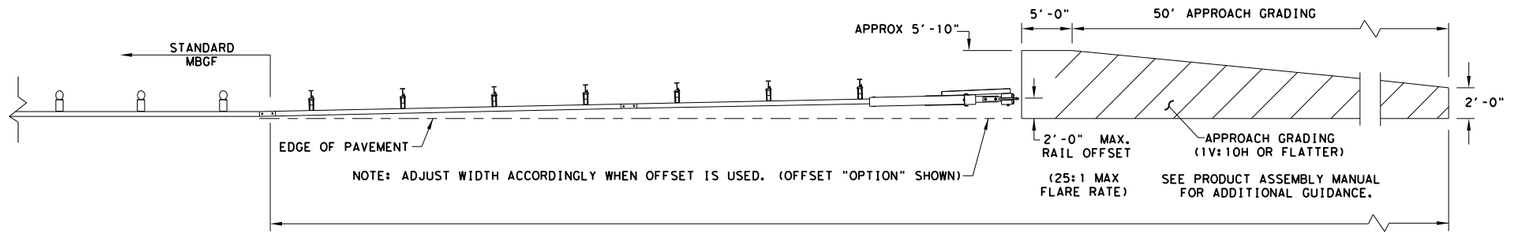
SECTION A-A



IMPACT HEAD
CONNECTION DETAIL



POST 1
CONNECTION DETAIL



NOTE: ADJUST WIDTH ACCORDINGLY WHEN OFFSET IS USED. (OFFSET "OPTION" SHOWN)

APPROACH GRADING AT GUARDRAIL END TREATMENTS

NOTE: TXDOT GENERIC APPROACH GRADING LAYOUT USED FOR ALL TANGENT TYPE END TREATMENTS.

NOTE: THIS STANDARD IS A BASIC REPRESENTATION OF THE MSKT END TERMINAL, IT IS NOT INTENDED TO REPLACE THE PRODUCT DESCRIPTION ASSEMBLY MANUAL.

Texas Department of Transportation

Design Division Standard

SINGLE GUARDRAIL TERMINAL

MSKT-MASH-TL-3

SGT(12S)31-18

FILE: sgt12s3118.dgn	DN:TxDOT	CK:KM	DW:VP	CK:CL	
© TxDOT: APRIL 2018	CONT	SECT	JOB	HIGHWAY	
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	DIST	COUNTY		SHEET NO.	
	DAL	ELLIS		147	

DATE:
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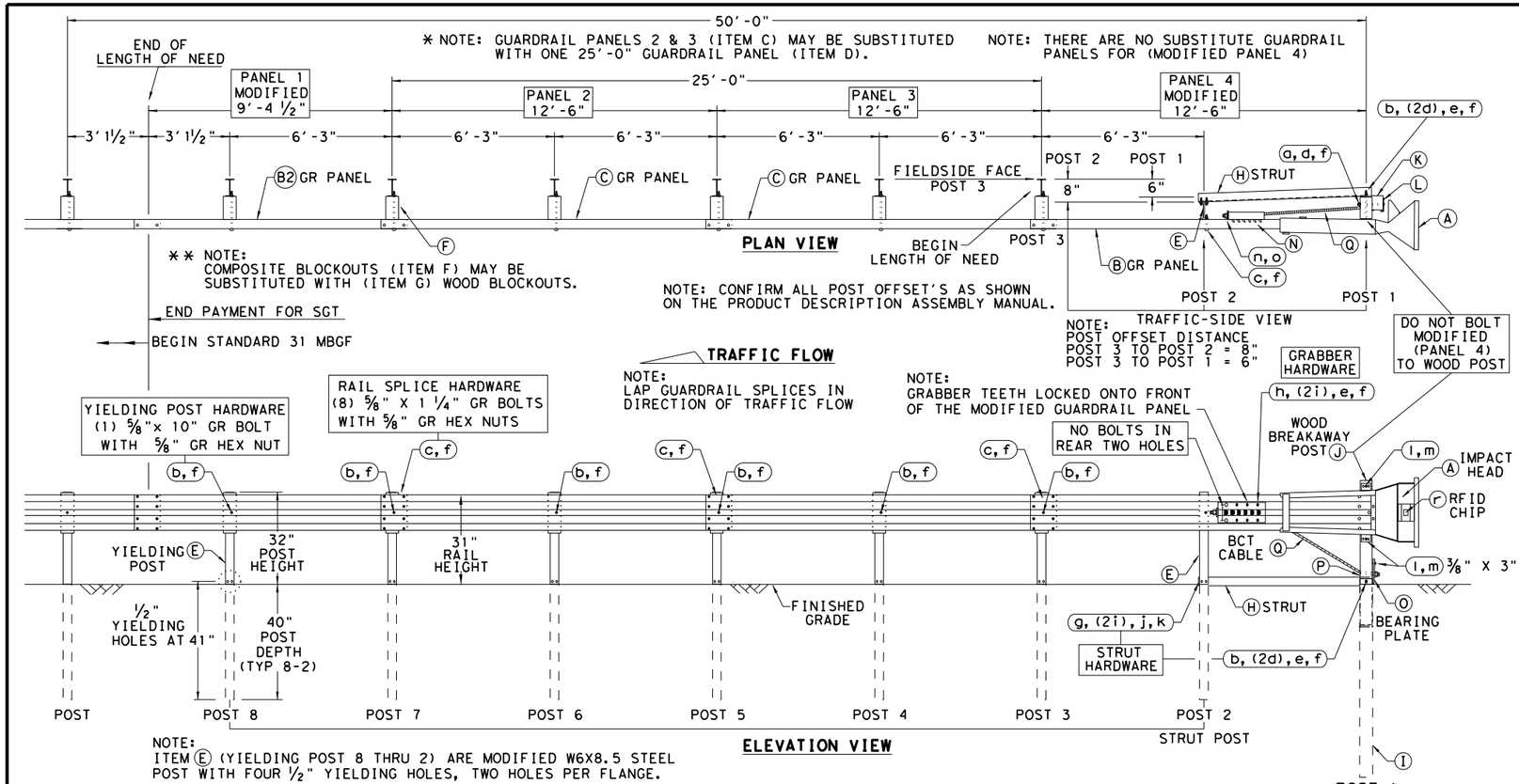
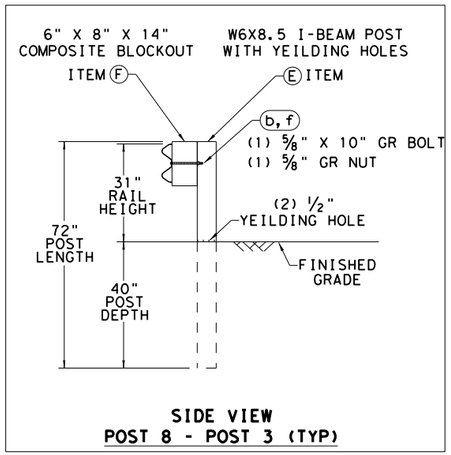


GENERAL NOTES

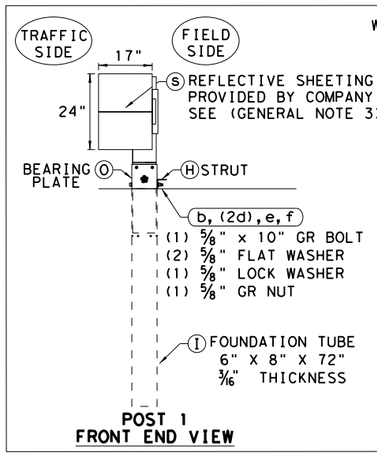
1. FOR SPECIFIC INFORMATION REGARDING INSTALLATION AND TECHNICAL GUIDANCE OF THE SYSTEM, CONTACT: SPIG INDUSTRY, INC. AT 1(267) 644-9510. 14675 INDUSTRIAL PARK RD; BRISTOL, VA 24202
2. FOR INSTALLATION, REPAIR AND MAINTENANCE REFER TO THE MANUFACTURER'S; SGET END TERMINAL, PRODUCT DESCRIPTION ASSEMBLY MANUAL.
3. MANUFACTURER WILL APPLY HIGH INTENSITY REFLECTIVE SHEETING, "OBJECT MARKER" TO THE FACE PLATE OF THE DEVICE PER MANUFACTURER'S RECOMMENDATIONS. THE OBJECT MARKER SHALL CONFORM TO THE STANDARDS REQUIRED IN TEXAS MUTCD.
4. THE NOMINAL HEIGHT OF THE GUARDRAIL BEAM IS 31 INCHES WITH A TOLERANCE OF +/- ONE INCH.
5. FOR POST (LEAVE-OUT) INSTALLATION AND GUIDANCE SEE TXDOT'S LATEST ROADWAY MOW STRIP STANDARD.
6. (POST 2 THROUGH POST 8) ARE MODIFIED STEEL-YIELDING POSTS WITH YIELDING HOLES AT GROUND LEVEL. THERE ARE NO SUBSTITUTE POSTS.
7. POSTS SHALL NOT BE SET IN CONCRETE.
8. IF SOLID ROCK IS ENCOUNTERED FOR ANY OF THE POSTS IN THE SYSTEM, CONTACT THE MANUFACTURER FOR SPECIFIC INSTALLATION GUIDANCE.
9. HARDWARE (BOLTS, NUTS, & WASHERS) SHALL BE GALVANIZED IN ACCORDANCE WITH ITEM 445,"GALVANIZING". FITTINGS SHALL BE SUBSIDIARY TO THE BID ITEM.
10. A COMPOSITE MATERIAL BLOCKOUT THAT MEETS DMS-7210 REQUIREMENTS MAY BE SUBSTITUTED FOR AN APPROVED WOOD BLOCKOUT. SEE CONSTRUCTION DIVISION MATERIAL PRODUCER LIST (MPL) FOR CERTIFIED PRODUCERS.
11. THE ENTIRE SYSTEM MUST BE INSTALLED IN A STRAIGHT LINE WITHOUT ANY CURVE. HOWEVER, THE SYSTEM CAN BE OFFSET BY TWO FEET AS SHOWN ON THE APPROACH GRADING DETAIL TO HELP OFF-SET THE IMPACT HEAD FROM SHOULDER OF THE ROAD.

ITEM	QTY	MAIN SYSTEM COMPONENTS	ITEM #
A	1	SGET IMPACT HEAD	SIH1A
B	1	MODIFIED GUARDRAIL PANEL 12'-6" 12GA	126SPZGP
B2	1	MODIFIED GUARDRAIL PANEL 9'-4 1/2" 12GA	GP94
C	2	STANDARD GUARDRAIL PANEL 12'-6" 12GA	GP126
D	1	STANDARD GUARDRAIL PANEL 25'-0" 12GA	GP25
E	7	MODIFIED YIELDING I-BEAM POST W6x8.5	YP6MOD
F	6	COMPOSITE BLOCKOUT 6" X 8" X 14"	CBO8
G	6	WOOD BLOCKOUT 6" X 8" X 14"	WBO8
H	1	STRUT 3" X 3" X 80" x 1/4" A36 ANGLE	STR80
I	1	FOUNDATION TUBE 6" X 8" X 72" x 3/16"	FNDT6
J	1	WOOD BREAKAWAY POST 5 1/2" x 7 1/2" x 50"	WBRK50
K	1	WOOD STRIKE BLOCK	WSBLK14
L	1	STRIKE PLATE 1/4" A36 BENT PLATE	SPLT8
M	1	REINFORCEMENT PLATE 12 GA. GR55	REPLT17
N	1	GUARDRAIL GRABBER 2 1/2" X 2 1/2" X 16 1/2"	GGR17
O	1	BEARING PLATE 8" X 8 5/8" X 5/8" A36	BPLT8
P	1	PIPE SLEEVE 4 1/4" X 2 3/8" O.D. (2 1/8" I.D.)	PSLV4
Q	1	BCT CABLE 3/4" X 81" LENGTH	CBL81
		SMALL HARDWARE	
a	1	5/8" X 12" GUARDRAIL BOLT 307A HDG	12GRBLT
b	7	5/8" X 10" GUARDRAIL BOLT 307A HDG	10GRBLT
c	33	5/8" X 1 1/4" GR SPLICE BOLTS 307A HDG	1GRBLT
d	3	5/8" FLAT WASHER F436 A325 HDG	58FW436
e	1	5/8" LOCK WASHER HDG	58LW
f	39	5/8" GUARDRAIL HEX NUT HDG	58HN563
g	2	1/2" X 2" STRUT BOLT A325 HDG	2BLT
h	6	1/2" X 1 1/4" PLATE BOLT A325 HDG	125BLT
i	16	1/2" FLAT WASHER F436 A325 HDG	12FWF436
j	8	1/2" LOCK WASHER HDG	12LW
k	8	1/2" HEX NUT A563 HDG	12HN563
l	4	3/8" X 3" HEX LAG SCREW GR5 HDG	38LS
m	4	3/8" FLAT WASHER F436 A325 HDG	38FW844
n	2	1" FLAT WASHER F436 A325 HDG	1FWF436
o	2	1" HEX NUT A563DH HDG	1HN563
p	1	18" TO 24" LONG ZIP TIE RATED 175-200LB	ZPT18
q	1	1 1/2" X 4" SCH-40 PVC PIPE	PSPCR4
r	1	RFID CHIP RATED MIL-STD-810F	RFID810F
s	1	IMPACT HEAD REFLECTIVE SHEETING	RS30M

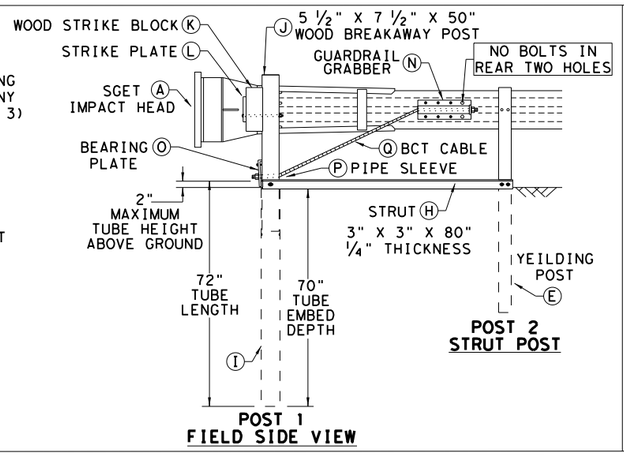
ALTERNATIVE ITEMS
* D
** G
NOTE: SEE PLAN VIEW



SIDE VIEW
POST 8 - POST 3 (TYP)

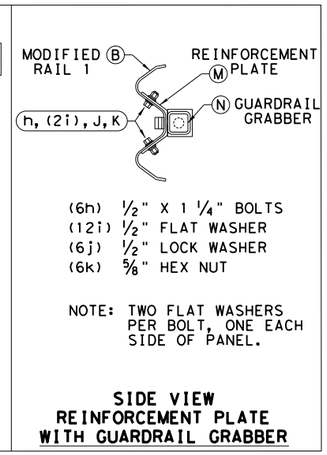


POST 1
FRONT END VIEW

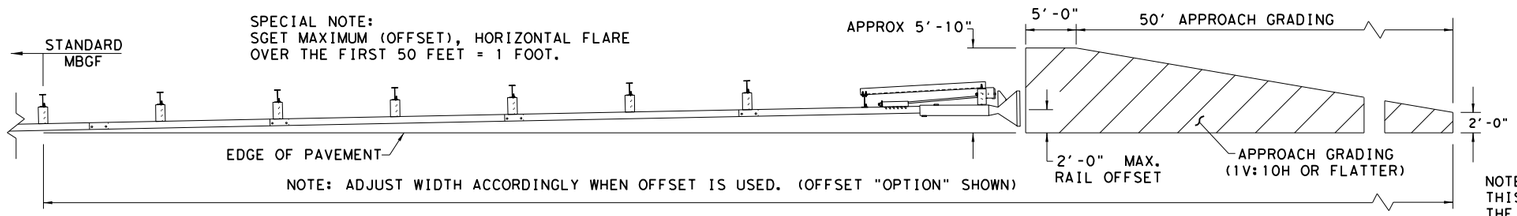


POST 1
FIELD SIDE VIEW

POST 2
STRUT POST



SIDE VIEW
REINFORCEMENT PLATE
WITH GUARDRAIL GRABBER



APPROACH GRADING AT GUARDRAIL END TREATMENTS

NOTE:
THIS STANDARD IS A BASIC REPRESENTATION OF THE SGET TERMINAL SYSTEM AND IS NOT INTENDED TO REPLACE THE MANUFACTURER'S ASSEMBLY MANUAL.

Texas Department of Transportation
Design Division Standard

SPIG INDUSTRY, LLC
SINGLE GUARDRAIL TERMINAL
SGET - TL-3 - MASH
SGT(15)31-20

FILE: sgt153120.dgn	DN: TxDOT	CK: KM	DW: VP	CK: VP
©TxDOT: APRIL 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
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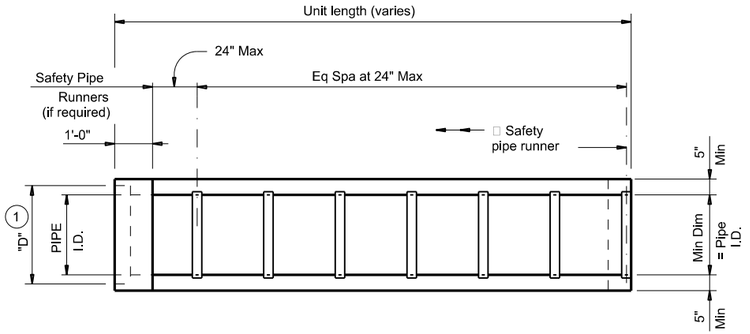
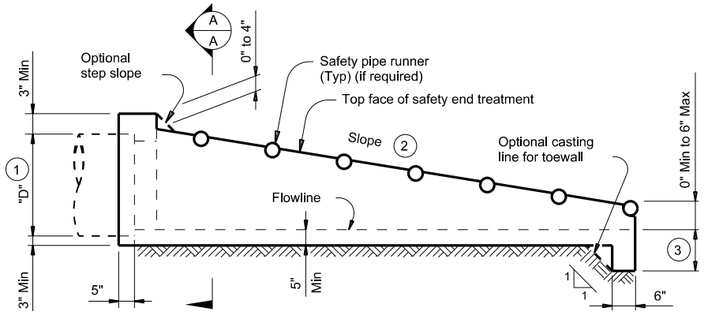


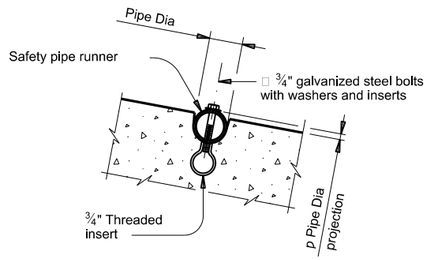
PLAN

(Showing bell end connection.)



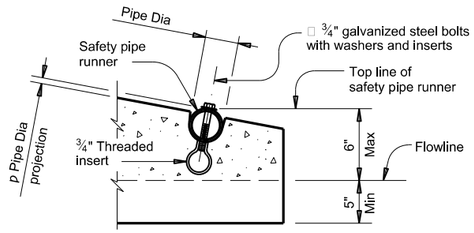
LONGITUDINAL ELEVATION

(Showing bell end connection.)

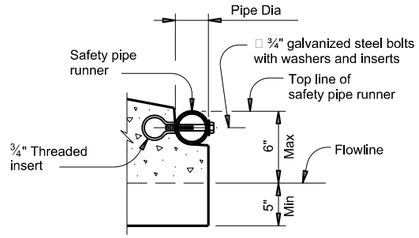


INSTALLATION DETAIL FOR SAFETY PIPE RUNNERS

(If required)



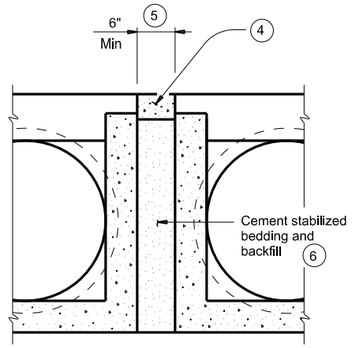
OPTION A



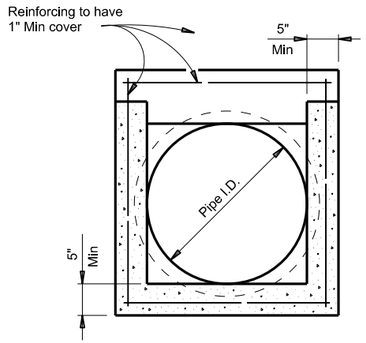
OPTION B

END DETAILS FOR INSTALLATION OF SAFETY PIPE RUNNERS

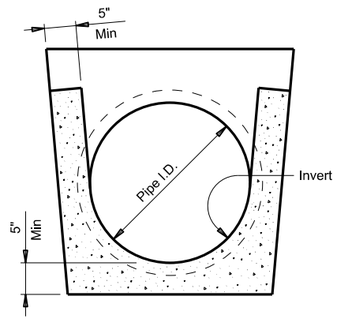
(If required)



MULTIPLE PIPE INSTALLATION

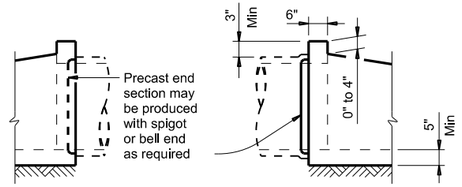


OPTION WITH SQUARE BOTTOM



OPTION WITH INVERT BOTTOM

SECTION A-A



OPTIONAL JOINT FOR RCP

(Showing joint between RCP and precast safety end treatment.)

REQUIREMENTS FOR CULVERT PIPES AND SAFETY PIPE RUNNERS

Pipe I.D.	RCP Wall "B" Thickness	TP Wall Thickness (7)	"D" (1)	Slope	Min Length	Pipe Runners Required		Required Pipe Runner Size		
						Single Pipe	Multiple Pipe	Nominal Dia.	O.D.	I.D.
12"	2"	1.15"	17.00"	6:1	4' - 9"	No	Yes, for > 2 pipes	3" STD	3.500"	3.068"
15"	2 ¼"	1.30"	20.50"	6:1	6' - 5"	No	Yes, for > 2 pipes	3" STD	3.500"	3.068"
18"	2 ½"	1.60"	24.00"	6:1	8' - 0"	No	Yes, for > 2 pipes	3" STD	3.500"	3.068"
24"	3"	1.95"	31.00"	6:1	11' - 3"	No	Yes, for > 2 pipes	3" STD	3.500"	3.068"
30"	3 ½"	2.65"	38.50"	6:1	14' - 8"	No	Yes	4" STD	4.500"	4.026"
36"	4"	2.75"	45.50"	6:1	17' - 11"	Yes	Yes	4" STD	4.500"	4.026"
42"	4 ½"	2.7"	52.50"	6:1	21' - 2"	Yes	Yes	4" STD	4.500"	4.026"

(1) Dimension "D" is based on reinforced concrete pipe (RCP) meeting the requirements of ASTM C-76, Class III, (RCP Wall "B" thickness). Adjust "D" for any other wall thickness used. For thermoplastic pipe (TP) take into account the annular space requirements for grouted connections.

(2) Slope as shown elsewhere in the plans. Slope of 6:1 or flatter is required for vehicle safety.

(3) Toewall to be used only when dimension is shown elsewhere in the plans.

(4) Fill the top 4" of void between precast end treatments with concrete riprap. Concrete riprap is considered subsidiary to the Item 467, "Safety End Treatment."

(5) Adjust clear distance between pipes to provide for the minimum distance between safety end treatments.

(6) Provide cement stabilized bedding and backfill in accordance with the Item 400, "Excavation and Backfill for Structures." Bedding and backfill is considered subsidiary to the Item 467, "Safety End Treatment." When concrete riprap is specified around the safety end treatment, backfill as directed by Engineer.

(7) Thermoplastic pipe wall thickness may vary. Adjust accordingly. Thermoplastic pipe requires the safety end treatments to have a bell end for grouted connections.

GENERAL NOTES:

Precast safety end treatment for reinforced concrete pipe (RCP), and thermoplastic pipe (TP) may be used for TYPE II end treatment as specified in Item "Safety End Treatment."

When precast safety end treatment is used as a Contractor's alternate to mitered RCP, riprap will not be required unless noted otherwise on the plans.

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Manufacture this product in accordance with Item 467, "Safety End Treatment" except as noted below :

A. Provide minimum reinforcing of #4 at 6" (Grade 40) or #4 at 9" (Grade 60) each way or 6"x6" - D12 x D12 or 5"x5" - D10 x D10 welded wire reinforcement (WWR).

B. For precast (steel formed) sections, provide Class "C" concrete (f'c = 3,600 psi).

At the option and expense of the Contractor the next larger size of safety end treatment may be furnished; as long as the "D" dimension cast is that of the required size of pipe.

Pipe runners are designed for a traversing load of 10,000 Lbs at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Provide pipe runners meeting the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

Galvanize all steel components except reinforcing steel after fabrication. Repair galvanizing damaged during transport or construction in accordance with the specifications.

Connect RCP using the Optional Joint for RCP detail shown or in accordance with Item 464, "Reinforced Concrete Pipe." Connect TP by grouting. See Pipe and Box Grouted Connections (PBGC) standard for grouted connections with TP and precast safety end treatment.

Texas Department of Transportation

Bridge Division Standard

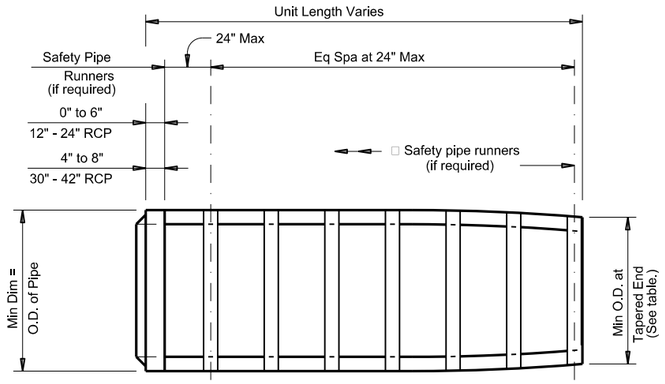
PRECAST SAFETY END TREATMENT

TYPE II ~ PARALLEL DRAINAGE

PSET-SP

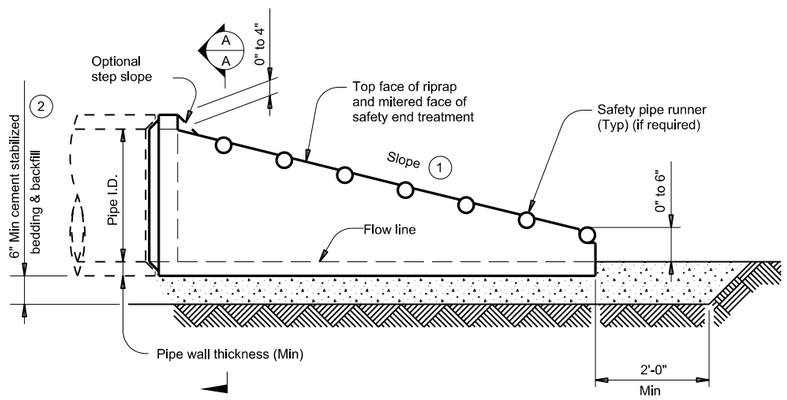
FILE: CD-PSET-SP-21.dgn	DN: RLW	CK: KLR	DW: JTR	CK: GAF
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS 12-21: Added 42" TP	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		149

DATE:
FILE:



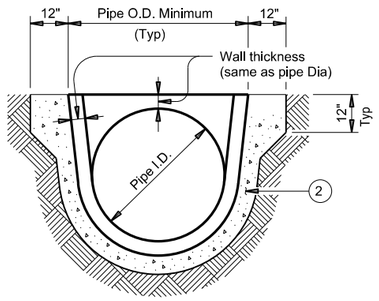
PLAN VIEW - 12" THRU 24"

(Showing spigot end connection.)

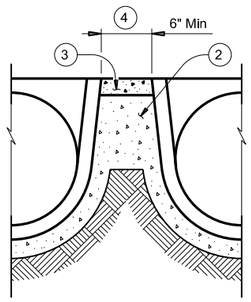


LONGITUDINAL ELEVATION - 12" THRU 24"

(Showing spigot end connection.)

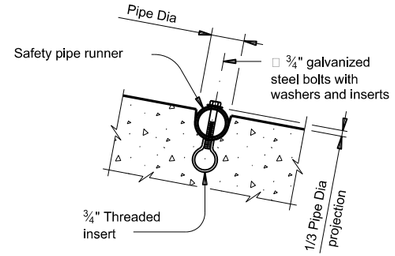


SECTION A-A



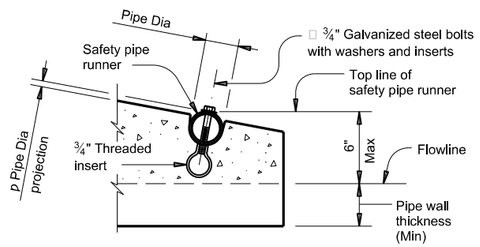
MULTIPLE PIPE INSTALLATION

1. Slope as shown elsewhere in the plans. Slope of 6:1 or flatter is required for vehicle safety.
2. Provide cement stabilized bedding and backfill in accordance with the Item, "Excavation and Backfill for Structures." Bedding and backfill is considered subsidiary to the Item 467, "Safety End Treatment." When concrete riprap is specified around the safety end treatment, backfill as directed by Engineer.
3. Fill the top 4" of void between precast end treatments with concrete riprap. Concrete riprap is considered subsidiary to the Item 467, "Safety End Treatment."
4. Adjust clear distance between pipes to provide for the minimum distance between safety end treatments.
5. Safety pipe runners are required for multiple pipe culverts with more than two pipes.

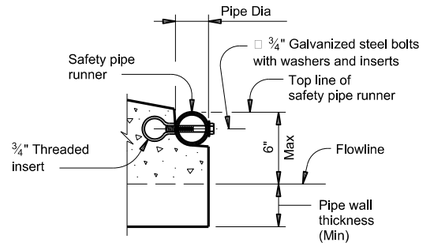


INSTALLATION DETAIL FOR SAFETY PIPE RUNNERS

(If required)



OPTION A



OPTION B

END DETAILS FOR INSTALLATION OF SAFETY PIPE RUNNERS

(If required)

REQUIREMENTS FOR CULVERT PIPES AND SAFETY PIPE RUNNERS

Pipe I.D.	Min Wall Thickness	Min O.D.	Min O.D. at Tapered End	Min Reinf Requirements (sq. in. per ft. of Pipe)	Max Slope	Min Length of Unit	Pipe Runner Requirements		Required Pipe Runner Sizes		
							Single Pipe	Multiple Pipe	Nominal Dia	O.D.	I.D.
12"	2"	16"	16"	0.07 Circ.	6:1	4' - 0"	No	(5)	3" STD	3.500"	3.068"
15"	2 ¼"	19 ½"	19"	0.07 Circ.	6:1	5' - 8"	No	(5)	3" STD	3.500"	3.068"
18"	2 ½"	23"	21 ½"	0.07 Circ.	6:1	7' - 3"	No	(5)	3" STD	3.500"	3.068"
24"	3"	30"	27"	0.07 Circ.	6:1	10' - 6"	No	(5)	3" STD	3.500"	3.068"
30"	3 ½"	37"	31"	0.18 Circ.	6:1	12' - 1"	No	Yes	4" STD	4.500"	4.026"
36"	4"	44"	36"	0.19 Ellip.	6:1	15' - 4"	Yes	Yes	4" STD	4.500"	4.026"
42"	4 ½"	51"	41 ½"	0.23 Ellip.	6:1	18' - 7"	Yes	Yes	4" STD	4.500"	4.026"

MATERIAL NOTES:

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Provide pipe runners meeting the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5LX52.

Galvanize steel components except reinforcing steel after fabrication. Repair galvanizing damaged during transport or construction in accordance with the specifications.

GENERAL NOTES:

Precast safety end treatment for reinforced concrete pipe (RCP) may be used for TYPE II end treatment as specified in Item 467, "Safety End Treatment."

When precast safety end treatment is used as a Contractor's alternate to mitered RCP, riprap will not be required unless noted otherwise on the plans.

Manufacture precast concrete end sections in accordance with Item 464, "Reinforced Concrete Pipe" and in accordance with ASTM Specification C-76, Class III, Wall B for circular pipe.

Provide precast concrete end sections with a spigot or bell end for compatibility to upstream or downstream end conditions with sufficient annular space to allow for grout, mortar, cold applied asphalt joint compound or pre-formed plastic gasket material.

Methods of lifting shall be provided by the manufacturer for ease of loading, unloading and installation.

Pipe runners are designed for a traversing load of 10,000 Lbs at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Texas Department of Transportation

Bridge Division Standard

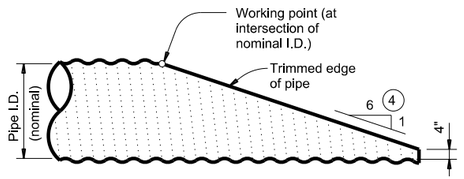
PRECAST SAFETY END TREATMENT

TYPE II ~ PARALLEL DRAINAGE

PSET-RP

FILE: CD-PSET-RP-20.dgn	DN: RLW	CK: KLR	DW: JTR	CK: GAF
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		150

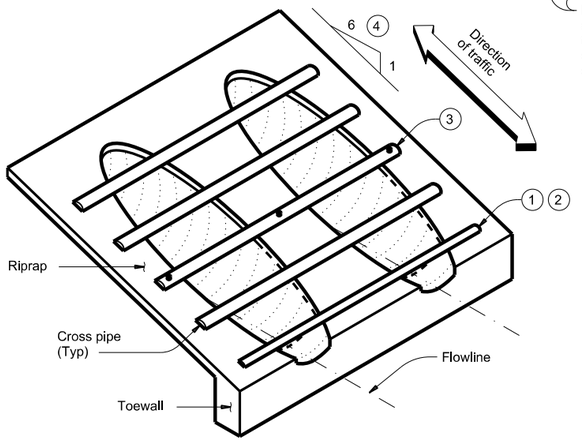
DATE:
FILE:



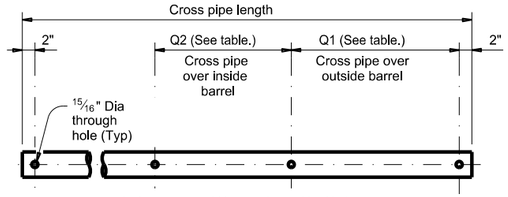
NOTE: All cross pipes, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

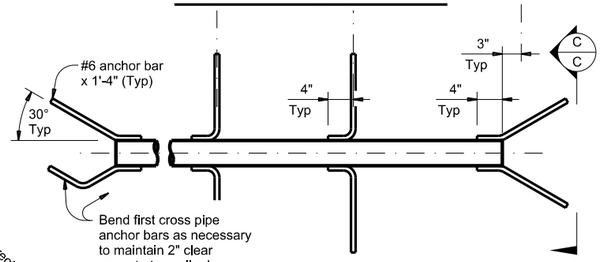
(Showing corrugated metal pipe (CMP) culvert Details at reinforced concrete pipe (RCP) culvert are similar.)



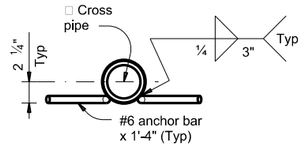
ISOMETRIC VIEW OF TYPICAL INSTALLATION



PIPE WITH BOLTED ANCHOR

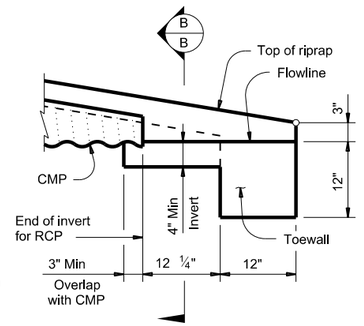


PIPE WITH ANCHOR BARS



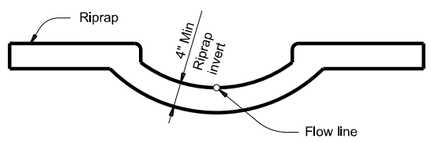
SECTION C-C

CROSS PIPE DETAILS



DETAIL "A"

(Showing invert with corrugated metal pipe (CMP) culvert. Reinforced concrete pipe (RCP) culvert details are similar. Cross pipes not shown for clarity.)



SECTION B-B

(Cross pipes not shown for clarity.)

CROSS PIPE LENGTHS, REQUIRED PIPE SIZES, AND RIPRAP QUANTITIES (2)

Nominal Culvert I.D.	Conc Riprap (CY) (6)	Pipe Culvert Spa ~ G	Single Barrel ~ Q1	Multi-Barrel ~ Q1	Q2	Conditions for Use of Cross Pipes	Cross Pipe Sizes
12"	0.6	0' - 9"	N/A	2' - 1"	1' - 9"	3 or more pipe culverts	3" Std (3.500" O.D.)
15"	0.7	0' - 11"	N/A	2' - 5"	2' - 2"		
18"	0.8	1' - 2"	N/A	2' - 10"	2' - 8"		
21"	0.9	1' - 4"	N/A	3' - 2"	3' - 1"		
24"	0.9	1' - 7"	N/A	3' - 6"	3' - 7"		
27"	1.0	1' - 8"	N/A	3' - 10"	3' - 11"	3 or more pipe culverts	3 1/2" Std (4.000" O.D.)
30"	1.1	1' - 10"	N/A	4' - 2"	4' - 4"	2 or more pipe culverts	
33"	1.2	1' - 11"	4' - 2"	4' - 5"	4' - 8"	All pipe culverts	
36"	1.3	2' - 1"	4' - 5"	4' - 9"	5' - 1"	All pipe culverts	4" Std (4.500" O.D.)
42"	1.5	2' - 4"	4' - 11"	5' - 5"	5' - 10"		
48"	1.7	2' - 7"	5' - 5"	6' - 0"	6' - 7"	All pipe culverts	5" Std (5.563" O.D.)
54"	2.0	3' - 0"	5' - 11"	6' - 9"	7' - 6"		
60"	2.2	3' - 3"	6' - 5"	7' - 4"	8' - 3"		
66"	2.4	3' - 3"	6' - 11"	7' - 10"	8' - 9"		
72"	2.7	3' - 4"	7' - 5"	8' - 5"	9' - 4"		

(1) The proper installation of the first cross pipe is critical for vehicle safety. Place the top of the first cross pipe no more than 6" above the flow line.

(2) Provide cross pipes, except the first bottom pipe, of the size shown in the table. Provide a 3 1#2" standard pipe (4" O.D.) for the first bottom pipe.

(3) Install the third cross pipe from the bottom of the culvert using a bolted connection. Ensure that riprap concrete does not flow into the cross pipe so as to permit disassembly of the bolted connection to allow cleanout access. At the Contractor's option, install all other cross pipes using the bolted connection details.

(4) Match cross slope as shown elsewhere in the plans. Cross slope of 6:1 or flatter is required for vehicle safety.

(5) Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap."

(6) Quantities shown are for one end of one reinforced concrete pipe (RCP) culvert. For multiple pipe culverts or for corrugated metal pipe (CMP) culverts, quantities will need to be adjusted. Riprap quantities are for contractor's information only.

MATERIAL NOTES:

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Provide cross pipes that meet the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 (Gr B), or API 5LX52.

Provide ASTM A307 bolts and nuts.

Galvanize all steel components, except concrete reinforcing, after fabrication. Repair galvanizing damaged during transport or construction in accordance with the specifications.

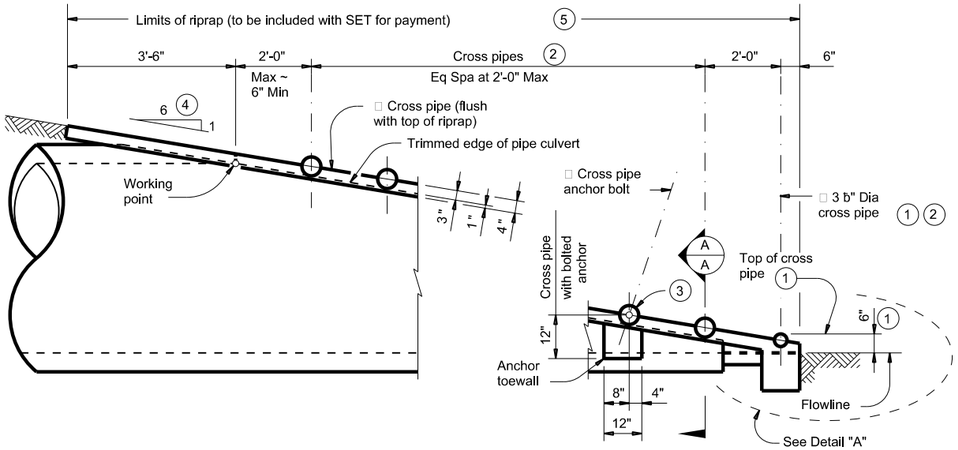
GENERAL NOTES:

Cross pipes are designed for a traversing load of 10,000 pounds at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Safety end treatments (SET) shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the cross pipes.

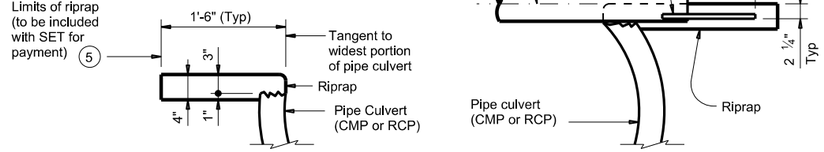
Construct concrete riprap and all necessary inverts in accordance with the requirements of Item 432, "Riprap."

Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.



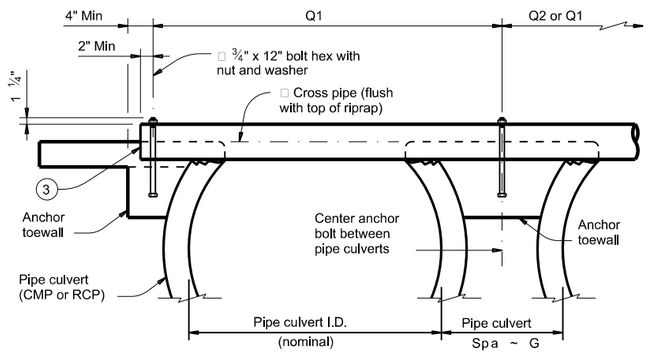
SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing reinforced concrete pipe (RCP) culvert. Details at corrugated metal pipe (CMP) culvert are similar.)



SHOWING TYPICAL PIPE CULVERT AND RIPRAP

SHOWING CROSS PIPE WITH ANCHOR BAR



SHOWING CROSS PIPE WITH BOLTED ANCHOR

SECTION A-A

Texas Department of Transportation

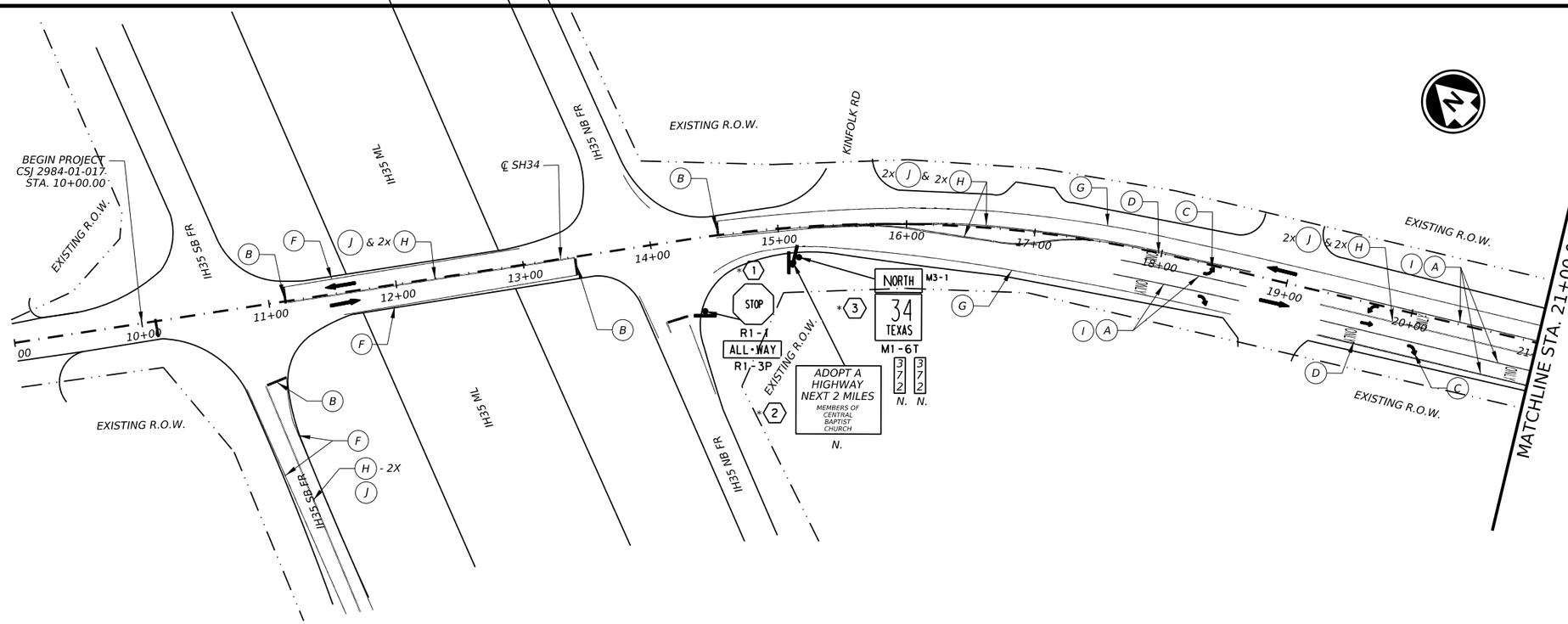
Bridge Division Standard

SAFETY END TREATMENT

FOR 12" DIA TO 72" DIA PIPE CULVERTS TYPE II ~ PARALLEL DRAINAGE

SETP-PD

FILE: CD-SETP-PD-20.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		151



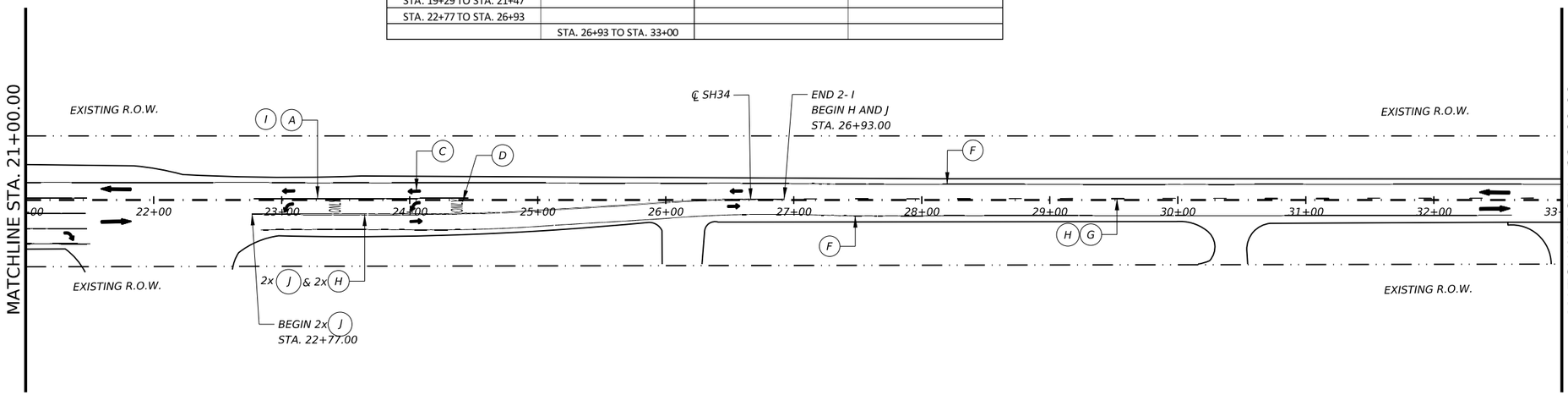
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 11+14 TO STA. 13+41			
STA. 14+51 TO STA. 18+70			
STA. 19+29 TO STA. 21+47			
STA. 22+77 TO STA. 26+93			
	STA. 26+93 TO STA. 33+00		



STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

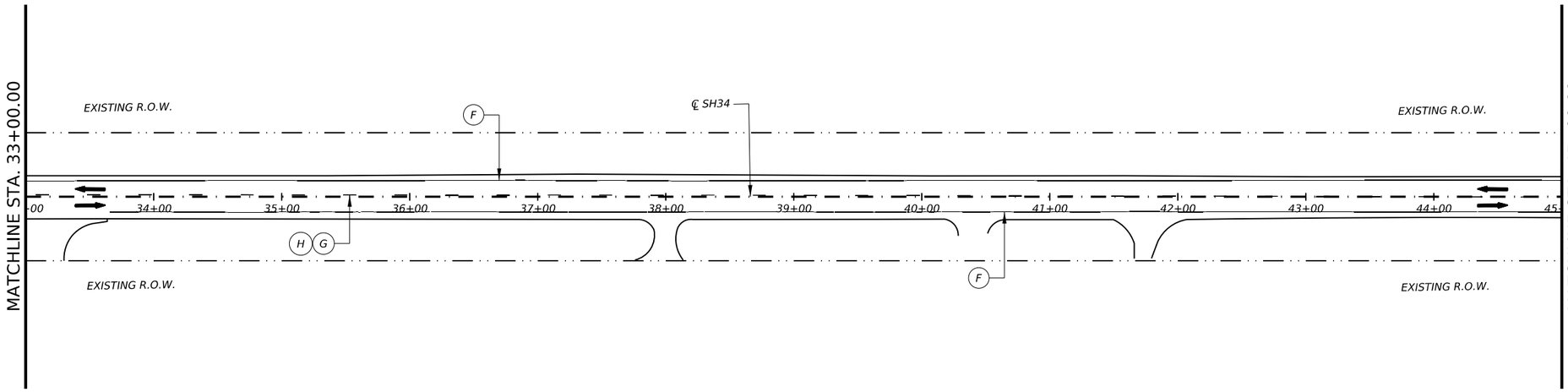
SH 34

PAVEMENT MARKING AND SIGNS LAYOUTS

SHEET 1 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		152

DATE: 5/5/2024 4:33:50 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-1.dgn



0 50 100
FEET

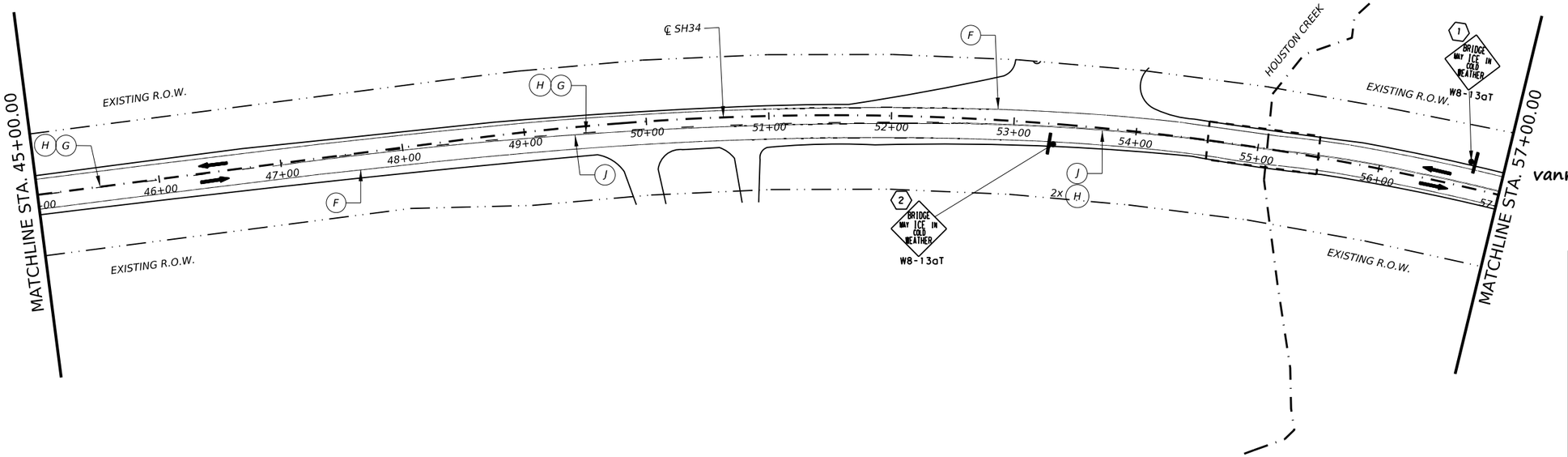
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 33+00 TO STA. 45+00		
	STA. 45+00 TO STA. 46+93		STA. 46+93 TO STA. 52+49
STA. 52+49 TO STA. 57+00			



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SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 2 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		153

DATE: 5/5/2024 4:33:57 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-2.dgn

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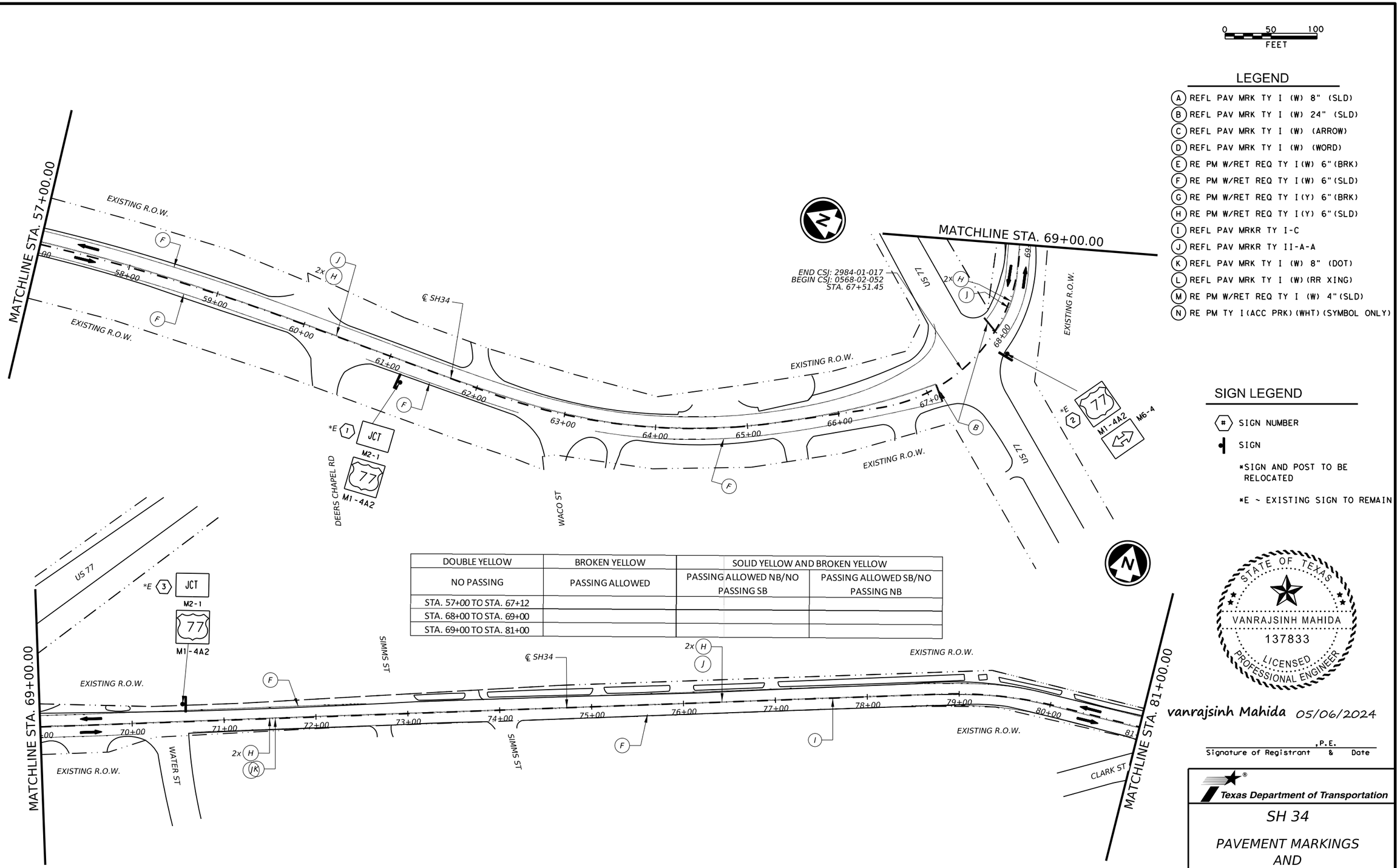

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 57+00 TO STA. 67+12			
STA. 68+00 TO STA. 69+00			
STA. 69+00 TO STA. 81+00			

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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 3 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		154

DATE: 5/5/2024 4:34:07 AM
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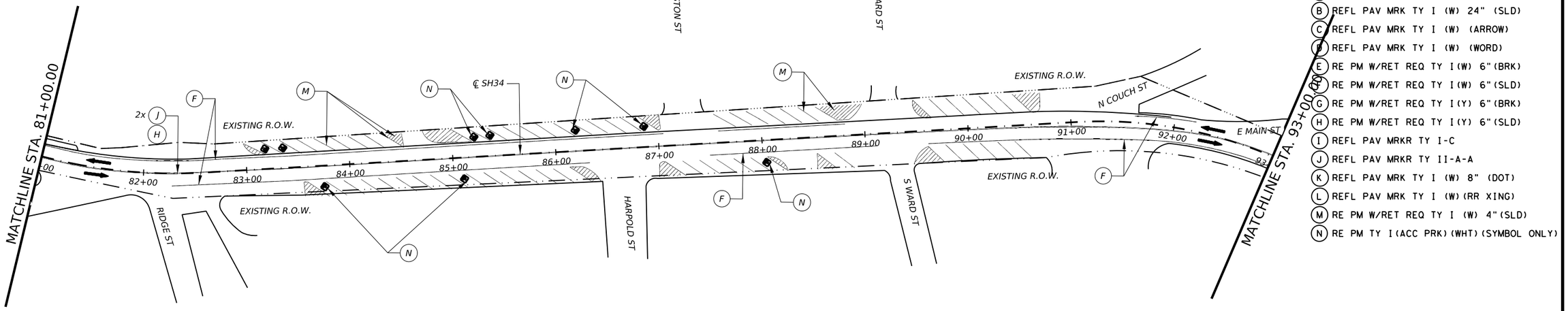

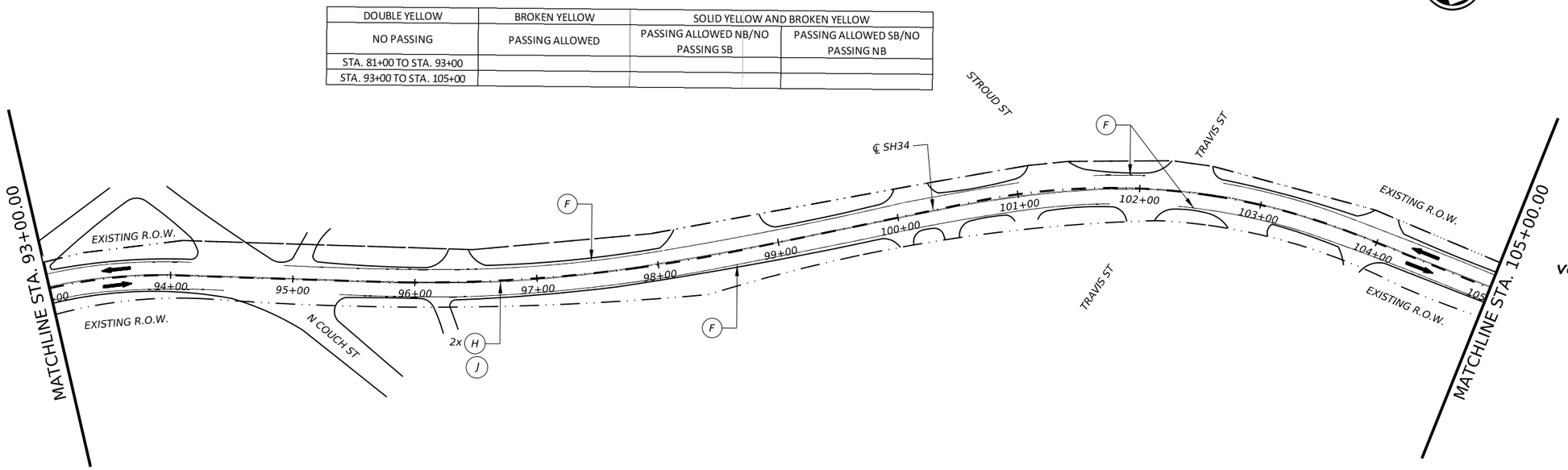

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 81+00 TO STA. 93+00			
STA. 93+00 TO STA. 105+00			

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN

*SIGN AND POST TO BE RELOCATED

*E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
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137833
LICENSED PROFESSIONAL ENGINEER

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Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 4 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		155

DATE: 5/5/2024 4:34:21 AM
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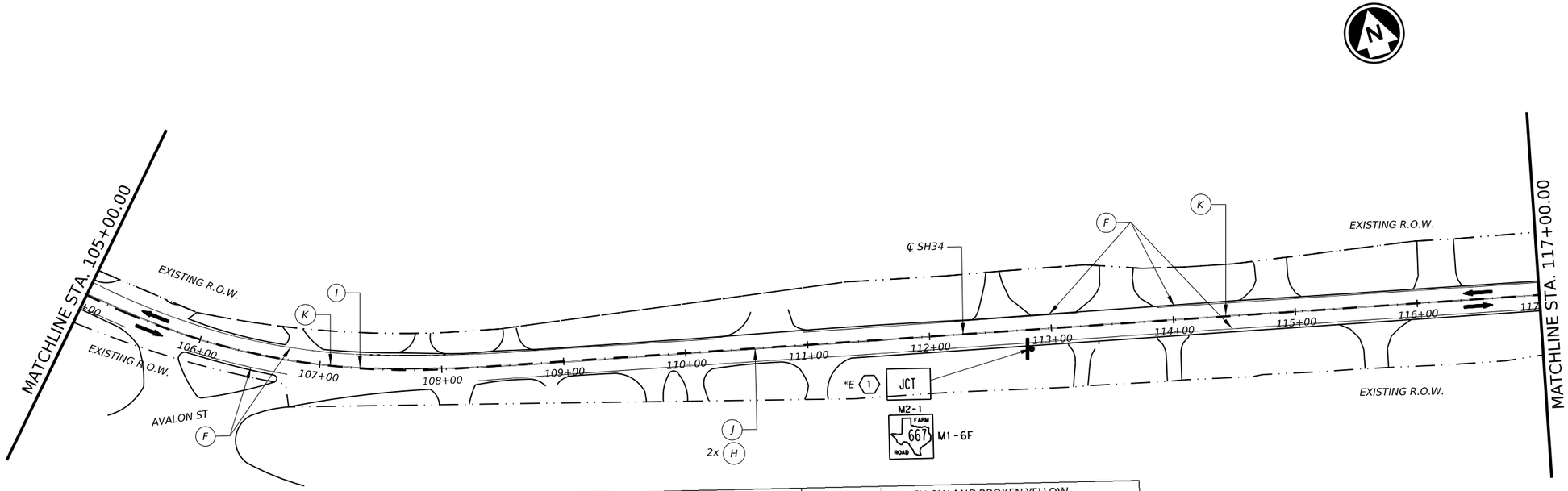


0 50 100
FEET

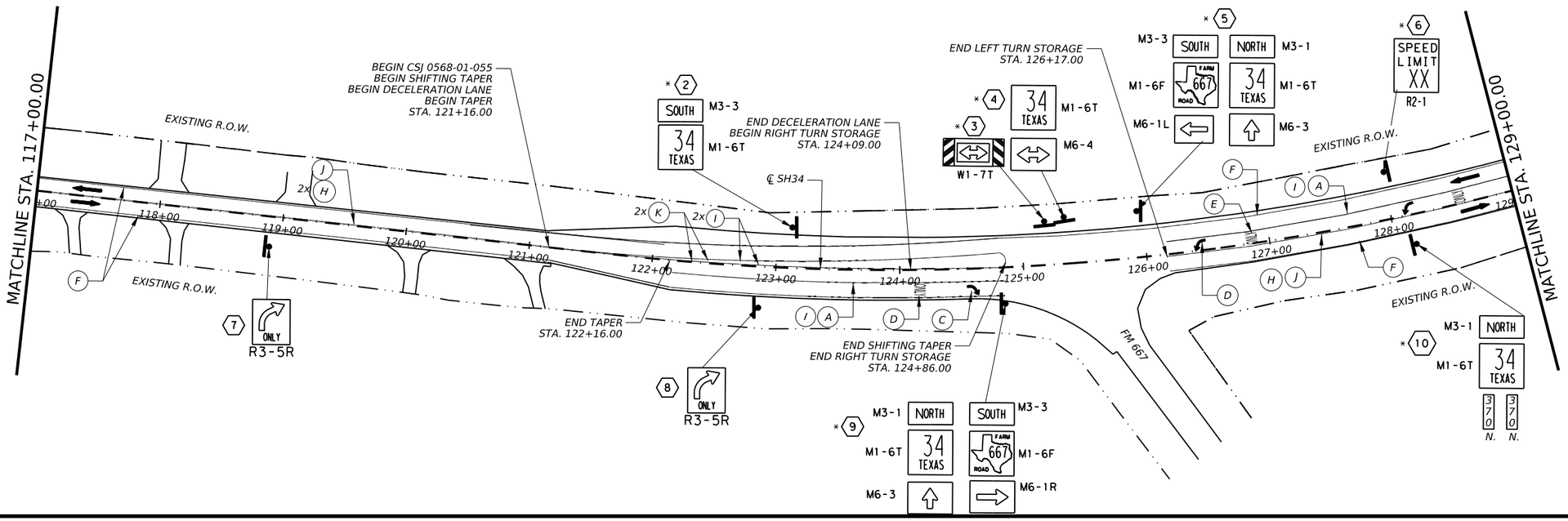
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 105+00 TO STA. 117+00			
STA. 117+00 TO STA. 124+00			
STA. 126+17 TO STA. 129+00			

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN



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SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 5 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		156

DATE: 5/5/2024 4:34:32 AM
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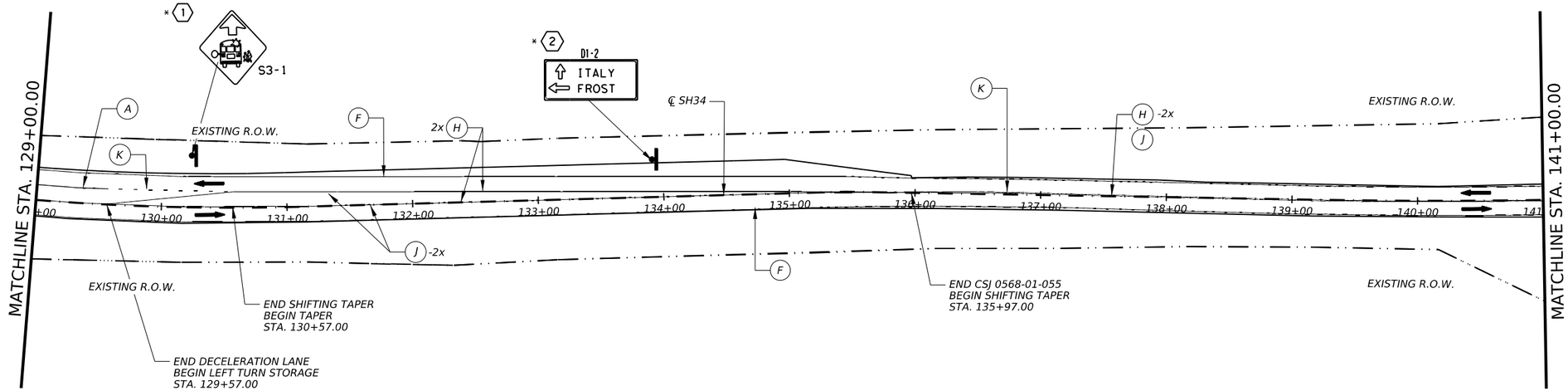


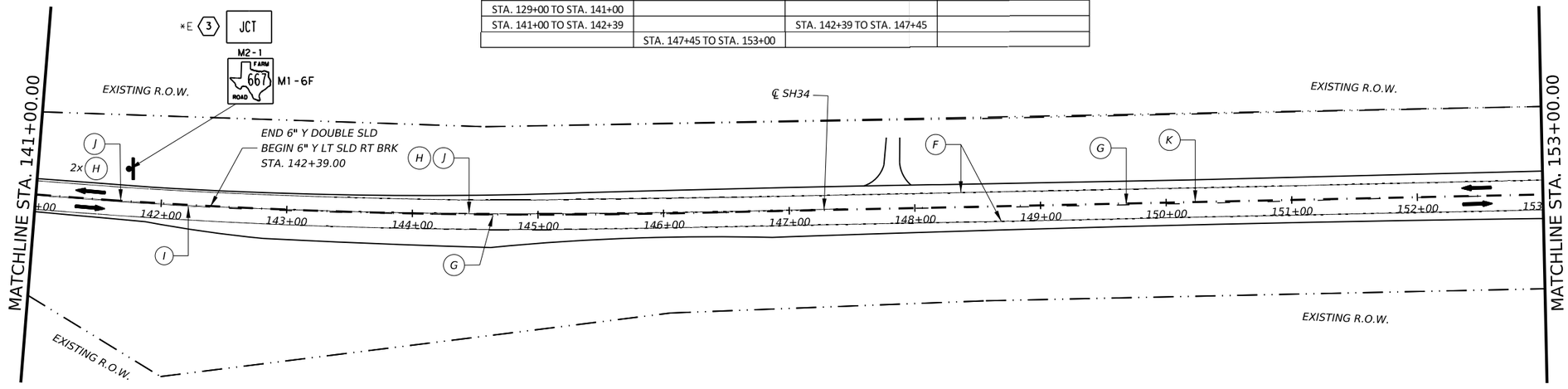
LEGEND

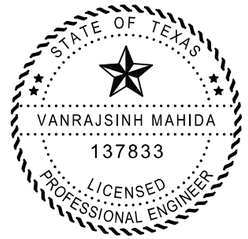
- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 129+00 TO STA. 141+00			
STA. 141+00 TO STA. 142+39		STA. 142+39 TO STA. 147+45	
	STA. 147+45 TO STA. 153+00		





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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 6 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		157

