DocuSign Envelope ID: 6DF4F7AB-51BF-402A-8D6F-C25AD75FB869

STATE PROJECT NO.			
STP 2B23 (142) HES			
CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		1

ROADWAY CLASSIFICATION:
PRINCIPAL ARTERIAL - OTHER

SPEED DESIGN: 40 - 70 MPH

CURRENT ADT 2021: 9994-19004

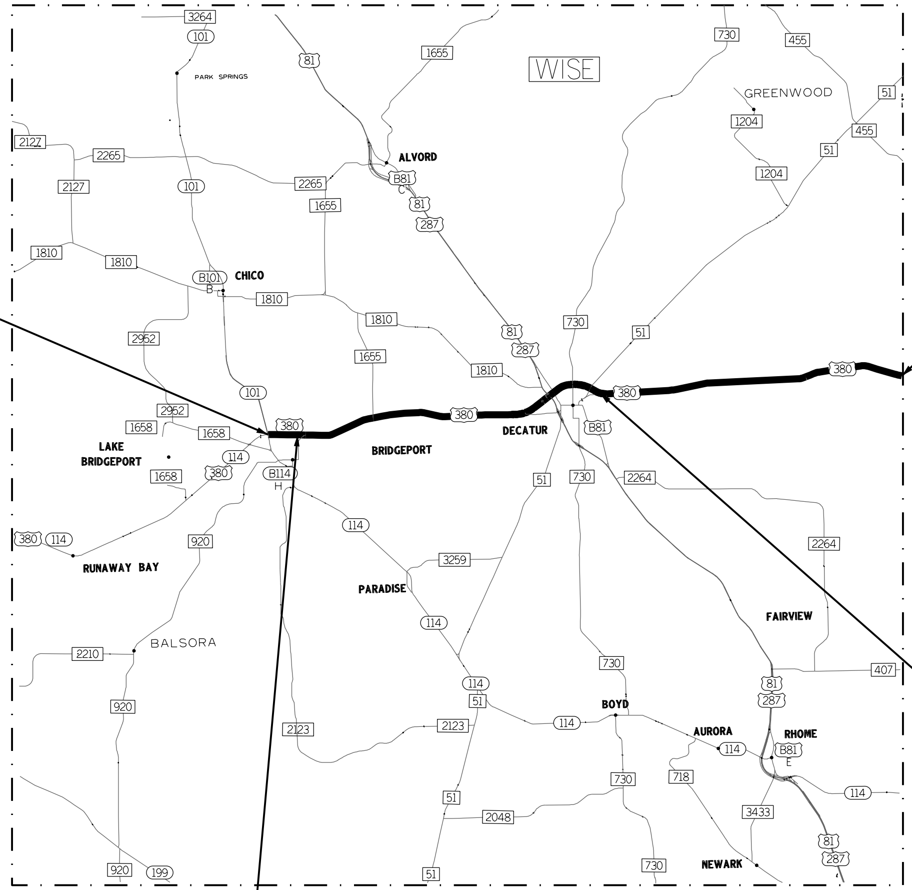
STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT NUMBER: STP 2B23 (142) HES
HIGHWAY: US 380
WISE COUNTY
NET LENGTH OF PROJECT: 118830.52 FT = 22.506 MI
LIMITS: FROM: SH 101 / SH 114
TO: DENTON COUNTY LINE
FOR THE CONSTRUCTION OF SAFETY IMPROVEMENT WORK
CONSISTING OF CABLE BARRIER FENCE

N

BEGIN PROJECT
CCSJ 0134-07-075, ETC
BEGIN CSJ 0134-11-038
℄ US 380 STA 57+63.68
REF MRK #568+0.097



END PROJECT
CCSJ 0134-07-075, ETC
END CSJ 0134-08-043
℄ US 380 STA 1246+01.67
REF MRK #592+0

END CSJ 0134-07-075
BEGIN CSJ 0134-08-043
℄ US 380 STA 690+49.49
REF MRK #580+0.118

END CSJ 0134-11-038
BEGIN CSJ 0134-07-075
℄ US 380 STA 73+98.12
REF MRK #568+0.405

LETTING DATE: ______
CONTRACTOR: ______
WORK BEGAN: ______
WORK COMPLETED: ______
WORK ACCEPTED: ______
FINAL CONTRACT COST: ______

©2023 Texas Department of Transportation

REQUIRED SIGNS SHALL BE IN ACCORDANCE WITH BC (1)-21 THRU BC(12)-21 AND THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, NOVEMBER 1, 2014 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT:
REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS (FORM FHWA 1273, JULY 5, 2022)

EQUATIONS: NONE
EXCEPTIONS:NONE

RAILROAD: NONE
NO TDLR REQUIRED

SUBMITTED FOR LETTING: 5/22/2023
DocuSigned by:
1C2C4AEE88...
AREA ENGINEER

5/12/2023
CARLA VERRANDO, P.E.
CONSULTING ENG. (TBPE FIRM REG. F-3580)

APPROVED FOR LETTING: 5/26/2023
DocuSigned by:
David M Salazar, P.E.
B741E64FAD82411...
DISTRICT ENGINEER

RECOMMENDED FOR LETTING: 5/25/2023
DocuSigned by:
7879B0B92E5D403...
DIRECTOR, TP&D

FILE: c:\pwworking\ust\x\dms17659\US380*AEC*GN*CO*001.dgn
DATE: 5/12/2023 11:14:43 AM

INDEX OF SHEETS

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER

7/6/2023

Salcido Lauvis, P.E.

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

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

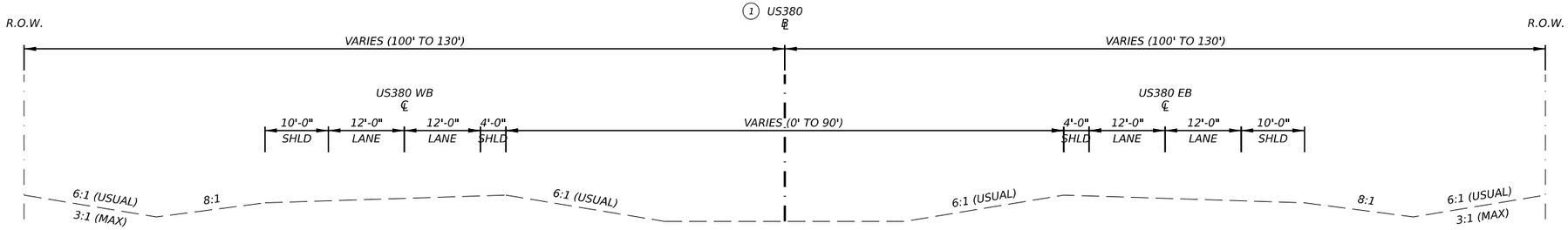
US 380

INDEX OF SHEETS

SHEET 1 OF 1

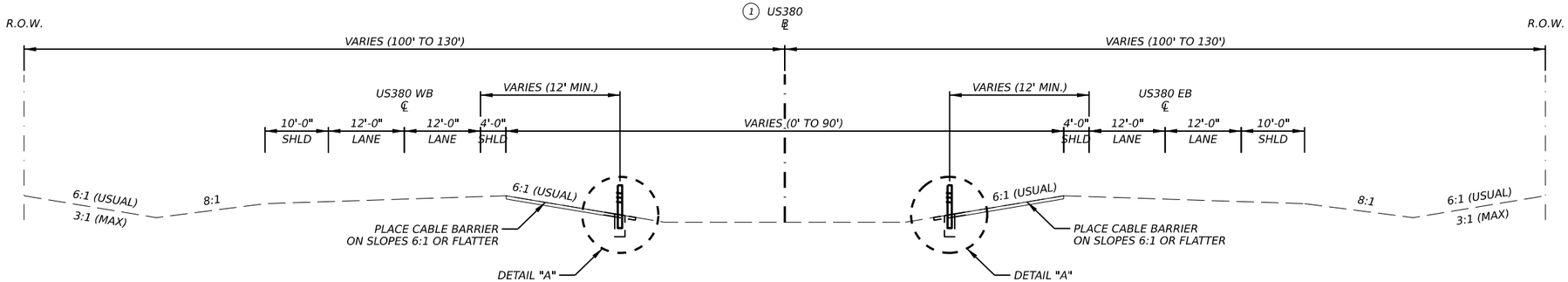
CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		2

DATE: 7/6/2023 9:26:11 AM
FILE: c:\pw\working\ustx\dms17659\US380 AEC INDEX 001.dgn



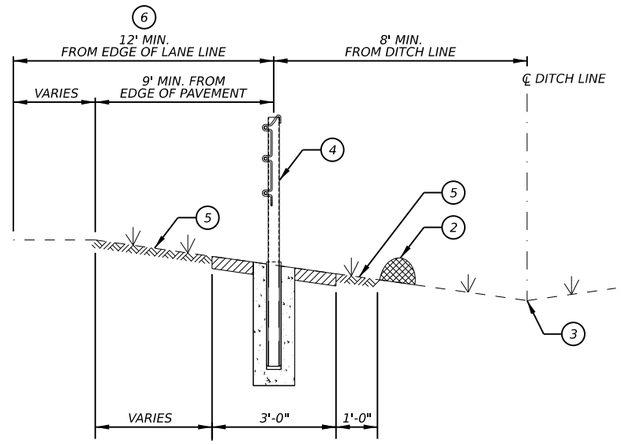
EXISTING TYPICAL SECTION

STA 57+63.68 TO STA 1246+01.67
N.T.S.



PROPOSED TYPICAL SECTION

STA 57+63.68 TO STA 1246+01.67
N.T.S.



DETAIL "A"

N.T.S.

NOTES:

1. BASELINE FOR US 380 MAY NOT BE LOCATED AT CENTER OF RIGHT-OF-WAY.
2. BLADE EXISTING VEGETATION AND EXPOSED SOIL TO ESTABLISH WINDROW. WINDROW TO BE USED AS A BERM FOR EROSION PROTECTION.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER.
4. CABLE BARRIER SYSTEM WITH 5" CONCRETE RIP RAP MOWSTRIP.
5. CELLULOSE FIBER MULCH SEEDING AND VEGETATIVE WATERING WITH TOPSOIL.
6. PLACE CABLE BARRIER AT 12' MINIMUM FROM EDGE OF TRAVEL LANE AT SLOPES THAT ARE 6:1 OR FLATTER. REFER TO PLAN LAYOUT FOR PROPOSED CABLE BARRIER LOCATIONS.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
6/1/2023

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

CABLE BARRIER
TYPICAL SECTION

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		3

DATE: 6/1/2023 12:32:37 PM
FILE: c:\pwwork\kinglustx\dms17659\US380 AEC RD_TYP 01.dgn

County: WISE

Highway: US 380

Specification Data

Basis of Estimate

Item	Description	Rate	Unit
166	Fertilizer (16-8-8)	600 lb./acre**	ton
168	Vegetative Watering	169,400 gal./acre	1,000 gal.
**	Non-Pay, for Contractor's Information Only.		

Special Notes

Electronic files containing answered pre-letting questions and other project related design information will be placed in the following FTP site periodically.

Check this site for new information. Notices of new postings will not be sent out by the Engineer.

The data located in these files is for non-construction purposes only and can be found at

TxDOT's public FTP site at https://ftp.dot.state.tx.us/pub/txdot-info/Pre-Letting Responses/.

Access is read-only.

All files in the FTP site are subject to the License Agreement shown on the FTP site.

To obtain a copy of the project plans free of charge, submit a request from the following site: http://www.txdot.gov/business/letting-bids/plans-online.html

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

Area Engineer's Email: _Edrean.Cheng@txdot.gov
Assistant Area Engineer's Email: __Oscar.R.Chavez@txdot.gov

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

Single lane closures, except as otherwise shown in the plans, will be restricted to off-peak hours as defined in the following table:

County: WISE

Highway: US 380

Peak Hours		Off-Peak Hours	
6 to 9 AM Monday through Friday	3 to 7 PM Monday through Friday	9 AM to 3 PM and 7 PM to 6 AM Monday through Friday	All day Saturday and Sunday

Work that requires closure of multiple travel lanes in the same direction, except as otherwise shown in the plans, are restricted to night hours between 9 PM and 6 AM.

The following Holiday/Event lane closure restriction requirements apply to this project:

No work that restricts or interferes with traffic shall be allowed between 3 PM on the day preceding a Holiday or Event and 9 AM on the day after the Holiday or Event.

Holiday Lane Closure Restrictions	
New Year's Eve and New Year's Day (December 31 through January 1)	3 PM December 30 through 9 AM January 2
Easter Holiday Weekend (Friday through Sunday)	3PM Thursday through 9 AM Monday
Memorial Day Weekend (Friday through Monday)	3 PM Thursday through 9 AM Tuesday
Independence Day (July 3 through July 5)	3 PM July 2 through 9 AM July 6
Labor Day Weekend (Friday through Monday)	3 PM Thursday through 9 AM Tuesday
Thanksgiving Holiday (Wednesday through Sunday)	3 PM Tuesday through 9 AM Monday
Christmas Holiday (December 23 through December 26)	3 PM December 22 through 9 AM December 27

Plan work schedules around the appropriate dates above to ensure productive work is performed without lane closures.

Event Lane Closure Restrictions 3 PM the day before Event to 9 AM the day after the Event			
NASCAR Races at Texas Motor Speedway (generally 3 events):	NASCAR Nationwide and Sprint Cup Series	NASCAR Nationwide and Sprint Cup Series (Held in Late	Indy Series Racing and NASCAR Truck

	(Held in late March/early April)	October/early November)	Series (Held in June)
Within one mile radius of major retail traffic generators i.e. malls (Thanksgiving Day through January 2)			

Modifications to Lane Closure / Work Restrictions:

Submit a request in writing for approval by the Engineer a minimum of 10 days in advance of implementing a change to lane closure restrictions.

When deemed necessary, the Engineer will lengthen, shorten, or otherwise modify lane closure restrictions as traffic conditions warrant.

When deemed necessary, the Engineer will modify the list of major events when new events develop, existing events are rescheduled, or when warranted.

Special Events/ Special Situations will be handled on a case-by-case basis. No work restricting lane closures is allowed from 3 PM a day before to 9 AM the day after the Special Event or Special Situation.

Existing storm sewers and utilities are shown from the best available information. Verify the location of all underground facilities prior to starting work.

For dimensions of right-of-way not shown on the plans, see right-of-way map on file at the TxDOT District Office.

Provide temporary drain openings at all low points or other drainage structures, as required, at the Contractor's expense.

Remove any obstructions to existing drainage due to the contractor's operations, as required, at the Contractor's expense.

Item 2. Instructions to Bidders

Proposals with a bid of more than 320 working days for the substantial completion of the project will be considered non-responsive.

Item 5. Control of the Work

When supplementary bridge plans, shop drawings, shop details, erection drawings, working drawings, forming plans, or other drawings are required, prepare and submit drawings on sheets 8-1/2 by 11 inches, 17 by 22 inches, or full size drawings reduced to half scale if completely legible. If, in the opinion of the Engineer, the drawings are not completely legible, prepare and submit on sheets 22 by 34 inches, with a 1-1/2 inch left margin, and 1/2 inch top, right, and bottom margins.

Submit all sheets with a title in the lower right hand corner. The title must include the sheet index data shown on the lower right corner of the project plans, name of the structure or element or stream, sheet numbering for the shop drawings, name of the fabricator and the name of the Contractor.

Standard Operating Procedure for Alternate Precast Proposal Submission" found online at https://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/publications/bridge.html#design. Acceptance or denial of an alternate is at the sole discretion of the Engineer. Impacts to the project schedule and any additional costs resulting from the use of alternates are the sole responsibility of the Contractor.

Item 6. Control of Materials

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

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

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

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

Item 7. Legal Relations and Responsibilities

The total area disturbed for this project is 51.33 acres. The disturbed area in this project, all project locations in the Contract, and the Contractor project specific locations (PSLs), within 1 mile of the project limits, for the Contract will further establish the authorization requirements for storm water discharges. The Department will obtain an authorization to discharge storm water from the Texas Commission on Environmental Quality (TCEQ) for the construction activities shown on the plans. The Contractor is to obtain required authorization

from the TCEQ for Contractor PSLs for construction support activities on or off the right of way. When the total area disturbed in the Contract and PSLs within 1 mile of the project limits exceeds 5 acres, provide a copy of the Contractor NOI for PSLs on the right of way to the Engineer and to the local government that operates a separate storm sewer system.

Item 8. Prosecution and Progress

Working days will be computed and charged in accordance with Section 8.3.1.1, 'Five-Day Workweek.'

The number of working days for final acceptance will be 342 working days.

Prepare the progress schedule as a bar chart, include all planned work activities and sequences and show Contract completion within the number of working days specified. Submit an updated hard copy when changes to the schedule occur or when requested.

Item 100. Preparing Right of Way

Measurement for this item will be along the centerline of the project with the limits of measurements as shown on the plans.

Item 166. Fertilizer

Fertilize all areas of project to be seeded.

Item 168. Vegetative Watering

Furnish and install an approved rain gauge at the project site, as directed. Furnishing and installation of the rain gauge will not be paid for directly, but will be subsidiary to Item 168.

Apply vegetative watering for an establishment period of thirteen weeks following application of seed or installation of sod, at a rate of 1/2 inch of water depth per week (approximately 13,030 gallons per acre). During the first four weeks after seeding, apply water twice per week, on non-consecutive days, each at half the weekly application rate. For the remainder of the establishment period, apply vegetative watering once per week during the months of January through June or September through December, at the weekly application rate; apply watering twice per week, on non-consecutive days during the months of July and August, each at one-half the weekly application rate.

Average weekly rainfall rates for the District are:

January—0.39"	April—0.86"	July—0.48"	October—0.68"
February—0.46"	May—1.00"	August—0.47"	November—0.46"

March—0.48" June—0.63" September—0.74" December—0.37"

Item 432. Riprap

No RAP shall be used as embankment under the mow strip.

Mow strip shall be reinforced with welded wire reinforcement (WWR) or conventional steel.

No fiber reinforced concrete will be allowed in mow strip construction.

Provide weep holes as directed.

The quantities for riprap at the location indicated may be varied to the extent necessary to ensure proper functioning for the purpose intended.

All concrete riprap will be 5" (.42') in thickness, unless otherwise shown on the plans, and must be reinforced.

Item 502. Barricades, Signs, and Traffic Handling

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 typically 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.

Existing signs are to remain as long as they do not interfere with construction and they do not conflict with the traffic control plan.

Any sign not detailed in the plans but called for in the layout will be as shown in the current "Standard Highway Sign Designs for Texas".

When traffic is obstructed, arrange warning devices in accordance with the latest edition of the "Texas Manual on Uniform Traffic Control Devices".

Cover or remove any work zone signs when work or condition referenced is not occurring.

Do not place barricades, signs, or any other traffic control devices where they interfere with sight distance at driveways or side streets. Provide access to all driveways during all phases of construction unless otherwise noted in the plans or as directed.

County: WISE

Highway: US 380

Item 506. Temporary Erosion, Sedimentation, and Environmental Controls

Remove accumulated sediment or replace SW3P controls when the capacity has been reduced by 50% or when the depth of sediment at the control structure exceeds one foot.

Item 543. Cable Barrier System

Driven posts will not be permitted.

The following products are approved for use on this project:

Trinity Industries CASS (TL-4) System
Nu-Cable (TL-4) System
Gibraltar Cable Barrier (TL-4) System

Pre-stretch all cable or wire rope.

Site conditions may require grading for proper installation of cable barrier. This grading will be considered subsidiary to this item.

The contractor shall avoid underground utilities and TxDOT drainage facilities by layout out cable barrier before installation. The engineer shall approve layout and lengths of cable barrier runs.

Item 658. Delineator and Object Marker Assemblies

Contractor to provide delineators that are “SHUR-TITE” or approved equal by the Engineer. Removal of existing delineators and object marker assemblies shall be considered subsidiary to various bid items.

Item 6001. Portable Changeable Message Signs

Provide all portable changeable message signs and arrow panels with a photoelectric device to allow for automatic dimming of operations to approximately 50% of their normal brightness when ambient light drops to approximately five footcandles, and then increase back again for daytime operations.

2 electronic portable changeable message sign unit(s) will be required. Individual or collective use of signs will be required by the Engineer when deemed necessary to supplement the traffic control plan.

Each sign must have programmed in its permanent memory the following 15 messages:

County: WISE

Highway: US 380

1. Exit Closed Ahead
2. Use Other Routes
3. Right Lane
4. Left Lane
5. Closed Ahead
6. Two Lane
7. Detour Ahead
8. Thru Traffic
9. Prepare To Stop
10. Merging Traffic
11. Expect 15 Minute Delay
12. Max Speed ** MPH
13. Merge Right
14. Merge Left
15. No Exit Next ** Miles

Item 6185. Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)

In addition to the shadow vehicles with truck mounted attenuator (TMA) that are specified as being required on the traffic control plan for this project, provide 0 additional shadow vehicle(s) with TMA for TCP (5-1)-18 as detailed on General Note of this standard sheet.

Therefore, 1 total shadow vehicle with TMA will be required for this type of work. Determine if one or more of these operations will be ongoing at the same time to determine the total number of TMAs needed for the project.

Estimate & Quantity Sheet

CONTROLLING PROJECT ID 0134-07-075 **DISTRICT** Fort Worth **COUNTY** Wise
HIGHWAY US 380

			CONTROL SECTION JOB	**0134-07-075**		**0134-08-043**		**0134-11-038**		TOTAL EST.	TOTAL FINAL
			PROJECT ID	**A00178911**		**A00178912**		**A00178913**			
			COUNTY	**Wise**		**Wise**		**Wise**			
			HIGHWAY	**US 380**		**US 380**		**US 380**			
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL		
	100-6001	PREPARING ROW	AC	25.920		24.960		0.450		51.330	
	164-6021	CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	142,825.000		136,556.000		2,627.000		282,008.000	
	164-6029	CELL FBR MLCH SEED(TEMP)(WARM)	SY	71,413.000		68,276.000		1,313.000		141,002.000	
	164-6031	CELL FBR MLCH SEED(TEMP)(COOL)	SY	71,413.000		68,276.000		1,313.000		141,002.000	
	168-6001	VEGETATIVE WATERING	MG	9,997.770		9,558.810		183.880		19,740.460	
	432-6046	RIPRAP (MOW STRIP)(5 IN)	CY	2,422.040		2,181.740		59.580		4,663.360	
	500-6001	MOBILIZATION	LS	1.000						1.000	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	16.000						16.000	
	506-6002	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	108.000		1,242.000				1,350.000	
	506-6011	ROCK FILTER DAMS (REMOVE)	LF	108.000		1,242.000				1,350.000	
	506-6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	2,000.000		600.000		80.000		2,680.000	
	506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	2,000.000		600.000		80.000		2,680.000	
	543-6002	CABLE BARRIER SYSTEM (TL-4)	LF	50,095.000		44,994.000		1,195.000		96,284.000	
	543-6020	CABLE BARRIER TERMINAL SECTION (TL-4)	EA	73.000		70.000		3.000		146.000	
	6001-6002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	4.000						4.000	
	6185-6002	TMA (STATIONARY)	DAY	384.000						384.000	
	6185-6005	TMA (MOBILE OPERATION)	DAY	20.000						20.000	
	18	EROSION CONTROL MAINTENANCE: CONTRACTOR FORCE ACCOUNT WORK (PART)	LS	1.000						1.000	
		SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS	1.000						1.000	

LOCATION	100 6001	164 6021	164 6029	164 6031	166 6002	168 6001	432 6046	506 6002	506 6011	506 6041	506 6043	543 6002	543 6020
CSJ 0134-07-075	PREPARING ROW	CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	CELL FBR MLCH SEED(TEMP)(WARM)	CELL FBR MLCH SEED(TEMP)(COOL)	* FERTILIZER	VEGETATIVE WATERING	RIPRAP (MOW STRIP)(5 IN)	ROCK FILTER DAMS (INSTALL) (TY 2)	ROCK FILTER DAMS (REMOVE)	BIODEG EROSN CONT LOGS (INSTL) (12")	BIODEG EROSN CONT LOGS (REMOVE)	CABLE BARRIER SYSTEM (TL-4)	CABLE BARRIER TERMINAL SECTION (TL-4)
	AC	SY	SY	SY	TON	MG	CY	LF	LF	LF	LF	LF	EA
1 OF 50	0.11	663	331	331	0.08	46.38	20.93					452	
2 OF 50	0.69	3952	1976	1976	0.49	276.67	88.01			80	80	1749	5
3 OF 50	0.64	3749	1874	1874	0.46	262.40	92.64			120	120	1849	5
4 OF 50	0.64	3734	1867	1867	0.46	261.39	89.49			160	160	1811	4
5 OF 50	0.89	5020	2510	2510	0.62	351.43	97.92			160	160	1993	4
6 OF 50	1.53	8134	4067	4067	1.01	569.41	104.17			40	40	2189	2
7 OF 50	1.32	7201	3600	3600	0.89	504.04	116.02			80	80	2415	3
8 OF 50	1.20	6513	3257	3257	0.81	455.94	101.25			80	80	2157	1
9 OF 50	0.85	4840	2420	2420	0.60	338.79	102.27			120	120	2148	2
10 OF 50	0.93	5006	2503	2503	0.62	350.44	71.94	36	36	120	120	1463	3
11 OF 50	1.34	7058	3529	3529	0.87	494.03	76.62	36	36			1625	1
12 OF 50	1.16	6307	3154	3154	0.78	441.51	96.16			120	120	1955	4
13 OF 50	1.72	9142	4571	4571	1.13	639.97	111.11			40	40	2400	
14 OF 50	1.58	8420	4210	4210	1.04	589.39	104.07			120	120	2187	2
15 OF 50	1.14	6280	3140	3140	0.78	439.58	104.03			120	120	2186	2
16 OF 50	0.91	5126	2563	2563	0.64	358.81	103.52			120	120	2175	2
17 OF 50	1.01	5625	2813	2813	0.70	393.76	103.52			80	80	2175	2
18 OF 50	1.25	6821	3410	3410	0.85	477.44	105.00	36	36			2146	4
19 OF 50	1.03	5727	2863	2863	0.71	400.87	105.05			40	40	2178	3
20 OF 50	1.40	7534	3767	3767	0.93	527.40	103.43			40	40	2204	1
21 OF 50	0.73	4163	2082	2082	0.52	291.42	90.69			80	80	1837	4
22 OF 50	0.56	3391	1696	1696	0.42	237.38	91.71			40	40	1859	4
23 OF 50	0.59	3324	1662	1662	0.41	232.69	66.62			120	120	1256	6
24 OF 50	0.75	4259	2130	2130	0.53	298.14	87.73			80	80	1804	3
25 OF 50	0.30	1739	869	869	0.22	121.71	36.57					699	3
26 OF 50	1.25	6775	3388	3388	0.84	474.26	100.09			40	40	2101	2
27 OF 50	0.40	2322	1161	1161	0.29	162.52	51.48					1082	1
PROJECT TOTALS	25.92	142825	71413	71413	17.70	9997.77	2422.04	108	108	2000	2000	50095	73

* NON-PAY ITEM, FOR CONTRACTOR'S REFERENCE ONLY.

SUMMARY OF WORKZONE TRAFFIC CONTROL ITEMS

LOCATION	6001 6002	6185 6002	6185 6005
CSJ 0134-07-075	PORTABLE CHANGEABLE MESSAGE SIGN	TMA (STATIONARY)	TMA (MOBILE OPERATION)
	EA	DAY	DAY
PHASE 0			10
PHASE 1	2	320	
PHASE 2	2	64	
PHASE 3			10
PROJECT TOTALS	4	384	20

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

CABLE BARRIER SUMMARY SHEET

SHEET 1 OF 3

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		6

DATE: 6/22/2023 9:08:43 AM
FILE: c:\pw\working\ustx\dms176591\US380_AEC_SUM_CBL_001.dgn

LOCATION	100 6001	164 6021	164 6029	164 6031	166 6002	168 6001	432 6046	506 6002	506 6011	506 6041	506 6043	543 6002	543 6020
CSJ 0134-08-043	PREPARING ROW	CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	CELL FBR MLCH SEED(TEMP)(WARM)	CELL FBR MLCH SEED(TEMP)(COOL)	* FERTILIZER	VEGETATIVE WATERING	RIPRAP (MOW STRIP)(5 IN)	ROCK FILTER DAMS (INSTALL) (TY 2)	ROCK FILTER DAMS (REMOVE)	BIODEG EROSN CONT LOGS (INSTL) (12")	BIODEG EROSN CONT LOGS (REMOVE)	CABLE BARRIER SYSTEM (TL-4)	CABLE BARRIER TERMINAL SECTION (TL-4)
	AC	SY	SY	SY	TON	MG	CY	LF	LF	LF	LF	LF	EA
27 OF 50	0.93	4882	2441	2441	0.61	341.74	53.24			40	40	1059	3
28 OF 50	2.18	11303	5652	5652	1.40	791.23	102.18	36	36	40	40	2146	2
29 OF 50	0.88	5042	2521	2521	0.63	352.96	105.79	36	36			2163	4
30 OF 50	0.65	3902	1951	1951	0.48	273.12	102.41			40	40	2060	5
31 OF 50	0.68	3884	1942	1942	0.48	271.85	83.10	54	54			1734	2
32 OF 50	0.23	1387	694	694	0.17	97.10	40.74	54	54	40	40	819	2
33 OF 50	1.90	9905	4952	4952	1.23	693.33	98.47	36	36			2036	3
34 OF 50	0.79	4563	2281	2281	0.57	319.39	103.43	108	108			2173	2
35 OF 50	1.11	6154	3077	3077	0.76	430.76	107.82	198	198			2207	4
36 OF 50	0.99	5540	2770	2770	0.69	387.79	102.27	36	36			2148	2
37 OF 50	0.88	5014	2507	2507	0.62	350.98	102.96	72	72			2163	2
38 OF 50	0.60	3589	1794	1794	0.44	251.20	92.13	72	72			1868	4
39 OF 50	0.59	3651	1825	1825	0.45	255.54	112.73	36	36	40	40	2313	4
40 OF 50	0.57	3232	1616	1616	0.40	226.24	63.98	36	36			1260	4
41 OF 50	2.22	11487	5744	5744	1.42	804.12	102.50	36	36	40	40	2153	2
42 OF 50	1.10	6053	3026	3026	0.75	423.71	102.59			80	80	2155	2
43 OF 50	0.65	3671	1835	1835	0.46	256.97	71.34	72	72	80	80	1419	4
44 OF 50	1.08	5967	2983	2983	0.74	417.66	103.66			40	40	2178	2
45 OF 50	0.80	4544	2272	2272	0.56	318.11	96.06	72	72			1953	4
46 OF 50	1.19	6486	3243	3243	0.80	453.99	103.47	36	36	40	40	2174	2
47 OF 50	0.87	4983	2491	2491	0.62	348.80	104.63	72	72	120	120	2199	2
48 OF 50	0.59	3270	1635	1635	0.41	228.92	60.46	108	108			1154	5
49 OF 50	2.80	14243	7122	7122	1.77	997.03	94.81	54	54			1957	3
50 OF 50	0.68	3804	1902	1902	0.47	266.27	70.97	18	18			1503	1
PROJECT TOTALS	24.96	136556	68276	68276	16.93	9558.81	2181.74	1242	1242	600	600	44994	70

* NON-PAY ITEM, FOR CONTRACTOR'S REFERENCE ONLY.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

CABLE BARRIER
SUMMARY SHEET

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		7

DATE: 5/26/2023 1:33:34 PM
FILE: c:\pwworking\ustx\dms17659\US380 AEC_SUM_CBL_002.dgn

LOCATION	100 6001	164 6021	164 6029	164 6031	166 6002	168 6001	432 6046	506 6041	506 6043	543 6002	543 6020
CSJ 0134-11-038	PREPARING ROW	CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	CELL FBR MLCH SEED(TEMP)(WARM)	CELL FBR MLCH SEED(TEMP)(COOL)	* FERTILIZER	VEGETATIVE WATERING	RIPRAP (MOW STRIP)(5 IN)	BIODEG EROSN CONT LOGS (INSTL)(12")	BIODEG EROSN CONT LOGS (REMOVE)	CABLE BARRIER SYSTEM (TL-4)	CABLE BARRIER TERMINAL SECTION (TL-4)
	AC	SY	SY	SY	TON	MG	CY	LF	LF	LF	EA
1 OF 50	0.45	2627	1313	1313	0.33	183.88	59.58	80	80	1195	3
PROJECT TOTALS	0.45	2627	1313	1313	0.33	183.88	59.58	80	80	1195	3

* NON-PAY ITEM, FOR CONTRACTOR'S REFERENCE ONLY.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

CABLE BARRIER SUMMARY SHEET

SHEET 3 OF 3

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		8

DATE: 5/26/2023 1:33:46 PM
FILE: c:\pw\working\ustx\dms17659\US380 AEC SUM CBL 003.dgn

SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 0: ADVANCED WARNING SIGNS

1. PLACE ADVANCED WARNING SIGNS, IN CONFORMANCE WITH BC STANDARDS.

PHASE 1: CABLE BARRIER INSTALLATION AND TEMPORARY SEEDING

LENGTH OF WORK SHALL NOT EXCEED 2-MILE SEGMENTS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. REPEAT STAGE 1 AND STAGE 2 FOR EACH LENGTH OF WORK.

STAGE 1:

1. FOLLOW STANDARD TCP (5-1a)-18 TO PLACE NECESSARY EROSION CONTROL DEVICES, AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STAGE 2:

1. FOLLOW STANDARD TCP (5-1b)-18 FOR BLADING OF EXISTING VEGETATION AND EXPOSED SOIL TO ESTABLISH WINDROW.

2. FOLLOW STANDARD TCP (6-1a)-12 FOR GRADING, CABLE BARRIER CONSTRUCTION, MOW STRIP, AND SEEDING OPERATIONS.

PHASE 2: PERMANENT SEEDING AND REMOVAL OF EROSION CONTROL DEVICES

LENGTH OF WORK SHALL NOT EXCEED 2-MILE SEGMENTS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

1. FOLLOW STANDARD TCP (6-1a)-12 FOR PERMANENT SEEDING OPERATIONS.

2. FOLLOW STANDARD TCP (5-1a)-18 TO REMOVE EROSION CONTROL DEVICES.

PHASE 3: PROJECT CLOSE-OUT

REMOVE ADVANCED WARNING SIGNS.