DATE: 5/5/2024 4:34:44 AM
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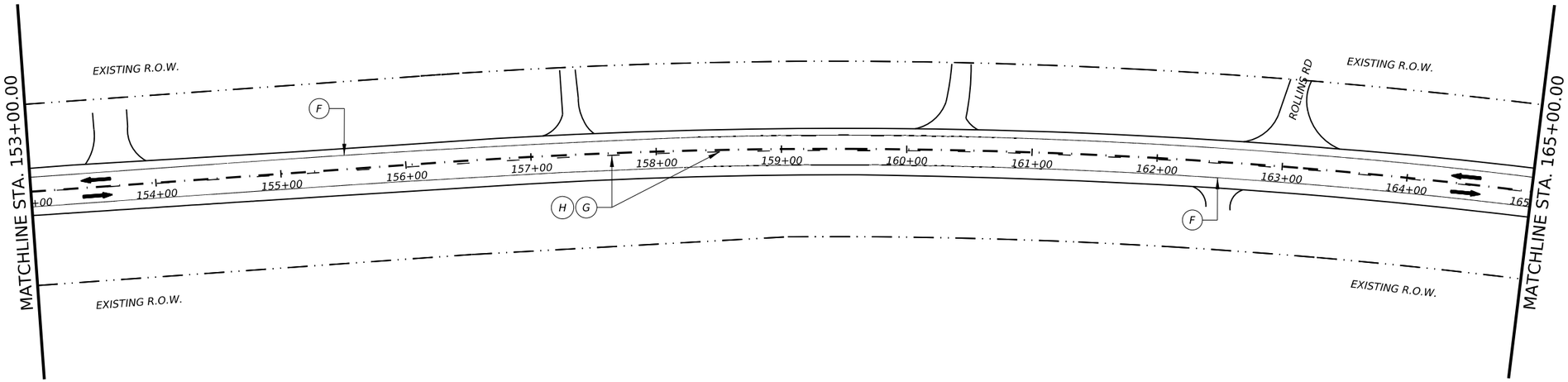


0 50 100
FEET

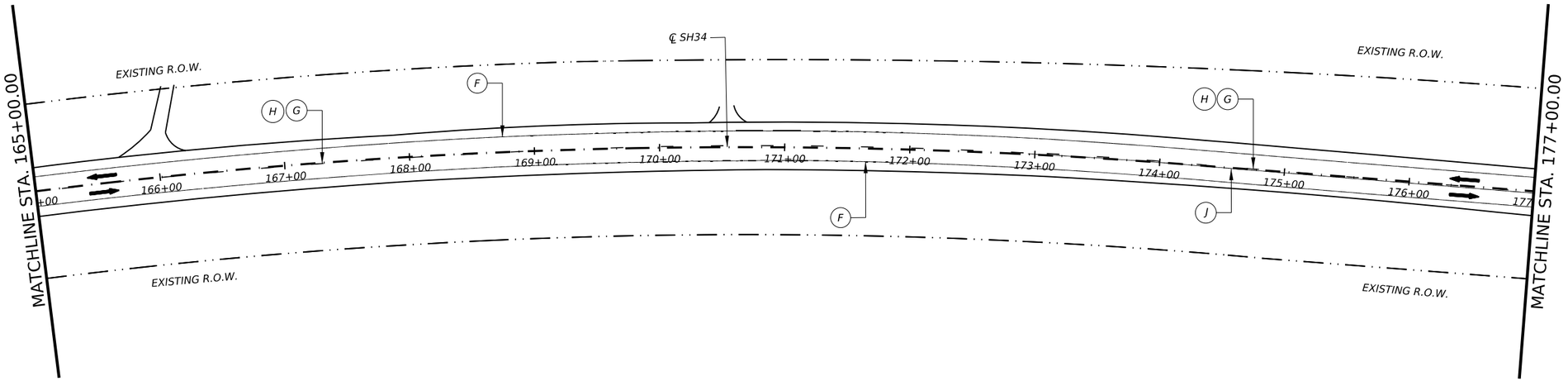
LEGEND

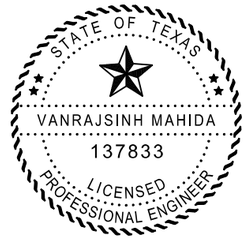
- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 153+00 TO STA. 165+00		
	STA. 165+00 TO STA. 172+95		STA. 172+95 TO STA. 177+00





vanrajsinh Mahida 05/06/2024

, P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 7 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		158

DATE: 5/5/2024 4:36:02 AM
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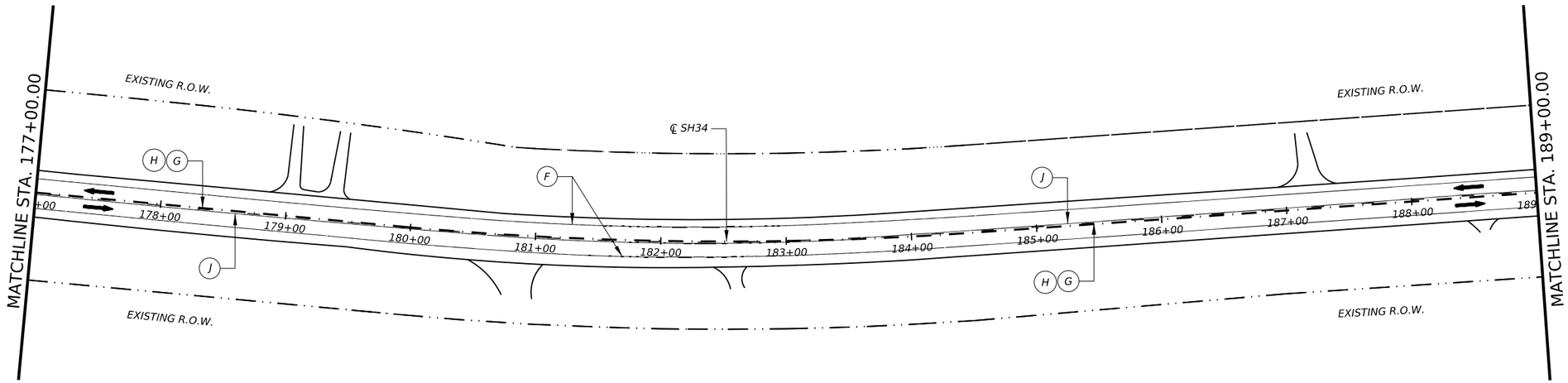


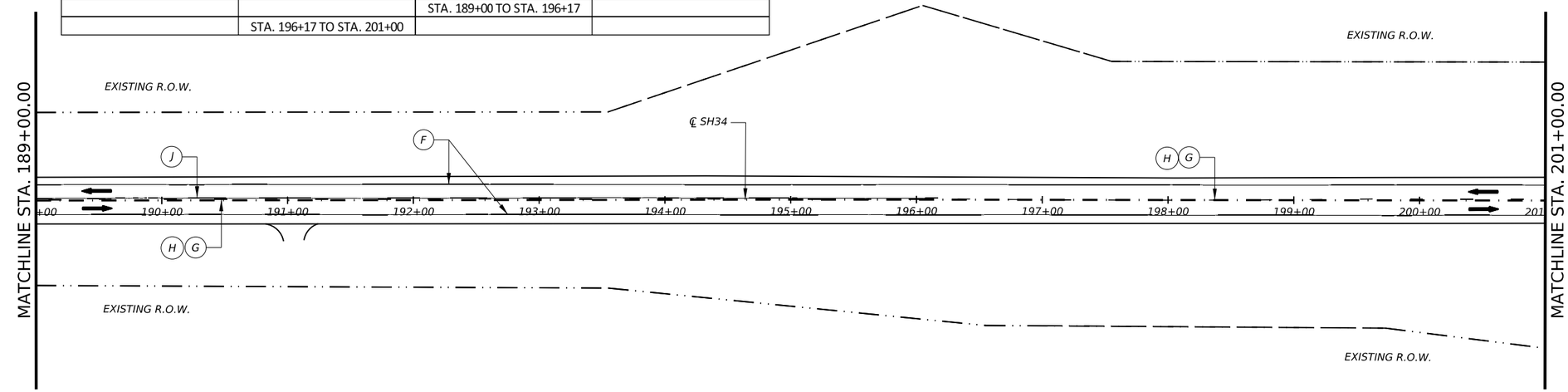
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
			STA. 177+00 TO STA. 183+61
		STA. 183+61 TO STA. 189+00	
		STA. 189+00 TO STA. 196+17	
	STA. 196+17 TO STA. 201+00		



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SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 8 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		159

DATE: 5/5/2024 4:36:34 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-8.dgn

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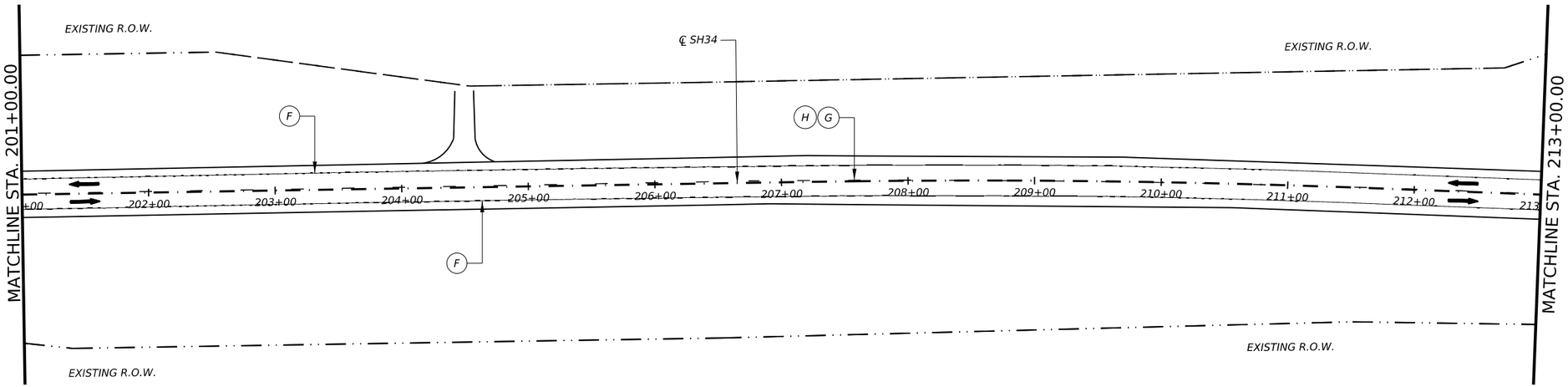


0 50 100
FEET

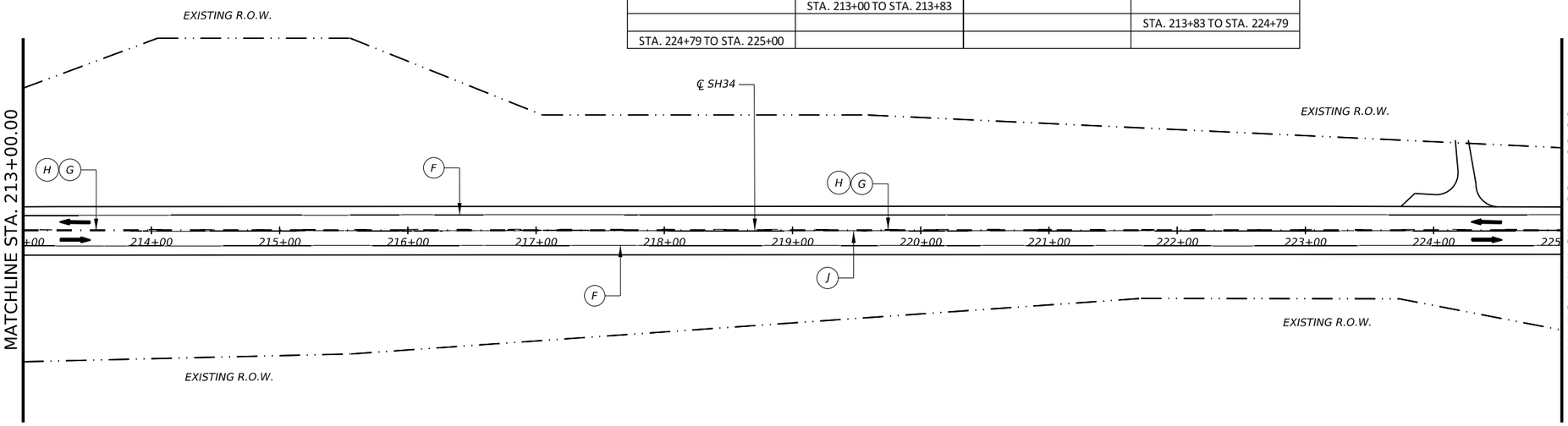
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 201+00 TO STA. 213+00		
	STA. 213+00 TO STA. 213+83		
			STA. 213+83 TO STA. 224+79
STA. 224+79 TO STA. 225+00			



STATE OF TEXAS
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vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 9 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		160

DATE: 5/5/2024 4:37:25 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-9.dgn

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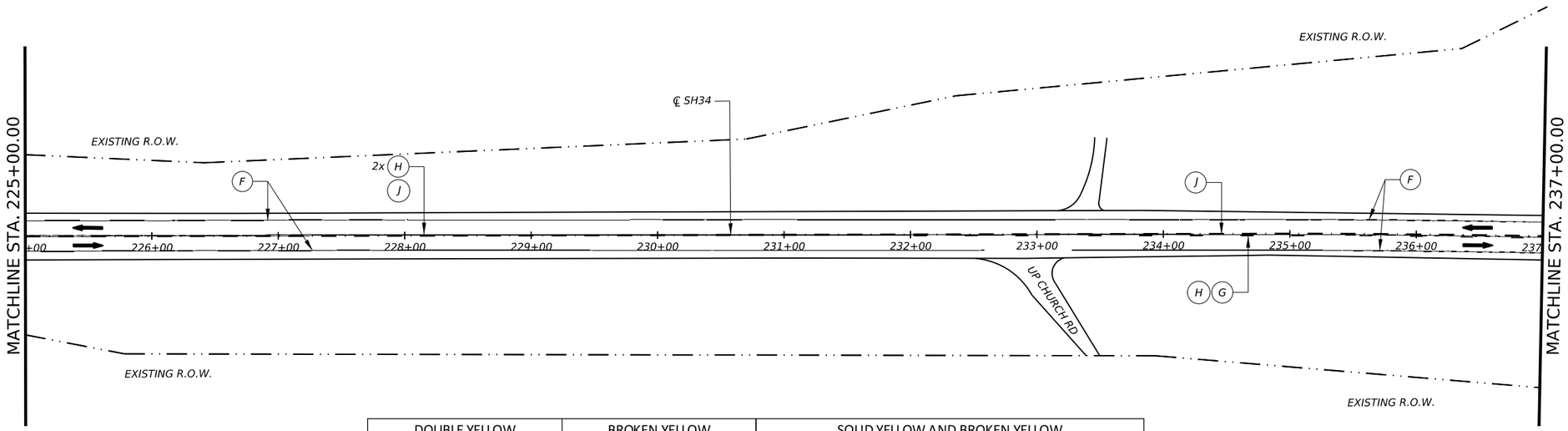
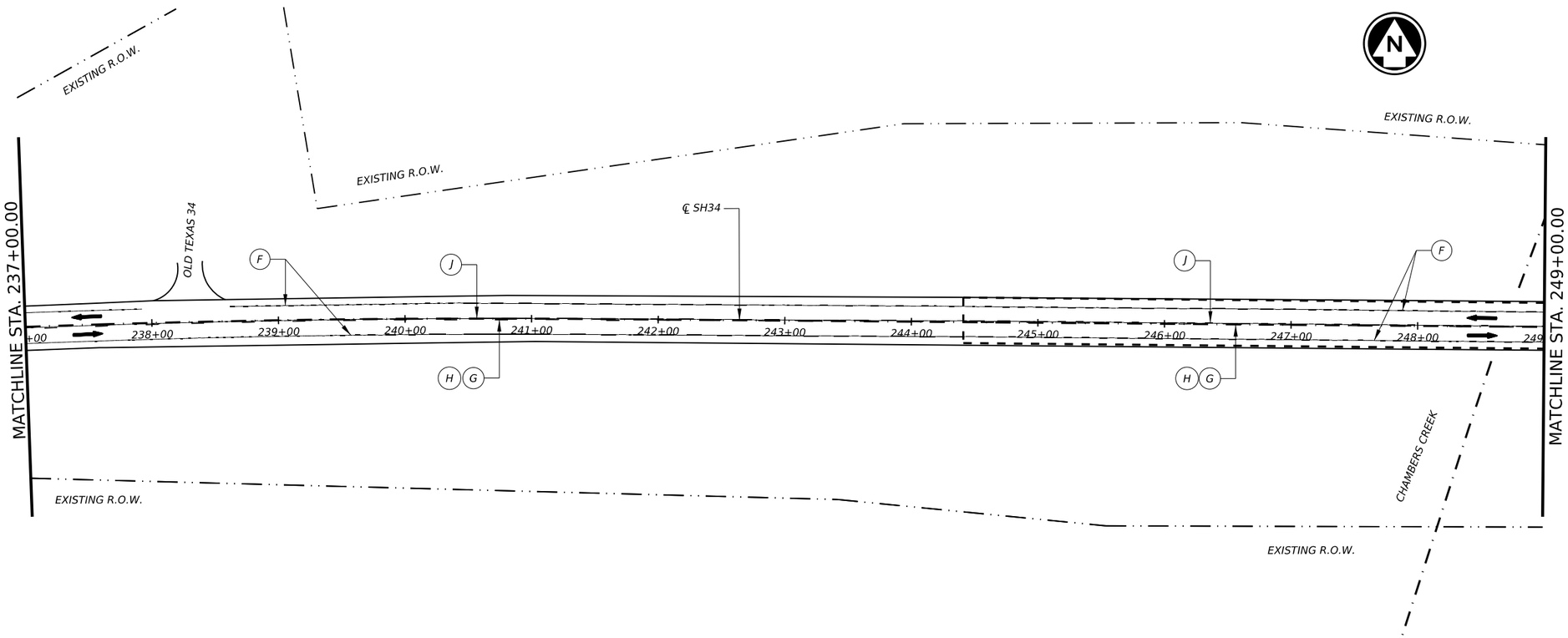


DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 225+00 TO STA. 231+88			
		STA. 231+88 TO STA. 249+00	



0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 10 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		161

DATE: 5/5/2024 4:38:03 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-10.dgn

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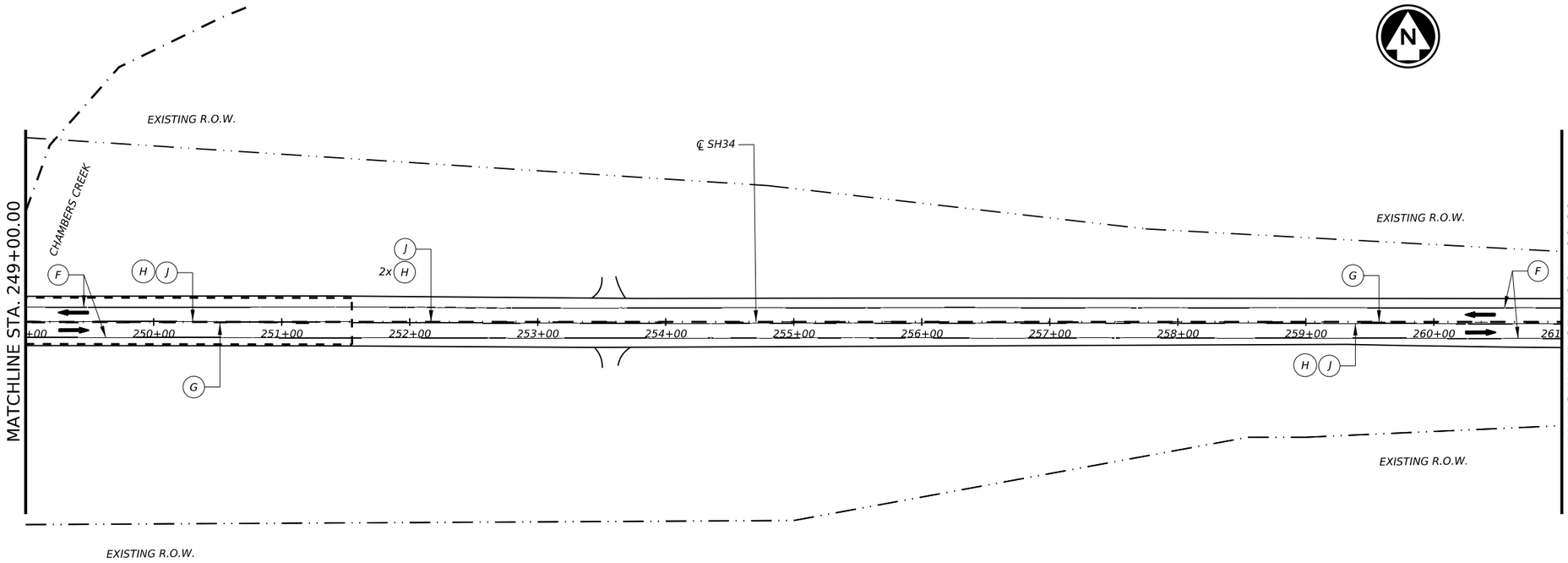


0 50 100
FEET

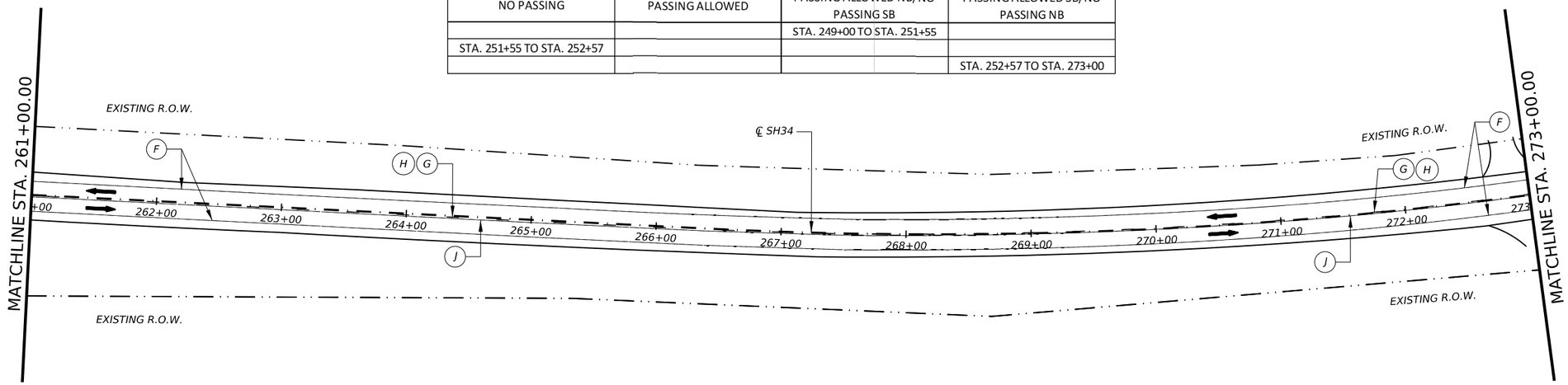
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
		STA. 249+00 TO STA. 251+55	
STA. 251+55 TO STA. 252+57			
			STA. 252+57 TO STA. 273+00



STATE OF TEXAS
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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 11 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		162

DATE: 5/5/2024 4:38:09 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-11.dgn

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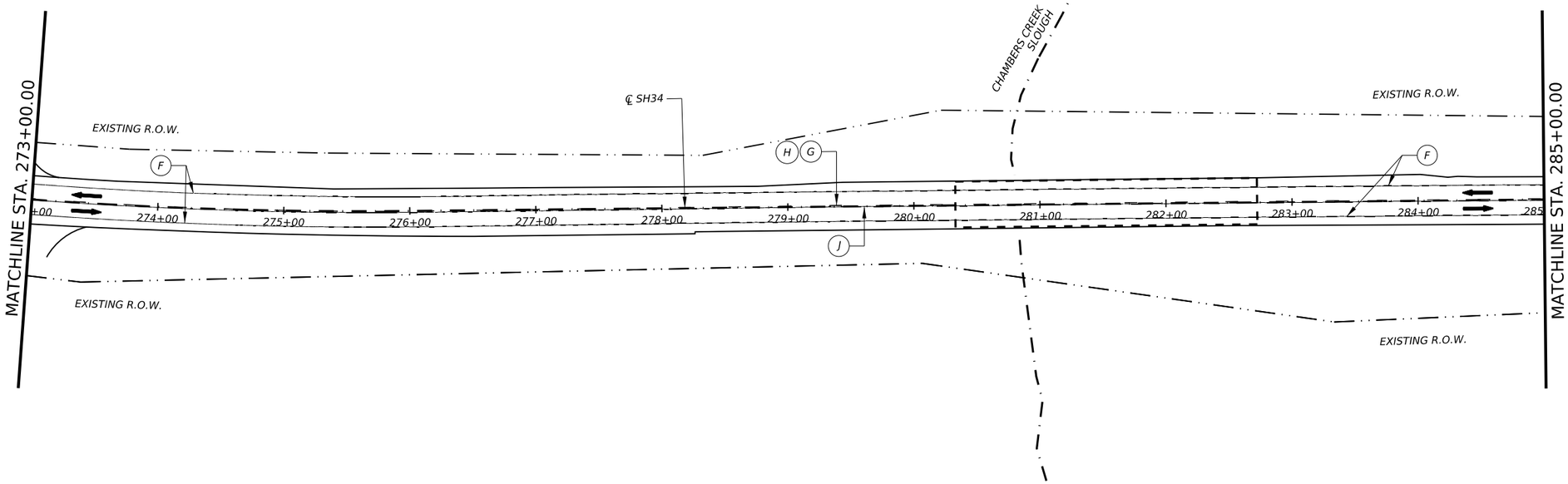


0 50 100
FEET

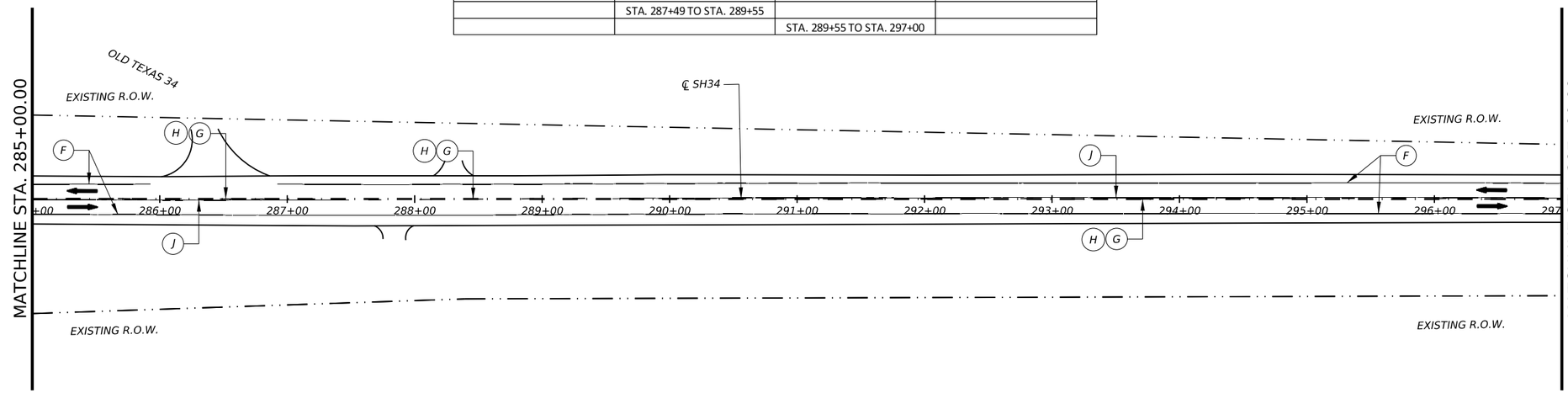
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
			STA. 273+00 TO STA. 287+49
	STA. 287+49 TO STA. 289+55		
		STA. 289+55 TO STA. 297+00	



STATE OF TEXAS
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Signature of Registrant & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 12 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		163

DATE: 5/5/2024 4:39:03 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-12.dgn

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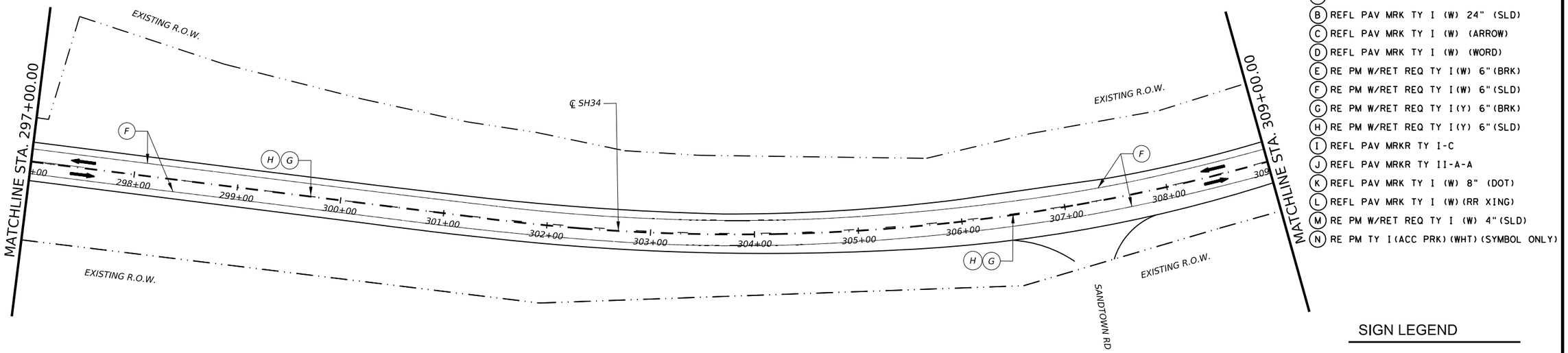

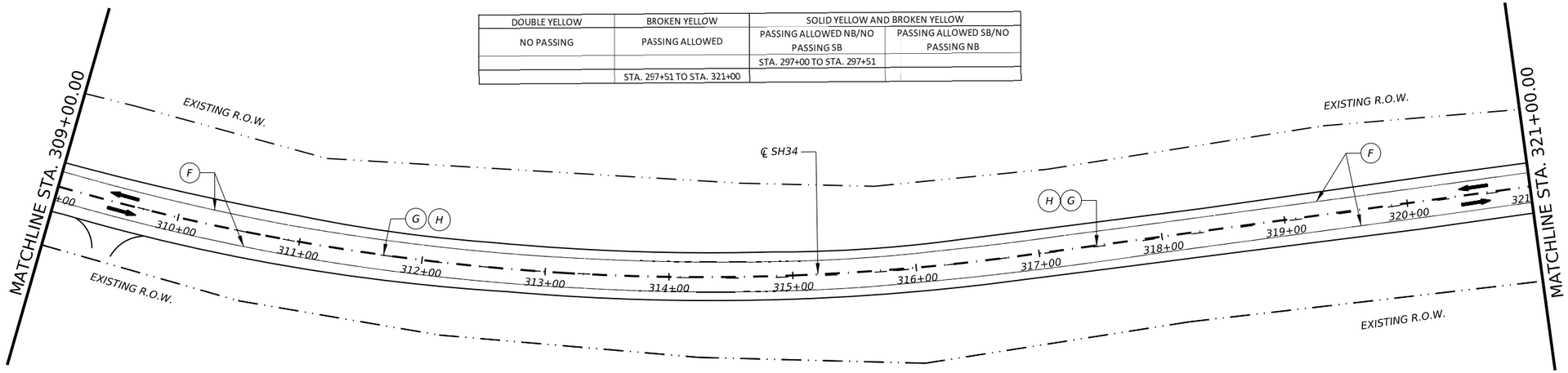

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
		STA. 297+00 TO STA. 297+51	
	STA. 297+51 TO STA. 321+00		

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
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LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

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Texas Department of Transportation

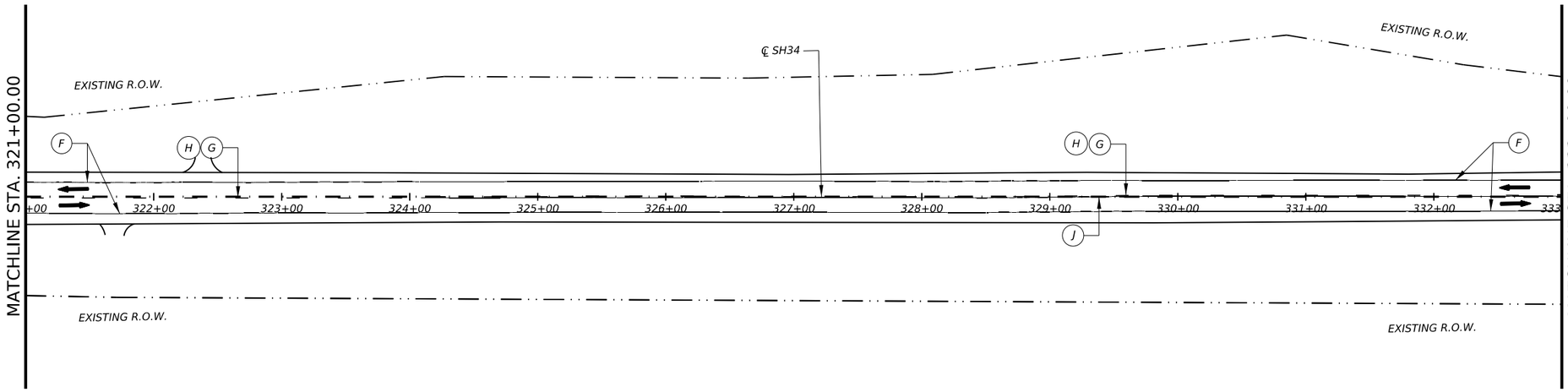
SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 13 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		164

DATE: 5/5/2024 4:39:16 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-13.dgn



0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

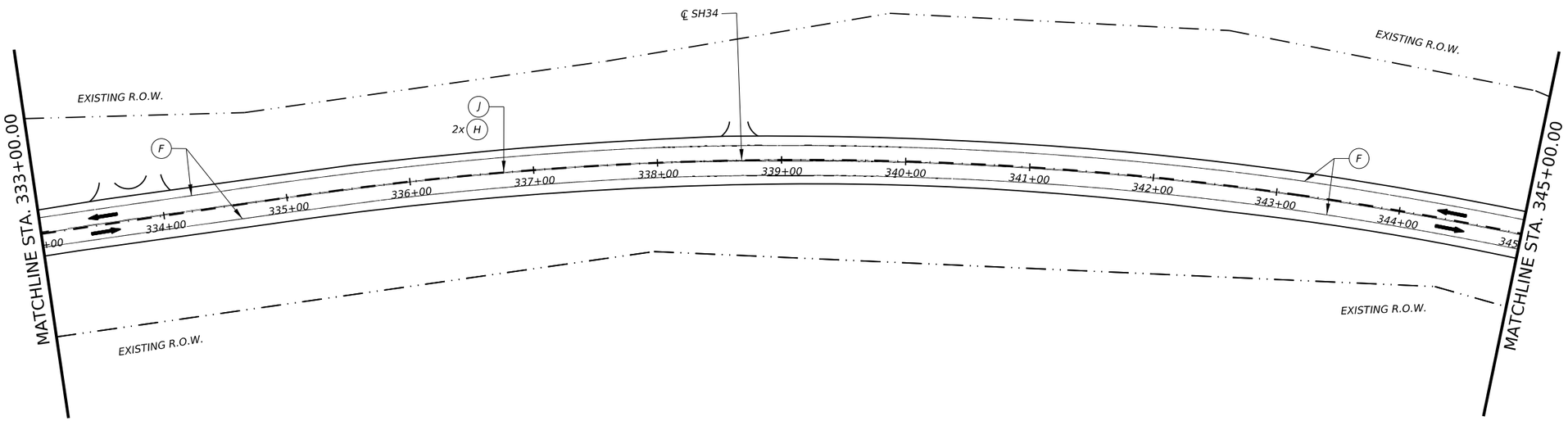
SIGN LEGEND

- (#) SIGN NUMBER
- SIGN

*SIGN AND POST TO BE RELOCATED

*E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 321+00 TO STA. 324+09		
			STA. 324+09 TO STA. 333+21
STA. 333+21 TO STA. 345+00			



STATE OF TEXAS
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Texas Department of Transportation

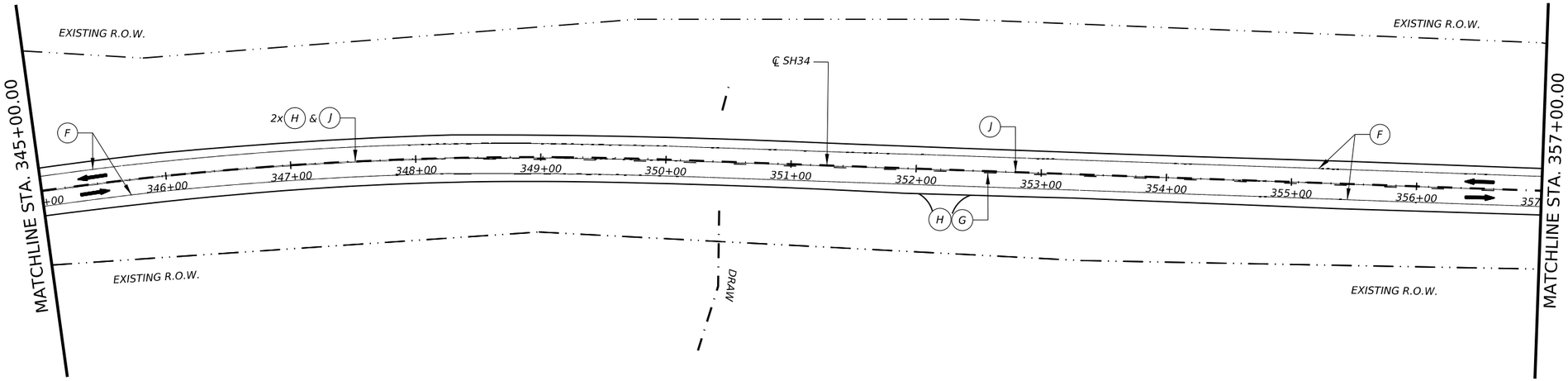
SH 34

PAVMENT MARKINGS AND SIGNS LAYOUTS

SHEET 14 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		165

DATE: 5/5/2024 4:39:49 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-14.dgn



0 50 100
FEET

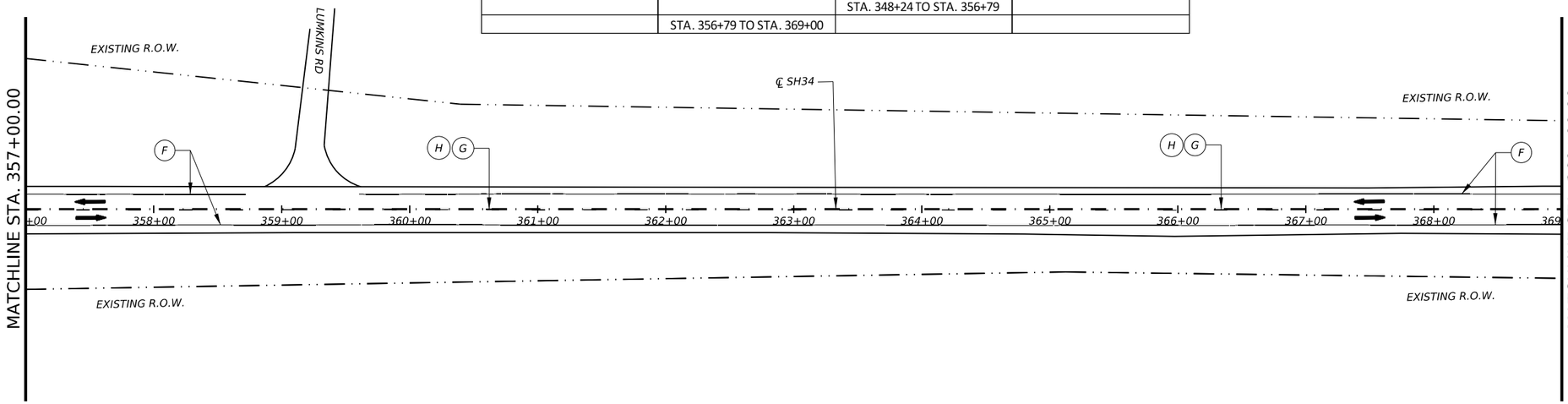
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 345+00 TO STA. 348+24			
		STA. 348+24 TO STA. 356+79	
	STA. 356+79 TO STA. 369+00		



STATE OF TEXAS
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137833
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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 15 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		166

DATE: 5/5/2024 4:40:29 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34_PVMT_Signs Layouts-15.dgn

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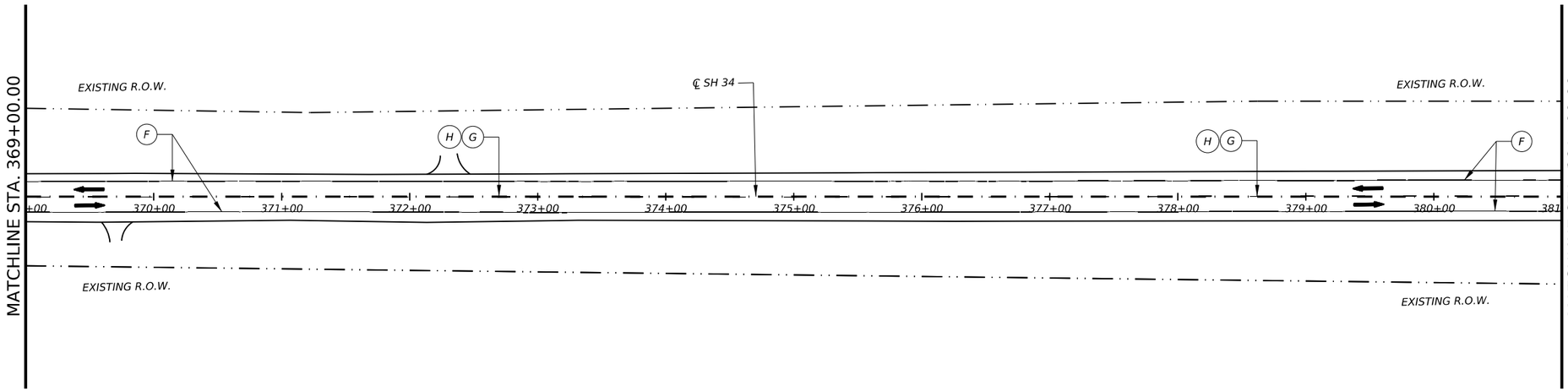


0 50 100
FEET

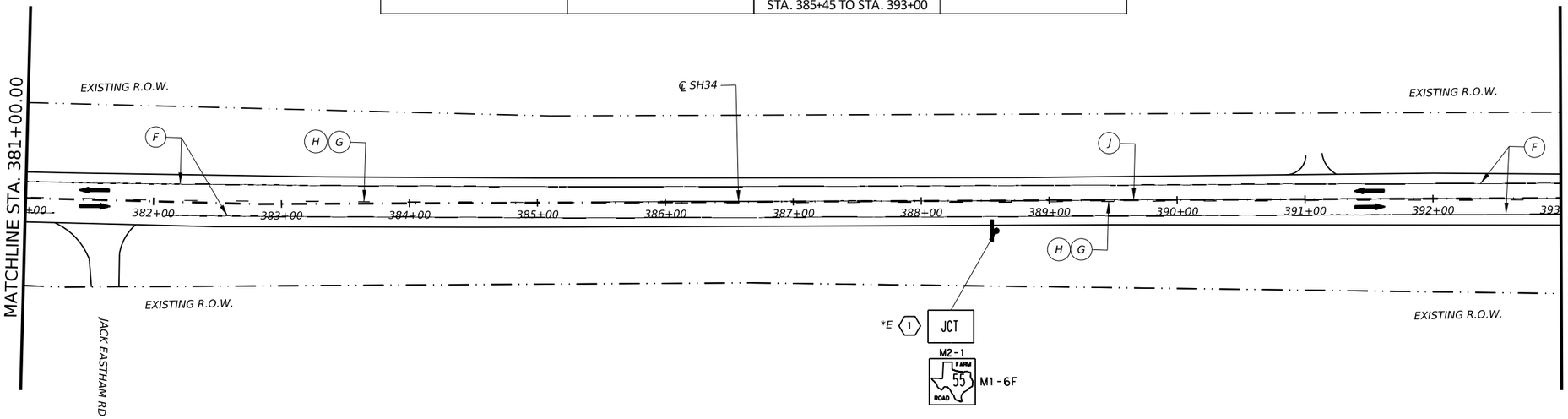
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 369+00 TO STA. 385+45		
		STA. 385+45 TO STA. 393+00	



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137833
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vanrajsinh Mahida 05/06/2024

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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 16 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		167

DATE: 5/5/2024 4:40:42 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-16.dgn

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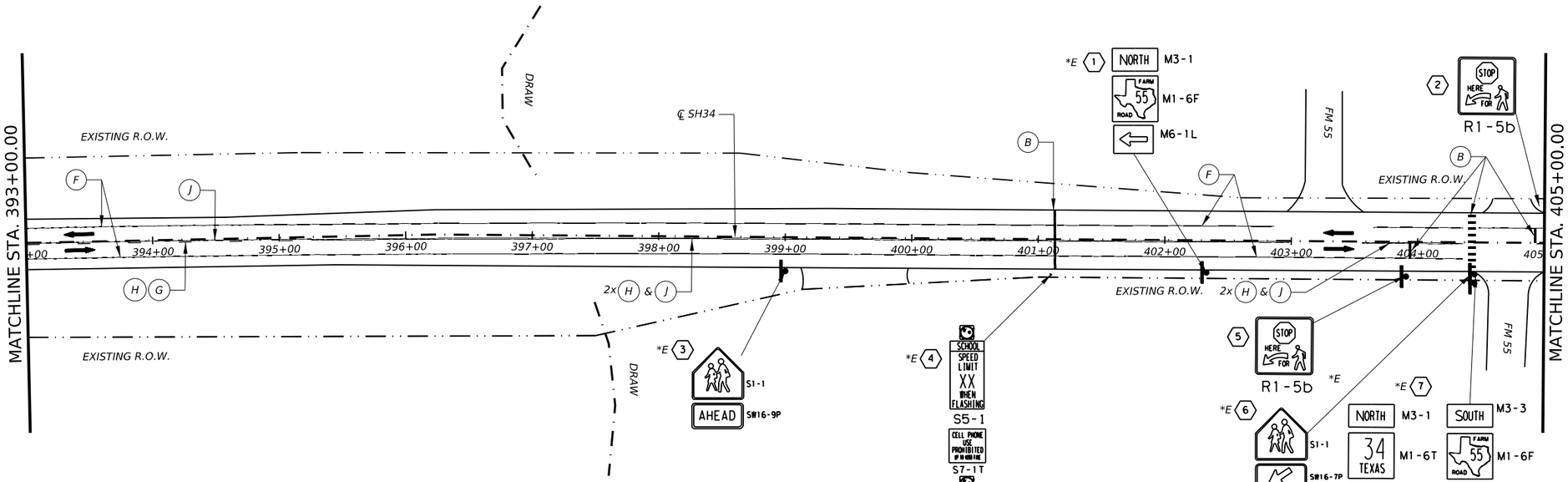

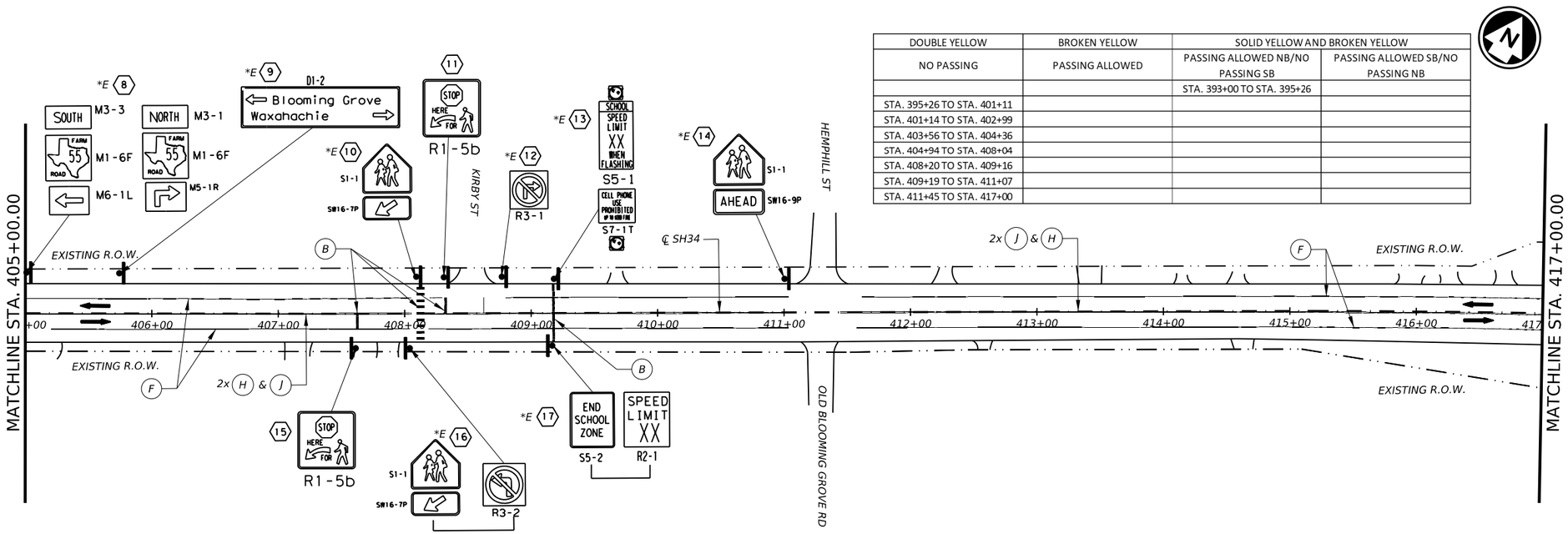

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
		STA. 393+00 TO STA. 395+26	
STA. 395+26 TO STA. 401+11			
STA. 401+14 TO STA. 402+99			
STA. 403+56 TO STA. 404+36			
STA. 404+94 TO STA. 408+04			
STA. 408+20 TO STA. 409+16			
STA. 409+19 TO STA. 411+07			
STA. 411+45 TO STA. 417+00			

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
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, P.E.
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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 17 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		168

DATE: 5/5/2024 4:41:13 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-17.dgn

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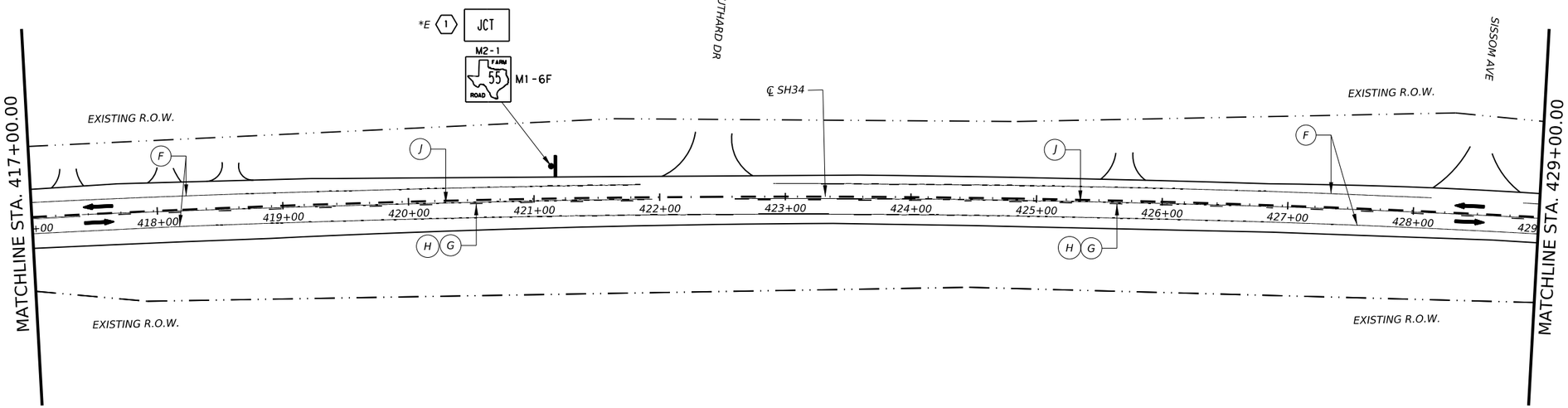

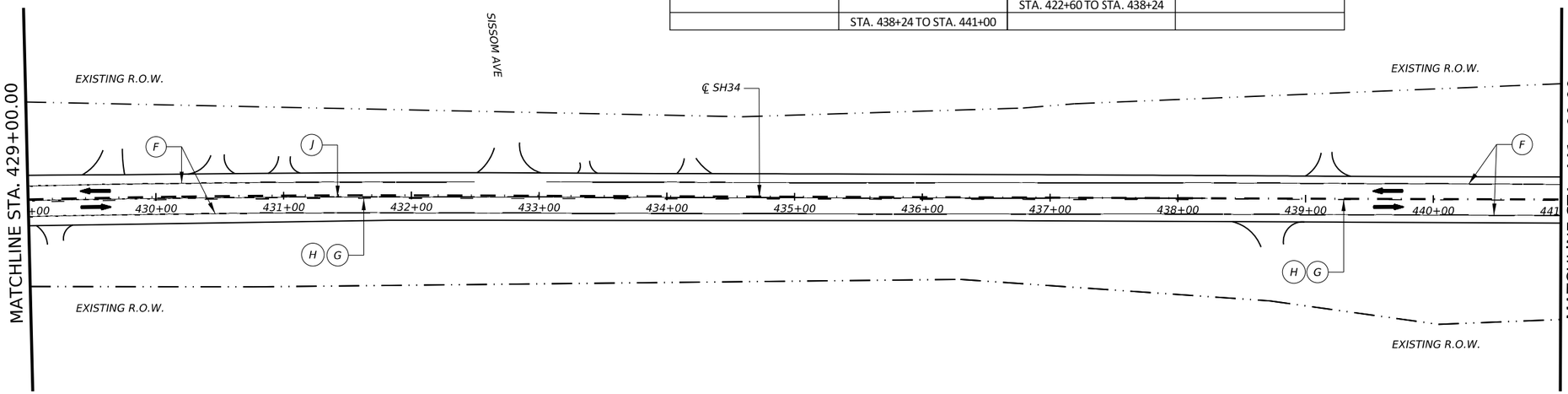

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 417+00 TO STA. 417+39			
		STA. 417+39 TO STA. 421+94	
		STA. 422+60 TO STA. 438+24	
	STA. 438+24 TO STA. 441+00		

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 18 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		169

DATE: 5/5/2024 4:41:19 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-18.dgn

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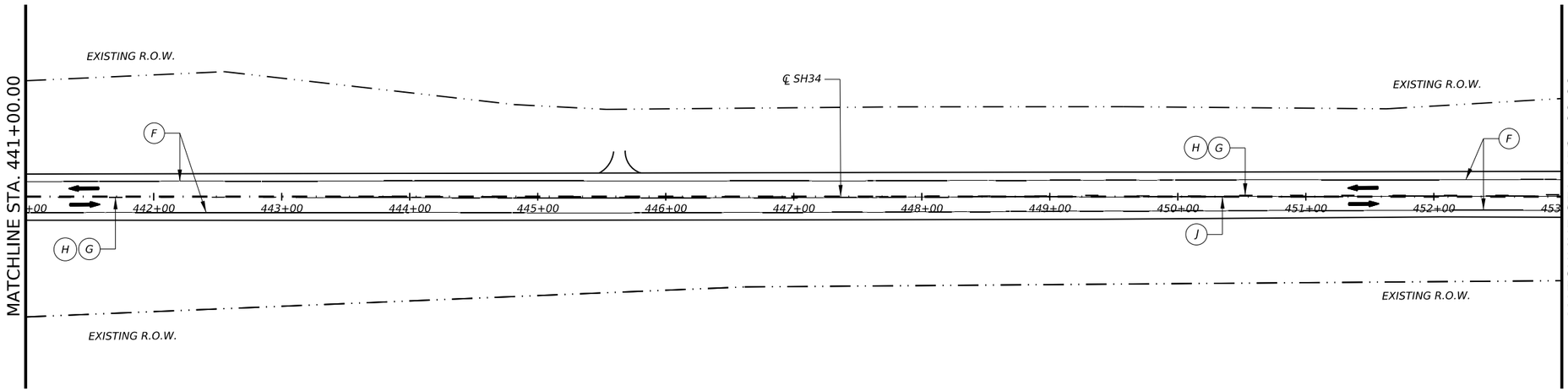


0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

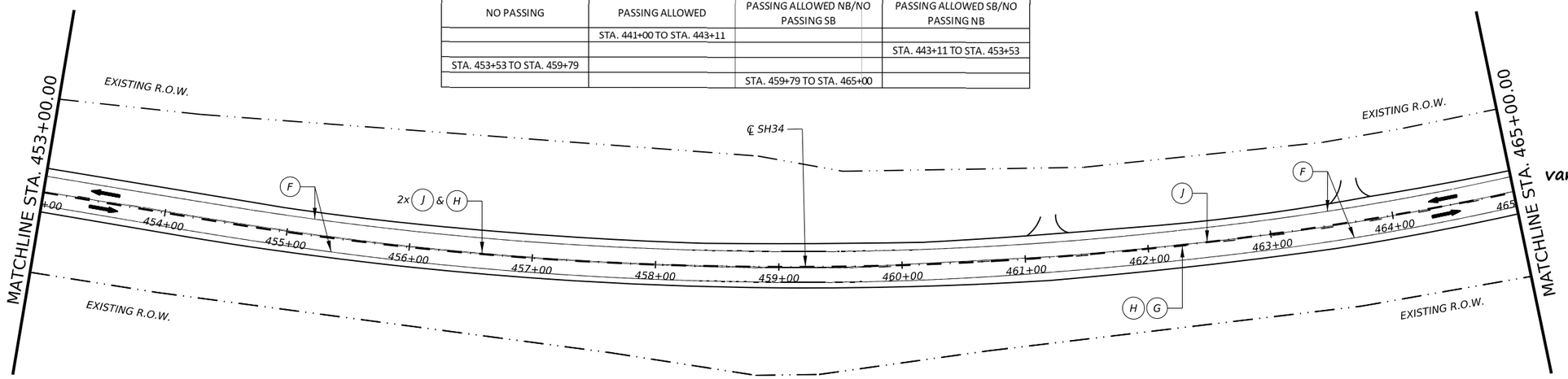
SIGN LEGEND

- (#) SIGN NUMBER
- SIGN

*SIGN AND POST TO BE RELOCATED

*E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 441+00 TO STA. 443+11		
			STA. 443+11 TO STA. 453+53
STA. 453+53 TO STA. 459+79			
		STA. 459+79 TO STA. 465+00	



STATE OF TEXAS
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Signature of Registrant & Date

Texas Department of Transportation

SH 34

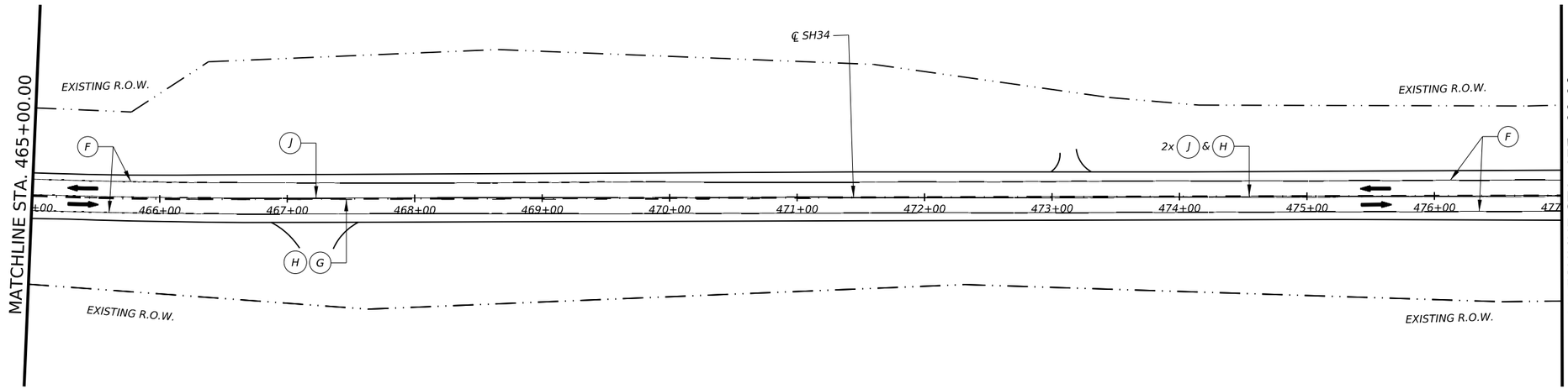
PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 19 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		170

CK: DW: CK: DW:

DATE: 5/5/2024 4:42:01 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-19.dgn



0 50 100
FEET

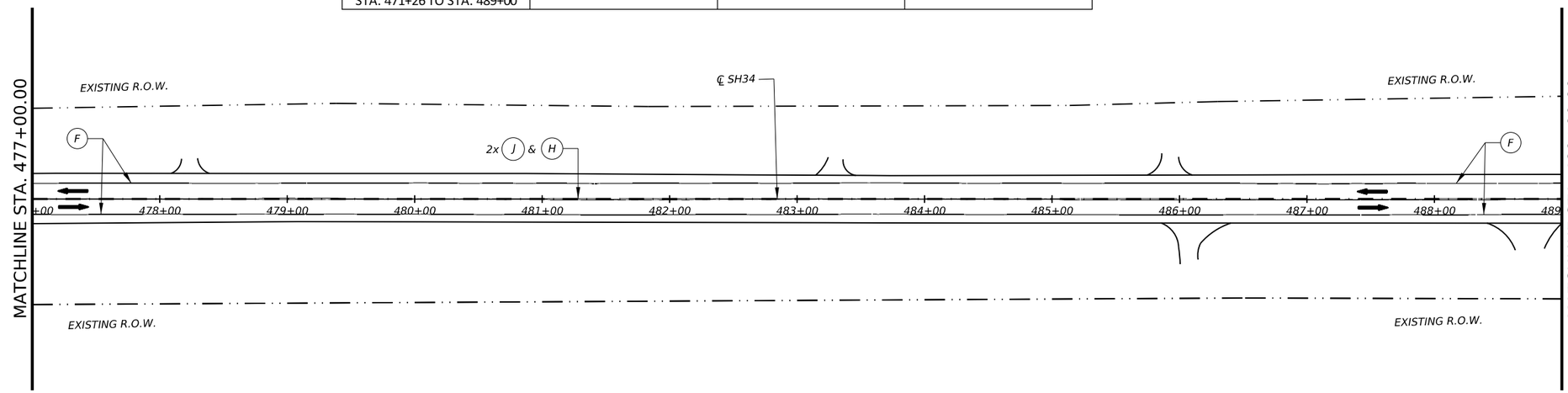
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
		STA. 465+00 TO STA. 471+26	
STA. 471+26 TO STA. 489+00			



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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 20 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		171

DATE: 5/5/2024 4:42:17 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-20.dgn

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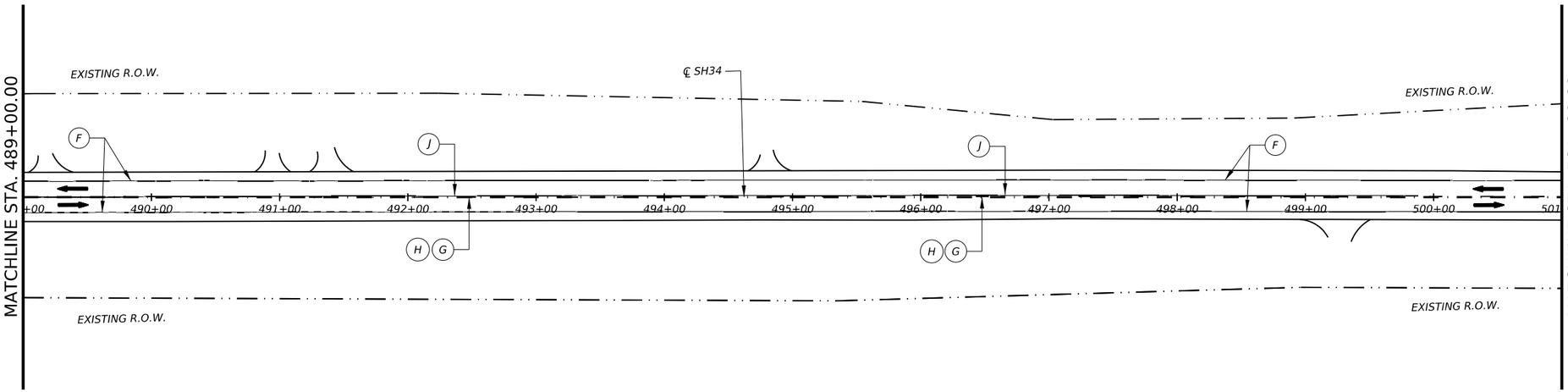


0 50 100
FEET

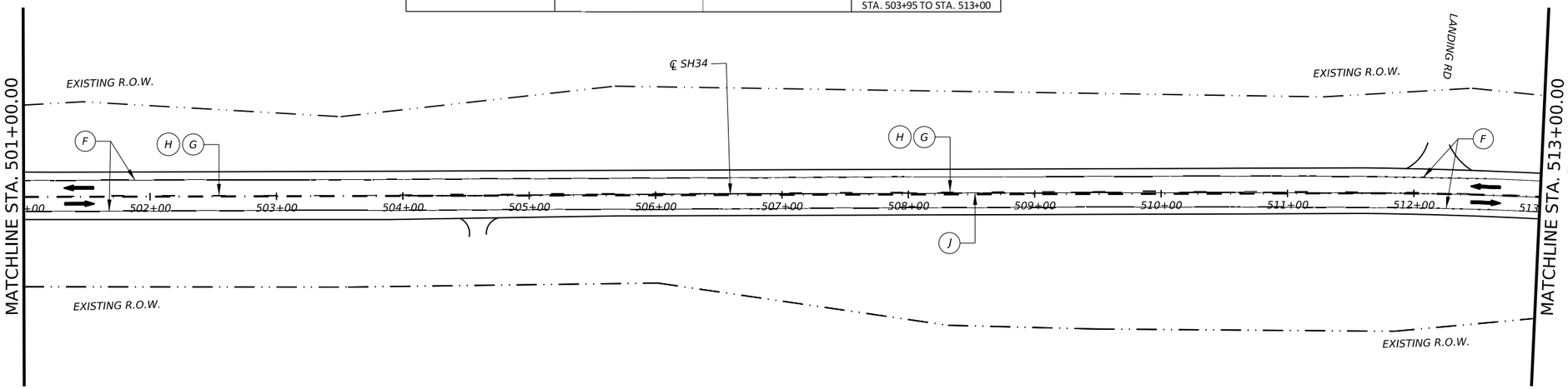
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 489+00 TO STA. 489+78			
		STA. 489+78 TO STA. 499+88	
	STA. 499+88 TO STA. 503+95		
			STA. 503+95 TO STA. 513+00



STATE OF TEXAS
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SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 21 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		172

DATE: 5/5/2024 4:42:50 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-21.dgn

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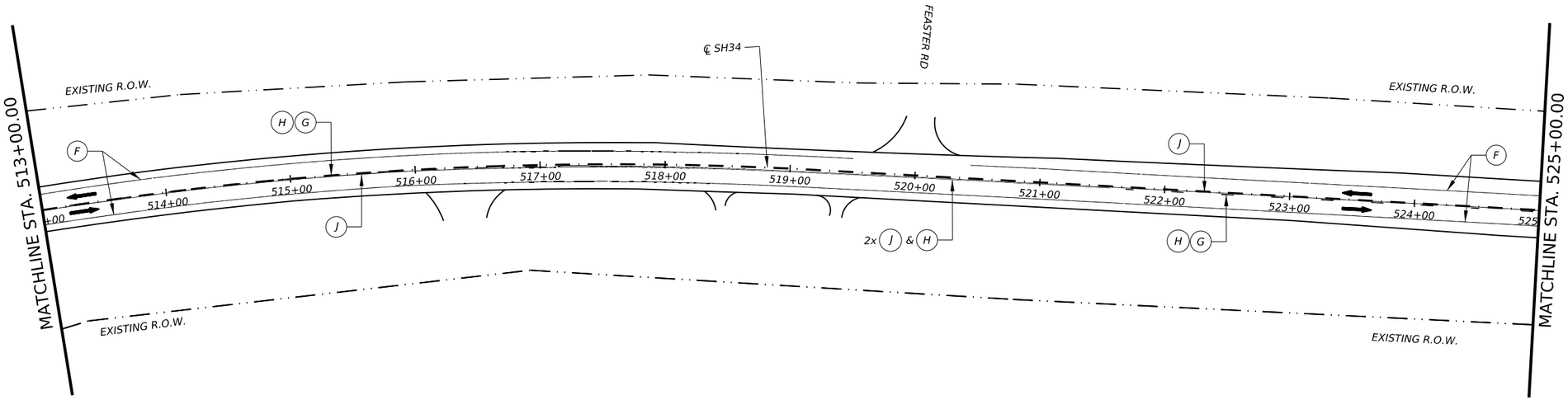


0 50 100
FEET

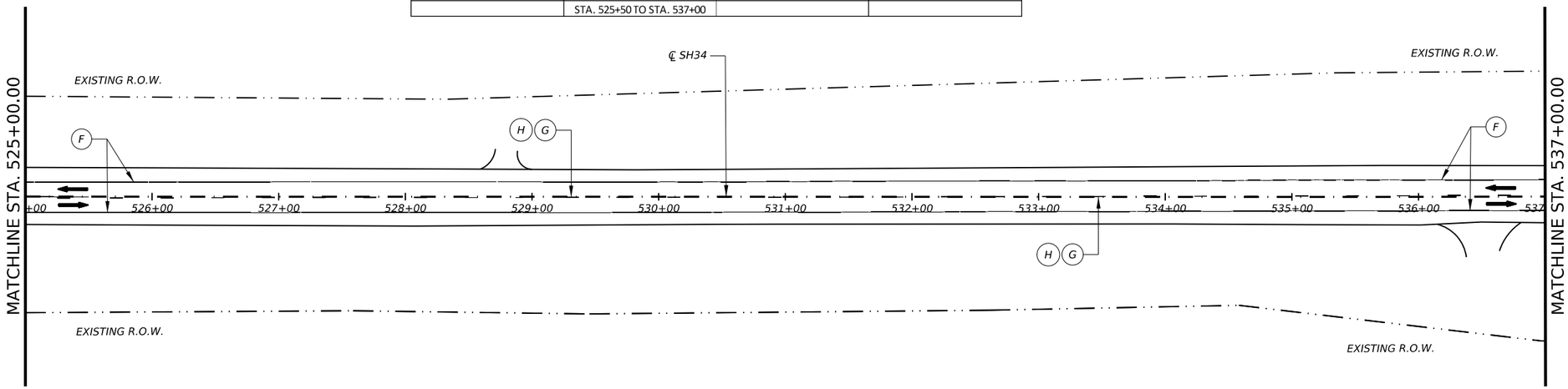
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
			STA. 513+00 TO STA. 517+13
STA. 517+13 TO STA. 521+56			
		STA. 521+56 TO STA. 525+50	
	STA. 525+50 TO STA. 537+00		



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SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 22 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		173

DATE: 5/5/2024 4:43:31 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-22.dgn

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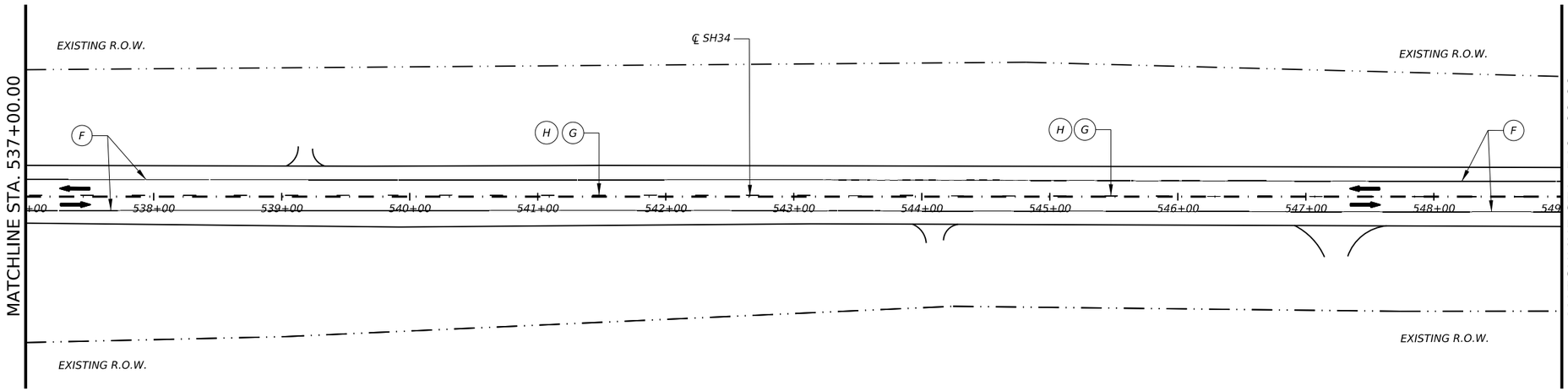


0 50 100
FEET

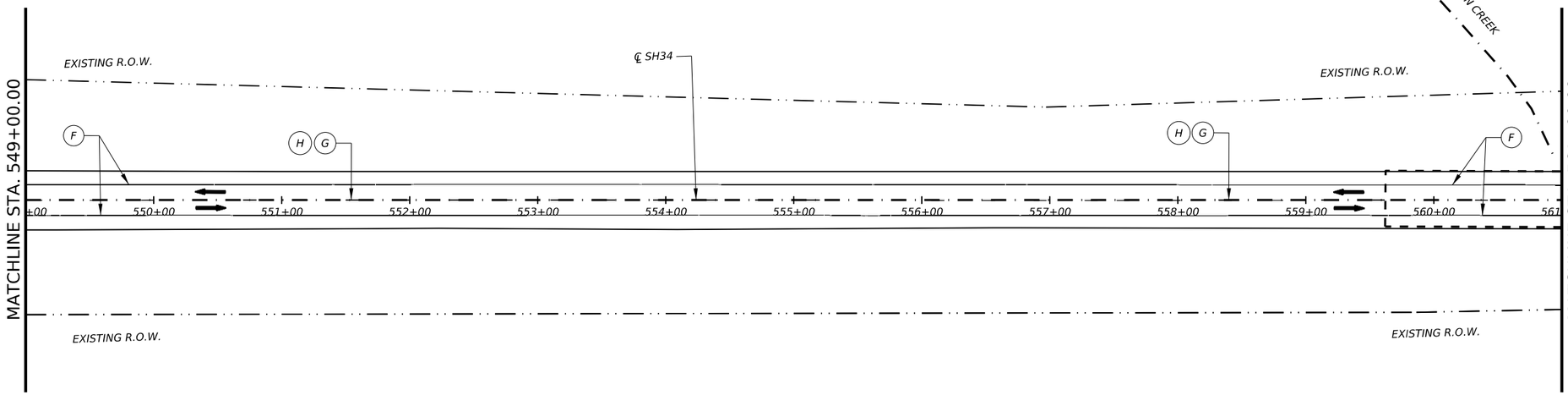
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	LID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 537+00 TO STA. 561+00		



STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 23 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		174

DATE: 5/5/2024 4:43:44 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-23.dgn

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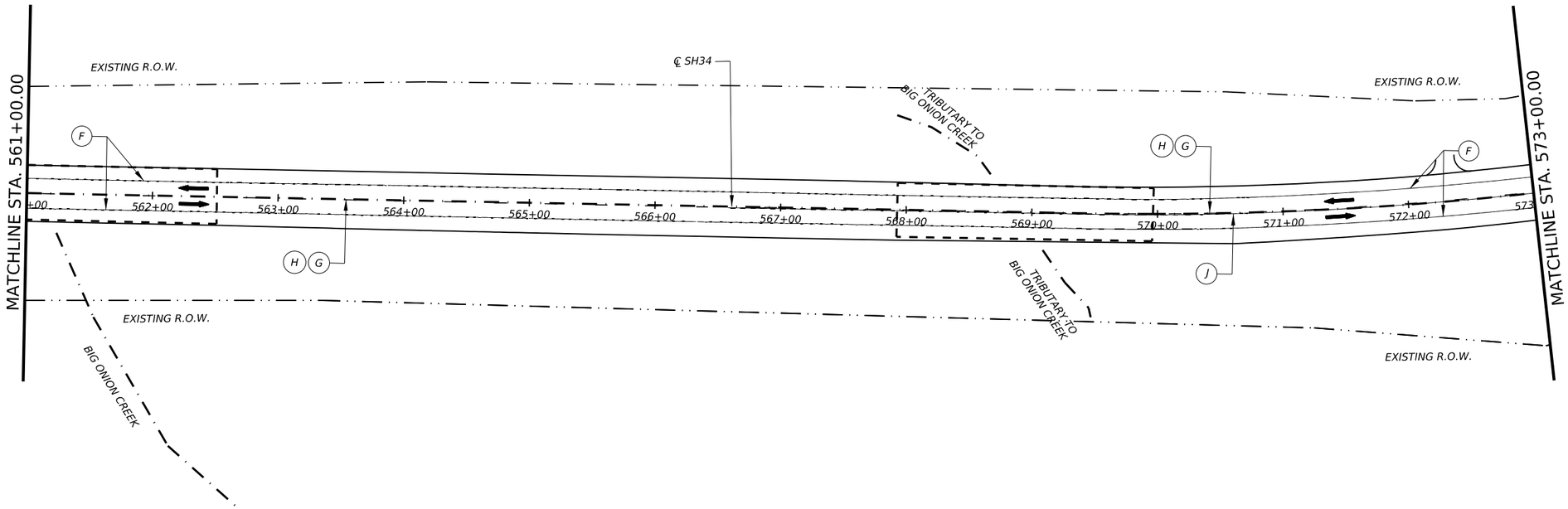


0 50 100
FEET

LEGEND

A	REFL PAV MRK TY I (W) 8" (SLD)
B	REFL PAV MRK TY I (W) 24" (SLD)
C	REFL PAV MRK TY I (W) (ARROW)
D	REFL PAV MRK TY I (W) (WORD)
E	RE PM W/RET REQ TY I(W) 6"(BRK)
F	RE PM W/RET REQ TY I(W) 6"(SLD)
G	RE PM W/RET REQ TY I(Y) 6"(BRK)
H	RE PM W/RET REQ TY I(Y) 6"(SLD)
I	REFL PAV MRKR TY I-C
J	REFL PAV MRKR TY II-A-A
K	REFL PAV MRK TY I (W) 8" (DOT)
L	REFL PAV MRK TY I (W)(RR XING)
M	RE PM W/RET REQ TY I (W) 4"(SLD)
N	RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

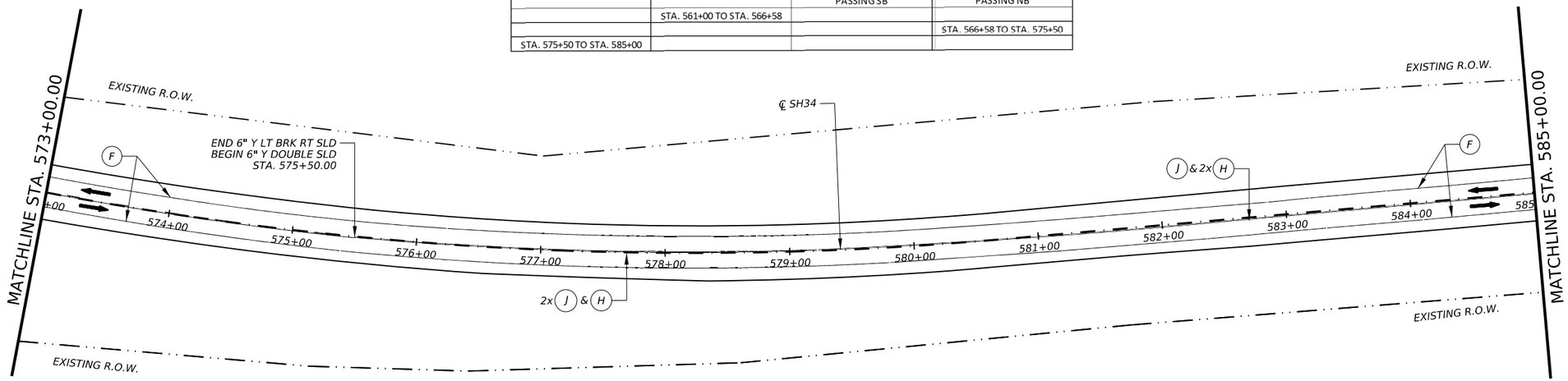
SIGN LEGEND

#	SIGN NUMBER
	SIGN

*SIGN AND POST TO BE RELOCATED

*E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 561+00 TO STA. 566+58		
			STA. 566+58 TO STA. 575+50
STA. 575+50 TO STA. 585+00			



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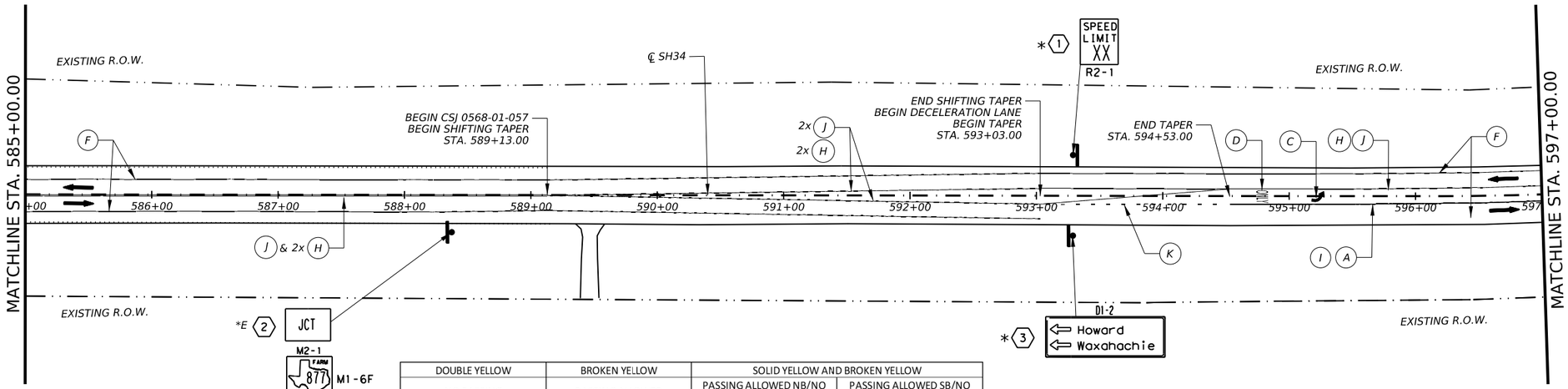
SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

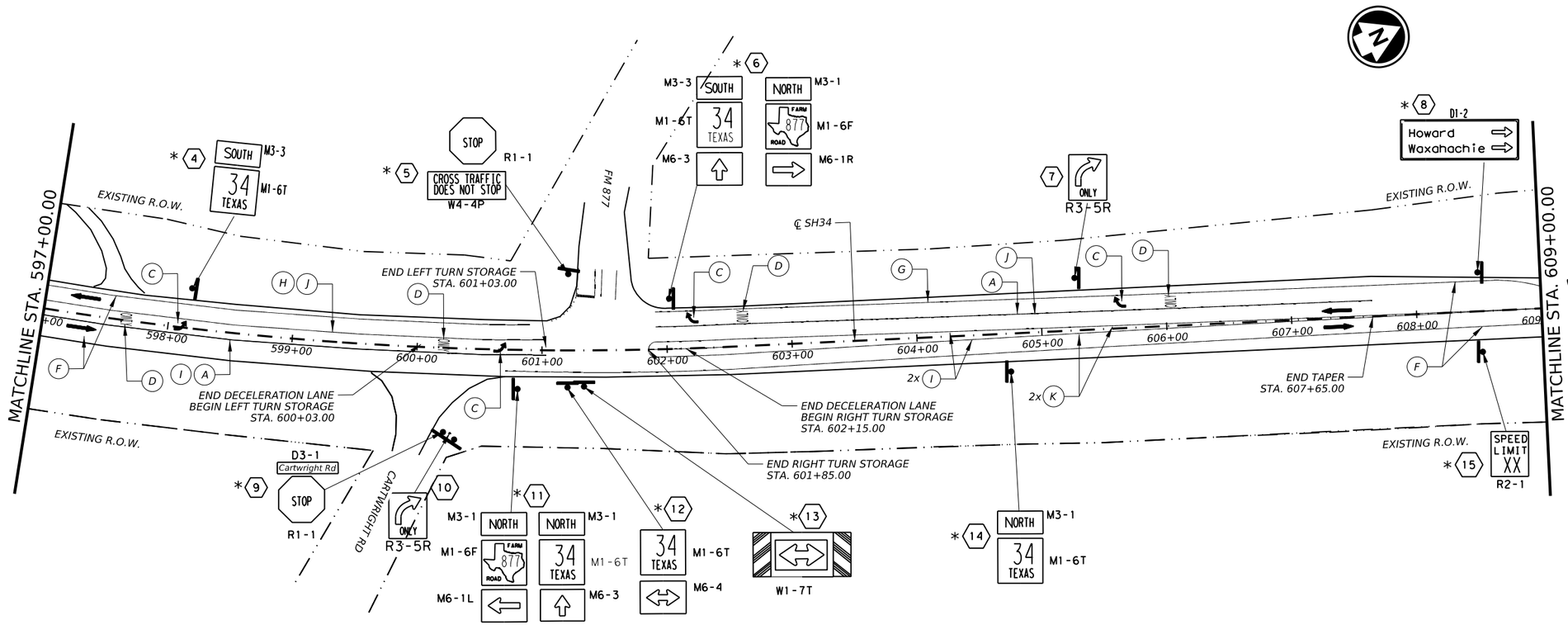
SHEET 24 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		175

DATE: 5/5/2024 4:43:57 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-24.dgn



DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 585+00 TO STA. 589+13			
STA. 607+90 TO STA. 612+84			
		STA. 612+84 TO STA. 621+00	



0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 25 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		176

DATE: 5/5/2024 4:44:30 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-25.dgn

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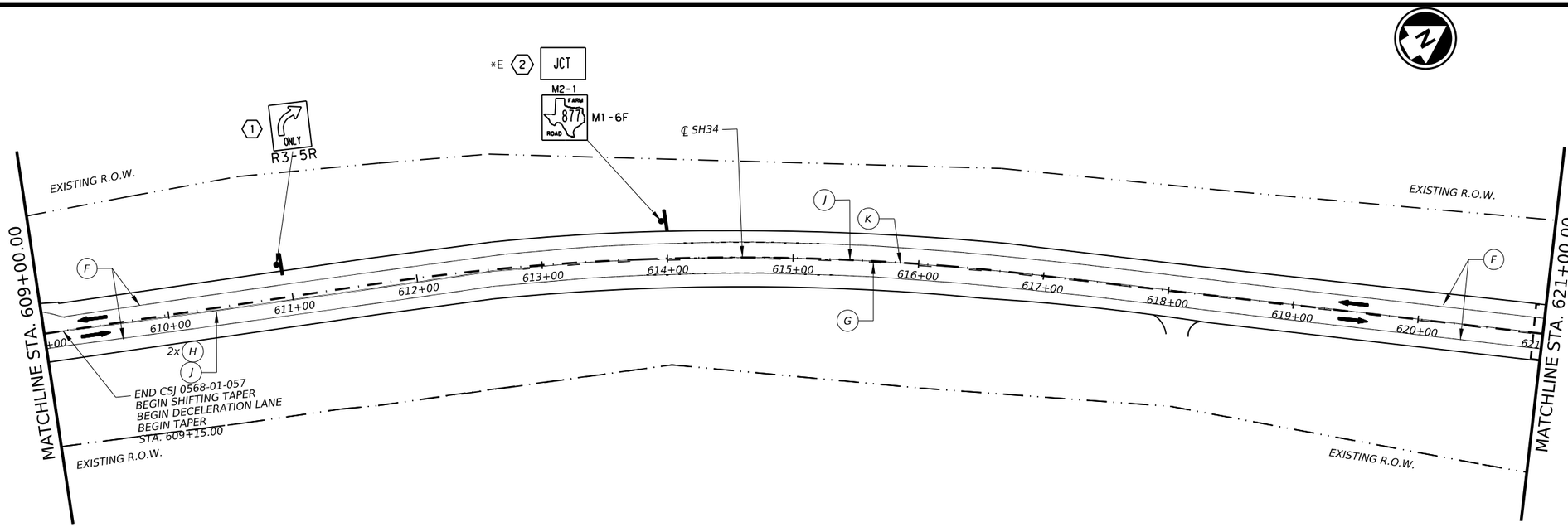


0 50 100
FEET

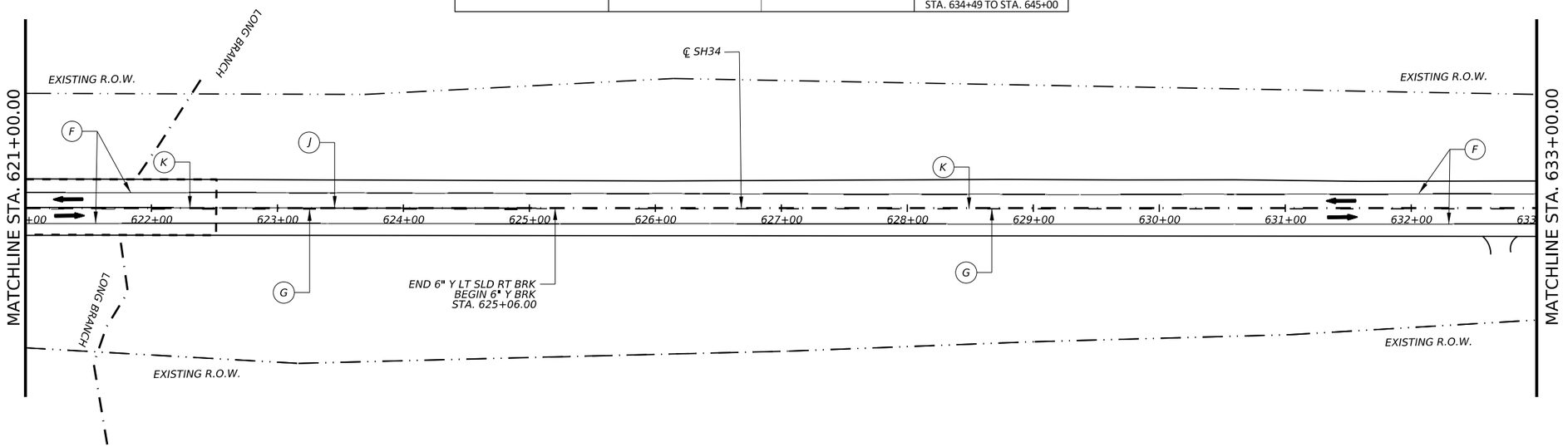
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
		STA. 621+00 TO STA. 625+05	
	STA. 625+05 TO STA. 634+49		
			STA. 634+49 TO STA. 645+00



STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 26 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		177

DATE: 5/5/2024 4:45:11 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-26.dgn

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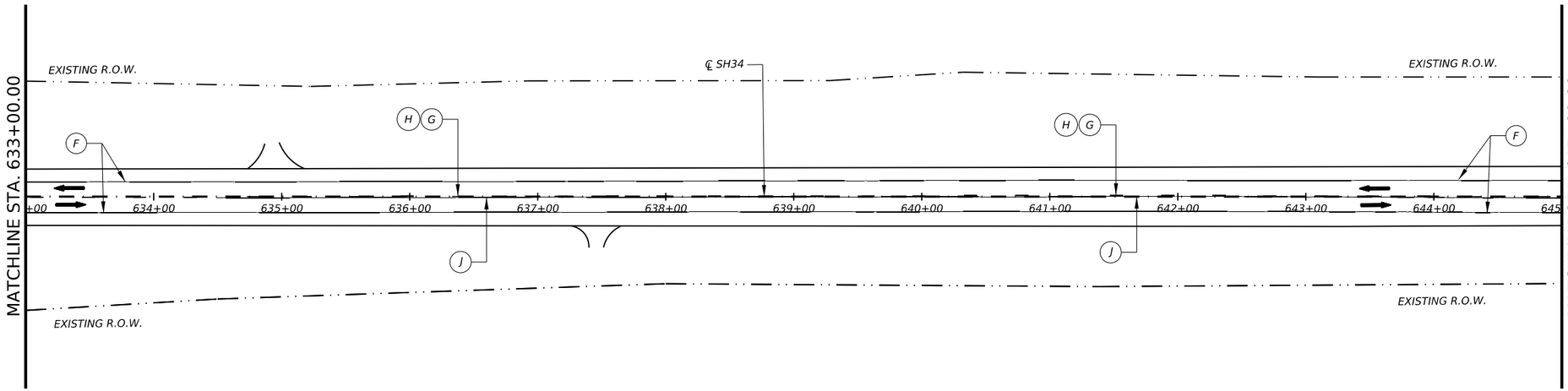

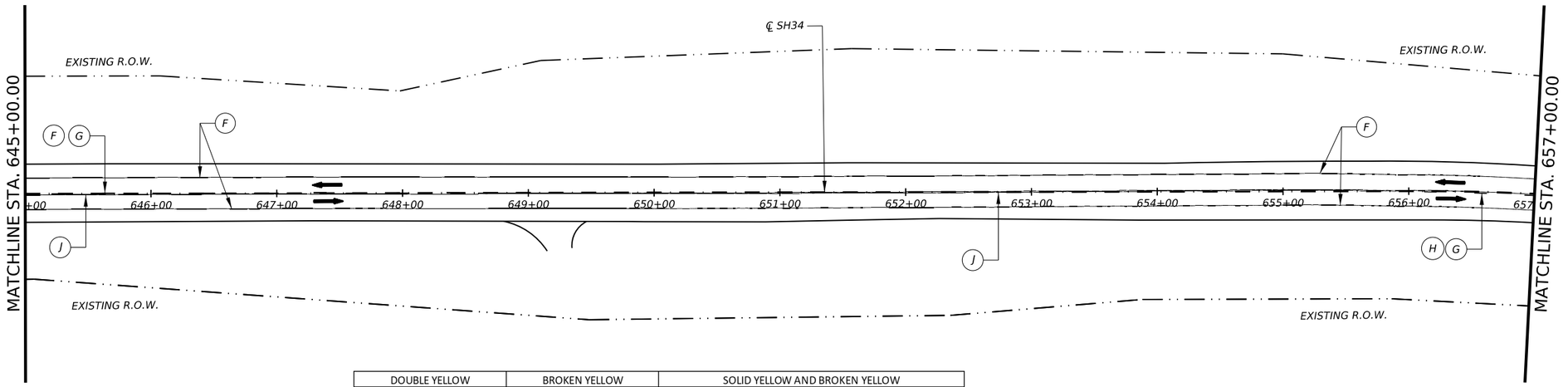

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
			STA. 645+00 TO STA. 648+60
STA. 648+60 TO STA. 655+90			
		STA. 655+90 TO STA. 666+32	
	STA. 666+32 TO STA. 669+00		

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN

*SIGN AND POST TO BE RELOCATED

*E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 27 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		178

DATE: 5/5/2024 4:45:24 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-27.dgn

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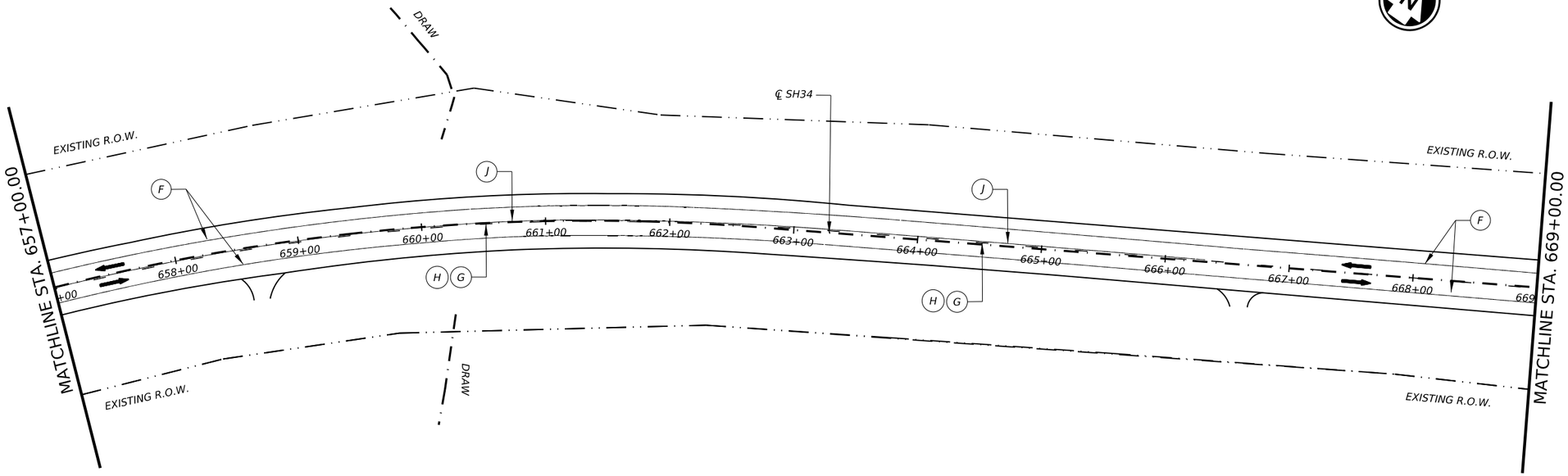


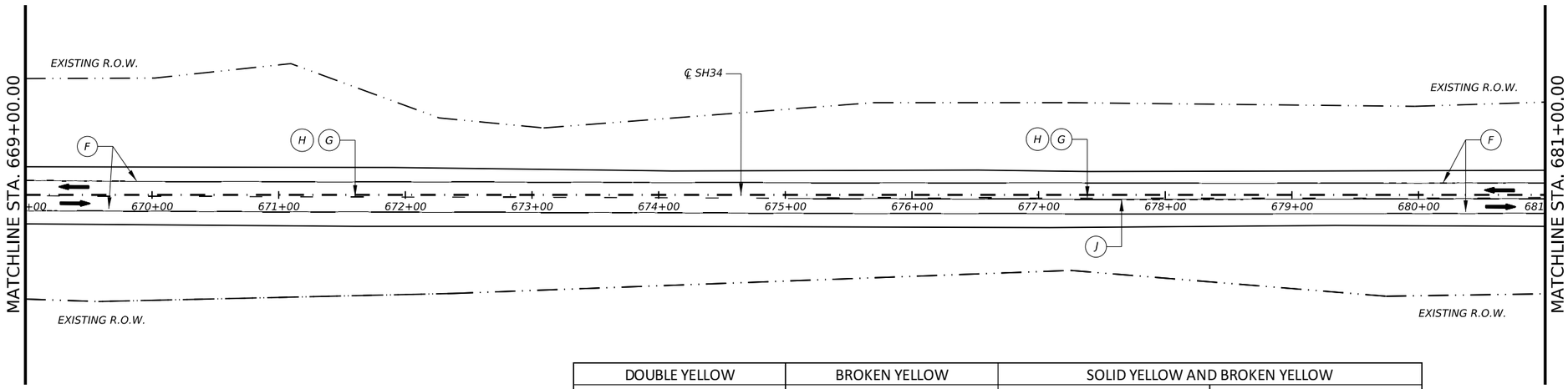
0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN



DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 669+00 TO STA. 675+02		
			STA. 675+02 TO STA. 686+84
STA. 686+84 TO STA. 693+00			

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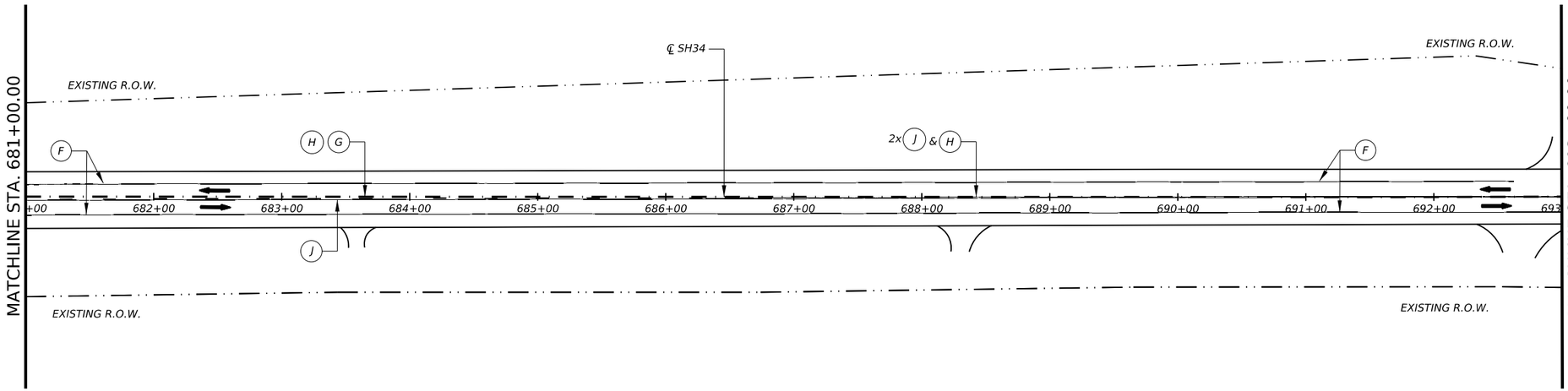
SH 34

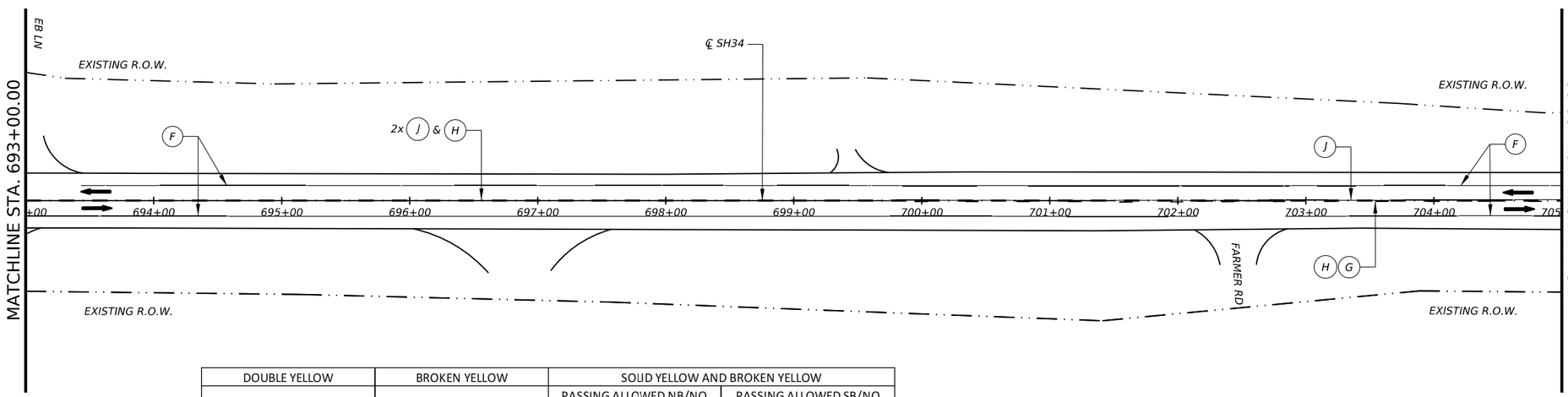
PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 28 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		179

DATE: 5/5/2024 4:45:36 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-28.dgn





DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 693+00 TO STA. 699+80			
		STA. 699+80 TO STA. 712+20	
	STA. 712+20 TO STA. 717+00		

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN

*SIGN AND POST TO BE RELOCATED

*E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
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vanrajsinh Mahida 05/06/2024

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Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 29 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		180

DATE: 5/5/2024 4:46:08 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-29.dgn

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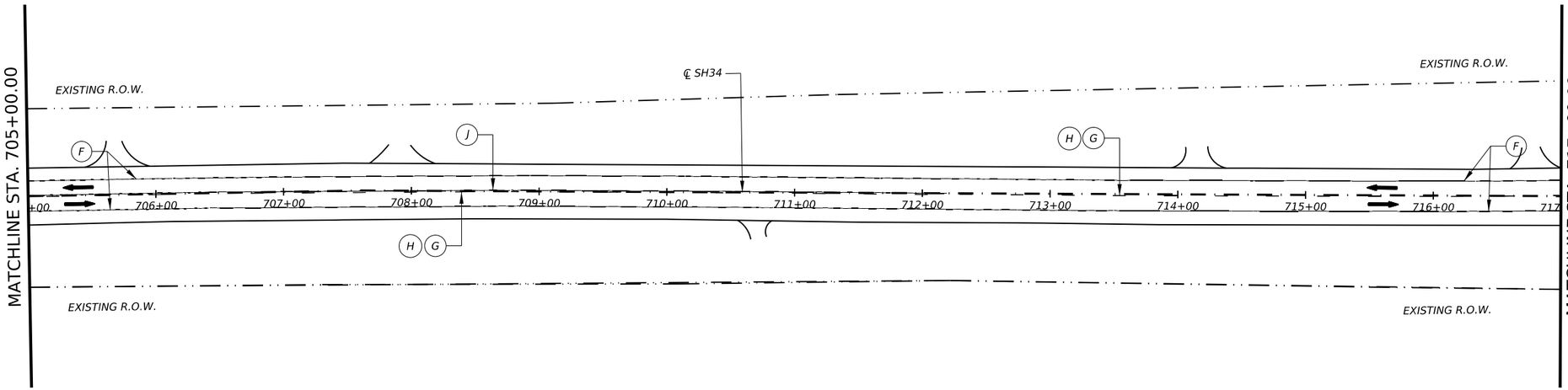

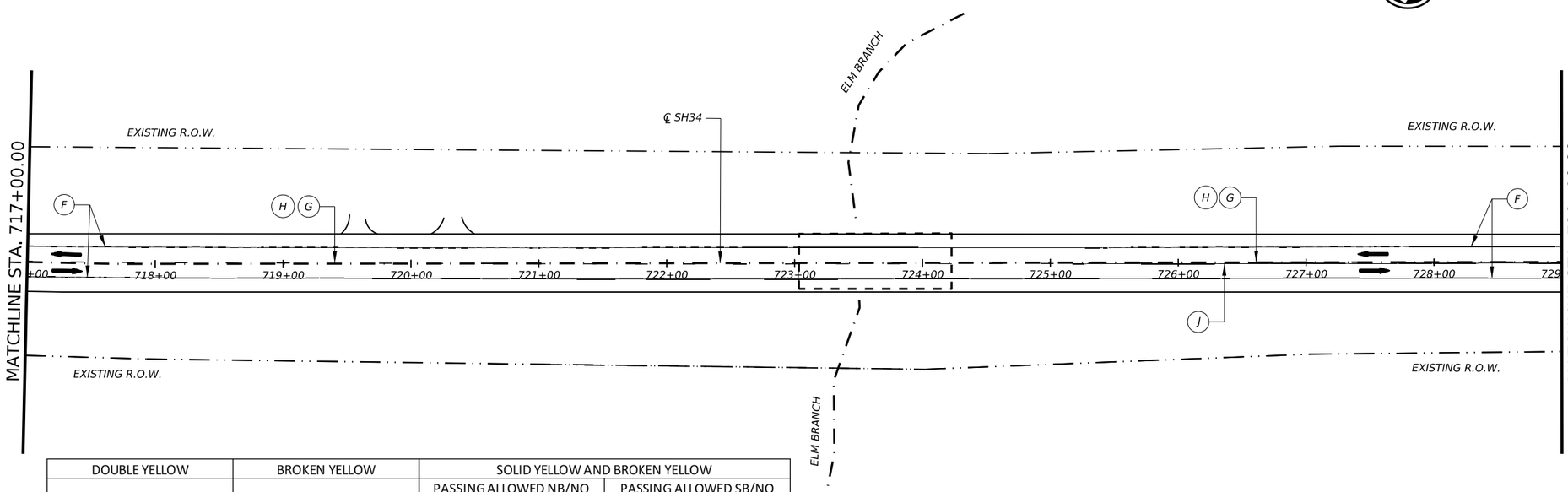

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 717+00 TO STA. 725+18		
			STA. 725+18 TO STA. 741+00

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN

*SIGN AND POST TO BE RELOCATED

*E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 30 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		181

DATE: 5/5/2024 4:46:50 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-30.dgn

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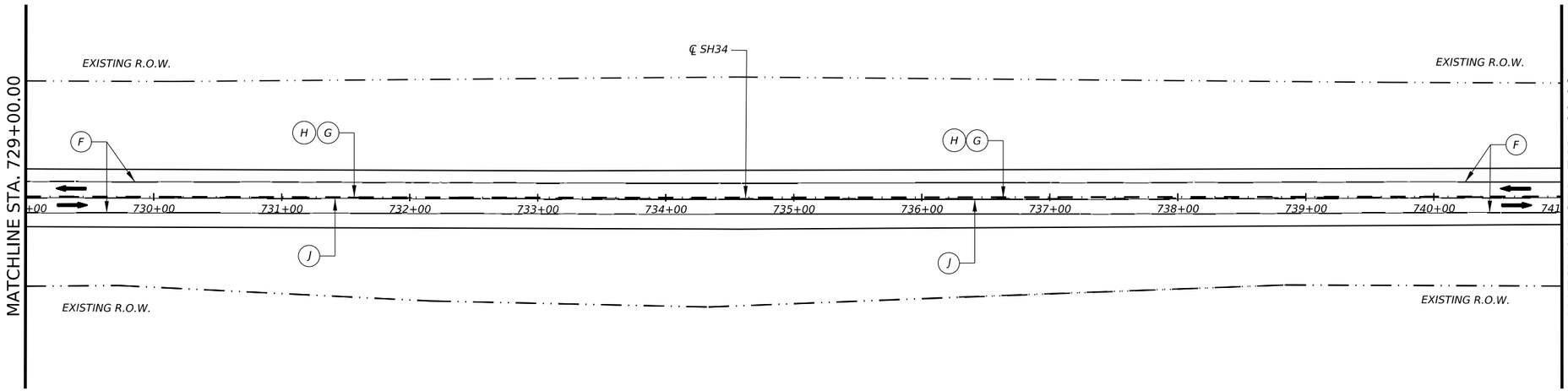


0 50 100
FEET

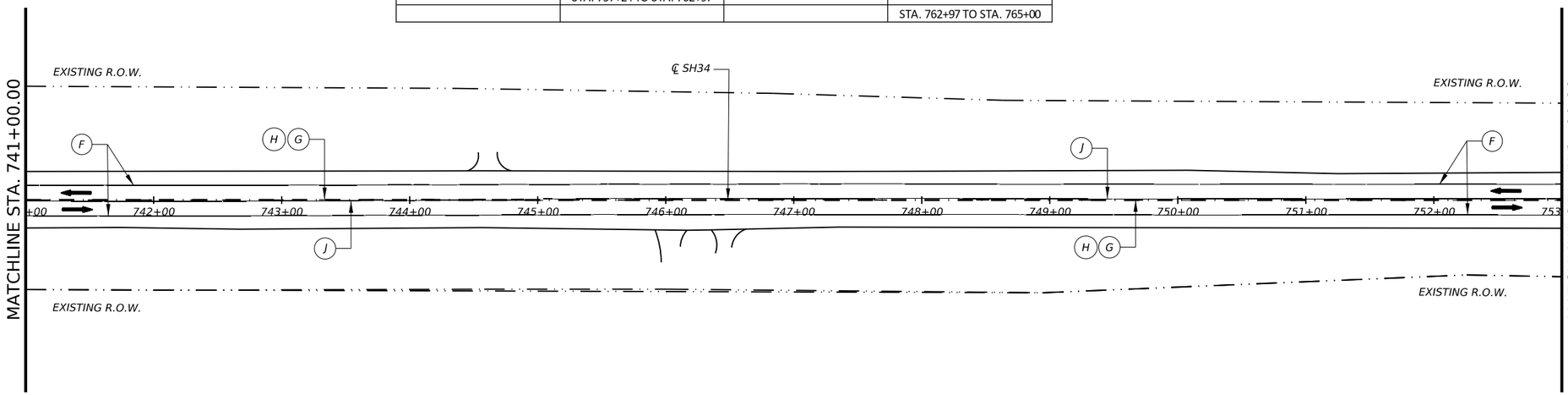
LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
			STA. 741+00 TO STA. 745+04
		STA. 745+04 TO STA. 757+24	
	STA. 757+24 TO STA. 762+97		
			STA. 762+97 TO STA. 765+00



STATE OF TEXAS
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137833
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vanrajsinh Mahida 05/06/2024

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SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		182

DATE: 5/5/2024 4:47:23 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-31.dgn

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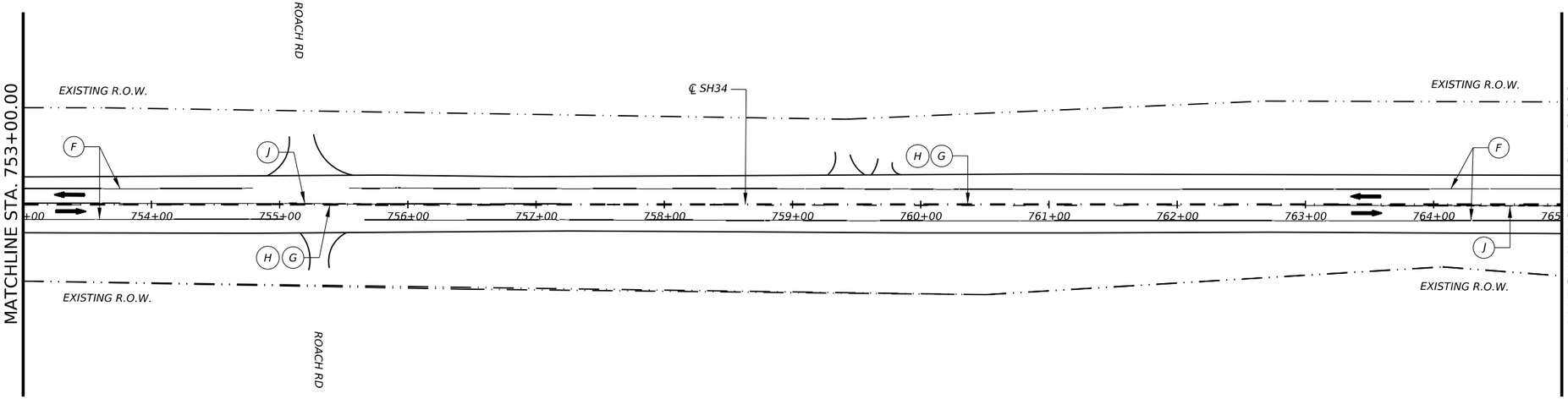

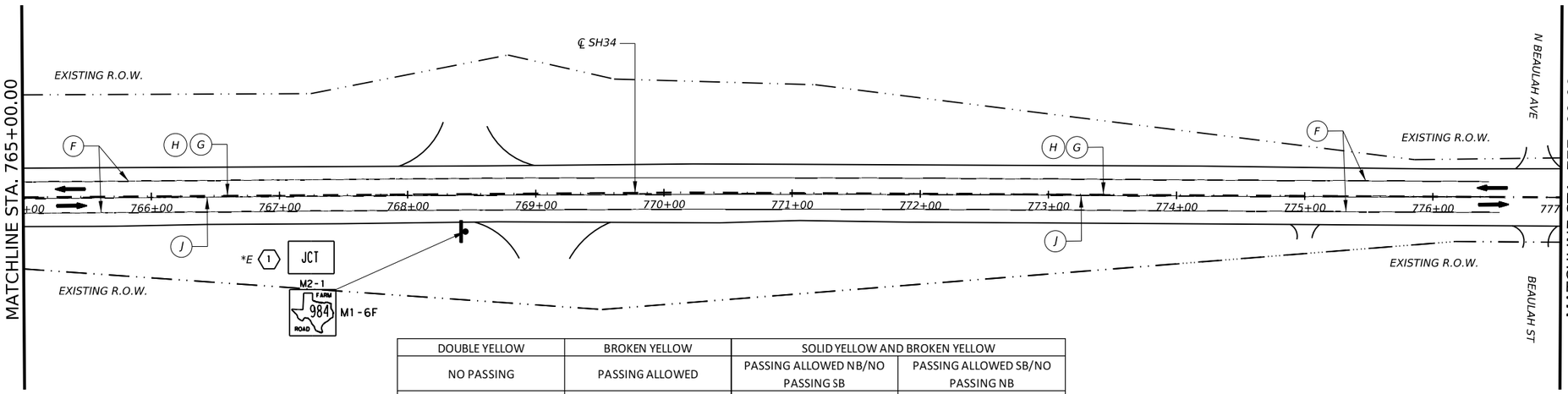

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
			STA. 765+00 TO STA. 775+50
STA. 775+50 TO STA. 776+57			
STA. 776+88 TO STA. 780+20			
STA. 780+62 TO STA. 785+14			
STA. 785+47 TO STA. 789+00			

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
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vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

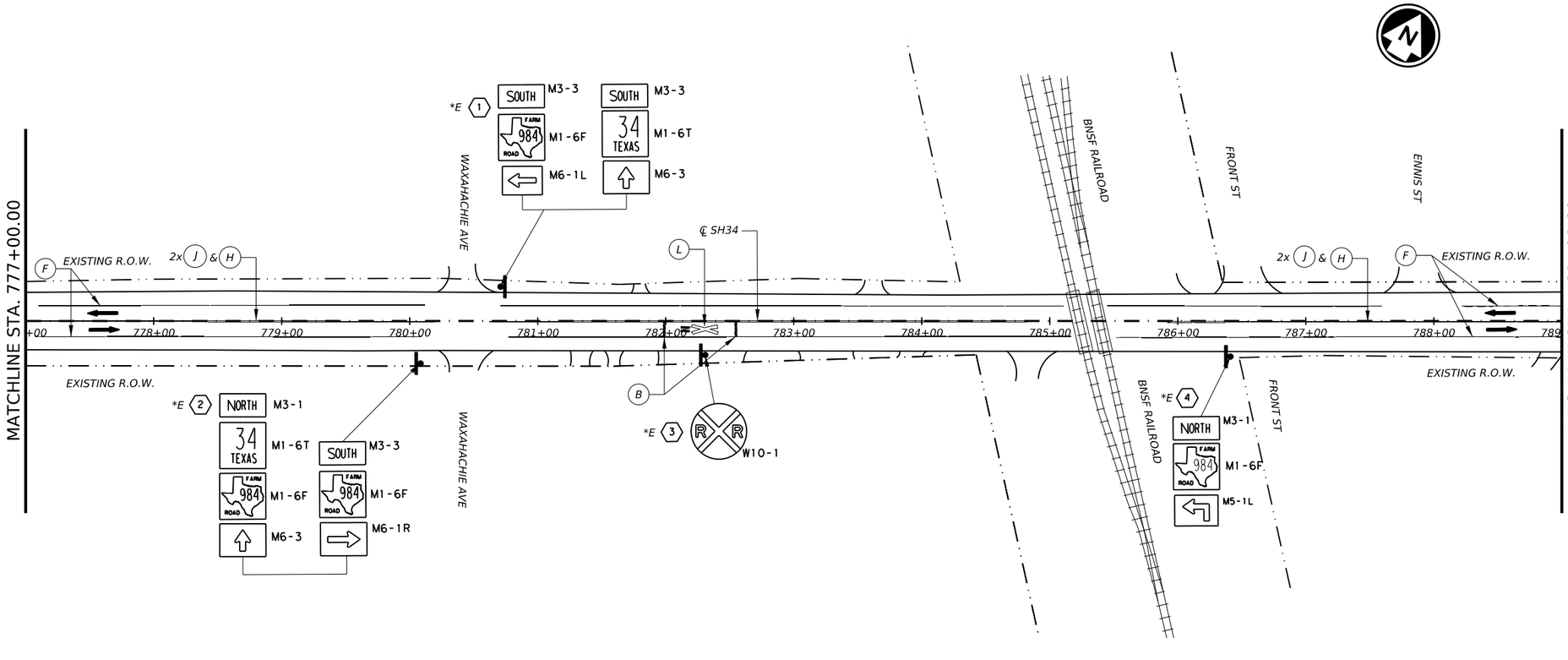
SH 34

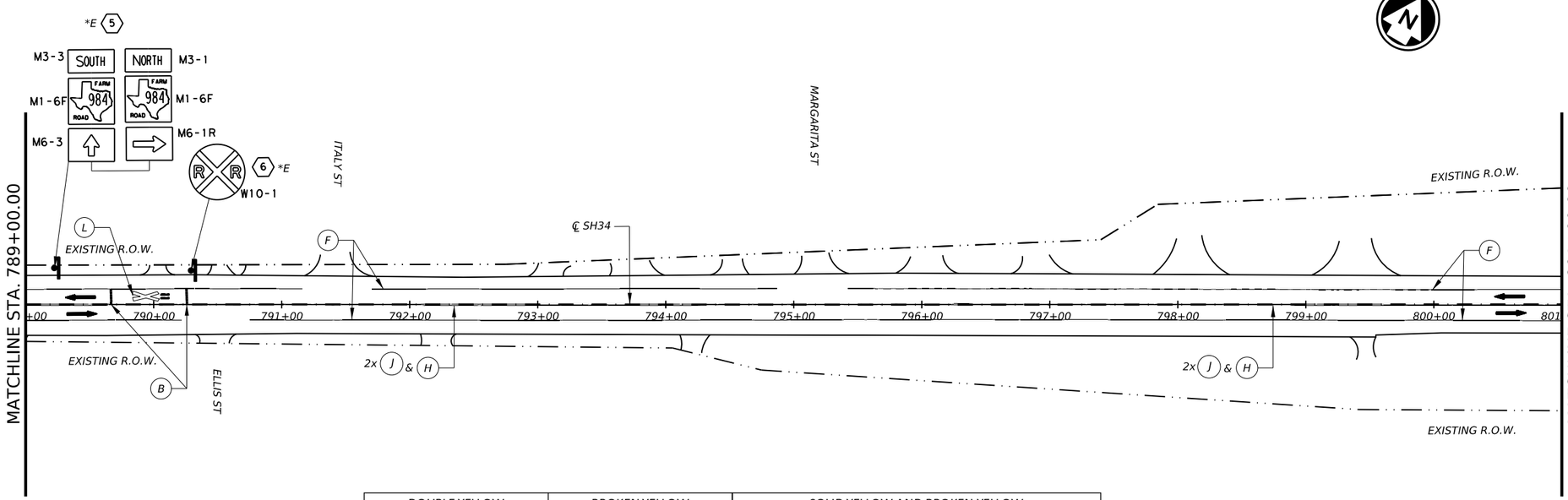
PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 32 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		183

DATE: 5/5/2024 4:47:28 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-32.dgn





DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 789+00 TO STA. 810+54.00			

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
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137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

, P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

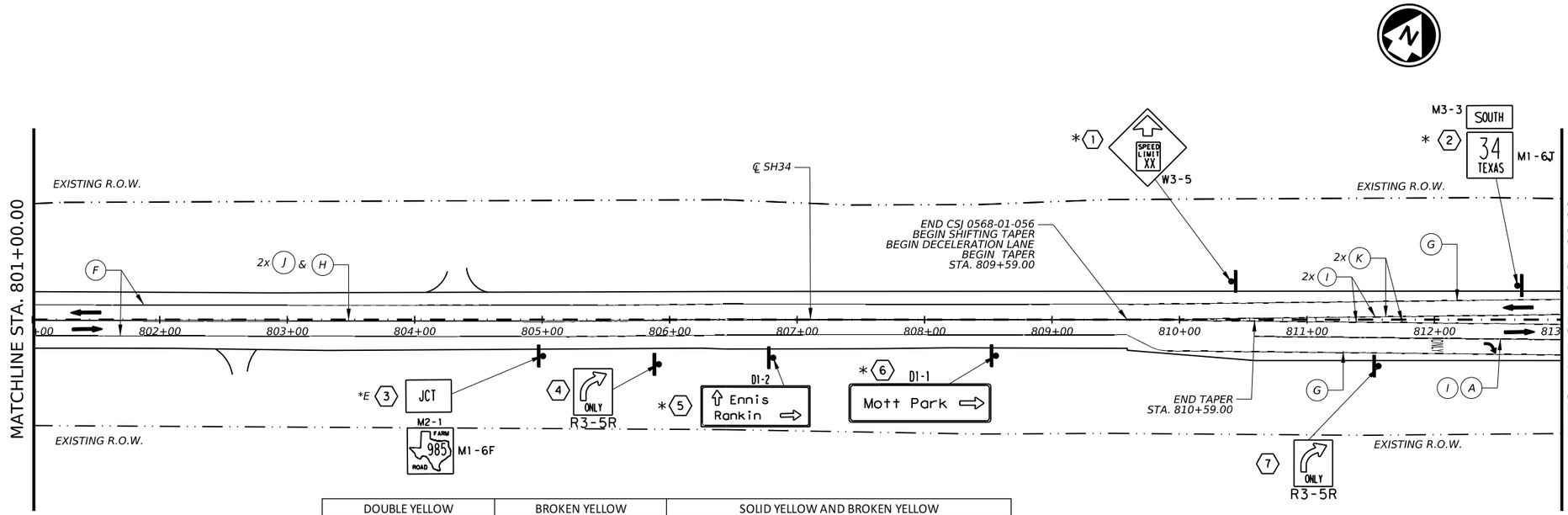
PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 33 OF 47

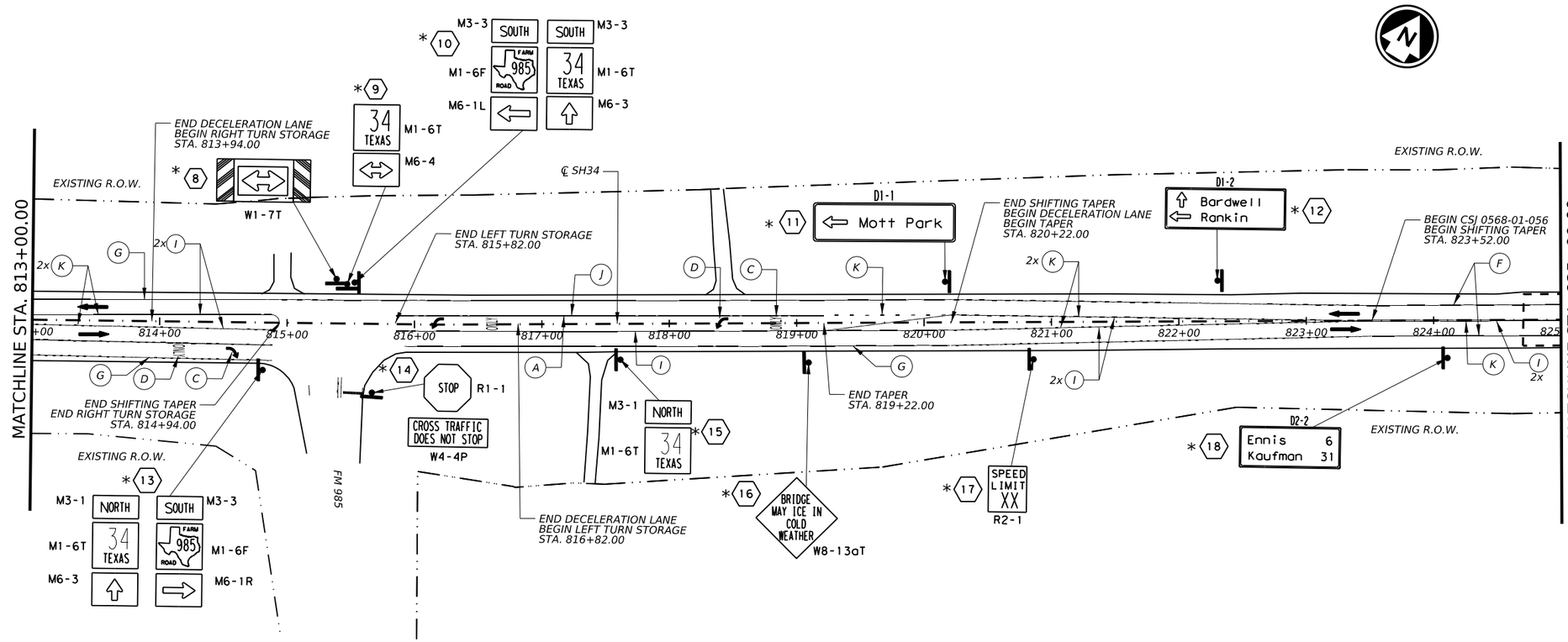
CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		184

DATE: 5/5/2024 4:47:34 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34_PVMT_Signs Layouts-33.dgn

CK DW CK DW



DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 823+52 TO STA. 837+00			



0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

, P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

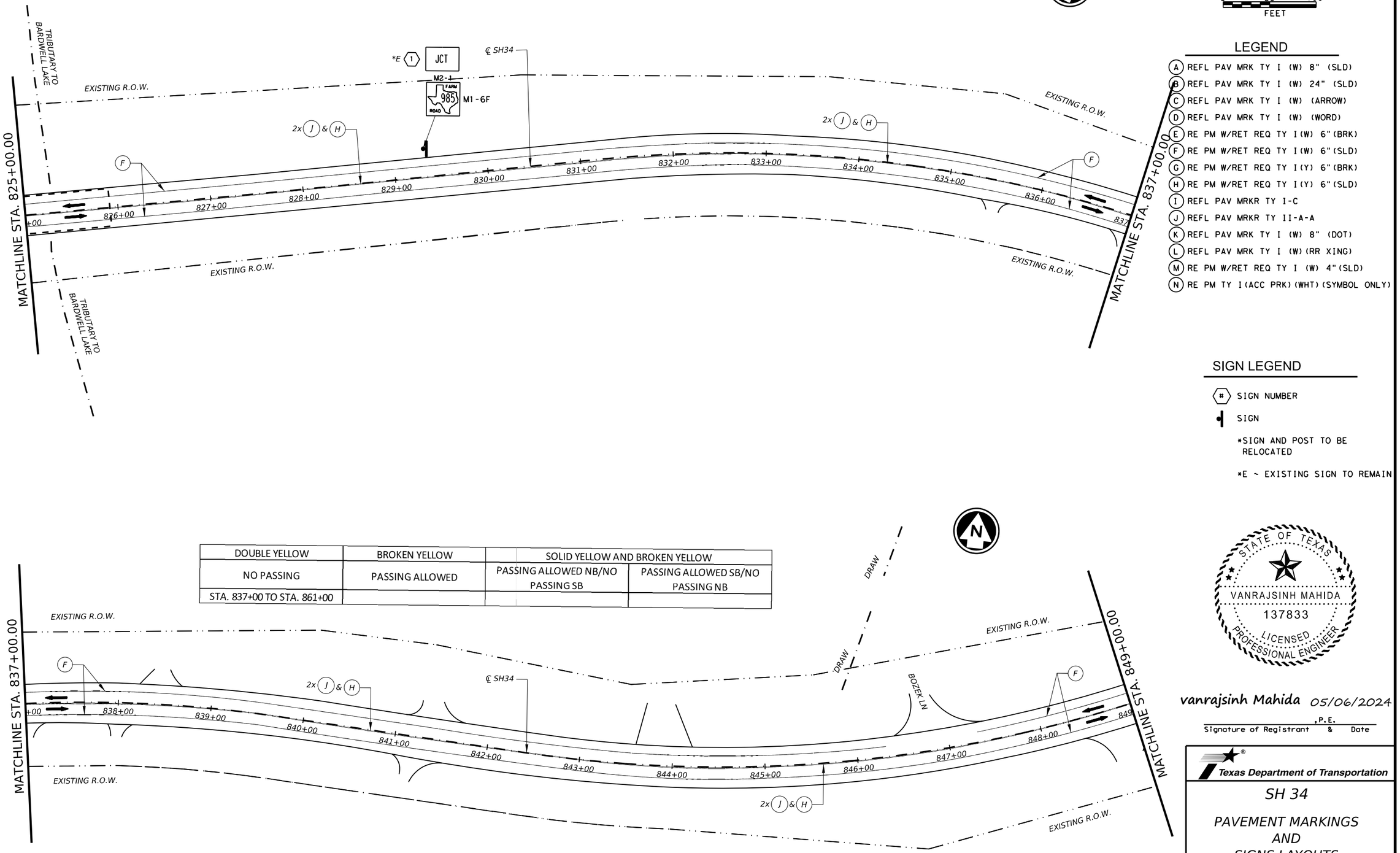
PAVEMENT MARKING AND SIGNS LAYOUTS

SHEET 34 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		185

DATE: 5/5/2024 4:47:39 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/056801052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-34.dgn

CK: DW: CK: DW:



LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 837+00 TO STA. 861+00			

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

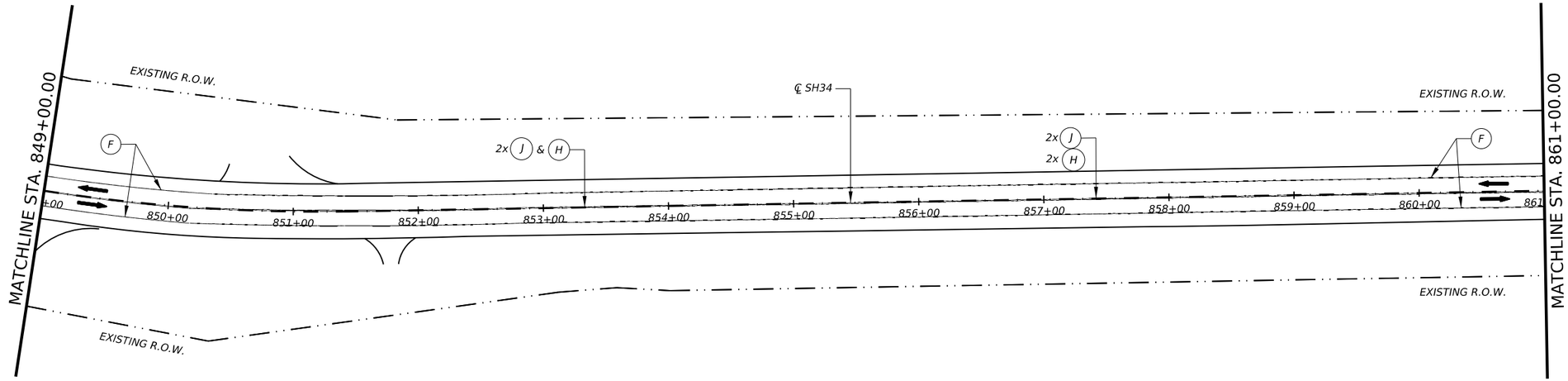
SH 34

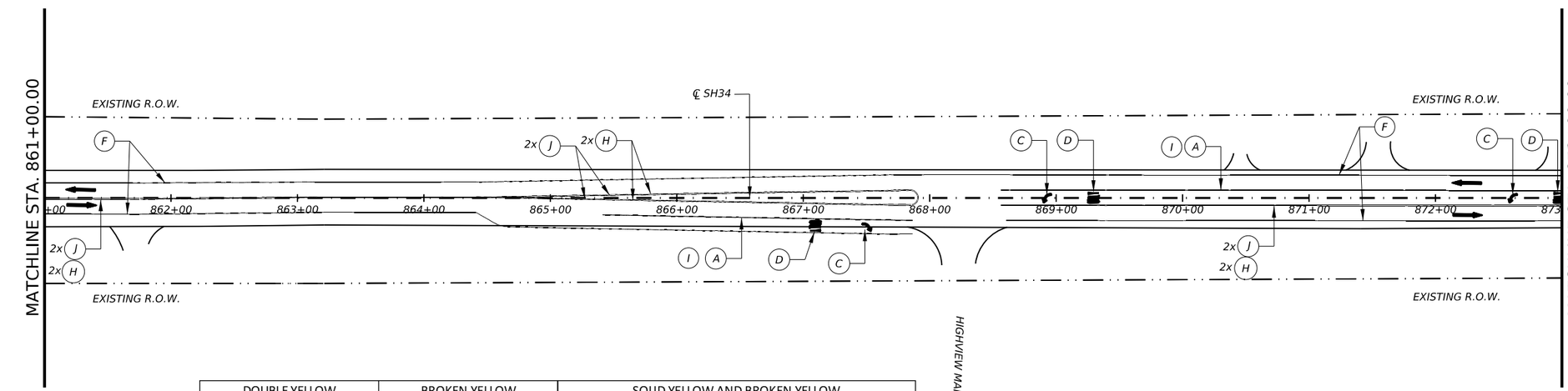
PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 35 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		186

DATE: 5/5/2024 4:47:44 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-35.dgn





DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 861+00 TO STA. 864+42			
STA. 878+47 TO STA. 885+00			

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 36 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		187

DATE: 5/5/2024 4:47:52 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-36.dgn

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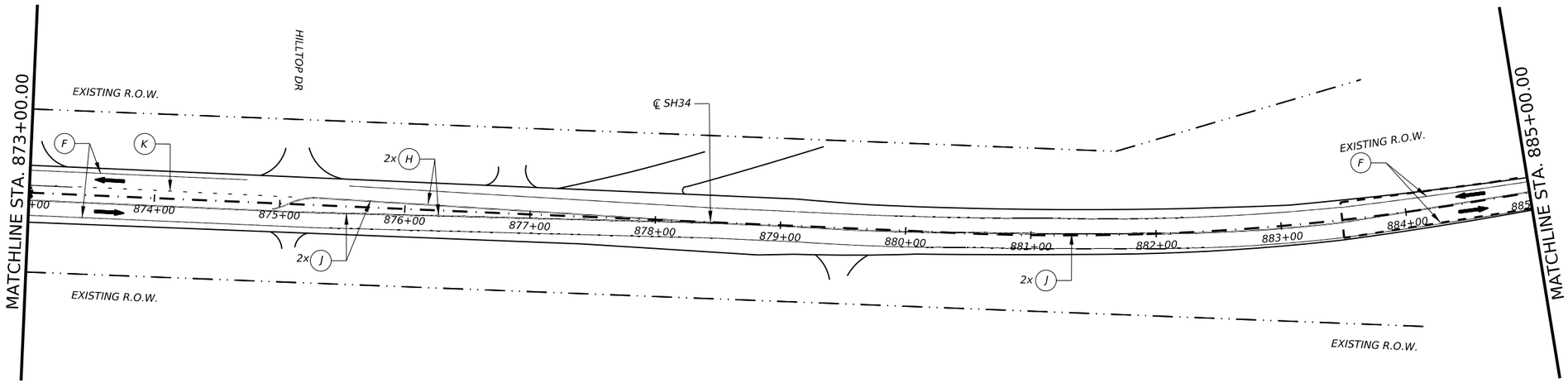
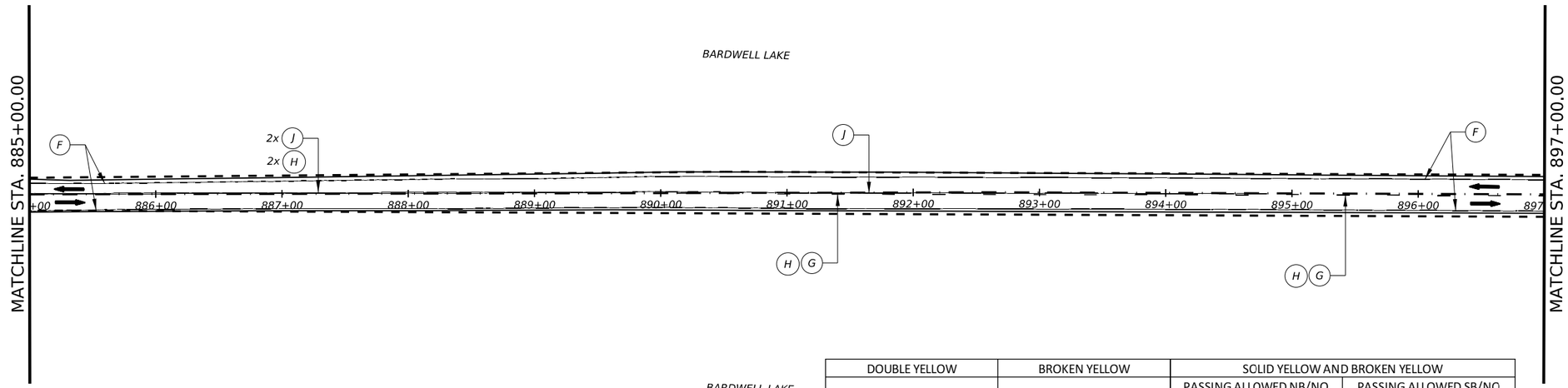
CK:
DW:





DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 885+00 TO STA. 889+78			
		STA. 889+78 TO STA. 894+80	
	STA. 894+80 TO STA. 909+00		

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 37 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		188

DATE: 5/5/2024 4:47:57 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-37.dgn

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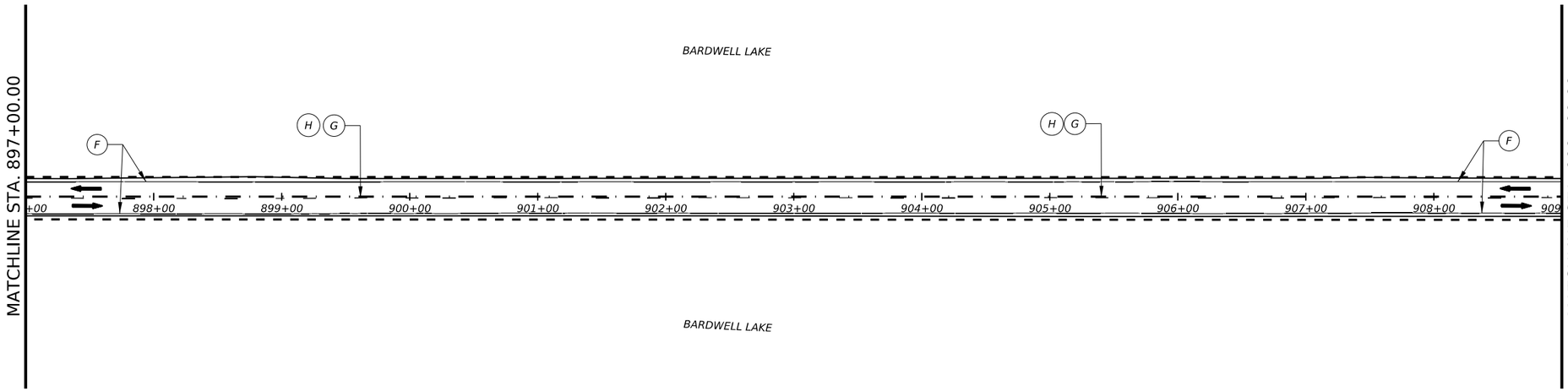