GENERAL NOTES

1. THE CONTRACTOR MAY PROPOSE/RECOMMEND MODIFICATIONS TO THE SEQUENCE OF WORK AND IF THIS PROPOSAL IS IMPLEMENTED, THE CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPING DETAILED PLAN SHEETS TO BE SEALED BY A LICENSED PROFESSIONAL ENGINEER WITH THE STATE OF TEXAS. THE CONTRACTOR CANNOT PROCEED WITH ANY CONSTRUCTION OPERATIONS BASED ON A REVISE PHASE/SEQUENCE UNTIL WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. IF AT ANY TIME DURING CONSTRUCTION THE CONTRACTOR'S PROPOSED PLAN OF OPERATION FOR HANDLING TRAFFIC DOES NOT PROVIDE FOR SAFE TRAFFIC MOVEMENT, THE CONTRACTOR WILL IMMEDIATELY CHANGE THEIR OPERATION TO CORRECT THE UNSATISFACTORY CONDITION.

2. DO NOT STORE ANY CONSTRUCTION MATERIAL OR EQUIPMENT AT ANY LOCATION THAT WILL CONSTITUTE A HAZARD AND WILL ENDANGER TRAFFIC. DO NOT STORE EQUIPMENT OUTSIDE DESIGNATED RIGHT OF WAY WITHOUT THE PERMISSION GRANTED FIRST BY THE PROPERTY OWNER.

3. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE AT ALL TIMES.

4. ACCESS TO ADJOINING PROPERTIES MUST BE MAINTAINED AT ALL TIMES.

5. THE CONTRACTOR SHALL PERFORM WORK DURING THE DAY AND MAINTAIN ROADWAY LANES OPEN TO TRAFFIC AT NIGHT.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/26/2023
Ernesto Salcido, P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

TCP NARRATIVE

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		9

DATE: 5/26/2023 1:31:01 PM
FILE: c:\pw\working\ustx\dms17659\US380 AEC_TC_NAR_001.dgn

DATE: 5/25/2023 10:35:19 AM
FILE: c:\pwworking\ustx\dms17749\BC-(1)-21.dgn

BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

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

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

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

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

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

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

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

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

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

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

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

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

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

WORKER SAFETY NOTES:

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

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

COMPLIANT WORKZONE TRAFFIC CONTROL DEVICES

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

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

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

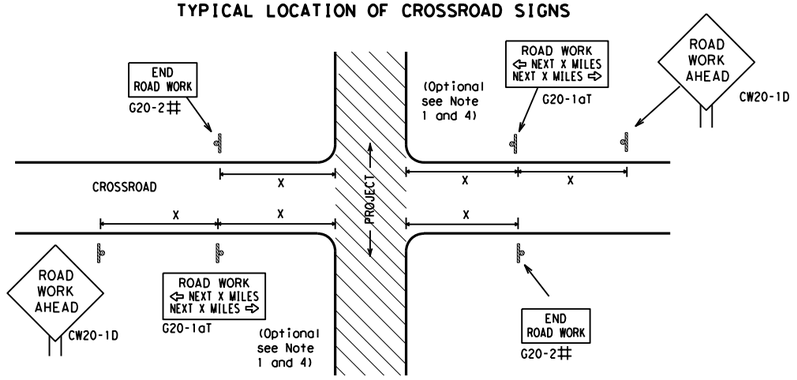
Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-03 7-13 9-07 8-14 5-10 5-21	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		10

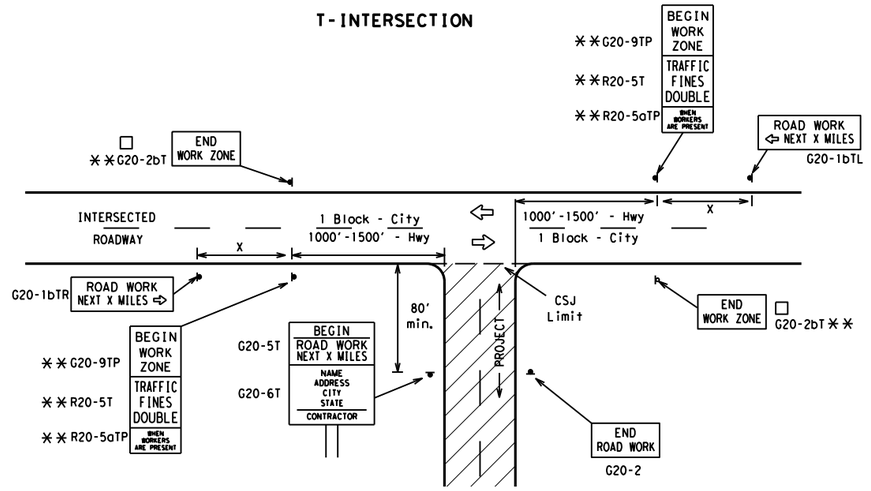
TYPICAL LOCATION OF CROSSROAD SIGNS



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]

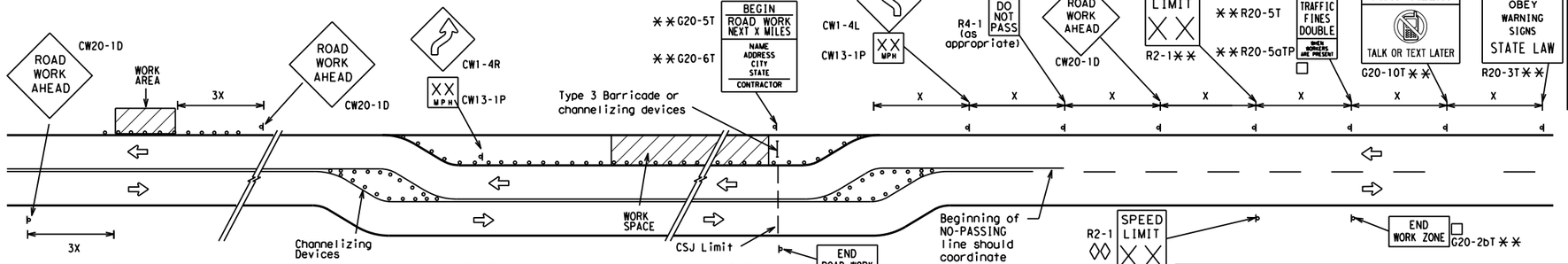
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ 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.

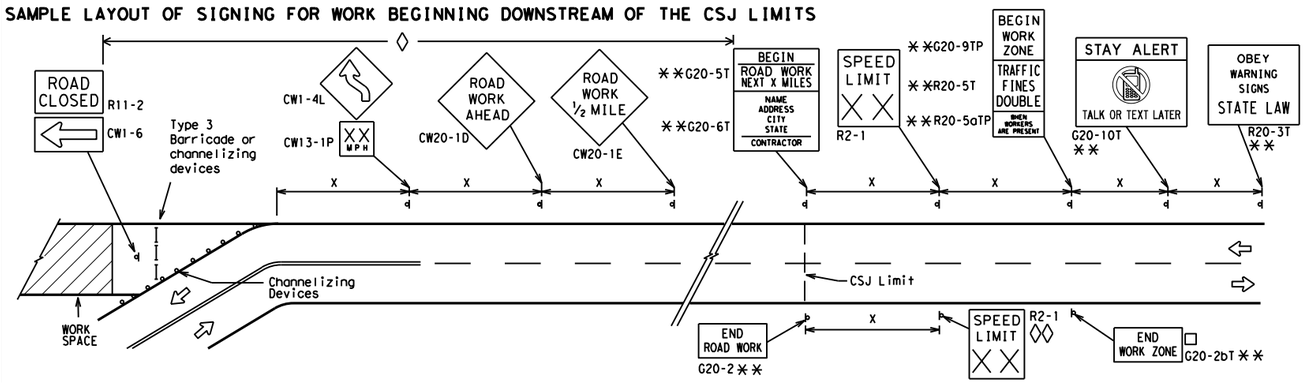
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



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.

SHEET 2 OF 12

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	0134	07	075, ETC	US 380
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	FTW	WISE		11

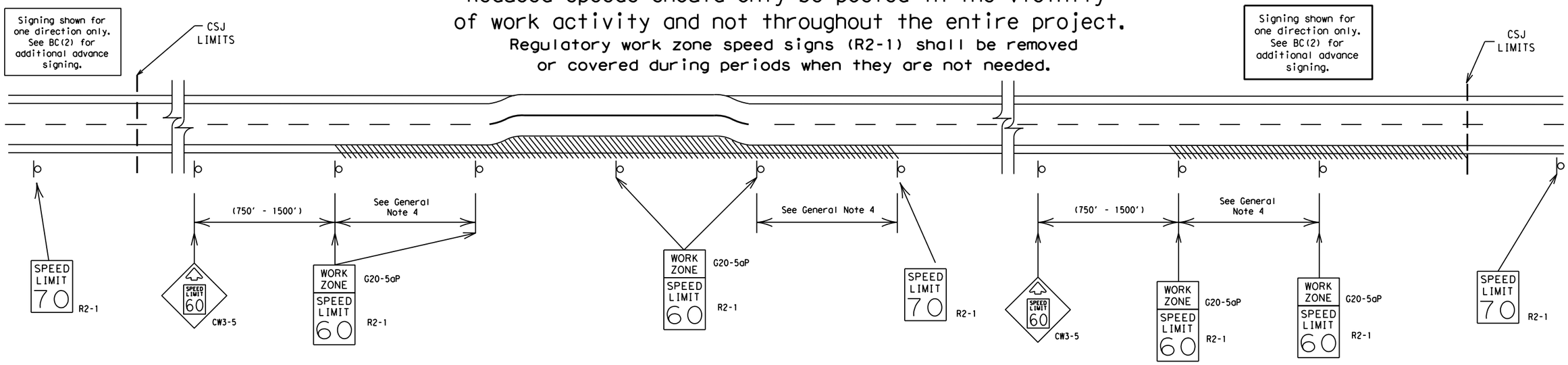
DATE: 5/25/2023 10:35:36 AM
FILE: c:\pwworking\ustx\dms17749\BC-(2)-21.dgn

TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

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

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

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



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

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

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

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

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

SHORT TERM WORK ZONE SPEED LIMITS

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

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

GENERAL NOTES

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

Texas Department of Transportation | Traffic Safety Division Standard

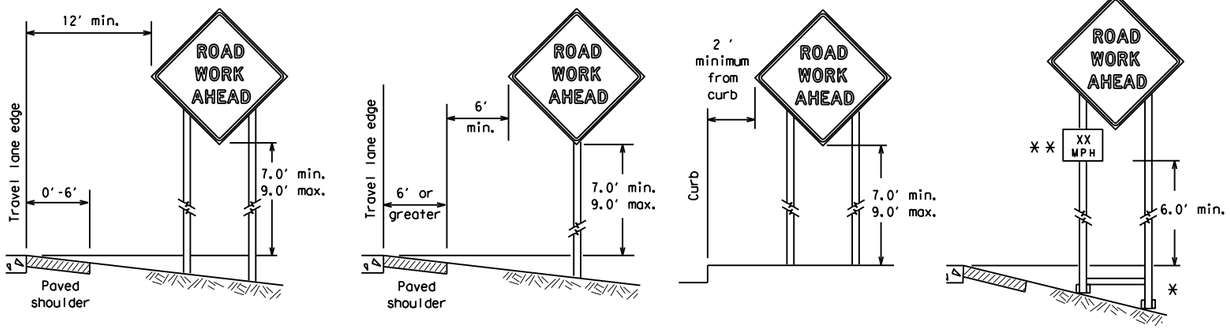
BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC(3)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 9-07 8-14 7-13 5-21	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		12

DATE: 5/25/2023 10:35:53 AM
FILE: c:\pwworking\ustx\dms17749\BC-(3)-21.dgn

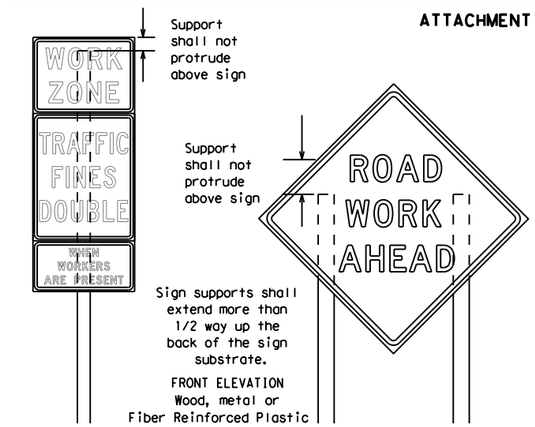
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS

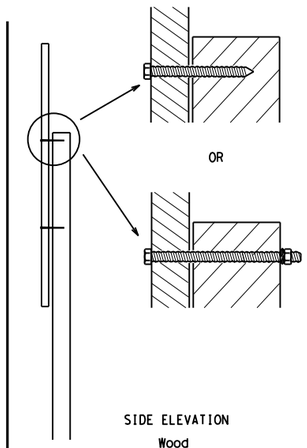


* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

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

ATTACHMENT FOR SIGN SUPPORTS





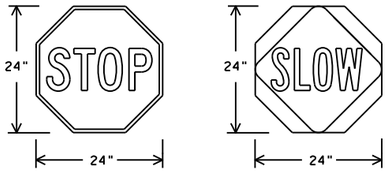
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

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

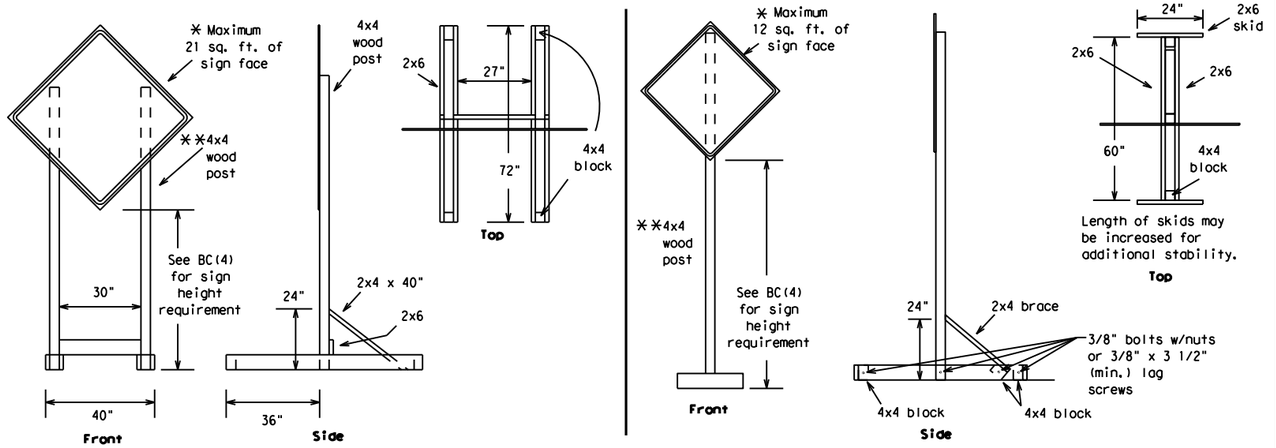
Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-21

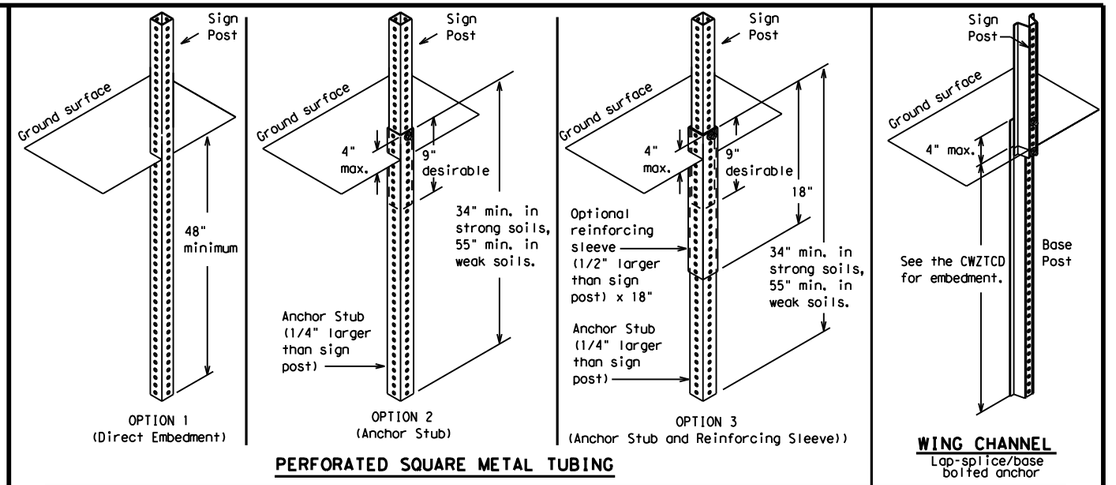
FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	FTW	WISE		13

DATE: 5/25/2023 10:36:11 AM
FILE: c:\pwworking\ustx\dms17749\BC-(4)-21.dgn



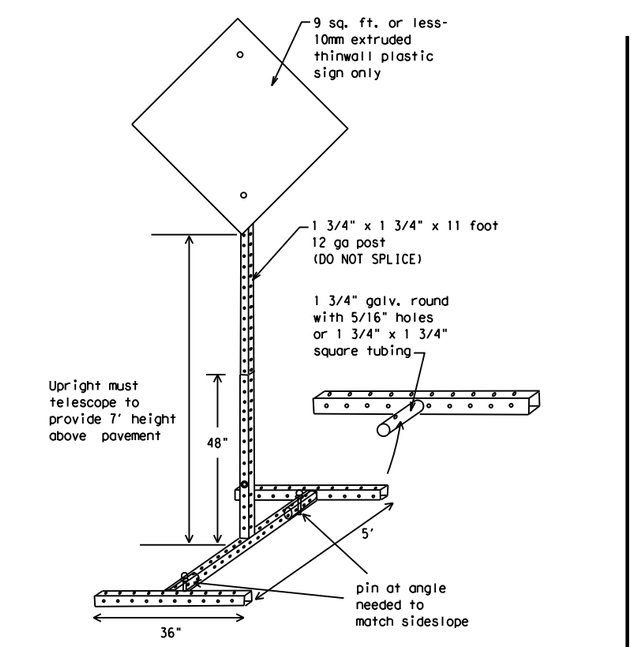
SKID MOUNTED WOOD SIGN SUPPORTS

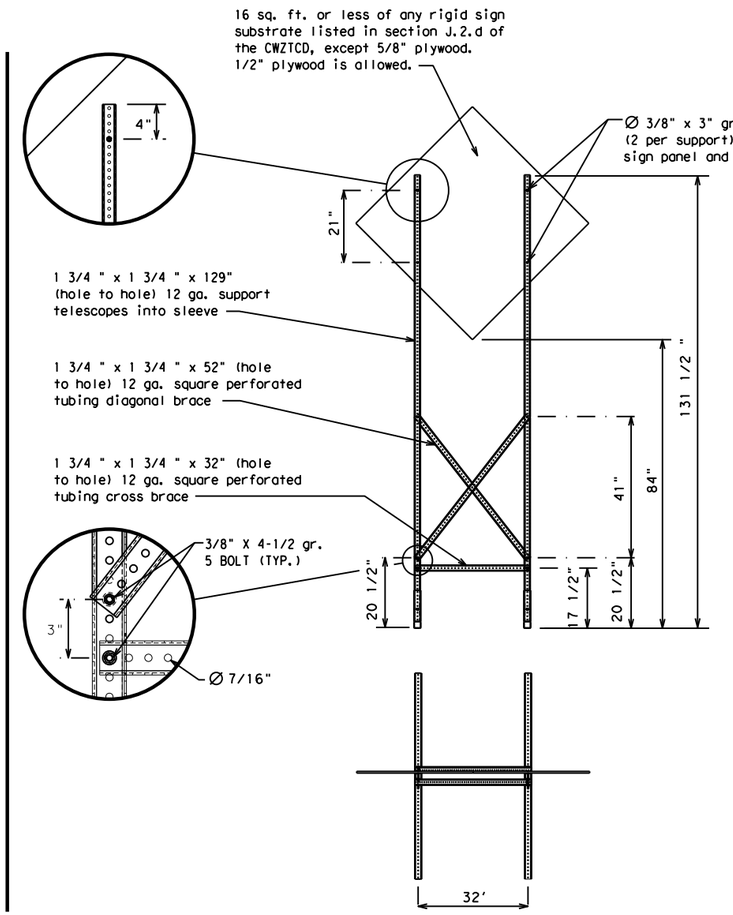
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

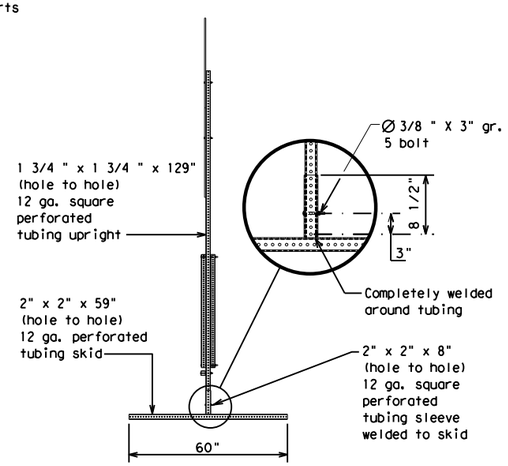


GROUND MOUNTED SIGN SUPPORTS

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







SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

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

WEDGE ANCHORS

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

OTHER DESIGNS

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

GENERAL NOTES

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

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

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

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

SHEET 5 OF 12

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	0134	07	075, ETC	US 380
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	FTW	WISE		14

DATE: 5/25/2023 10:36:31 AM
FILE: c:\pwworking\usftx\dms17749\BC-(5)-21.dgn

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

PORTABLE CHANGEABLE MESSAGE SIGNS

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

WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD
Alternate	ALT
Avenue	AVE
Best Route	BEST RTE
Boulevard	BLVD
Bridge	BRDG
Cannot	CANT
Center	CTR
Construction Ahead	CONST AHD
CROSSING	XING
Detour Route	DETOUR RTE
Do Not	DONT
East	E
Eastbound	(route) E
Emergency	EMER
Emergency Vehicle	EMER VEH
Entrance, Enter	ENT
Express Lane	EXP LN
Expressway	EXPWY
XXXX Feet	XXXX FT
Fog Ahead	FOG AHD
Freeway	FRWY, FWY
Freeway Blocked	FWY BLKD
Friday	FRI
Hazardous Driving	HAZ DRIVING
Hazardous Material	HAZMAT
High-Occupancy	HOV
Vehicle Highway	HWY
Hour(s)	HR, HRS
Information	INFO
It Is	ITS
Junction	JCT
Left	LFT
Left Lane	LFT LN
Lane Closed	LN CLOSED
Lower Level	LWR LEVEL
Maintenance	MAINT
Major	MAJ
Miles	MI
Miles Per Hour	MPH
Minor	MNR
Monday	MON
Normal	NORM
North	N
Northbound	(route) N
Parking	PKING
Road	RD
Right Lane	RT LN
Saturday	SAT
Service Road	SERV RD
Shoulder	SHLDR
Slippery	SLIP
South	S
Southbound	(route) S
Speed	SPD
Street	ST
Sunday	SUN
Telephone	PHONE
Temporary	TEMP
Thursday	THURS
To Downtown	TO DWNTN
Traffic	TRAF
Travelers	TRVLRS
Tuesday	TUES
Time Minutes	TIME MIN
Upper Level	UPR LEVEL
Vehicles (s)	VEH, VEHS
Warning	WARN
Wednesday	WED
Weight Limit	WT LIMIT
West	W
Westbound	(route) W
Wet Pavement	WET PVMT
Will Not	WONT

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

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

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

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

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

Other Condition List

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

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

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

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

Location List

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

Warning List

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

** Advance Notice List

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

** See Application Guidelines Note 6.

APPLICATION GUIDELINES

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

WORDING ALTERNATIVES

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

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

FULL MATRIX PCMS SIGNS

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

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

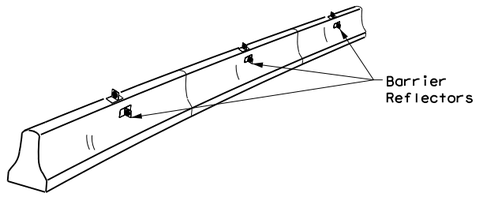
BC(6)-21

FILE:	bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT	November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS		0134	07	075, ETC	US 380
9-07 8-14		DIST	COUNTY		SHEET NO.
7-13 5-21		FTW	WISE		15

100

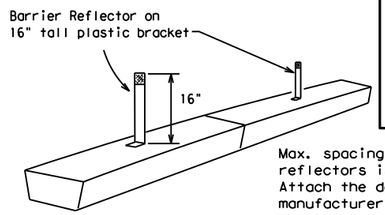
DATE: 5/25/2023 10:36:52 AM
FILE: c:\pwworking\ustx\dms17749\BC-(6)-21.dgn

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



CONCRETE TRAFFIC BARRIER (CTB)

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

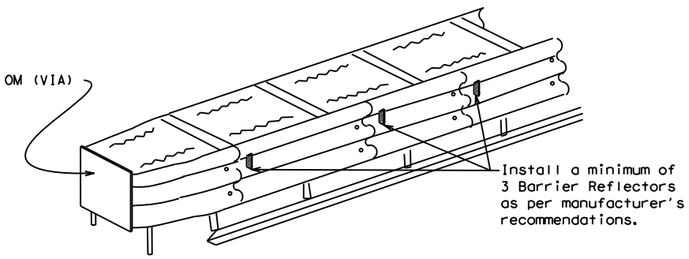


Max. spacing of barrier reflectors is 20 feet. Attach the delineators as per manufacturer's recommendations.

LOW PROFILE CONCRETE BARRIER (LPCB) 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)

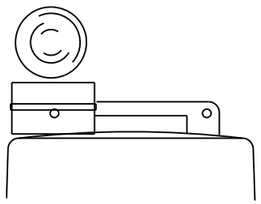


DELINEATION OF END TREATMENTS

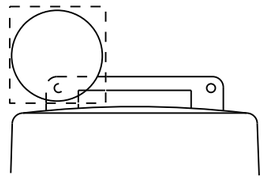
END TREATMENTS FOR CTB'S USED IN WORK ZONES

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

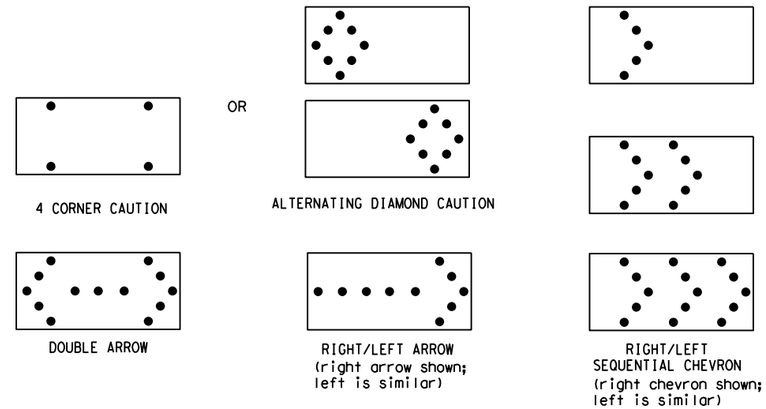
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing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

SHEET 7 OF 12

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	0134	07	075, ETC	US 380
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	FTW	WISE		16

101

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:

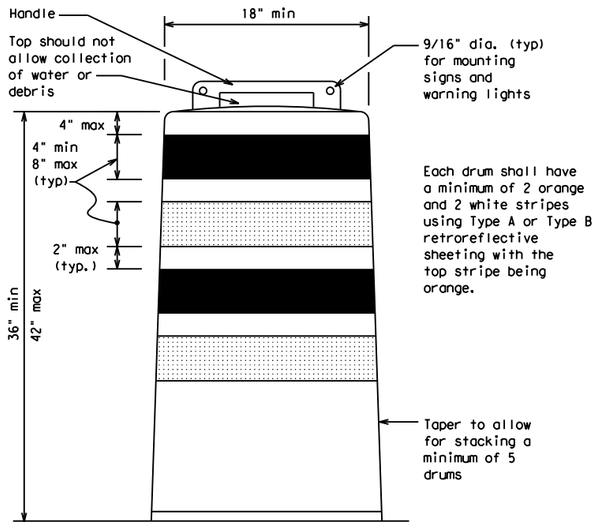
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents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

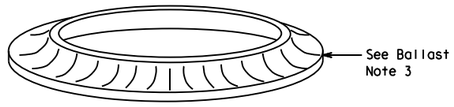
RETROREFLECTIVE SHEETING

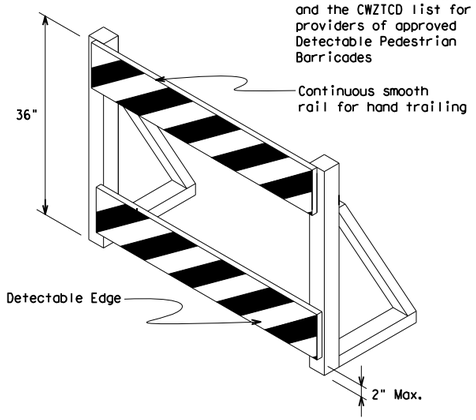
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials," Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall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

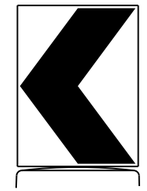




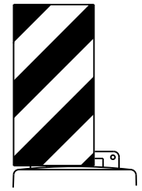


DETECTABLE PEDESTRIAN BARRICADES

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

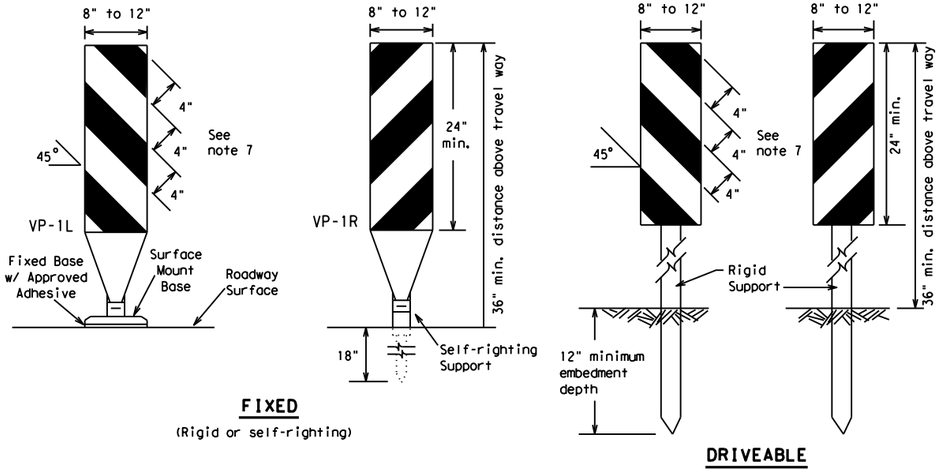
BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21	FTW	WISE		17
7-13				

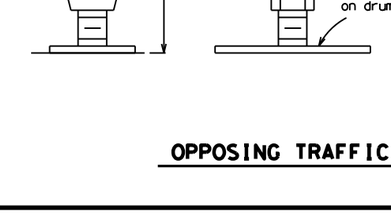
102

DATE: 5/25/2023 10:37:30 AM
FILE: c:\pwworking\ustx\cms17749\BC-(8)-21.dgn



FIXED
(Rigid or self-righting)

DRIVEABLE

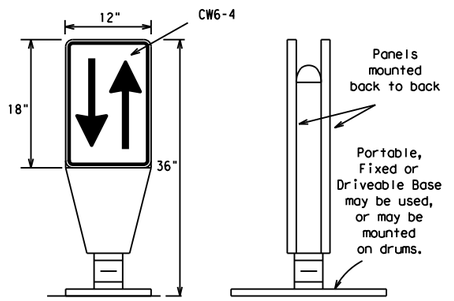


(Rigid or self-righting)

PORTABLE

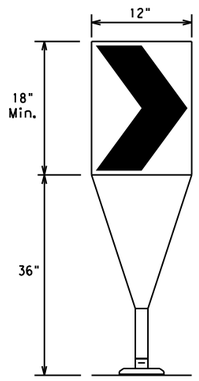
VERTICAL PANELS (VPs)

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



OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

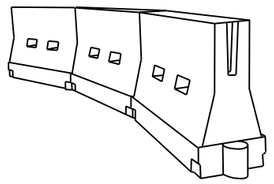
1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The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



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

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

CHEVRONS



LONGITUDINAL CHANNELIZING DEVICES (LCD)

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

WATER BALLASTED SYSTEMS USED AS BARRIERS

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

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

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

GENERAL NOTES

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

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

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

SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS

SHEET 9 OF 12

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-21

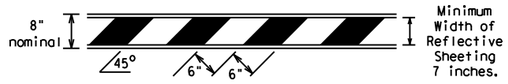
FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	FTW	WISE		18

DATE: 5/25/2023 10:37:48 AM
FILE: c:\pwworking\ustx\dms17749\BC-(9)-21.dgn

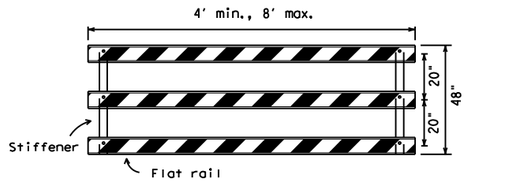
TYPE 3 BARRICADES

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

Barricades shall NOT be used as a sign support.