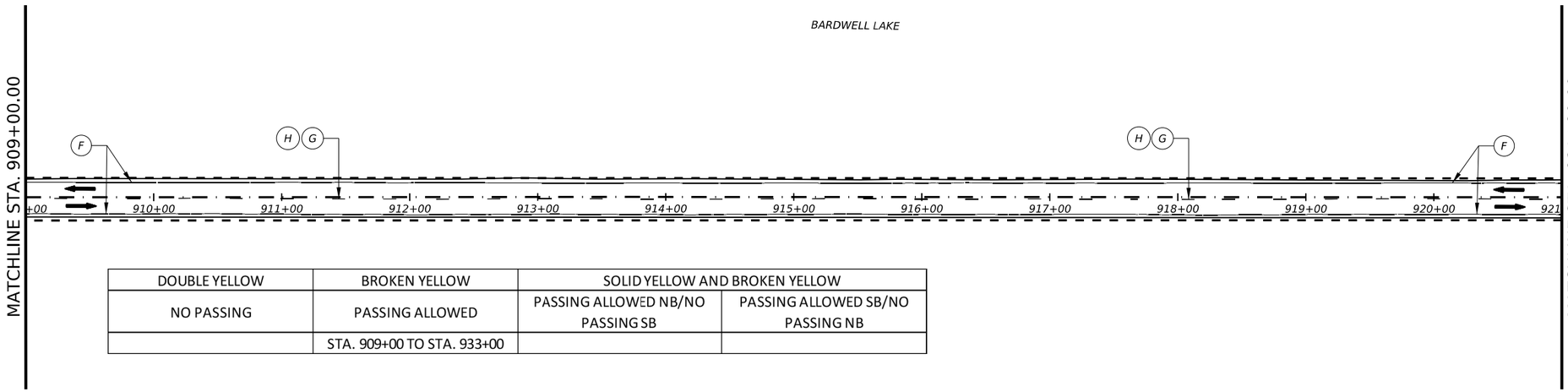

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 909+00 TO STA. 933+00		

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
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137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 38 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		189

DATE: 5/5/2024 4:48:02 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-38.dgn

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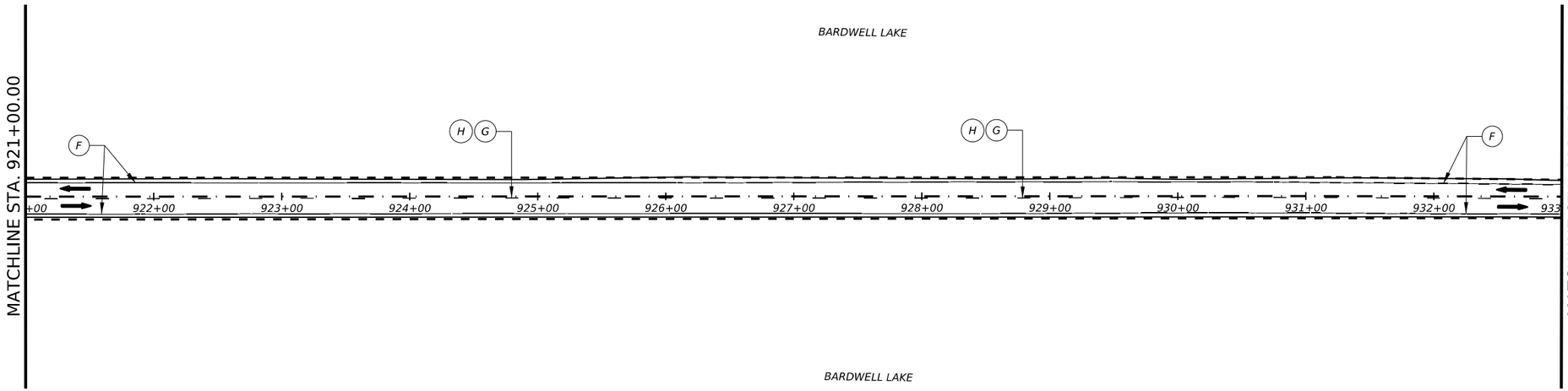

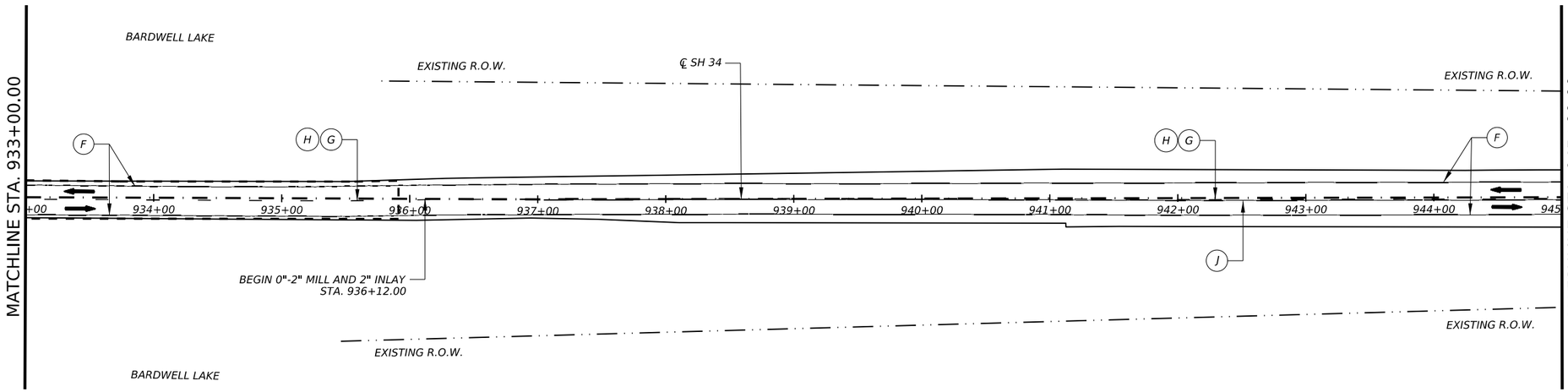

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
	STA. 933+00 TO STA. 937+05		
			STA. 937+05 TO STA. 954+30
STA. 954+30 TO STA. 957+00			

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

(#) SIGN NUMBER

SIGN

*SIGN AND POST TO BE RELOCATED

*E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 39 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		190

DATE: 5/5/2024 4:48:43 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-39.dgn

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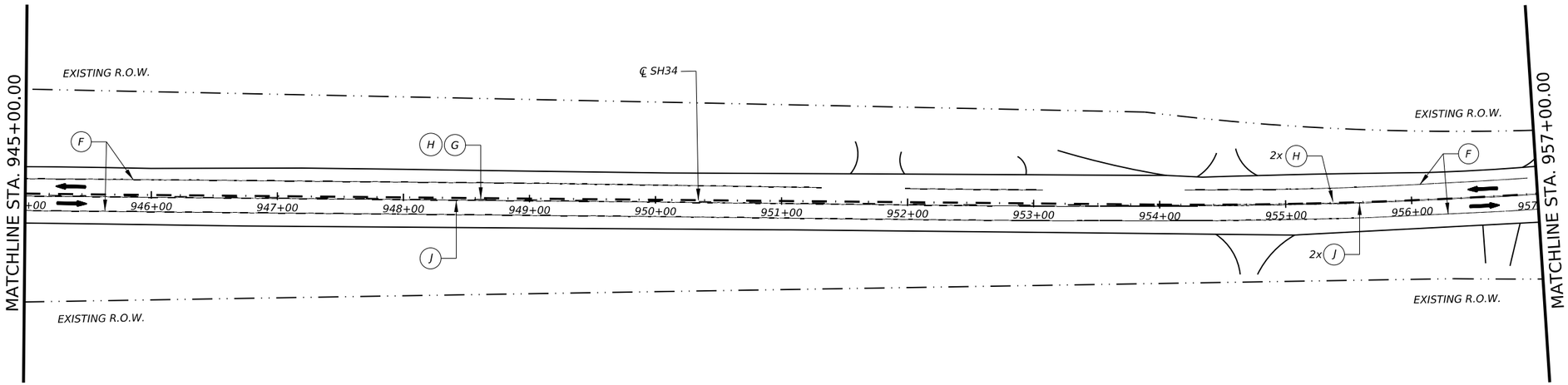

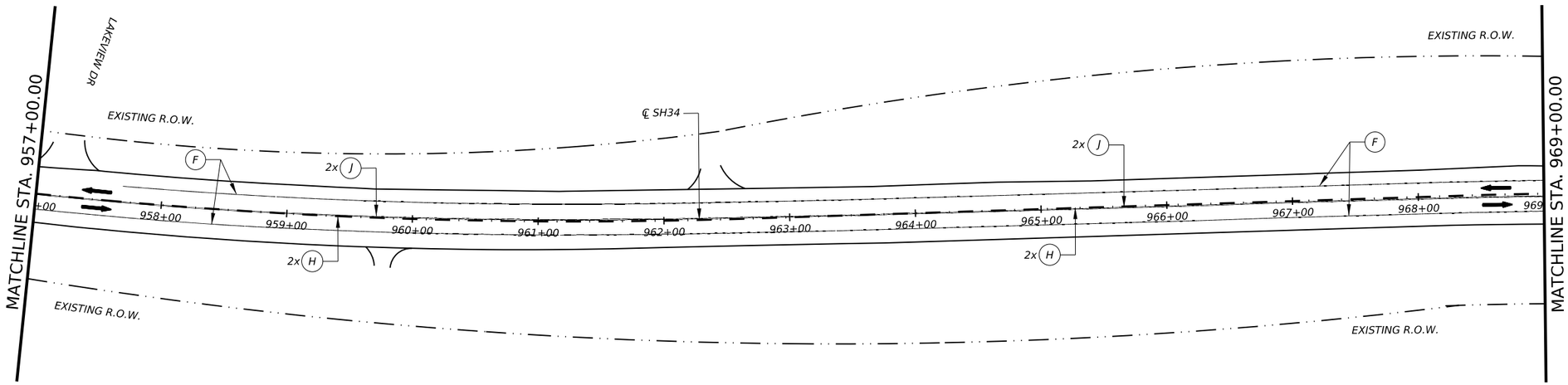

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 957+00 TO STA. 981+00			

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		191

DATE: 5/5/2024 4:48:56 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-40.dgn

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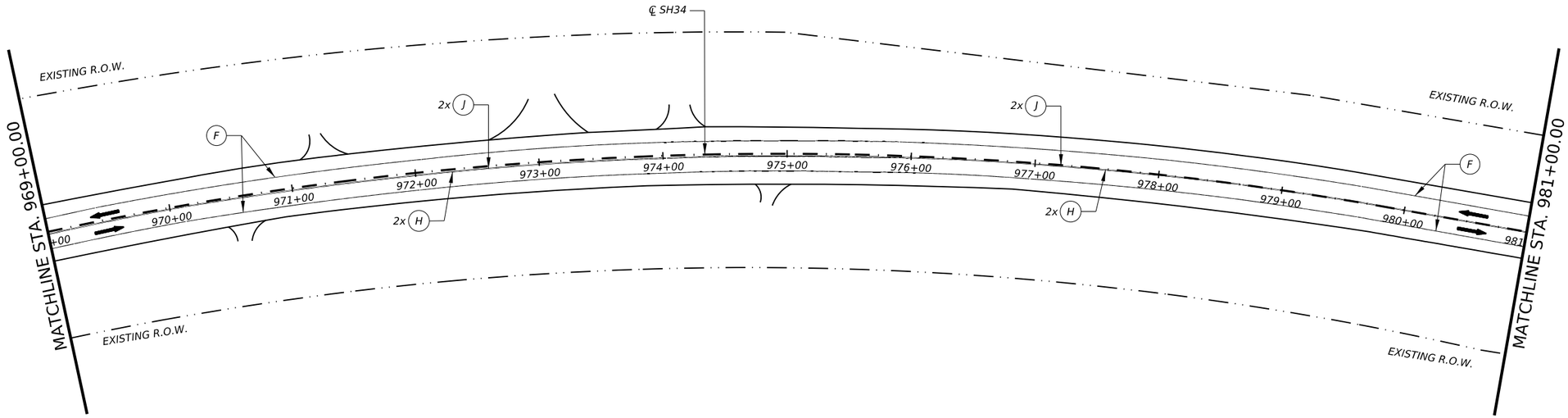

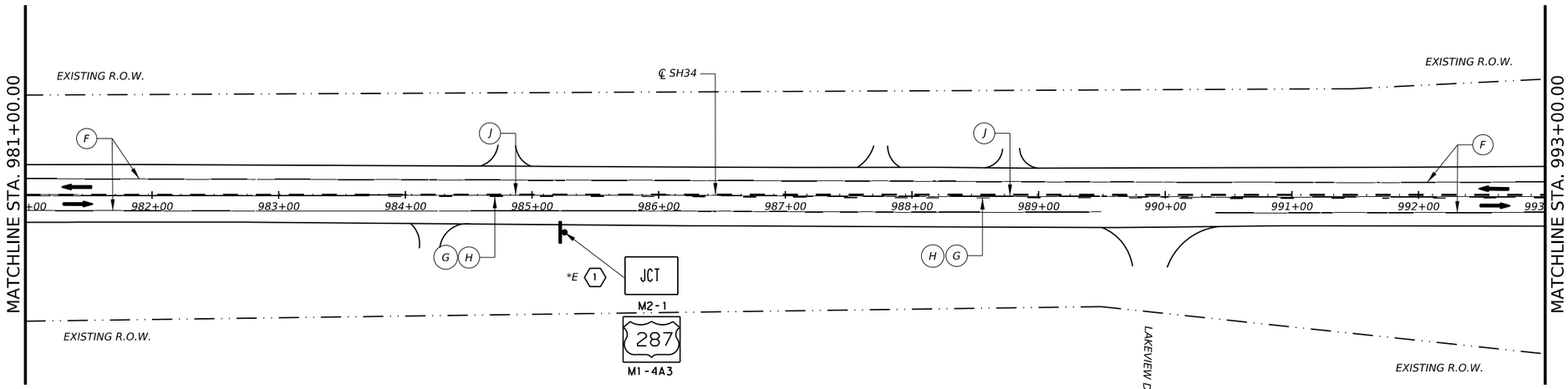

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 981+00 TO STA. 983+72			
		STA. 983+72 TO STA. 995+45	

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 41 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		192

DATE: 5/5/2024 4:49:08 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-41.dgn

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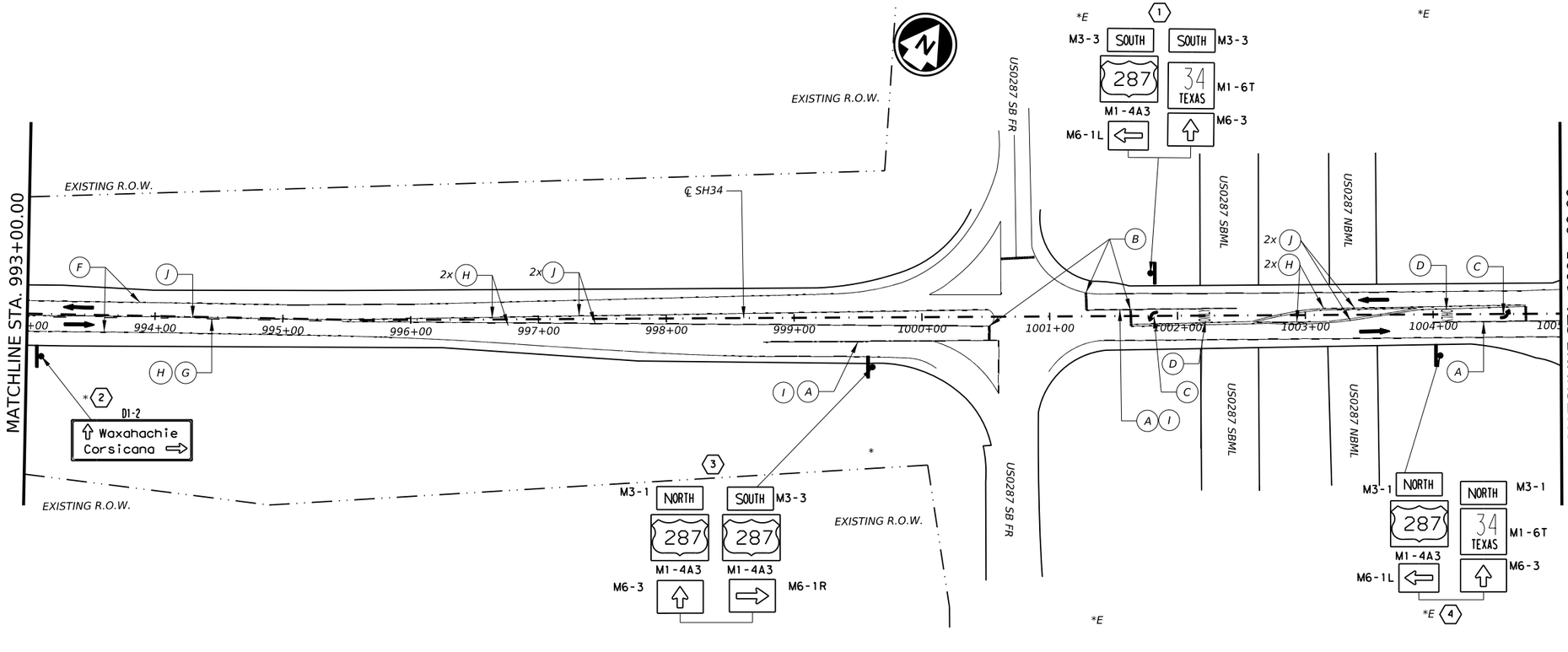

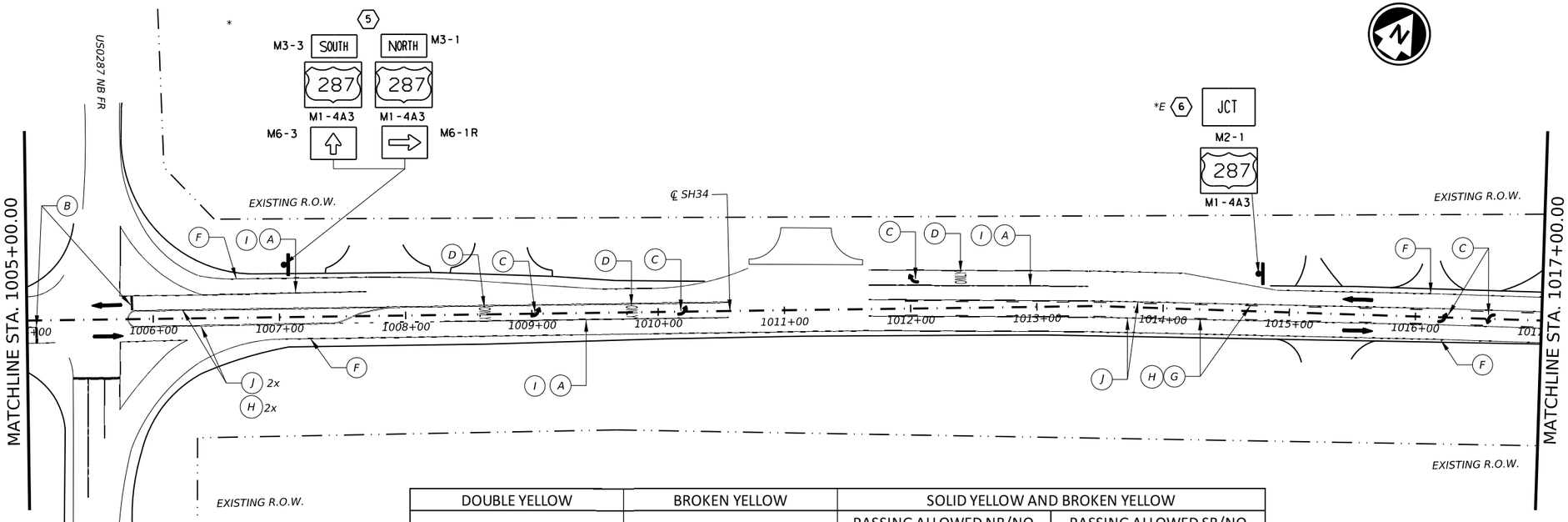

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 42 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		193

DATE: 5/5/2024 4:49:40 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-42.dgn

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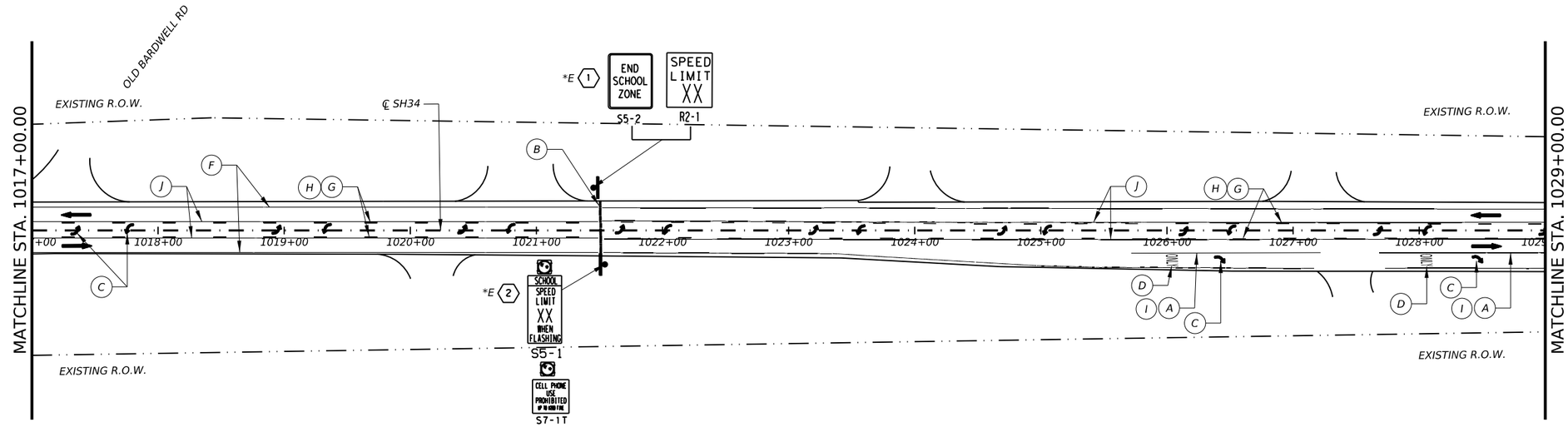
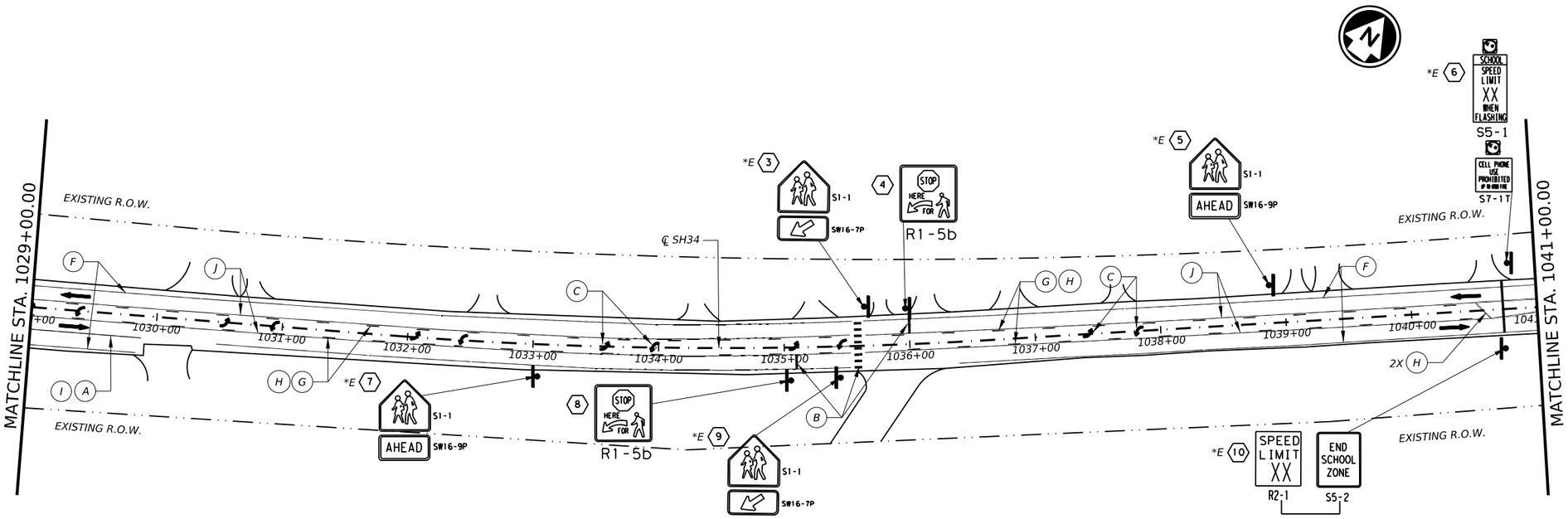




DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

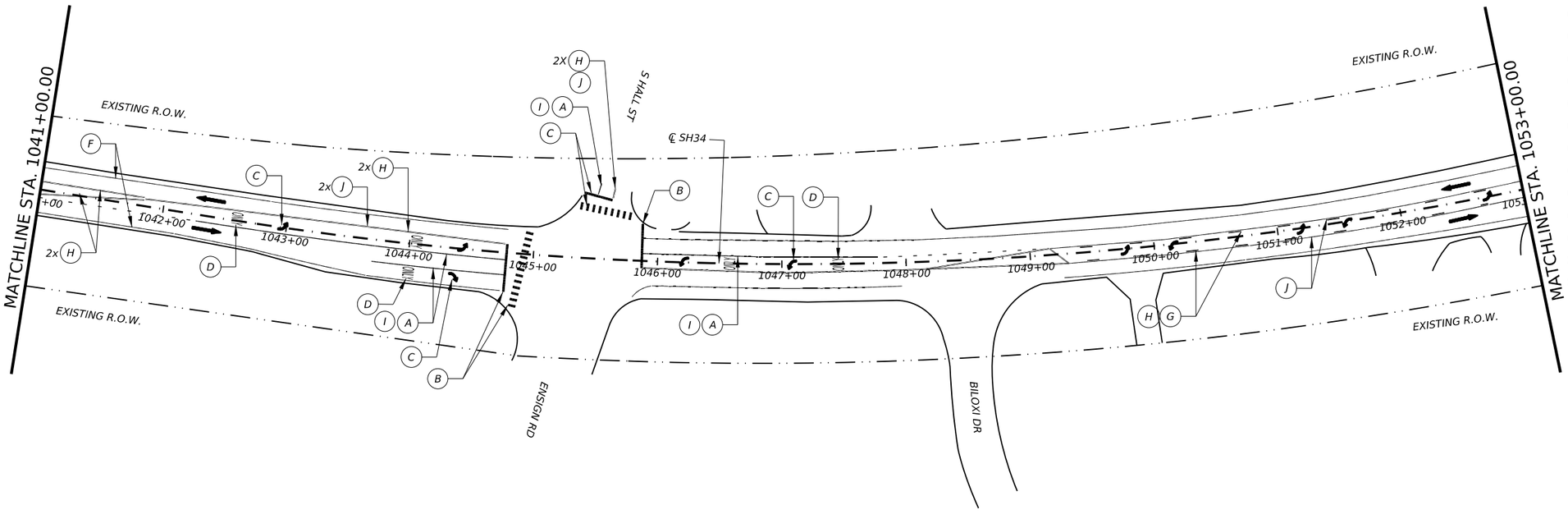
PAVEMENT MARKINGS AND SIGNS LAYOUTS

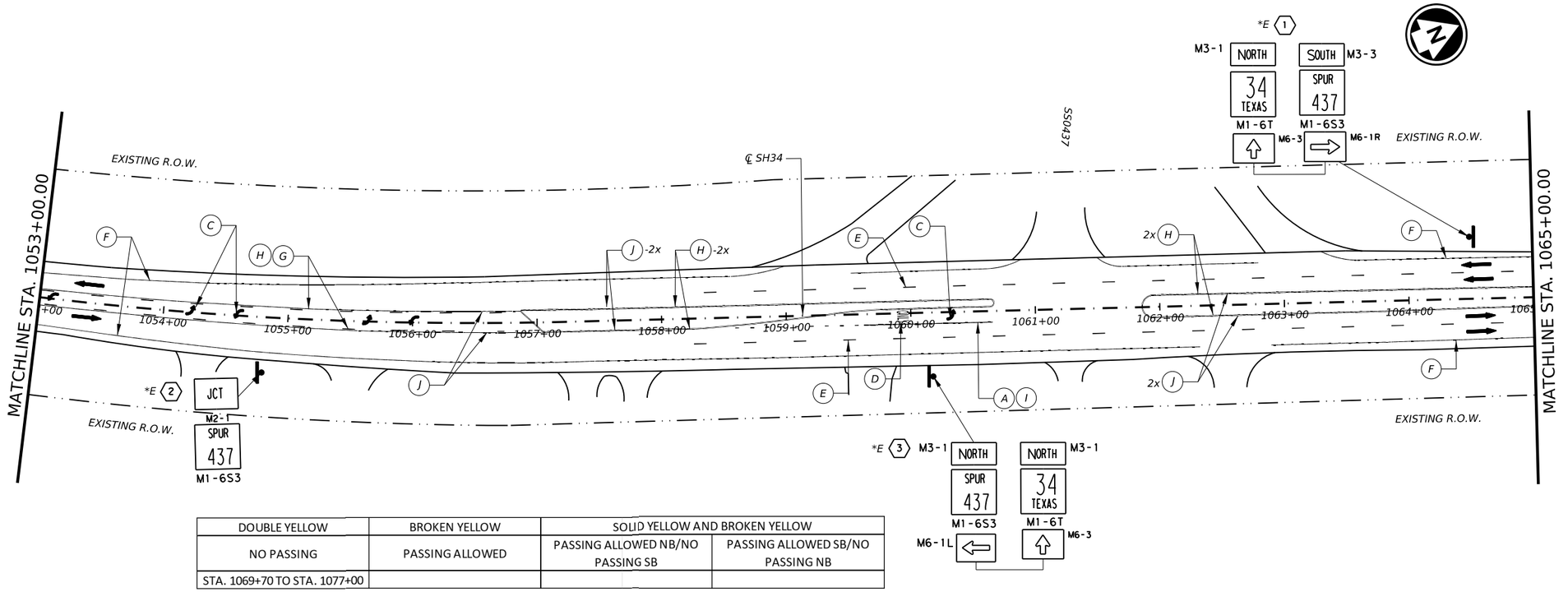
SHEET 43 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		194

DATE: 5/5/2024 4:49:46 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-43.dgn

CK: DW: CK: DW:





DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 1069+70 TO STA. 1077+00			

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 44 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		195

DATE: 5/5/2024 4:49:53 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-44.dgn

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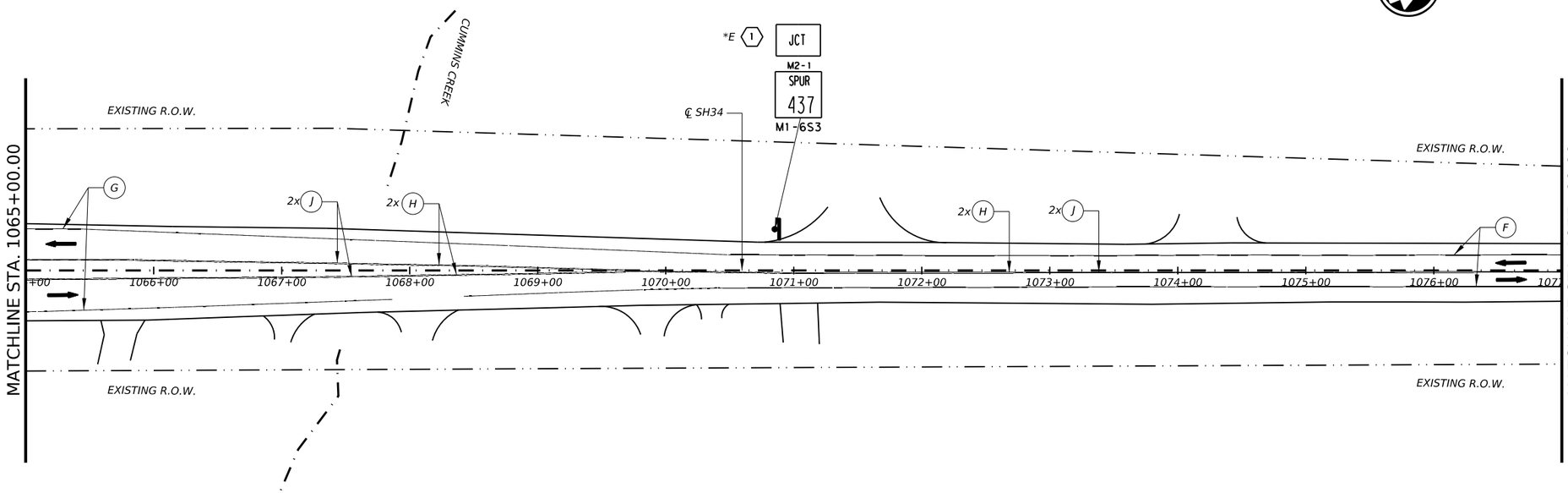


DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 1077+00 TO STA. 1078+27			
STA. 1079+24 TO STA. 1086+47			
STA. 1094+74 TO STA. 1096+79			
STA. 1097+88 TO STA. 1101+00			

0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

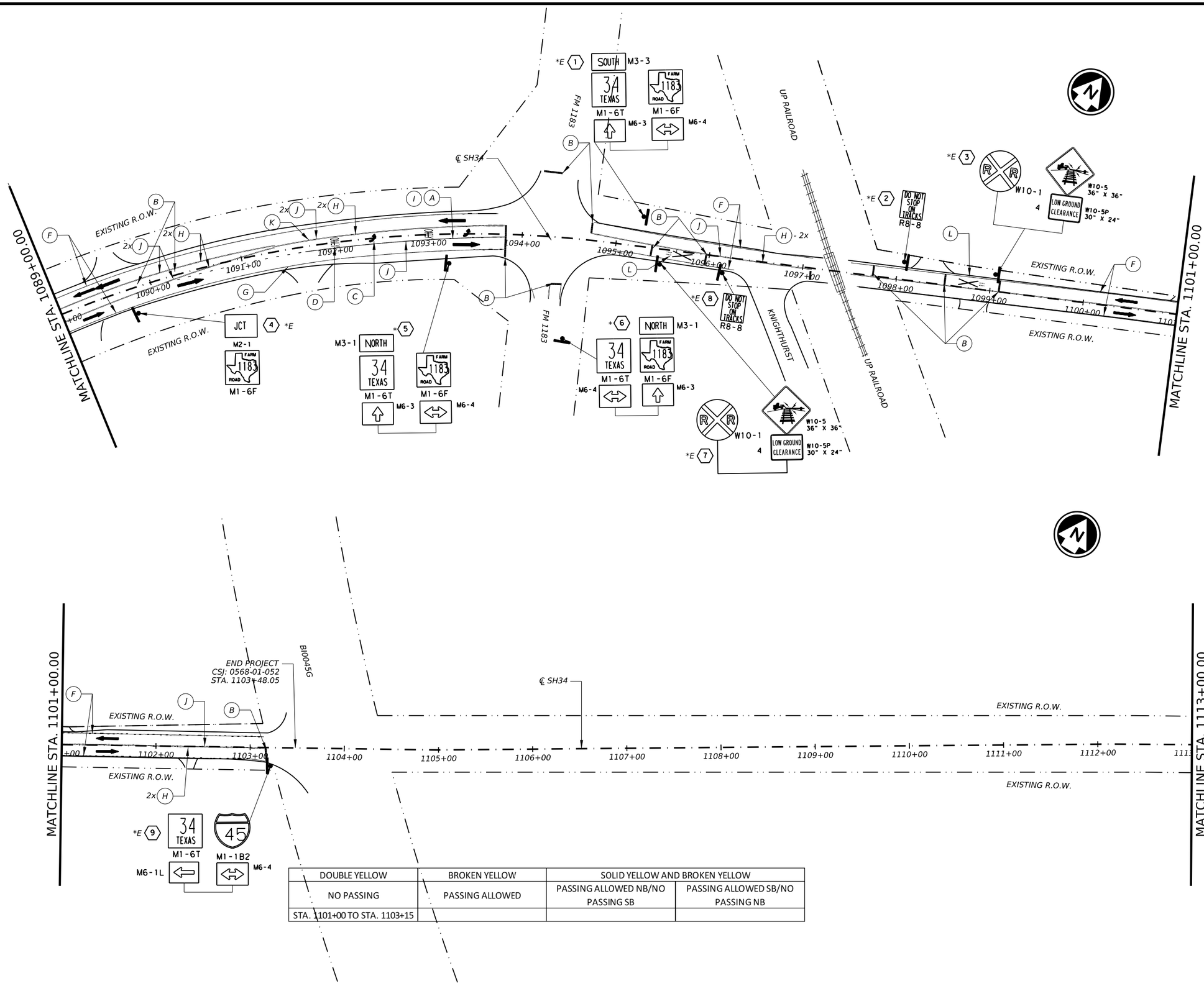
PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 45 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		196

CK:
DW:
CK:
DW:

DATE: 5/5/2024 4:49:58 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/SH34_PVMT_Signs Layouts-45.dgn



0 50 100
FEET

LEGEND

- (A) REFL PAV MRK TY I (W) 8" (SLD)
- (B) REFL PAV MRK TY I (W) 24" (SLD)
- (C) REFL PAV MRK TY I (W) (ARROW)
- (D) REFL PAV MRK TY I (W) (WORD)
- (E) RE PM W/RET REQ TY I(W) 6"(BRK)
- (F) RE PM W/RET REQ TY I(W) 6"(SLD)
- (G) RE PM W/RET REQ TY I(Y) 6"(BRK)
- (H) RE PM W/RET REQ TY I(Y) 6"(SLD)
- (I) REFL PAV MRKR TY I-C
- (J) REFL PAV MRKR TY II-A-A
- (K) REFL PAV MRK TY I (W) 8" (DOT)
- (L) REFL PAV MRK TY I (W)(RR XING)
- (M) RE PM W/RET REQ TY I (W) 4"(SLD)
- (N) RE PM TY I(ACC PRK)(WHT)(SYMBOL ONLY)

SIGN LEGEND

- (#) SIGN NUMBER
- SIGN
- *SIGN AND POST TO BE RELOCATED
- *E ~ EXISTING SIGN TO REMAIN

DOUBLE YELLOW	BROKEN YELLOW	SOLID YELLOW AND BROKEN YELLOW	
NO PASSING	PASSING ALLOWED	PASSING ALLOWED NB/NO PASSING SB	PASSING ALLOWED SB/NO PASSING NB
STA. 1101+00 TO STA. 1103+15			

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS

SHEET 46 OF 47

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		197

DATE: 5/5/2024 4:50:04 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/SH34 PVMT Signs Layouts-46.dgn

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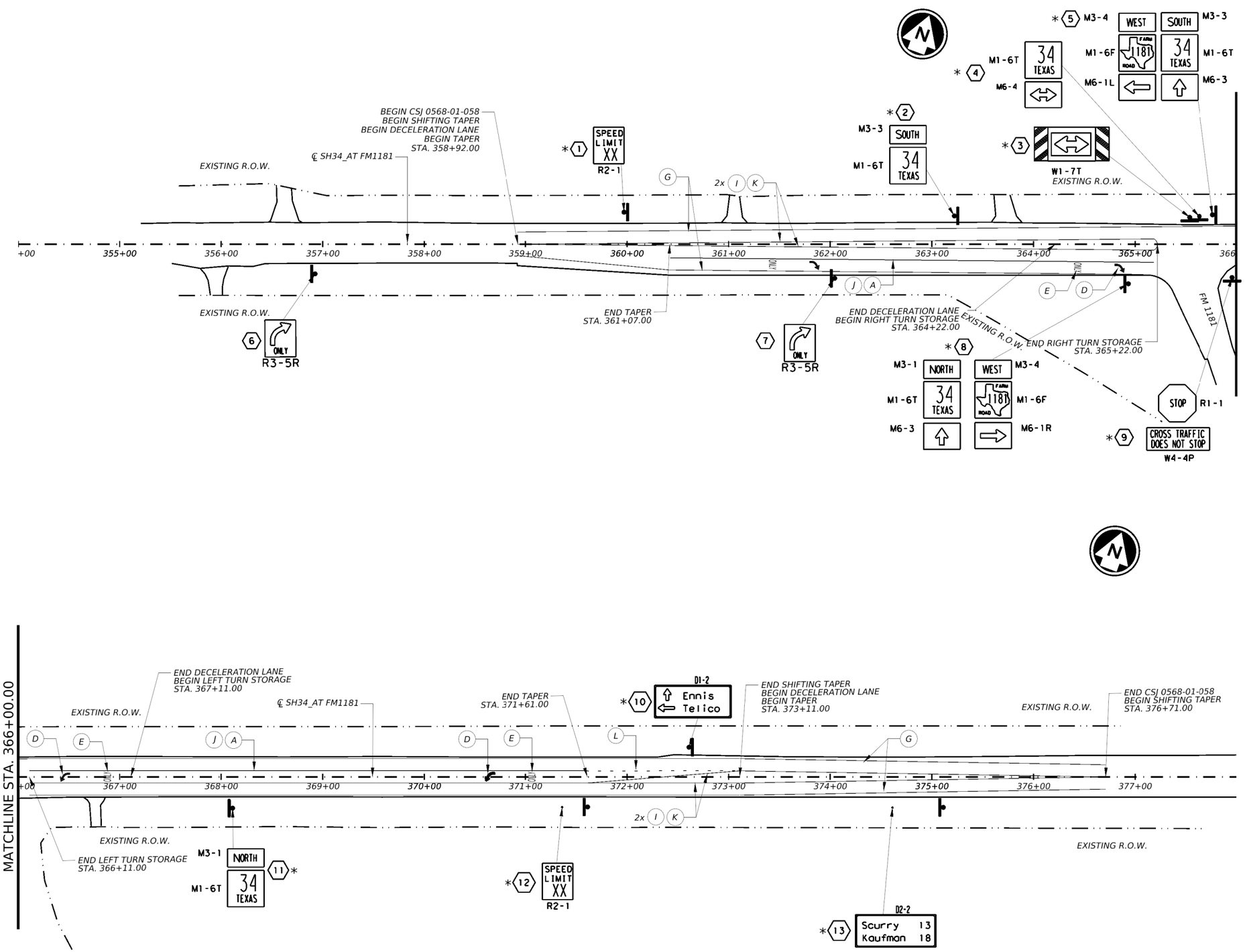


vanrajsinh Mahida 05/06/2024

Signature of Registrant, P.E. & Date

Texas Department of Transportation

SH 34

PAVEMENT MARKINGS AND SIGNS LAYOUTS AT FM 1181

SHEET 47 OF 47

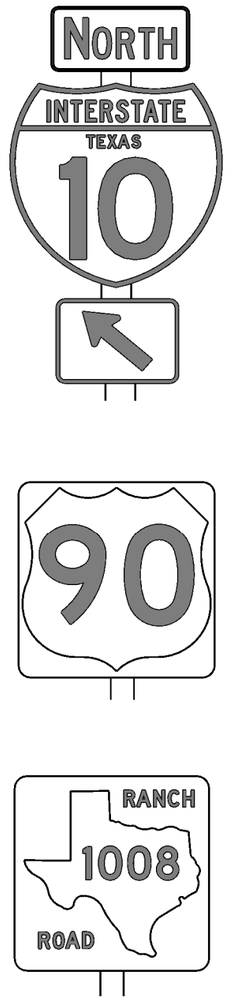
CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		198

DATE: 5/4/2024 10:40:48 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/8. Traffic/1 - SH34 PVMT Signs Layouts.dgn

DATE: 5/4/2024 10:41:02 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Profiles/0568-01-052 sheets for SER/tsr3-13.dgn

REQUIREMENTS FOR INDEPENDENT MOUNTED ROUTE SIGNS

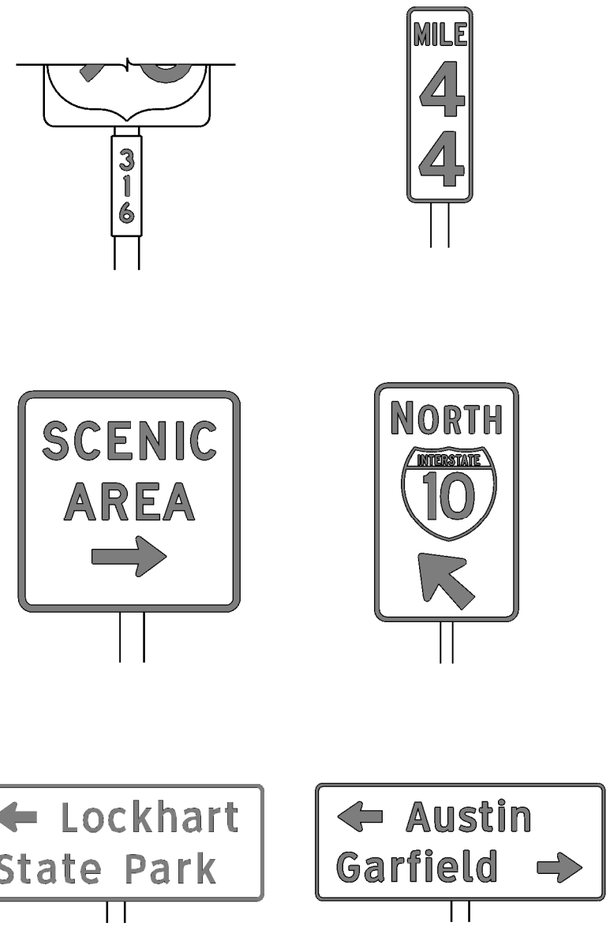
SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE A SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & BORDERS	ALL OTHERS	TYPE B or C SHEETING



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

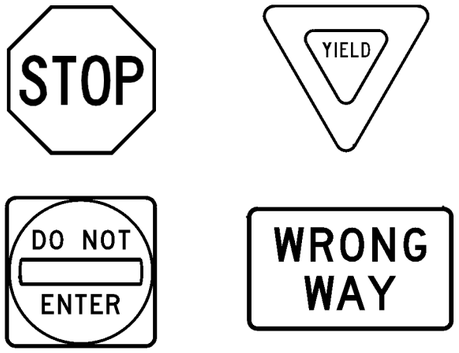
TSR(3)-13

FILE: tsr3-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	DAL	ELLIS		199

DATE: 5/4/2024 10:41:14 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568xx0294 angles/tsr4-13.dgn

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

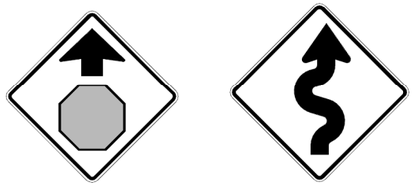
REQUIREMENTS FOR WHITE BACKGROUND REGULATORY SIGNS

(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

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

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/

Texas Department of Transportation

Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

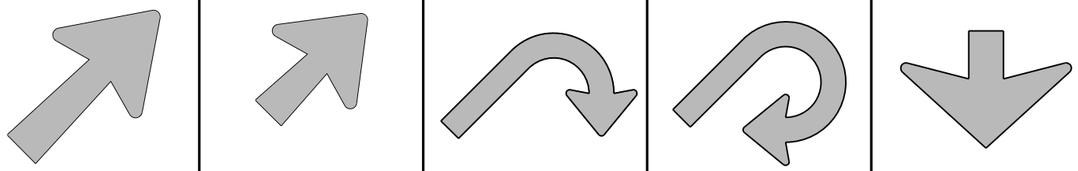
TSR(4)-13

FILE: tsr4-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
12-03 7-13 9-08	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		200

DATE:
FILE:

ARROW DETAILS

for Large Ground-Mounted and Overhead Guide Signs



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

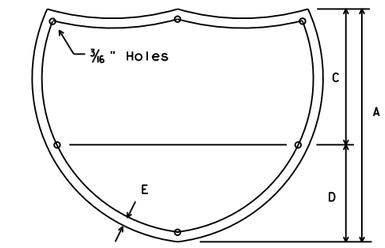
NOTE

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.

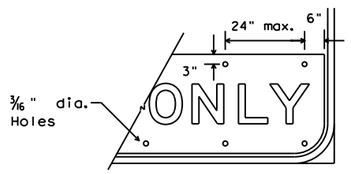
http://www.txdot.gov/

SIGN BLANK PUNCHING DETAILS FOR ATTACHMENTS WHEN SPECIFIED TO BE TYPE A ALUMINUM SIGNS (FOR MOUNTING TO GUIDE SIGN FACE)

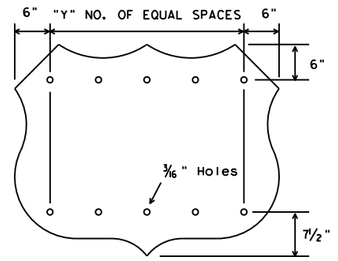


INTERSTATE ROUTE MARKERS

A	C	D	E
36	21	15	1 1/2
48	28	20	1 3/4

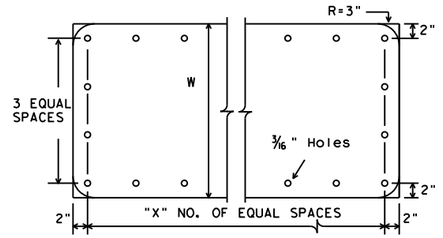


EXIT ONLY PANEL



U.S. ROUTE MARKERS

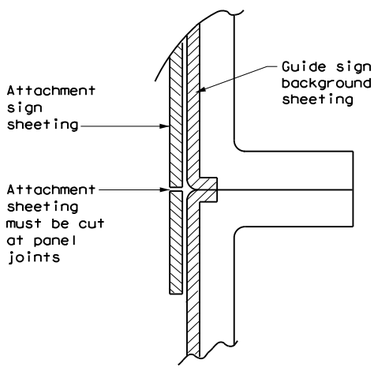
Sign Size	"Y"
24x24	2
30x24	3
36x36	3
45x36	4
48x48	4
60x48	5



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

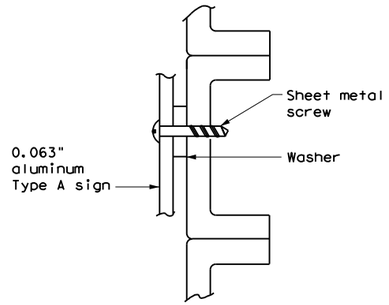
MOUNTING DETAILS OF ATTACHMENTS TO GUIDE SIGN FACE ("EXIT ONLY" AND "LEFT EXIT" PANELS, ROUTE MARKERS AND OTHER ATTACHMENTS)



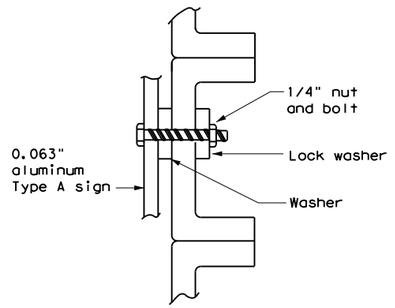
DIRECT APPLIED ATTACHMENT

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



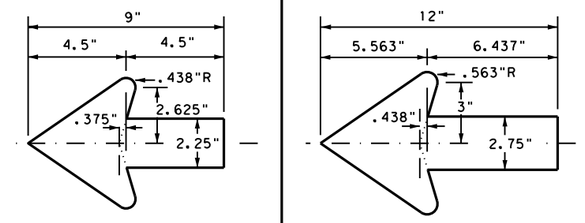
NUT/BOLT ATTACHMENT

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	0568	01	052,ETC.	SH 34
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	DAL	ELLIS		201

DATE: 5/4/2024 10:41:39 PM
FILE: pw://txdot.projectwiseonline.com:TX0015/Documents/18 - DAL/Design Projects/056801052/4 - Design/Design/Plan Sets/8. Traffic/Standards/smdgen.dgn

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)

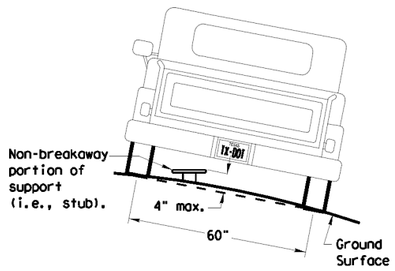
Anchor Type

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) to (SLIP-3))

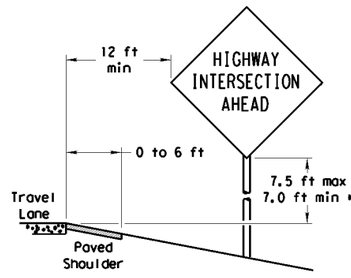
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



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).

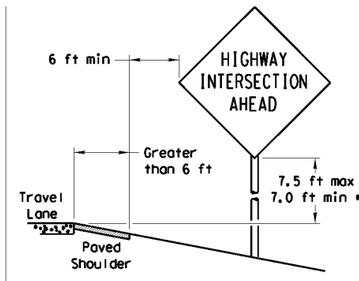
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

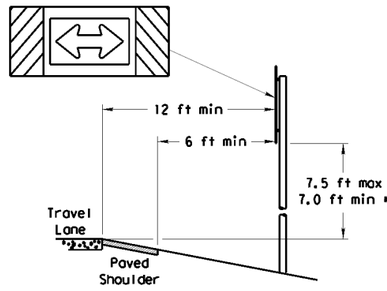
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



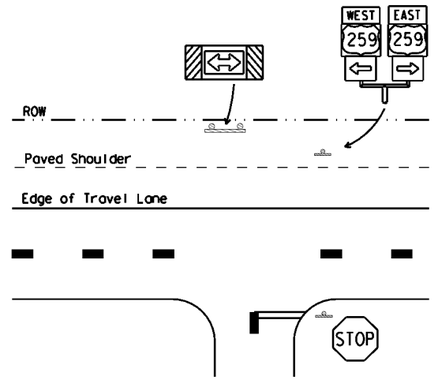
GREATER THAN 6 FT. WIDE

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.

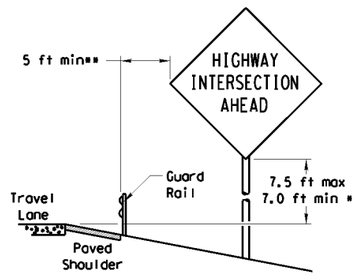
T-INTERSECTION



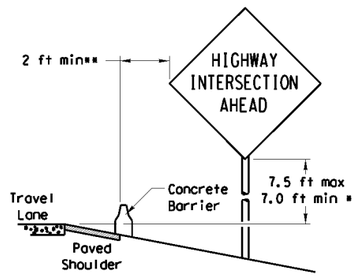
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



BEHIND BARRIER



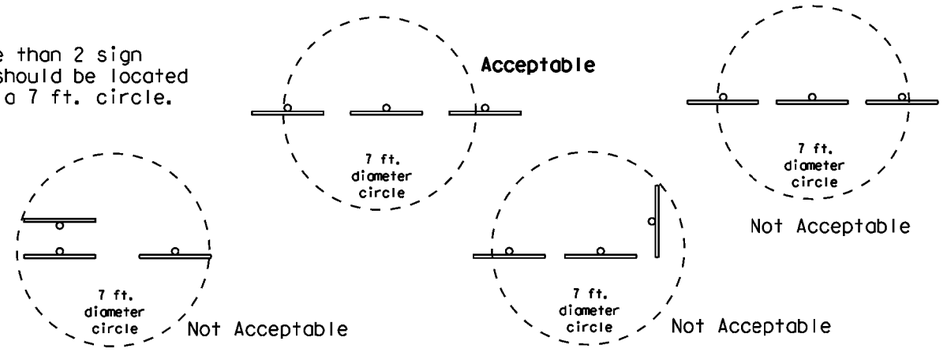
BEHIND GUARDRAIL



BEHIND CONCRETE BARRIER

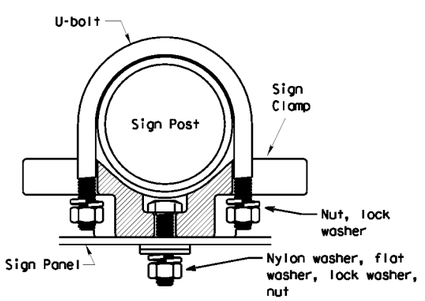
**Sign clearance based on distance required for proper guard rail or concrete barrier performance.

No more than 2 sign posts should be located within a 7 ft. circle.



TYPICAL SIGN ATTACHMENT DETAIL

Single Signs

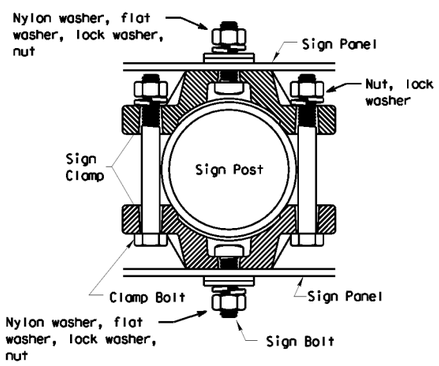


Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

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.

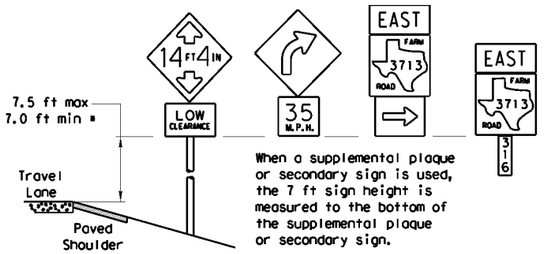
Sign clamps may be either the specific size clamp or the universal clamp.

Back-to-Back Signs



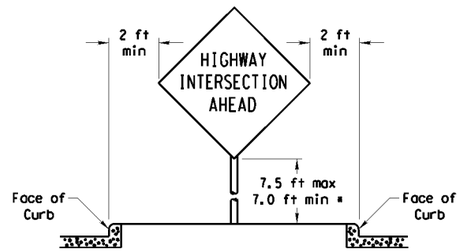
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



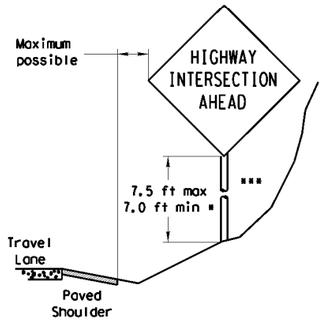
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

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.

* 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

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

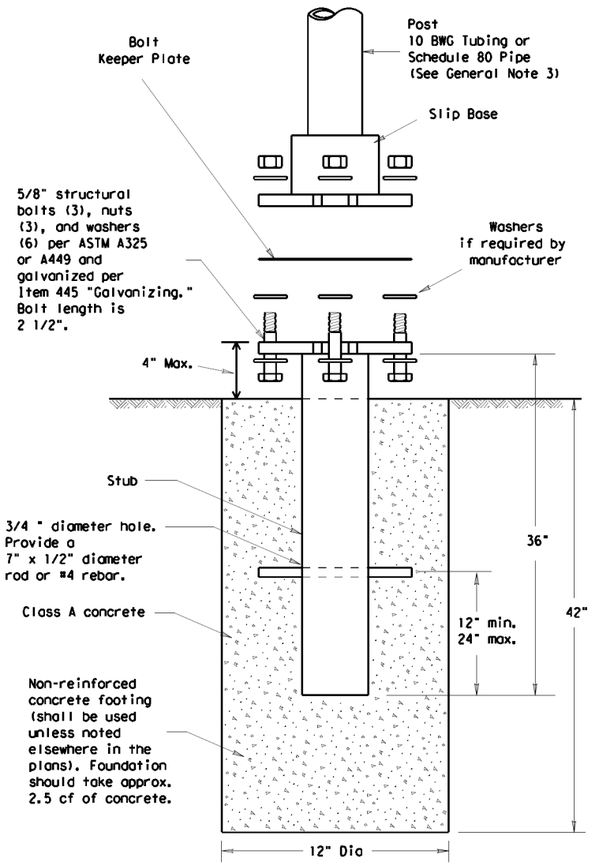
SMD(GEN)-08

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

9-08 REVISIONS

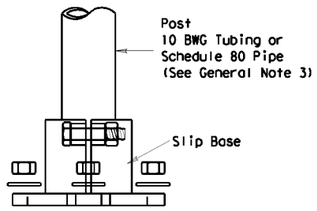
CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		202

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS

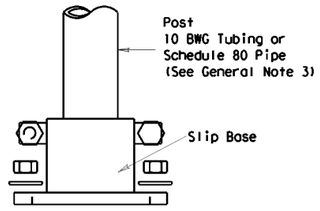


SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

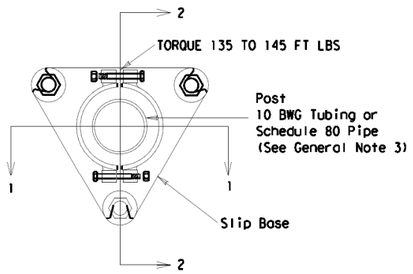
NOTE
The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.



SIDE VIEW 1-1



SIDE VIEW 2-2



TOP VIEW

DETAIL A

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

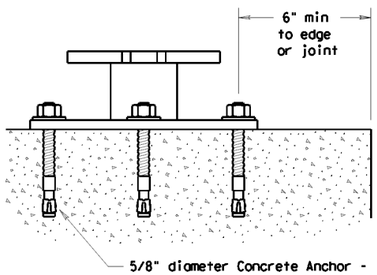
Foundation

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.

ADDED DETAIL A FOR CLAMP BASE
10-2010

Texas Department of Transportation
Dallas District Standard

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08(DAL)

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

REVISIONS	CONT	SECT	JOB	HIGHWAY
9-08	0568	01	052,ETC.	SH 34
12-10 (DISTRICT) ADDED CLAMP BASE DETAIL FOR SLIP BASE INSTALLATION	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		203

26B

DATE: 5/4/2024 10:41:53 PM
DGN: Design Projects/0568010524 - Design/Plan Set/8. Traffic/Standards/slip-1 dal.DGN

DATE: 5/4/2024 10:42:05 PM
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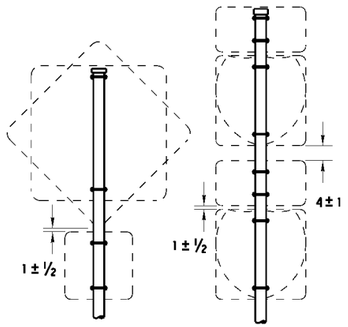
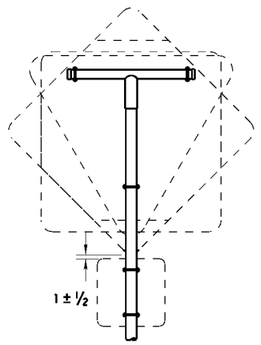
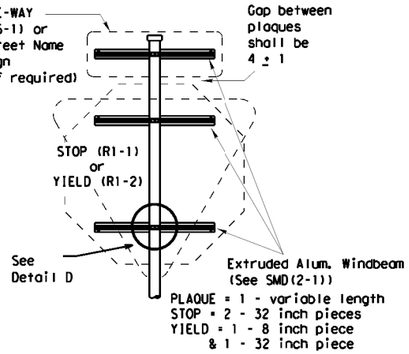


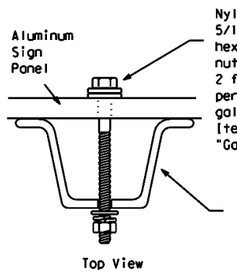
SM RD SGN ASSM TY XXXXX(1)XX(P)



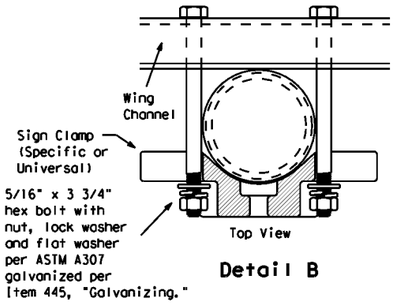
SM RD SGN ASSM TY XXXXX(1)XX(T)



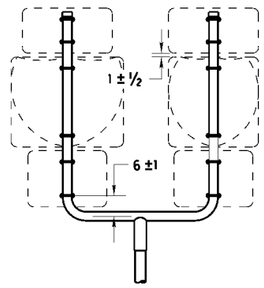
SM RD SGN ASSM TY XXXXX(1)XX(P-BM)



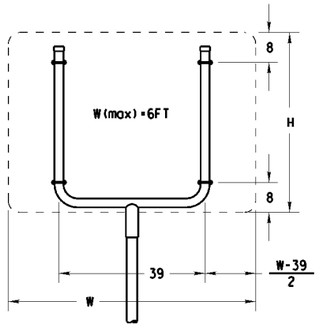
Detail A



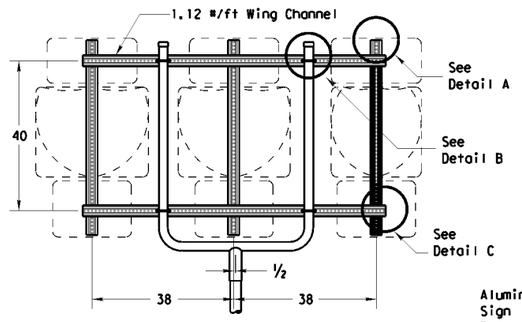
Detail B



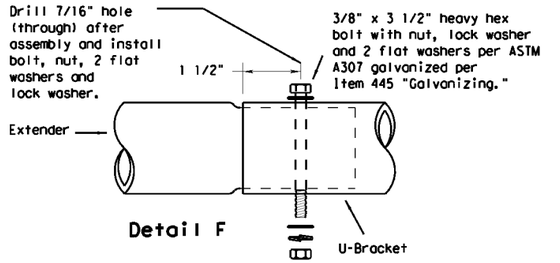
SM RD SGN ASSM TY XXXXX(1)XX(U)



SM RD SGN ASSM TY XXXXX(1)XX(U)

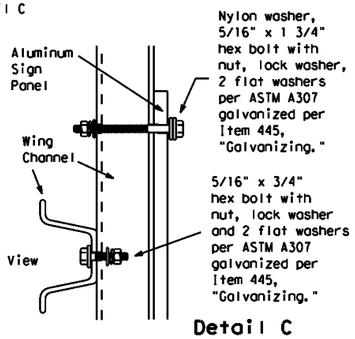


SM RD SGN ASSM TY XXXXX(1)XX(U-WC)
(See Note 11)

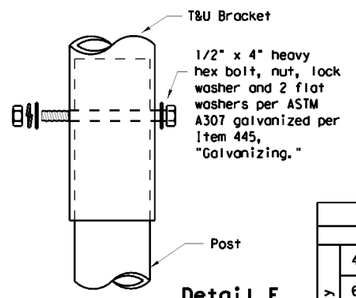


Detail F

Splices shall only be allowed behind the sign substrate.



Detail C

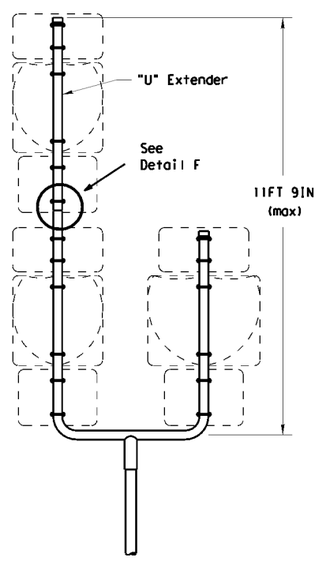


Detail E

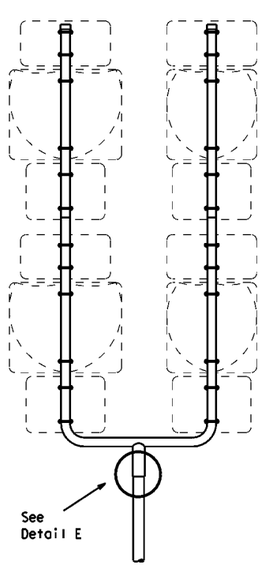
GENERAL NOTES:

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

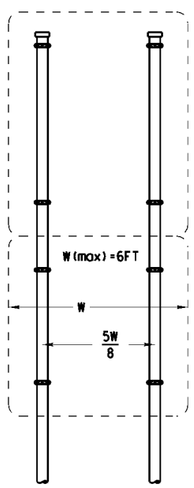
1. See table above.
2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to 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 S80(1)XX(U-1EXT)

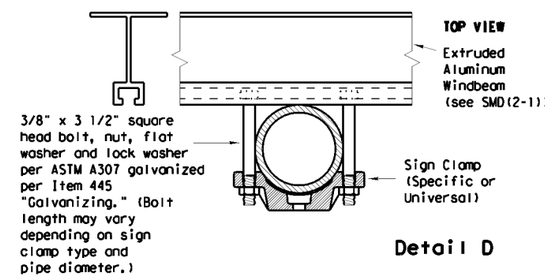


SM RD SGN ASSM TY S80(1)XX(U-2EXT)

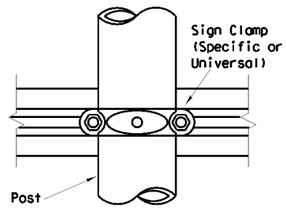


SM RD SGN ASSYM TY XXXXX(2)XX(P)

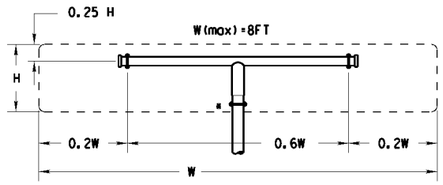
SIDE VIEW



Detail D



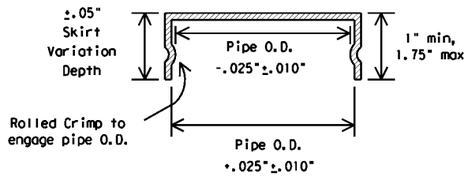
REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	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

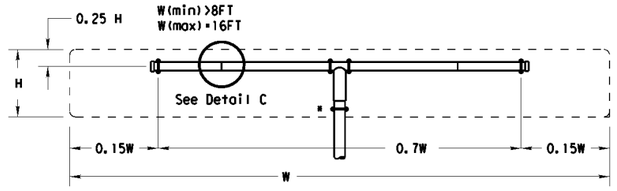
9-08 REVISIONS

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

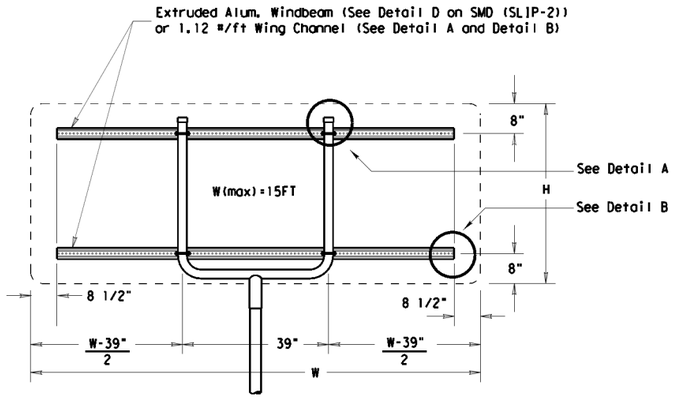
CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34

DIST	COUNTY	SHEET NO.
DAL	ELLIS	204

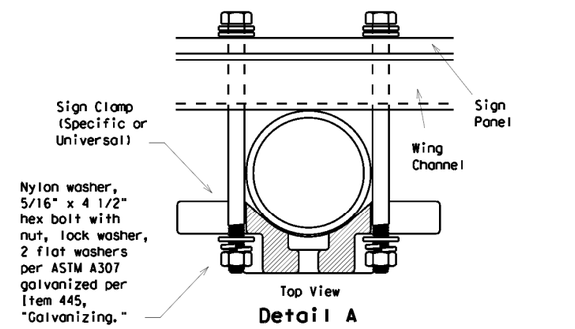
DATE: 5/4/2024 10:42:18 PM
FILE: dw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/8. Traffic/Standards/smds3.dgn



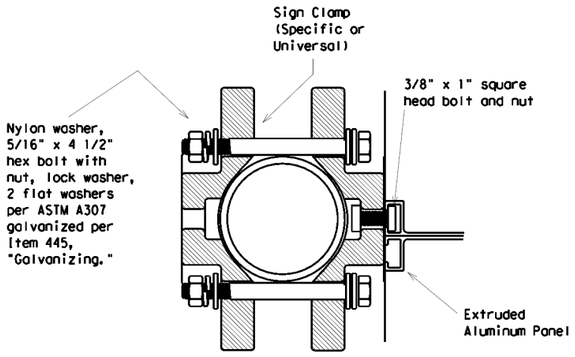
SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)
(* - See Note 12)



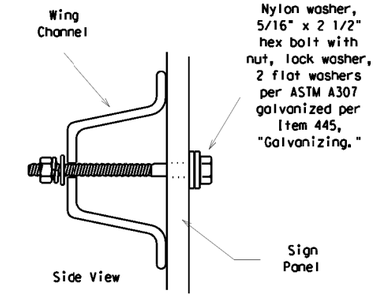
SM RD SGN ASSM TY XXXXX(1)XX(U-XX)



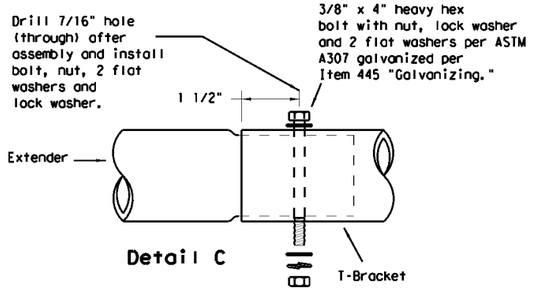
Detail A



Detail D
EXTRUDED ALUMINUM SIGN WITH T BRACKET

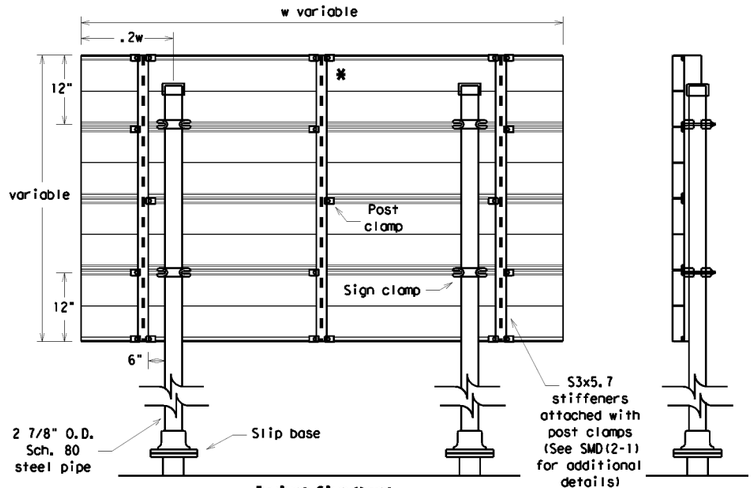


Detail B



Detail C

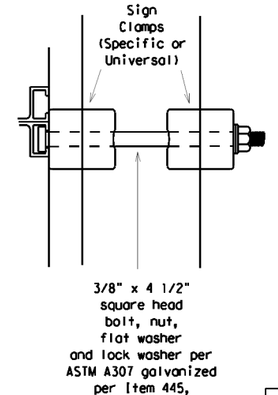
Splices shall only be allowed behind the sign substrate.