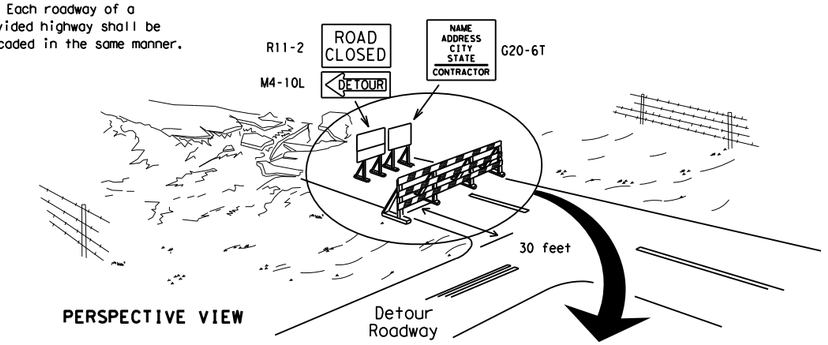
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



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

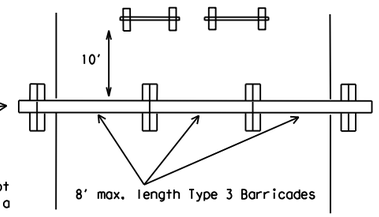
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

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



PERSPECTIVE VIEW

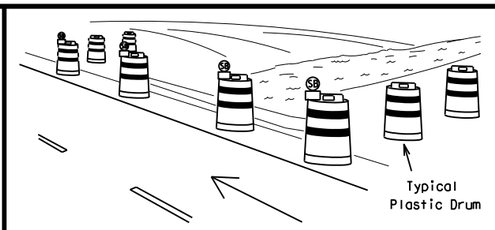
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

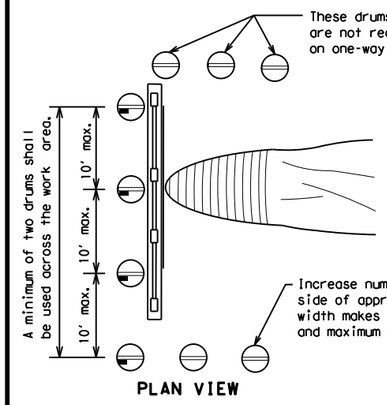
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

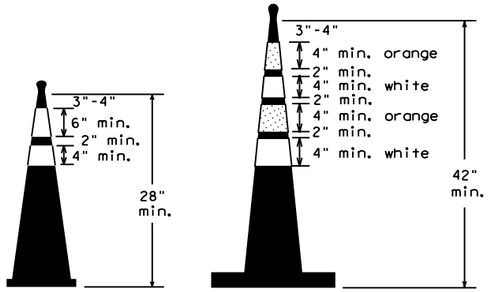
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder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



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

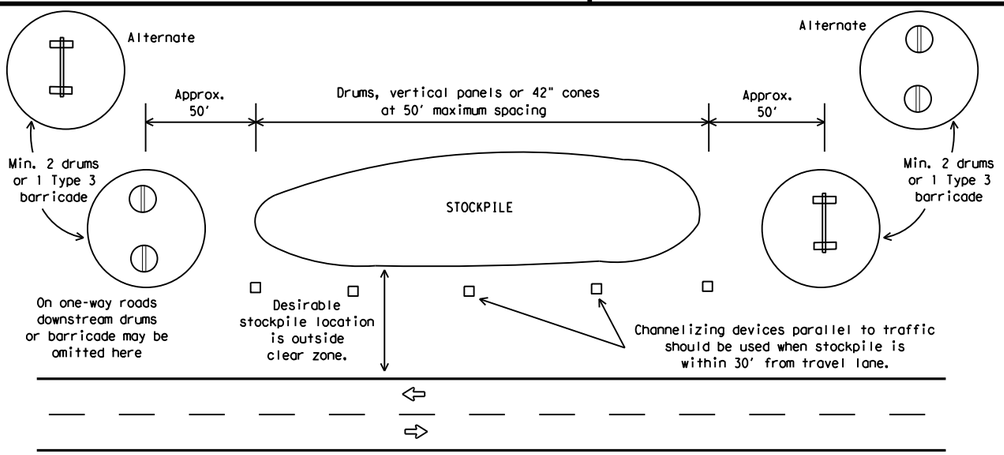
PLAN VIEW

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

DATE: 5/25/2023 10:38:06 AM
FILE: c:\pwworking\ustx\dms17749\BC-(10)-21.dgn

Texas Department of Transportation — Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 9-07 8-14 7-13 5-21	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		19

104

WORK ZONE PAVEMENT MARKINGS

GENERAL

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

RAISED PAVEMENT MARKERS

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

PREFABRICATED PAVEMENT MARKINGS

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

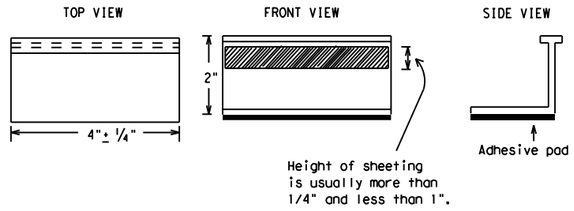
MAINTAINING WORK ZONE PAVEMENT MARKINGS

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

REMOVAL OF PAVEMENT MARKINGS

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

Temporary Flexible-Reflective Roadway Marker Tabs



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

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

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

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

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

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

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

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

BC(11)-21

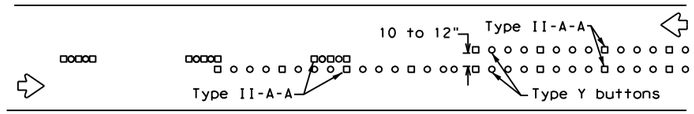
FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
2-98 9-07 5-21	DIST	COUNTY		SHEET NO.
1-02 7-13	FTW	WISE		20
11-02 8-14				

105

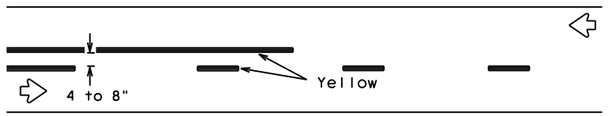
DATE: 5/25/2023 10:38:26 AM
FILE: c:\pwworking\ustx\dms17749\BC-(11)-21.dgn

PAVEMENT MARKING PATTERNS

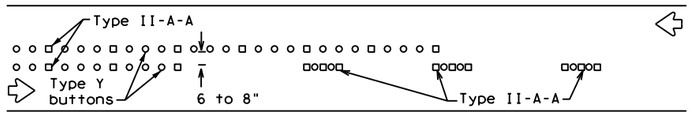
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



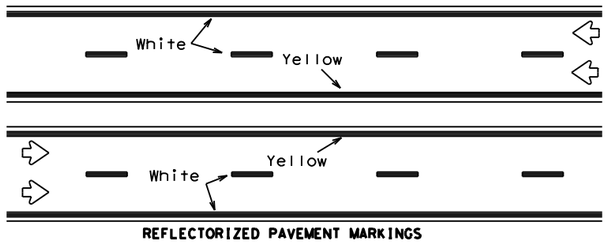
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



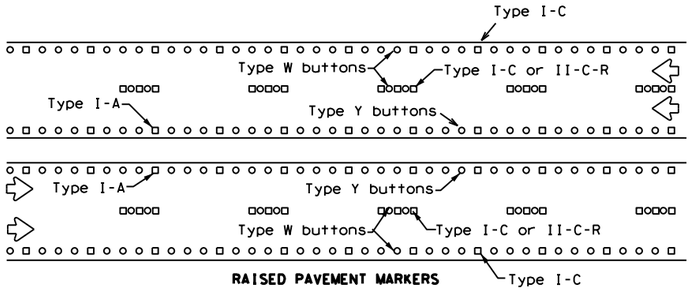
RAISED PAVEMENT MARKERS - PATTERN B

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

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



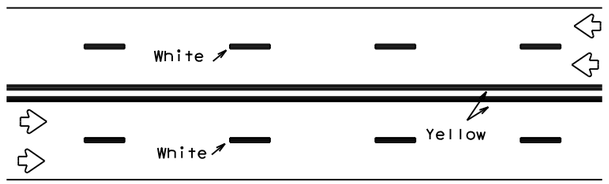
REFLECTORIZED PAVEMENT MARKINGS



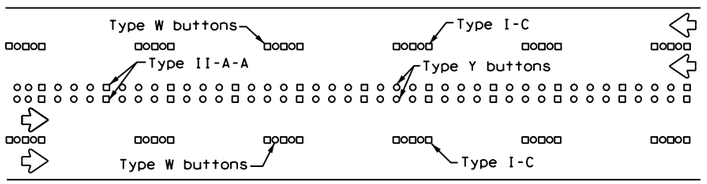
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



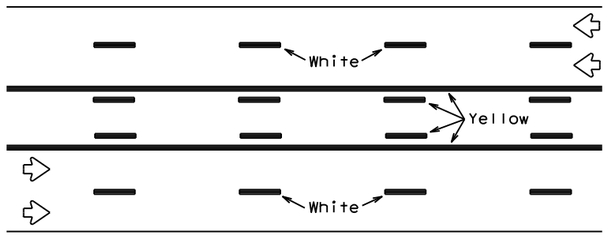
REFLECTORIZED PAVEMENT MARKINGS



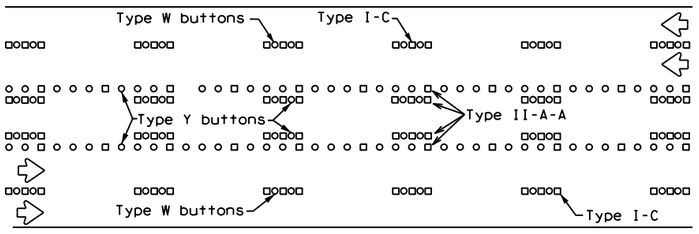
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

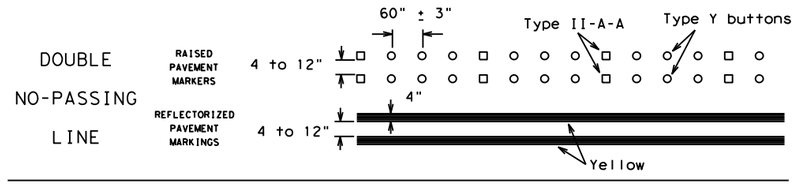
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

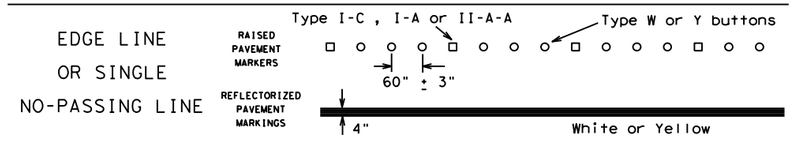
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

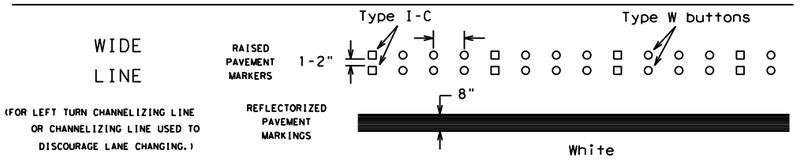


EDGE LINE OR SINGLE NO-PASSING LINE



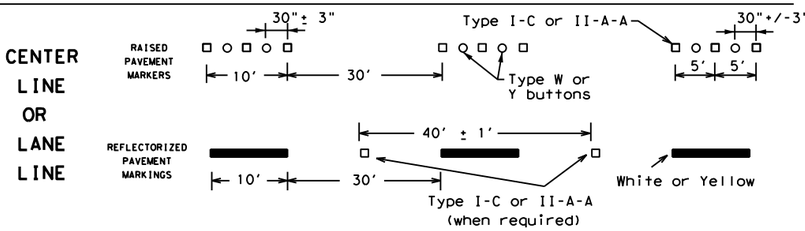
WIDE LINE

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

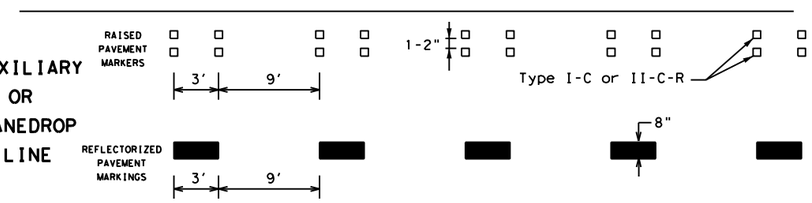


BROKEN LINES

CENTER LINE OR LANE LINE

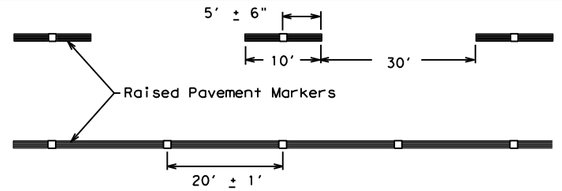


AUXILIARY OR LANEDROP LINE



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."

Texas Department of Transportation

Traffic Safety Division Standard

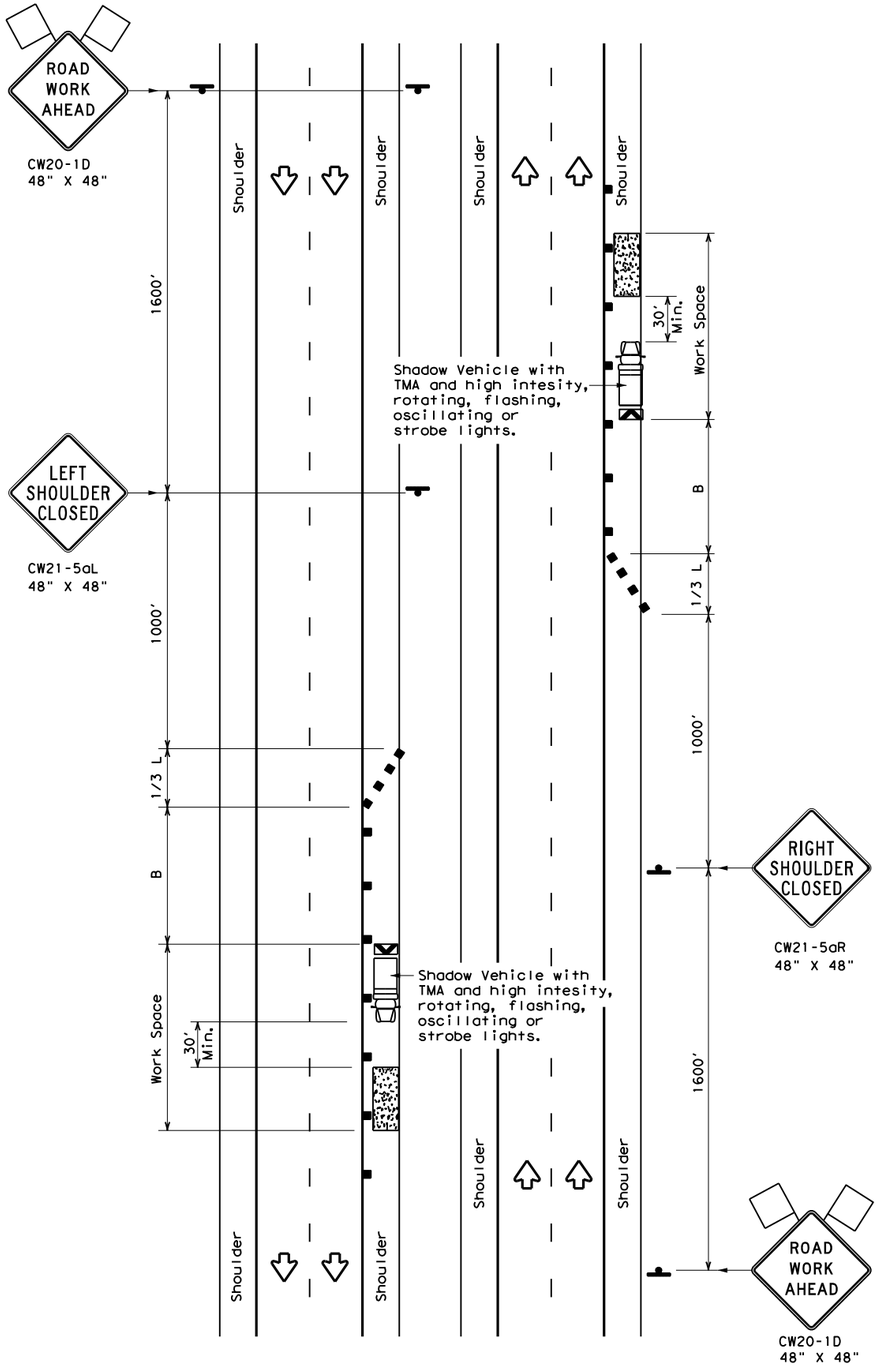
BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS 1-97 9-07 5-21 2-98 7-13 11-02 8-14	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		21

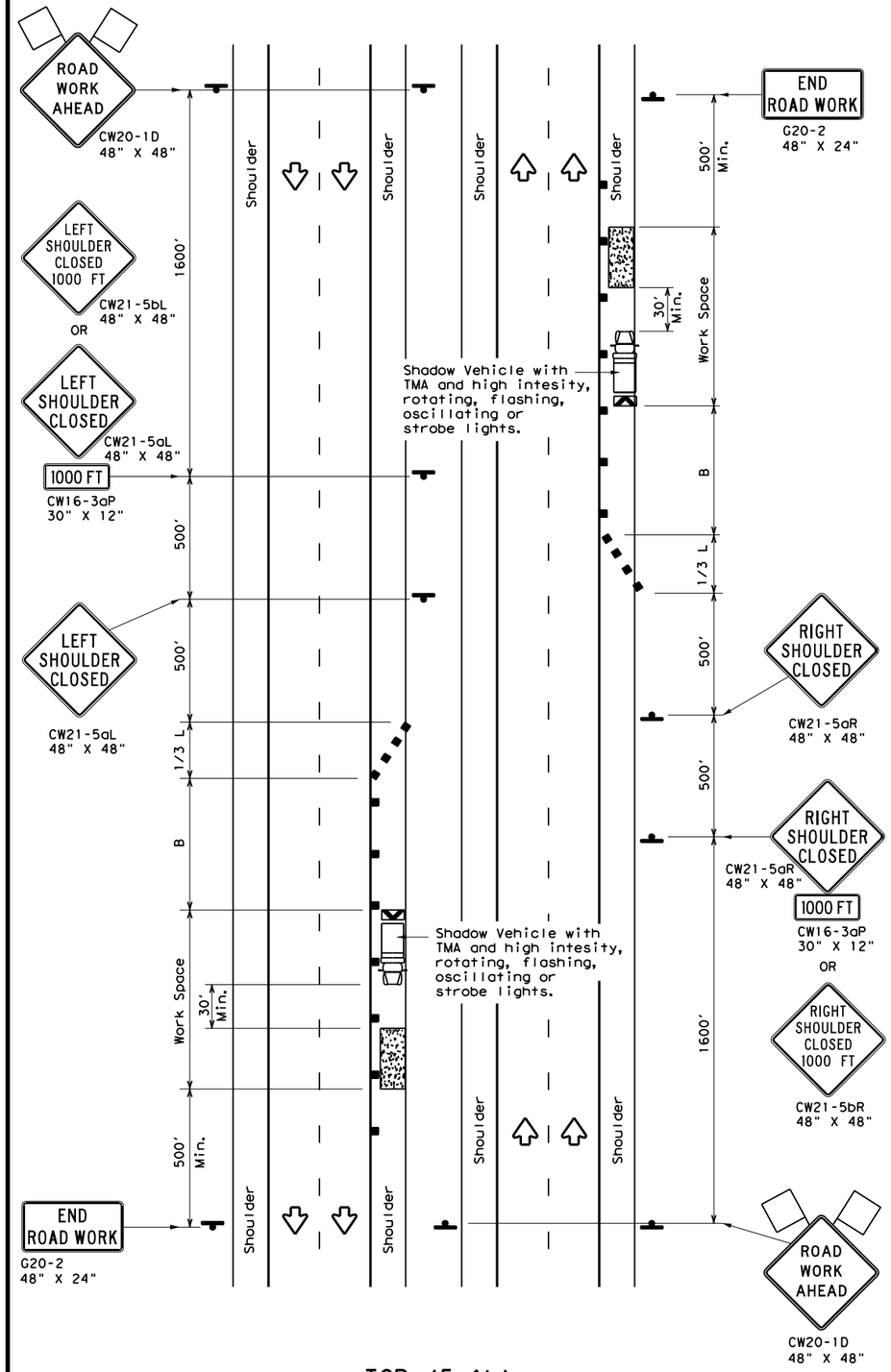
DATE: 5/25/2023 10:38:46 AM
FILE: c:\pwworking\ustx\dms11749\BC-(12)-21.dgn

DATE: 5/25/2023 10:39:06 AM
FILE: c:\pwworking\ustrx\cms17749\TCP(5-1)-18.dgn



TCP (5-1a)

WORK AREA ON SHOULDER



TCP (5-1b)

WORK AREA ON SHOULDER

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	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	90'
35		205'	225'	245'	35'	70'	120'
40		265'	295'	320'	40'	80'	155'
45	L=WS	450'	495'	540'	45'	90'	195'
50		500'	550'	600'	50'	100'	240'
55		550'	605'	660'	55'	110'	295'
60		600'	660'	720'	60'	120'	350'
65		650'	715'	780'	65'	130'	410'
70		700'	770'	840'	70'	140'	475'
75		750'	825'	900'	75'	150'	540'
80		800'	880'	960'	80'	160'	615'

* 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
	TCP(5-1a)	TCP(5-1b)	TCP(5-1b)	

GENERAL NOTES

1. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30' to 100' in advance of the area of crew exposure without adversely effecting the performance or quality of the work. Type 3 barricades or drums may be substituted when workers on foot are no longer present when approved by the Engineer.
2. 28" tall or taller one-piece cones will be allowed only for Short Duration or Short Term stationary operations when workers are present to maintain the devices upright and in proper location. Intermediate Term stationary work areas should use Drums, Vertical Panels or 42" tall two-piece cones.

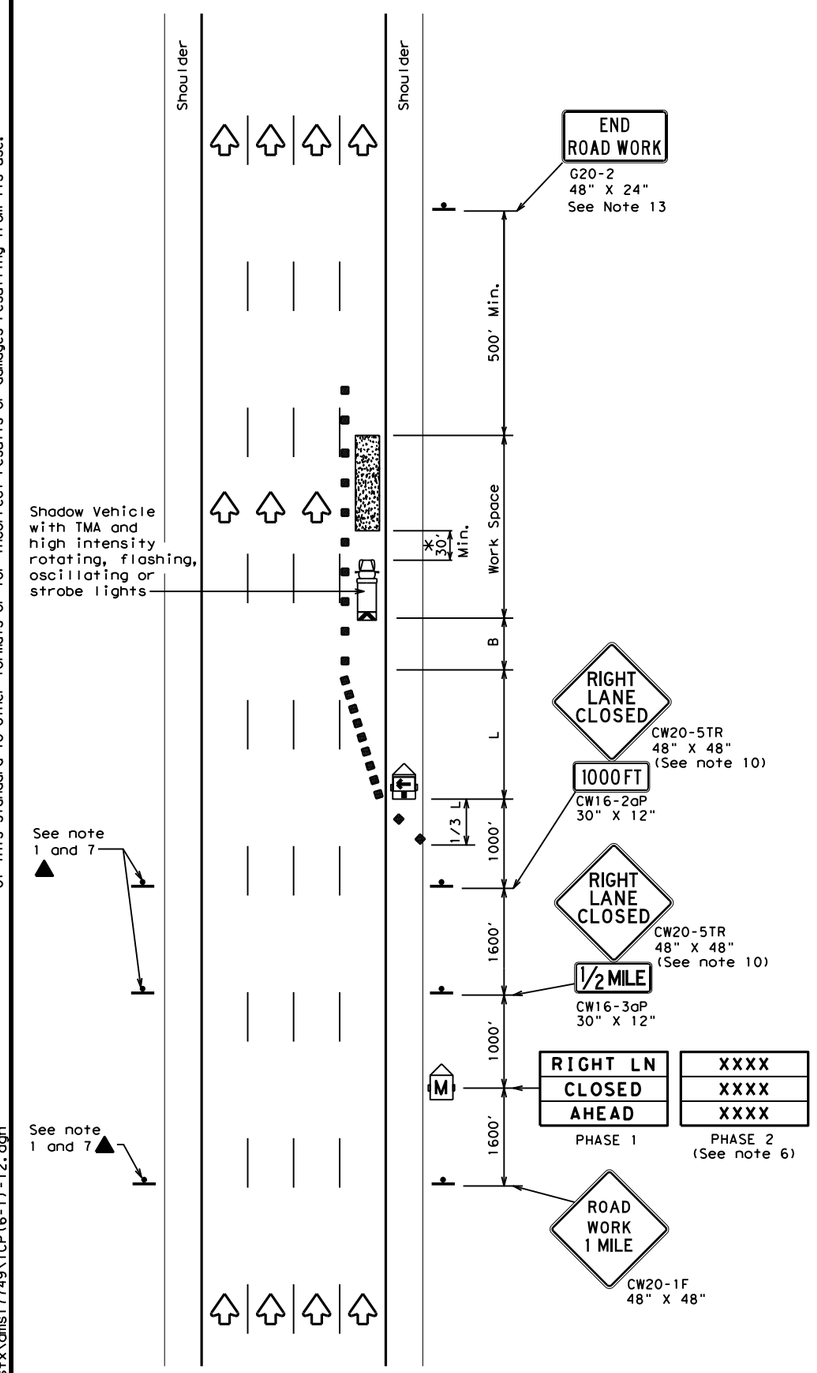
Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN SHOULDER WORK FOR FREEWAYS / EXPRESSWAYS

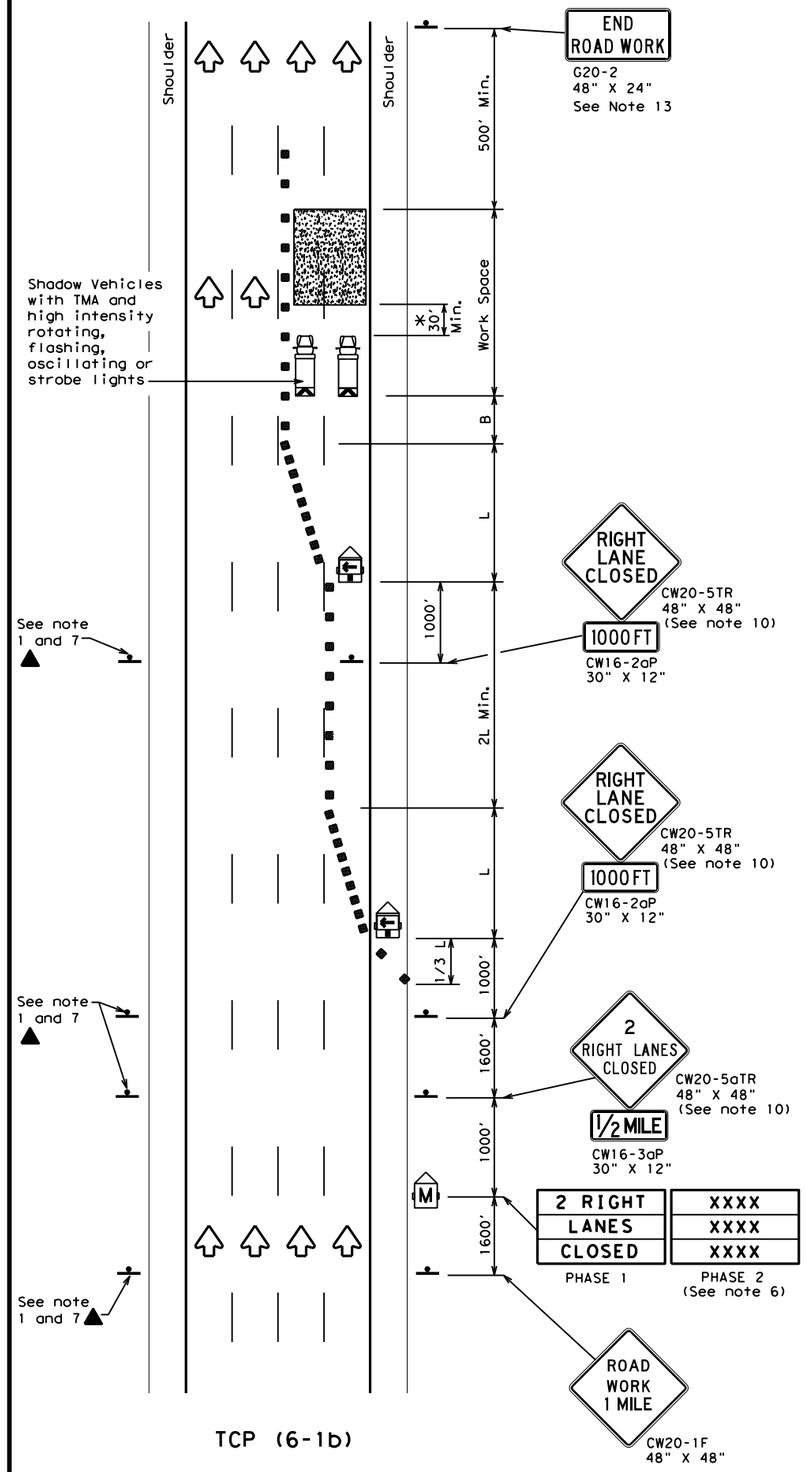
TCP(5-1)-18

FILE: tcp5-1-18.dgn	DN:	CK:	DW:	CK:
©TxDOT February 2012	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-18	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		22



TCP (6-1a)

TYPICAL FREEWAY ONE LANE CLOSURE



TCP (6-1b)

TYPICAL FREEWAY TWO LANE CLOSURE

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 "L" ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Suggested Longitudinal Buffer Space "B"
45	L=WS	450'	495'	540'	45'	90'	195'
50		500'	550'	600'	50'	100'	240'
55		550'	605'	660'	55'	110'	295'
60		600'	660'	720'	60'	120'	350'
65		650'	715'	780'	65'	130'	410'
70		700'	770'	840'	70'	140'	475'
75		750'	825'	900'	75'	150'	540'
80		800'	880'	960'	80'	160'	615'

** 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. All traffic control devices illustrated are REQUIRED. Devices denoted with the triangle symbol may be omitted when stated elsewhere in the plans.
2. Drums or 42"cones are the typical channelizing devices. For Intermediate Term Stationary work, drums shall be used on tapers with drums or 42" cones used on tangent sections. Other channelizing devices may be used as directed by the Engineer.
3. All construction signs and barricades placed during any phase of work shall remain in place until removal is approved by the Engineer.
4. The Engineer may direct the Contractor to furnish additional signs and barricades as required to maintain traffic flow, detours and motorist safety during construction.
5. Static message boards or changeable message signs stating the date and duration of ramp or freeway lane closures shall be placed a minimum of seven (7) calendar days in advance of the actual closure.
6. Phase 2 of the PCMS message should include appropriate information formatted as shown on BC(6), such as "MERGE LEFT," recommended advisory speed, delay information, or other specific warnings.
7. Duplicate construction warning signs should be erected on the medians side of freeways where median width will permit and traffic volume justifies the signing.
8. The number of closed lanes may be increased provided the spacing of traffic control devices, taper lengths and tangent lengths meet the requirements of the TMUTCD.
9. Warning signs for intermediate term stationary work should be mounted at 7' to the bottom of the sign.
10. Warning signs shown shall be appropriately altered for left lane closures. When signs are mounted at 1' height for short term stationary or short duration work, sign versions shown in the SHSD for Texas with distances on the sign face rather than mounted on a plaque below the sign may be used.
11. When possible, PCMS units should be located in advance of the last available exit ramp prior to the lane closure to allow motorists an alternate route. They may also be relocated to improve advance warning in case of unanticipated queuing or congestion.
12. For Intermediate Term Stationary work at night, floodlights should be used to illuminate the work area and equipment crossings. Floodlights shall not produce a disabling glare condition for road users or workers.
13. The END ROAD WORK (G20-2) sign may be omitted when it conflicts with G20-2 signs already in place on the project.

* A shadow vehicle equipped with a Truck Mounted Attenuator is typically required. A shadow vehicle equipped with a TMA shall be used if it can be positioned 30' to 100' in advance of the area of crew exposure without adversely affecting the work performance.

Texas Department of Transportation
Traffic Operations Division Standard

TRAFFIC CONTROL PLAN FREEWAY LANE CLOSURES

TCP(6-1)-12

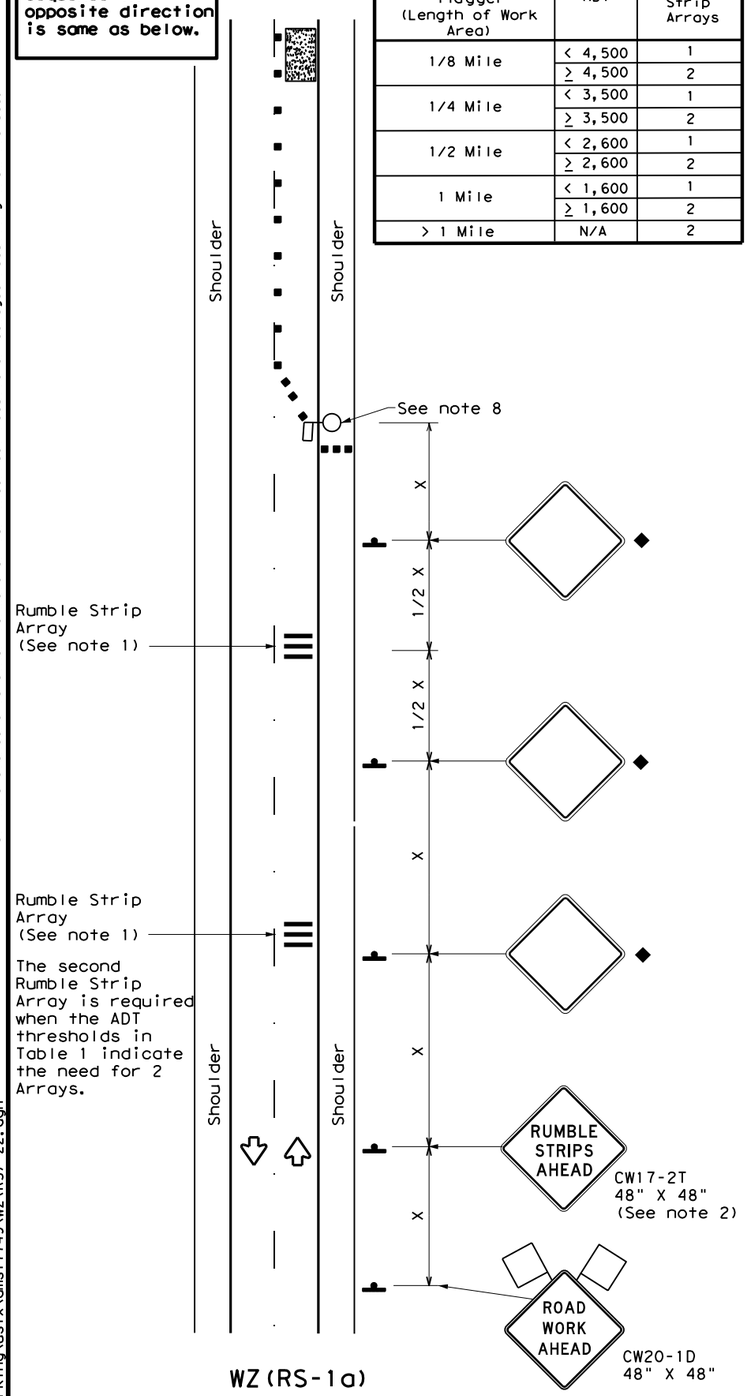
FILE: tcp6-1.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
8-12	DIST	COUNTY		SHEET NO.
	FTW	WISE		23

201

DATE: 5/25/2023 10:39:27 AM
FILE: c:\pwworking\ustx\dms17749\TCP(6-1)-12.dgn

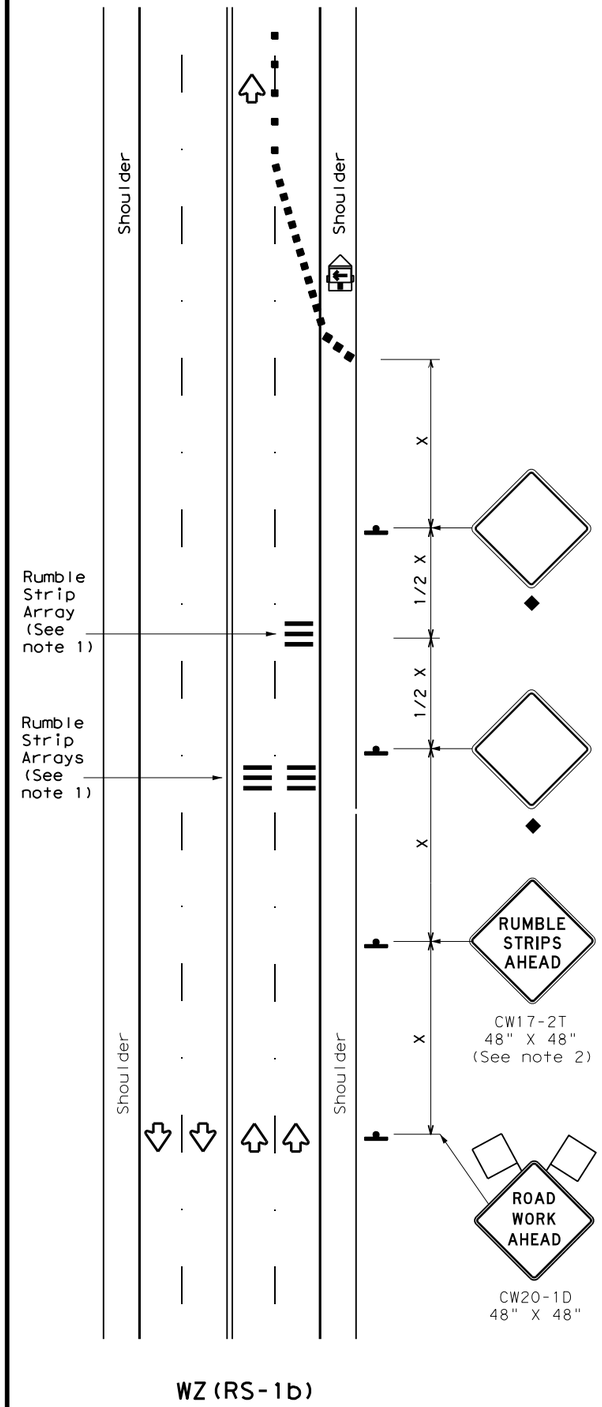
Warning sign and rumble strip sequence in opposite direction is same as below.

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	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
	✓	✓		

◆ 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	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		24

117

DATE: 5/25/2023 10:39:46 AM
FILE: c:\pwworking\ustx\dms17749\WZ(RS)-22.dgn

HORIZONTAL ALIGNMENT REPORT

Alignment Name: CL US380

	STATION	X	Y
POT	1000.000	7127288.675	2188229.114
PC	2396.340	7128228.389	2189261.927
Tangential Direction:	N47.702°E		
Tangential Length:	1396.340		
PC	2396.340	7128228.389	2189261.927
PI	3606.942	7129043.105	2190157.358
CC		7123990.463	2193117.841
PCC	4782.450	7129425.965	2191305.824
Radius:	5729.580		
Delta:	23.861° Right		
Degree of Curvature (Arc):	1.000°		
Length:	2386.110		
Tangent:	1210.602		
Chord:	2368.904		
Middle Ordinate:	123.765		
External:	126.498		
Back Tangent Direction:	N47.702°E		
Back Radial Direction:	S42.298°E		
Chord Direction:	N59.633°E		
Ahead Radial Direction:	S18.437°E		
Ahead Tangent Direction:	N71.563°E		
PCC	4782.450	7129425.965	2191305.824
PI	4829.299	7129440.782	2191350.269
CC		7128623.856	2191573.221
PT	4876.052	7129450.597	2191396.078
Radius:	845.506		
Delta:	6.343° Right		
Degree of Curvature (Arc):	6.777°		
Length:	93.602		
Tangent:	46.849		
Chord:	93.555		
Middle Ordinate:	1.295		
External:	1.297		
Back Tangent Direction:	N71.563°E		
Back Radial Direction:	S18.437°E		
Chord Direction:	N74.735°E		
Ahead Radial Direction:	S12.094°E		
Ahead Tangent Direction:	N77.906°E		
PT	4876.052	7129450.597	2191396.078
PC	5390.177	7129558.312	2191898.792
Tangential Direction:	N77.906°E		
Tangential Length:	514.125		
PC	5390.177	7129558.312	2191898.792
PI	6121.089	7129711.446	2192613.483
CC		7123887.036	2193113.957
PT	6844.335	7129682.479	2193343.820
Radius:	5800.000		
Delta:	14.365° Right		
Degree of Curvature (Arc):	0.988°		
Length:	1454.159		
Tangent:	730.912		
Chord:	1450.353		
Middle Ordinate:	45.513		
External:	45.873		
Back Tangent Direction:	N77.906°E		
Back Radial Direction:	S12.094°E		
Chord Direction:	N85.089°E		
Ahead Radial Direction:	S2.271°W		
Ahead Tangent Direction:	S87.729°E		
PT	6844.335	7129682.479	2193343.820
PC	12288.162	7129466.731	2198783.370
Tangential Direction:	S87.729°E		
Tangential Length:	5443.827		

HORIZONTAL ALIGNMENT REPORT (CONTINUED)

Alignment Name: CL US380

	STATION	X	Y
PC	12288.162	7129466.731	2198783.370
PI	12457.528	7129460.019	2198952.603
CC		7121972.623	2198486.133
PT	12626.836	7129445.674	2199121.360
Radius:	7500.000		
Delta:	2.587° Right		
Degree of Curvature (Arc):	0.764°		
Length:	338.674		
Tangent:	169.366		
Chord:	338.646		
Middle Ordinate:	1.912		
External:	1.912		
Back Tangent Direction:	S87.729°E		
Back Radial Direction:	S2.271°W		
Chord Direction:	S86.435°E		
Ahead Radial Direction:	S4.859°W		
Ahead Tangent Direction:	S85.141°E		
PT	12626.836	7129445.674	2199121.360
PC	13116.694	7129404.184	2199609.458
Tangential Direction:	S85.141°E		
Tangential Length:	489.857		
PC	13116.694	7129404.184	2199609.458
PI	13345.009	7129384.847	2199836.953
CC		7137375.438	2200287.034
PT	13573.201	7129378.515	2200065.180
Radius:	8000.000		
Delta:	3.269° Left		
Degree of Curvature (Arc):	0.716°		
Length:	456.507		
Tangent:	228.316		
Chord:	456.445		
Middle Ordinate:	3.256		
External:	3.257		
Back Tangent Direction:	S85.141°E		
Back Radial Direction:	S4.859°W		
Chord Direction:	S86.776°E		
Ahead Radial Direction:	S1.589°W		
Ahead Tangent Direction:	S88.411°E		
Element: Linear			
PT	13573.201	7129378.515	2200065.180
PC	16433.503	7129299.194	2202924.383
Tangential Direction:	S88.411°E		
Tangential Length:	2860.302		
PC	16433.503	7129299.194	2202924.383
PI	17107.822	7129280.494	2203598.442
CC		7132298.040	2203007.578
PT	17760.094	7129552.041	2204215.669
Radius:	3000.000		
Delta:	25.336° Left		
Degree of Curvature (Arc):	1.910°		
Length:	1326.591		
Tangent:	674.319		
Chord:	1315.809		
Middle Ordinate:	73.029		
External:	74.851		
Back Tangent Direction:	S88.411°E		
Back Radial Direction:	S1.589°W		
Chord Direction:	N78.921°E		
Ahead Radial Direction:	S23.747°E		
Ahead Tangent Direction:	N66.253°E		
PT	17760.094	7129552.041	2204215.669
PC	23669.085	7131931.575	2209624.365
Tangential Direction:	N66.253°E		
Tangential Length:	5908.991		

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/26/2023

Salcido Jarvis, P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

HORIZONTAL ALIGNMENT DATA

SHEET 1 OF 5

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		25

DATE: 5/26/2023 3:00:59 PM
FILE: c:\pw\working\ustx\dms17659\US380 AEC RD HALN 001.dgn

HORIZONTAL ALIGNMENT REPORT (CONTINUED)

Alignment Name: CL US380

	STATION	X	Y
PC	23669.085	7131931.575	2209624.365
PI	23994.750	7132062.719	2209922.457
CC		7129368.642	2210751.918
PT	24317.501	7132121.947	2210242.691
Radius:	2800.000		
Delta:	13.268° Right		
Degree of Curvature (Arc):	2.046°		
Length:	648.417		
Tangent:	325.665		
Chord:	646.969		
Middle Ordinate:	18.749		
External:	18.875		
Back Tangent Direction:	N66.253°E		
Back Radial Direction:	S23.747°E		
Chord Direction:	N72.887°E		
Ahead Radial Direction:	S10.478°E		
Ahead Tangent Direction:	N79.522°E		
PT	24317.501	7132121.947	2210242.691
PC	27834.309	7132761.536	2213700.850
Tangential Direction:	N79.522°E		
Tangential Length:	3516.808		
PC	27834.309	7132761.536	2213700.850
PI	28093.860	7132808.740	2213956.073
CC		7126861.597	2214792.049
PT	28353.088	7132833.727	2214214.418
Radius:	6000.000		
Delta:	4.954° Right		
Degree of Curvature (Arc):	0.955°		
Length:	518.778		
Tangent:	259.551		
Chord:	518.617		
Middle Ordinate:	5.606		
External:	5.611		
Back Tangent Direction:	N79.522°E		
Back Radial Direction:	S10.478°E		
Chord Direction:	N81.998°E		
Ahead Radial Direction:	S5.525°E		
Ahead Tangent Direction:	N84.475°E		
PT	28353.088	7132833.727	2214214.418
PC	32064.261	7133191.009	2217908.353
Tangential Direction:	N84.475°E		
Tangential Length:	3711.173		
PC	32064.261	7133191.009	2217908.353
PI	32317.327	7133215.372	2218160.243
CC		7126223.523	2218582.256
PT	32570.172	7133221.482	2218413.235
Radius:	7000.000		
Delta:	4.141° Right		
Degree of Curvature (Arc):	0.819°		
Length:	505.911		
Tangent:	253.066		
Chord:	505.801		
Middle Ordinate:	4.570		
External:	4.573		
Back Tangent Direction:	N84.475°E		
Back Radial Direction:	S5.525°E		
Chord Direction:	N86.546°E		
Ahead Radial Direction:	S1.384°E		
Ahead Tangent Direction:	N88.616°E		
PT	32570.172	7133221.482	2218413.235
PC	33881.991	7133253.157	2219724.672
Tangential Direction:	N88.616°E		
Tangential Length:	1311.819		

HORIZONTAL ALIGNMENT REPORT (CONTINUED)

Alignment Name: CL US380

	STATION	X	Y
PC	33881.991	7133253.157	2219724.672
PI	34379.026	7133265.159	2220221.562
CC		7129254.324	2219821.255
PT	34870.991	7133155.187	2220706.277
Radius:	4000.000		
Delta:	14.166° Right		
Degree of Curvature (Arc):	1.432°		
Length:	989.000		
Tangent:	497.034		
Chord:	986.482		
Middle Ordinate:	30.527		
External:	30.762		
Back Tangent Direction:	N88.616°E		
Back Radial Direction:	S1.384°E		
Chord Direction:	S84.300°E		
Ahead Radial Direction:	S12.783°W		
Ahead Tangent Direction:	S77.217°E		
PT	34870.991	7133155.187	2220706.277
PC	37057.355	7132671.442	2222838.454
Tangential Direction:	S77.217°E		
Tangential Length:	2186.364		
PC	37057.355	7132671.442	2222838.454
PI	37644.388	7132541.558	2223410.938
CC		7137547.521	2223944.732
PT	38226.070	7132547.804	2223997.938
Radius:	5000.000		
Delta:	13.392° Left		
Degree of Curvature (Arc):	1.146°		
Length:	1168.716		
Tangent:	587.033		
Chord:	1166.057		
Middle Ordinate:	34.109		
External:	34.343		
Back Tangent Direction:	S77.217°E		
Back Radial Direction:	S12.783°W		
Chord Direction:	S83.913°E		
Ahead Radial Direction:	S0.610°E		
Ahead Tangent Direction:	N89.390°E		
PT	38226.070	7132547.804	2223997.938
PC	42875.862	7132597.284	2228647.467
Tangential Direction:	N89.390°E		
Tangential Length:	4649.792		
PC	42875.862	7132597.284	2228647.467
PI	43199.215	7132600.725	2228970.801
CC		7147596.435	2228487.848
PT	43522.468	7132618.096	2229293.687
Radius:	15000.000		
Delta:	2.470° Left		
Degree of Curvature (Arc):	0.382°		
Length:	646.605		
Tangent:	323.353		
Chord:	646.555		
Middle Ordinate:	3.484		
External:	3.485		
Back Tangent Direction:	N89.390°E		
Back Radial Direction:	S0.610°E		
Chord Direction:	N88.155°E		
Ahead Radial Direction:	S3.080°E		
Ahead Tangent Direction:	N86.920°E		
PT	43522.468	7132618.096	2229293.687
PC	45689.914	7132734.537	2231458.004
Tangential Direction:	N86.920°E		
Tangential Length:	2167.447		

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/26/2023

Salcido Pavia, P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

HORIZONTAL ALIGNMENT DATA

SHEET 2 OF 5

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		26

DATE: 5/26/2023 1:41:16 PM
FILE: c:\pw\working\ustx\dms17659\US380 AEC RD HALN 002.dgn

HORIZONTAL ALIGNMENT REPORT (CONTINUED)

Alignment Name: CL US380

	STATION	X	Y
PC	45689.914	7132734.537	2231458.004
PI	46204.221	7132762.167	2231971.568
CC		7118754.755	2232210.120
PT	46718.065	7132752.041	2232485.775
Radius:	14000.000		
Delta:	4.208° Right		
Degree of Curvature (Arc):	0.409°		
Length:	1028.151		
Tangent:	514.307		
Chord:	1027.920		
Middle Ordinate:	9.437		
External:	9.444		
Back Tangent Direction:	N86.920°E		
Back Radial Direction:	S3.080°E		
Chord Direction:	N89.024°E		
Ahead Radial Direction:	S1.128°W		
Ahead Tangent Direction:	S88.872°E		
PT	46718.065	7132752.041	2232485.775
PC	48779.539	7132711.451	2234546.849
Tangential Direction:	S88.872°E		
Tangential Length:	2061.474		
PC	48779.539	7132711.451	2234546.849
PI	48908.528	7132708.904	2234675.813
CC		7118624.676	2234268.607
PT	49037.510	7132703.996	2234804.709
Radius:	14089.523		
Delta:	1.049° Right		
Degree of Curvature (Arc):	0.407°		
Length:	257.971		
Tangent:	128.989		
Chord:	257.968		
Middle Ordinate:	0.590		
External:	0.590		
Back Tangent Direction:	S88.868°E		
Back Radial Direction:	S1.132°W		
Chord Direction:	S88.344°E		
Ahead Radial Direction:	S2.181°W		
Ahead Tangent Direction:	S87.819°E		
PT	49037.510	7132703.996	2234804.709
PC	51190.805	7132612.009	2236956.037
Tangential Direction:	S87.552°E		
Tangential Length:	2153.294		
PC	51190.805	7132612.009	2236956.037
PI	52006.937	7132577.145	2237771.425
CC		7137607.445	2237169.632
PT	52808.801	7132803.368	2238555.578
Radius:	5000.000		
Delta:	18.541° Left		
Degree of Curvature (Arc):	1.146°		
Length:	1617.997		
Tangent:	816.133		
Chord:	1610.946		
Middle Ordinate:	65.305		
External:	66.169		
Back Tangent Direction:	S87.552°E		
Back Radial Direction:	S2.448°W		
Chord Direction:	N83.178°E		
Ahead Radial Direction:	S16.093°E		
Ahead Tangent Direction:	N73.907°E		
PT	52808.801	7132803.368	2238555.578
PC	53401.986	7132967.792	2239125.518
Tangential Direction:	N73.907°E		
Tangential Length:	593.184		

HORIZONTAL ALIGNMENT REPORT (CONTINUED)

Alignment Name: CL US380

	STATION	X	Y
PC	53401.986	7132967.792	2239125.518
PI	54706.758	7133329.461	2240379.164
CC		7139405.255	2237268.351
PT	55979.273	7134135.135	2241405.479
Radius:	6700.000		
Delta:	22.040° Left		
Degree of Curvature (Arc):	0.855°		
Length:	2577.288		
Tangent:	1304.773		
Chord:	2561.427		
Middle Ordinate:	123.544		
External:	125.865		
Back Tangent Direction:	N73.907°E		
Back Radial Direction:	S16.093°E		
Chord Direction:	N62.888°E		
Ahead Radial Direction:	S38.132°E		
Ahead Tangent Direction:	N51.868°E		
PT	55979.273	7134135.135	2241405.479
PI	57352.138	7134982.853	2242485.354
Tangential Direction:	N51.868°E		
Tangential Length:	1372.864		
PI	57352.138	7134982.853	2242485.354
PC	61079.940	7137245.253	2245448.132
Tangential Direction:	N52.634°E		
Tangential Length:	3727.802		
PC	61079.940	7137245.253	2245448.132
PI	61778.832	7137663.368	2246008.159
CC		7133960.854	2247900.258
PCC	62464.408	7137872.271	2246675.099
Radius:	4098.804		
Delta:	19.353° Right		
Degree of Curvature (Arc):	1.398°		
Length:	1384.469		
Tangent:	698.892		
Chord:	1377.897		
Middle Ordinate:	58.316		
External:	59.158		
Back Tangent Direction:	N53.255°E		
Back Radial Direction:	S36.745°E		
Chord Direction:	N62.932°E		
Ahead Radial Direction:	S17.392°E		
Ahead Tangent Direction:	N72.608°E		
PCC	62464.408	7137872.271	2246675.099
PI	64606.521	7138421.866	2248745.507
CC		7132334.074	2248145.228
PT	66564.278	7137478.486	2250668.703
Radius:	5730.000		
Delta:	40.996° Right		
Degree of Curvature (Arc):	1.000°		
Length:	4099.870		
Tangent:	2142.113		
Chord:	4012.972		
Middle Ordinate:	362.793		
External:	387.315		
Back Tangent Direction:	N75.134°E		
Back Radial Direction:	S14.866°E		
Chord Direction:	S84.369°E		
Ahead Radial Direction:	S26.129°W		
Ahead Tangent Direction:	S63.871°E		
PT	66564.278	7137478.486	2250668.703
PC	68408.092	7136666.476	2252324.085
Tangential Direction:	S63.871°E		
Tangential Length:	1843.814		

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/26/2023

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

HORIZONTAL ALIGNMENT DATA

SHEET 3 OF 5

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		27

DATE: 5/26/2023 1:37:53 PM
FILE: c:\pworking\ustx\dms17659\US380_AEC_RD_HALN_003.dgn

HORIZONTAL ALIGNMENT REPORT (CONTINUED)

Alignment Name: CL US380

	STATION	X	Y
PC	68408.092	7136666.476	2252324.085
PI	69305.150	7136271.414	2253129.466
CC		7139808.787	2253865.475
PT	70164.401	7136312.451	2254025.585
Radius:	3500.000		
Delta:	28.751° Left		
Degree of Curvature (Arc):	1.637°		
Length:	1756.309		
Tangent:	897.057		
Chord:	1737.940		
Middle Ordinate:	109.588		
External:	113.131		
Back Tangent Direction:	S63.871°E		
Back Radial Direction:	S26.129°W		
Chord Direction:	S78.246°E		
Ahead Radial Direction:	S2.622°E		
Ahead Tangent Direction:	N87.378°E		
PT	70164.401	7136312.451	2254025.585
PC	82654.919	7136883.838	2266503.026
Tangential Direction:	N87.378°E		
Tangential Length:	12490.518		
PC	82654.919	7136883.838	2266503.026
PI	83017.764	7136900.436	2266865.491
CC		7141778.708	2266278.873
PT	83379.286	7136970.242	2267221.558
Radius:	4900.000		
Delta:	8.470° Left		
Degree of Curvature (Arc):	1.169°		
Length:	724.368		
Tangent:	362.845		
Chord:	723.708		
Middle Ordinate:	13.379		
External:	13.416		
Back Tangent Direction:	N87.378°E		
Back Radial Direction:	S2.622°E		
Chord Direction:	N83.143°E		
Ahead Radial Direction:	S11.092°E		
Ahead Tangent Direction:	N78.908°E		
PT	83379.286	7136970.242	2267221.558
PC	88357.116	7137927.901	2272106.399
Tangential Direction:	N78.908°E		
Tangential Length:	4977.829		
PC	88357.116	7137927.901	2272106.399
PI	88740.160	7138001.592	2272482.288
CC		7133119.435	2273049.085
PT	89121.649	7138015.978	2272865.062
Radius:	4900.000		
Delta:	8.940° Right		
Degree of Curvature (Arc):	1.169°		
Length:	764.533		
Tangent:	383.044		
Chord:	763.758		
Middle Ordinate:	14.903		
External:	14.949		
Back Tangent Direction:	N78.908°E		
Back Radial Direction:	S11.092°E		
Chord Direction:	N83.378°E		
Ahead Radial Direction:	S2.152°E		
Ahead Tangent Direction:	N87.848°E		
PT	89121.649	7138015.978	2272865.062
PI	93636.742	7138185.546	2277376.969
Tangential Direction:	N87.848°E		
Tangential Length:	4515.093		
Element: Linear			

HORIZONTAL ALIGNMENT REPORT (CONTINUED)

Alignment Name: CL US380

	STATION	X	Y
PI	93636.742	7138185.546	2277376.969
PC	105554.187	7138603.081	2289287.098
Tangential Direction:	N87.992°E		
Tangential Length:	11917.445		
Element: Circular			
PC	105554.187	7138603.081	2289287.098
PI	106336.991	7138630.507	2290069.422
CC		7143500.072	2289115.423
PT	107106.677	7138900.309	2290804.262
Radius:	4900.000		
Delta:	18.153° Left		
Degree of Curvature (Arc):	1.169°		
Length:	1552.491		
Tangent:	782.805		
Chord:	1546.005		
Middle Ordinate:	61.357		
External:	62.135		
Back Tangent Direction:	N87.992°E		
Back Radial Direction:	S2.008°E		
Chord Direction:	N78.916°E		
Ahead Radial Direction:	S20.161°E		
Ahead Tangent Direction:	N69.839°E		
PT	107106.677	7138900.309	2290804.262
PC	108584.551	7139409.675	2292191.583
Tangential Direction:	N69.839°E		
Tangential Length:	1477.874		
PC	108584.551	7139409.675	2292191.583
PI	109207.091	7139624.240	2292775.978
CC		7134246.675	2294087.218
PT	109824.354	7139702.756	2293393.546
Radius:	5500.000		
Delta:	12.916° Right		
Degree of Curvature (Arc):	1.042°		
Length:	1239.803		
Tangent:	622.540		
Chord:	1237.180		
Middle Ordinate:	34.897		
External:	35.120		
Back Tangent Direction:	N69.839°E		
Back Radial Direction:	S20.161°E		
Chord Direction:	N76.297°E		
Ahead Radial Direction:	S7.246°E		
Ahead Tangent Direction:	N82.754°E		
PT	109824.354	7139702.756	2293393.546
PC	117143.274	7140610.793	2300655.919
Tangential Direction:	N82.873°E		
Tangential Length:	7318.920		
PC	117143.274	7140610.793	2300655.919
PI	117984.071	7140715.108	2301490.220
CC		7136641.698	2301152.188
PT	118800.738	7140474.698	2302295.914
Radius:	4000.000		
Delta:	23.741° Right		
Degree of Curvature (Arc):	1.432°		
Length:	1657.464		
Tangent:	840.797		
Chord:	1645.632		
Middle Ordinate:	85.543		
External:	87.412		
Back Tangent Direction:	N82.873°E		
Back Radial Direction:	S7.127°E		
Chord Direction:	S85.256°E		
Ahead Radial Direction:	S16.615°W		
Ahead Tangent Direction:	S73.385°E		

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/26/2023

Salcido Jr., P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

HORIZONTAL ALIGNMENT DATA

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		28

DATE: 5/26/2023 1:38:06 PM
FILE: c:\pw\working\ustx\dms17659\US380 AEC RD HALN 004.dgn

HORIZONTAL ALIGNMENT REPORT (CONTINUED)

Alignment Name: CL US380

	STATION	X	Y
PT	118800.738	7140474.698	2302295.914
PC	123842.057	7139033.226	2307126.757
Tangential Direction:	S73.385°E		
Tangential Length:	5041.318		
PC	123842.057	7139033.226	2307126.757
PI	124142.322	7138947.371	2307414.486
CC		7144016.126	2308613.601
PT	124441.921	7138895.204	2307710.185
Radius:	5200.000		
Delta:	6.610° Left		
Degree of Curvature (Arc):	1.102°		
Length:	599.864		
Tangent:	300.265		
Chord:	599.532		
Middle Ordinate:	8.648		
External:	8.662		
Back Tangent Direction:	S73.385°E		
Back Radial Direction:	S16.615°W		
Chord Direction:	S76.690°E		
Ahead Radial Direction:	S10.005°W		
Ahead Tangent Direction:	S79.995°E		
PT	124441.921	7138895.204	2307710.185
POT	125942.585	7138634.488	2309188.028
Tangential Direction:	S79.995°E		
Tangential Length:	1500.664		

DATE: 5/26/2023 1:38:19 PM
FILE: c:\pw\working\ustx\dms176591US380 AEC RD HALN 005.dgn

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/26/2023
Salcido Ernesto, P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

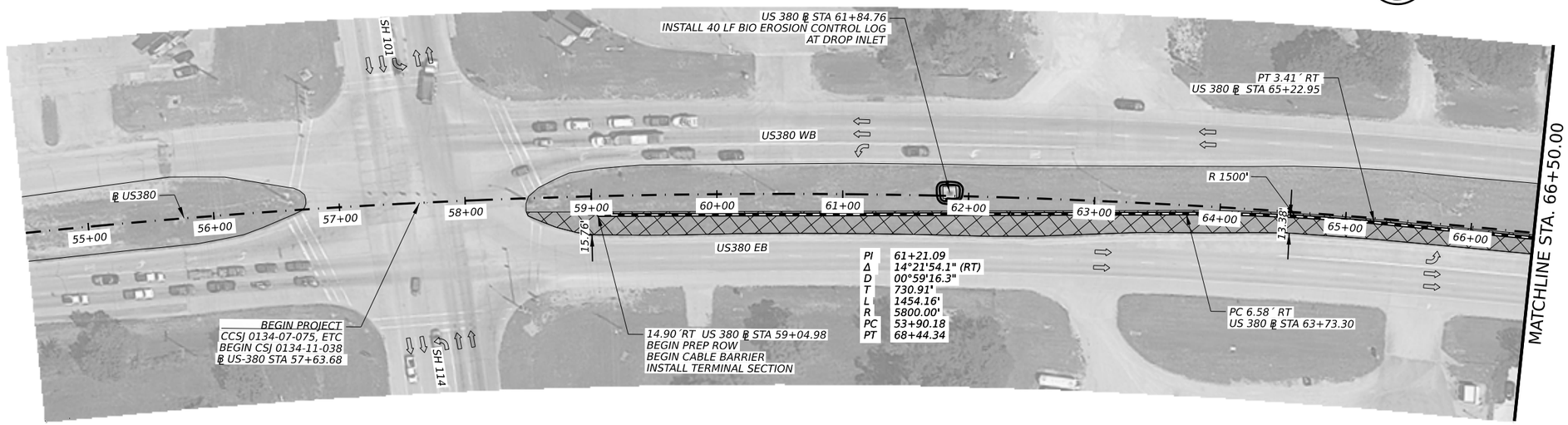
Texas Department of Transportation

US 380

HORIZONTAL ALIGNMENT DATA

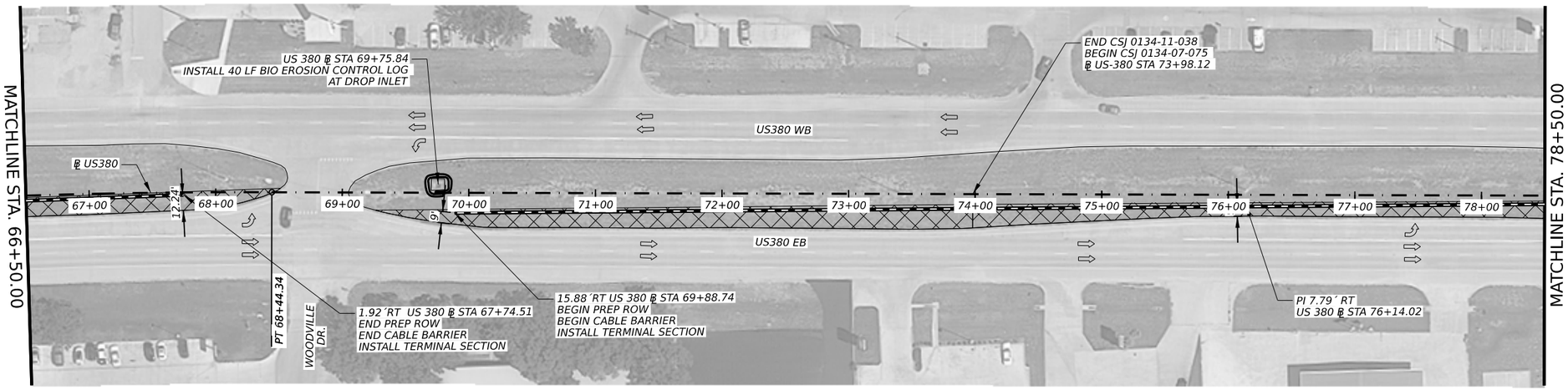
SHEET 5 OF 5

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		29



CSJ 0134-11-038 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.45
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	2627
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1313
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1313
FERTILIZER *	TON	0.33
VEGETATIVE WATERING	MG	183.88
RIPRAP (MOW STRIP)(5 IN)	CY	59.58
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
BIODEG EROSN CONT LOGS (REMOVE)	LF	80
CABLE BARRIER SYSTEM (TL-4)	LF	1195
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	3

CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.11
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	663
CELL FBR MLCH SEED(TEMP)(WARM)	SY	331
CELL FBR MLCH SEED(TEMP)(COOL)	SY	331
FERTILIZER *	TON	0.08
VEGETATIVE WATERING	MG	46.38
RIPRAP (MOW STRIP)(5 IN)	CY	20.93
CABLE BARRIER SYSTEM (TL-4)	LF	452



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Yanin, P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

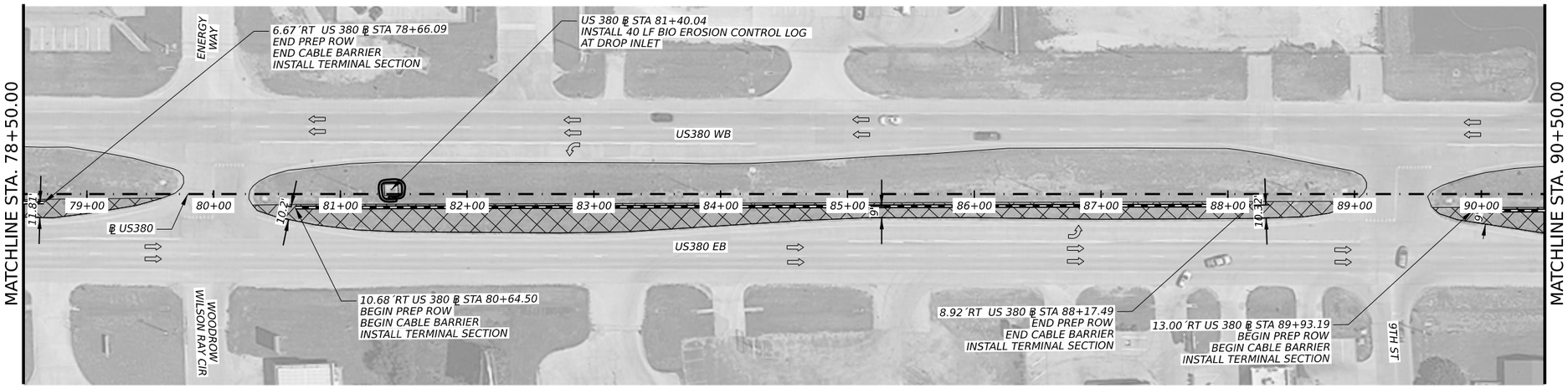
US 380

CABLE BARRIER LAYOUT STA 54+50 TO 78+50

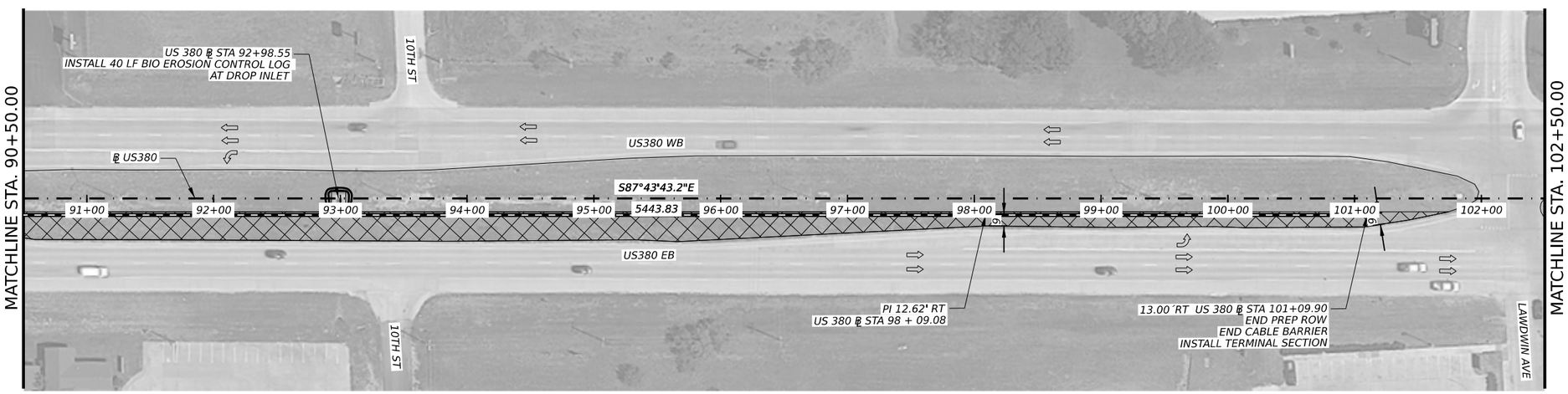
SHEET 1 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		30