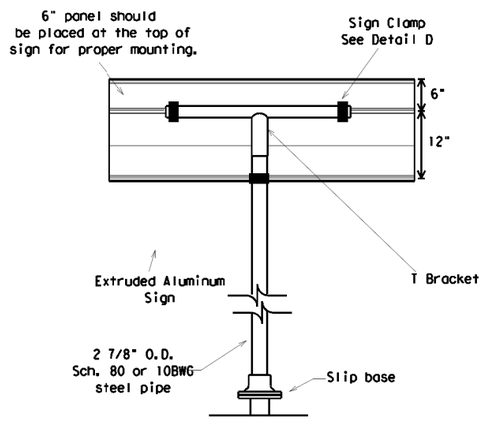
Typical Sign Mount

SM RD SGN ASSM TY S80(2)XX(P-EXAL)

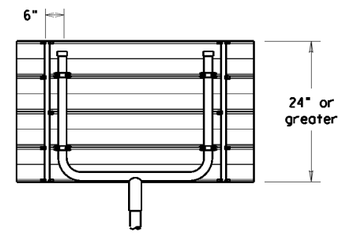
* Additional stiffener placed at approximate center of signs when sign width is greater than 10'.



Detail E



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:

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. Sign blanks shall be the sizes and shapes shown on the plans.
11. 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.
12. 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

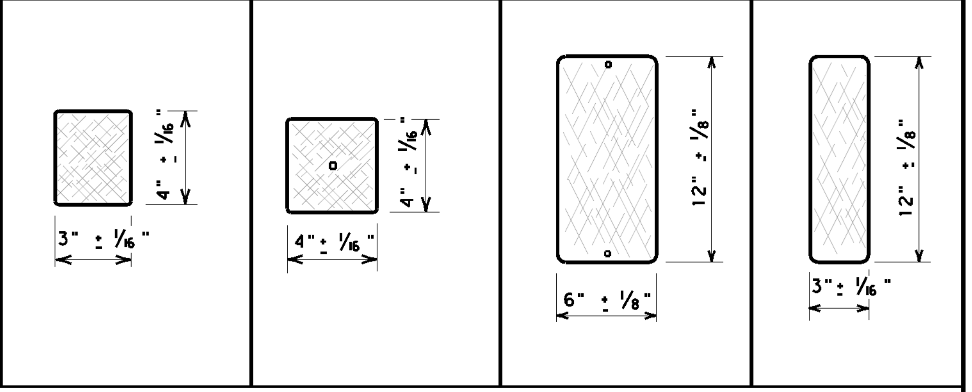
SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-3)-08

REVISIONS	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
9-08	CONT	SECT	JOB	HIGHWAY
	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		205

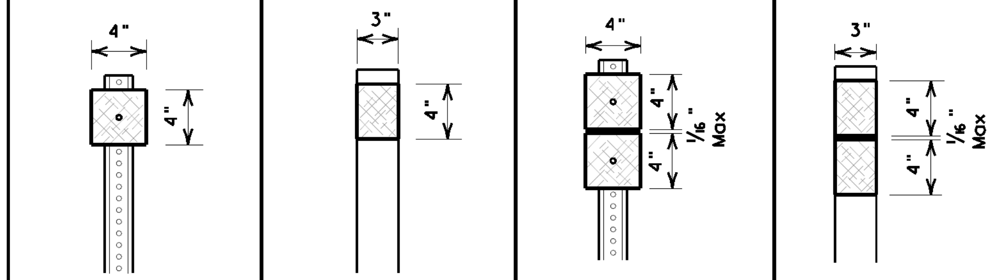
REFLECTOR UNIT SIZES FOR DELINEATORS AND OBJECT MARKERS

	SIZE 1	SIZE 2	SIZE 3	SIZE 4
DEVICE	3" ± 1/16" × 4" ± 1/16"	4" ± 1/16" × 4" ± 1/16"	6" ± 1/8" × 12" ± 1/8"	3" ± 1/16" × 12" ± 1/8"
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



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)

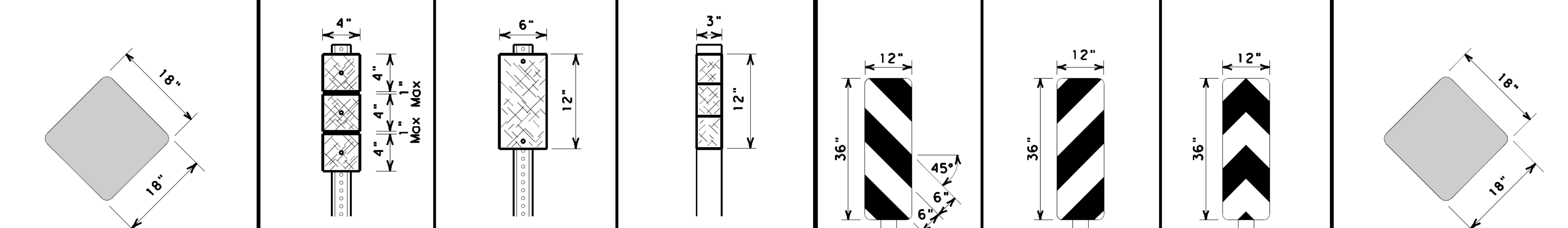
TYPE OF POST
WC = Wing Channel Post
WFLX = White Flexible Post
TWT = Thin Walled Tubing

TYPE OF MOUNT
GND = Embedded (drivable)
SRF = Surface Mount
WAS = Wedge Anchor Steel
WAP = Wedge Anchor Plastic

DIRECTION
If Required
BI = Bi-Directional

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

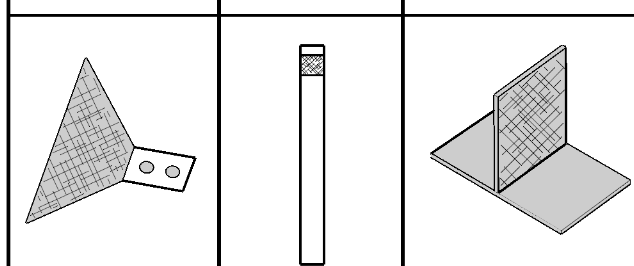


DEPARTMENTAL MATERIAL SPECIFICATIONS

FLEXIBLE DELINEATOR & OBJECT MARKER POSTS (EMBEDDED & SURFACE MOUNT TYPES)	DMS-4400
SIGN FACE MATERIALS	DMS-8300
DELINEATORS, OBJECT MARKERS AND BARRIER REFLECTORS	DMS-8600

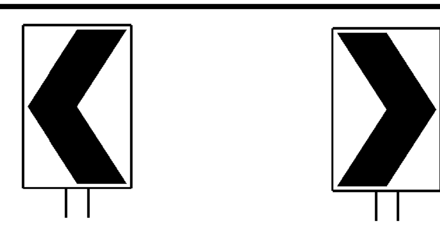
BARRIER REFLECTORS (BRF)

	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.		



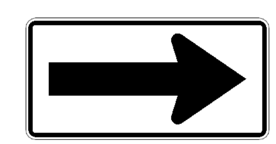
CHEVRONS

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	



ONE DIRECTION LARGE ARROW

DEVICE	W1-6	
SIZE (W x L)	48" x 24" (Conventional)	60" x 30" (Expressway & Freeway)
MOUNTING HEIGHT	7'-0"	



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).

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	0568	01	052,ETC.	SH 34
10-09 3-15	DIST		COUNTY	SHEET NO.
4-10 7-20	DAL		ELLIS	206

20A

DATE: 5/4/2024 10:42:31 PM
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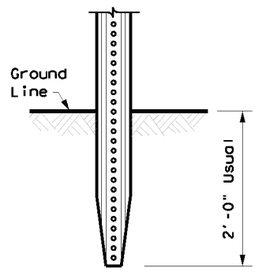
POST TYPE AND SUPPORT FOUNDATION DETAILS

WING CHANNEL (WC)

GND

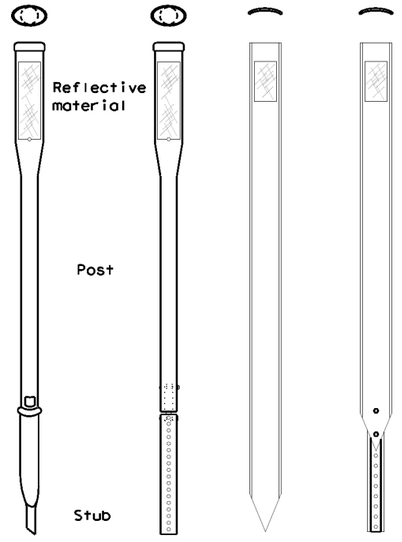


NOTES

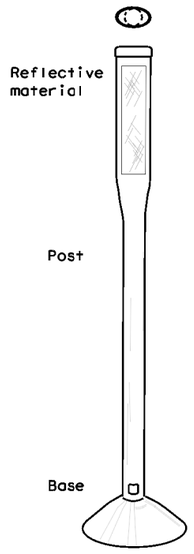
1. Embedded Wing Channel (WC) post option may be used for Type 2 Object Markers and Delineators only.
2. 1.12 lbs/ft steel per ASTM A 1011 SS Gr. 50, or ASTM A499.

FLEXIBLE POSTS (YFLX, WFLX)

GND



SRF



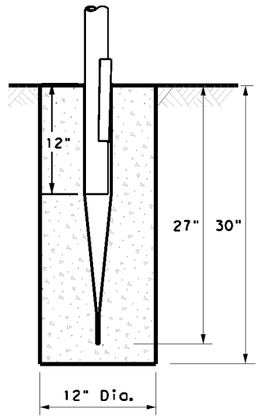
EMBEDDED | SURFACE MOUNT

NOTES

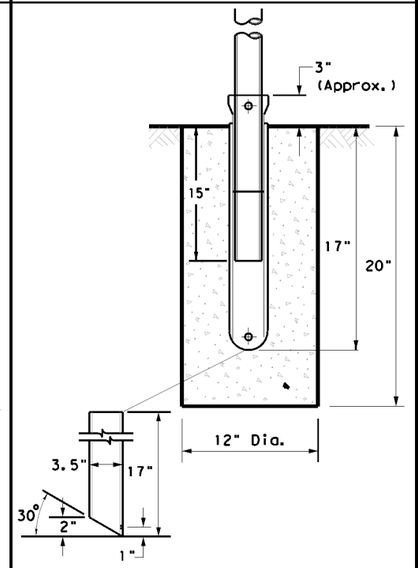
1. See "Flexible Delineator and Object Marker Posts" Material Producer List for approved devices.
2. Install per manufacturer's recommendations.
3. Post length may vary to meet field conditions.
4. When using yellow delineators with flexible posts to separate opposing direction of travel, such as centerline or median use, the flexible posts shall be yellow.

WEDGE ANCHOR SYSTEMS

WAS



WAP



STEEL | PLASTIC

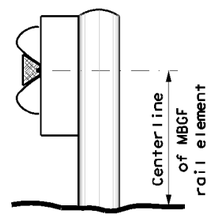
NOTE

1. Install per manufacturer's recommendations.

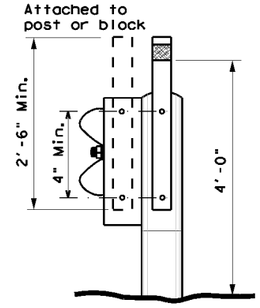
TYPE OF BARRIER MOUNTS

GUARD FENCE ATTACHMENT

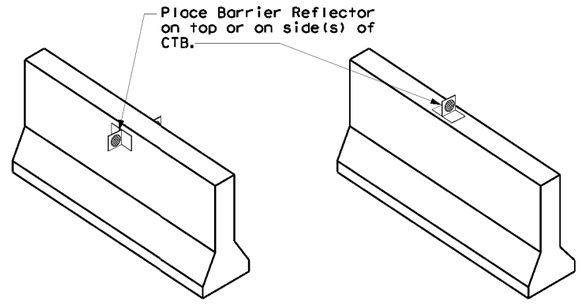
GF1



GF2



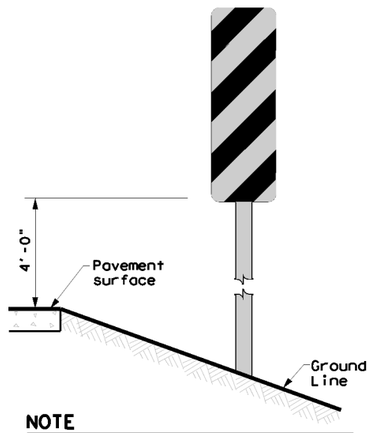
CONCRETE TRAFFIC BARRIER (CTB)



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.

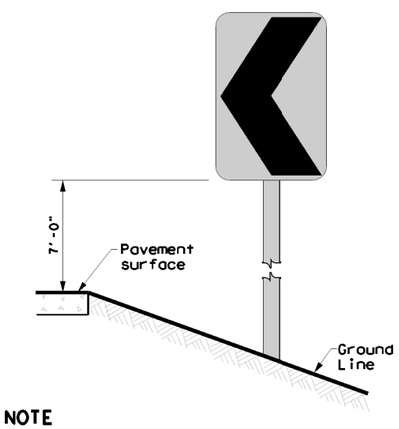
TYPES 1, 3, AND 4 OBJECT MARKERS AND CHEVRONS



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)

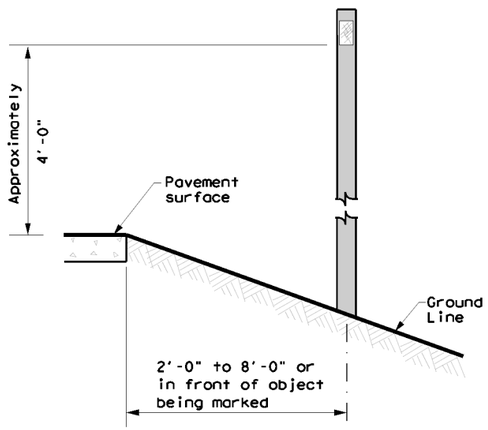
CHEVRONS AND ONE DIRECTION LARGE ARROW SIGN



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
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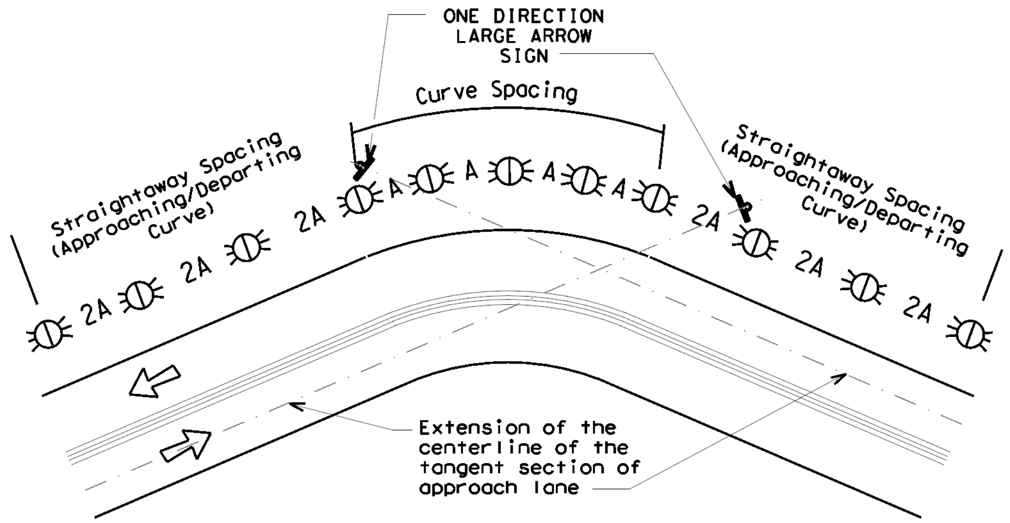
MINIMUM WARNING DEVICES AT CURVES WITH ADVISORY SPEEDS

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

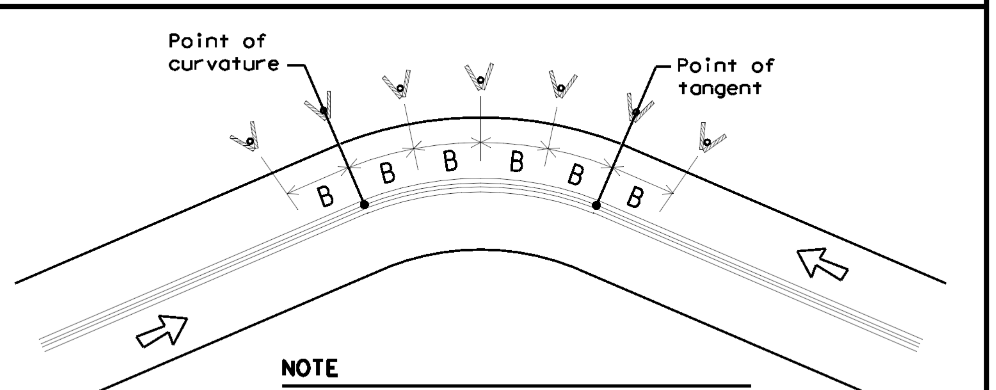
SUGGESTED SPACING FOR DELINEATORS ON HORIZONTAL CURVES



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	Radius of Curve (FEET)	Spacing in Curve (FEET)	Spacing in Straightaway (FEET)	Chevron Spacing in Curve (FEET)
		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

Symbol	Meaning
(symbol)	Bi-directional Delineator
(symbol)	Delineator
(symbol)	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
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REVISIONS	0568	01	052,ETC.	SH 34
3-15 8-15 8-15 7-20	DIST		COUNTY	SHEET NO.
	DAL		ELLIS	208

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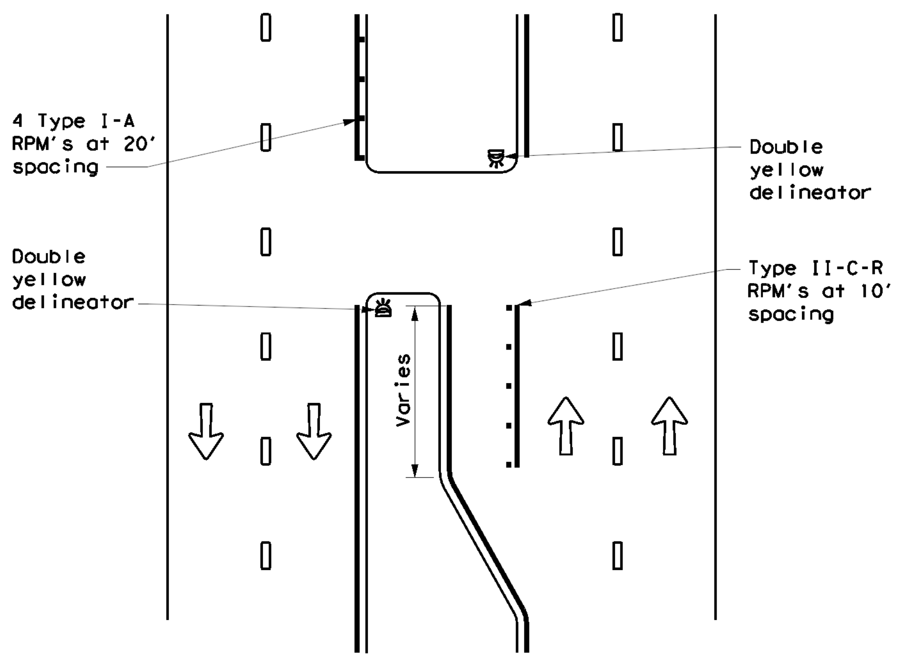
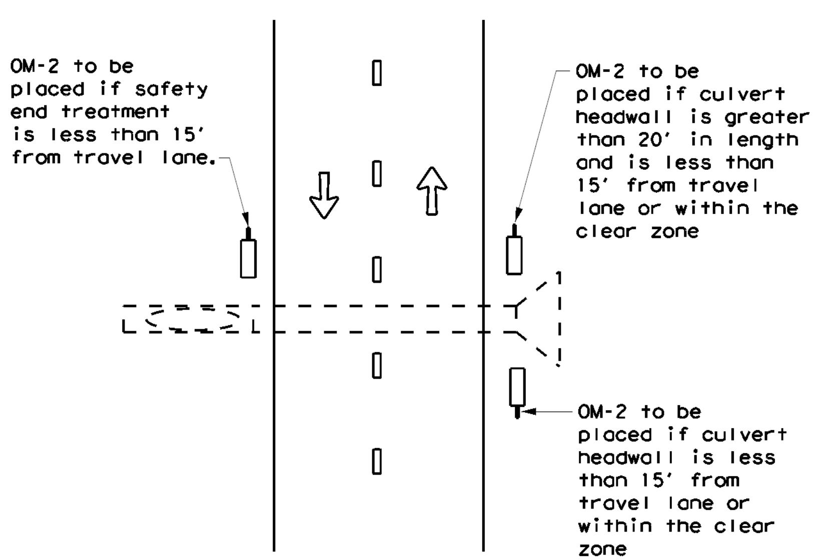
CROSSOVERS



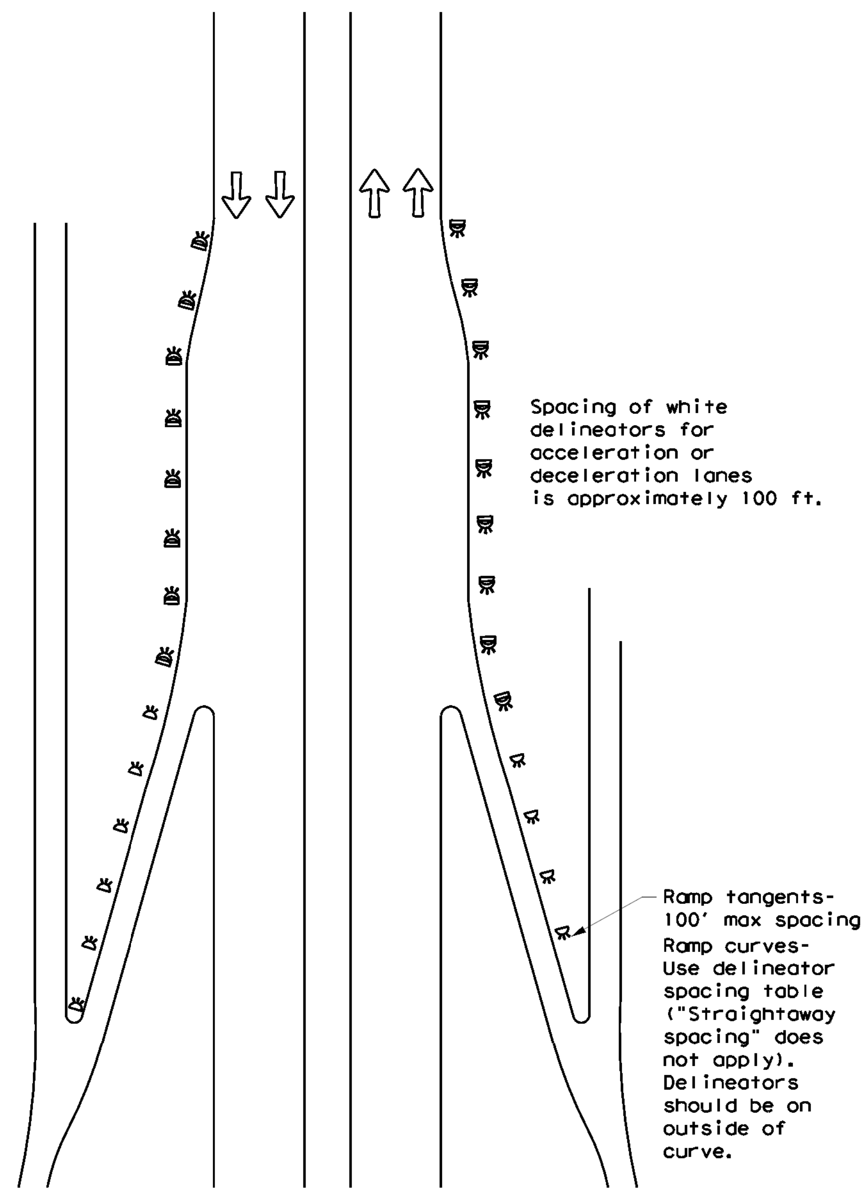
DETAIL 1

FOR CULVERTS WITHOUT MBGF



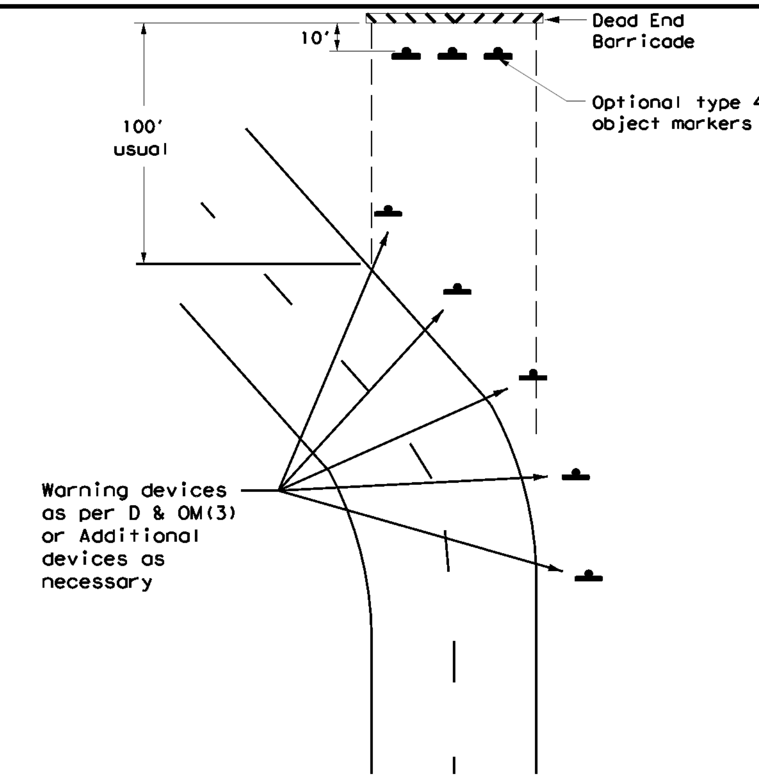
DETAIL 2

FREEWAY DELINEATION FOR RAMPS AND ACCELERATION/DECELERATION LANES



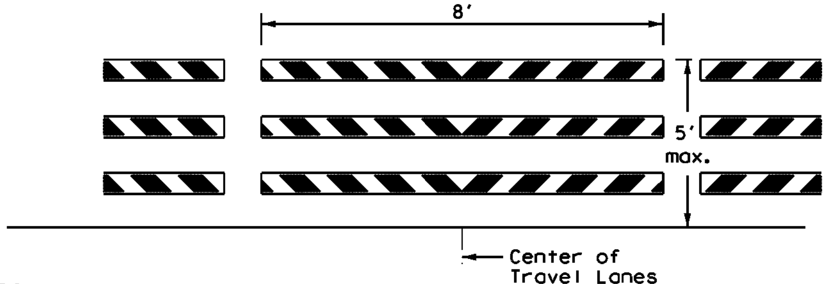
DETAIL 3

TYPICAL APPLICATION OF DEAD END BARRICADE



DETAIL 4

TYPICAL DEAD END BARRICADE INSTALLATION



NOTES

1. Barricade striping shall be red and white reflective sheeting for all permanent road closures.
2. Barricade striping is red and white sloping toward the center of the roadway.
3. Type 3 Barricade Supports should be anchored to soil or pavement as described in compliant Work Zone Traffic Control Devices List, section D.2.f and D.2.g.

DETAIL 5

LEGEND

Symbol	Description
(symbol)	Bidirectional Delineator
(symbol)	Delineator
(symbol)	OM-3
(symbol)	Barricade
(symbol)	Sign
(symbol)	OM-2
(symbol)	Double Delineator

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DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

D & OM(4)-20

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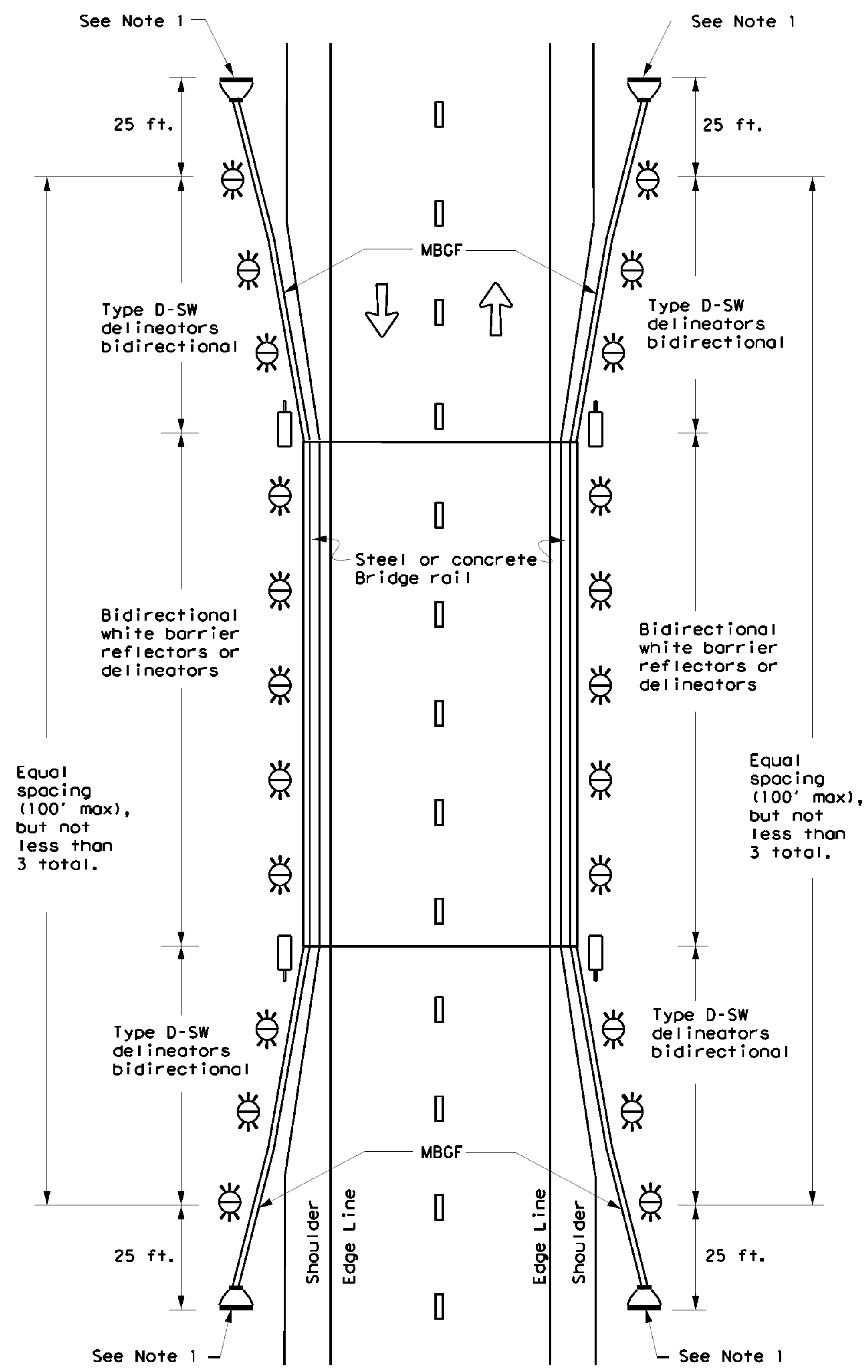
REVISIONS 3-15 7-20	0568	01	052,ETC.	SH 34
	DIST		COUNTY	SHEET NO.
	DAL		ELLIS	209

20D

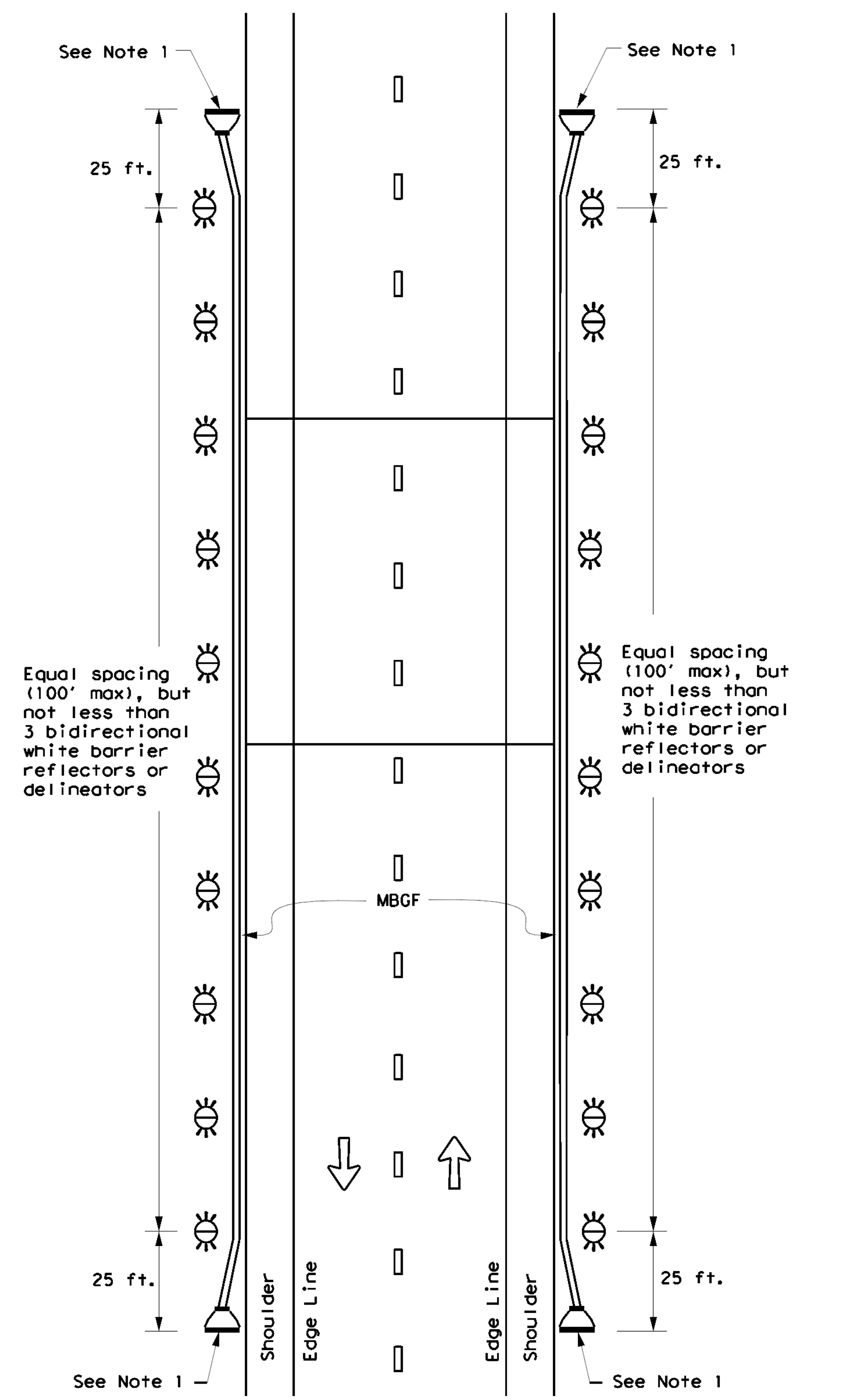
TWO-WAY, TWO LANE ROADWAY WITH REDUCED WIDTH APPROACH RAIL



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.

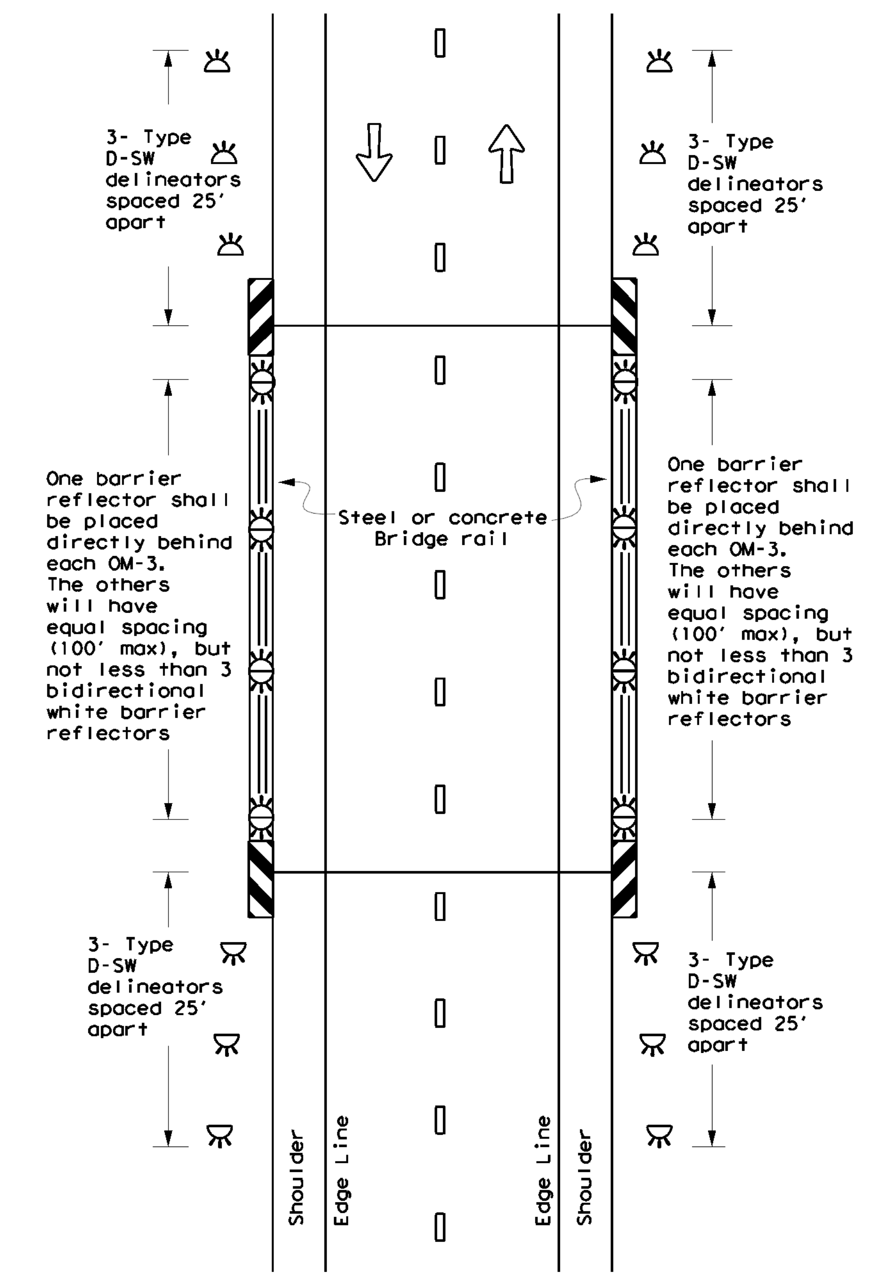
TWO-WAY, TWO LANE ROADWAY WITH METAL BEAM GUARD FENCE (MBGF)



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

Symbol	Description
	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
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REVISIONS	0568	01	052, ETC.	SH 34
7-20	DIST		COUNTY	SHEET NO.
	DAL		ELLIS	210

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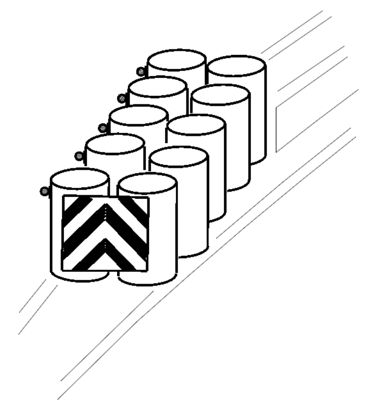
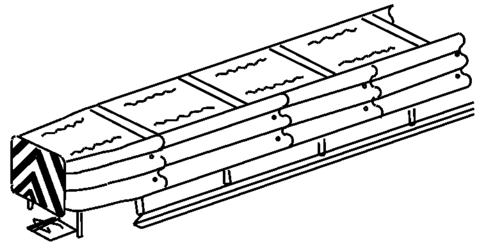
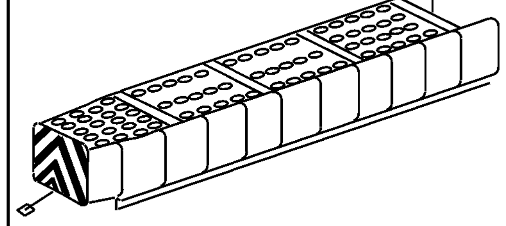
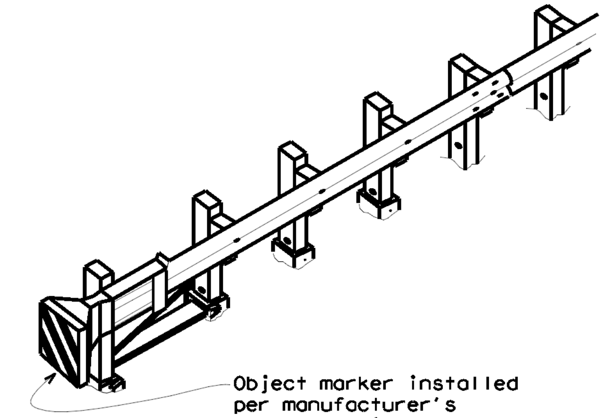
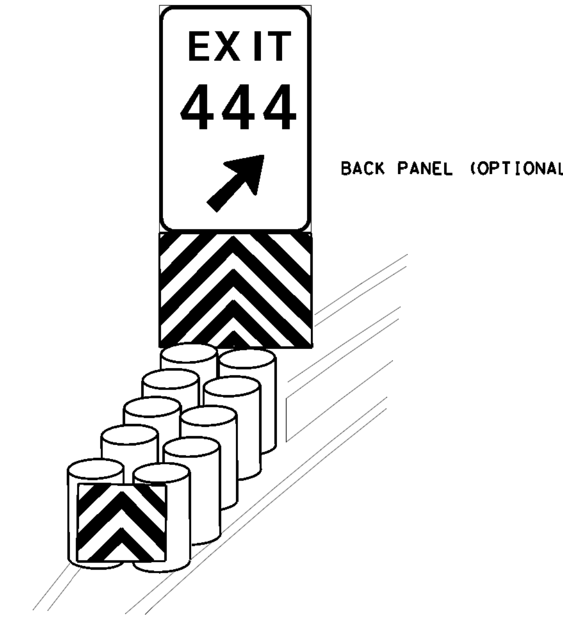
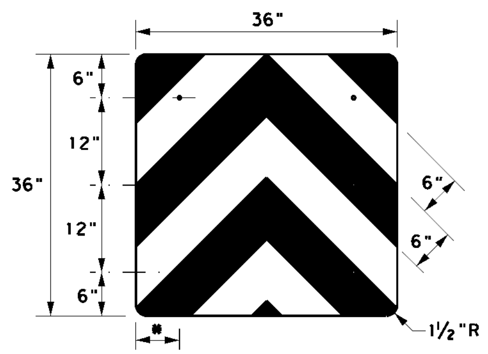


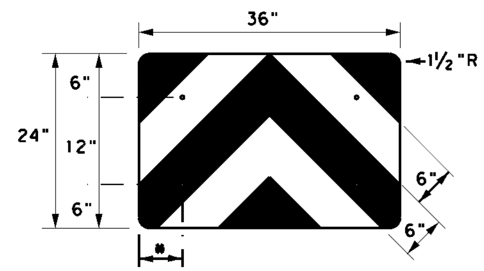




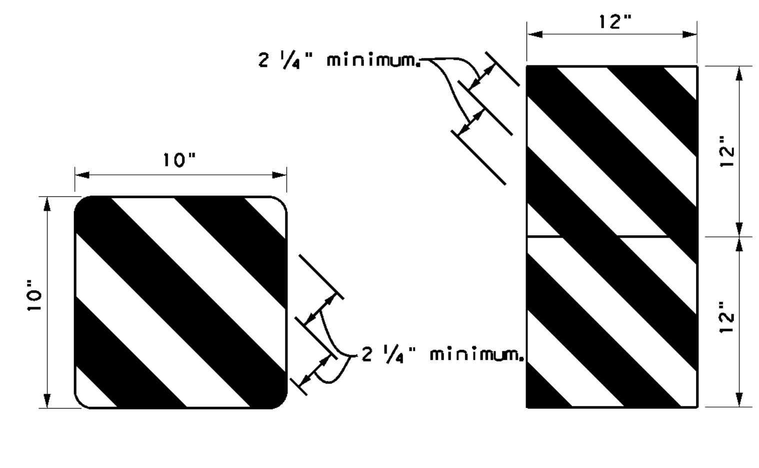




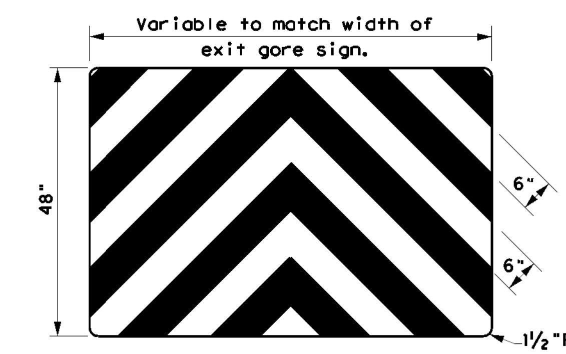


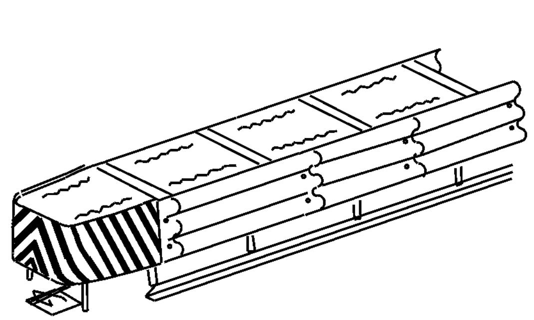


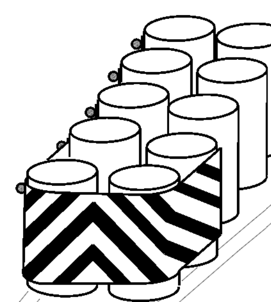
* Adjust to fit attenuator per manufacturer's recommendation, or as directed by the Engineer

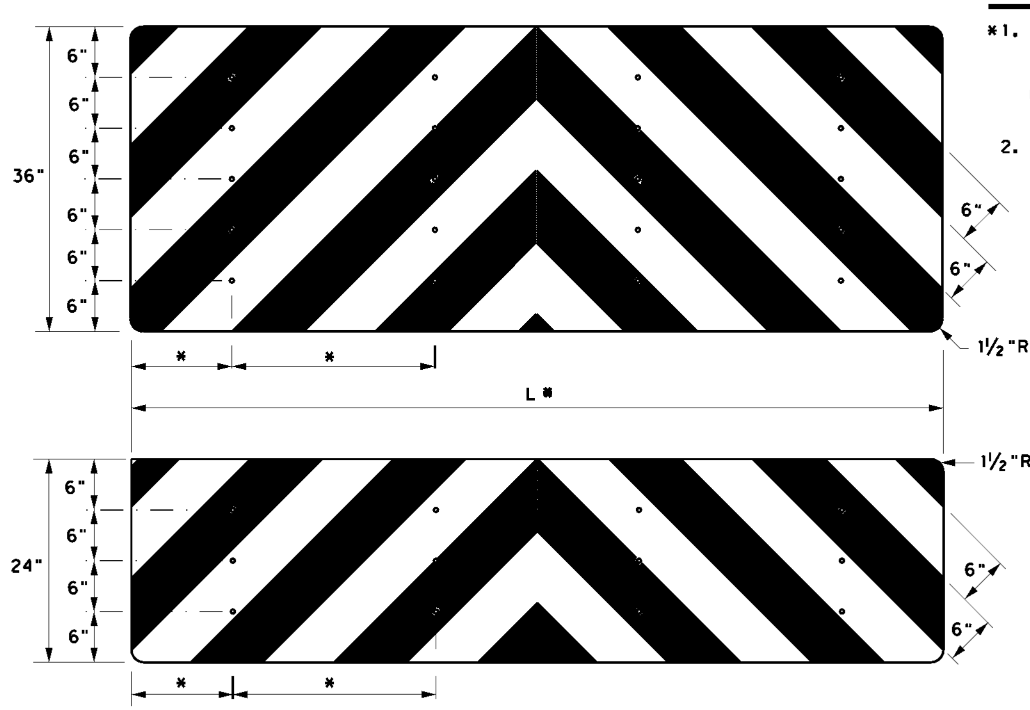


OBJECT MARKERS SMALLER THAN 3 FT²









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 0568	SECT 01	JOB 052,ETC.	HIGHWAY SH 34
REVISIONS 4-92 8-04 / 8-95 3-15 / 4-98 7-20	DIST DAL	COUNTY ELLIS		SHEET NO. 211

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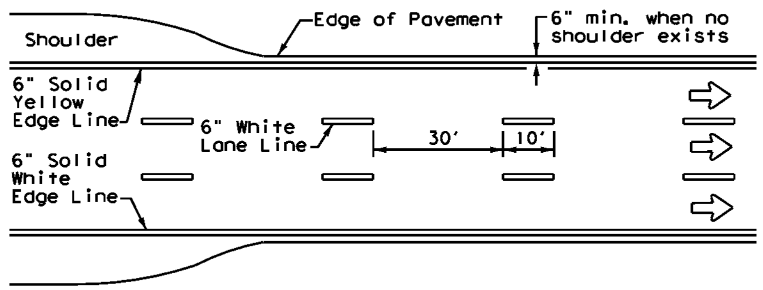
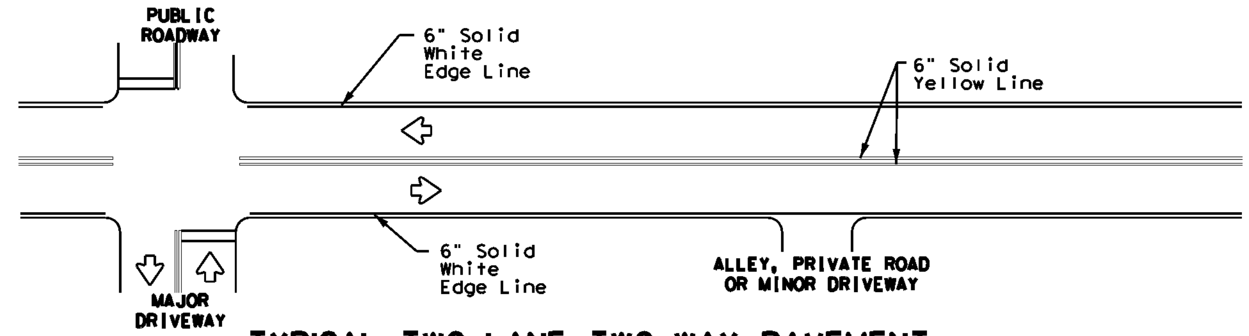


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS

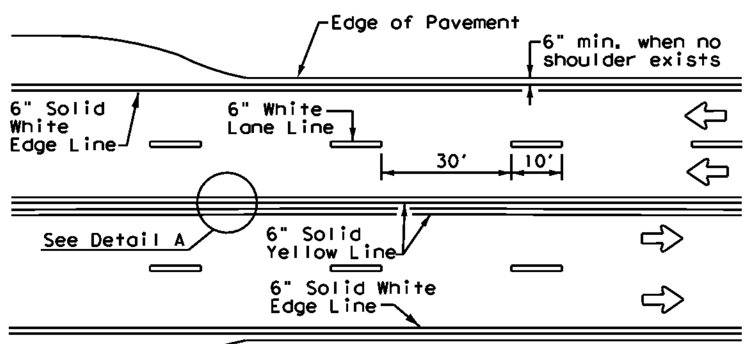
GENERAL NOTES

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.

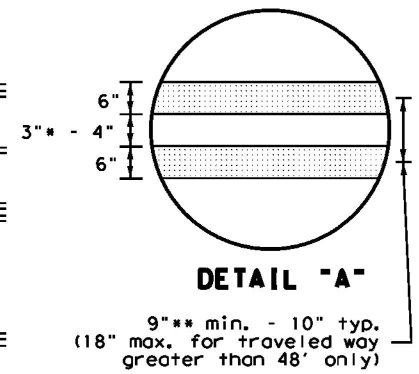
2. The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the center of edge line to the center of edge line of a two lane roadway.

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.

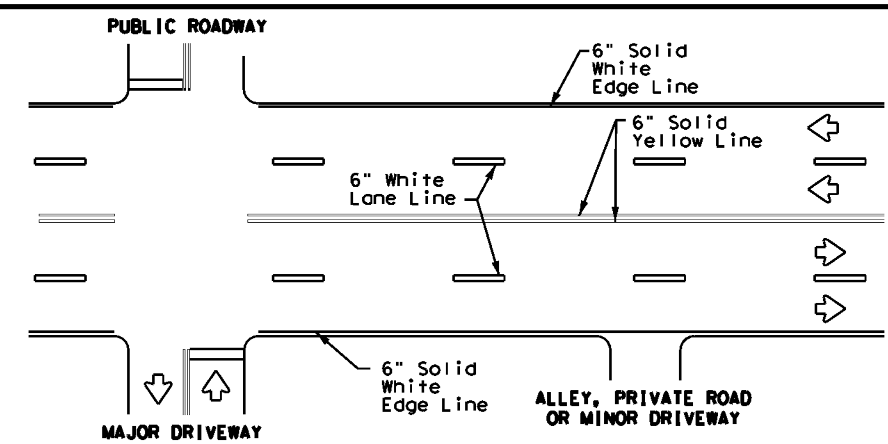


CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

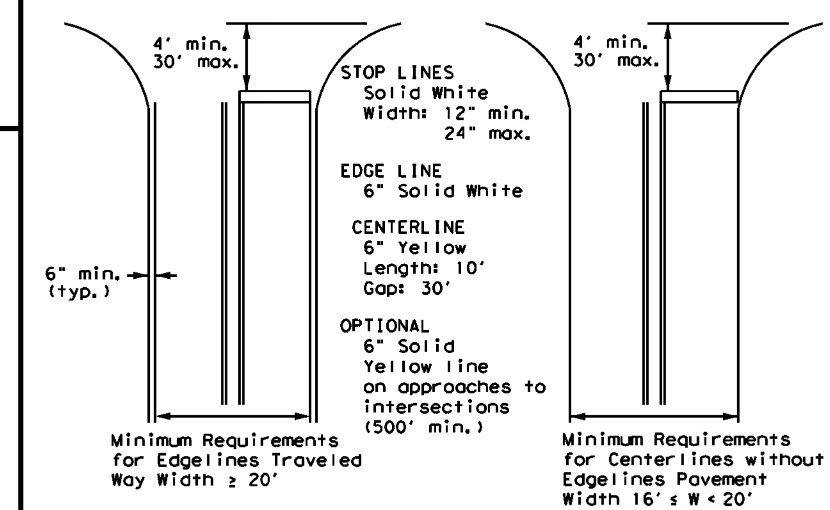


* 2" minimum for restripe projects when approved by the Engineer.

** 8" minimum for restripe projects when approved by the Engineer.



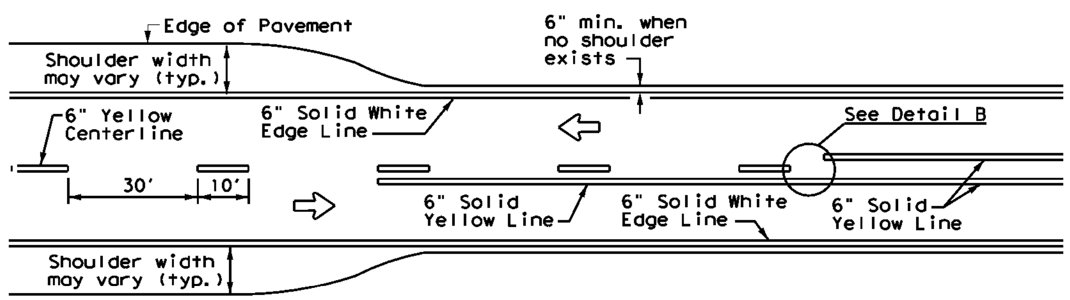
TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS



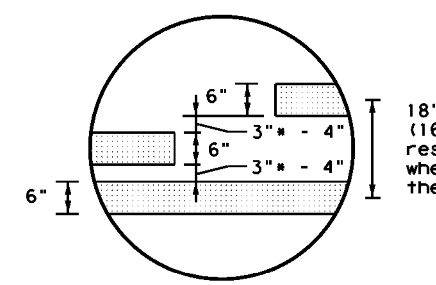
NOTE: Traveled way is exclusive of shoulder widths. Refer to General Note 2 for additional details.

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

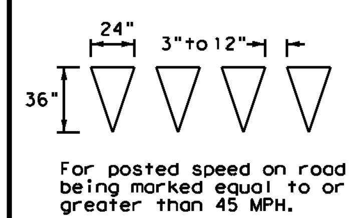
Based on Traveled Way and Pavement Widths for Undivided Roadways



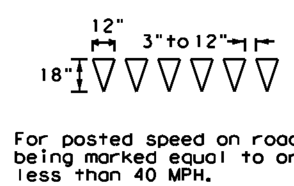
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

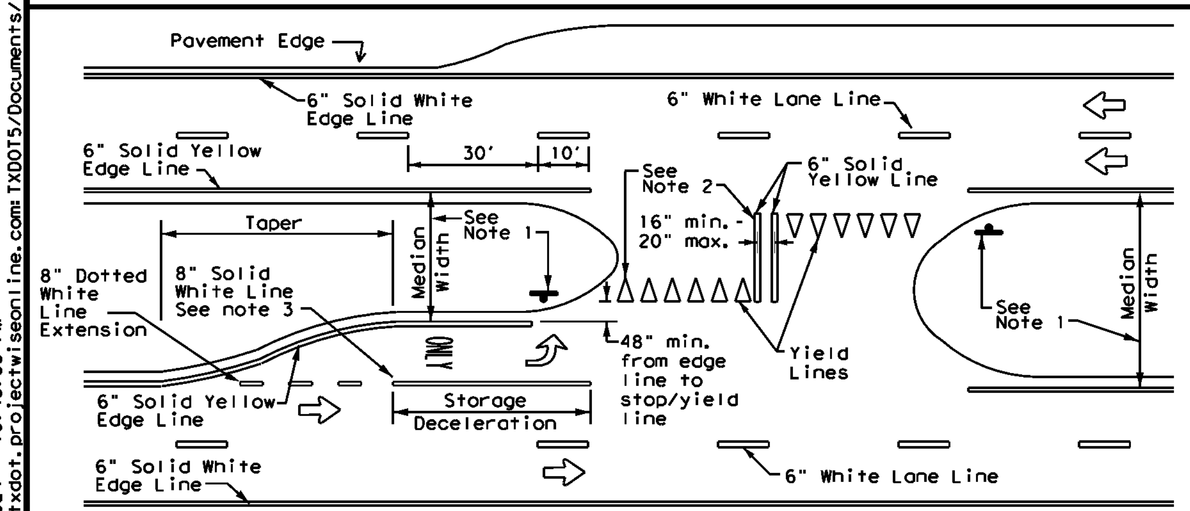


* 2" minimum for restripe projects when approved by the Engineer.



YIELD LINES





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.

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Texas Department of Transportation

Traffic Safety Division Standard

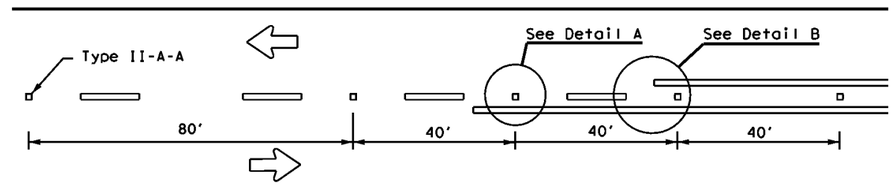
TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-22

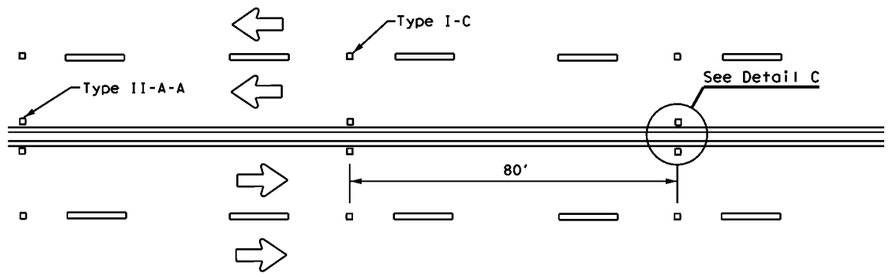
FILE: pm1-22.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 11-78 8-00 6-20 8-95 3-03 12-22 5-00 2-12	0568	01	052,ETC.	SH 34
	DIST		COUNTY	SHEET NO.
	DAL		ELLIS	212

22A

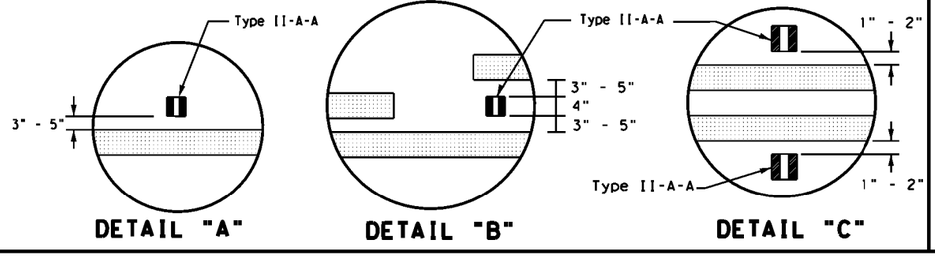
REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

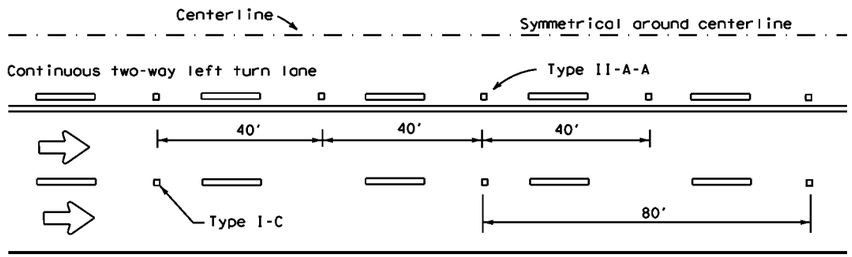


CENTERLINE FOR ALL TWO LANE TWO-WAY ROADWAYS

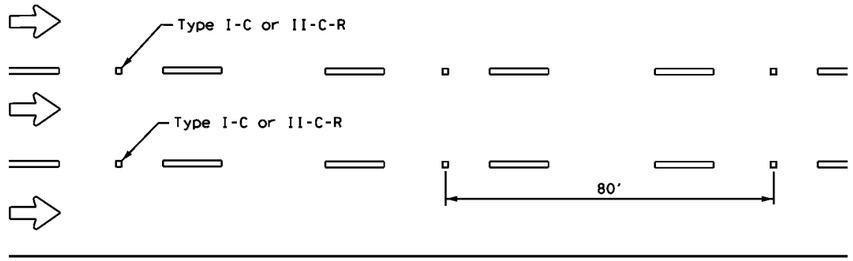


CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY ROADWAYS





CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



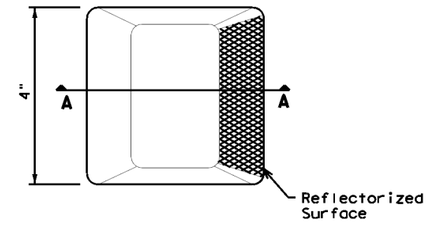
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.

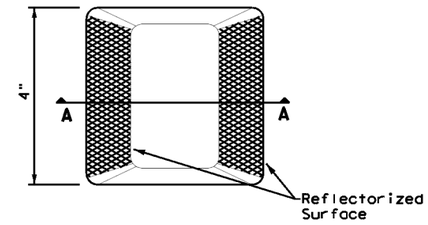
See Note 3.

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

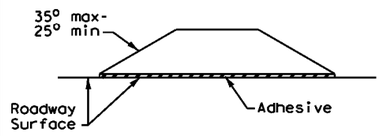
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)

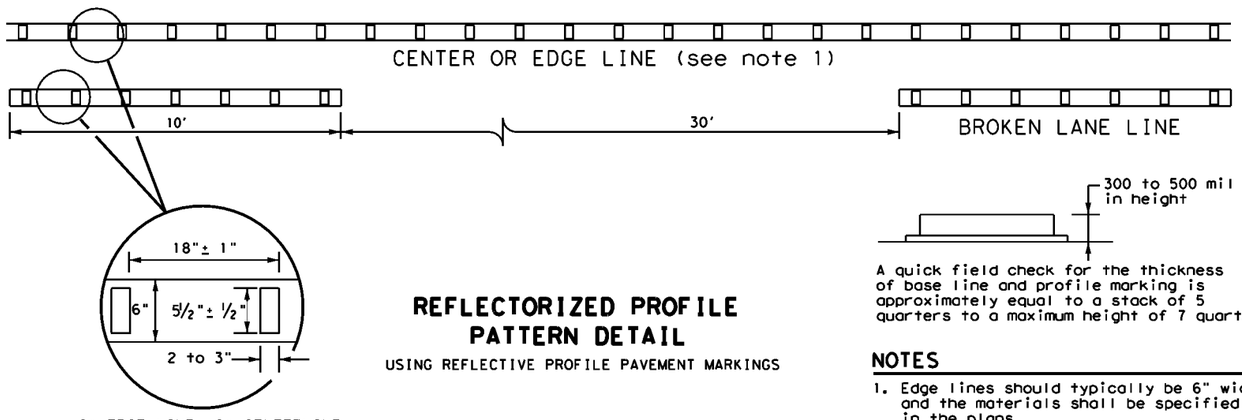


Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS



REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

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

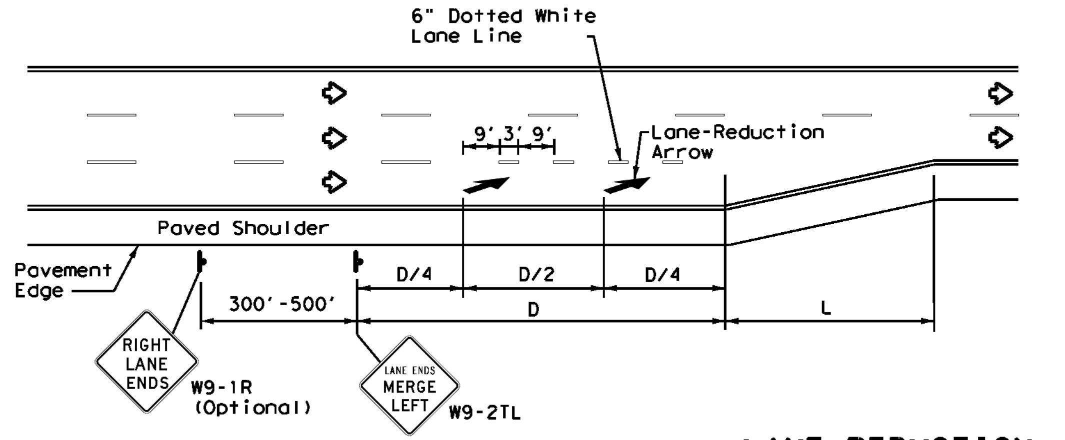
Traffic Safety Division Standard

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	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		213

22B

DATE: 5/4/2024 10:44:06 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568-01-052 Traffic Safety Standards/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.