DATE: 5/25/2023 10:44:40 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.69
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3952
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1976
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1976
FERTILIZER *	TON	0.49
VEGETATIVE WATERING	MG	276.67
RIPRAP (MOW STRIP)(5 IN)	CY	88.01
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
BIODEG EROSN CONT LOGS (REMOVE)	LF	80
CABLE BARRIER SYSTEM (TL-4)	LF	1749
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	5



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

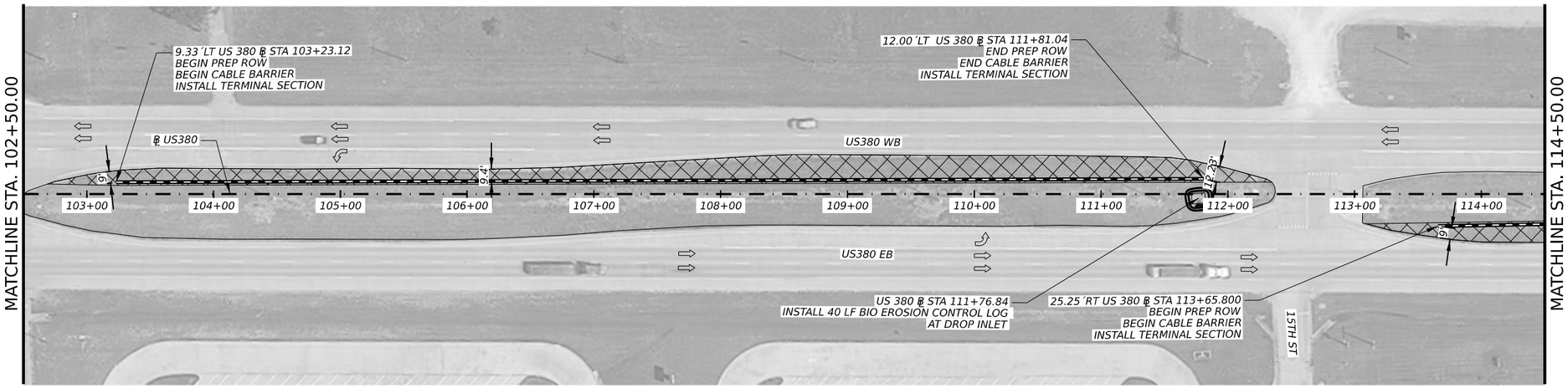
US 380

CABLE BARRIER LAYOUT STA 78+50 TO 102+50

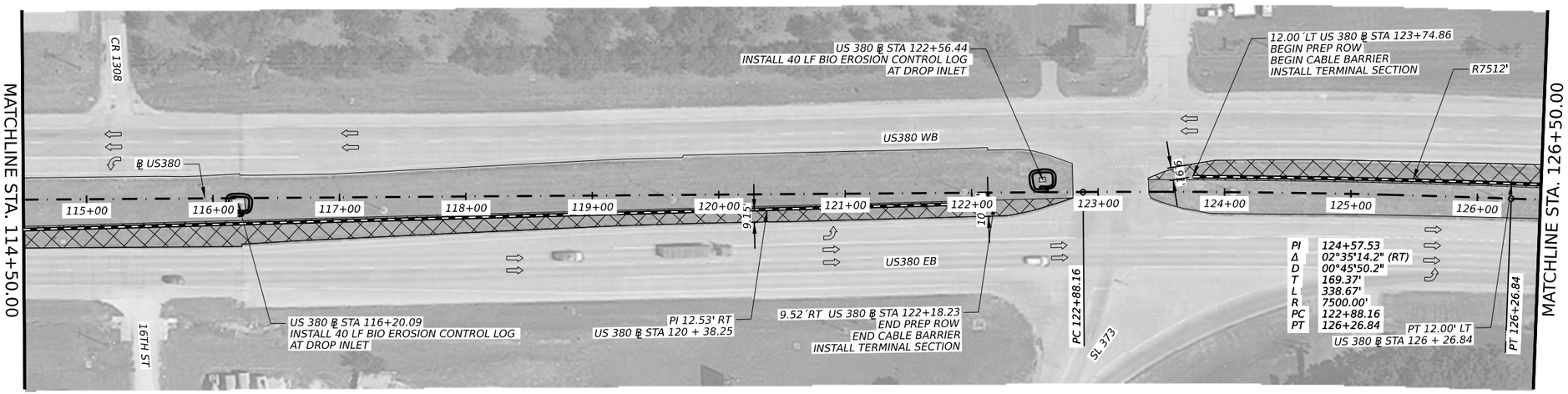
SHEET 2 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		31

DATE: 5/25/2023 10:45:12 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.64
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3749
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1874
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1874
FERTILIZER *	TON	0.46
VEGETATIVE WATERING	MG	262.40
RIPRAP (MOW STRIP)(5 IN)	CY	92.64
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	120
BIODEG EROSN CONT LOGS (REMOVE)	LF	120
CABLE BARRIER SYSTEM (TL-4)	LF	1849
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	5



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

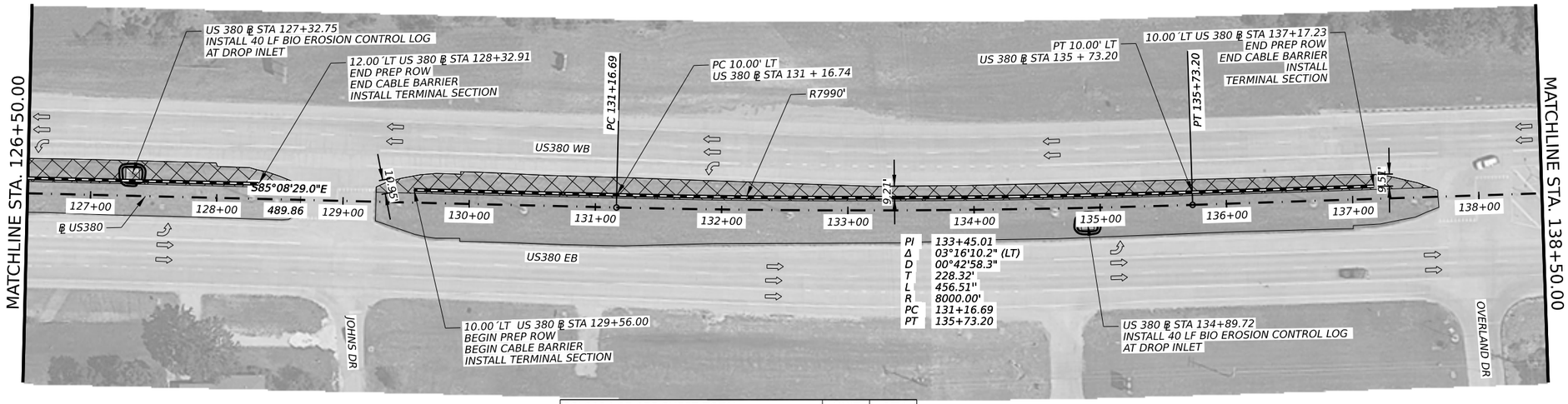
US 380

CABLE BARRIER LAYOUT STA 102+50 TO 126+50

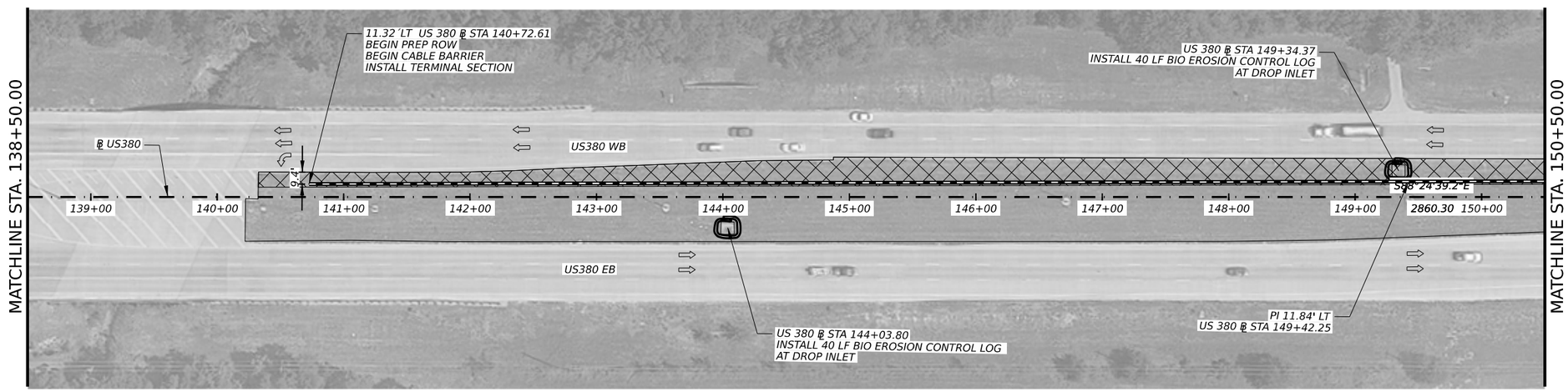
SHEET 3 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		32

DATE: 5/25/2023 10:45:44 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.64
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3734
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1867
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1867
FERTILIZER *	TON	0.46
VEGETATIVE WATERING	MG	261.39
RIPRAP (MOW STRIP)(5 IN)	CY	89.49
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	160
BIODEG EROSN CONT LOGS (REMOVE)	LF	160
CABLE BARRIER SYSTEM (TL-4)	LF	1811
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
AECOM Technical Services, Inc.- F-3580
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777

Texas Department of Transportation

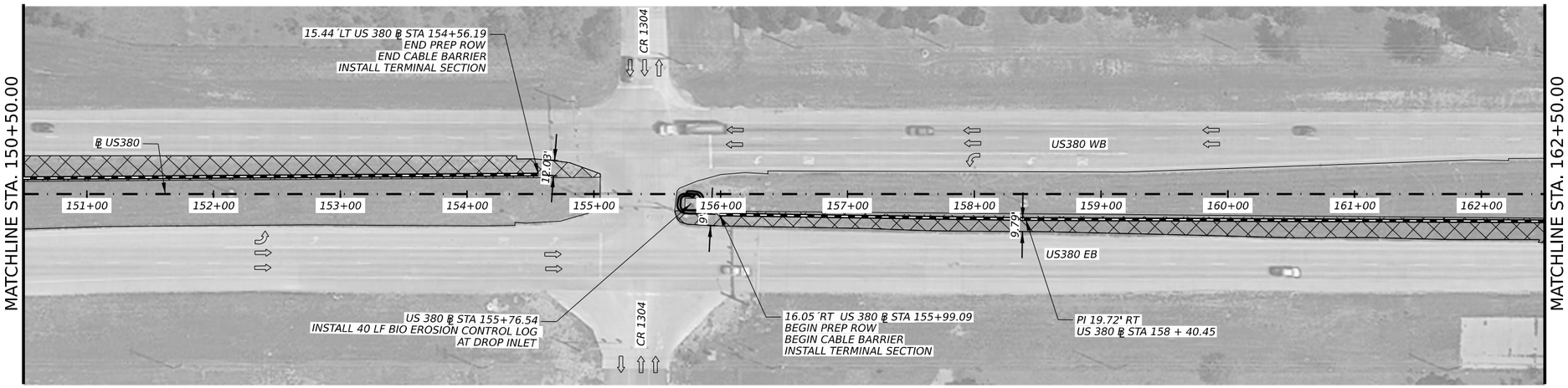
US 380

CABLE BARRIER LAYOUT STA 126+50 TO 150+50

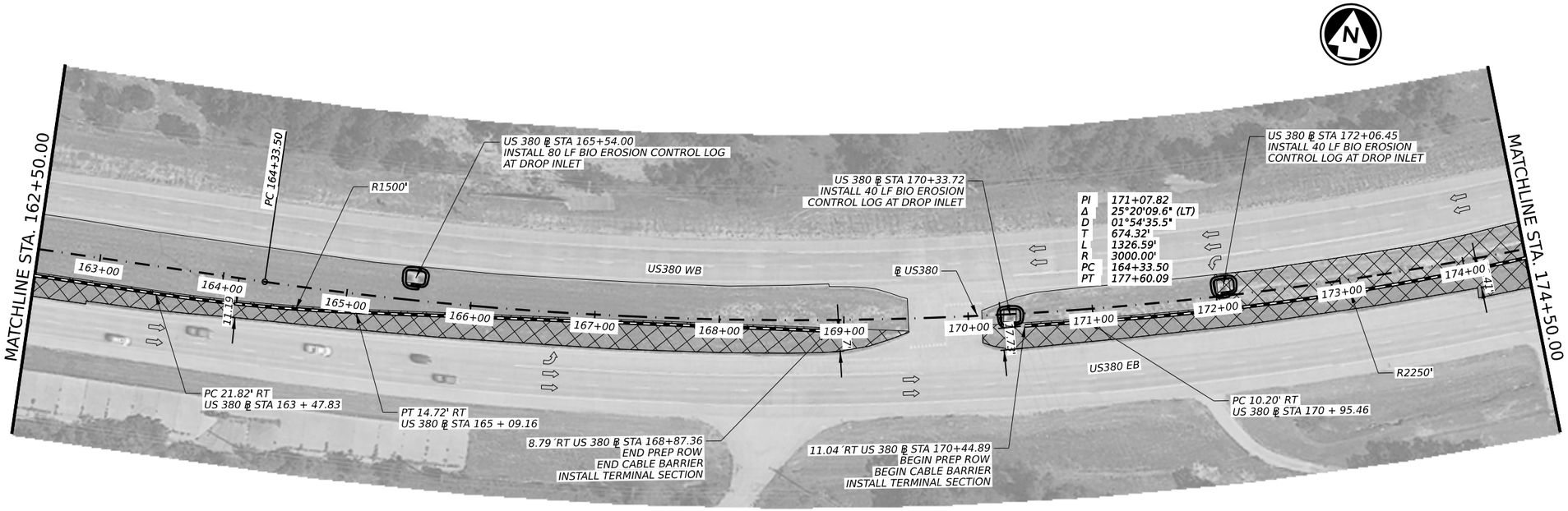
SHEET 4 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		33

DATE: 5/25/2023 10:46:26 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.89
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	5020
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2510
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2510
FERTILIZER *	TON	0.62
VEGETATIVE WATERING	MG	351.43
RIPRAP (MOW STRIP)(5 IN)	CY	97.92
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	160
BIODEG EROSN CONT LOGS (REMOVE)	LF	160
CABLE BARRIER SYSTEM (TL-4)	LF	1993
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100

SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

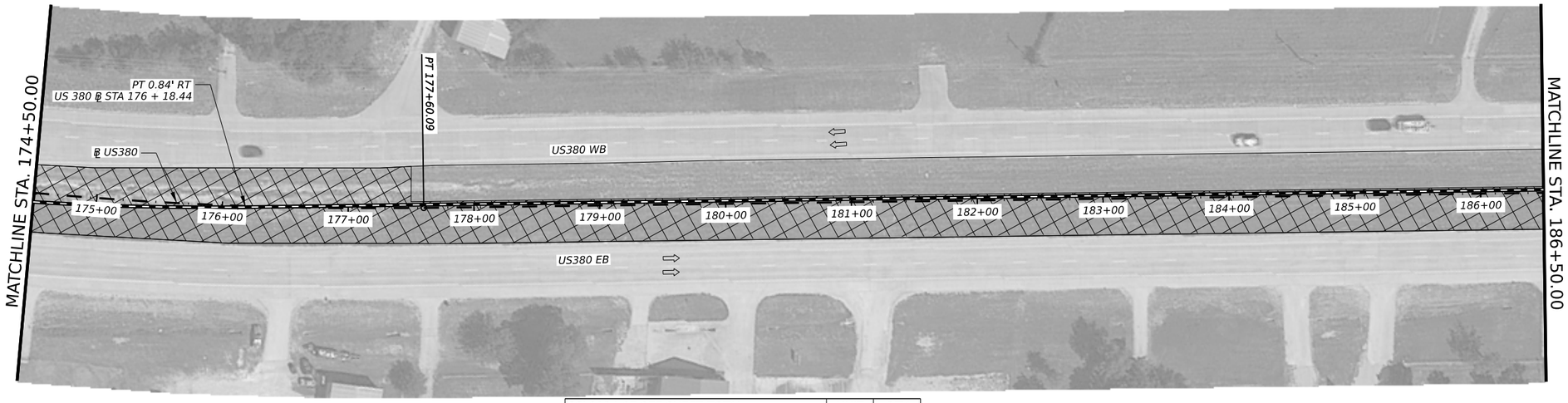
US 380

CABLE BARRIER LAYOUT STA 150+50 TO 174+50

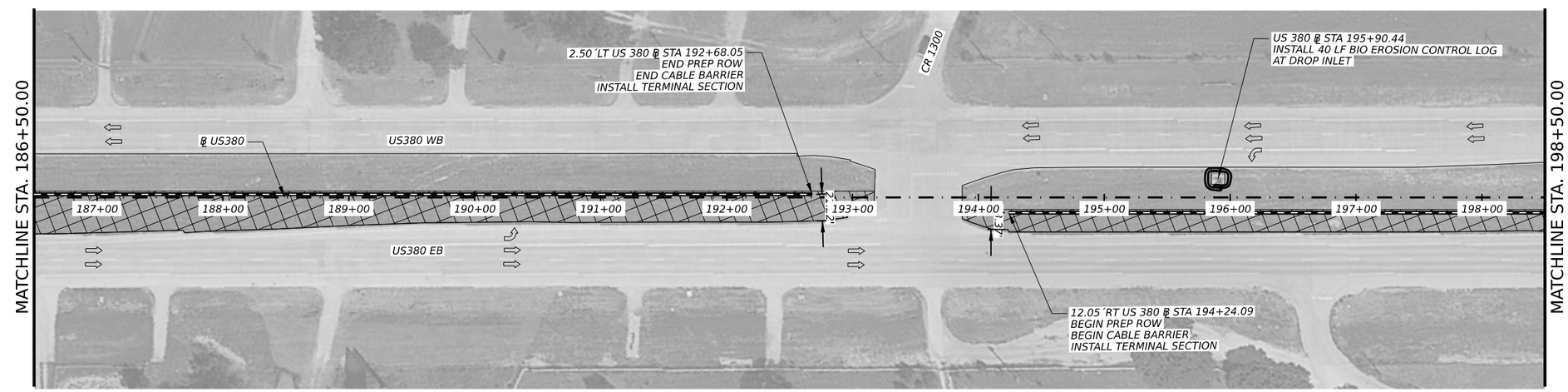
SHEET 5 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		34

DATE: 5/25/2023 3:13:47 PM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.53
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	8134
CELL FBR MLCH SEED(TEMP)(WARM)	SY	4067
CELL FBR MLCH SEED(TEMP)(COOL)	SY	4067
FERTILIZER *	TON	1.01
VEGETATIVE WATERING	MG	569.41
RIPRAP (MOW STRIP)(5 IN)	CY	104.17
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2189
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100

SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1355S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

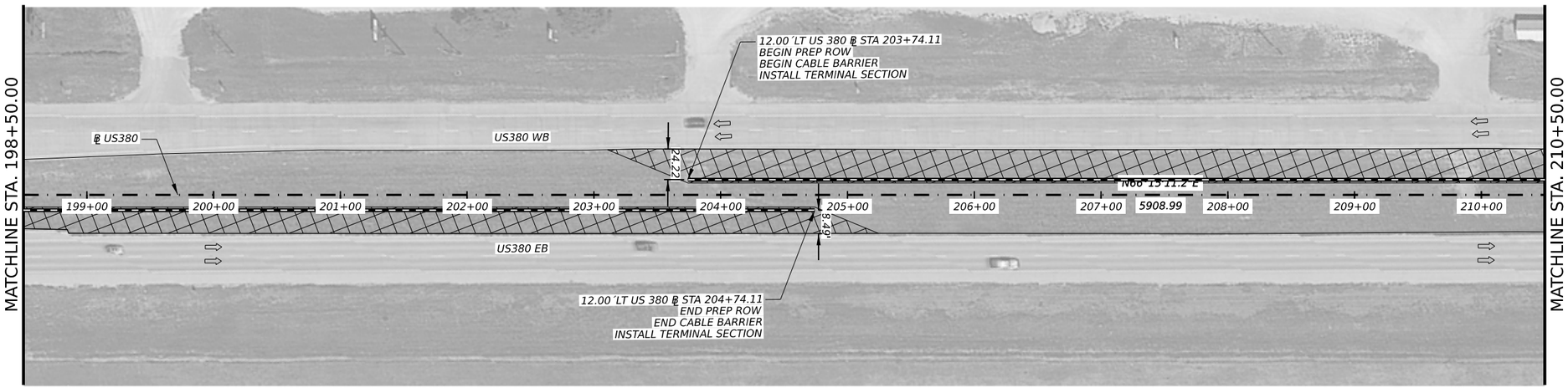
US 380

CABLE BARRIER LAYOUT STA 174+50 TO 198+50

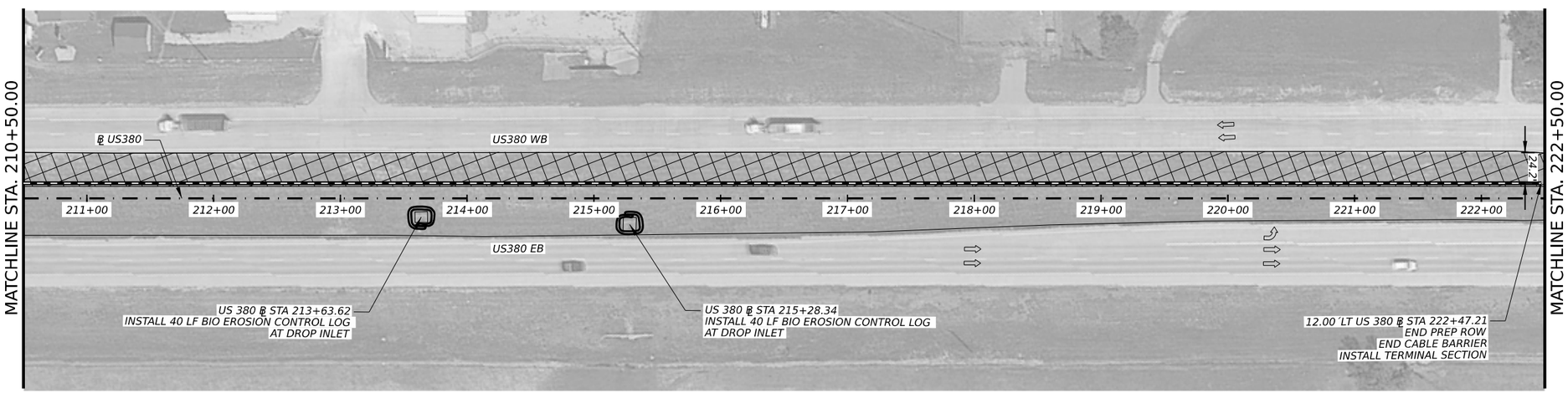
SHEET 6 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		35

DATE: 5/25/2023 10:47:30 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.32
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	7201
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3600
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3600
FERTILIZER *	TON	0.89
VEGETATIVE WATERING	MG	504.04
RIPRAP (MOW STRIP)(5 IN)	CY	116.02
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
BIODEG EROSN CONT LOGS (REMOVE)	LF	80
CABLE BARRIER SYSTEM (TL-4)	LF	2415
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	3



0 50 100

SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

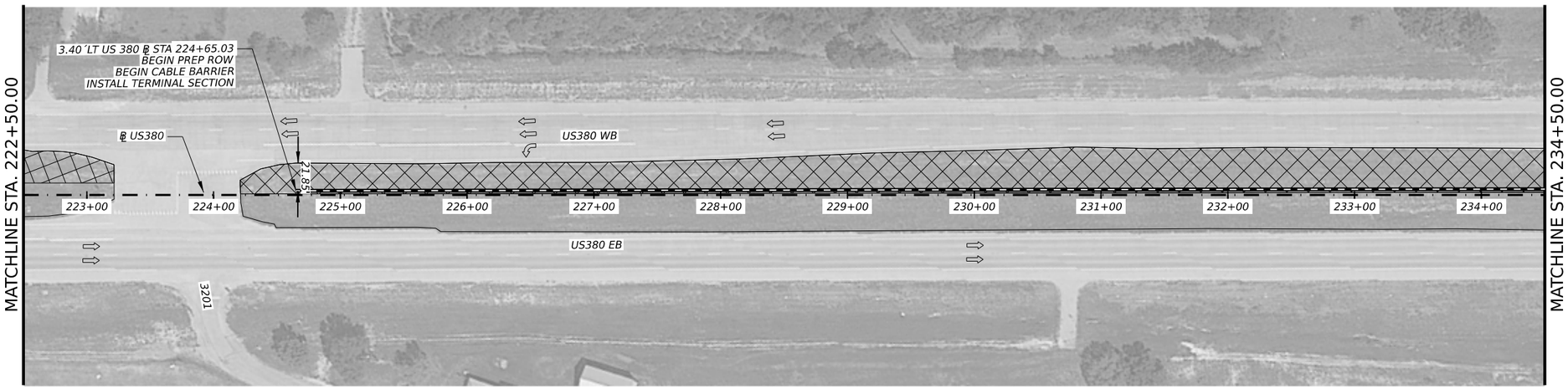
US 380

CABLE BARRIER LAYOUT STA 198+50 TO 222+50

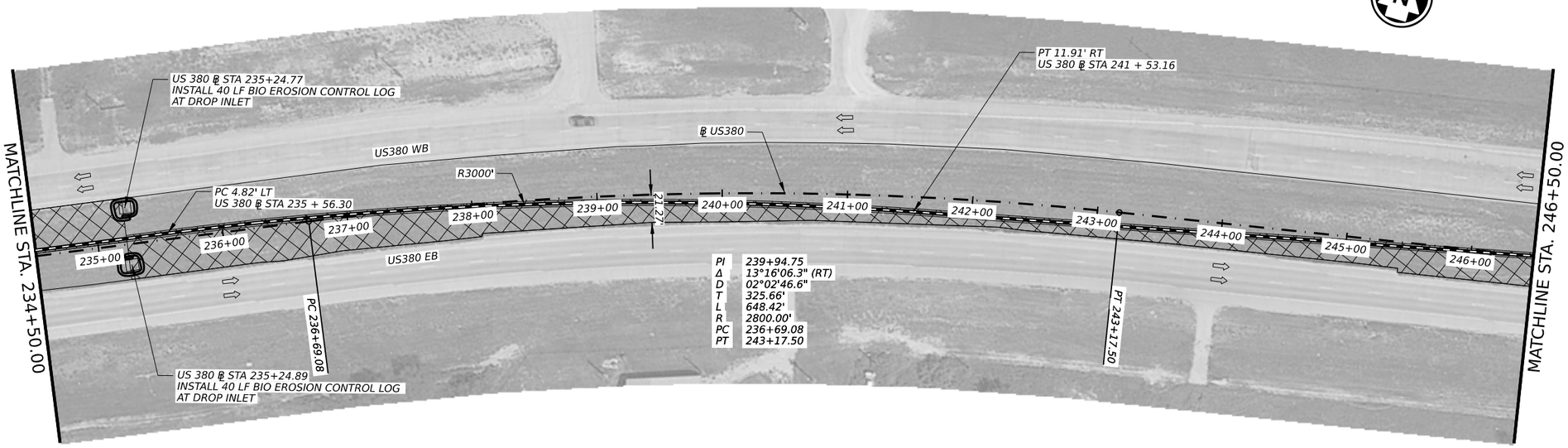
SHEET 7 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		36

DATE: 5/25/2023 3:15:22 PM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.20
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	6513
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3257
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3257
FERTILIZER *	TON	0.81
VEGETATIVE WATERING	MG	455.94
RIPRAP (MOW STRIP)(5 IN)	CY	101.25
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
BIODEG EROSN CONT LOGS (REMOVE)	LF	80
CABLE BARRIER SYSTEM (TL-4)	LF	2157
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	1



PI	239+94.75
Δ	13°16'06.3" (RT)
D	02°02'46.6"
T	325.66'
L	648.42'
R	2800.00'
PC	236+69.08
PT	243+17.50

0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Jr., P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

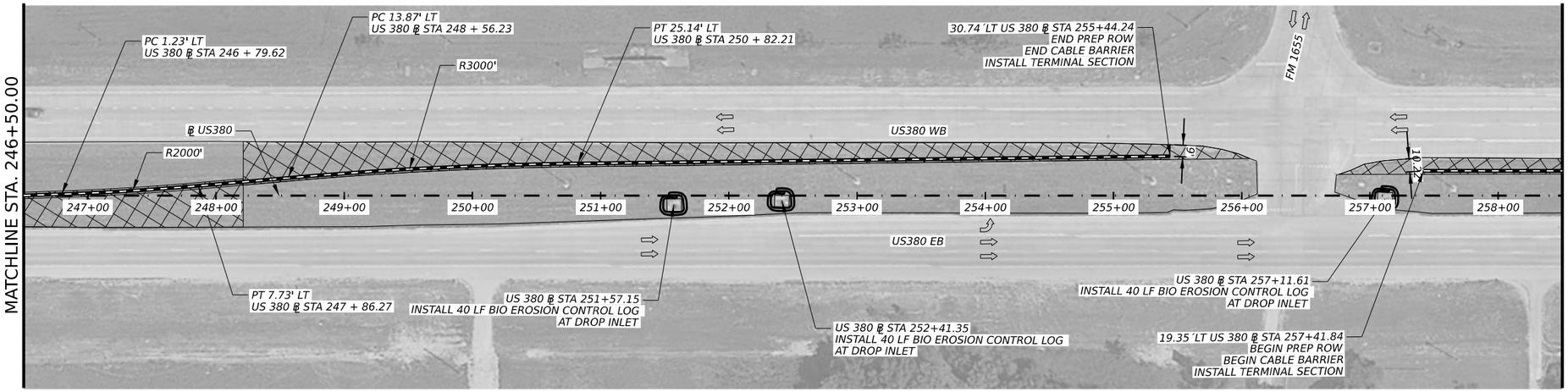
US 380

CABLE BARRIER LAYOUT
STA 222+50 TO 246+50

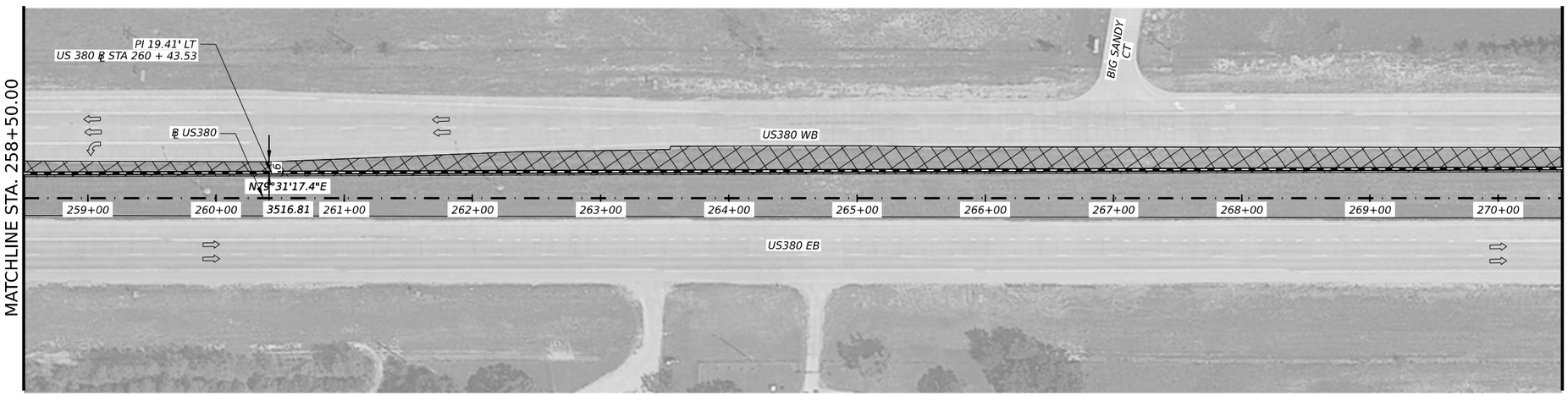
SHEET 8 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		37

DATE: 5/25/2023 10:48:45 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.85
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	4840
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2420
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2420
FERTILIZER *	TON	0.60
VEGETATIVE WATERING	MG	338.79
RIPRAP (MOW STRIP)(5 IN)	CY	102.27
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	120
BIODEG EROSN CONT LOGS (REMOVE)	LF	120
CABLE BARRIER SYSTEM (TL-4)	LF	2148
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Ramos, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