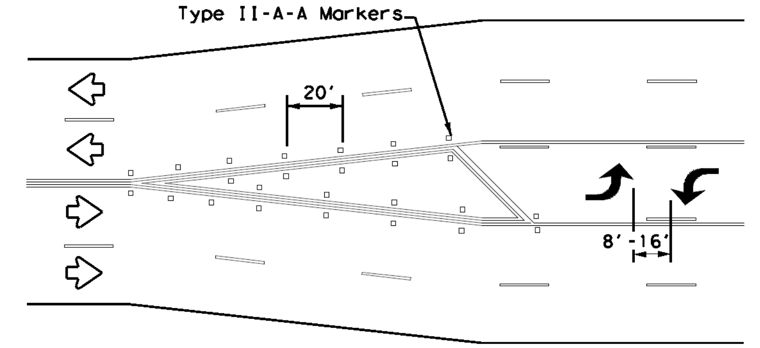
ADVANCED WARNING SIGN DISTANCE (D)		
Posted Speed	D (ft)	L (ft)
30 MPH	460	$L = \frac{WS^2}{60}$
35 MPH	565	
40 MPH	670	
45 MPH	775	L=WS
50 MPH	885	
55 MPH	990	
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	

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.

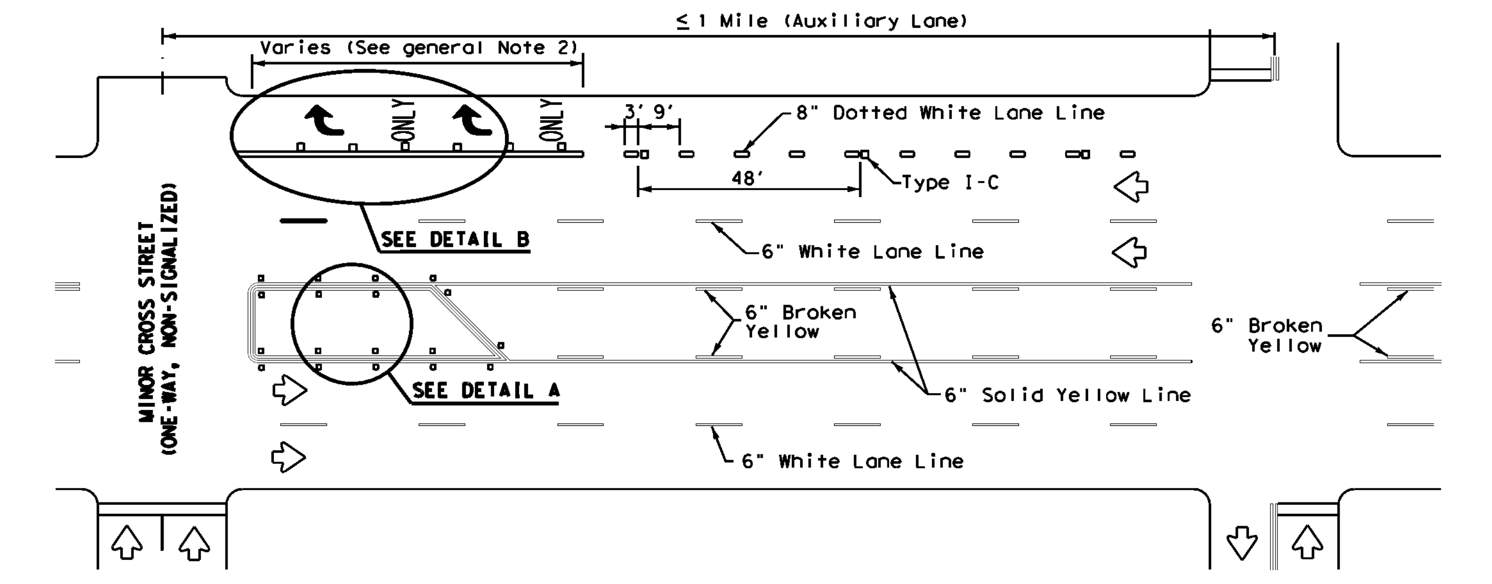
MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

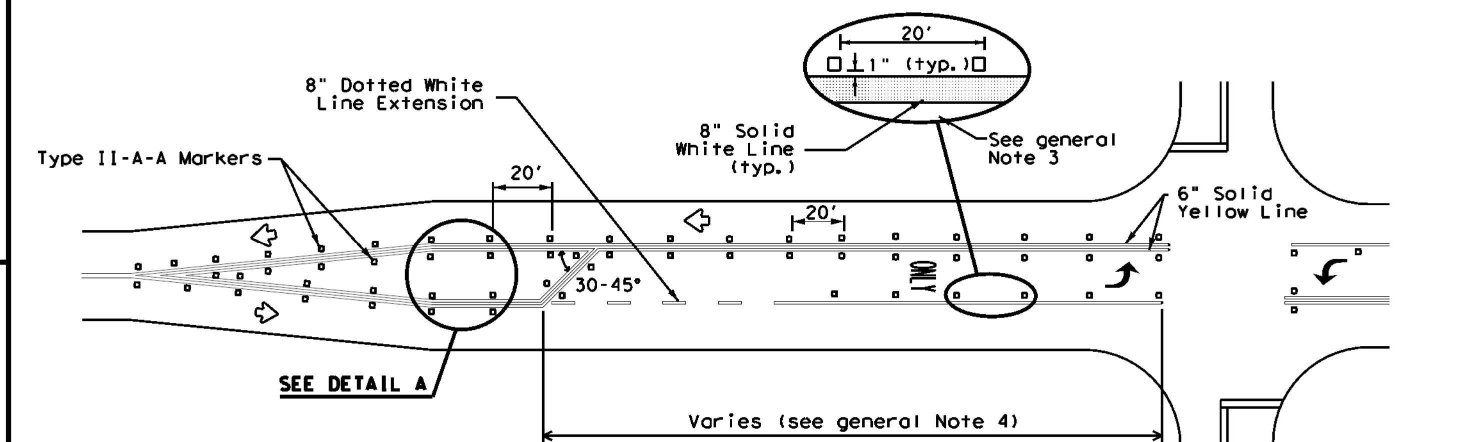


A two-way left-turn (TWLT) lane-use arrow pavement marking should be used at or just downstream from the beginning of a two-way left-turn lane within a corridor. Repeating the marking after each intersection or dedicated turn bay is not required unless stated elsewhere in the plans.

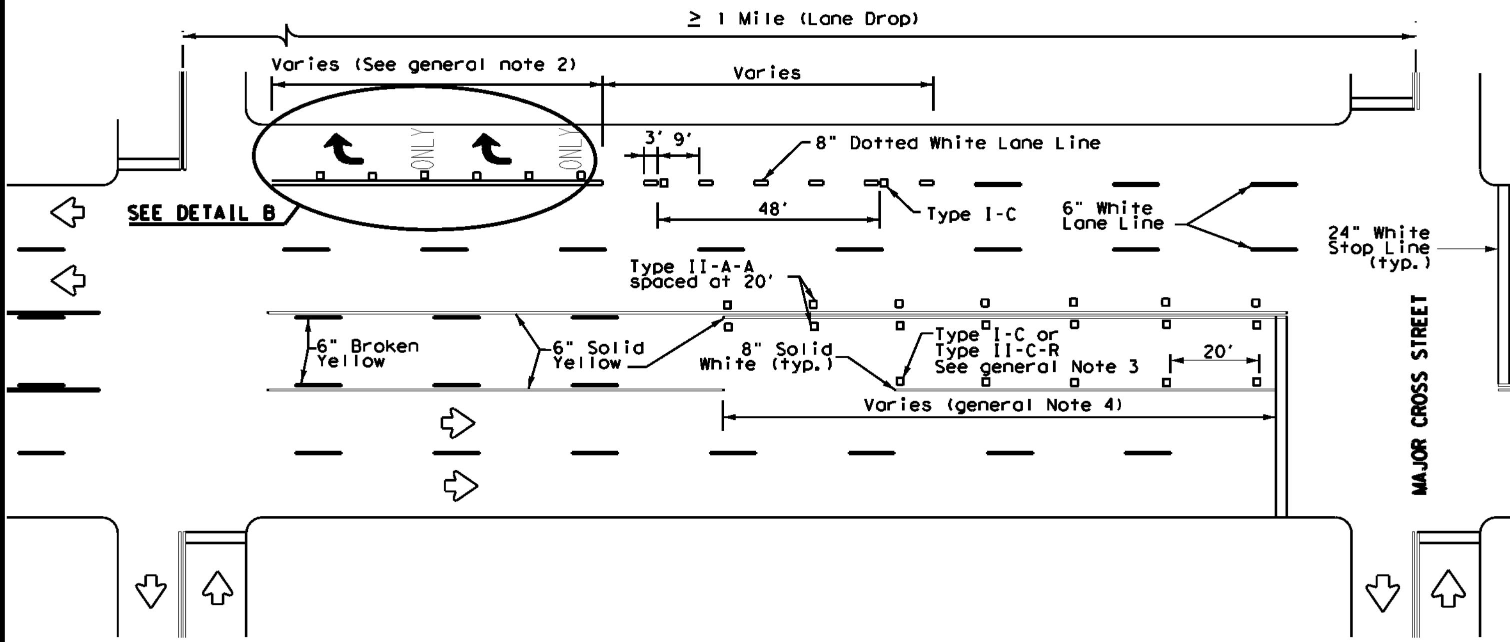
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY



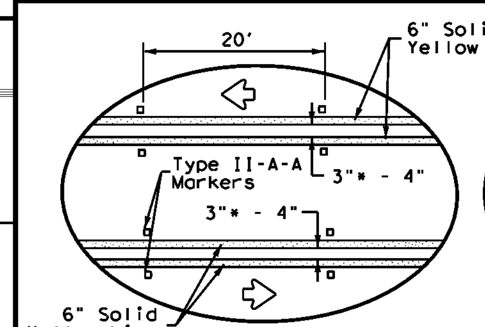
TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



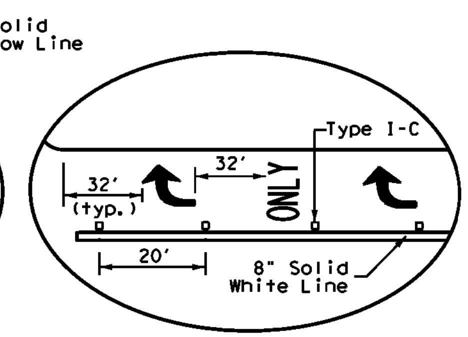
TYPICAL TWO-LANE ROADWAY INTERSECTION WITH LEFT TURN BAYS



TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



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	0568	01	052,ETC.	SH 34
	DIST		COUNTY	SHEET NO.
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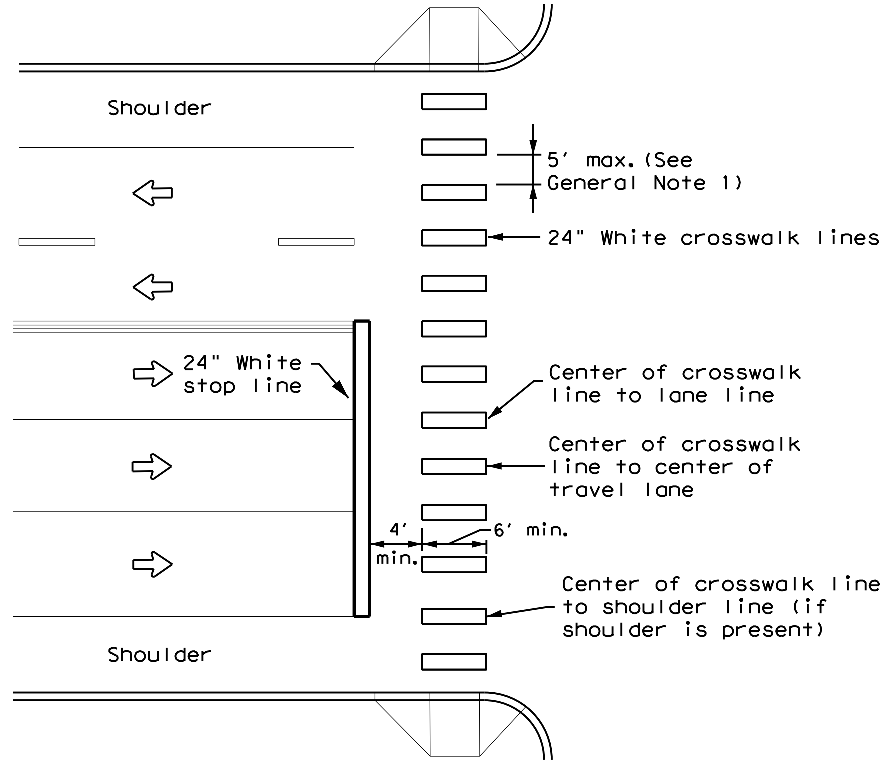


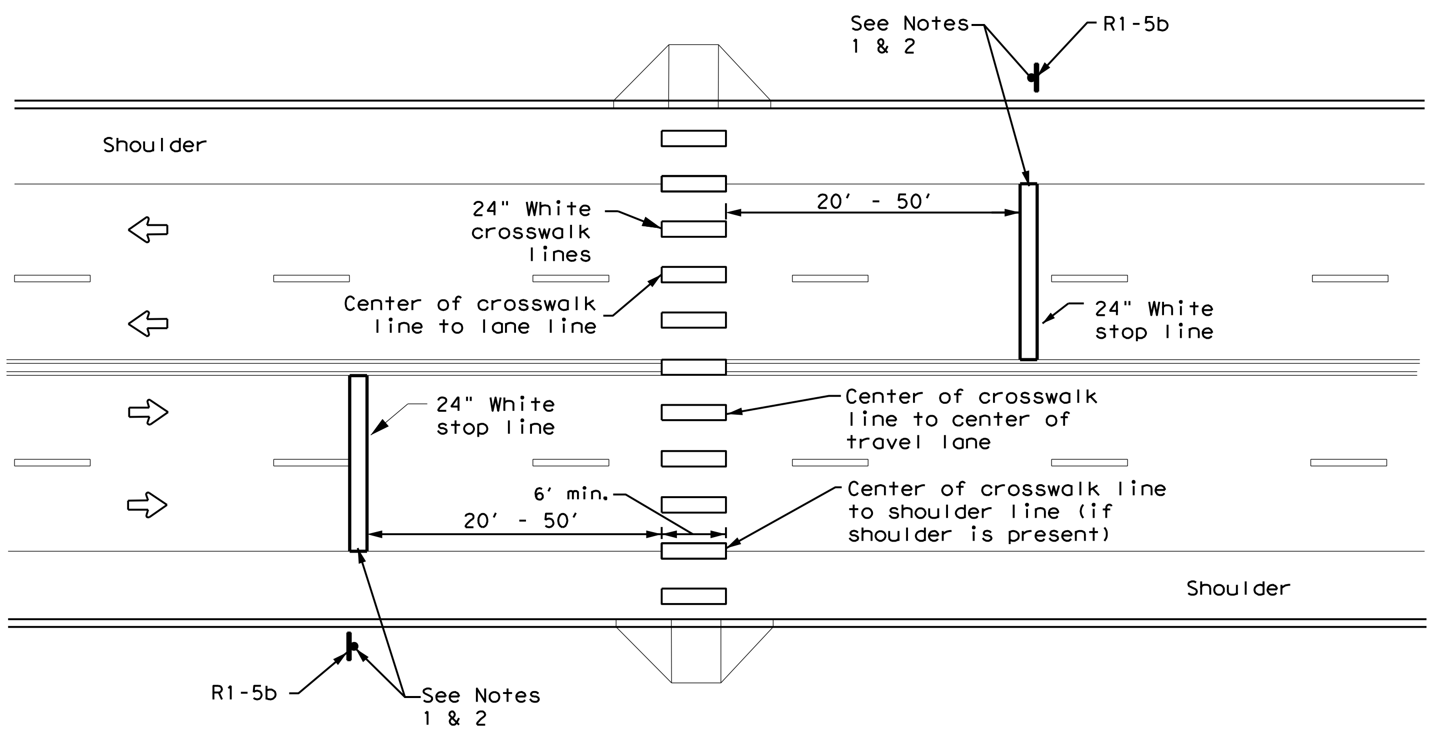
HIGH-VISIBILITY LONGITUDINAL CROSSWALK AT CONTROLLED APPROACH

GENERAL NOTES

1. Longitudinal crosswalk lines should not be placed in the wheel path of vehicles. Center the crosswalk lines on travel lanes, lane lines, and shoulder lines (if present).
2. A minimum 6" clear distance shall be provided to the curb face. If the last crosswalk line falls into this distance it must be omitted.
3. For divided roadways, adjustments in spacing of the crosswalk lines should be made in the median so that the crosswalk lines are maintained in their proper location across the travel portion of the roadway.
4. At skewed crosswalks, the crosswalk lines are to remain parallel to the lane lines.
5. Each crosswalk shall be a minimum of 6' wide.
6. The High-Visibility Longitudinal Crosswalk is the preferred crosswalk pattern on State Highways. Other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used. All crosswalk designs and dimension shall comply with the "Texas Manual on Uniform Traffic Control Devices."
7. Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

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.



UNSIGNALIZED MIDBLOCK HIGH-VISIBILITY LONGITUDINAL CROSSWALK

NOTES:

1. Use stop bars with Stop Here For Pedestrians (R1-5b) signs at unsignalized midblock cross walks.
2. Use stop bars with STOP HERE ON RED (R10-6 or R10-6a) signs at mid block crosswalks controlled by traffic signals or pedestrian hybrid beacons.

Texas Department of Transportation

Traffic Safety Division Standard

CROSSWALK PAVEMENT MARKINGS

PM(4)-22A

FILE: pm4-22a.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 6-20 6-22 12-22	0568	01	052, ETC.	SH 34
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220	DAL		ELLIS	215

DATE:
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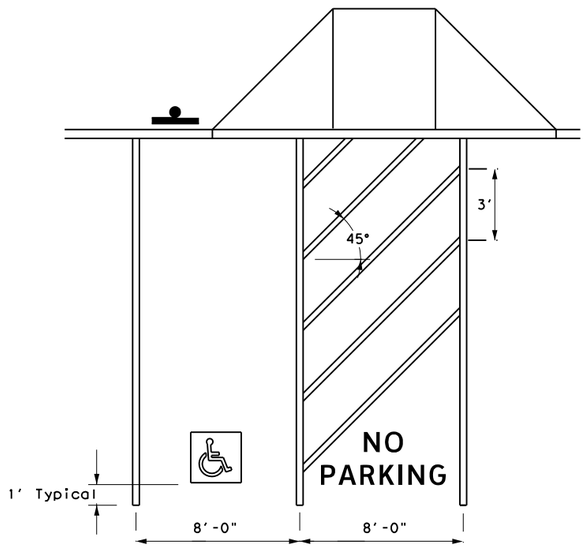
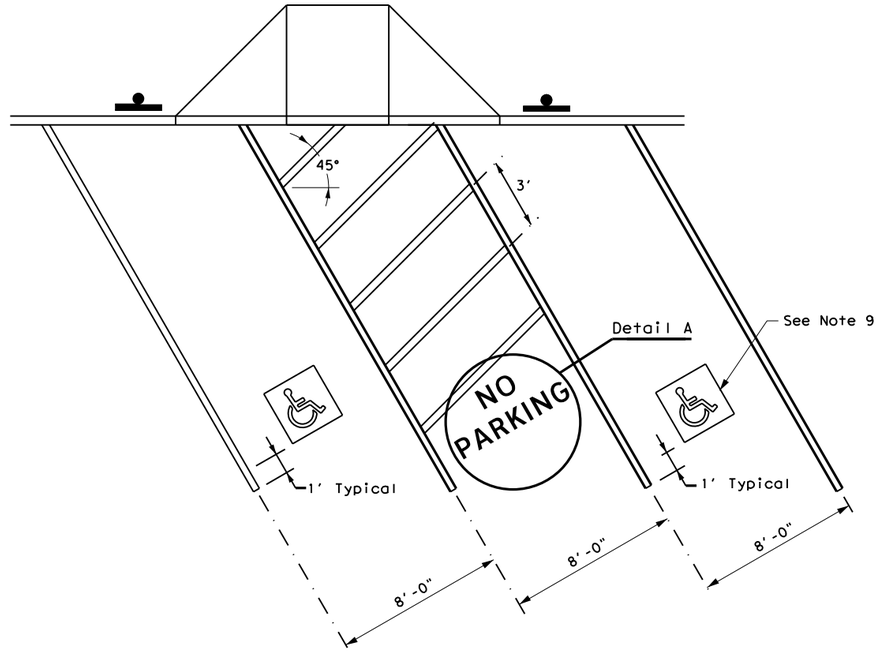




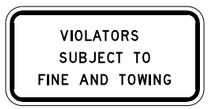
PERPENDICULAR OR ANGLED ACCESSIBLE PARKING SPACE DIMENSIONS

GENERAL NOTES:

1. All paved accessible parking space limit lines shall be 4" solid white lines.
2. Paved accessible parking spaces must include a white International Symbol of Accessibility applied conspicuously on the surface in a color that contrasts the pavement. A blue background with white border may supplement the symbol for additional contrast.
3. The words "NO PARKING" must be applied on any access aisle adjacent to the parking space. The words must be white, applied:
   a) in all capital letters.
   b) centered within each access aisle adjacent to the parking space.
4. RESERVED PARKING (R7-8T) sign including the International Symbol of Accessibility.
   a) shall be REQUIRED for each accessible parking space.
   b) shall NOT be placed between two accessible parking spaces.
   c) shall NOT be placed in a location that restricts movement of wheelchairs within the adjacent sidewalk.
   d) shall have a mounting height of 7 feet to the bottom of the sign.
5. A sign identifying the consequences of parking illegally in a paved accessible parking space. Must:
   a) at a minimum state "VIOLATORS SUBJECT TO FINE AND TOWING" (Plaque)(R7-8aPT).
   b) be mounted on a pole, post, wall or freestanding board.
   c) be no more than eight inches (8") below sign R7-8T a sign required by the Texas Accessibility Standards, 502.6.
   d) be installed so that the bottom edge of the sign is no lower than 48 inches and no higher than 80 inches above the ground level.
6. Signs identifying van parking spaces shall contain the designation "VAN ACCESSIBLE" (R7-8P) Signs shall be 60 inches minimum above the ground level measured to the bottom of the sign.
7. Perpendicular or angled parking spaces shall be 8 feet wide minimum with an access aisle 8 feet minimum wide (van accessible). Two parking spaces are permitted to share a common access aisle.
8. Access aisles shall be at street level, extend the full length of the parking space they serve, follow ADA surface requirements, and marked to discourage parking in the access aisle. Curb ramps shall connect the access aisle to the adjacent pedestrian access route. Curb ramps shall not be located within the access aisle.
9. International Symbol of Accessibility Parking Space Marking and sign details can be found in The Standard Highway Sign Designs for Texas (SHSD) at the following website. http://www.txdot.gov/

R7-8T

R7-8P



R7-8aPT

ACCESSIBLE PARKING SIGNS

Detail A

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
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
SIGN FACE MATERIALS	DMS-8300

Texas Department of Transportation

Traffic Safety Division Standard

PAVEMENT MARKINGS AND SIGNING FOR ACCESSIBLE PARKING

PM(AP)-21

FILE: pm(ap)-21	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
July 2021	CONT	SECT	JOB	HIGHWAY
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	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		216

22F

DATE:
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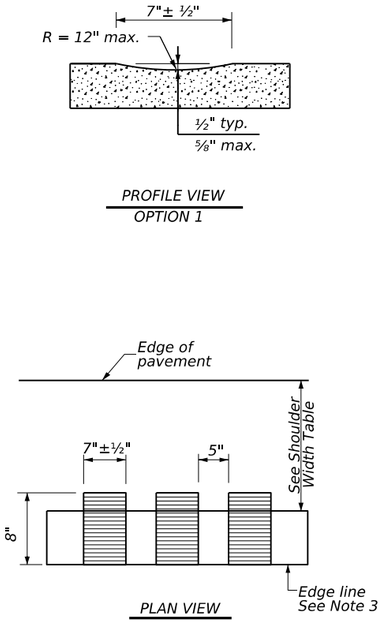
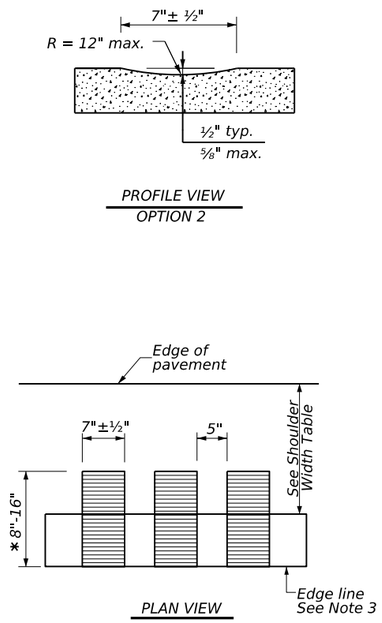


CONTINUOUS MILLED DEPRESSIONS (Rumble Strips)



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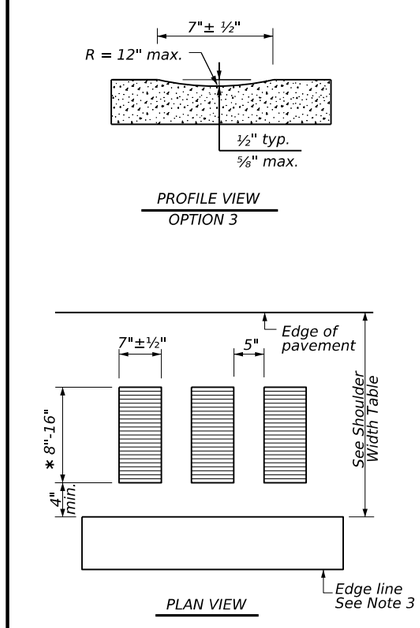

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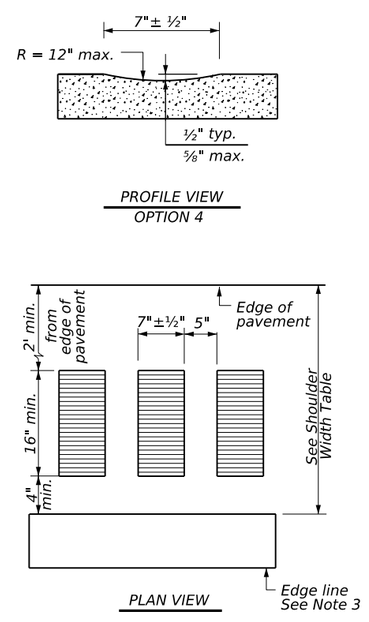
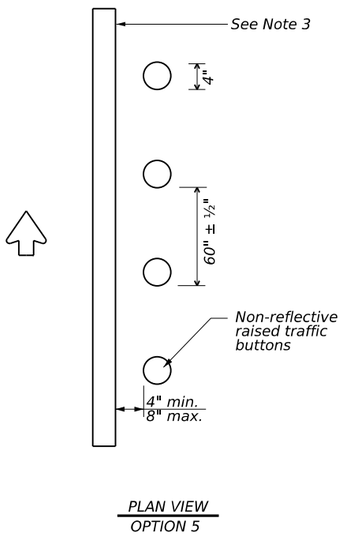
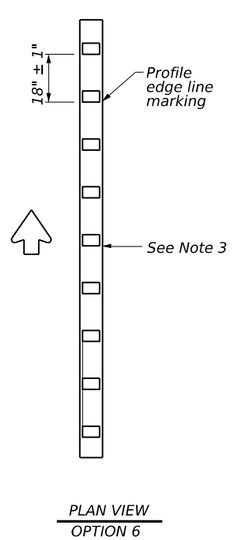


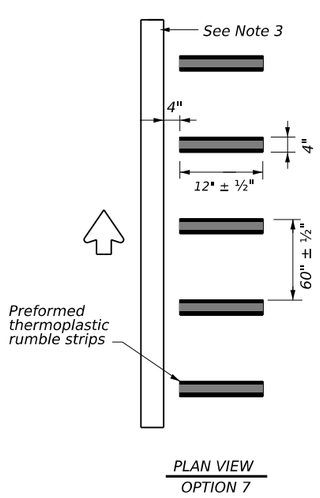
CONTINUOUS MILLED DEPRESSIONS (Rumble Strips)



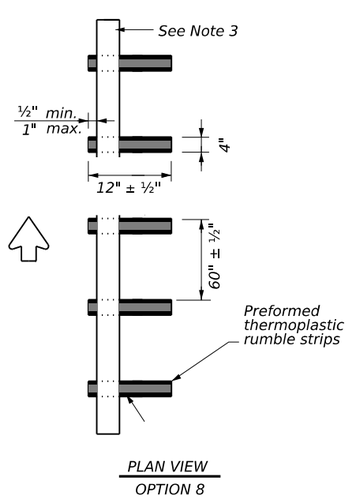
RAISED EDGE LINE (Rumble Strips)



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.

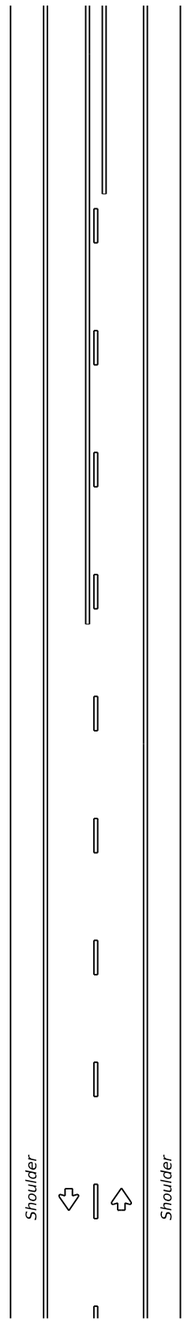
Texas Department of Transportation

Traffic Safety Division Standard

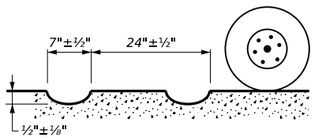
EDGE LINE RUMBLE STRIPS ON UNDIVIDED OR TWO LANE HIGHWAYS
RS(2)-23

FILE: rs(2)-23.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT January 2023	CONT	SECT	JOB	HIGHWAY
REVISIONS 10-13 1-23	0568	01	052, ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		217

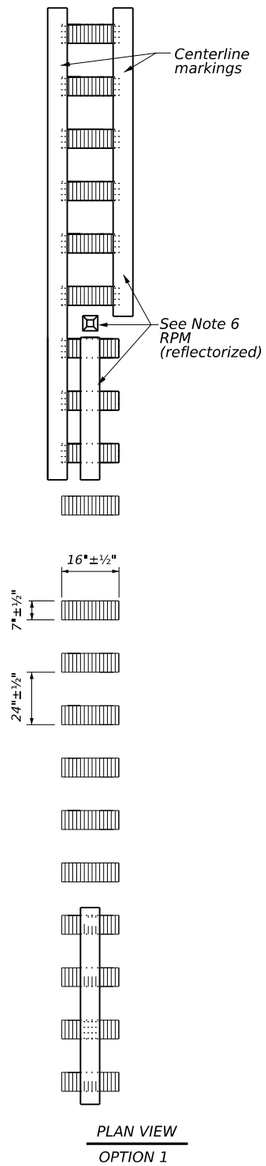
CENTERLINE RUMBLE STRIPS



TWO LANE TWO-WAY HIGHWAYS

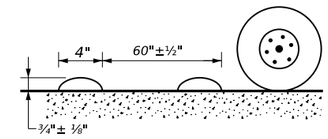


PROFILE VIEW

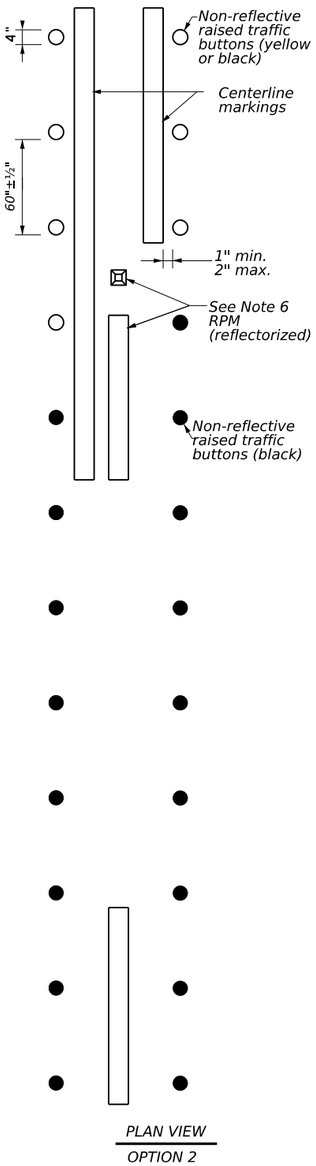


PLAN VIEW
OPTION 1

MILLED CENTERLINE RUMBLE STRIPS

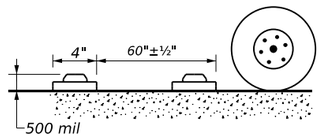


PROFILE VIEW

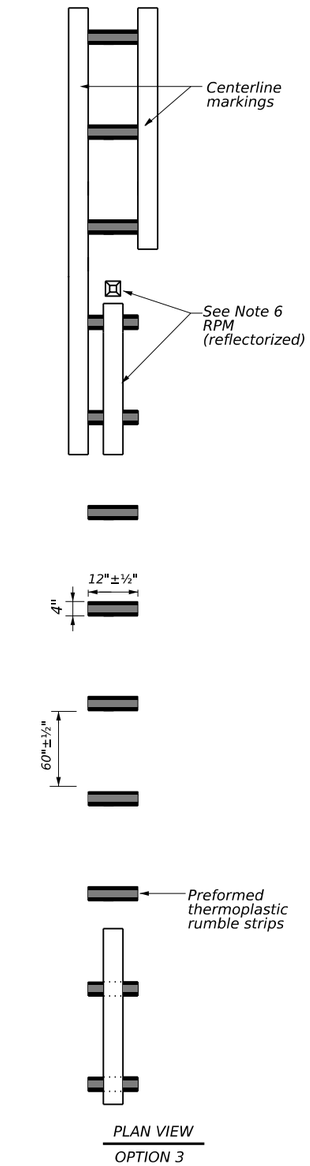


PLAN VIEW
OPTION 2

RAISED CENTERLINE RUMBLE STRIPS

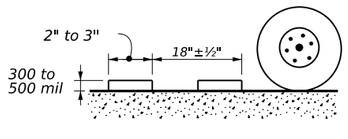


PROFILE VIEW

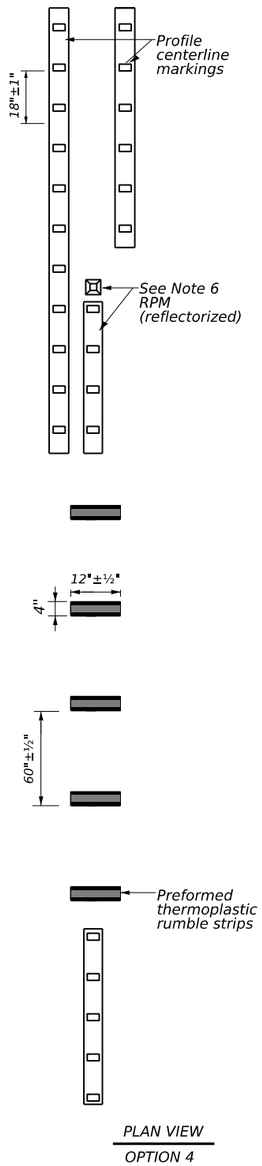


PLAN VIEW
OPTION 3

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).

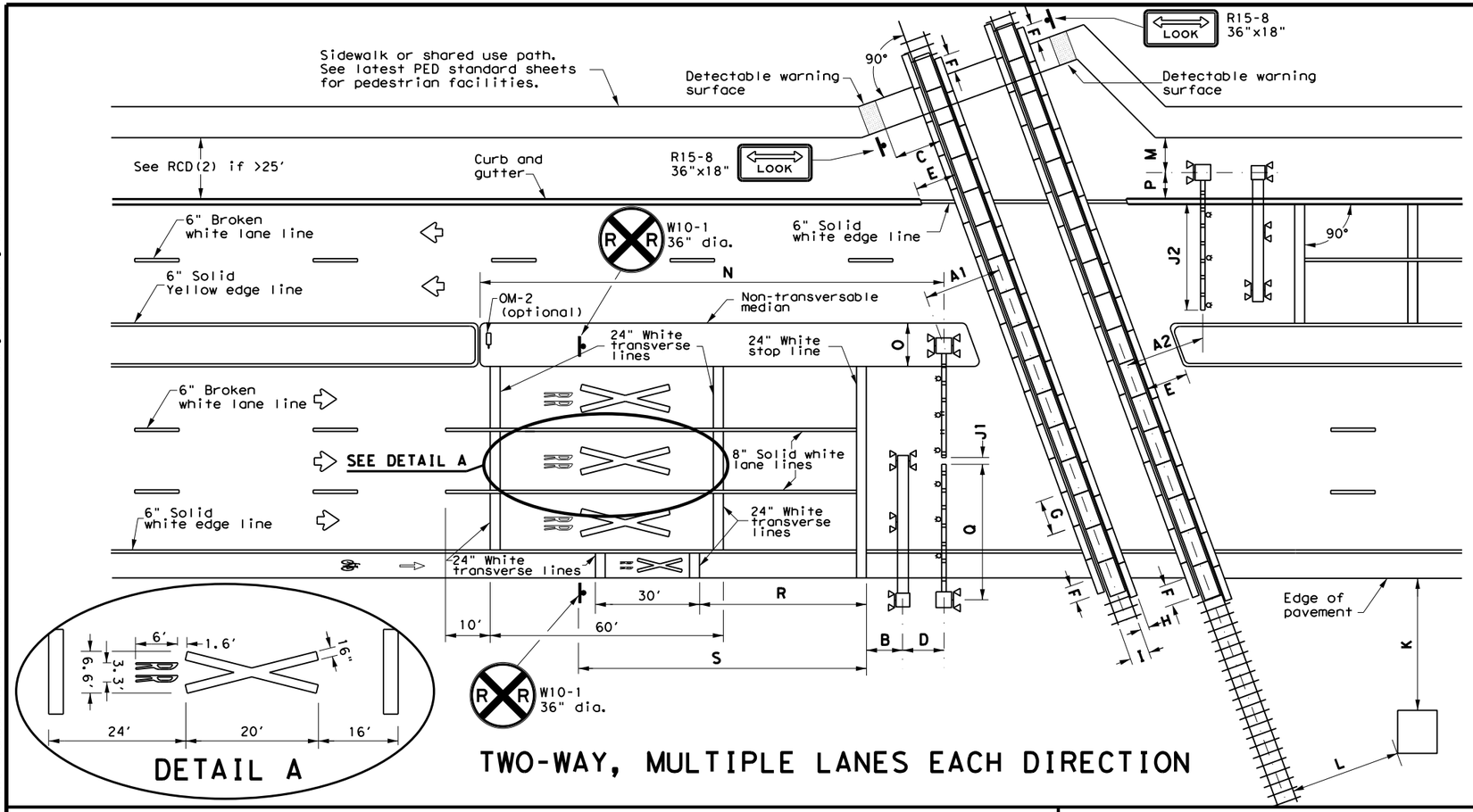
Texas Department of Transportation

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	0568	01	052,ETC.	SH 34
10-13 1-23	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		218

DATE: 5/4/2024 10:45:07 PM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/056801052 4 - Design Plan Set/8. Traffic/Standards/rs(4)-23.dgn



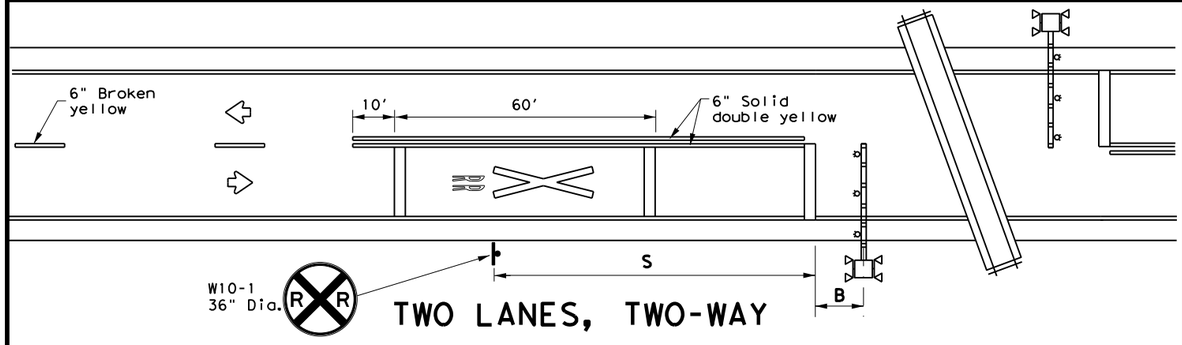
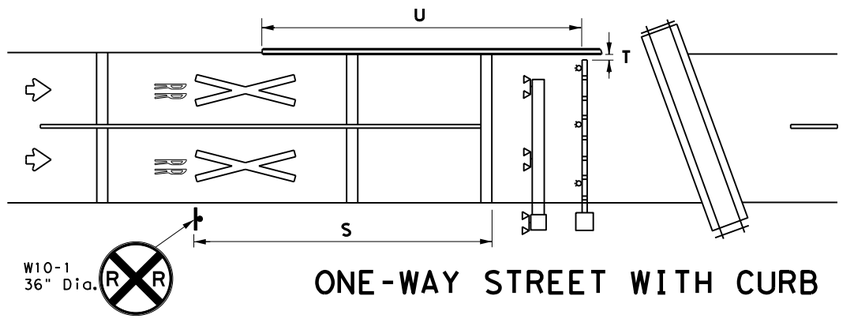


TABLE 1	
Approach Speed (mph)	Desirable Placement (feet)
20	100
25	100
30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550
75	650

LEGEND	
	Sign
	Object Marker
	Traffic Flow
	Cantilever
	Gate Assembly
	Mast Flasher Pair

GENERAL NOTES

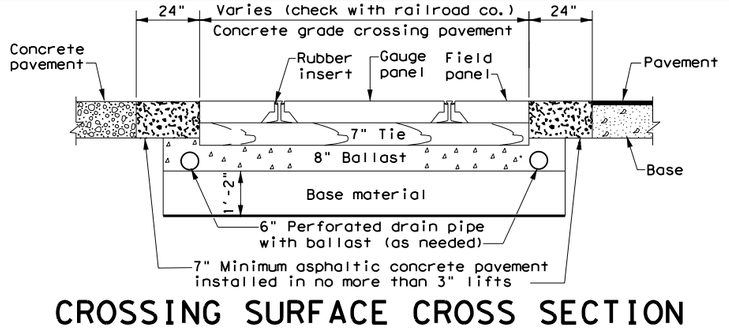
1. Medians and curbs must be non-traversable to qualify as a Quiet Zone Supplementary Safety Measure (SSM). Non-traversable curbs in Quiet Zones are 6" tall minimum and used on roadways where speed does not exceed 40 mph.
2. Raised pavement markers may be used to supplement striping. See PM(2) and PM(3) standard sheets.
3. Medians preferred whenever possible to prevent vehicles from driving around gates.
4. Longitudinal edge striping may be continued thru crossing as needed. Illumination may also be considered for nighttime visibility.
5. See SMD standard sheets for sign mounting details.
6. See the Standard Highway Sign Design for Texas (SHSD) manual for sign and pavement marking details.



NOTES

T: Tip of gate to edge of curb: 1' maximum for Quiet Zone SSM, 90% of traveled way covered by gates for all other locations.

U: Non-traversable curb length from gate: 100' minimum for a Quiet Zone SSM, 10' minimum for all other locations.



NOTES

A1: Center of RR mast to center of rail: 12' minimum, 15' typical.

A2: Tip of gate to center of rail: 12' minimum, 15' typical.

B: Center of mast (cantilever, gate, or mast flasher) of nearest active traffic control device to stop line: 8' (NOTE: Stop line may be moved as needed, but should be at least 8' back from gates, if present).

C: Near edge of detectable warning surface to nearest rail: 12' minimum.

D: Center of gate mast to center of cantilever mast: 6' typical. NOTE: Cantilever may be located in front or behind gates.

E: Edge of median or curb to nearest rail: 10' typical. NOTE: Design median edge to be parallel with rail.

F: Edge of planking panel from edge of pavement or sidewalk: 3' minimum. NOTE: Field panels need not be in line with gauge panels.

G: Length of panels along rail: 8' typical.

H: Width of field panel: 2' typical (check with railroad company).

I: Distance between rails: 4'- 8'1/2".

J1: Tip of gate to tip of gate: 2' maximum.

J2: 90% of traveled roadway to be covered by gate.

K: Nearest edge of RR cabinet from edge of pavement: 30' typical. NOTE: Cabinet not required to be parallel to edge of pavement.

L: Nearest edge of RR cabinet from nearest rail: 25' typical.

M: Center of RR mast to edge of sidewalk: 6' minimum.

N: Center of gate mast to leading edge of non-traversable median: 100' minimum to qualify as a Quiet Zone SSM. NOTE: 60'will suffice if there is a street intersection within the 100' and all street intersections within 60' are closed.

O: Width of median for RR gate assembly: 8'-6" minimum, 10' typical when using median gates. NOTE: Center of gate mast minimum 4'-3" from face of curb.

P: Center of RR mast to face of curb: 5'-3" minimum. Center of RR mast to edge of pavement (with shoulder): 7' minimum. Center of RR mast to edge of pavement (no shoulder): 9'-3" minimum. NOTE: Final location determined by the railroad company.

Q: Gate length: 28' or less typical, but railroad company may allow up to 32' under special circumstances.

R: Stop line to first RR Crossing transverse line (bike lane): 50' typical.

S: Stop line to GRADE CROSSING ADVANCE WARNING (W10-1) sign and adjacent RR Crossing pavement markings. See Table 1. See RCD(2) for other signs.

Texas Department of Transportation

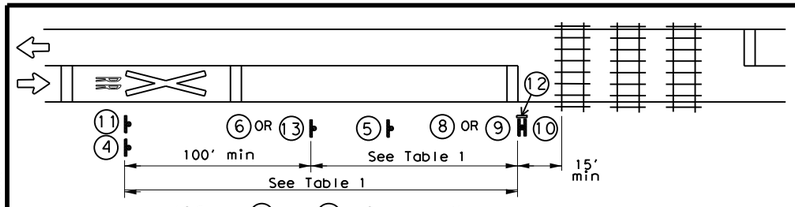
Traffic Safety Division Standard

RAILROAD CROSSING DETAILS SIGNING, STRIPING, AND DEVICE PLACEMENT RCD(1)-22

FILE: rcd1-22.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
2-16	DIST	COUNTY		SHEET NO.
11-22	DAL	ELLIS		219

DATE:
FILE:

DATE:
FILE:

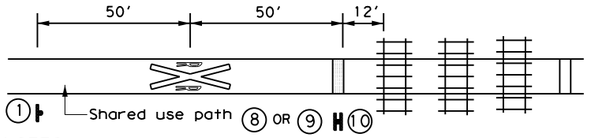


(if no (6) or (13) sign used)

PASSIVE CROSSING

NOTES

1. STOP or YIELD sign may also be installed to the left of the crossbuck sign, rather than below it.
2. A 2" white retroreflective strip shall be installed on front and back of crossbuck sign post.
3. See the Crossbuck Assemblies with YIELD or STOP Signs at Passive Grade Crossings section of the TMUTCD for further details about sign mounting arrangements.



NOTES

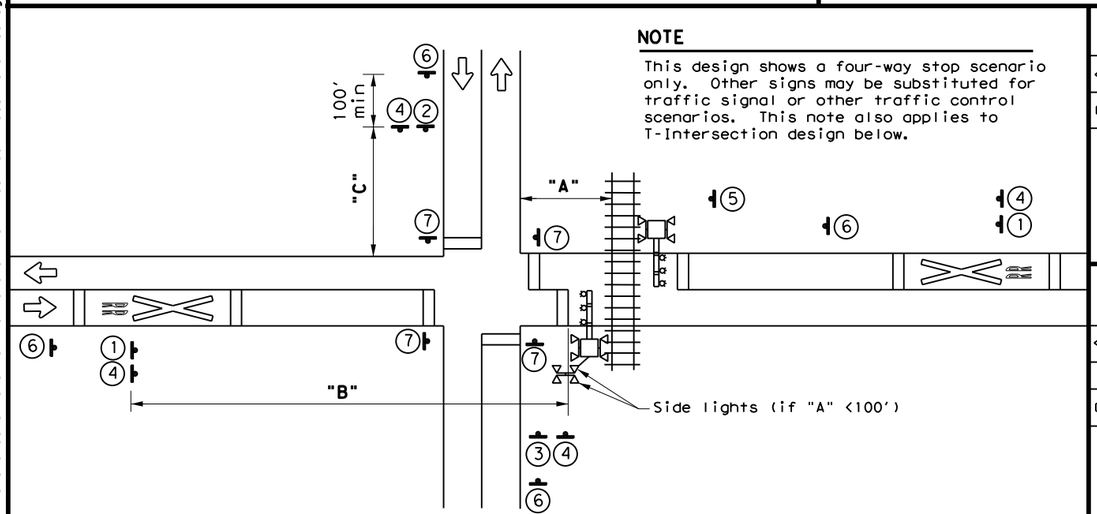
1. A shared use path is considered a separate pathway crossing when more than 25' from traveled way of adjacent roadway.
2. Detectable warning used at stop bar.
3. Smaller signs preferred. See the Design of Bicycle Signs section within the TMUTCD for sizing details.

PATHWAY CROSSING

TABLE 1	
Approach Speed (mph)	Desirable Placement (feet)
20	100
25	100
30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550
75	650

GENERAL NOTES

1. Railroad company to provide active traffic control devices, CROSSBUCK (R15-1), NUMBER OF TRACKS (R15-2P) plaque (if more than 1 track), and EMERGENCY NOTIFICATION (I-13) signs.
2. LOW GROUND CLEARANCE (W10-5) signs may be relocated further upstream of crossing to provide advance warning of alternate route.
3. GRADE CROSSING AND INTERSECTION ADVANCE WARNING (W10-2) signs may be modified as needed to fit roadway geometry.
4. Table 1 placement distances may vary per the Placement of Warning Signs section of the TMUTCD.
5. See Table 1 to determine placement of STOP AHEAD (W3-1) and YIELD AHEAD (W3-2) signs unless shown otherwise.
6. DO NOT STOP ON TRACKS (R8-8) signs installed when potential for vehicles stopping on tracks is significant as determined by sealing engineer. Install so sign does not block view of RR mast.
7. See the Standard Highway Sign Design for Texas (SHSD) manual for sign and pavement marking details.

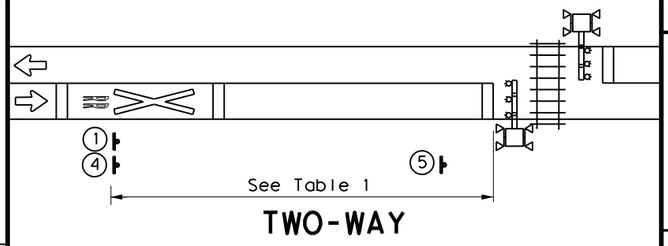


NOTE

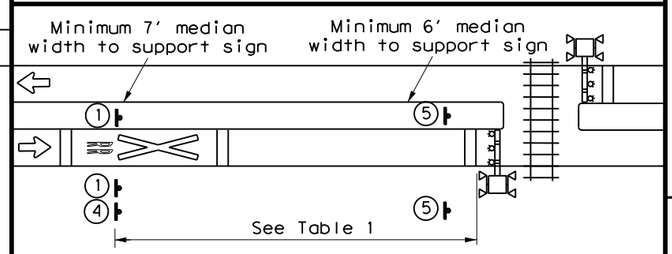
This design shows a four-way stop scenario only. Other signs may be substituted for traffic signal or other traffic control scenarios. This note also applies to T-Intersection design below.

	"A" <100'	"A" ≥100'
"B"	See Table 1. Place pavement markings and signs on opposite side of intersection from rail if spacing from Table 1 would put markings within intersection.	See Table 1. Place pavement markings and signs between rail and intersection if spacing from Table 1 would put markings within intersection.
"C"	See Table 1.	GRADE CROSSING AND INTERSECTION ADVANCE WARNING (W10-2, W10-3, W10-4) signs should only be installed if W10-1 sign is not between intersection and railroad crossing. If needed, see Table 1.

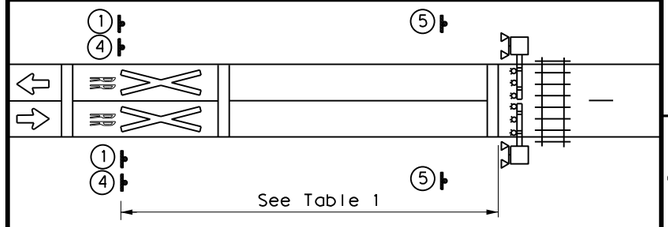
GRADE CROSSING NEAR A PARALLEL STREET



TWO-WAY



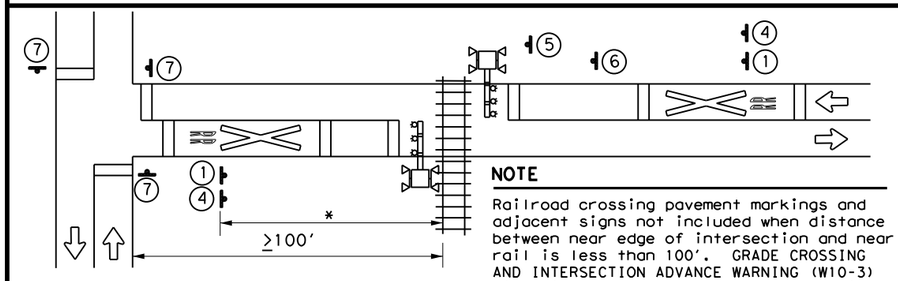
TWO-WAY WITH MEDIAN



ONE-WAY

SIGNS

** R R ① W10-1 36" Dia.	** ② W10-2L 36" X 36"	** ③ W10-2R 36" X 36"	IF NEEDED ④ W10-5 36" X 36"; LOW GROUND CLEARANCE W10-5P 30" X 24"	
IF NEEDED ⑤ R8-8 DO NOT STOP ON TRACKS 24" X 30"	IF NEEDED ⑥ W3-1 30" X 30"	⑦ STOP R1-1 36" X 36"; ALL WAY R1-3P 18" X 6"	RAIL ROAD CROSSING 3 TRACKS R15-1 48" X 9"; R15-2P 27" X 18"; STOP R1-1 36" X 36" ⑧	
RAIL ROAD CROSSING 3 TRACKS R15-1 48" X 9"; R15-2P 27" X 18"; YIELD ⑨ R1-2 48" X 48" X 48"	RAIL ROAD CROSSING 3 TRACKS R15-1 48" X 9"; R15-2P 27" X 18" ⑩	R R ⑪ ** W10-1 36" Dia.; NO GATES OR LIGHTS W10-13P 30" X 24"	REPORT EMERGENCY OR PROBLEM 1-800-555-5555 CROSSING 836 597 H ⑫ I-13 15" X 9" Sign may be placed perpend. to travel lanes.	
IF NEEDED ⑬ W3-2 30" X 30"	** Includes a NO TRAIN HORN (W10-9P) plaque if crossing is in a Quiet Zone. If needed, is mounted below W10-2/W10-3/W10-4 signs.			
NO TRAIN HORN W10-9P 30" X 24"				

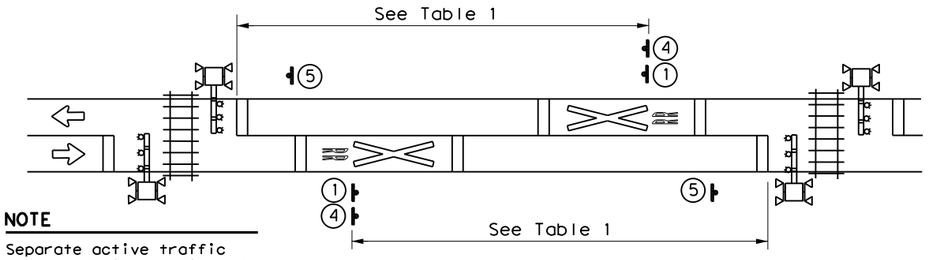


*Use Table 1 if sufficient space exists.

NOTE

Railroad crossing pavement markings and adjacent signs not included when distance between near edge of intersection and near rail is less than 100'. GRADE CROSSING AND INTERSECTION ADVANCE WARNING (W10-3) signs installed on roadway parallel with rail in this case.

T-INTERSECTION



NOTE

Separate active traffic control devices, railroad crossing pavement markings, and adjacent signs required when tracks are more than 100' apart.

TWO ADJACENT CROSSINGS

Texas Department of Transportation

Traffic Safety Division Standard

RAILROAD CROSSING DETAILS SIGNING & STRIPING

RCD(2)-22

FILE: rcd2-22.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	0568	01	052,ETC.	SH 34
2-16 11-22	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		220

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.

For all projects with soil disturbing activity and for projects that have Environmental, Permits, Issues, and Commitments (EPICs) dependent on stormwater controls and water quality measures TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office, Area Office, or electronically.

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):
CCSJ: 0568-01-052,ETC. SH 34

1.2 PROJECT LIMITS:
From: SH 34 FROM IH 35E TO BI 45G,
To: AND SH 34 AT FM 1181

1.3 PROJECT COORDINATES:
BEGIN: (Lat) 32.182847 ,(Long) 96.891281
END: (Lat) 32.320156 ,(Long) 96.617983

1.4 TOTAL PROJECT AREA (Acres): 237.38

1.5 TOTAL AREA TO BE DISTURBED (Acres): 3.46
- CSJ 0568-01-055: 0.79 Acres - CSJ 0568-01-056: 0.57 Acres
- CSJ 0568-01-057: 0.65 Acres - CSJ 0568-01-058: 0.86 Acres
- CSJ 0568-01-052: 0.56 Acres - CSJ 2984-01-017: 0.03 Acres

1.6 NATURE OF CONSTRUCTION ACTIVITY:
PAVEMENT REPAIR AND OVERLAY
ADDING LEFT AND/ RIGHT TURN LANES
AT VARIOUS INTERSECTIONS

1.7 MAJOR SOIL TYPES:

Soil Type	Description
SH 34 from IH 35E to US 77: Austin Silty Clay, 1 to 3% slopes Houston Black Clay, 1 to 3% slopes	Austin Silty Clay: mostly silty clay with bedrock, well drained and high rate of runoff. Houston Black Clay: mostly clay, moderately well drained and very high runoff rate.
SH 34 at FM 667: Eddy Soils, 3 to 8% slopes, eroded Houston Black Clay, 1 to 3% slopes	Eddy Soils: gravelly clay loam with bedrock, well drained and medium runoff rate. Houston Black Clay (1-3%): mostly clay, moderately well drained and very high runoff rate.
SH 34 at FM 877: Houston Black Clay, 0 to 1% slopes Houston Black Clay, 1 to 3% slopes	Houston Black Clay (0-1%): mostly clay, moderately well drained and high runoff rate. Houston Black Clay (1-3%): mostly clay, moderately well drained and very high runoff rate.
SH 34 at FM 985: Houston Black Clay, 1 to 3% slopes Heiden Clay, 3 to 5% slopes, eroded	Houston Black Clay (1-3%): mostly clay, moderately well drained and very high runoff rate. Heiden Clay: mostly clay, well drained and very high runoff rate.
SH 34 from US 77 to BI 45G: Houston Black Clay, 1 to 3% slopes Wilson Clay Loam, 1 to 3% slopes	Houston Black Clay (1-3%): mostly clay, moderately well drained and very high runoff rate. Wilson Clay Loam: mostly clay and clay loam, moderately well drained and high runoff rate.
SH 34 at FM 1181: Houston Black Clay, 1 to 3% slopes Leson Clay, 1 to 3% slopes	Houston Black Clay (1-3%): mostly clay, moderately well drained and very high runoff rate. Leson Clay: mostly clay, moderately well drained, and very high runoff rate.

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:

X PSLs determined during preconstruction meeting
☐ PSLs determined during construction
☐ No PSLs planned for construction

Type	Sheet #s

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.)

X Mobilization
X Install sediment and erosion controls
X Blade existing topsoil into windrows, prep ROW, clear and grub
☐ Remove existing pavement
☐ Grading operations, excavation, and embankment
X Excavate and prepare subgrade for proposed pavement widening
☐ Remove existing culverts, safety end treatments (SETs)
☐ Remove existing metal beam guard fence (MBGF), bridge rail
X Install proposed pavement per plans
X Install culverts, culvert extensions, SETs
☐ Install mow strip, MBGF, bridge rail
X Place flex base
X Rework slopes, grade ditches
☐ Blade windrowed material back across slopes
X Revegetation of unpaved areas
X Achieve site stabilization and remove sediment and erosion control measures
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.10 POTENTIAL POLLUTANTS AND SOURCES:

X Sediment laden stormwater from stormwater conveyance over disturbed area
X Fuels, oils, and lubricants from construction vehicles, equipment, and storage
X Solvents, paints, adhesives, etc. from various construction activities
☐ Transported soils from offsite vehicle tracking
X Construction debris and waste from various construction activities
☐ Contaminated water from excavation or dewatering pump-out water
☐ Sanitary waste from onsite restroom facilities
X Trash from various construction activities/receptacles
☐ Long-term stockpiles of material and waste
X
X Other: CONCRETE OR ASPHALTIC PAVEMENT SAW-CUTTING
X Other: ROADWAY SURFACE MILLING OR GRINDING
☐ 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
SH 34 FROM IH 35E TO US 77; HOUSTON CREEK	FLOWS TO CHAMBERS CREEK (0814*)
SH 34 AT FM 667; DRAINAGE TO HOUSTON CREEK	HOUSTON CREEK FLOWS TO CHAMBERS CREEK (0814*)
SH 34 AT FM 877: DRAINAGE TO LONG BRANCH AND BIG ONION CREEK	BOTH FLOW TO ONION CREEK TO CHAMBER CREEK (0814*)
SH 34 AT FM 985: DRAINGE TO TRIBUTARY TO BARDWELL LAKE	BARDWELL LAKE (0815*)
SH 34 FROM US 77 TO BI 45G: ALL OF THE ABOVE, PLUS ELM BRANCH AND DRAINAGE TO CUMMINS CREEK	ELM BRANCH FLOWS TO ONION CREEK TO CHAMBERS CREEK (0814*); AND CUMMINS CREEK FLOWS TO CHAMBERS CREEK (0814*)
SH 34 AT FM 1181: DRAINAGE TO TRIBUTARY TO VILLAGE CREEK	VILLAGE CREEK FLOWS TO TRINITY RIVER (0805*)

* Segments 0805 and 0814 are impaired by Bacteria in water (Recreation Use). 0805 is also impaired by PCB and Dioxin in edible tissure. And, 0815 is impaired by Sulfate in water.

1.12 ROLES AND RESPONSIBILITIES: TxDOT

X Development of plans and specifications
☐ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
X Post Construction Site Notice
X Submit NOI/CSN to local MS4
X Perform SWP3 inspections
X Maintain SWP3 records and update to reflect daily operations
X Complete and submit Notice of Termination to MS4
X Maintain SWP3 records for 3 years
☐ Other: _____
☐ Other: _____

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

X Day To Day Operational Control
X Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
X Post Construction Site Notice
X Submit NOI/CSN to local MS4
X Maintain schedule of major construction activities
X Install, maintain and modify BMPs
X Complete and submit Notice of Termination to MS4
X Maintain SWP3 records for 3 years
☐ Other: _____
☐ Other: _____
☐ Other: _____

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity
ELLIS COUNTY

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant & ,P.E. Date

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 1 of 2
Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
18			221
STATE	STATE DIST.	COUNTY	
TEXAS	DAL	ELLIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0568	01	052,ETC.	SH 34

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

- X ☐ Protection of Existing Vegetation
- X ☐ Vegetated Buffer Zones
- ☐ ☐ Soil Retention Blankets
- ☐ ☐ Geotextiles
- ☐ ☐ Mulching/ Hydromulching
- ☐ ☐ Soil Surface Treatments
- X ☐ Temporary Seeding
- ☐ X Permanent Planting, Sodding or Seeding
- X ☐ Biodegradable Erosion Control Logs
- X ☐ Rock Filter Dams/ Rock Check Dams
- X ☐ Vertical Tracking
- ☐ ☐ Interceptor Swale
- ☐ ☐ Riprap
- ☐ ☐ Diversion Dike
- ☐ ☐ Temporary Pipe Slope Drain
- ☐ ☐ Embankment for Erosion Control
- ☐ ☐ Paved Flumes
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

2.2 SEDIMENT CONTROL BMPs:

T / P

- X ☐ Biodegradable Erosion Control Logs
- X ☐ Dewatering Controls
- X ☐ Inlet Protection
- X ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Sandbag Berms
- X ☐ Sediment Control Fence
- X ☐ Stabilized Construction Exit
- ☐ ☐ Floating Turbidity Barrier
- X ☐ 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
  - X 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
Not applicable: No planned permanent structural stormwater BMPs.		

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

- X Excess dirt/mud on road removed daily
- X Haul roads dampened for dust control
- X Loaded haul trucks to be covered with tarpaulin
- X Stabilized construction exit
- ☐ Daily street sweeping
- X Other: MAINTAIN ROADWAYS, ACTIVE PEDESTRIAN FACILITIES AND ADJACENT PROPERTIES FREE OF PROJECT
- ☐ Other: SEDIMENTATION AND LOOSE MATERIALS.
- ☐ Other: _____
- ☐ Other: _____

2.5 POLLUTION PREVENTION MEASURES:

- X Chemical Management
- ☐ Concrete and Materials Waste Management
- X Debris and Trash Management
- ☐ Dust Control
- ☐ Sanitary Facilities
- X Other: AVOID STORING PORTABLE SANITARY UNITS, CONCRETE WASHOUTS OR CHEMICALS WITHIN 50 FEET
- ☐ Other: UPGRADIENT OF A RECEIVING WATER OR DRAINAGE CONVEYANCE WITHOUT ADEQUATE POLLUTION CONTROLS
- X Other: CAPTURE SAW-CUTTING DEBRIS, AND CONCRETE SLURRY, SPOILS, AND WASHOUT FOR PROPER DISPOSAL.
- ☐ Other: _____
- ☐ Other: _____

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
SH 34 at FM 985: Tributary to Bardwell Lake (immediately adjacent to project area) no planned disturbance of vegetative buffer; SW3P Layout provides SCF to protect feature.		
No surface or receiving waters present within or immediately adjacent to the other project areas. Vegetative buffers not applicable.		

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- X Fire hydrant flushings
- X Irrigation drainage
- X Pavement washwater (where spills or leaks have not occurred, and detergents are not used)
- X Potable water sources
- X Springs
- X Uncontaminated groundwater
- X Water used to wash vehicles or control dust
- X 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
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024
Signature of Registrant , P.E. & Date

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

July 2023 Sheet 2 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
18			222
STATE	STATE DIST.	COUNTY	
TEXAS	DAL	ELLIS	
CONT.	SECT.	JOB	HIGHWAY NO.
0568	01	052,ETC.	SH 34

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 damage resulting from its use.

I. STORMWATER POLLUTION PREVENTION PLAN-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Permit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 506.
List adjacent MS 4 Operator(s) that receive discharges from this project. They need to be notified prior to construction activities.
(Note: Leave blank only if no adjacent MS 4 Operator(s) are affected.)

1. County of Ellis MS4 Phase II contact Joe White, Civil Engineer

2.

☐ No Action Required ☒ Required Action

Action Number:

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

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

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas. No equipment is allowed in any sream channel below the ordinary High Water Mark except on approved temporary stream crossings or drill pads.

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# 3(a)

Required Actions: List Waters of the US Permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.
1.

2.

3.

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 for applicable 401 General Conditions:
(Note: If CORP Permit not required, do not check boxes.)

Erosion	Sedimentation	Post-Construction TSS
☐ Temporary Vegetation	☐ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☐ Rock Berm	☐ Retention/Irrigation Systems
☐ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☐ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☐ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ 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

Action Number:

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 Number:

1. The following species could occur in the project area: Southern crawfish frog, Woodhouse's toad, eastern spotted skunk, western hog-nosed skunk, swamp rabbit, eastern box turtle, western box turtle, prairie skink, Texas garter snake, and timber (canebrake) rattlesnake.
Follow the special note on the EPIC sheet and the BMPs listed below to protect these species.

2. Contractor to implement the following BMPs from 7/12 Beneficial Management Practices: Avoiding, Minimizing, and Mitigating Impacts of Transportation Projects on State Natural Resources available at https://ftp.txdot.gov/pub/txdot-info/env/toolkit/300-01-bmp.pdf.

a. Minimize impacts to wetland habitats including isolated ephemeral pools
b. Section 1.2 Vegetation BMP
c. Section 1.4 Water Quality BMP
d. Section 2.6.1 Aquatic Amphibian and Reptile BMP (barrier fencing not required)
e. Section 2.6.2 Terrestrial Amphibian and Reptile BMP

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

☐ No Action Required ☒ Required Action

Action Number:

1. Follow Special Notes.

Special Notes:

1. Avoid harming all wildlife species if encountered and allow them to safely leave the project site. Due diligence should be used to avoid killing or harming any wildlife species in the implementation of transportation projects.
2. 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 immediated area, and contact the Engineer immediately.
3. The Migratory Bird Act of 1918 states that it is unlawful to kill, capture, collect, possess, buy, sell, trade or transport any migratory bird, nest, young, feather or egg in part or in whole, without a federal permit issued in accordance within the Act's policies and regulations. The contractor would remove all old migratory bird nests from any structure or trees where work would be done from October 1 to February 15. In addition, the contractor would be prepared to prevent migratory birds from building nest(s) between February 15 to October 1. In the event that migratory birds are encountered on-site during project construction, efforts to avoid adverse impacts on protected birds, active nests, eggs and/or young would be observed.

LIST OF ABBREVIATIONS

BMP:	Best Management Practice	SPCC:	Spill Prevention Control and Countermeasure
CGP:	Construction General Permit	SW3P:	Storm Water Pollution Prevention Plan
DSHS:	Texas Department of State Health Services	PCN:	Pre-Construction Notification
FHWA:	Federal Highway Administration	PSL:	Project Specific Location
MOA:	Memorandum of Agreement	TCEQ:	Texas Commission on Environmental Quality
MOU:	Memorandum of Understanding	TPDES:	Texas Pollutant Discharge Elimination System
MS4:	Municipal Separate Stormwater Sewer System	TPWD:	Texas Parks and Wildlife Department
MBTA:	Migratory Bird Treaty Act	TxDOT:	Texas Department of Transportation
NOT:	Notice of Termination	T&E:	Threatened and Endangered Species
NWP:	Nationwide Permit	USACE:	U.S. Army Corp 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 Safety Data Sheets (SDS) 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 SDS. In the event of a spill, take actions to mitigate the spill as indicated in the SDS, 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, canisters, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation(s) or replacement(s) (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 Number:

1.

2.

3.

VII. OTHER ENVIRONMENTAL ISSUES

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

☒ No Action Required ☐ Required Action

Action Number:

1.

GENERAL NOTE:

Any change orders and/or deviations from the final design must be reported to the Engineer prior to commencement of construction activities, as additional environmental clearance may be required.