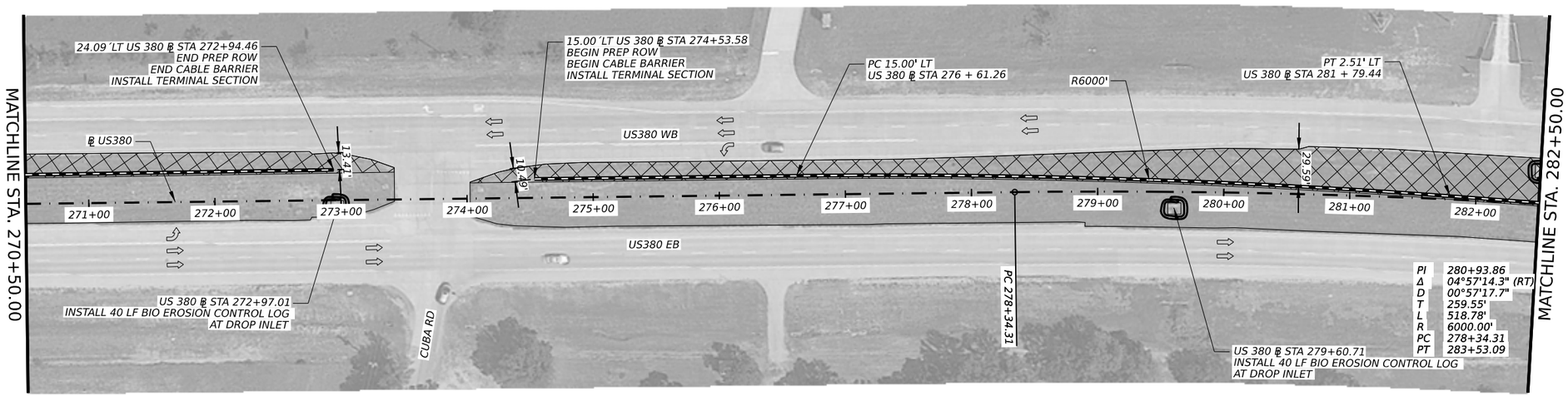
US 380

CABLE BARRIER LAYOUT
STA 246+50 TO 270+50

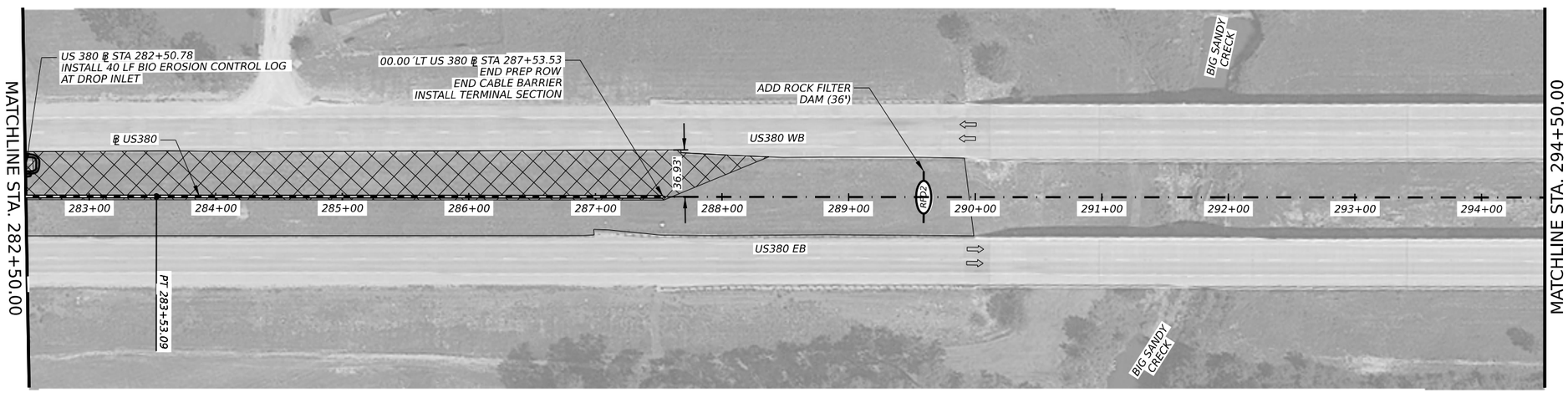
SHEET 9 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		38

DATE: 5/25/2023 10:49:17 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.93
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	5006
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2503
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2503
FERTILIZER *	TON	0.62
VEGETATIVE WATERING	MG	350.44
RIPRAP (MOW STRIP)(5 IN)	CY	71.94
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	120
BIODEG EROSN CONT LOGS (REMOVE)	LF	120
CABLE BARRIER SYSTEM (TL-4)	LF	1463
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	3



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

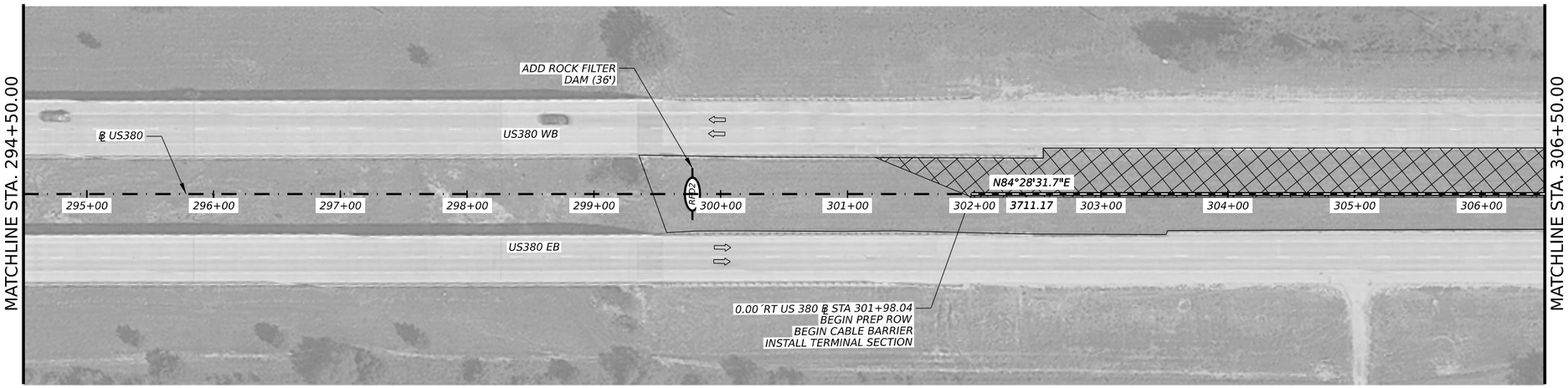
US 380

CABLE BARRIER LAYOUT
STA 270+50 TO 294+50

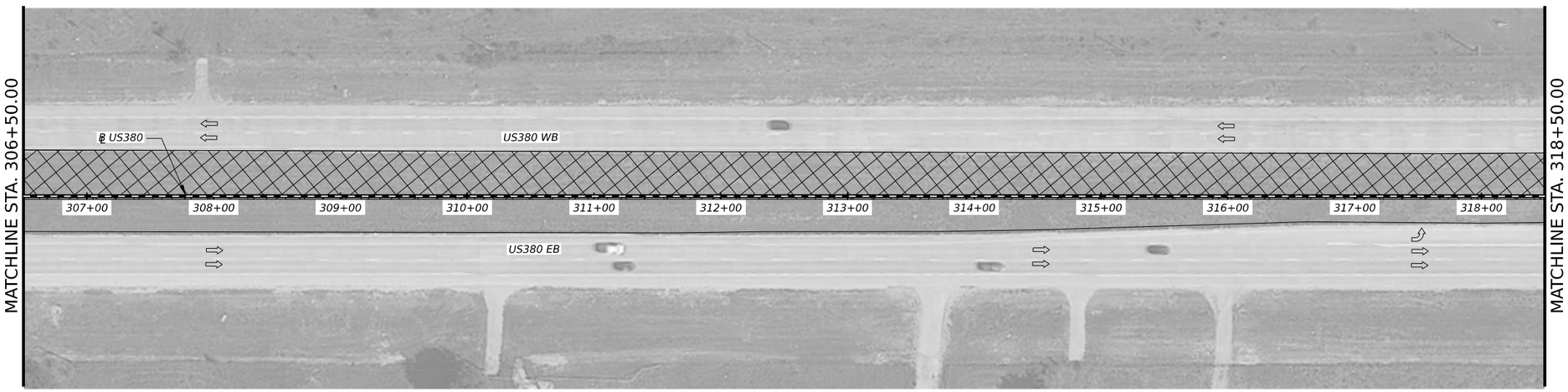
SHEET10 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		39

DATE: 5/25/2023 2:06:31 PM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.34
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	7058
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3529
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3529
FERTILIZER *	TON	0.87
VEGETATIVE WATERING	MG	494.03
RIPRAP (MOW STRIP)(5 IN)	CY	76.62
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
CABLE BARRIER SYSTEM (TL-4)	LF	1625
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	1



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Ernesto Salcido, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

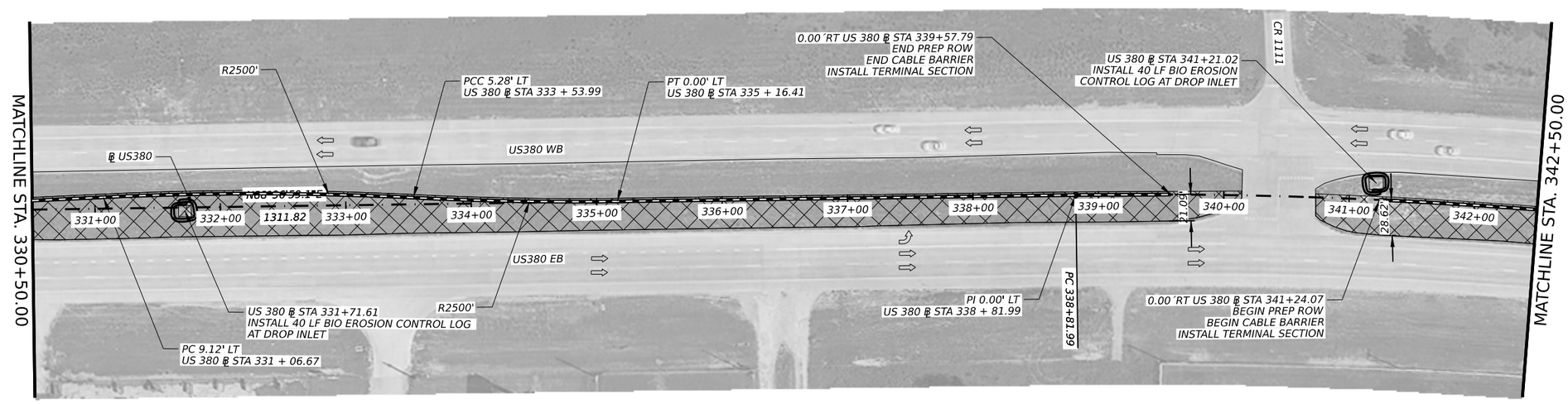
CABLE BARRIER LAYOUT STA 294+50 TO 318+50

SHEET 11 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		40

DATE: 5/25/2023 10:50:23 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn

CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.16
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	6307
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3154
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3154
FERTILIZER *	TON	0.78
VEGETATIVE WATERING	MG	441.51
RIPRAP (MOW STRIP)(5 IN)	CY	96.16
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	120
BIODEG EROSN CONT LOGS (REMOVE)	LF	120
CABLE BARRIER SYSTEM (TL-4)	LF	1955
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Pavia, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

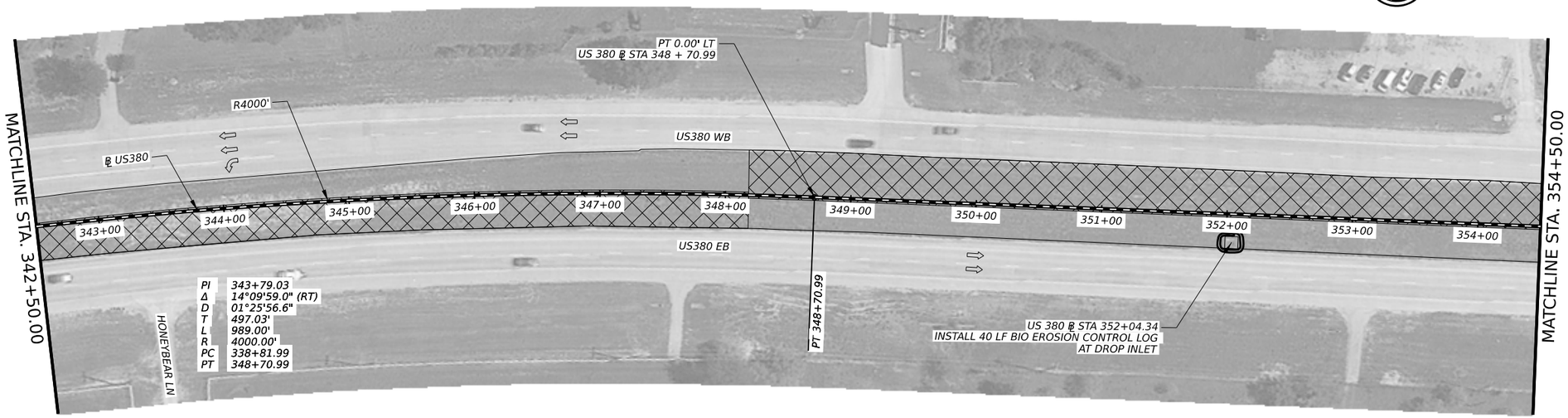
US 380

CABLE BARRIER LAYOUT STA 318+50 TO 342+50

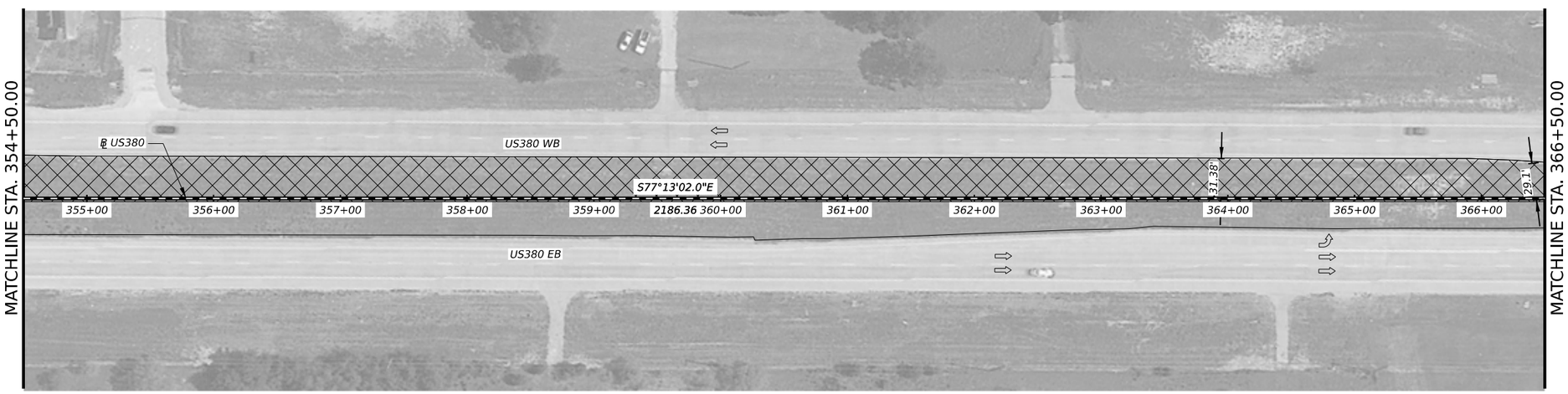
SHEET12 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		41

DATE: 5/25/2023 10:50:57 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.72
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	9142
CELL FBR MLCH SEED(TEMP)(WARM)	SY	4571
CELL FBR MLCH SEED(TEMP)(COOL)	SY	4571
FERTILIZER *	TON	1.13
VEGETATIVE WATERING	MG	639.97
RIPRAP (MOW STRIP)(5 IN)	CY	111.11
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2400



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Ramos, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

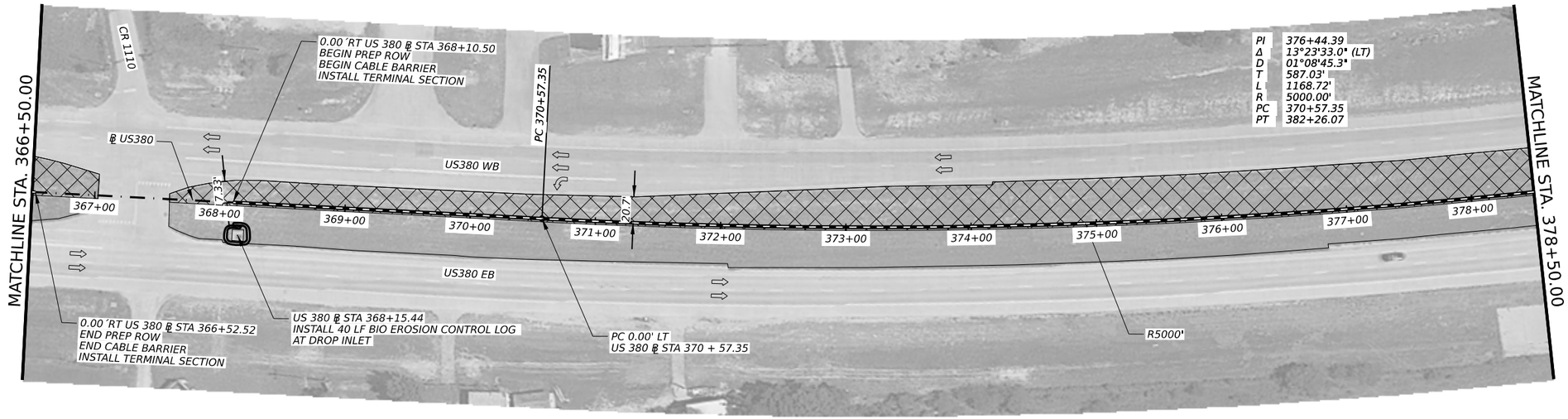
US 380

CABLE BARRIER LAYOUT
STA 342+50 TO 366+50

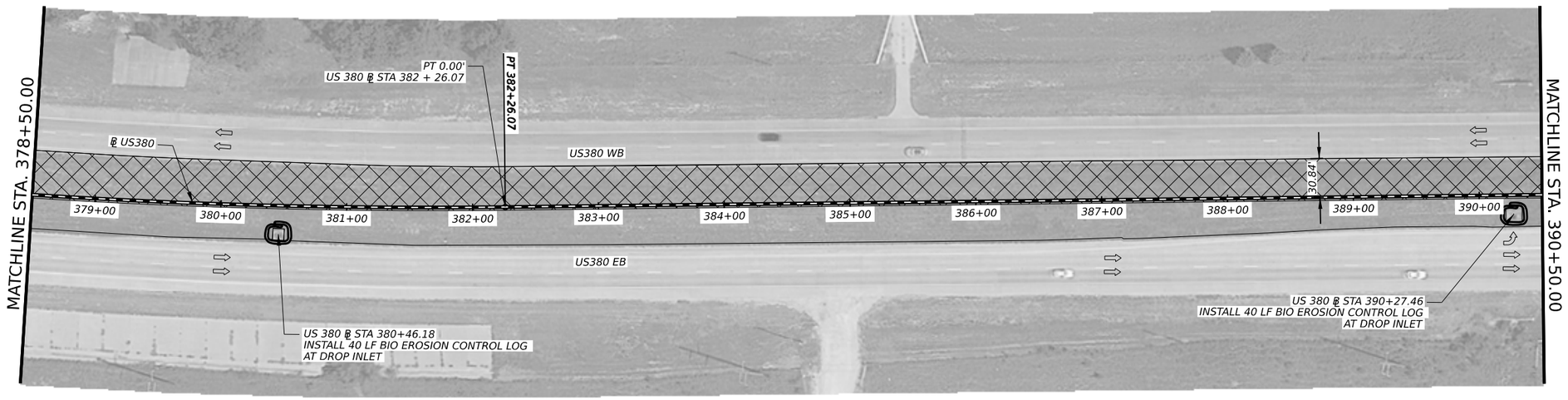
SHEET13 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		42

DATE: 5/25/2023 10:51:28 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.58
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	8420
CELL FBR MLCH SEED(TEMP)(WARM)	SY	4210
CELL FBR MLCH SEED(TEMP)(COOL)	SY	4210
FERTILIZER *	TON	1.04
VEGETATIVE WATERING	MG	589.39
RIPRAP (MOW STRIP)(5 IN)	CY	104.07
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	120
BIODEG EROSN CONT LOGS (REMOVE)	LF	120
CABLE BARRIER SYSTEM (TL-4)	LF	2187
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Pavia, P.E.

AECOM
AECOM Technical Services, Inc.- F-3580
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777

Texas Department of Transportation

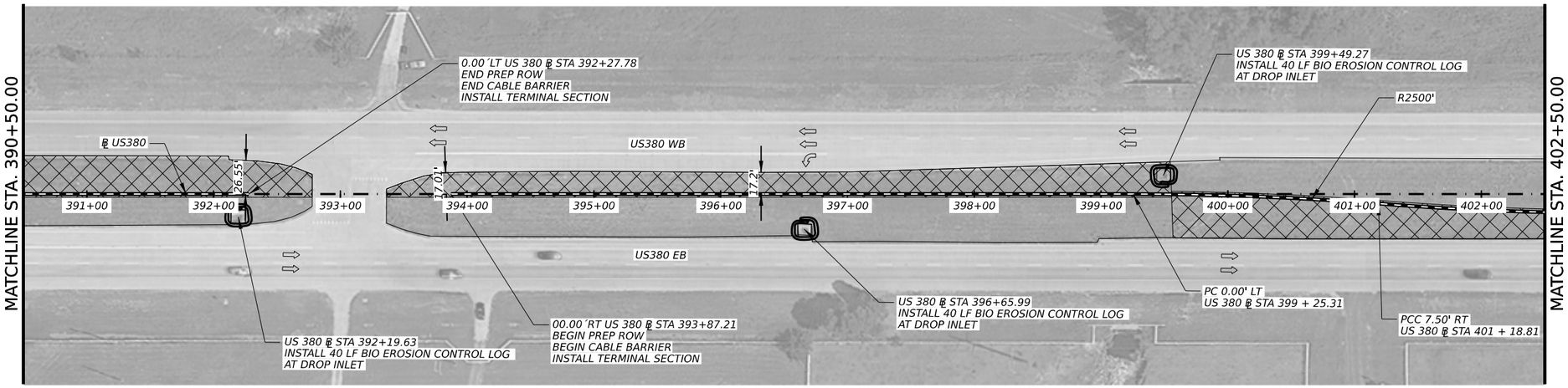
US 380

CABLE BARRIER LAYOUT STA 366+50 TO 390+50

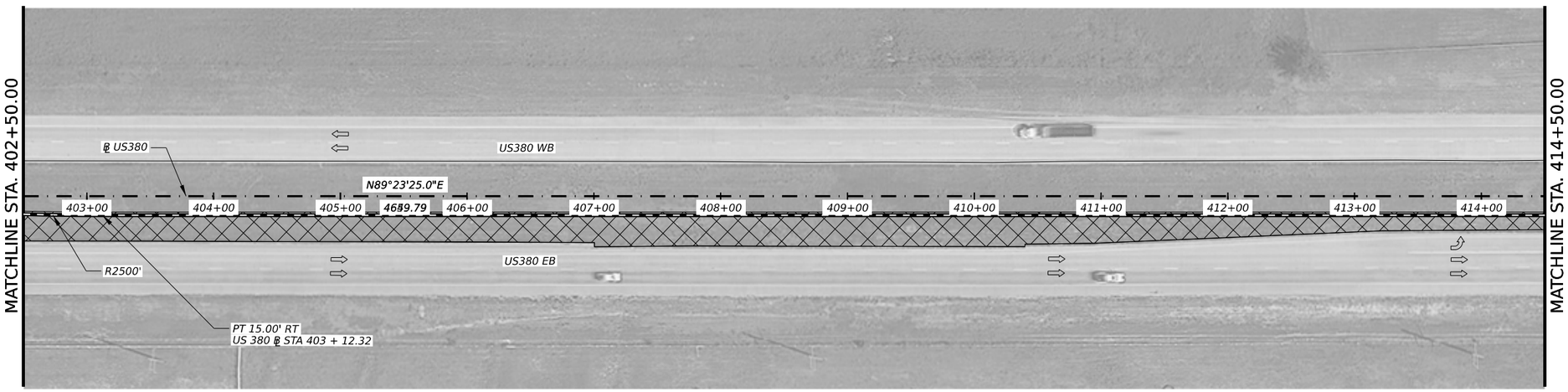
SHEET14 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		43

DATE: 5/25/2023 10:51:56 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.14
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	6280
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3140
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3140
FERTILIZER *	TON	0.78
VEGETATIVE WATERING	MG	439.58
RIPRAP (MOW STRIP)(5 IN)	CY	104.03
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	120
BIODEG EROSN CONT LOGS (REMOVE)	LF	120
CABLE BARRIER SYSTEM (TL-4)	LF	2186
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Pavia, P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

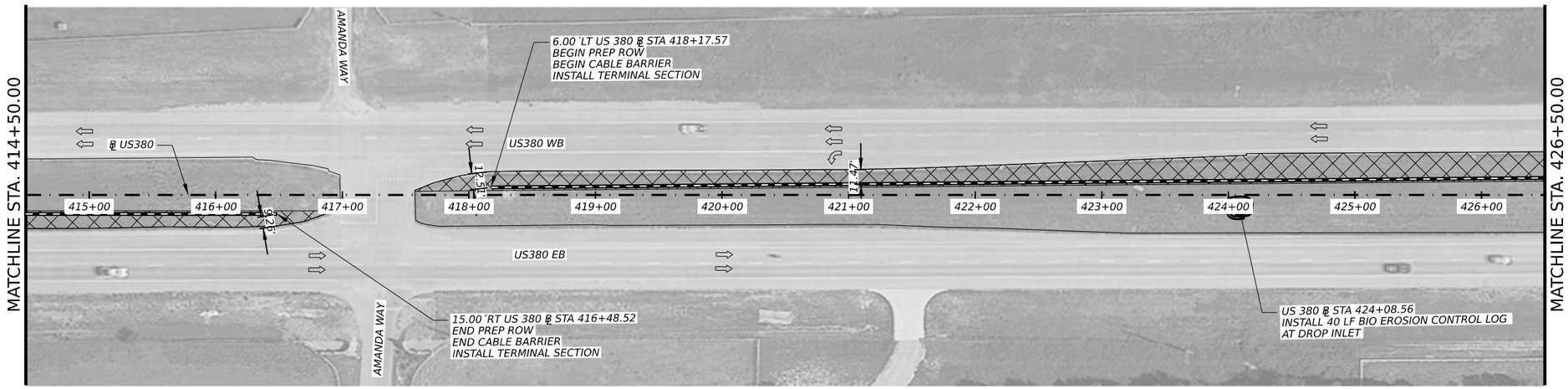
US 380

CABLE BARRIER LAYOUT STA 390+50 TO 414+50

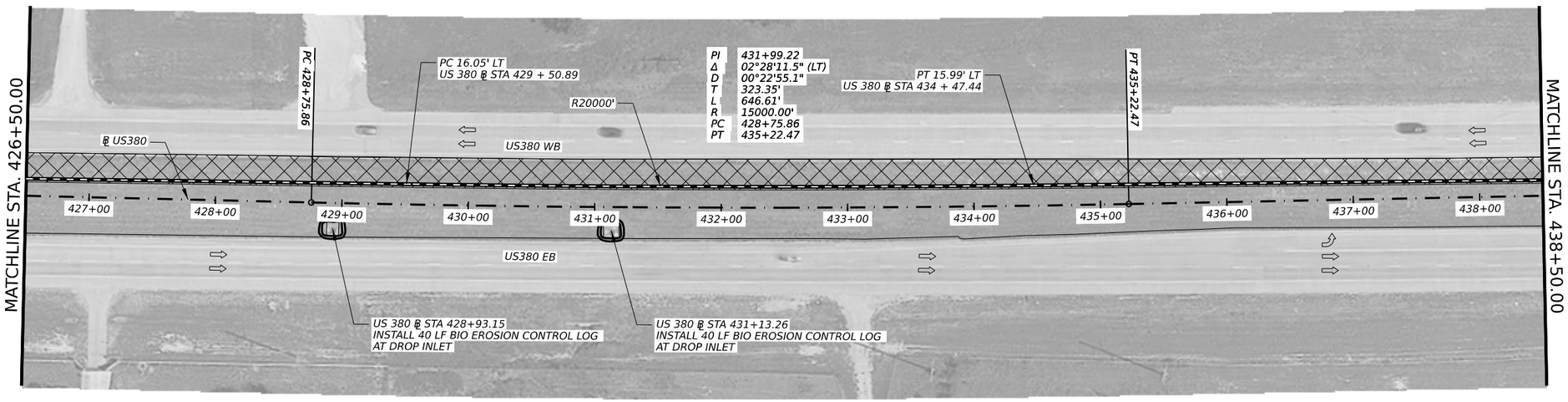
SHEET15 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, etc	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		44

DATE: 5/25/2023 10:52:31 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.91
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	5126
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2563
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2563
FERTILIZER *	TON	0.64
VEGETATIVE WATERING	MG	358.81
RIPRAP (MOW STRIP)(5 IN)	CY	103.52
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	120
BIODEG EROSN CONT LOGS (REMOVE)	LF	120
CABLE BARRIER SYSTEM (TL-4)	LF	2175
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100

SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Pavia, P.E.

AECOM
AECOM Technical Services, Inc.- F-3580
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777

Texas Department of Transportation

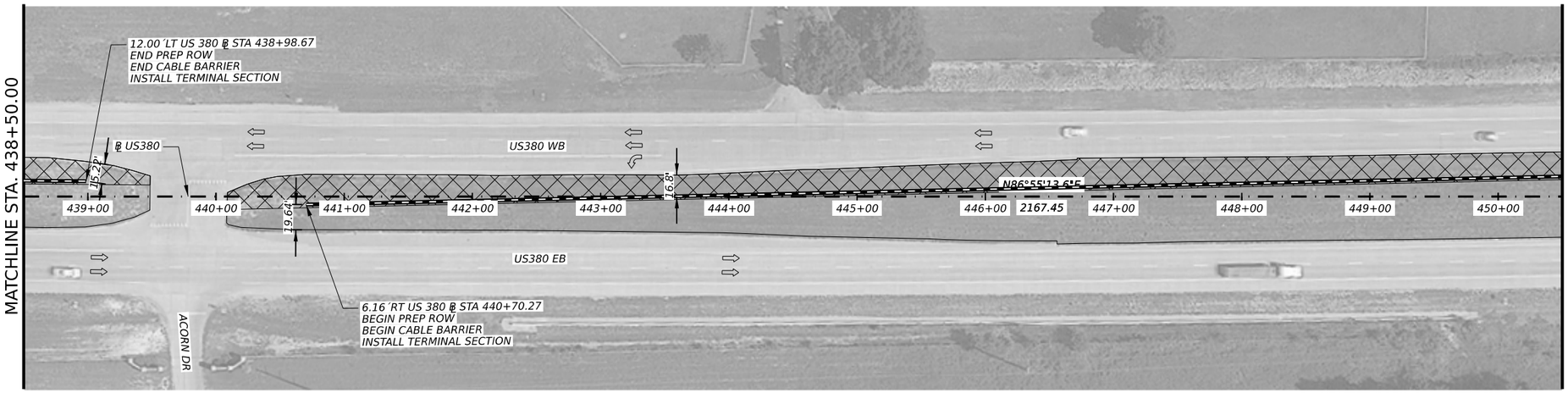
US 380

CABLE BARRIER LAYOUT STA 414+50 TO 438+50

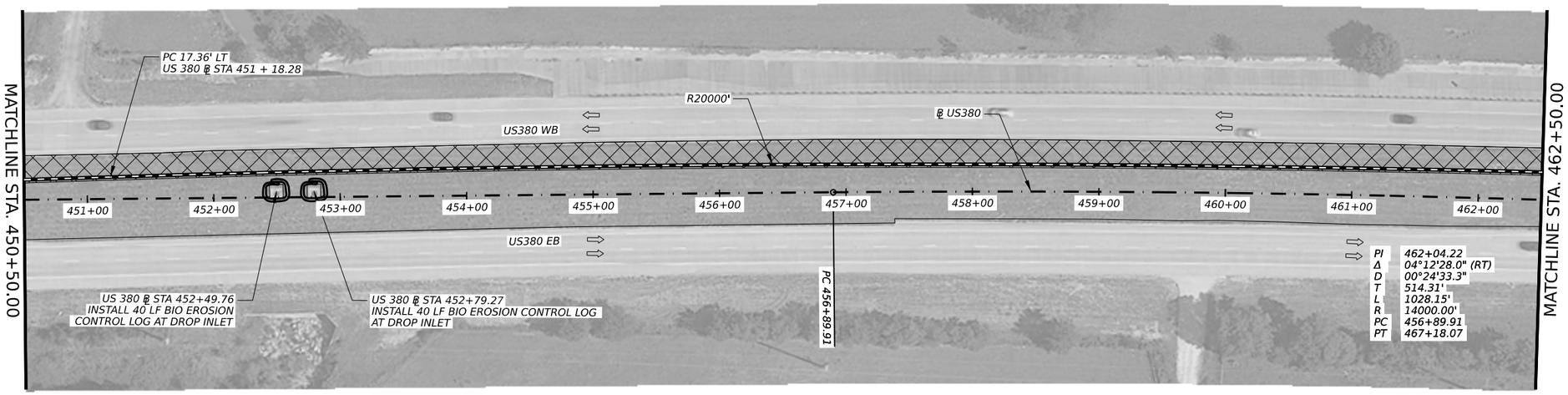
SHEET16 OF 50

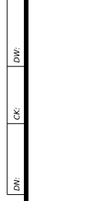
CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		45

DATE: 5/25/2023 10:53:02 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.01
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	5625
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2813
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2813
FERTILIZER *	TON	0.70
VEGETATIVE WATERING	MG	393.76
RIPRAP (MOW STRIP)(5 IN)	CY	103.52
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
BIODEG EROSN CONT LOGS (REMOVE)	LF	80
CABLE BARRIER SYSTEM (TL-4)	LF	2175
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2





0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Ramos, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

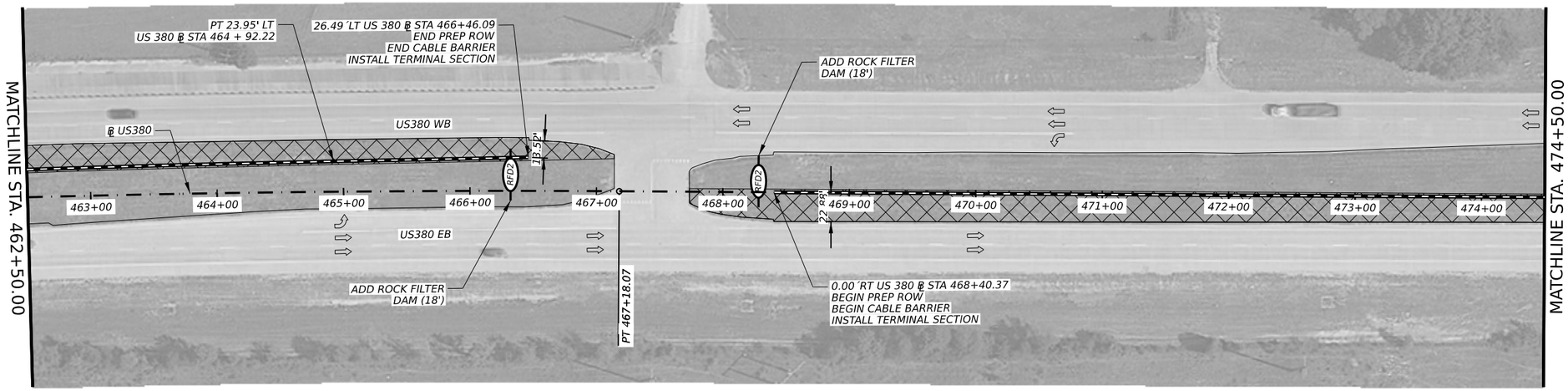
US 380

CABLE BARRIER LAYOUT STA 438+50 TO 462+50

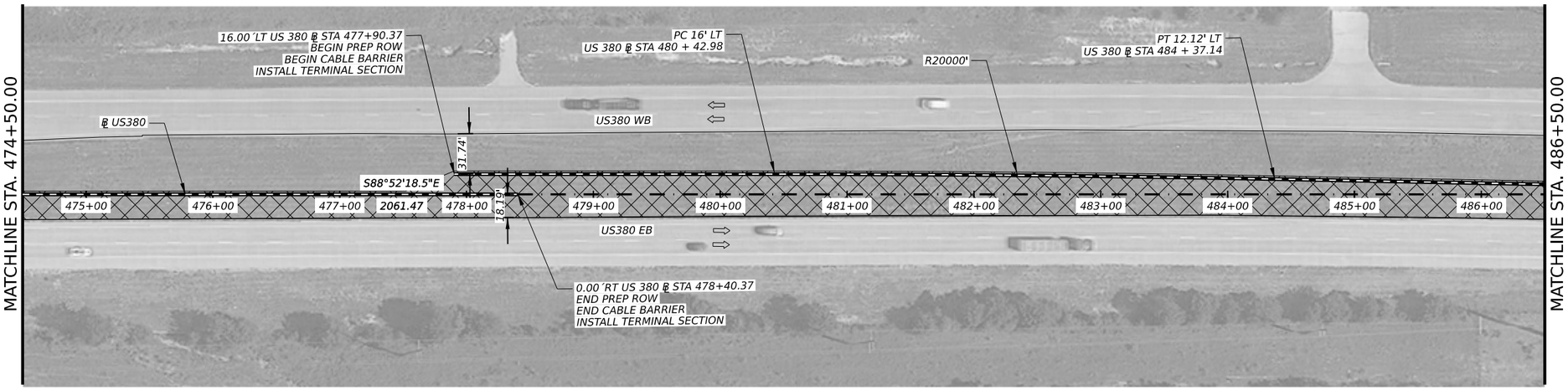
SHEET17 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		46

DATE: 5/25/2023 3:18:42 PM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.25
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	6821
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3410
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3410
FERTILIZER *	TON	0.85
VEGETATIVE WATERING	MG	477.44
RIPRAP (MOW STRIP)(5 IN)	CY	105.00
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
CABLE BARRIER SYSTEM (TL-4)	LF	2146
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

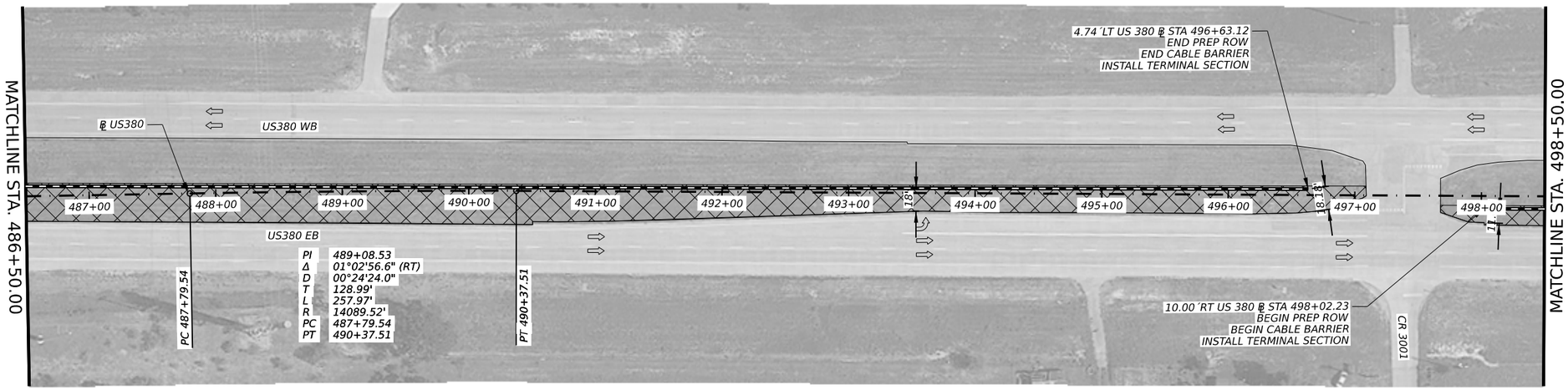
US 380

CABLE BARRIER LAYOUT
STA 462+50 TO 486+50

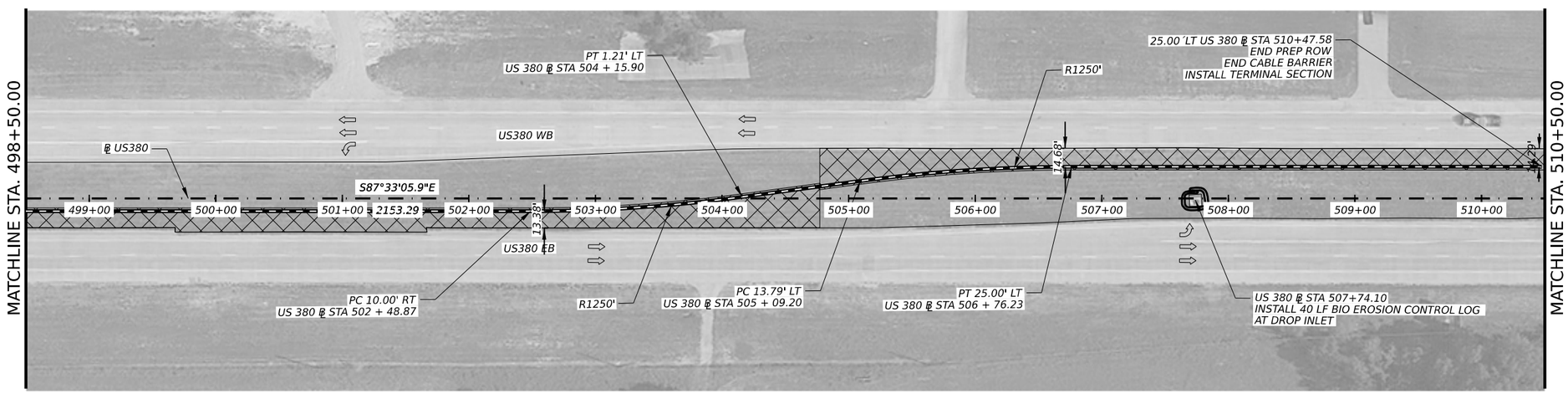
SHEET18 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		47

DATE: 5/25/2023 10:53:57 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.03
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	5727
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2863
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2863
FERTILIZER *	TON	0.71
VEGETATIVE WATERING	MG	400.87
RIPRAP (MOW STRIP)(5 IN)	CY	105.05
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2178
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	3



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

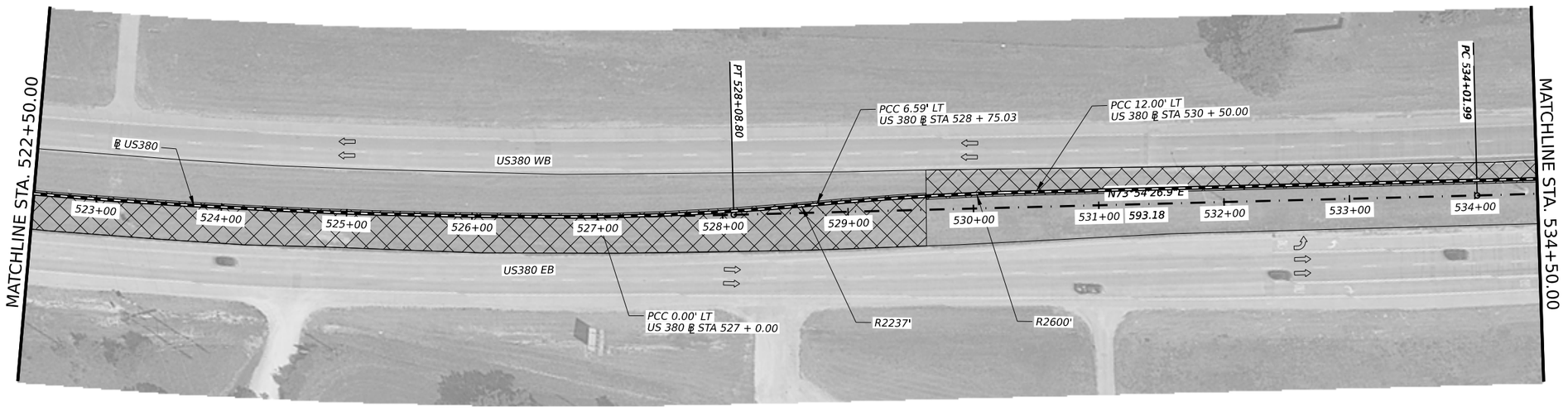
CABLE BARRIER LAYOUT STA 486+50 TO 510+50

SHEET19 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		48

DATE: 5/25/2023 10:54:20 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn

CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.40
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	7534
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3767
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3767
FERTILIZER *	TON	0.93
VEGETATIVE WATERING	MG	527.40
RIPRAP (MOW STRIP)(5 IN)	CY	103.43
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2204
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	1



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1355S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

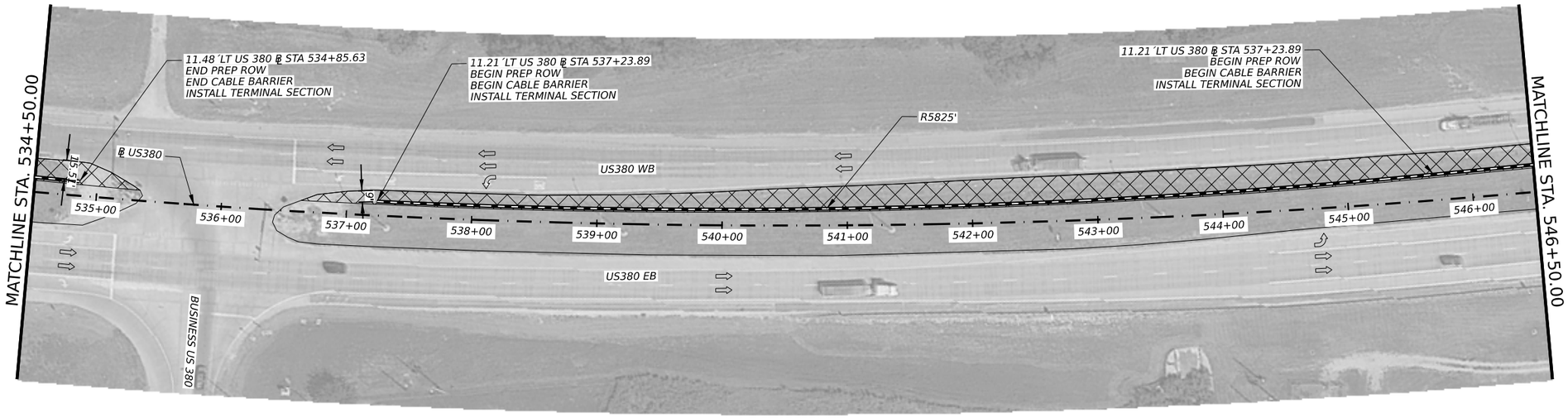
US 380

CABLE BARRIER LAYOUT STA 510+50 TO 534+50

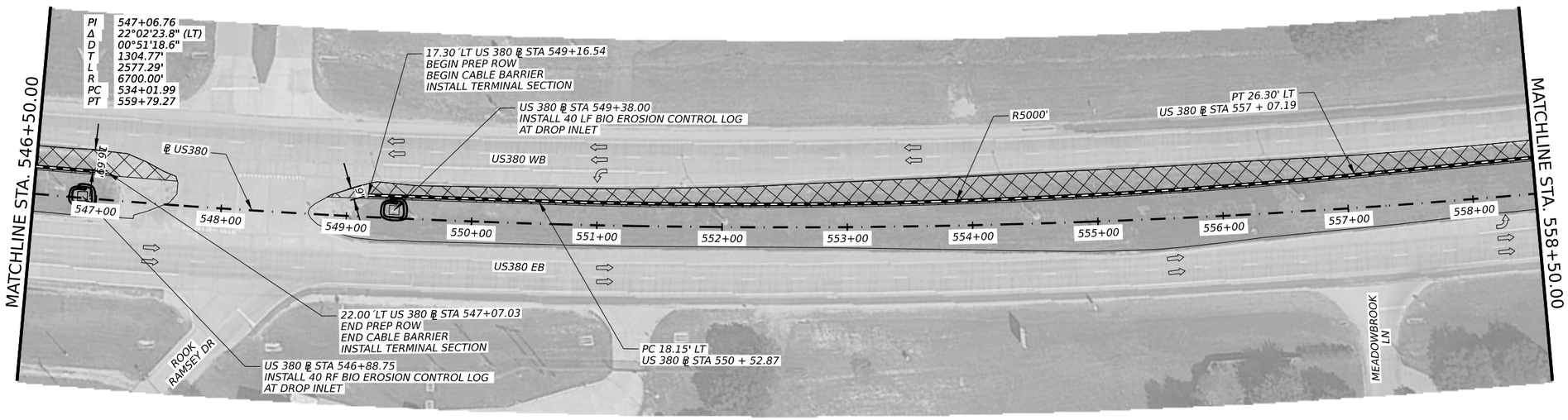
SHEET20 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		49

DATE: 5/25/2023 10:54:48 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.73
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	4163
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2082
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2082
FERTILIZER *	TON	0.52
VEGETATIVE WATERING	MG	291.42
RIPRAP (MOW STRIP)(5 IN)	CY	90.69
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
BIODEG EROSN CONT LOGS (REMOVE)	LF	80
CABLE BARRIER SYSTEM (TL-4)	LF	1837
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

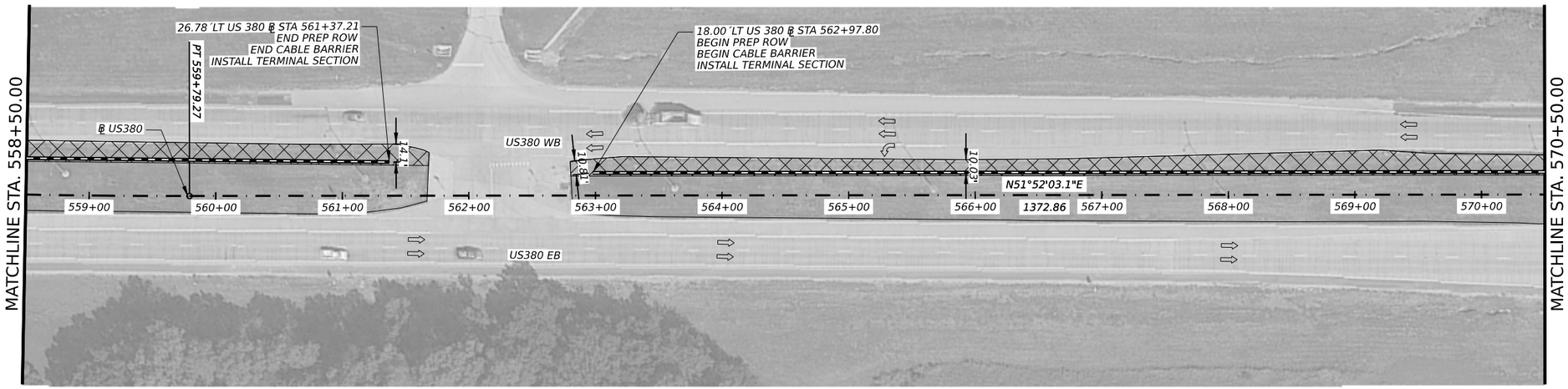
US 380

CABLE BARRIER LAYOUT STA 534+50 TO 558+50

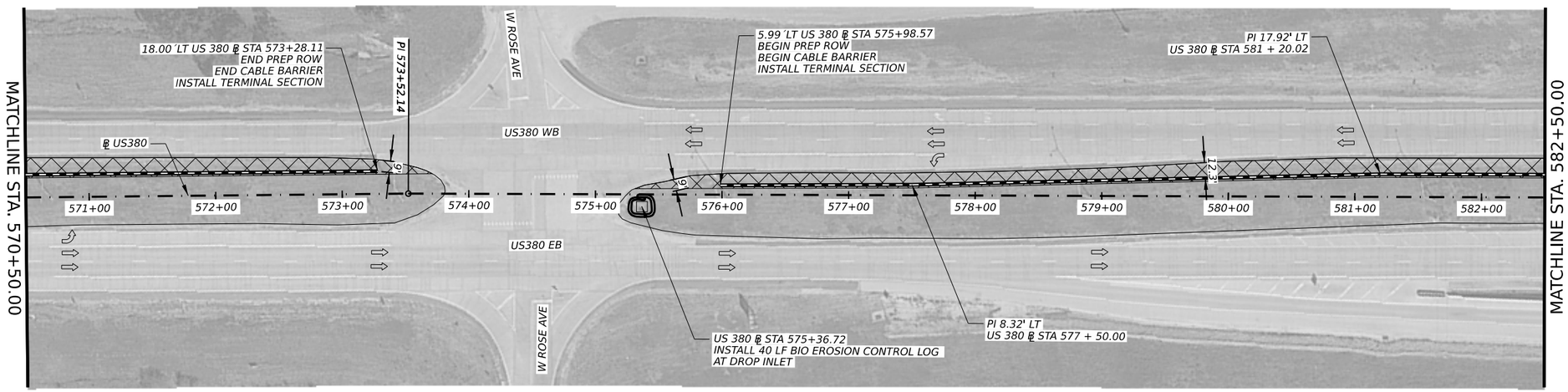
SHEET 21 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		50

DATE: 5/25/2023 10:55:23 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.56
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3391
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1696
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1696
FERTILIZER *	TON	0.42
VEGETATIVE WATERING	MG	237.38
RIPRAP (MOW STRIP)(5 IN)	CY	91.71
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	1859
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

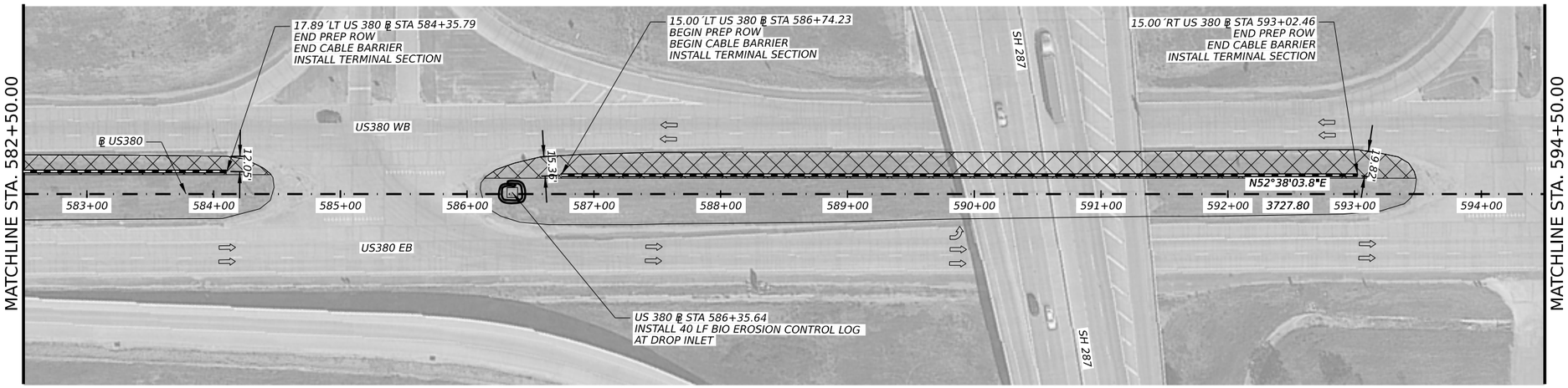
US 380

CABLE BARRIER LAYOUT
STA 558+50 TO 582+50

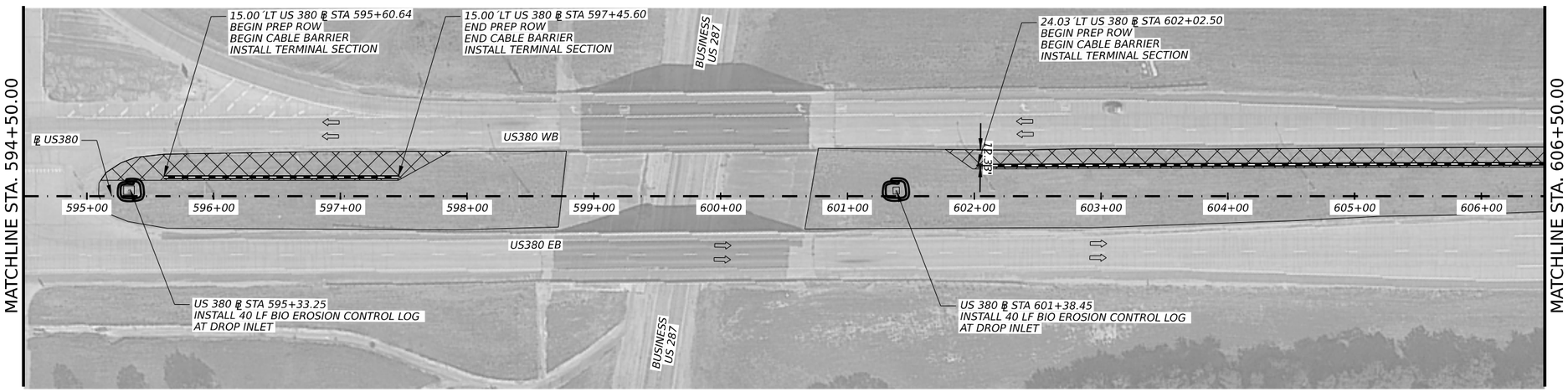
SHEET22 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		51

DATE: 5/25/2023 10:55:56 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.59
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3324
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1662
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1662
FERTILIZER *	TON	0.41
VEGETATIVE WATERING	MG	232.69
RIPRAP (MOW STRIP)(5 IN)	CY	66.62
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	120
BIODEG EROSN CONT LOGS (REMOVE)	LF	120
CABLE BARRIER SYSTEM (TL-4)	LF	1256
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	6



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

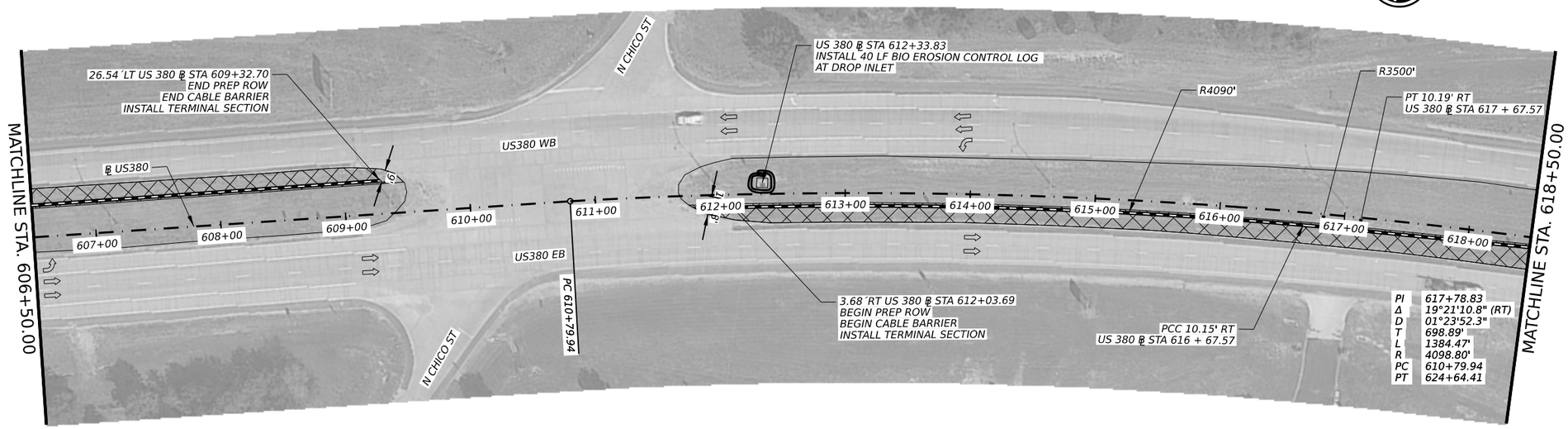
US 380

CABLE BARRIER LAYOUT
STA 582+50 TO 606+50

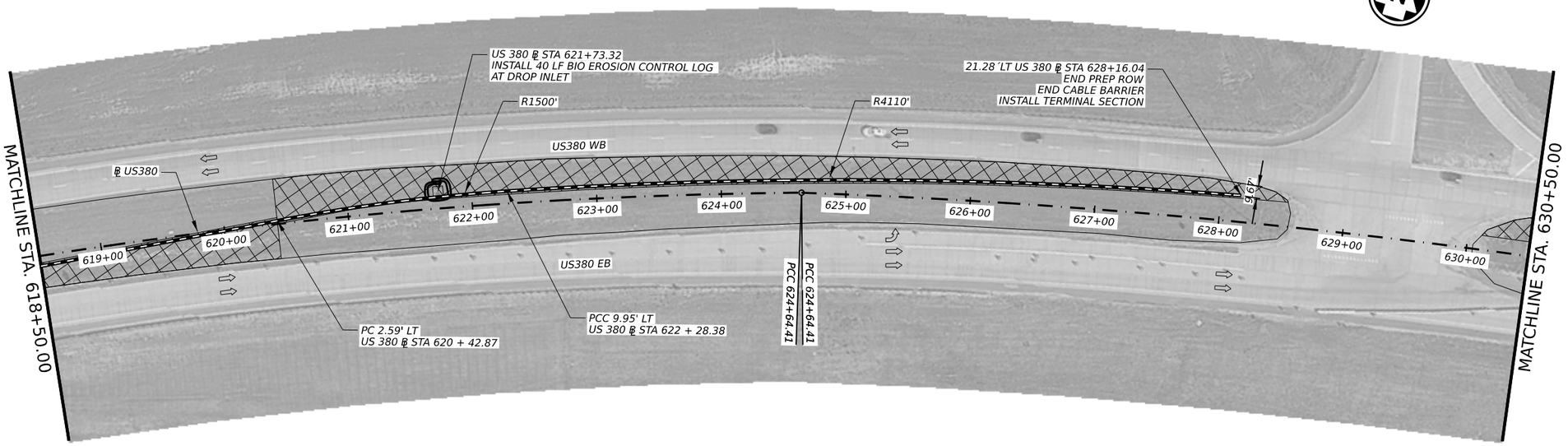
SHEET 23 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		52

DATE: 5/25/2023 10:56:29 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.75
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	4259
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2130
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2130
FERTILIZER *	TON	0.53
VEGETATIVE WATERING	MG	298.14
RIPRAP (MOW STRIP)(5 IN)	CY	87.73
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
BIODEG EROSN CONT LOGS (REMOVE)	LF	80
CABLE BARRIER SYSTEM (TL-4)	LF	1804
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	3



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

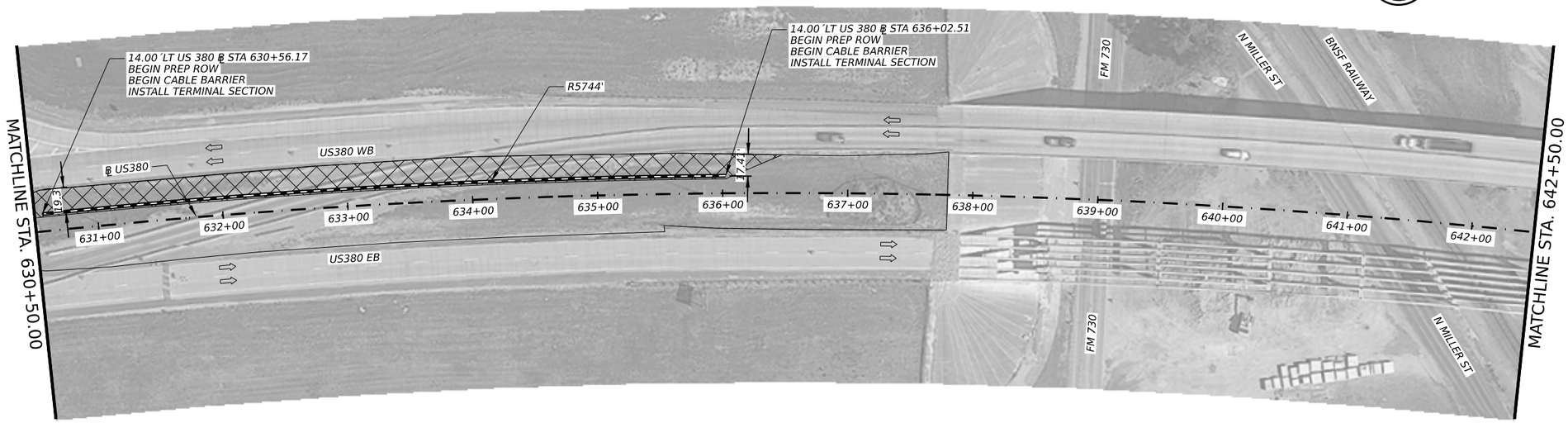
US 380

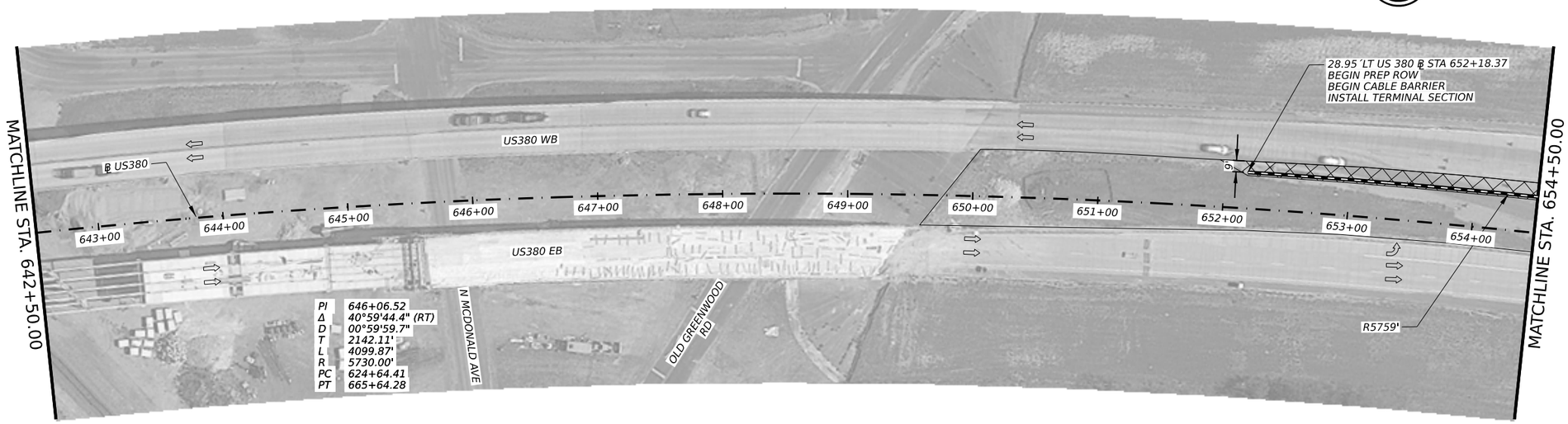
CABLE BARRIER LAYOUT
STA 606+50 TO 630+50

SHEET24 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		53

DATE: 5/25/2023 10:57:16 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn





CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.30
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	1739
CELL FBR MLCH SEED(TEMP)(WARM)	SY	869
CELL FBR MLCH SEED(TEMP)(COOL)	SY	869
FERTILIZER *	TON	0.22
VEGETATIVE WATERING	MG	121.71
RIPRAP (MOW STRIP)(5 IN)	CY	36.57
CABLE BARRIER SYSTEM (TL-4)	LF	699
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	3