LAST REVISION: 1/15/15

 Texas Department of Transportation
Dallas District

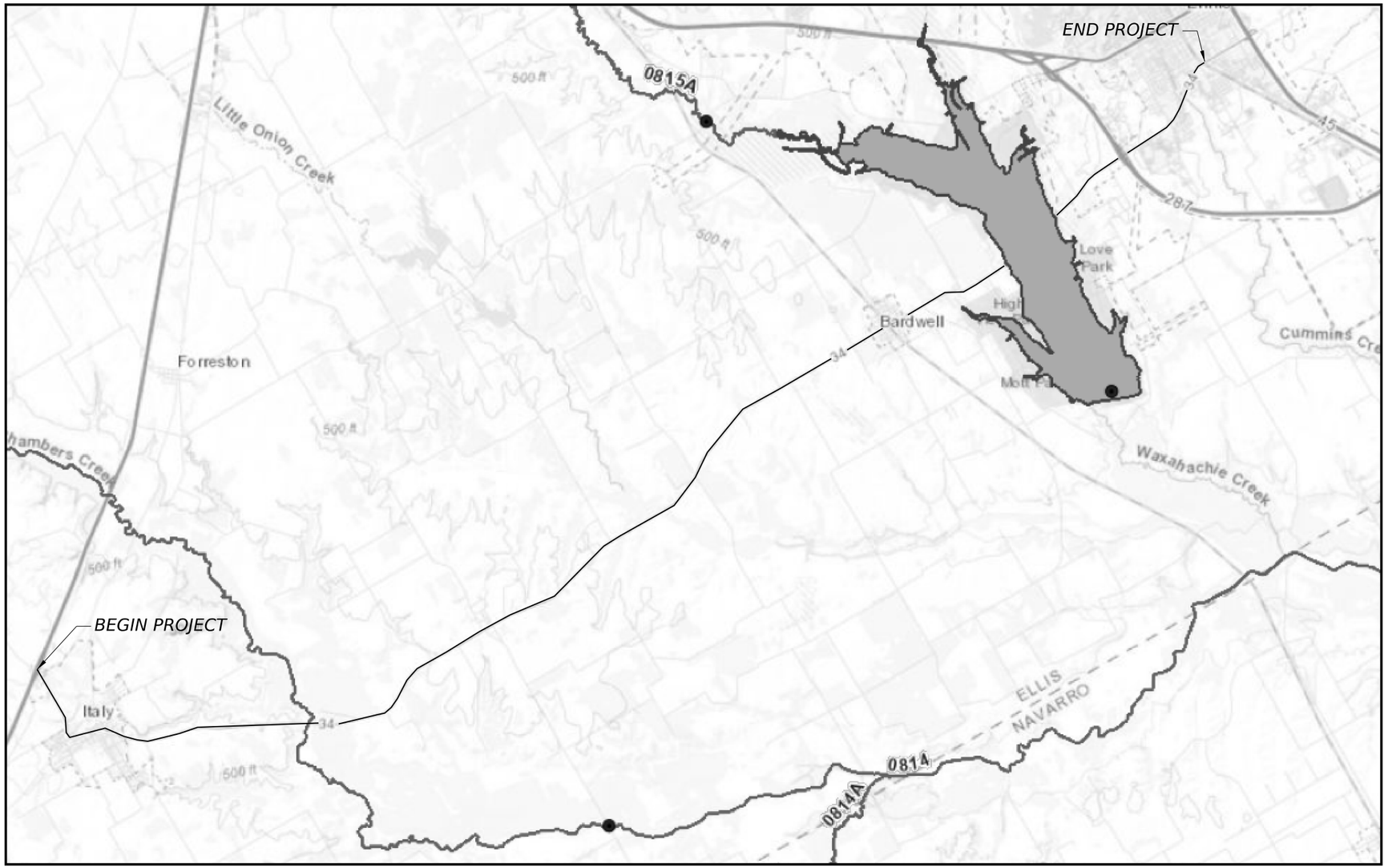
ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	SEE TITLE SHEET		SH 34
STATE	DISTRICT	COUNTY	
TEXAS	DALLAS	Ellis	
CONTROL	SECTION	JOB	SHEET NO.
0568	01	052 ETC.	223

Notes To Designer:
1. Do not alter Sheet Design or Font style, size or weight - match text attributes.
2. If additional space is needed for a numbered section, fence and adjust sections up or down as needed for proportioning and readability but do not relocate from its relative position.
3. All areas should be addressed thoroughly and verify the necessary pay items are set up to support actions needed.

Filled Out: XX/XX/XXXX
Prepared by: Name/Section

CCSJ 0568-01-052,ETC. SH 34 Receiving Waters Map



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Stream Segments

Reservoir Segments

SWQM Stations (Active)

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Texas Parks & Wildlife, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, TCEQ

Web AppBuilder for ArcGIS

TCEQ | Texas Parks & Wildlife, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS |

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

RECEIVING WATERS MAP

2024 SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		224

DATE: 5/4/2024 10:46:10 PM
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DW: CK: DW: CK:

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DATE DISTURBED	
DATE STABILIZED	

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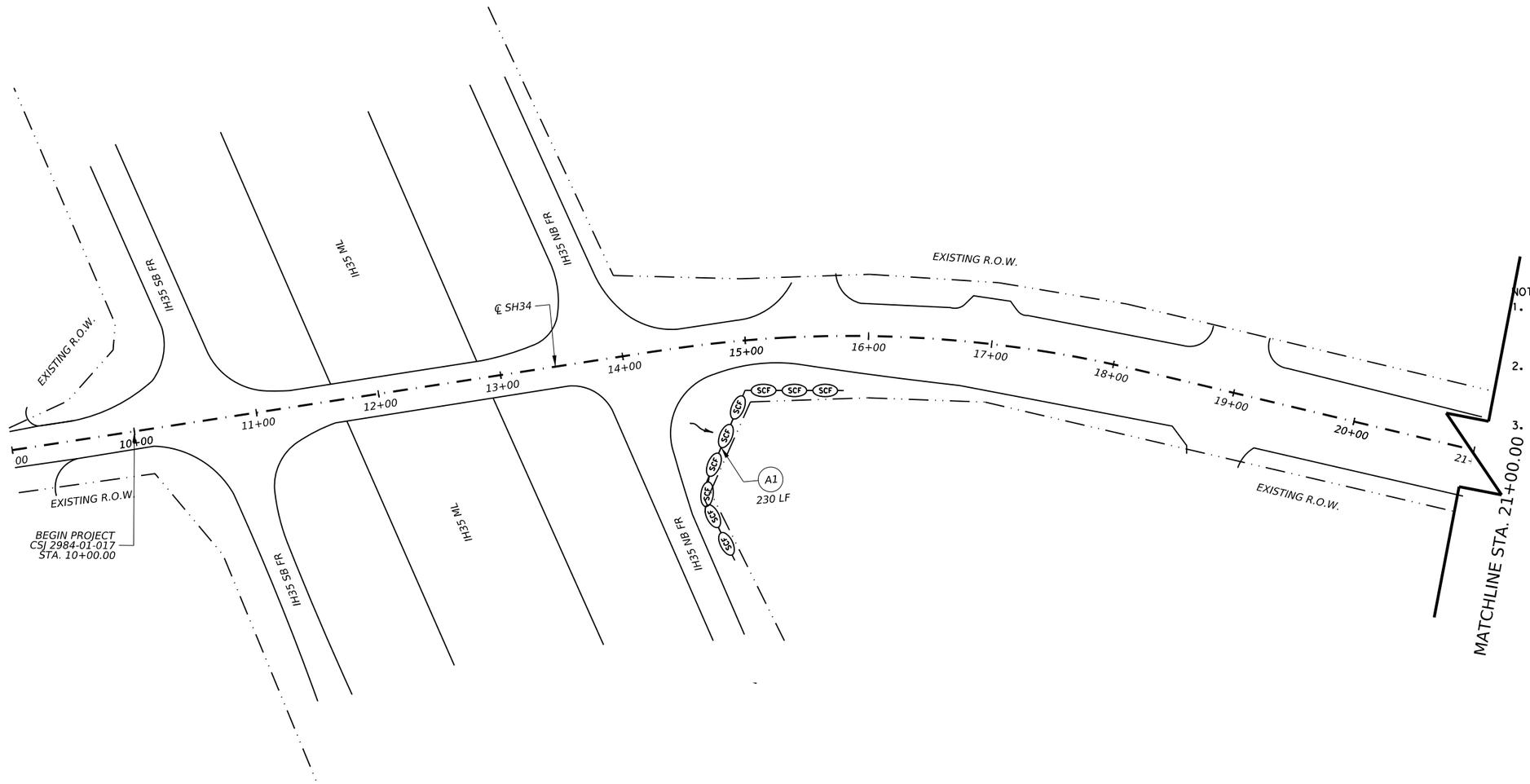
INSTALL DATE:	
REMOVE DATE:	



0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

NOTES:
1. BMPs SHALL NOT BE INSTALLED ANY SOONER THAN TWO WEEKS PRIOR TO SOIL DISTURBING ACTIVITIES IN THEIR CONTROL AREA.
2. REMOVE SEDIMENT BUILDUP FROM BMPs AS NECESSARY TO ENSURE ADEQUATE DRAINAGE IS ALWAYS PROVIDED.
3. SEE DAILY WORK REPORTS FOR INITIAL STABILIZATION TIMEFRAMES.

STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

SW3P SITE MAP
(CSJ 2984-01-017)

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		225

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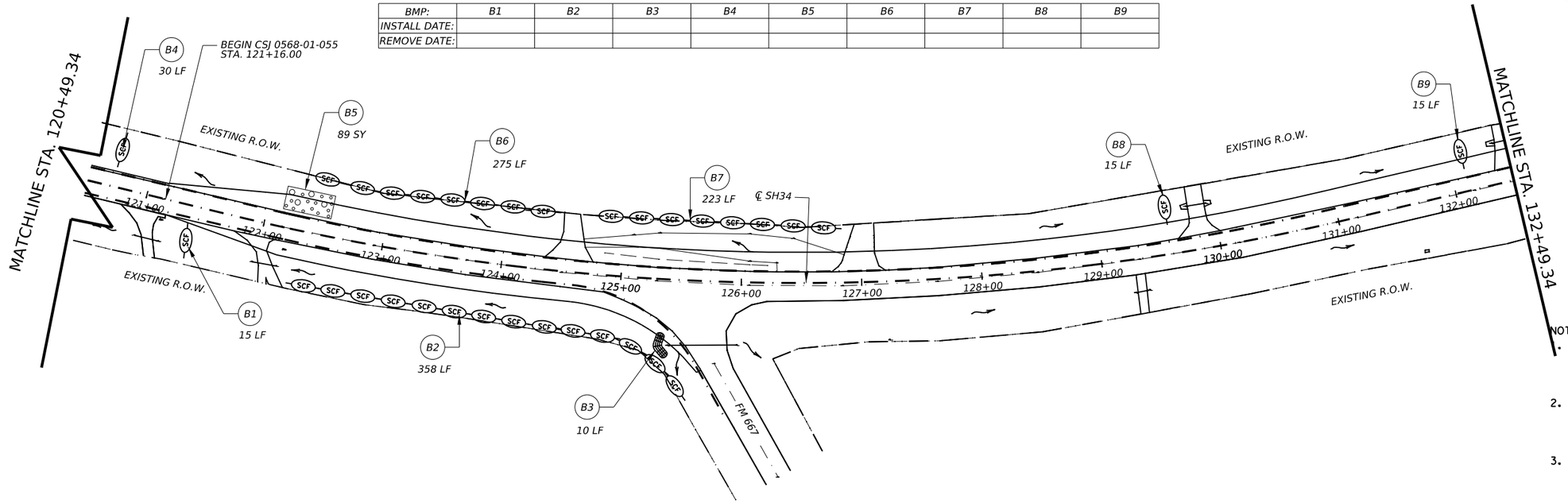
CK:									
DW:									
CK:									
DW:									

B

LOCATION	FROM STA 120+49.34 TO STA 132+49.34
DATE DISTURBED	
DATE STABILIZED	

BMP:	B1	B2	B3	B4	B5	B6	B7	B8	B9
INSTALL DATE:									
REMOVE DATE:									



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DATE DISTURBED	
DATE STABILIZED	

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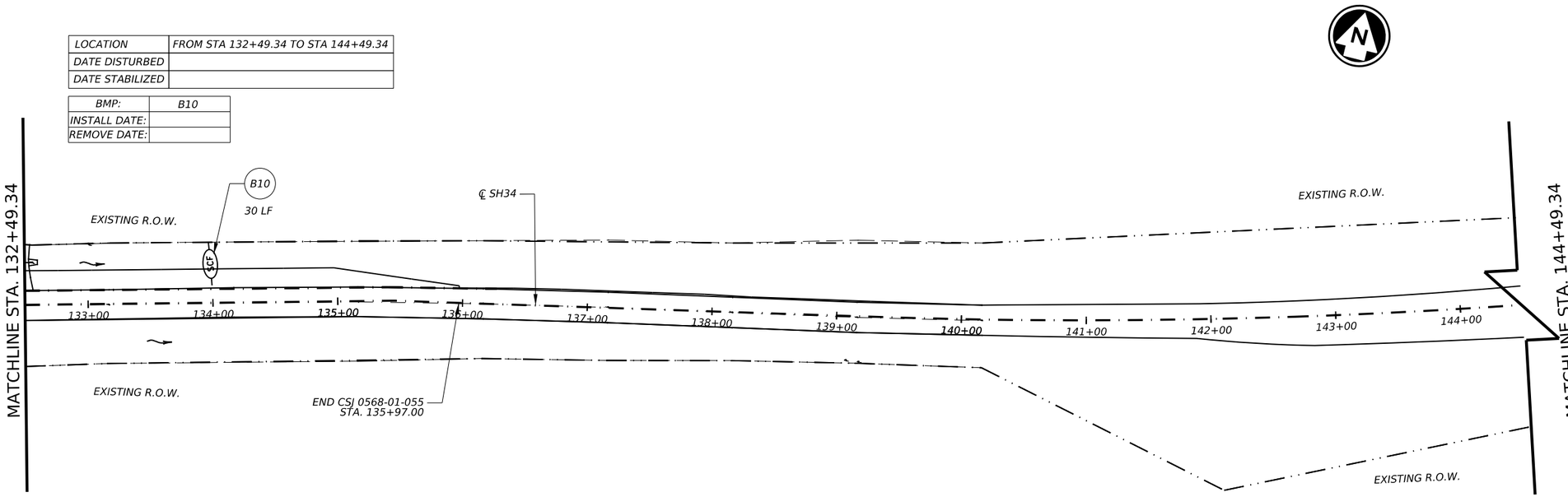
INSTALL DATE:	
REMOVE DATE:	



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SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
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STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

, P.E.
Signature of Registrant & Date

Texas Department of Transportation

SH 34

SW3P SITE MAP
AT FM 667
(CSJ 0568-01-055)

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		226

DATE: 5/5/2024 3:05:29 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/056801052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP_FM667.dgn

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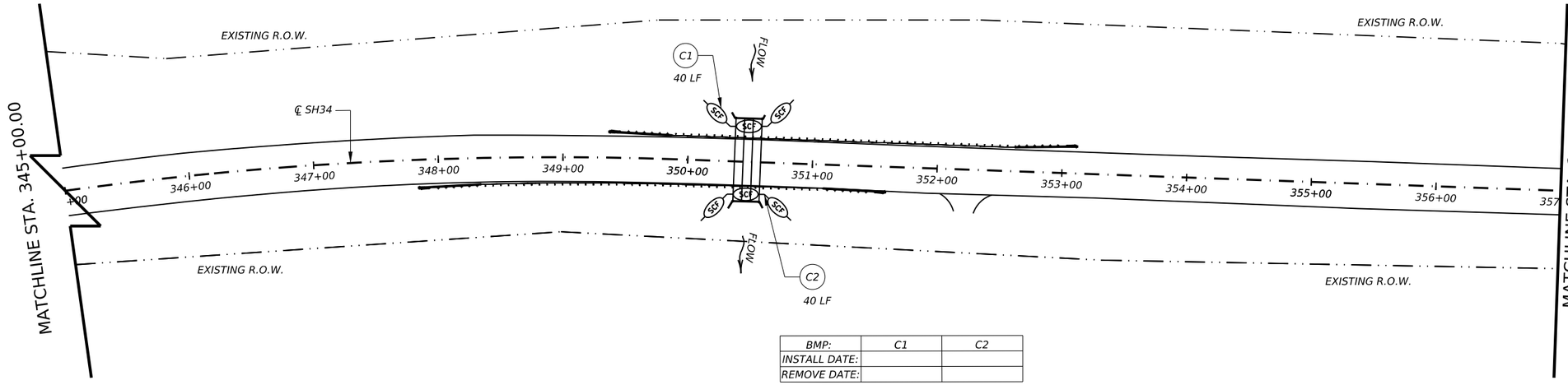
DATE DISTURBED	
DATE STABILIZED	



BMP:	C1	C2
INSTALL DATE:		
REMOVE DATE:		

0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
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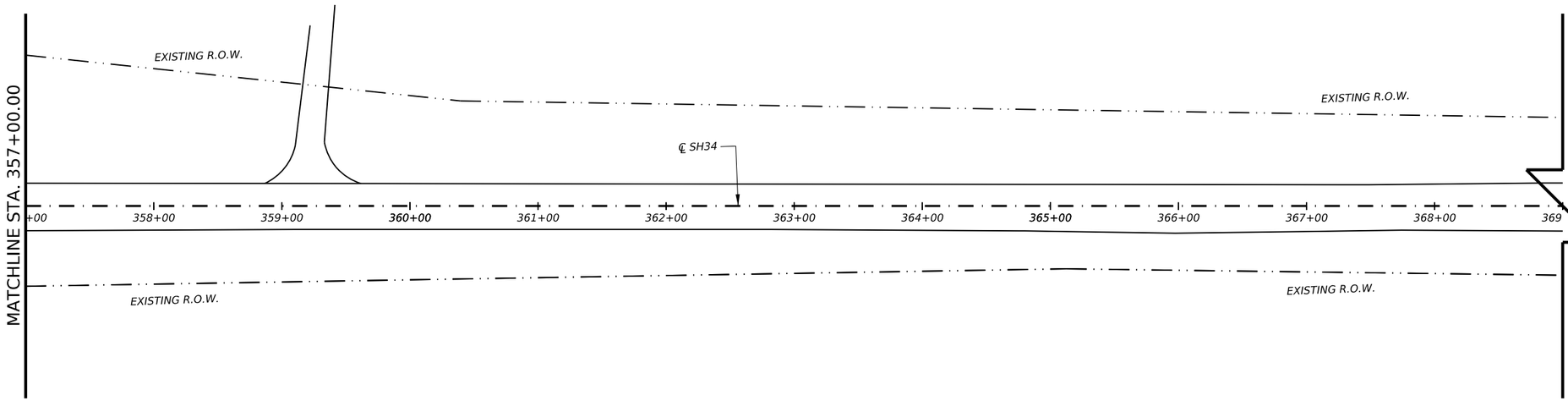


STATE OF TEXAS
VANRAJSINH MAHIDA
137833
LICENSED
PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

SW3P SITE MAP
(CSJ 0568-01-052)

SHEET 3 OF 13

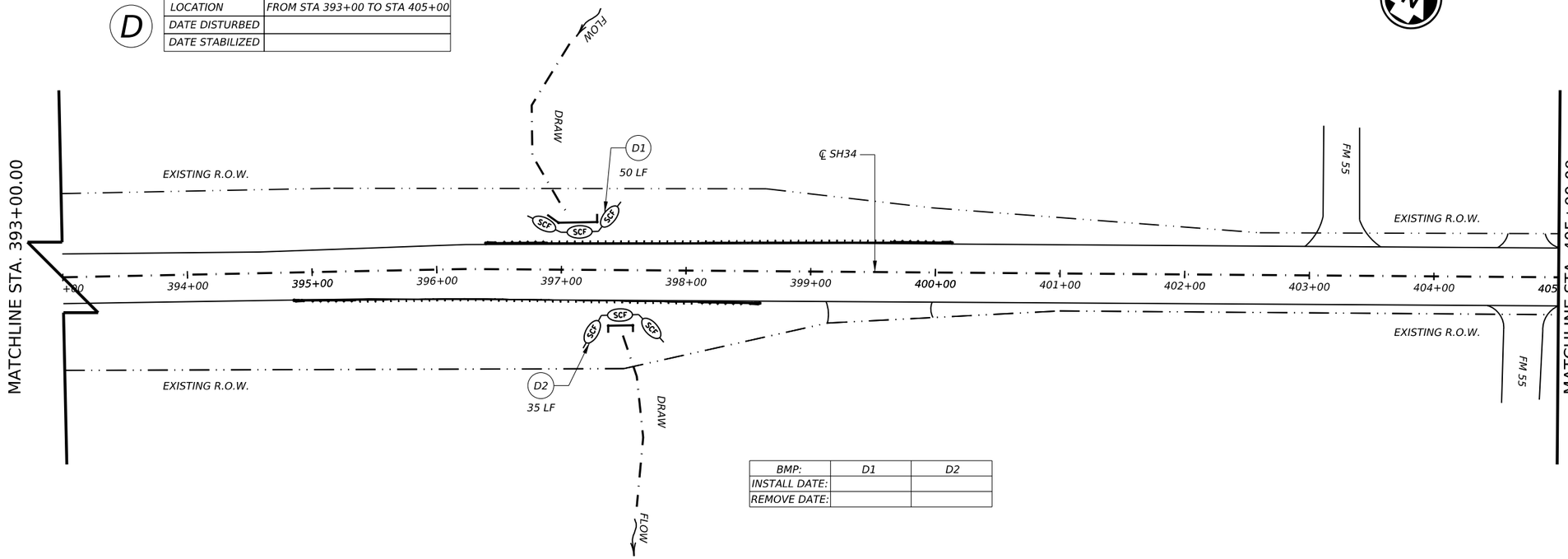
CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		227

DATE: 5/5/2024 3:05:41 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP_CSJ 0568010052 GR#1.dgn

CK: DW: CK: DW:

LOCATION	FROM STA 393+00 TO STA 405+00
DATE DISTURBED	
DATE STABILIZED	

D



BMP:	D1	D2
INSTALL DATE:		
REMOVE DATE:		

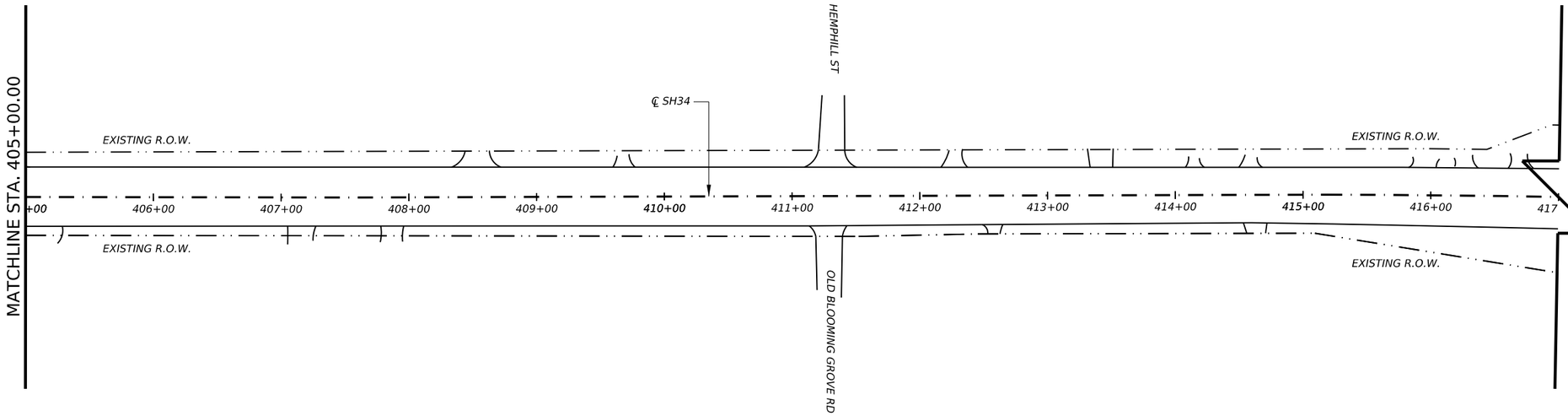
0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

NOTES:

1. BMPs SHALL NOT BE INSTALLED ANY SOONER THAN TWO WEEKS PRIOR TO SOIL DISTURBING ACTIVITIES IN THEIR CONTROL AREA.
2. REMOVE SEDIMENT BUILDUP FROM BMPs AS NECESSARY TO ENSURE ADEQUATE DRAINAGE IS ALWAYS PROVIDED.
3. SEE DAILY WORK REPORTS FOR INITIAL STABILIZATION TIMEFRAMES.



STATE OF TEXAS
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137833
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PROFESSIONAL ENGINEER

vanrajsinh Mahida 05/06/2024

Signature of Registrant , P.E. & Date

Texas Department of Transportation

SH 34

SW3P SITE MAP
(CSJ 0568-01-052)

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		228

DATE: 5/5/2024 3:05:53 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP_CSJ 0568010052 GR#2.dgn

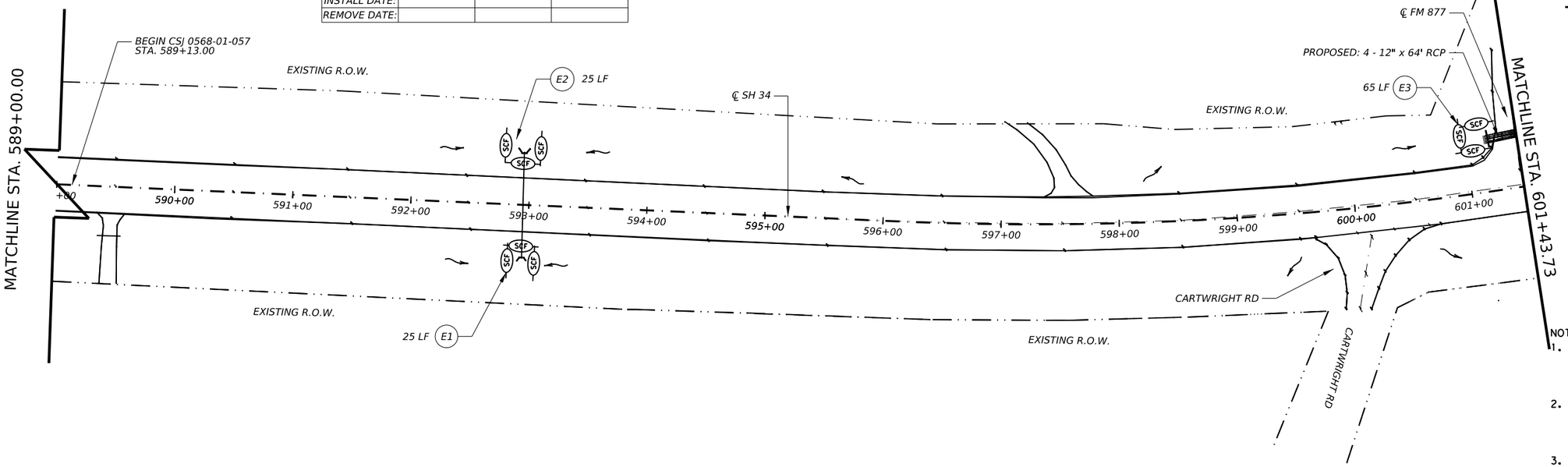
DW: CK: DW: CK:

CK:	DW:	CK:	DW:

E

LOCATION	FROM STA 589+00 TO STA 601+43.73
DATE DISTURBED	
DATE STABILIZED	

BMP:	E1	E2	E3
INSTALL DATE:			
REMOVE DATE:			



0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

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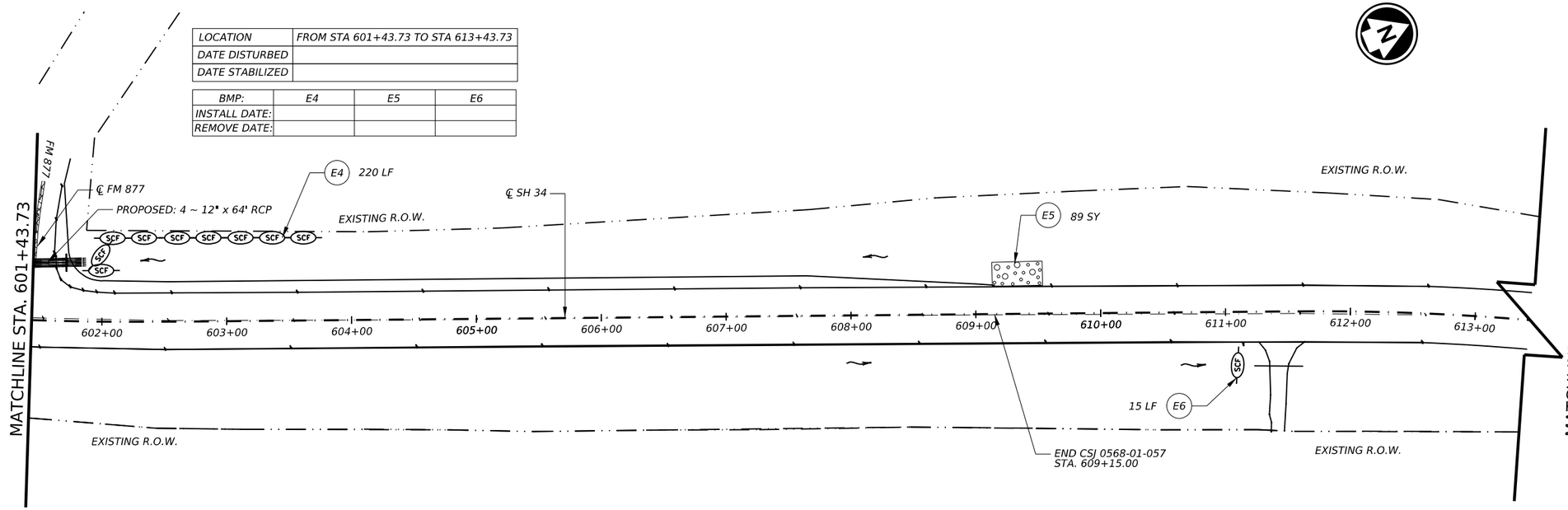
LOCATION	FROM STA 601+43.73 TO STA 613+43.73
DATE DISTURBED	
DATE STABILIZED	

BMP:	E4	E5	E6
INSTALL DATE:			
REMOVE DATE:			



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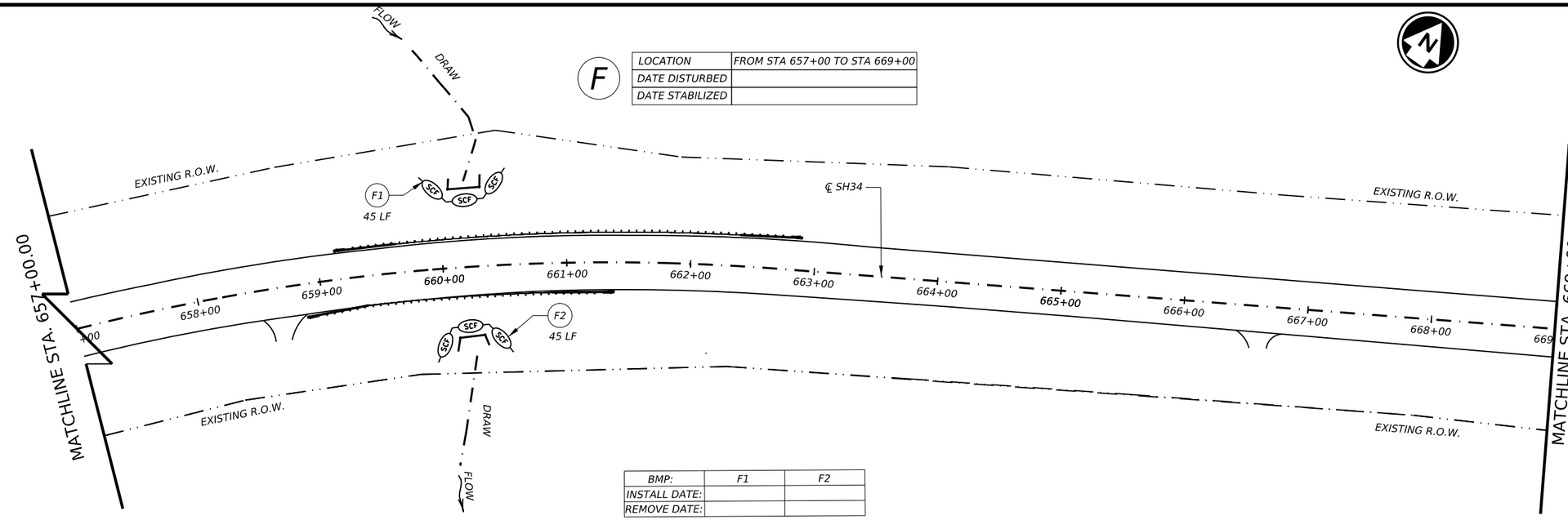
SH 34

SW3P SITE MAP
AT FM 877
(CSJ 0568-01-057)

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		229

DATE: 5/5/2024 3:06:04 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP FM877.dgn



F	LOCATION	FROM STA 657+00 TO STA 669+00
	DATE DISTURBED	
	DATE STABILIZED	

BMP:	F1	F2
INSTALL DATE:		
REMOVE DATE:		

0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

NOTES:

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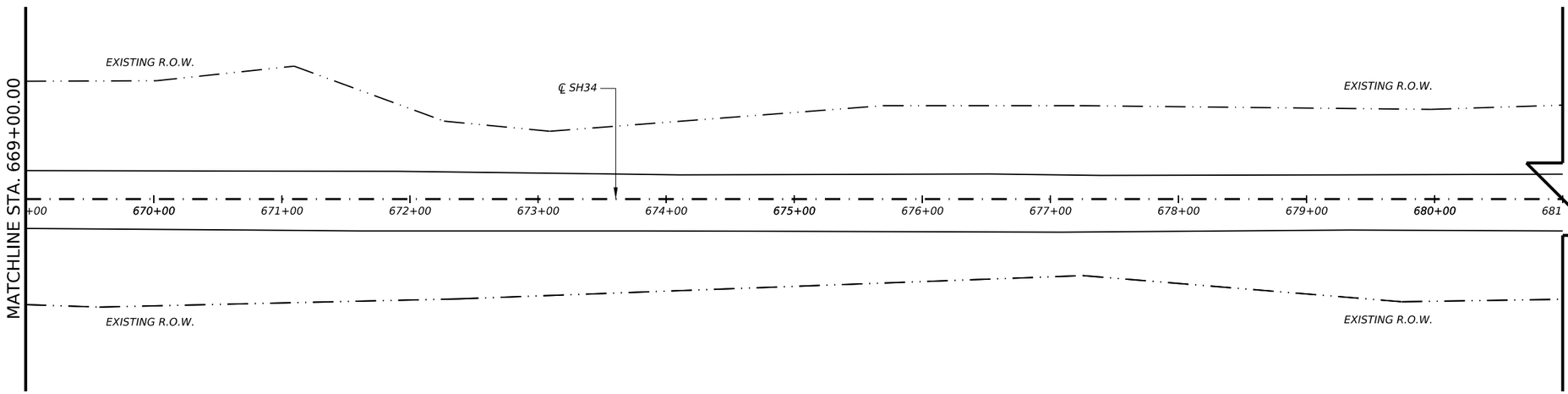
3. SEE DAILY WORK REPORTS FOR INITIAL STABILIZATION TIMEFRAMES.



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PROFESSIONAL ENGINEER

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SH 34

SW3P SITE MAP
(CSJ 0568-01-052)

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		230

DATE: 5/5/2024 3:06:18 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP_CSJ 0568010052 GR#3.dgn

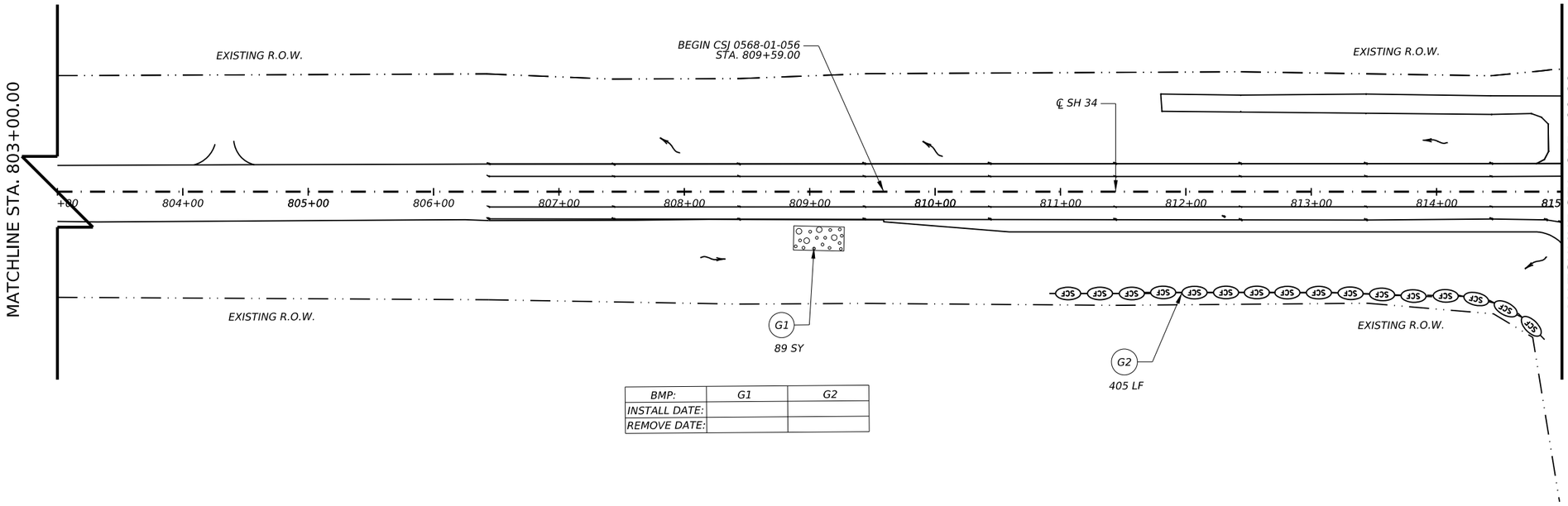
DW: CK: DW: CK:

CK:		
DW:		
CK:		
DW:		

DATE: 5/5/2024 3:06:30 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP FM985.dgn

G

LOCATION	FROM STA 803+00 TO STA 815+00
DATE DISTURBED	
DATE STABILIZED	



BMP:	G1	G2
INSTALL DATE:		
REMOVE DATE:		

0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

NOTES:
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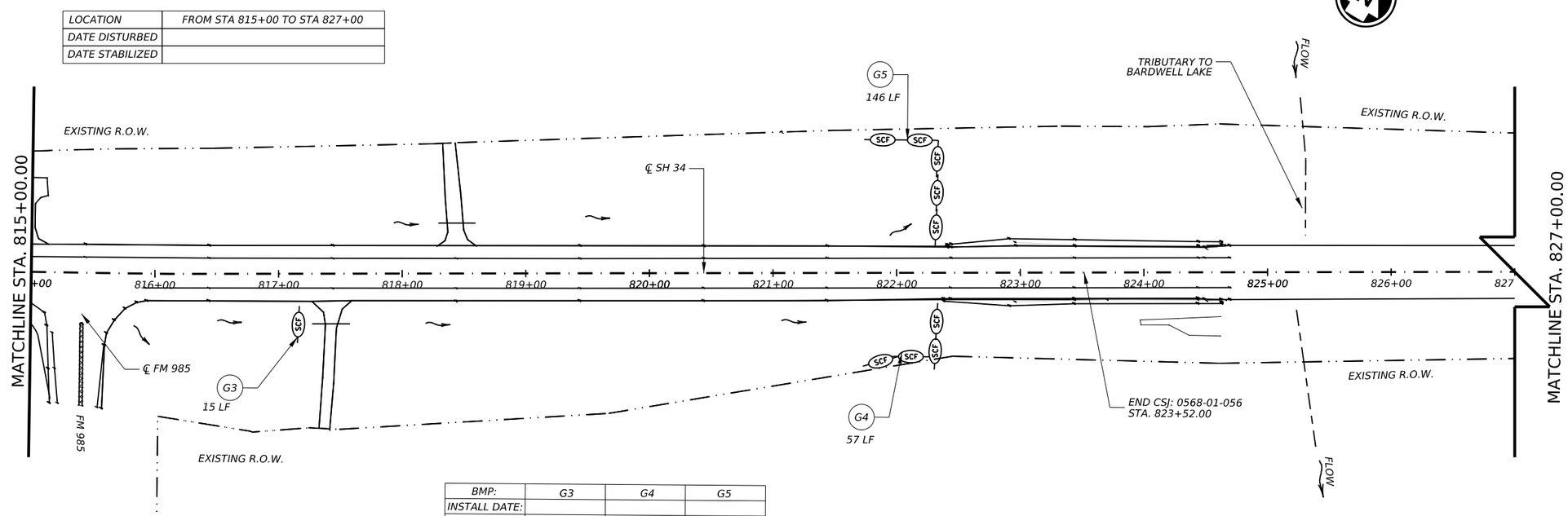
3. SEE DAILY WORK REPORTS FOR INITIAL STABILIZATION TIMEFRAMES.

LOCATION	FROM STA 815+00 TO STA 827+00
DATE DISTURBED	
DATE STABILIZED	



BMP:	G3	G4	G5
INSTALL DATE:			
REMOVE DATE:			

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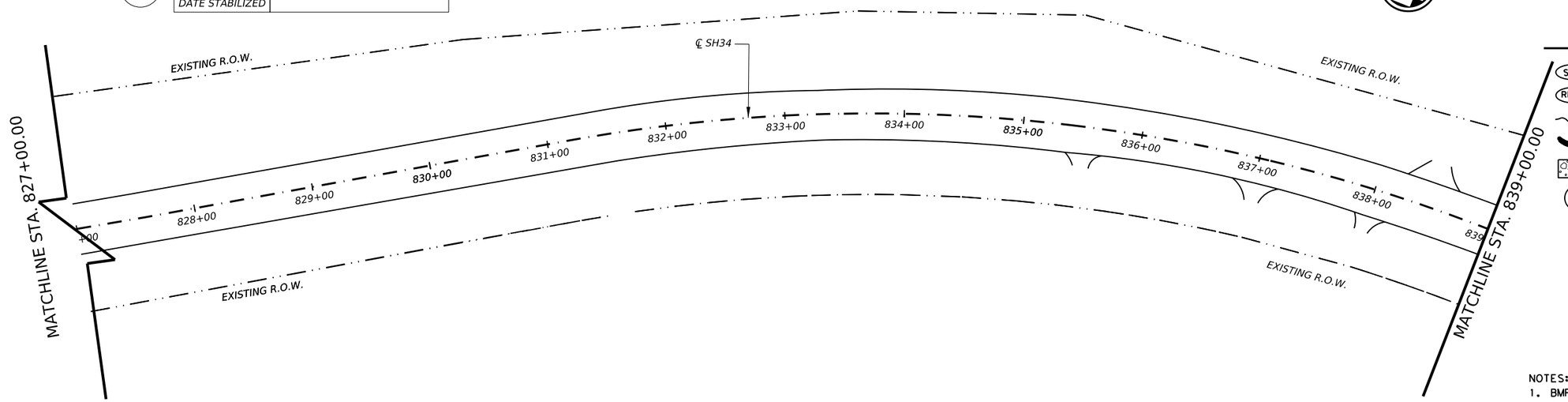
SH 34

SW3P SITE MAP AT FM 985 (CSJ 0568-01-056)

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		231

H	LOCATION	FROM STA 839+00 TO STA 851+00
	DATE DISTURBED	
	DATE STABILIZED	



0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

NOTES:
1. BMPs SHALL NOT BE INSTALLED ANY SOONER THAN TWO WEEKS PRIOR TO SOIL DISTURBING ACTIVITIES IN THEIR CONTROL AREA.
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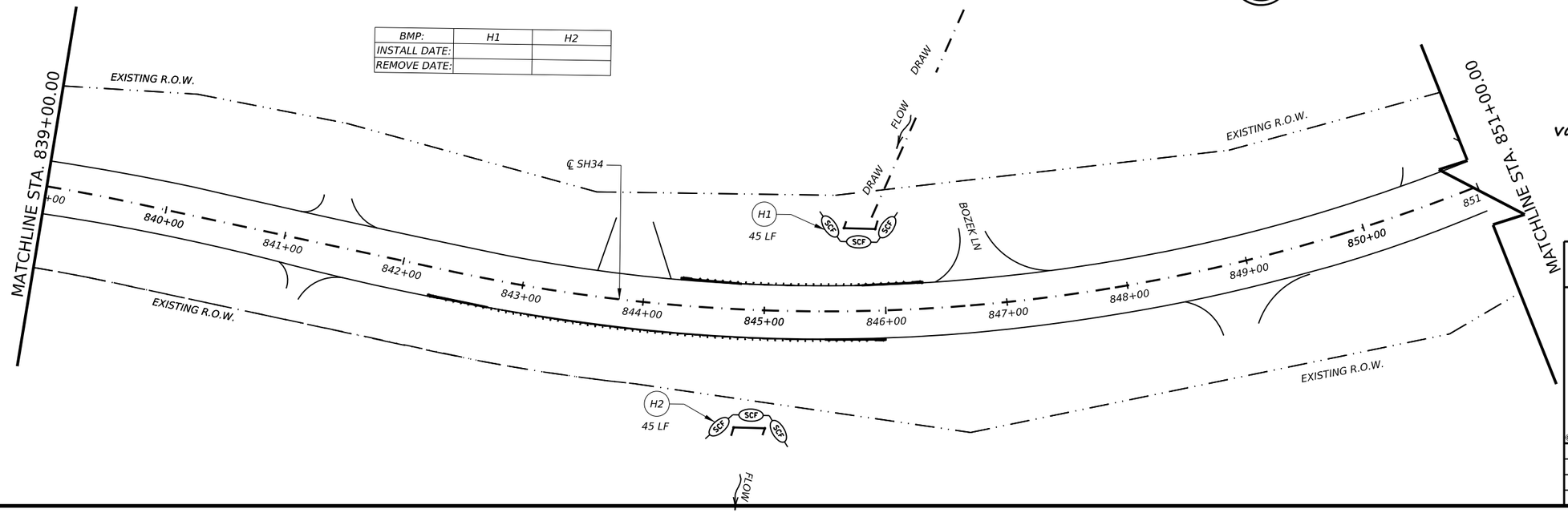
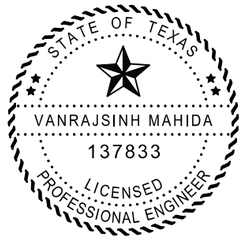
3. SEE DAILY WORK REPORTS FOR INITIAL STABILIZATION TIMEFRAMES.

BMP:	H1	H2
INSTALL DATE:		
REMOVE DATE:		





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Signature of Registrant & Date

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SH 34

SW3P SITE MAP
(CSJ 0568-01-052)

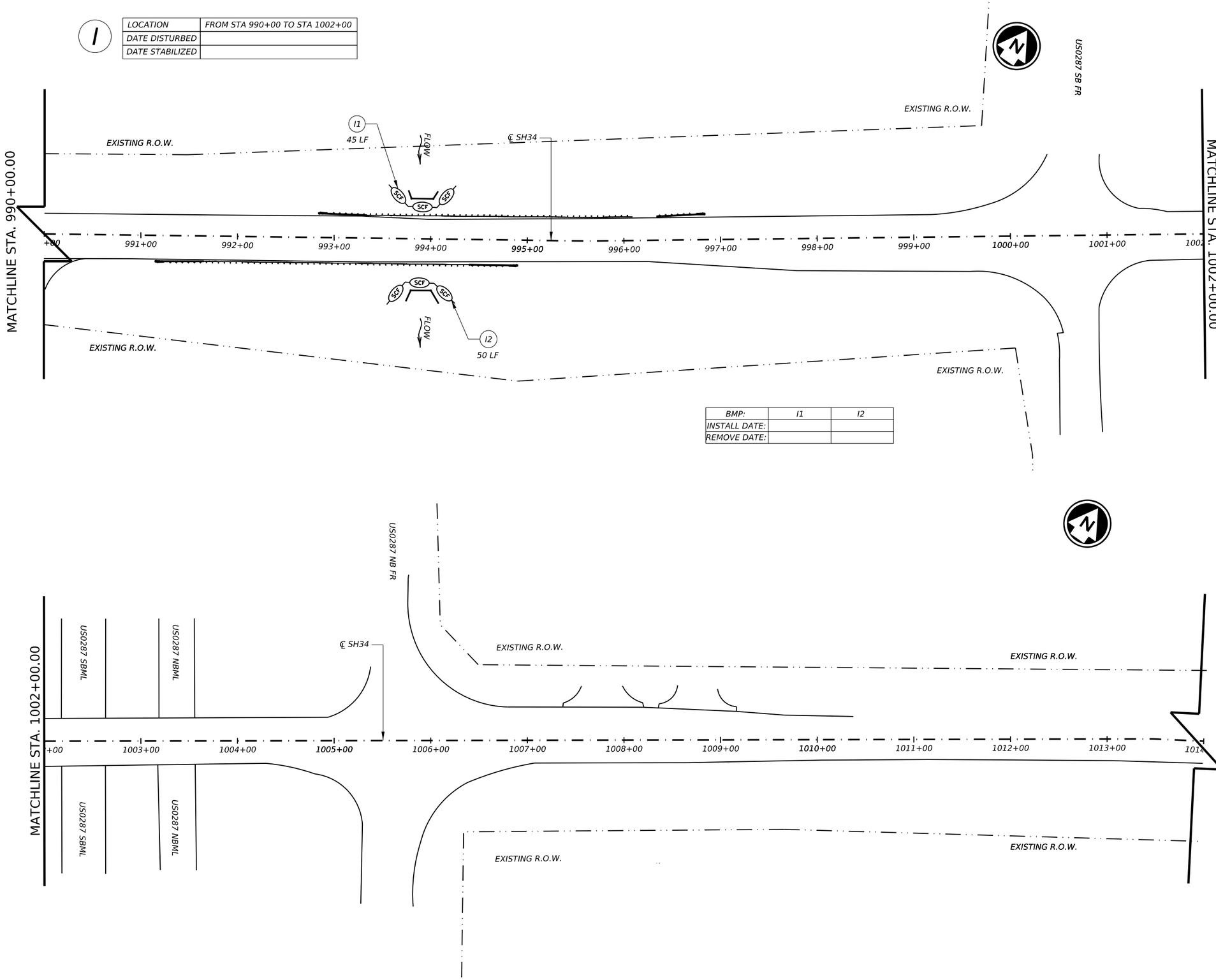
SHEET 8 OF 13

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		232

DATE: 5/5/2024 3:06:42 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP_CSJ 0568010052 GR#4.dgn

CK: DW: CK: DW:

LOCATION	FROM STA 990+00 TO STA 1002+00
DATE DISTURBED	
DATE STABILIZED	



BMP:	I1	I2
INSTALL DATE:		
REMOVE DATE:		

0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

NOTES:

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STATE OF TEXAS
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Texas Department of Transportation

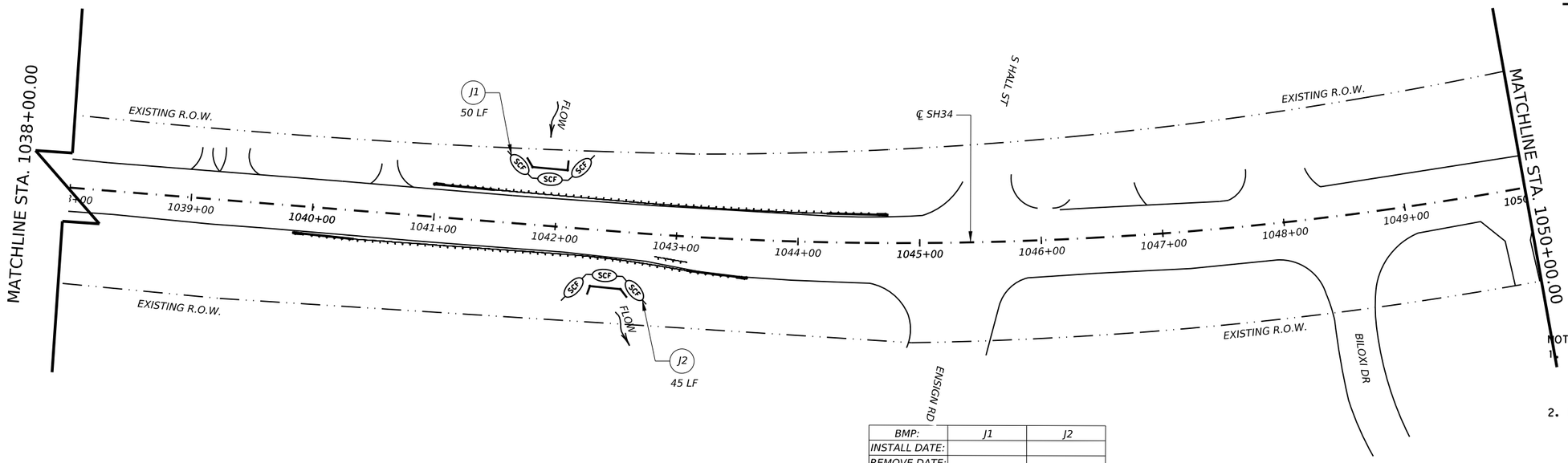
SH 34

SW3P SITE MAP
(CSJ 0568-01-052)

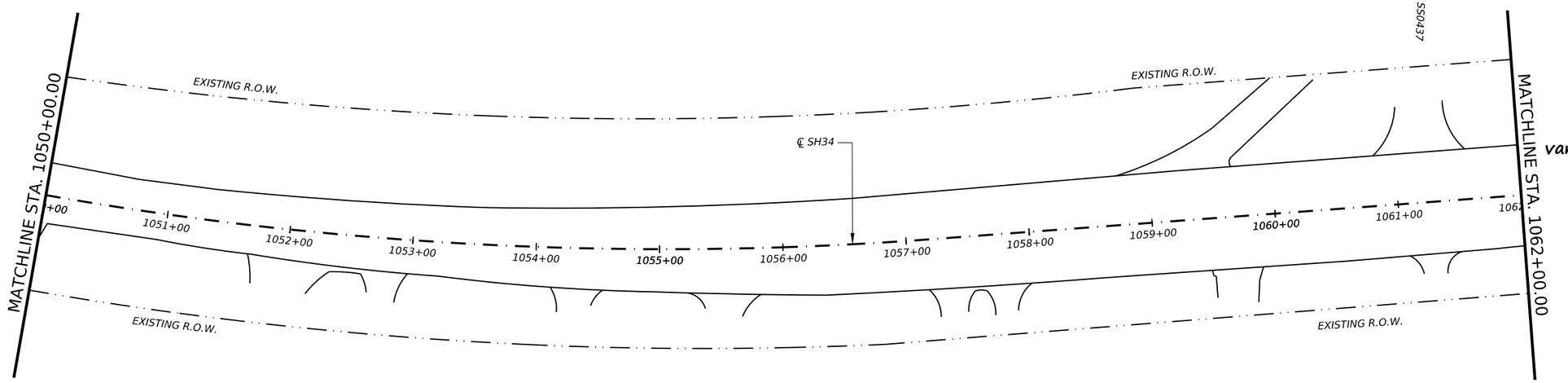
CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		233

DATE: 5/5/2024 3:06:53 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP_CSJ 0568010052 GR#5.dgn

J	LOCATION	FROM STA 1038+00 TO STA 1050+00
	DATE DISTURBED	
	DATE STABILIZED	



BMP:	J1	J2
INSTALL DATE:		
REMOVE DATE:		



0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

NOTES:

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Signature of Registrant & Date

Texas Department of Transportation

SH 34

SW3P SITE MAP
(CSJ 0568-01-052)

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		234

DATE: 5/5/2024 3:07:05 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP_CSJ 0568010052 GR#6.dgn

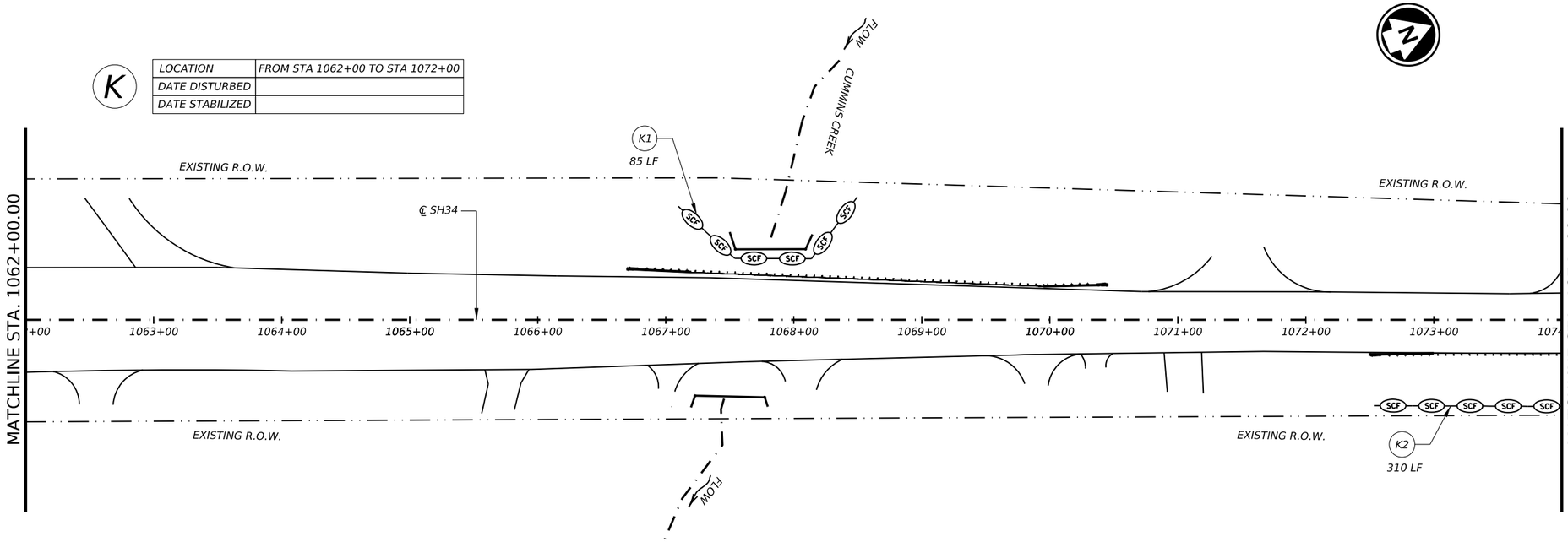
DW: CK: DW: CK:

CK:		
DW:		
CK:		
DW:		

DATE: 5/5/2024 3:07:16 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/000 SW3P SITE MAP_CSJ 0568010052 GR#7.dgn

K

LOCATION	FROM STA 1062+00 TO STA 1072+00
DATE DISTURBED	
DATE STABILIZED	



0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

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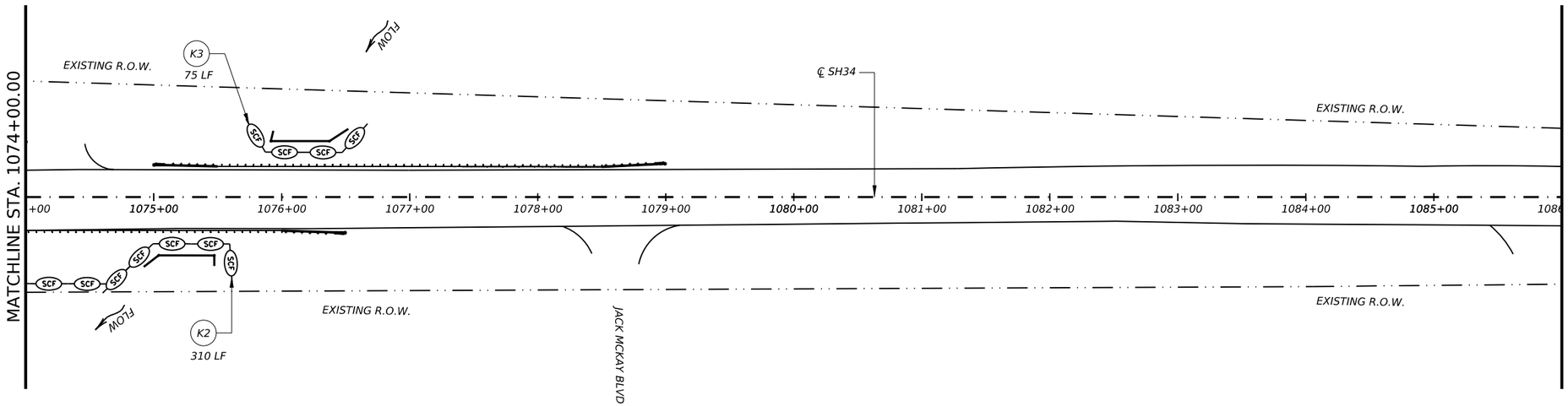
LOCATION	FROM STA 1072+00 TO STA 1086+00
DATE DISTURBED	
DATE STABILIZED	

BMP:	K1	K2	K3
INSTALL DATE:			
REMOVE DATE:			



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PROFESSIONAL ENGINEER

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Signature of Registrant , P.E. & Date

Texas Department of Transportation

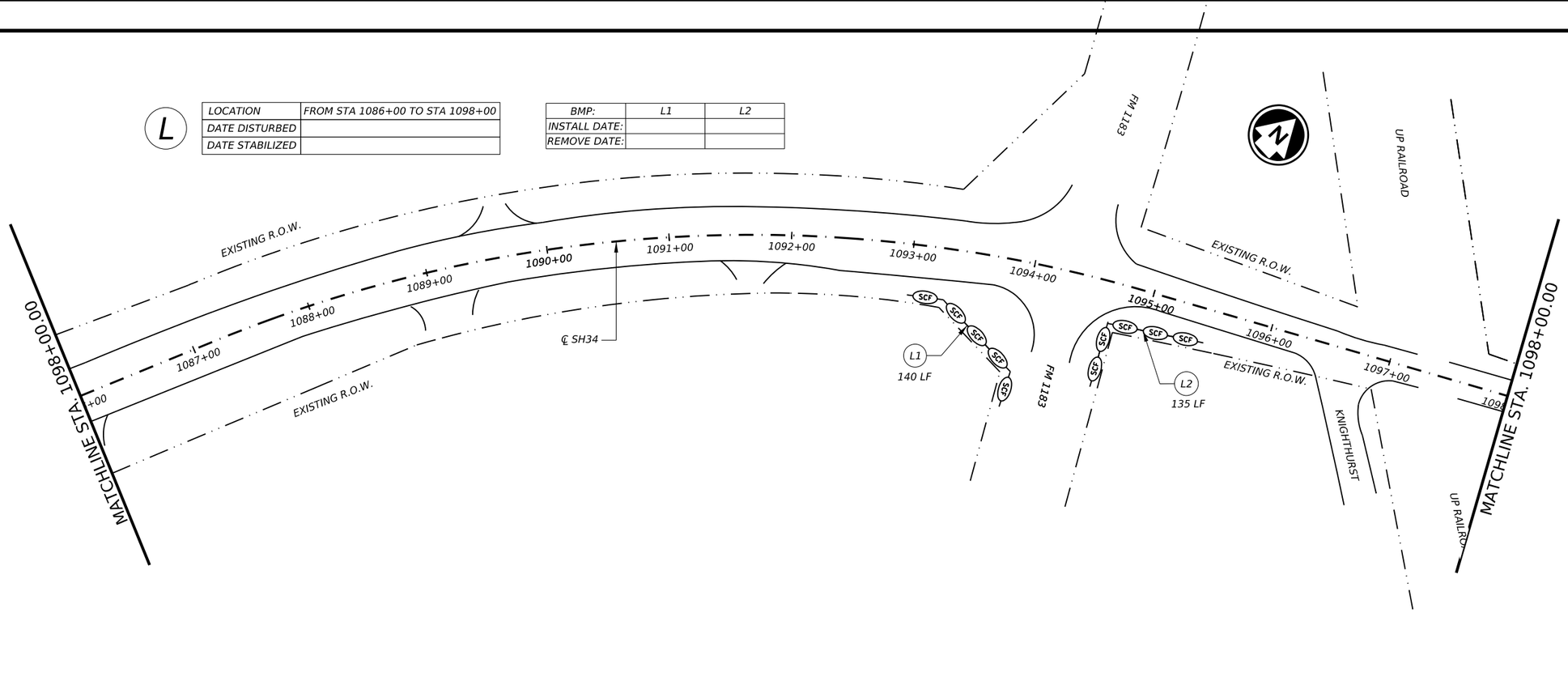
SH 34

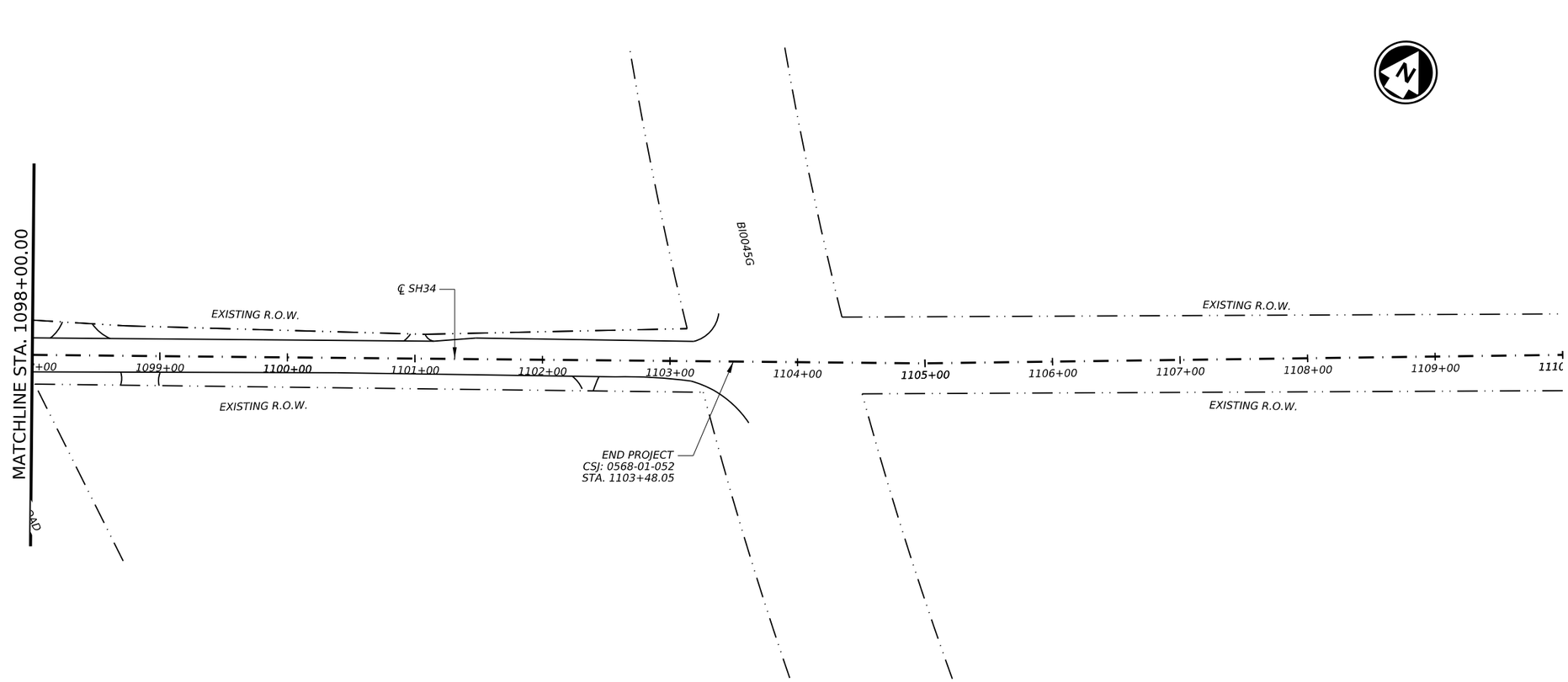
SW3P SITE MAP
(CSJ 0568-01-052)

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		235

LOCATION	FROM STA 1086+00 TO STA 1098+00
DATE DISTURBED	
DATE STABILIZED	

BMP:	L1	L2
INSTALL DATE:		
REMOVE DATE:		





0 50 100
SCALE IN FEET

SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

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STATE OF TEXAS
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SH 34

SW3P SITE MAP (CSJ 0568-01-052)

CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		236

DATE: 5/5/2024 3:07:30 AM
FILE: pw://txdot.projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010052/4 - Design/Plan Set/9. Environmental/CL SH 46 - SW3P AT FM1183.dgn

DW: CK: DW: CK:

DATE: 5/5/2024 3:07:42 AM
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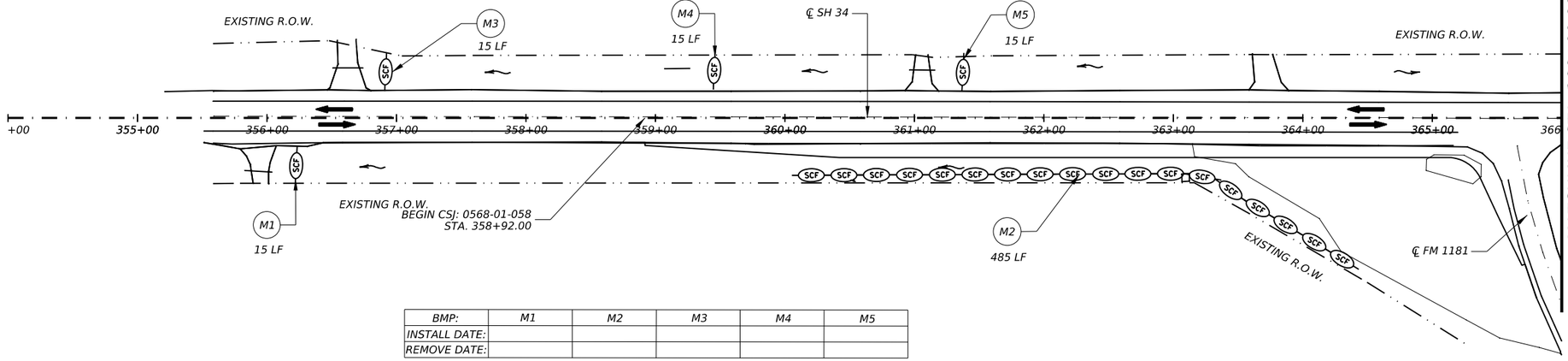
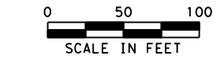
M

LOCATION	FROM STA 356+00 TO STA 366+00
DATE DISTURBED	
DATE STABILIZED	



BMP:	M1	M2	M3	M4	M5
INSTALL DATE:					
REMOVE DATE:					



SW3P LEGEND

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- DIRECTION OF FLOW
- BIODGRD EROSION CONTROL LOG (12")
- CONSTRUCTION EXIT
- XX — BMP INSTALLATION

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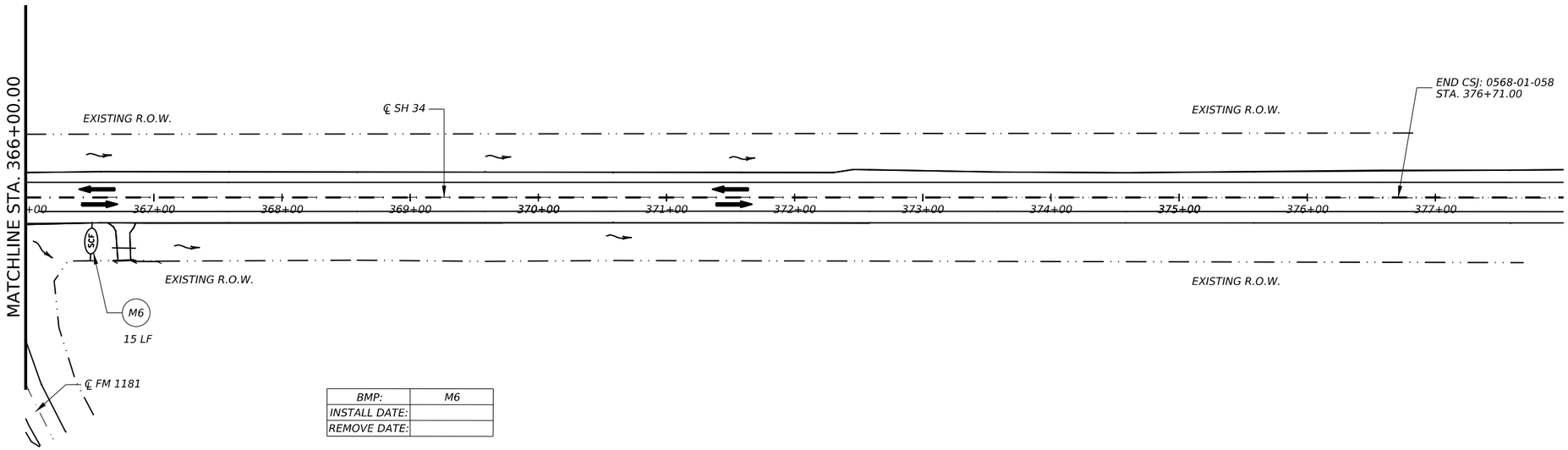
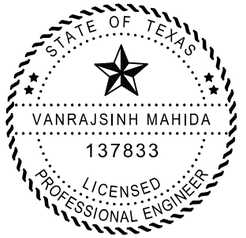
LOCATION	FROM STA 366+00 TO STA 376+00
DATE DISTURBED	
DATE STABILIZED	



BMP:	M6
INSTALL DATE:	
REMOVE DATE:	



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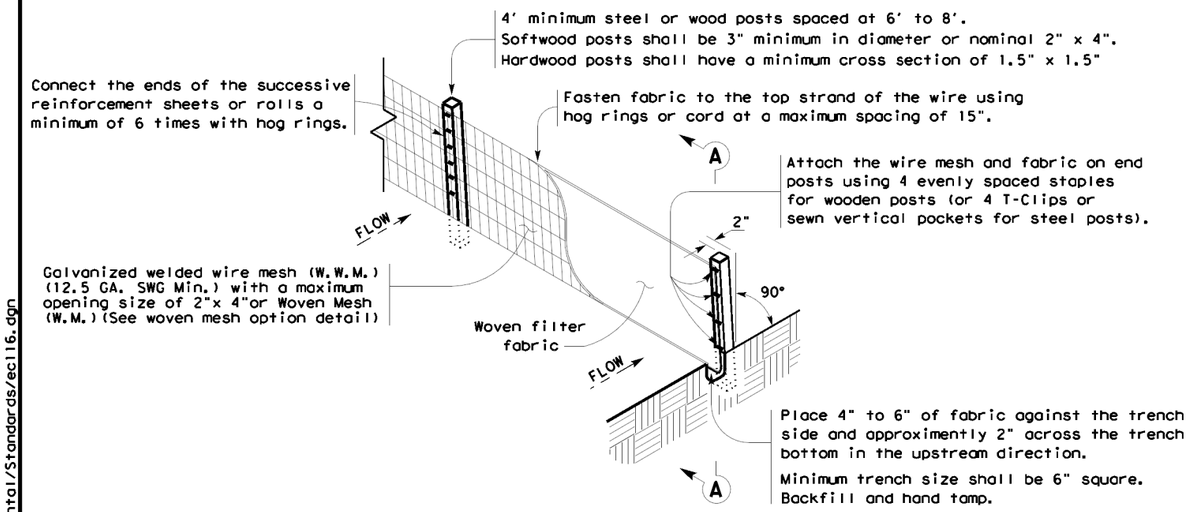
SH 34

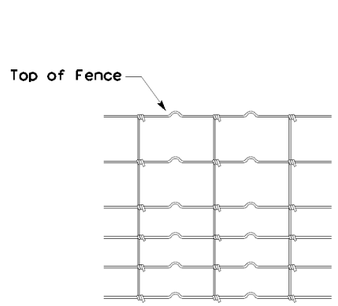
SW3P SITE MAP AT FM 1181 (CSJ 0568-01-058)

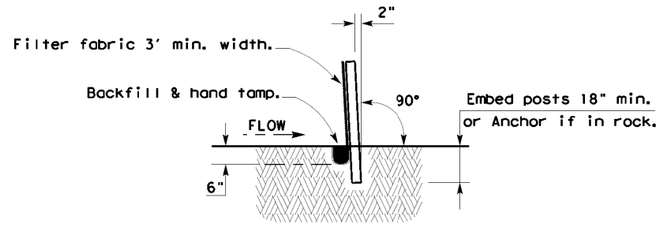
CONT	SECT	JOB	HIGHWAY
0568	01	052,ETC.	SH 34
DIST	COUNTY		SHEET NO.
DAL	ELLIS		237



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.