0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

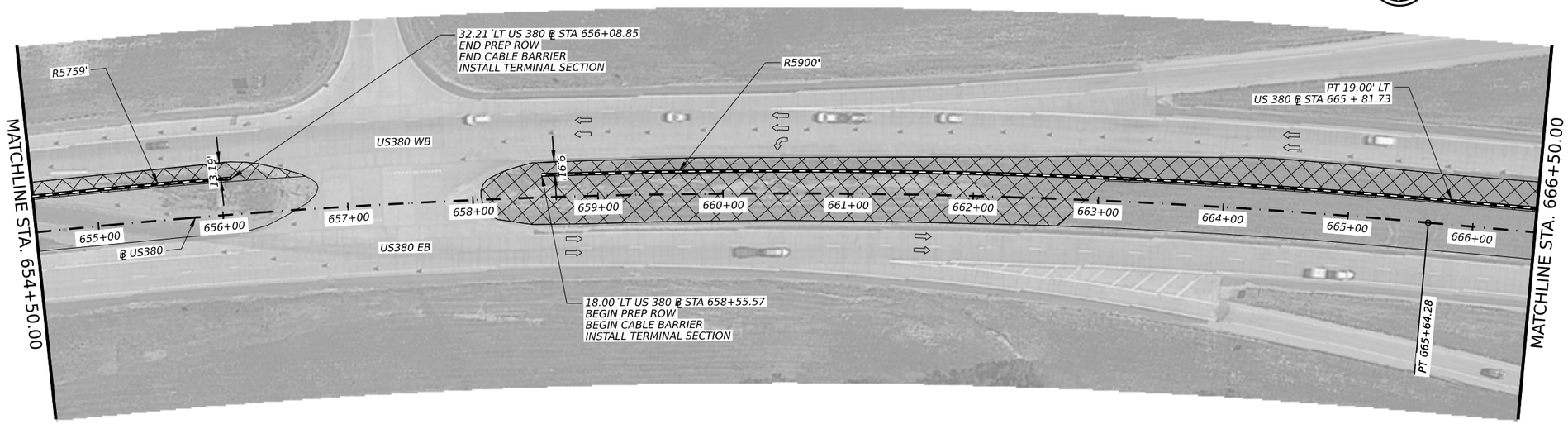
US 380

CABLE BARRIER LAYOUT STA 630+50 TO 654+50

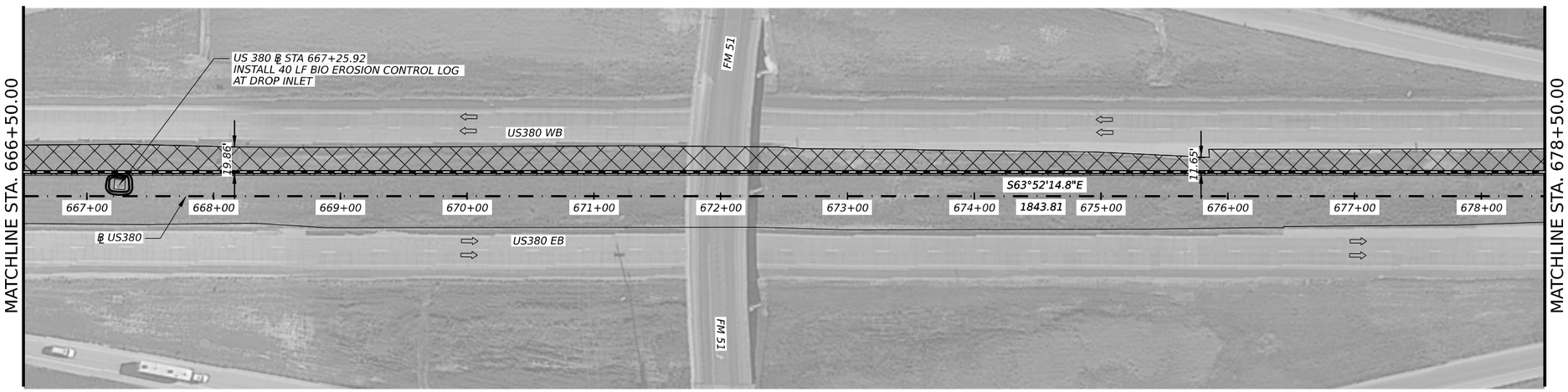
SHEET25 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		54

DATE: 5/25/2023 10:58:03 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.25
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	6775
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3388
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3388
FERTILIZER *	TON	0.84
VEGETATIVE WATERING	MG	474.26
RIPRAP (MOW STRIP)(5 IN)	CY	100.09
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2101
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100

SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Ramos, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

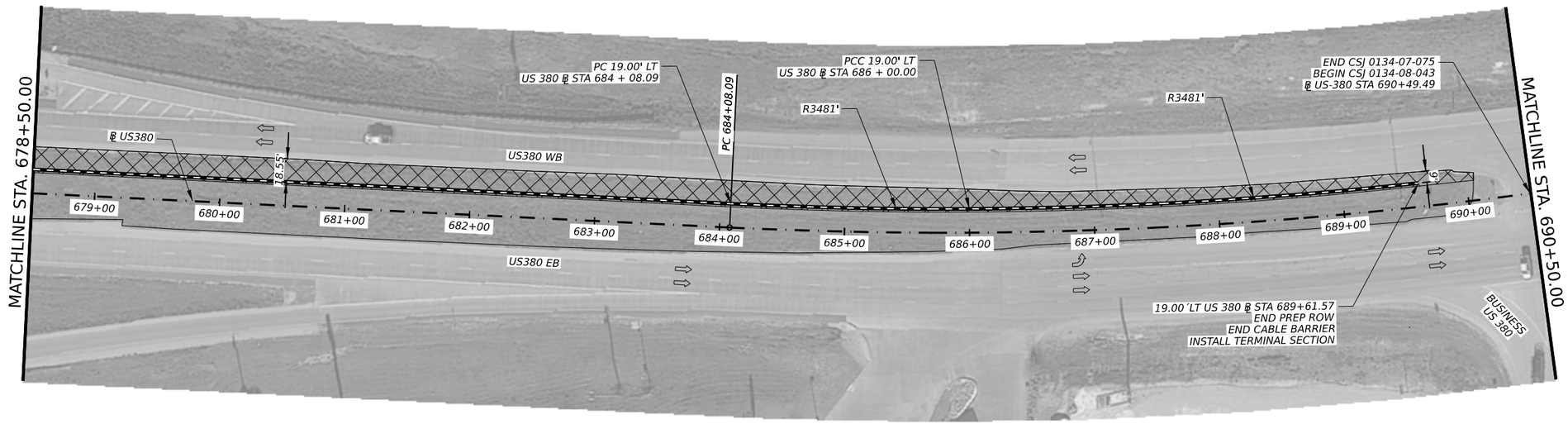
US 380

CABLE BARRIER LAYOUT STA 654+50 TO 678+50

SHEET26 OF 50

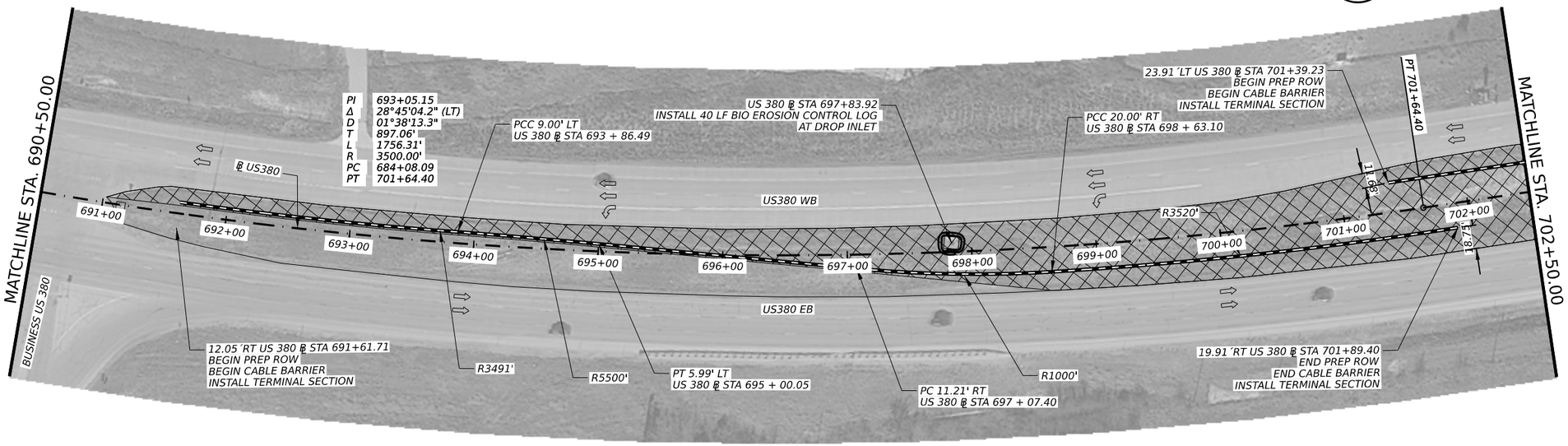
CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		55

DATE: 5/25/2023 10:58:33 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-07-075 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.40
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	2322
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1161
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1161
FERTILIZER *	TON	0.29
VEGETATIVE WATERING	MG	162.52
RIPRAP (MOW STRIP)(5 IN)	CY	51.48
CABLE BARRIER SYSTEM (TL-4)	LF	1082
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	1

CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.93
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	4882
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2441
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2441
FERTILIZER *	TON	0.61
VEGETATIVE WATERING	MG	341.74
RIPRAP (MOW STRIP)(5 IN)	CY	53.24
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	1059
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	3



0 50 100

SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 75240
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

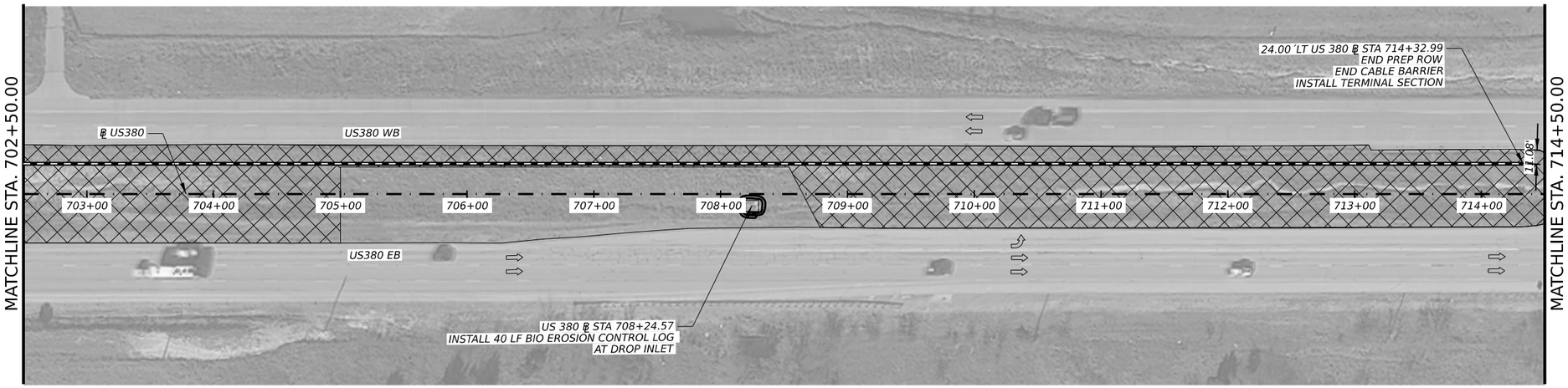
US 380

CABLE BARRIER LAYOUT STA 678+50 TO 702+50

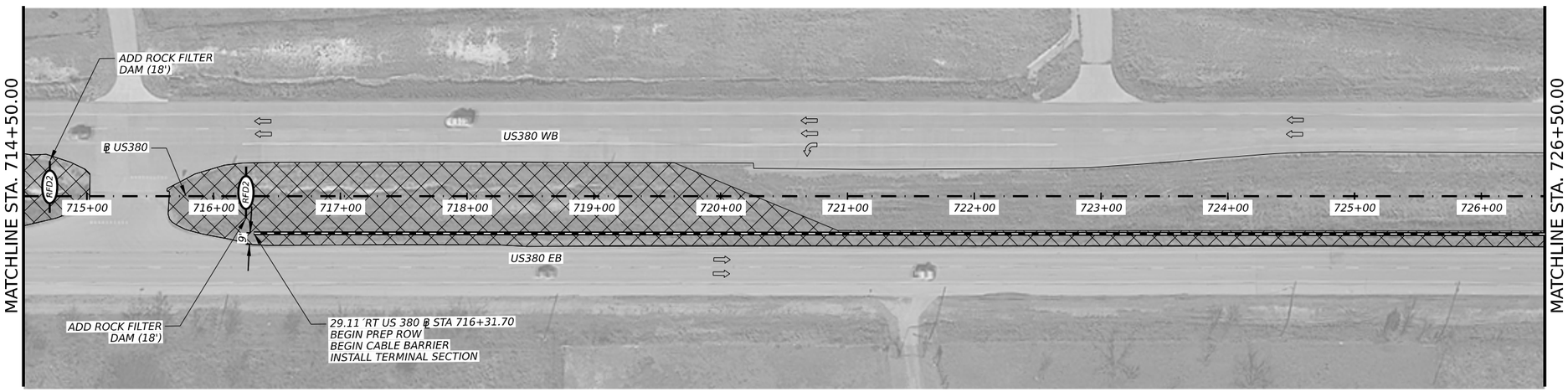
SHEET27 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		56

DATE: 5/25/2023 10:59:09 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	2.18
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	11303
CELL FBR MLCH SEED(TEMP)(WARM)	SY	5652
CELL FBR MLCH SEED(TEMP)(COOL)	SY	5652
FERTILIZER *	TON	1.40
VEGETATIVE WATERING	MG	791.23
RIPRAP (MOW STRIP)(5 IN)	CY	102.18
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2146
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

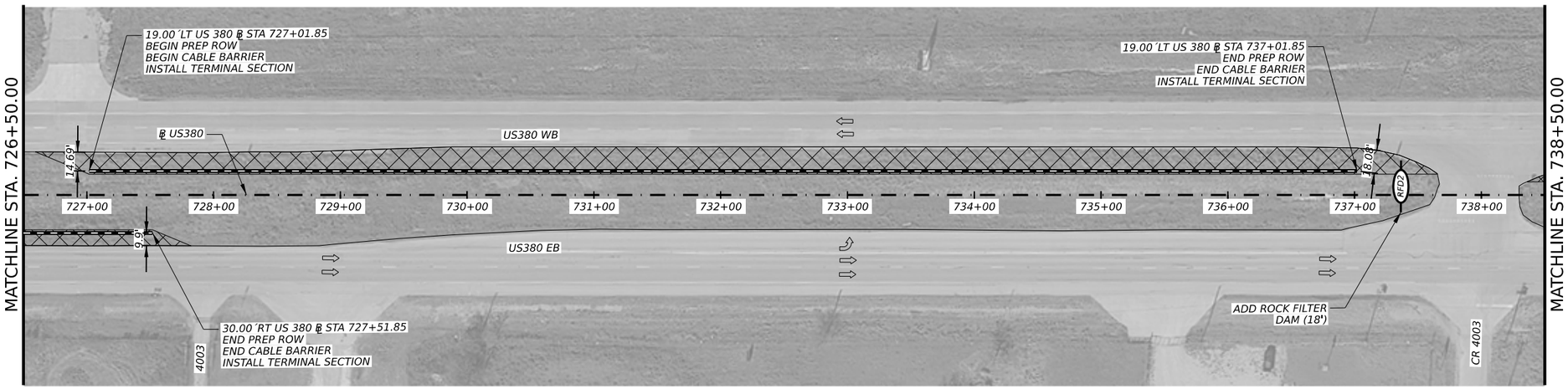
US 380

CABLE BARRIER LAYOUT
STA 702+50 TO 726+50

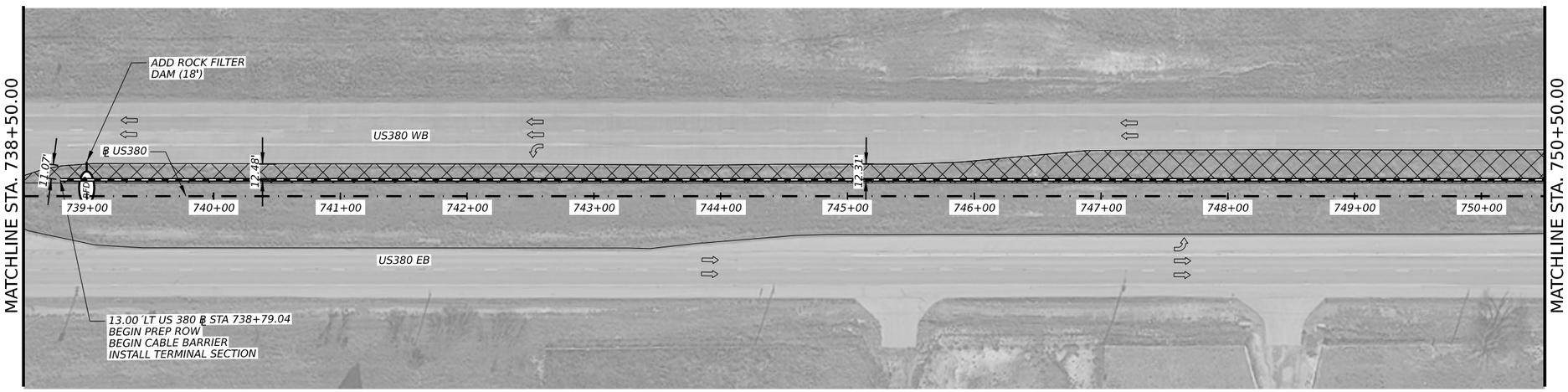
SHEET28 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		57

DATE: 5/25/2023 10:59:52 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.88
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	5042
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2521
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2521
FERTILIZER *	TON	0.63
VEGETATIVE WATERING	MG	352.96
RIPRAP (MOW STRIP)(5 IN)	CY	105.79
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
CABLE BARRIER SYSTEM (TL-4)	LF	2163
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Jr., P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

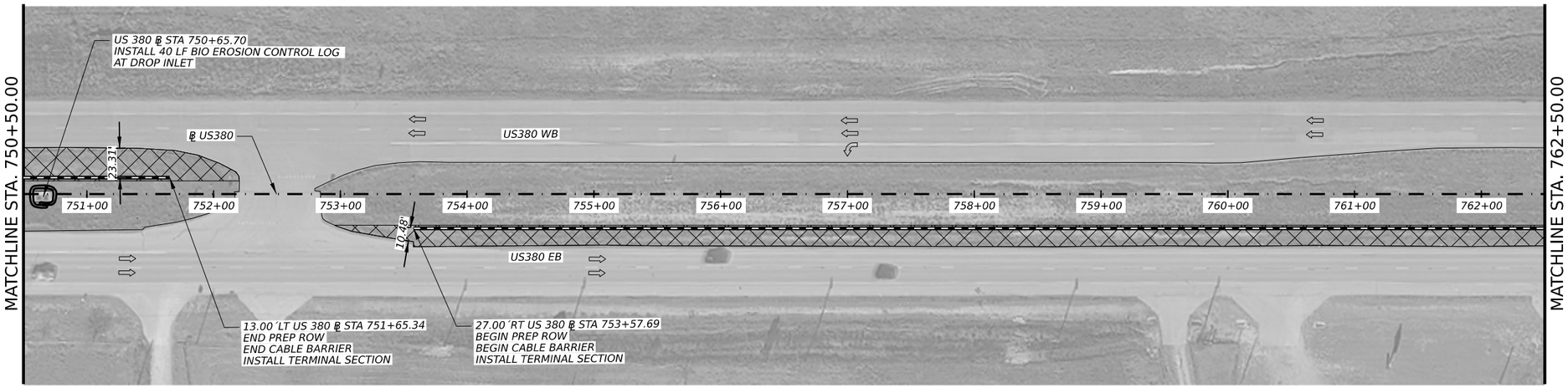
US 380

CABLE BARRIER LAYOUT
STA 726+50 TO 750+50

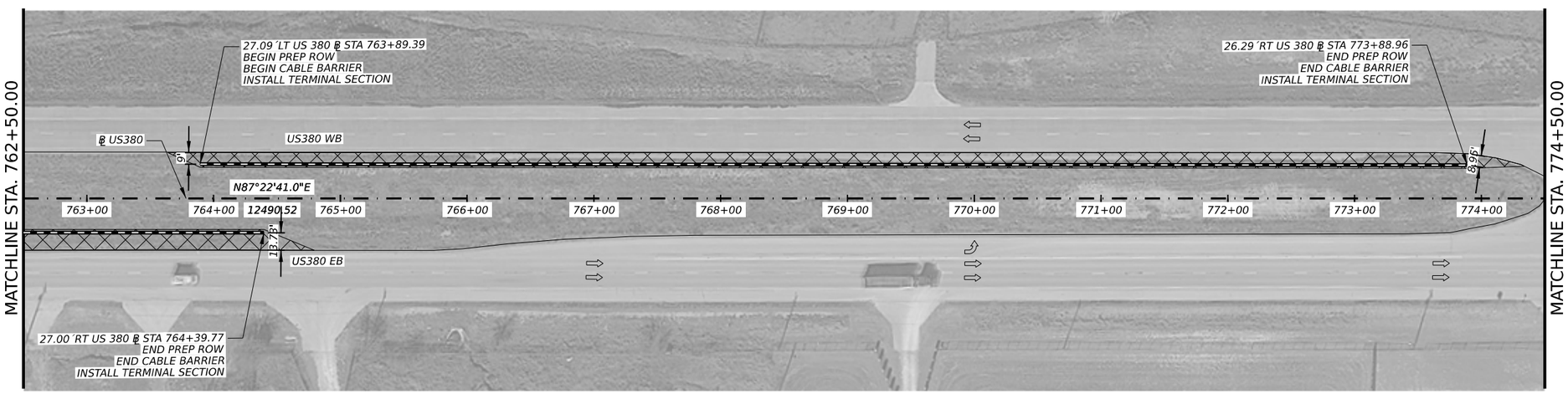
SHEET29 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		58

DATE: 5/25/2023 11:06:27 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.65
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3902
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1951
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1951
FERTILIZER *	TON	0.48
VEGETATIVE WATERING	MG	273.12
RIPRAP (MOW STRIP)(5 IN)	CY	102.41
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2060
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	5



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

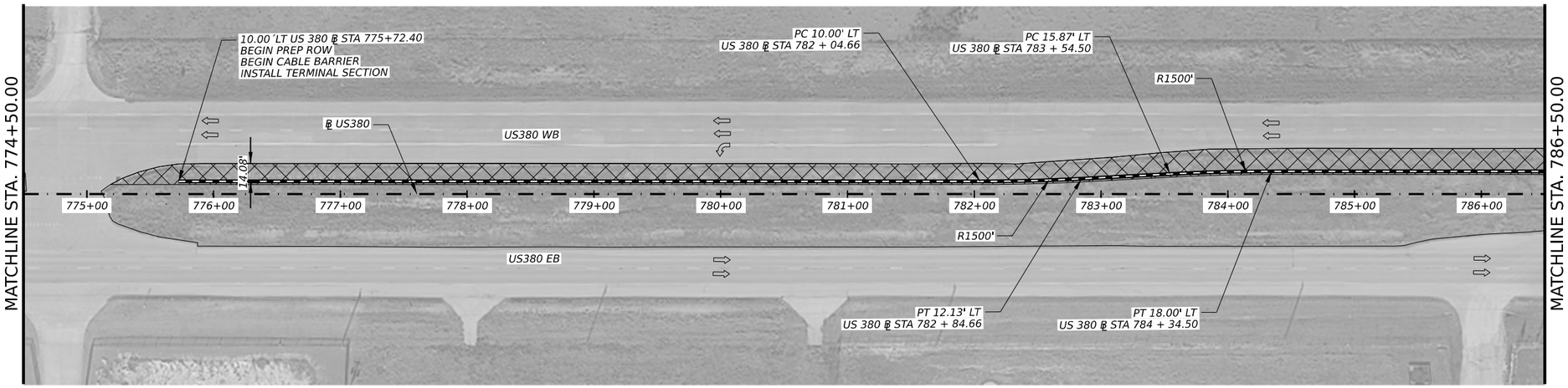
US 380

CABLE BARRIER LAYOUT
STA 750+50 TO 774+50

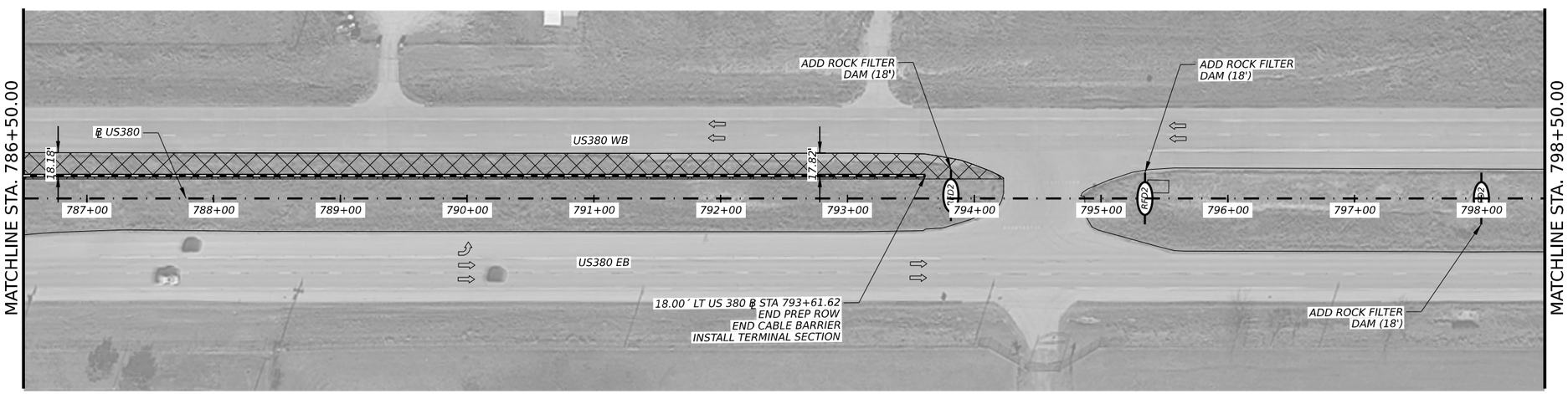
SHEET 30 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		59

DATE: 5/25/2023 11:01:00 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.68
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3884
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1942
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1942
FERTILIZER *	TON	0.48
VEGETATIVE WATERING	MG	271.85
RIPRAP (MOW STRIP)(5 IN)	CY	83.10
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	54
ROCK FILTER DAMS (REMOVE)	LF	54
CABLE BARRIER SYSTEM (TL-4)	LF	1734
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

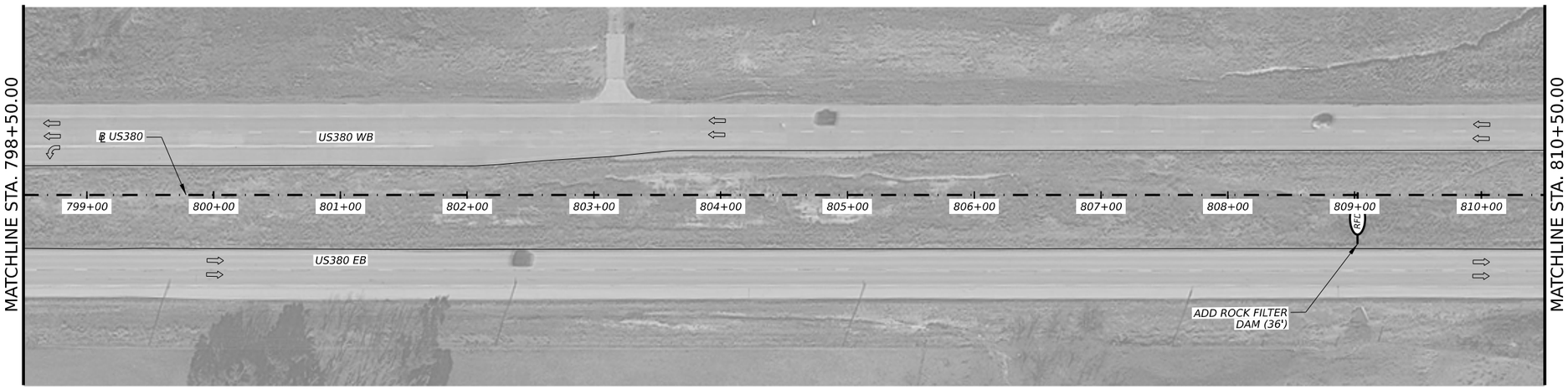
US 380

CABLE BARRIER LAYOUT
STA 774+50 TO 798+50

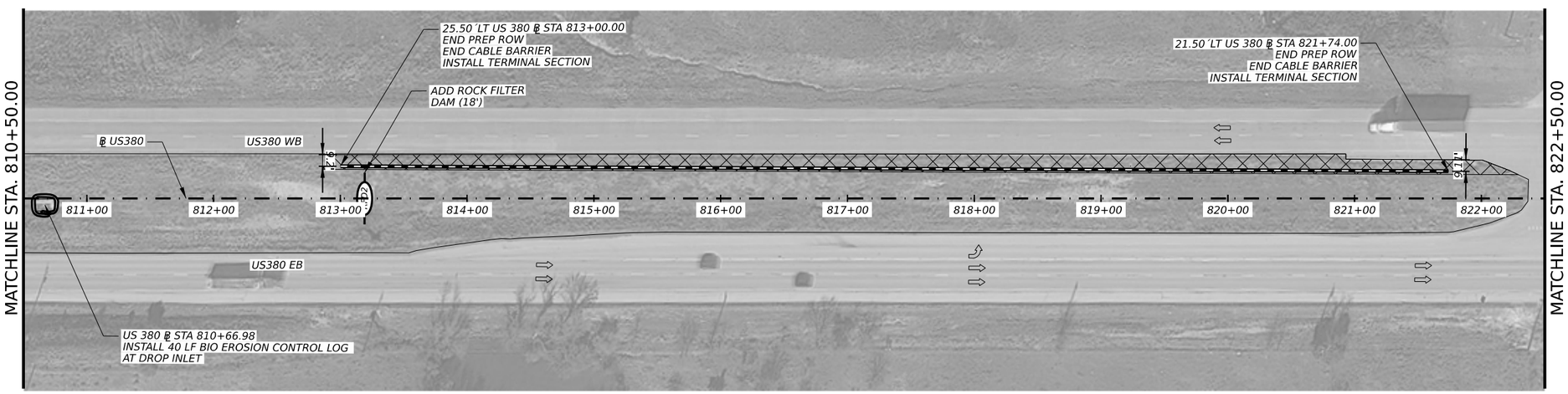
SHEET 31 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		60

DATE: 5/25/2023 11:01:38 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.23
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	1387
CELL FBR MLCH SEED(TEMP)(WARM)	SY	694
CELL FBR MLCH SEED(TEMP)(COOL)	SY	694
FERTILIZER *	TON	0.17
VEGETATIVE WATERING	MG	97.10
RIPRAP (MOW STRIP)(5 IN)	CY	40.74
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	54
ROCK FILTER DAMS (REMOVE)	LF	54
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	819
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Jr., P.E.

AECOM
1355S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

US 380

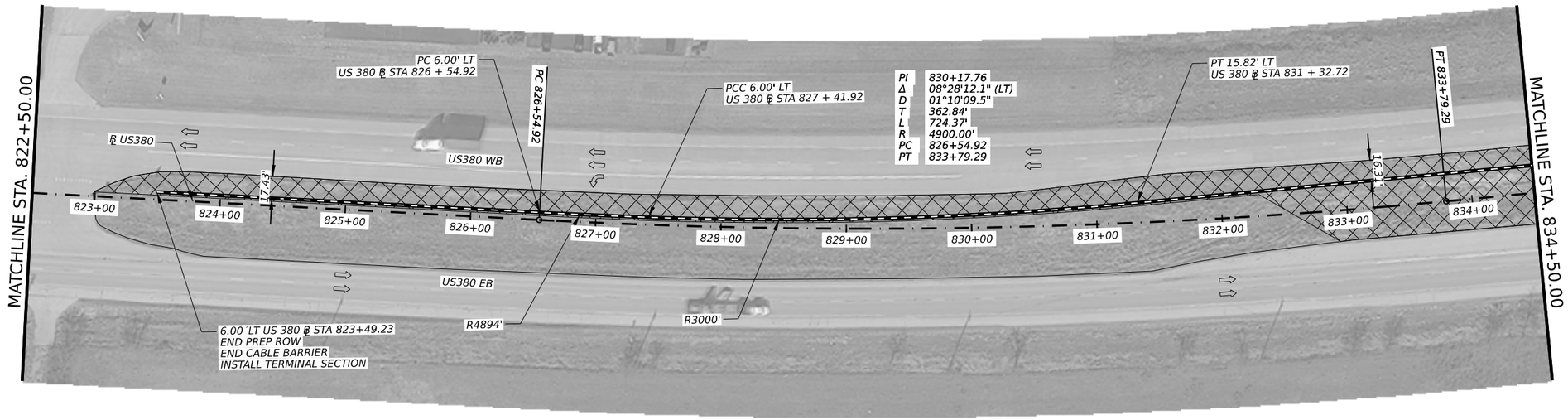
CABLE BARRIER LAYOUT
STA 798+50 TO 822+50

SHEET 32 OF 50

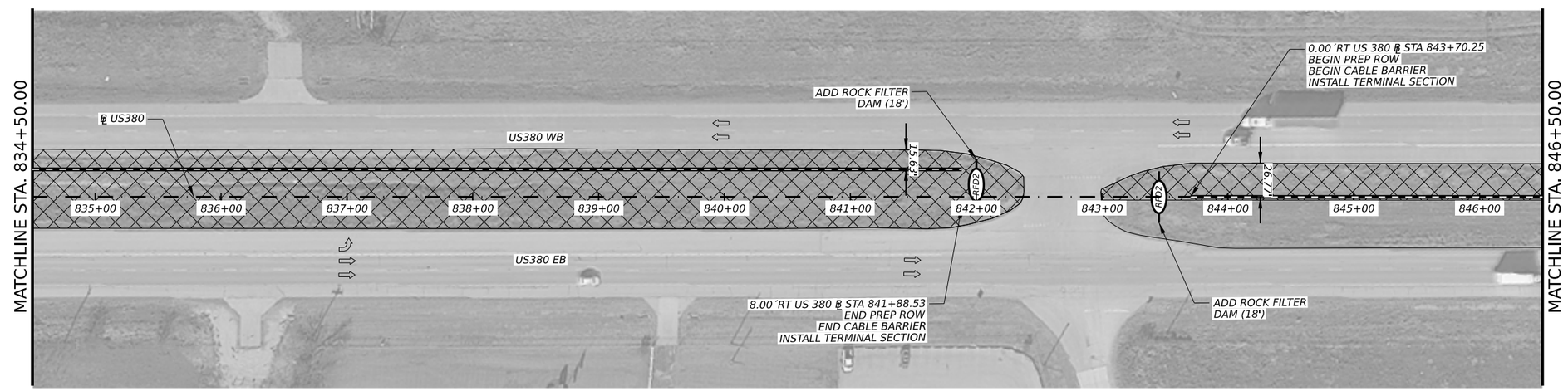
CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		61

DATE: 5/25/2023 11:02:16 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn

CK DW CK DW



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.90
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	9905
CELL FBR MLCH SEED(TEMP)(WARM)	SY	4952
CELL FBR MLCH SEED(TEMP)(COOL)	SY	4952
FERTILIZER *	TON	1.23
VEGETATIVE WATERING	MG	693.33
RIPRAP (MOW STRIP)(5 IN)	CY	98.47
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
CABLE BARRIER SYSTEM (TL-4)	LF	2036
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	3



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