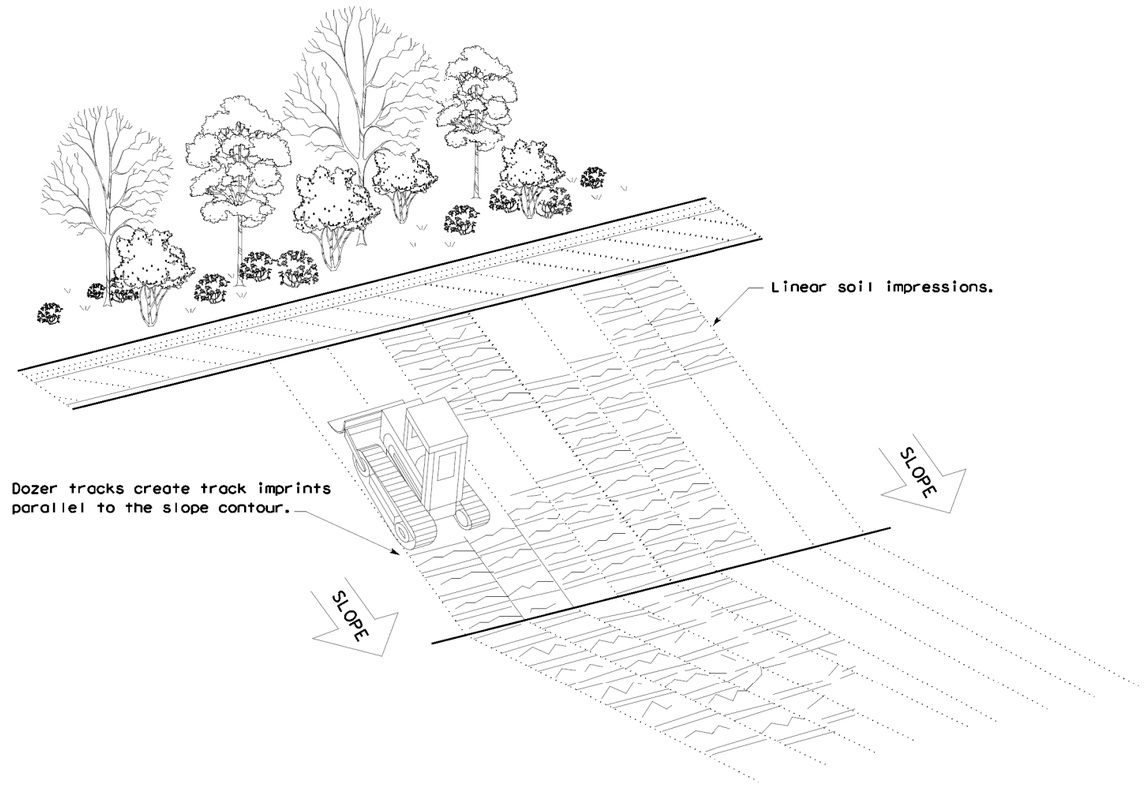
LEGEND

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
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REVISIONS	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		238

5/4/2024
DW: TxDOT: projectwiseonline.com:TXDOT5/Documents/18 - DAL/Design Projects/0568010524 - Design/Plan Set/9. Environmental/Standards/ec116.dgn

DATE: 5/4/2024
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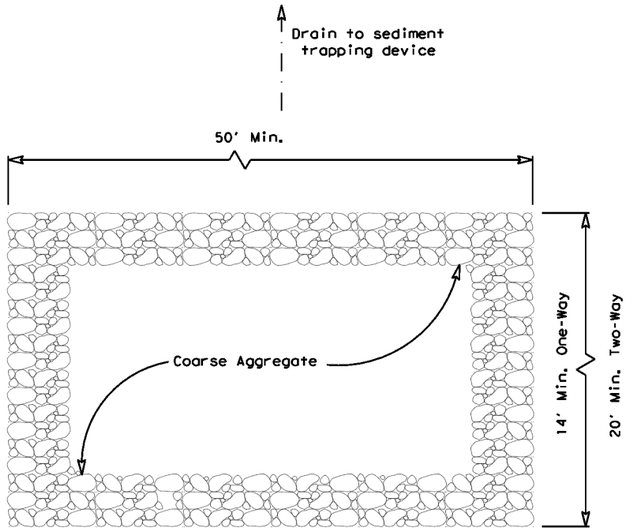
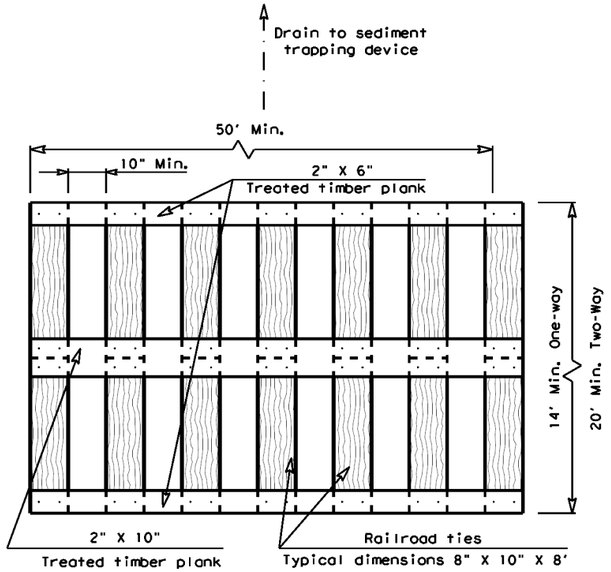
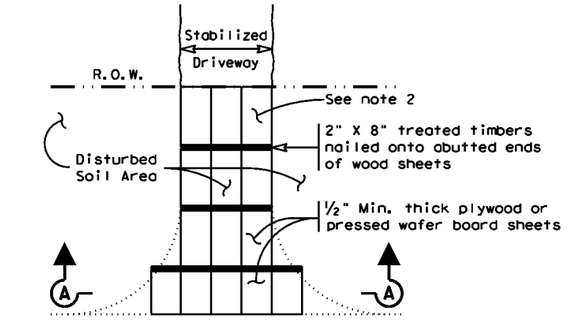


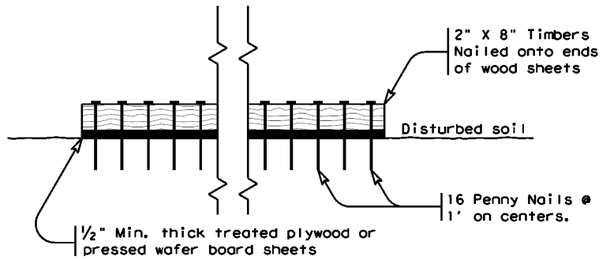
PLAN VIEW



PLAN VIEW



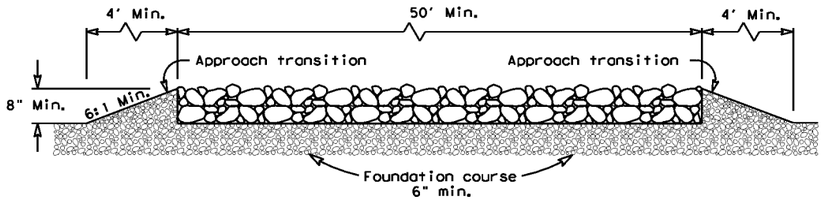
PLAN VIEW



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

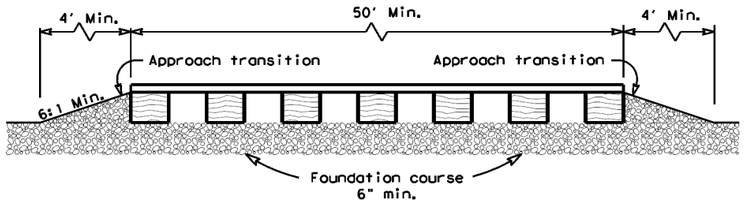
SHORT TERM



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
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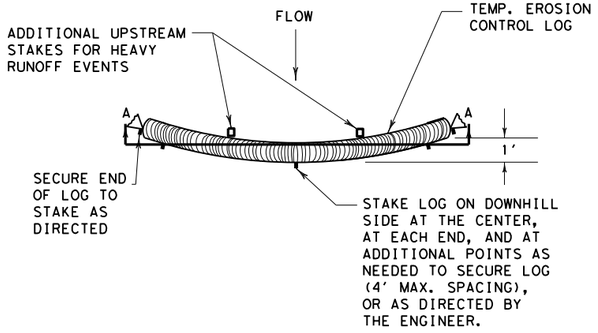
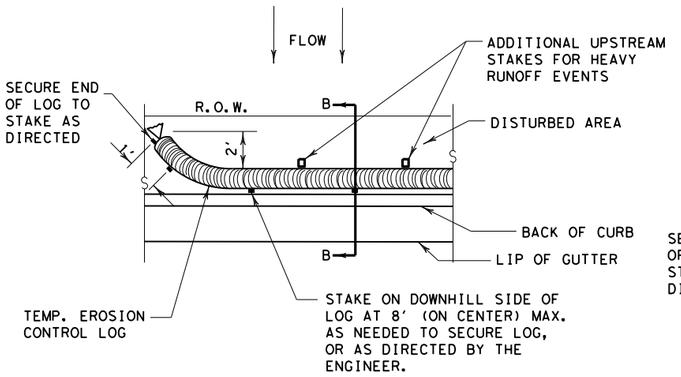
REVISIONS	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		239

DATE:
FILE:



PLAN VIEW



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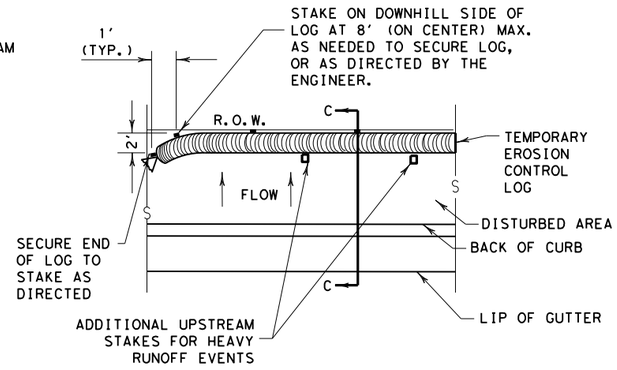
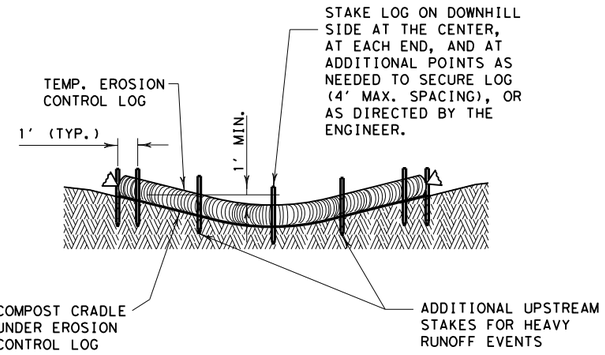


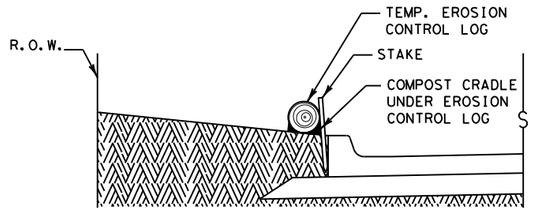
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

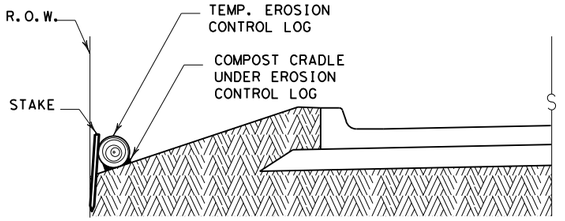
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

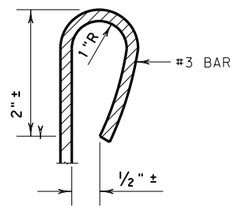
CL-BOC



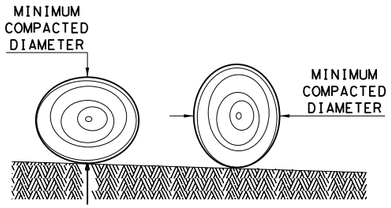
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW



REBAR STAKE DETAIL



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

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.

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

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.

SHEET 1 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	
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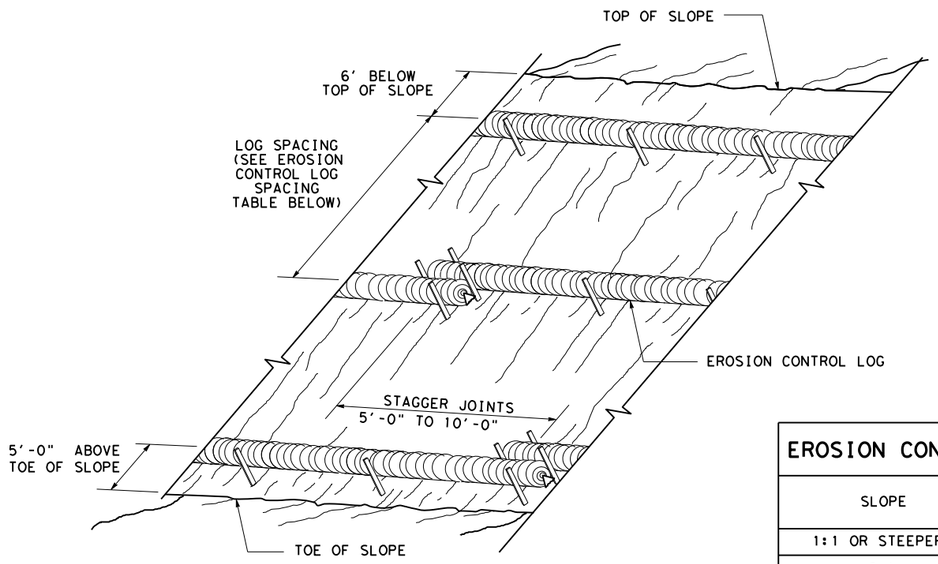
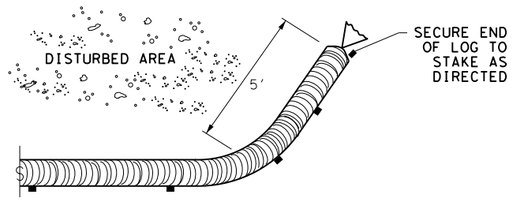


EROSION CONTROL LOGS ON SLOPES
STAKE AND TRENCHING ANCHORING

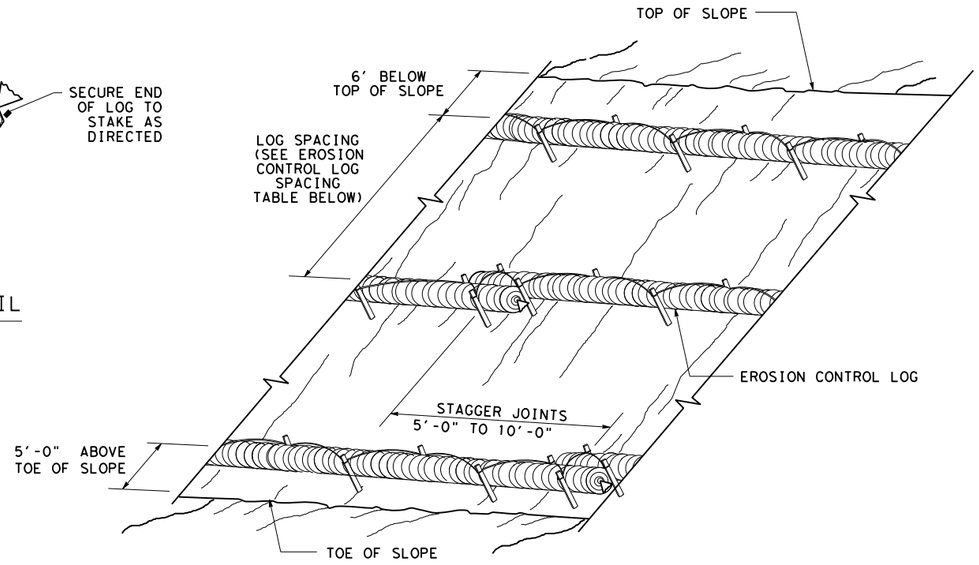
CL-SST



END SECTION RAP DETAIL

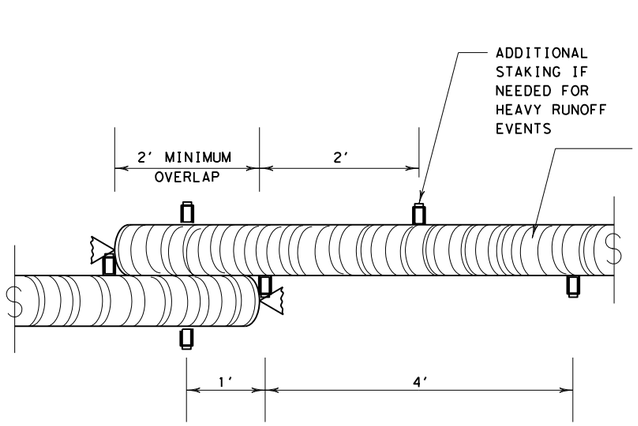
EROSION CONTROL LOG SPACING TABLE				
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5'	10'	15'	20'
2:1	10'	20'	30'	40'
3:1	15'	30'	45'	60'
4:1 OR FLATTER	20'	40'	60'	80'

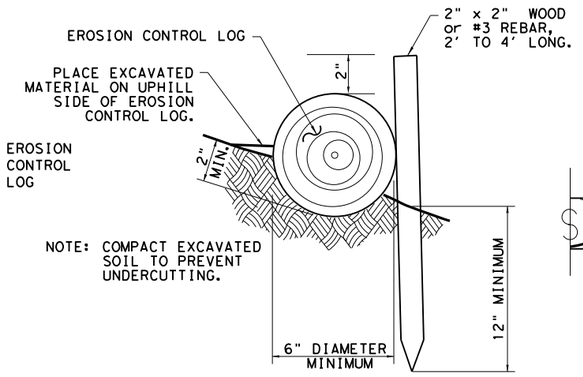
* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:
SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;
HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



EROSION CONTROL LOGS ON SLOPES
STAKE AND LASHING ANCHORING

CL-SSL

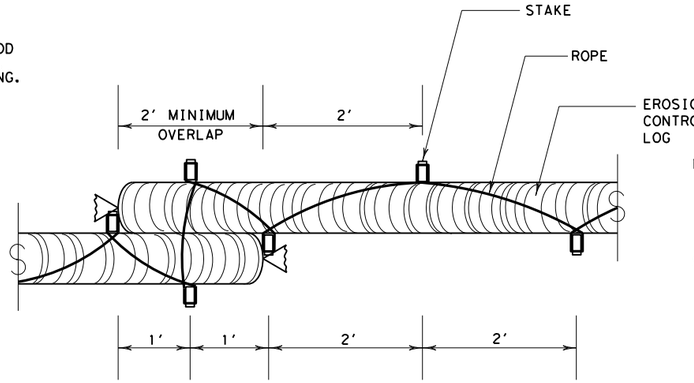


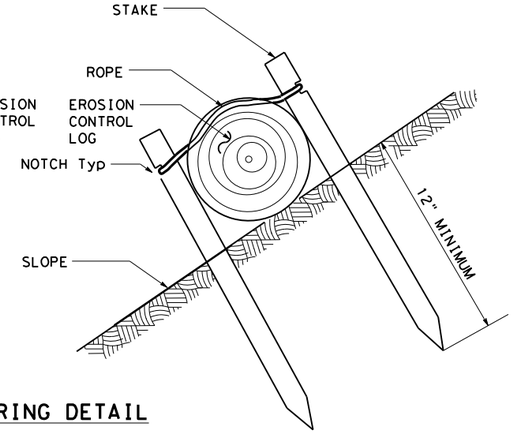


STAKE AND TRENCHING ANCHORING DETAIL

CL-SST

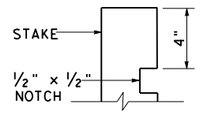
TRENCH DEPTH TABLE	
LOG DIAMETER	DEPTH
6"	2"
8"	3"
12"	4"
18"	5"





STAKE AND LASHING ANCHORING DETAIL

CL-SSL



STAKE NOTCH DETAIL

SHEET 2 OF 3

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
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	DAL	ELLIS			241	

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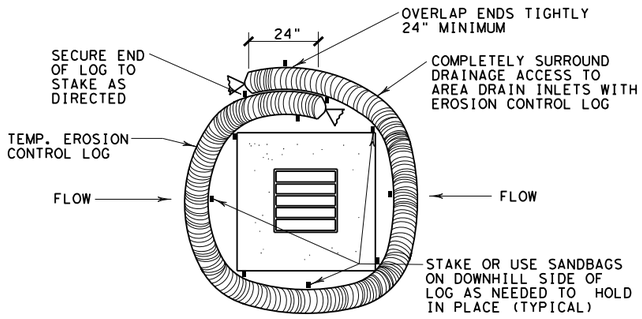
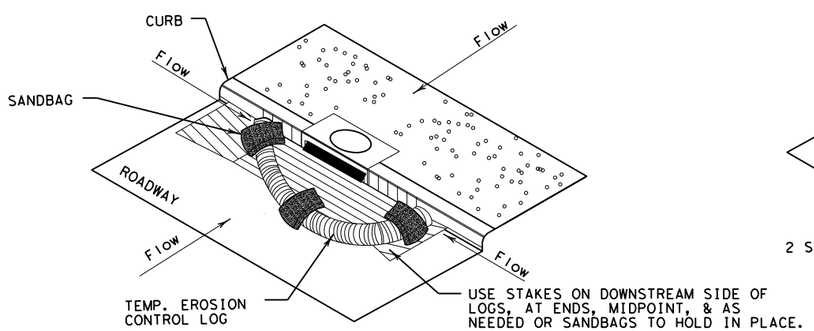


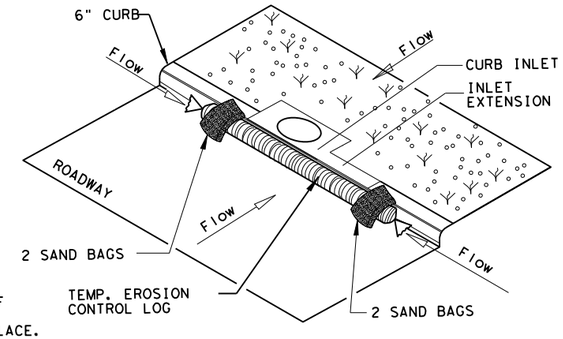
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

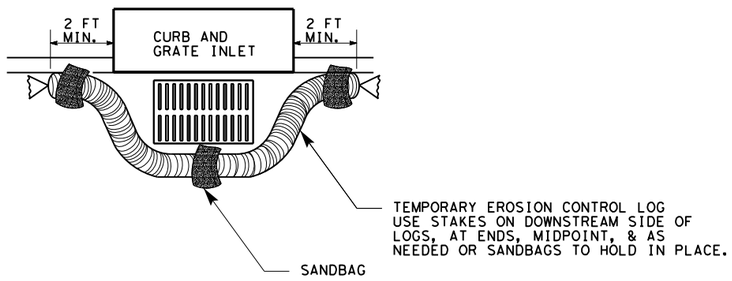
CL-CI



EROSION CONTROL LOG AT CURB INLET

CL-CI

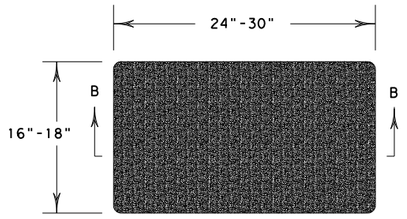
NOTE:
EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



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
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	DIST	COUNTY			SHEET NO.		
	DAL	ELLIS			242		

USER ID

SURFACE PREPARATION ITEM 160* TOPSOIL SY / ITEM 161* COMPOST MANUF. TOPSOIL (BOS) (4") SY

SURFACE PREPARATION

Prepare planting area surface BEFORE placing Topsoil, Compost, Fertilizer, Seed and/or Sod.
Once project area has been completed to final lines, grade and compaction, remove objectionable materials from planting area surface and cultivate existing surface to a depth of 4 inches, unless otherwise specified or directed.

Refer to Items 160 and 161 of TxDOT 2014 Standard Specifications* for specifications, dimensions, volumes, and measurements that have been modified or not shown in plans. Materials and construction shall meet all specifications.

TOPSOIL NOTES:
1. When Topsoil is specified under Item 160, use suitable material salvaged from the project ROW in accordance with Item 160 specifications, and/or secure additional good material from approved sources.
2. Topsoil shall include only the top 6 inches of its native surface, and be easily cultivated, fertile, erosion-resistant and free of objectionable materials.
3. Topsoil obtained from sites outside of the ROW must come from approved sources and have a pH between 5.5 and 8.5 su.
4. Place Topsoil on pre-cultivated surface, spread to a uniform loose cover at thickness specified, and shape per plans. Water and roll the finished surface with a light roller or other suitable equipment per Item 160.3; do not over-compact.

COMPOST NOTES:
1. When Compost Manufactured Topsoil (4") is specified under Item 161, use compost meeting all requirements of Item 161.2 and Table 1. Provide quality control (QC) documentation and obtain Engineer approval prior to compost delivery.
2. Contractor shall provide tickets/invoices that document material type, quantity and placement for all compost delivered.
3. Additional topsoil may be required to be imported to achieve the compost/topsoil mix ratio. Topsoil must meet Item 160 specifications.

APPLICATION OF COMPOST MANUFACTURED TOPSOIL (4")

AFTER Surface Preparation, uniformly spread a 1-inch layer of compost on-grade with 3 inches topsoil over pre-cultivated planting area. (25% compost and 75% topsoil = 1" compost and 3" topsoil.)
Then mix compost and topsoil together by cultivating the compost into the topsoil (by till or disk) to a 4-inch (4") depth.
Roll the finished surface with a light corrugated drum; do not over-compact.

FERTILIZER ITEM 166* FERTILIZER AC

SOIL ANALYSIS FOR FERTILIZER APPLICATION RATE

Unless otherwise stated in the plans, Contractor shall perform at least one soil analysis on each project before fertilization, and submit results to Engineer with recommended fertilizer rates based on soil analysis.
Engineer may direct sample location(s). Soil analysis may be waived if both compost and sod are used on entire project.

FERTILIZER NOTES:
1. Refer to Item 166 of TxDOT 2014 Standard Specifications* for specifications, dimensions, volumes, and measurements that have been modified or not shown in plans. Materials and construction shall meet all specifications.
2. Apply fertilizer BEFORE seeding, or AFTER placing sod.
3. Use fertilizer containing nitrogen (N), phosphoric acid (P) and potash (K) nutrients, unless otherwise specified. At least 50% of the Nitrogen component shall be a slow-release sulfur-coated urea as described in Item 166.3. Do not apply more than 60 lbs Nitrogen per acre without Engineer concurrence.
4. Deliver fertilizer in bags, clearly labeled to show contents, unless otherwise specified or approved prior to delivery. When non-bagged, loose fertilizer is approved, provide documentation for each load of material delivered, to validate authenticity of the material.
5. Apply fertilizer uniformly, as a dry, granular material, essentially dust-free, and do not mix with water for application as a slurry.
6. When both temporary and permanent seeding are specified for the same area, apply half of the required fertilizer before the temporary seeding operation and the other half before the permanent seeding operation.

SODDING FOR EROSION CONTROL ITEM 162* BLOCK SOD (BERMUDA) SY

BLOCK OR ROLL SOD	COMMON NAME	BOTANICAL NAME
	Common Bermuda Grass	Cynodon dactylon

SODDING NOTES:
1. Refer to Item 162 of TxDOT 2014 Standard Specifications* for specifications, dimensions, volumes, and measurements that have been modified or not shown in plans. Materials and construction shall meet all specifications.
2. Place sod between the average date of the last freeze in the Spring and 6 weeks before the average date of the first freeze in the Fall, per the Texas Almanac for the project area.
3. Place sod only AFTER soil surface preparation is complete as detailed in this sheet. Dry soil may require pre-watering.
4. Place all sod (blocks or rolls) within 24 hours of delivery to the site, and keep moist from the time it is dug up until it is planted. Sod with dried roots will not be accepted.
5. Place sod with joints alternating on each row to prevent all joints from lining up, and place blocks firmly against adjacent blocks. Roll, tamp and trim sod per Item 162.3.
6. Place fertilizer promptly AFTER sodding operation is complete in each area.
7. Water sod immediately following placement, and continue Vegetative Watering per Item 168.

VEGETATIVE WATERING FOR ESTABLISHING SEED AND SOD ITEM 168* VEGETATIVE WATERING MG

WATERING SCHEDULE

SEASON (Usual Months)	RATE	TIME SCHEDULE	TOTAL WATER ESTIMATE
SPRING & FALL (March, April, May, October)	7,000 gallons/acre per working day	Vegetative watering for seed shall begin on the day after rainfall described below and continue for 60 consecutive working days; vegetative watering for sod shall begin on the day the sod is placed and continue for a minimum of 15 consecutive working days.	420,000 gallons/acre (60 working days)
SUMMER (June, July, August, September)	12,000 gallons/acre per working day		720,000 gallons/acre (60 working days)
WINTER (November through February)	1,000 gallons/acre per working day	Vegetative watering for seed and/or sod shall begin on the day after placement for 15 consecutive working days	15,000 gallons/acre (15 working days)

Notes: Rate and frequency may be adjusted, with the approval of the Engineer, to meet site conditions (especially with sod).
For informational purposes only: 1,000 gallons equals 1 MG

VEGETATIVE WATERING NOTES:
1. Refer to Item 168 of TxDOT 2014 Standard Specifications* for specifications, dimensions, volumes, and measurements that have been modified or not shown in plans. Materials and construction shall meet all specifications.
2. Use clean water free of industrial waste and other substances harmful to vegetation growth, per Item 168.2.
3. Use Vegetative Watering to keep the seed bed moist during germination; not to provide initial watering. After drill seeding, postpone watering operations until site receives at least 1/2-inch of natural rainfall in a single day. Delay watering operations for warm season grasses until soil temperature exceeds 70 degrees F.
4. For sod, water immediately.
5. All water distribution equipment shall be furnished and operated to provide water at a uniform and controllable rate. Use a metering device on all watering equipment.
6. Evenly distribute water over entire area designated for seeding and/or sodding, using even spray patterns that do not disturb seed bed and/or dislodge seed from seed bed.
7. Do not water between the hours of 12:00 p.m. and 6:00 p.m. when daytime temperatures exceed 95 degrees F.
8. After initial establishment period, continue intermittent watering of newly established seed or sod at a rate of approximately 1-inch water/week, during summer months until end of contract.
9. If 1/4-inch or more of rainfall occurs on site on any given working day, no vegetative watering will be needed on that working day. (Note: 1/4-inch rain equals 7,000 gallons of water per acre.)
10. Should the Contractor fail to apply the specified amount of water within the time allowed, any seed or sod in poor condition shall be replaced, fertilized, and watered at Contractor's expense.

SEEDING FOR EROSION CONTROL ITEM 164* DRILL SEEDING AC

RECOMMENDED PLANTING SEASON	PERMANENT RURAL SEED MIX ITEM 164 - DRILL SEEDING (PERM) (RURAL)(CLAY)	PERMANENT URBAN SEED MIX ITEM 164 - DRILL SEEDING (PERM) (URBAN)(CLAY)	TEMPORARY DRILL SEED MIX ITEM 164 - DRILL SEEDING (TEMP) (WARM OR COOL)
WARM SEASON Mar.15th, April, May, June, July, August, Sept. 15th	Pure Live Seed Rate** Green Sprangletop (Van Horn) - 1.0 lbs/AC Sideoats Grama (Haskell) - 1.0 lbs/AC Texas Grama (Atascosa) - 1.0 lbs/AC Hairy Grama (Chaparral) - 0.4 lbs/AC Shortspike Windmillgrass (Welder) - 0.2 lbs/AC Little Bluestem (OK Select) - 0.8 lbs/AC Purple Prairie Clover (Cuero) - 0.6 lbs/AC Engelmann Daisy (Eldorado) - 0.75lbs/AC Illinois Bundleflower - 1.3 lbs/AC Awnless Bushsunflower (Plateau) - 0.2 lbs/AC	Pure Live Seed Rate** Green Sprangletop (Leptochloa dubia) - 0.3 lbs/AC Sideoats Grama (El Reno)(Bouteloua curtipendula) - 3.6 lbs/AC Buffalograss (Texoka)(Buchloe dactyloides) - 1.6 lbs/AC Bermudagrass (Cynodon dactylon) - 2.4 lbs/AC	Pure Live Seed Rate** Foxtail Millet (Setaria italica) - 34 lbs/AC
COOL SEASON Sept 16th, Oct, Nov, Dec, Jan, Feb, Mar 14th			Pure Live Seed Rate** Tall Fescue (Festuca arundinaceae) - 4.5 lbs/AC Western Wheatgrass (Agropyron smithii) - 5.6 lbs/AC Red Winter Wheat (Triticum aestivum) - 34 lbs/AC Cereal Rye - 34 lbs/AC

**Note: The amount of Pure Live Seed (PLS) in one pound of bulk seed is based on three factors: % Purity, % Germination, and % Dormant. Use the following formula to calculate PLS in bulk seed: PLS = % Purity X (% Germination + % Dormant) Ensure that the specified amount of pure live seed is placed.

SEEDING NOTES:
1. When seeding is specified under Item 164, refer to TxDOT 2014 Standard Specifications* for specifications, dimensions, volumes, and measurements that have been modified or not shown. Materials and construction shall meet specifications.
2. Conduct seeding upon completion of each applicable construction stage (dependent upon planting season requirements), without compensation for additional move-ins.
3. Place seed AFTER preparing planting area surface. Refer to Surface Preparation detail this sheet, as well as Topsoil Item 160 and Compost Manufactured Topsoil Item 161 when specified. Apply fertilizer per Item 166 BEFORE seeding, per specifications and this sheet, to help drill the fertilizer into the soil.
4. When temporary grasses are well-established and more than 2 inches tall, mow planting area before seeding permanent grasses; mowing for this purpose will be subsidiary. When vegetation is not already well-established, cultivate planting area to a depth as described in Item 164.3, before temporary seeding and before permanent seeding.
5. Seed material must be appropriate to the location, soil type and season. Use the seed mix species and pure live seed rates designated in Tables 1-4 of the TxDOT 2014 Standard Specifications* for Item 164, unless otherwise specified.
6. All seed shall meet labeling, delivery, analysis, and testing requirements described in Item 164.2.1. Deliver seed in labeled, unopened bags or containers to Engineer prior to planting.
7. Uniformly plant seed over the designated planting area, along the contour of slopes, and drill seed to a depth as described in Item 164.3.4.
8. Hydroseeding may be allowed, when specified or Engineer concurs.
9. Implement and continue Vegetative Watering per the schedule, rate and volume specified under Item 168.

ROADSIDE MOWING ITEM 730* PROJECT MAINTENANCE AC

MOWING NOTES:
1. During project construction, once seed is established, use mowing to promote permanent grasses by mowing any remaining temporary grasses.
2. Also mow established turf and ROW grasses in designated areas of project limits as specified or directed by Engineer.
3. Remove litter and debris prior to mowing.
4. Do not mow on wet ground when soil rutting can occur.
5. Hand-trim around obstructions and stormwater control devices as needed.
6. Maintain paved surfaces free of tracked soils and clipped vegetation.

TXDOT REFERENCE MATERIALS:

- "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES" 2014
- "A GUIDANCE TO ROADSIDE VEGETATION ESTABLISHMENT" 2004
- ONLINE TRAINING COURSE: MNT415 REVEGETATION DURING CONSTRUCTION
- DALLAS DISTRICT "VEGETATION ESTABLISHMENT GUIDELINES"

SEQUENCE OF WORK:

- CULTIVATE SURFACE SOIL.
- PREPARE / PLACE TOPSOIL, OR
- PREPARE / PLACE COMPOST MANUFACTURED TOPSOIL.
- APPLY FERTILIZER AND THEN PLACE SEEDING, OR
- PLACE SOD AND THEN APPLY FERTILIZER.
- CONDUCT VEGETATIVE WATERING.
- CONDUCT ROADSIDE MOWING, AS DIRECTED.

Texas Department of Transportation

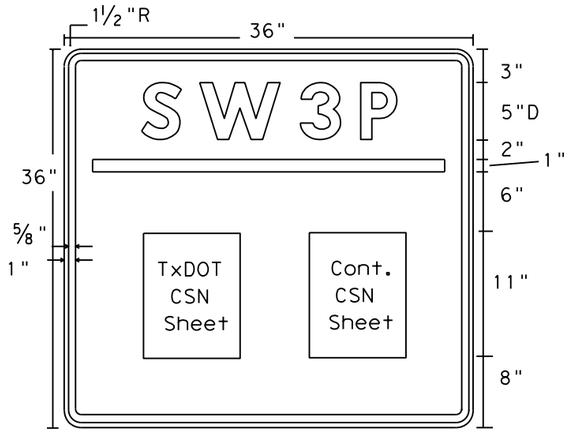
VEGETATION ESTABLISHMENT SHEET

(DALLAS DISTRICT)

TEMPLATE REVISION DATE: 02/21/19

DESIGN	FED.RD. DIV.NO.	PROJECT NO.		HIGHWAY NO.
CPB	6	(See Title Sheet)		SH 34
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
XXX	TEXAS	DALLAS	DALLAS	
CHECK	CONTROL	SECTION	JOB	243
XXX	0568	01	052,ETC.	

5/4/2024



SW3P SIGN

TxDOT & Contractor Construction Site Note (CSN)

Sign Dimensions

36" X 36"

Letters - White
Numbers - White
Border - White
Background - Blue

GENERAL NOTES:

1. The alphabets and lateral spacing between letters and numerals shall conform with the "Texas Manual on Uniform Traffic Control Devices for Streets and Highways", (TMUTCD) latest edition, and the "Compliant Work Zone Traffic Control Devices List". Lateral spacing of text shall provide a balanced appearance. All materials shall conform to Department Specifications.
2. Legend and border may be applied by reverse screening process with transparent colored ink, cut-out white reflective sheeting applied to colored background or combination thereof. Background shall be reflective sheeting Type C.
3. CSN Sheets will be laminated and attached to the sign with an adhesive. Ensure sheets remain dry. (See Figure 1).
4. SW3P Signs should be placed just inside the ROW line at the project limits at a readable height. It may be placed perpendicular or parallel to ROW line. If the sign cannot be placed outside the clear zone, it will be mounted per TMUTCD requirements.
5. Final location of the signs will be as approved by the Engineer.

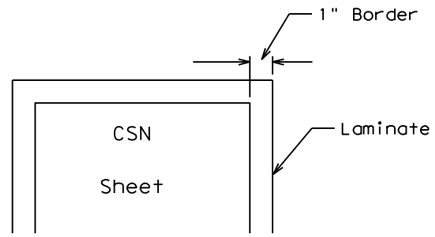
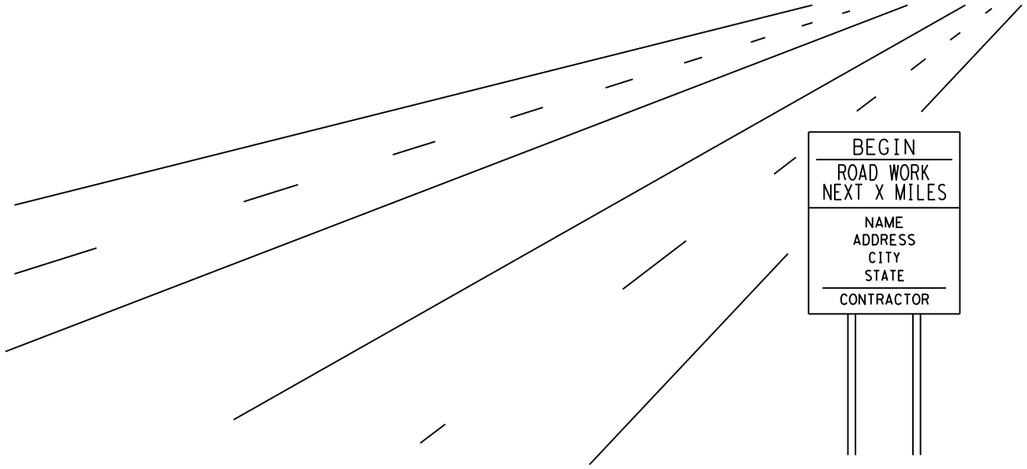
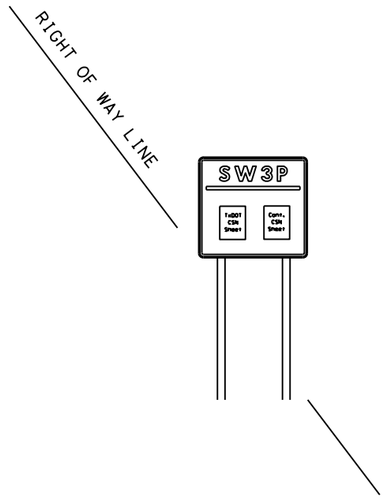


Figure 1





DEPARTMENT MATERIAL SPECIFICATIONS	
PLYWOOD SIGN BLANKS	DMS-7100
FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
VINYL NON-REFLECTIVE DECAL SHEETING	DMS-8320

COLOR	USAGE	REFLECTIVE SHEETING OR OTHER MATERIAL
BLUE	BACKGROUND	TYPE C (FLUORESCENT PRISMATIC)
WHITE	LEGEND & BORDERS	VINYL NON-REFLECTIVE DECAL SHEETING

Texas Department of Transportation
DALLAS DISTRICT STANDARD

SW3P SIGN SHEET

FILE:	DN: TxDOT	CK:	DW:	CK:	
©TxDOT 2016	DISTRICT		PROJECT		SHEET
REVISION DATE: 10-16-15	18				244
	COUNTY		CONTROL	SECT	JOB	HIGHWAY
	ELLIS		0568	01	052, ETC.	SH 34

LEVELS DISPLAYED
1
PATH:

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

☐ This project is adjacent or parallel work, not within RR ROW:

DOT No.: 597281L
Crossing Type: AT- GRADE
RR Company Operating Track at Crossing: BNSF
RR Company Owning Track at Crossing: BNSF
RR MP: 258.600
RR Subdivision: DFW
City: BARDWELL
County: ELLIS
CSJ at this Crossing: 0568-01-052
Latitude: 32.2662052
Longitude: -96.6952047

Scope of Work, including any TCP, to be performed by State Contractor:

State's contractor will be performing pavement repair, asphalt overlay work, and traffic control in the railroad right-of-way.

Scope of Work to be performed by Railroad Company:

N/A

II. FLAGGING & INSPECTION

No. of Days of Railroad Flagging Expected: 5

On this project, night or weekend flagging is:

☑ Expected
☐ Not Expected

Flagging services will be provided by:

☐ Railroad Company: 1) Txdot will pay flagging invoices. Flagging Agreement with railroad will be needed or, 2) Permitted crossing. Railroad company to provide flagging.
☑ Outside Party: Contractor will pay flagging invoices to be reimbursed by TxDOT

Contractor must incorporate flaggers into anticipated construction schedule. The Railroad requires a 30-day notice if their flaggers are to be utilized. If Contractor falls behind schedule due to their own negligence and is not ready for scheduled flaggers, any flagging charges will be paid by Contractor.

Contact Information for Flagging:

☐ **UPRR** UP.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
UP.request@nrssinc.net
Call Center 877-984-6777

☑ **BNSF** BNSFinfo@railprosfs.com
Call Center 877-315-0513, Select #1 for flagging

☐ **CPKCR** KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS:

Contractor must incorporate railroad construction inspection into anticipated construction schedule.

☑ Not Required
☐ Required. Contact Information for Construction Inspection:

III. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

☐ Required.
☑ Not Required

Railroad Point of Contact: _____

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

IV. RAILROAD INSURANCE REQUIREMENTS

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies and corresponding certificates of insurance must be issued by the contractor on behalf of the Railroad. Separate insurance policies and certificates are required when more than one Railroad Company is operating on the same right of way, or when several Railroad Companies are involved and operate on their own separate right of ways.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Escalated Limits

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000

Railroad Protective Liability Limits

☐ Not Required	
☑ Non - Bridge/Typical Maintenance Projects. Includes repairs to overpass/underpass and culvert structures	$2,000,000 / $6,000,000
☐ Bridge Structure Projects. Includes new construction or replacement of overpass/ underpass structures	$5,000,000 / $10,000,000
☐ Other: _____	

V. CONTRACTOR'S RIGHT OF ENTRY (CROE)

☐ Not Required
☐ Required: UPRR Maintenance Consent Letter. TxDOT to assist
☐ Required: TxDOT to assist in obtaining the UPRR CROE
☑ Required: Contractor to obtain
- ☑ BNSF: contractor to obtain a surface/resurface permit from JLL
  https://bnsf.railpermitting.com
- ☐ CPKCR
  https://jllrpg.360works.com/fmi/webd/rpo_web_kcs.fmp12
- ☐ Other Railroads: _____

To view previously approved CROE templates agreed upon between the State and Railroad, see: https://www.txdot.gov/business/resources/railroad-highway-crossing/sample-right-of-entry-agreements.html

Approved CROE templates are not to be modified by the Contractor.

Contractor shall not operate within Railroad Right of Way without an executed Construction & Maintenance Agreement between the State and the Railroad and an executed CROE between the Contractor and the Railroad if required on project.

VI. RAILROAD COORDINATION MEETING

A Railroad Coordination Meeting is required. See item 5, Article 8.1, of the Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges Manual for more details.

VII. RAILROAD SAFETY ORIENTATION

A. Complete the Railroad's course "Orientation for Contractor's Safety," and maintain registration prior to working on the Railroad's property. This course is required to be completed annually by Contractor and Subcontractor personnel working on site.

UPRR, BNSF, CPKCR will not accept on-track safety training certificates from other Railroads. Refer to each Railroad's specific contractor right of entry for training information.

Know and follow the Contractor's Right of Entry Agreement EXHIBIT D, MINIMUM SAFETY REQUIREMENTS regarding clothing, personal protective equipment, and general safety requirements.

VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are subject to the same insurance requirements as the Prime Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: BNSF
Railroad Emergency Line at: 800-832-5452
Location: DOT 597281L
RR Milepost: 258.600
Subdivision: DFW

RRD Review Only
Initials: KS
Date: 2-28-24

Texas Department of Transportation — Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: rr-scope-of-work.pdf		DN: TxDOT	CK:	DW:		CK:	
© TxDOT June 2014		CONT	SECT	JOB		HIGHWAY	
REVISIONS		0568	01	052		SH 34	
6/2023		DIST	COUNTY			SHEET NO.	
		18	ELLIS			245	

I. WORK AT CROSSING LOCATIONS (AT GRADE, HIGHWAY OVERPASS, HIGHWAY UNDERPASS, PEDESTRIAN, OR CLOSED/ABANDONED)

☐ This project is adjacent or parallel work, not within RR ROW:

DOT No.: 765515B
Crossing Type: AT-GRADE
RR Company Operating Track at Crossing: UPRR
RR Company Owning Track at Crossing: UPRR
RR MP: 230.140
RR Subdivision: ENNIS
City: ENNIS
County: ELLIS
CSJ at this Crossing: 0568-01-052
Latitude: 32.3193020
Longitude: -96.6197369

Scope of Work, including any TCP, to be performed by State Contractor:

State's contractor will be performing pavement repair, asphalt overlay work, and traffic control in the railroad right-of-way.

Scope of Work to be performed by Railroad Company:

N/A

II. FLAGGING & INSPECTION

No. of Days of Railroad Flagging Expected: 5

On this project, night or weekend flagging is:

☑ Expected
☐ Not Expected

Flagging services will be provided by:

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Contact Information for Flagging:

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Call Center 877-315-0513, Select #1 for flagging
UP.request@nrssinc.net
Call Center 877-984-6777

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Call Center 877-315-0513, Select #1 for flagging

☐ **CPKCR** KCS.info@railpros.com
Call Center 877-315-0513, Select #1 for flagging
Bottom Line On-Track Safety Services
bottomline076@aol.com, 903-767-7630

☐ OTHERS:

Contractor must incorporate railroad construction inspection into anticipated construction schedule.

☑ Not Required
☐ Required. Contact Information for Construction Inspection:

III. CONSTRUCTION WORK TO BE PERFORMED BY THE RAILROAD

☐ Required.
☑ Not Required

Railroad Point of Contact: _____

Coordinate with TxDOT for any work to be performed by the Railroad Company. TxDOT must issue a work order for any work done by the Railroad Company prior to the work being performed.

IV. RAILROAD INSURANCE REQUIREMENTS

The Contractor shall confirm the insurance requirements with the Railroad as the insurance limits are subject to change without notice.

Insurance policies and corresponding certificates of insurance must be issued by the contractor on behalf of the Railroad. Separate insurance policies and certificates are required when more than one Railroad Company is operating on the same right of way, or when several Railroad Companies are involved and operate on their own separate right of ways.

No direct compensation will be made to the Contractor for providing the insurance coverages shown below or any deductibles. These costs are incidental to the various bid items.

Escalated Limits

Type of Insurance	Amount of Coverage (Minimum)
Workers Compensation	$500,000 / $500,000 / $500,000
Commercial General Liability	$2,000,000 / $4,000,000
Business Automobile	$2,000,000

Railroad Protective Liability Limits

☐ Not Required	
☑ Non - Bridge/Typical Maintenance Projects. Includes repairs to overpass/underpass and culvert structures	$2,000,000 / $6,000,000
☐ Bridge Structure Projects. Includes new construction or replacement of overpass/ underpass structures	$5,000,000 / $10,000,000
☐ Other: _____	

V. CONTRACTOR'S RIGHT OF ENTRY (CROE)

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☐ Required: TxDOT to assist in obtaining the UPRR CROE
☐ Required: Contractor to obtain
- ☐ BNSF: _____
  https://bnsf.railpermitting.com
- ☐ CPKCR
  https://jllrpg.360works.com/fmi/webd/rpo_web_kcs.fmp12
- ☐ Other Railroads: _____

To view previously approved CROE templates agreed upon between the State and Railroad, see: https://www.txdot.gov/business/resources/railroad-highway-crossing/sample-right-of-entry-agreements.html

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VIII. SUBCONTRACTORS

Contractor shall not subcontract work without written consent of TxDOT. Subcontractors are subject to the same insurance requirements as the Prime Contractor.

IX. EMERGENCY NOTIFICATION

In Case of Railroad Emergency
Call: UPRR
Railroad Emergency Line at: 800-848-8715
Location: DOT 765515B
RR Milepost: 230.140
Subdivision: ENNIS

RRD Review Only
Initials: KS
Date: 2-27-2024

Texas Department of Transportation — Rail Division

RAILROAD SCOPE OF WORK
PROJECT SPECIFIC DETAILS

FILE: rr-scope-of-work.pdf		DN: TxDOT	CK:	DW:		CK:	
© TxDOT June 2014		CONT	SECT	JOB		HIGHWAY	
REVISIONS	6/2023	0568	01	052		SH 34	
		DIST	COUNTY			SHEET NO.	
		18	ELLIS			246	

PART 1 - GENERAL

1.01 DESCRIPTION

This project includes construction work within the right of way and/or properties of the Railroad and adjacent to its tracks, wire lines and other facilities. These sheets describe the minimum special requirements for coordination with the Railroad when working upon, over or under Railroad Right of Way or when impacting current or future Railroad operations. Coordinate with the Railroad while performing the work outlined herein, and afford the same cooperation with the Railroad as with TxDOT. Complete all submittals and work in accordance with TxDOT Standard Specifications, Railroad Guidelines and AREMA recommendations as modified by these minimum special requirements or as directed in writing by the Railroad Designated Representative.

For purposes of this project, the Railroad Designated Representative is the person or persons designated by the Railroad Manager of Industry and Public Projects to handle specific tasks related to the project.

1.02 REQUEST FOR INFORMATION / CLARIFICATION

Submit Requests for Information ("RFI") involving work within any Railroad Right of Way to the TxDOT Engineer. The TxDOT Engineer will submit the RFI to the Railroad Designated Representative for review and approval for RFI's corresponding to work within Railroad Right of Way. Allow six (6) weeks total time for review and approval, which includes four (4) weeks for review and approval by the Railroad.

1.03 PLANS / SPECIFICATIONS

TxDOT has received written Railroad approval of the plans and specifications for this project. Any revisions or changes in the plans after award of the Contract must have the approval of TxDOT and the Railroad.

PART 2 - UTILITIES AND FIBER OPTIC

Construct all utility installations in accordance with current AREMA recommendations, Railroad, TxDOT and owning utility specifications and requirements. Railroad general guidelines can be found on the Railroad website or by contacting the Railroad Designated Representative.

PART 3 - CONSTRUCTION

3.01 GENERAL

A. Perform all work in compliance with all applicable Railroad, Federal Railroad Administration (FRA), and TxDOT rules and regulations. Arrange and conduct work in a manner that does not endanger or interfere with the safe operation of the tracks and property of the Railroad and the traffic moving on such tracks, or the wires, signals and other property of the Railroad, its tenants or licensees, at or in the vicinity of the Work. The safe operation of railroad train movements takes precedence over any work to be performed by the Contractor. The Contractor is responsible for train delay cost and lost revenue claims due to any delays or interruption of train operations resulting from Contractor's construction or other activities.

B. Construction activities within 15 feet of the operational tracks will only be allowed if absolutely necessary and the Railroad's Designated Representative grants approval. Construction activities within 15 feet of the operational track(s) preferably allow the tracks to stay operational. In such cases, coordination and approval by the Railroad Track Manager is required with regard to schedule, flagging, and slow orders. See Sections 3.07 and 3.08 for additional information.

C. Provide track protection for all work equipment (including rubber tired equipment) operating within 25 feet from nearest rail. When not in use, keep Contractor machinery and materials at least 50 feet from the Railroad's nearest track.

D. Vehicular crossings of railroad track are allowed only at existing crossings, or haul road crossings developed with Railroad approval.

E. The Contractor is also advised that new railroad facilities within the project may be built by the Railroad. If applicable, these facilities are delineated in the plans. Be aware of the limits of responsibilities and coordinate efforts with the Railroad and TxDOT.

F. Railroad requirements do not allow work within 50 feet of track centers when a train passes the work site and all personnel must clear the area within 50 feet of the track centerline and secure all equipment. Additional allowances may be pursued as outlined in 3.02 and 3.03.

G. All permanent clearances shall be verified before project closing.

3.02 RAILROAD OPERATIONS

A. Trains and/or equipment are expected on any track, at any time, in either direction. Become familiar with the train schedules in this location and structure bid assuming intermittent track windows in this period, as defined in Paragraph B that follows.

B. All railroad tracks within and adjacent to the contract site are active, and rail traffic over these facilities shall be maintained throughout the Project. Activities may include both through moves and switching moves to local customers. railroad traffic and operations will occur continuously throughout the day and night on these tracks and shall be maintained at all times as defined herein. Coordinate and schedule the work so that construction activities do not interfere with railroad operations.

C. Coordinate work windows with TxDOT and the Railroad's Designated Representative. Types of work windows include Conditional Work Windows and Absolute Work Windows, as defined below:

1. Conditional Work Window: A Conditional Work Window is a period of time that railroad operations have priority over construction activities. When construction activities may occur on and/or adjacent to the railroad tracks within 25 feet of the nearest track, a railroad flag person will be required. At the direction of the railroad flag person, upon approach of a train, and when trains are present on the tracks, the tracks must be cleared (i.e., no construction equipment, materials or personnel within 25 feet, or as directed by the Railroad Designated Representative, from the tracks). Conditional Work Windows are available for the Project.

2. Absolute Work Window: An Absolute Work Window is a period of time that construction activities are given priority over railroad operations. During this time frame, the designated railroad track(s) will be inactive for train movements and may be fouled by the Contractor. At the end of an Absolute Work Window, the railroad tracks and/or signals must be completely operational for train operations and all Railroad, Public Utilities Commission (PUC) and FRA requirements, codes and regulations for operational tracks must be satisfied. In the situation where the operating tracks and/or signals have been affected, the Railroad will perform inspections of the work prior to placing that track back into service. Railroad flag persons will be required for construction activities requiring an Absolute Work Window. Absolute Work Windows will not generally be granted. Any request will require a detailed explanation for Railroad review.

3.03 RIGHT OF ENTRY, ADVANCE NOTICE AND WORK STOPPAGES

A. Do not perform any work within Railroad Right of Way without a valid executed Right of Entry Agreement if required on this project.

B. Give advance notice to the Railroad as required in the "Contractor's Right of Entry Agreement" before commencing work in connection with construction upon or over Railroad Right of Way and observe the Railroad's rules and regulations with respect thereto.

C. Perform all work upon Railroad Right of Way in a manner to avoid interference with or endanger the operations of the Railroad. Whenever work may affect the operations or safety of trains, submit the work method to the Railroad Designated Representative for approval. Approval does not relieve the Contractor from liability. Do not commence any work which requires flagging service or inspection service until the flagging protection required by the Railroad is available at the job site. See Section 3.15 for railroad flagging requirements.

D. Make requests in writing for both Absolute and Conditional Work Windows, at least 30 days in advance of any work. Include in the written request:
1. Exactly what the work entails.
2. The days and hours that work will be performed.
3. The exact location of work, and proximity to the tracks.
4. The type of window requested and the amount of time requested.
5. The designated contact person.

Provide a written confirmation notice to the Railroad at least 48 hours before commencing work in connection with approved work windows when work is within 25 feet of nearest rail. Perform all work in accordance with previously approved work plans.

E. Make provisions to protect operations and property of the Railroad should a condition arising from, or in connection with the work, require immediate and unusual action. If in the judgment of the Railroad Designated Representative such provisions are insufficient, the Railroad Designated Representative may require or provide such provisions as deemed necessary. In any event, such provisions shall be at the Contractor's expense and without cost to the Railroad or TxDOT. The Railroad or TxDOT shall have the right to order the Contractor to temporarily cease operations in the event of an emergency or, if in the opinion of the Railroad Designated Representative, the Contractor's operations could endanger railroad operations. In the event of such an order, immediately notify TxDOT of the order.

3.04 INSURANCE

Do not begin work upon or over Railroad Right of Way until furnishing the Railroad with the insurance policies, binders, certificates and endorsements required by the "Contractor's Right of Entry Agreement", and until the Railroad Designated Representative has advised TxDOT that such insurance is in accordance with the Agreement.

3.05 RAILROAD SAFETY ORIENTATION

A. Complete the railroad course "Orientation for Contractor's Safety", and maintain current registration prior to working on railroad property. This course is required to be completed annually by Contractor and Subcontractor personnel working on site.

"UPRR, BNSF, KCS/TEXMEX will not accept on-track safety training certificates from other railroads. Refer to Railroad specific contractor right of entry for training information."

B. Know and follow the "Contractor's Right of Entry Agreement" EXHIBIT D, MINIMUM SAFETY REQUIREMENTS regarding clothing, personal protective equipment, and general safety requirements.

3.06 COOPERATION

The Railroad will cooperate with Contractor so that work may be conducted in an efficient manner, and will cooperate with Contractor in enabling use of Railroad Right of Way in performing the work.

3.07 MINIMUM CONSTRUCTION CLEARANCES FOR FALSEWORK AND OTHER TEMPORARY STRUCTURES

Abide by the following minimum temporary clearances during the course of construction:
A. 15' - 0" (BNSF)(UPRR)and 14'-0" (KCS) horizontal from centerline of track
B. 22' (KCS) and 21' - 6" (UPRR & BNSF) vertically above top of rail.

For construction clearance less than listed above, obtain local Railroad Operating Unit review and approval.

3.08 APPROVAL OF REDUCED CLEARANCES

A. Maintain minimum track clearances during construction as specified in Section 3.07.

B. Submit any proposed infringement on the specified minimum clearances to the Railroad Designated Representative through TxDOT at least 30 days in advance of the work. Do not proceed with such infringement without written approval by the Railroad Designated Representative.

C. Do not commence work involving an approved infringement without receiving written assurance from the Railroad Designated Representative that arrangements have been made for any necessary flagging service.

Texas Department of Transportation | Rail Division

RAILROAD REQUIREMENTS FOR NON-BRIDGE CONSTRUCTION PROJECTS

FILE:	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2018	CONT	SECT	JOB	HIGHWAY
REVISIONS March 2020	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		247

DATE:
FILE:

3.09 MAINTENANCE OF RAILROAD FACILITIES

A. Maintain all ditches and drainage structures free of silt or other obstructions resulting from Contractor's operations. Repair eroded areas and any other damage within Railroad Right of Way and repair any other damage to the property of the Railroad, or its tenants.

B. Perform all such maintenance and repair of damages due to the Contractors's operations at Contractor's expense.

C. Submit a proposed method of erosion control for review by the Railroad prior to beginning any grading on the project site. Comply with all applicable local, state and federal regulations when developing and implementing such erosion control.

3.10 SITE INSPECTIONS BY RAILROAD's DESIGNATED REPRESENTATIVE

A. In addition to the office reviews of construction submittals, site inspections may be performed by the Railroad Designated Representative at significant points during construction, including the following if applicable:
   1. Pre-construction meetings.
   2. Pile driving/drilling of caissons or drilled shafts.
   3. Reinforcement and concrete placement for railroad bridge substructure and/or superstructure.
   4. Erection of precast concrete or steel bridge superstructure.
   5. Placement of waterproofing (prior to placing ballast on bridge deck).
   6. Completion of the bridge structure.

B. Site inspection is not limited to the milestone events listed above. Site visits to check progress of the work may be performed at any time throughout the construction as deemed necessary by the Railroad.

C. Provide a detailed construction schedule, including the proposed temporary horizontal and vertical clearances and construction sequence for all work to TxDOT for submittal to the Railroad Designated Representative for review prior to commencement of work. Include the anticipated dates when the above listed events will occur. Update this schedule for the above listed events as necessary and each month at a minimum to allow the Railroad to schedule site inspections.

3.11 RAILROAD REPRESENTATIVES

Railroad representatives, conductors, flag person or watch person will be provided by the Railroad at expense of TxDOT to protect Railroad facilities, property and movements of its trains or engines. In general, the Railroad will furnish such personnel or other protective services as follows:

A. When any part of any equipment is standing or being operated within 25 feet, measured horizontally, from nearest rail of any track on which trains may operate, or when any object is off the ground and any dimension thereof could extend inside the 25 foot limit, or when any erection or construction activities are in progress within such limits, regardless of elevation above or below track.

B. For any excavation below elevation of track subgrade if, in the opinion of the Railroad Designated Representative, track or other railroad facilities may be subject to settlement or movement.

C. During any clearing, grubbing, excavation or grading in proximity to railroad facilities, which, in the opinion of the Railroad Designated Representative, may endanger railroad facilities or operations.

D. During any Contractor's operations when, in the opinion of the Railroad Designated Representative, railroad facilities, including, but not limited to, tracks, buildings, signals, wire lines, or pipe lines, may be endangered.

E. Arrange with the Railroad Designated Representative to provide the adequate number of flag persons to accomplish the work.

3.12 COMMUNICATIONS AND SIGNAL LINES

If required, the Railroad will rearrange its communications and signal lines, its grade crossing warning devices, train signals and tracks, and facilities that are in use and maintained by the Railroad's forces in connection with its operation at expense of TxDOT. This work by the Railroad will be done by its own forces and it is not a part of the Work under this Contract.

3.13 TRAFFIC CONTROL

Coordinate any operations that control traffic across or around railroad facilities with the Railroad Designated Representative.

3.14 CONSTRUCTION EXCAVATIONS AND BORING ACTIVITIES UNDER TRACK

A. Take special precaution and care in connection with excavating and shoring. Excavations for construction of footings, piers, columns, walls or other facilities that require shoring shall comply with requirements of TxDOT, OSHA, AREMA and Railroad "Guidelines for Temporary Shoring".

B. The project plans indicate whether there are fiber optic lines or other such telecommunications systems that require consideration. Regardless, contact the necessary call center to determine if such cable systems are present:

   UPRR 1-800-336-9193
   7:00 AM to 9:00 PM CST Monday-Friday except holidays,
   staffed 24 hrs/day for emergencies
   48 hrs notice required

   BNSF 1-800-533-2891
   24 hour number
   5 working days notice required

   KCS 1-800-344-8377
   Texas One Call, a 24 hour number
   48 hrs notice required, excluding weekends and holidays

   If a telecommunications system is buried anywhere on or near railroad property, coordinate with TxDOT, the Railroad and the Telecommunication Company(ies) to arrange for relocation or protective measures prior to beginning work on or near railroad property. Refer to the project General Notes for additional information.

C. Projects involving a boring or jack and bore operation under track such as drainage pipes or culverts and utilities require an installation plan reviewed and approved by the Railroad and TxDOT prior to proceeding with such construction. A railroad inspector and contractor assisted monitoring of ground and track movement is required to maintain safe passage of rail traffic. Stop installation and do not allow passage of trains if movements in excess of 1/4 inch vertical or horizontal is detected in the tracks. Immediately repair the damage to the satisfaction of TxDOT and the Railroad before proceeding.

3.15 RAILROAD FLAGGING

Per the Right of Entry Agreement for flagging, notify the Railroad Representative at least 10 working days in advance of Contractor's work and at least 30 working days in advance of any Contractor's work in which any person or equipment will be within 25 feet of nearest rail or as specified in the Contractor Right of Entry (CROE).

3.16 CLEANING OF RIGHT-OF-WAY

When work is complete, remove all tools, implements, and other materials brought into Railroad Right of Way and leave the right of Way in a clean and presentable condition to the satisfaction of TxDOT and the Railroad.

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RAILROAD REQUIREMENTS FOR NON-BRIDGE CONSTRUCTION PROJECTS

FILE:	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT October 2018	CONT	SECT	JOB	HIGHWAY
REVISIONS March 2020	0568	01	052,ETC.	SH 34
	DIST	COUNTY		SHEET NO.
	DAL	ELLIS		248

DATE:
FILE: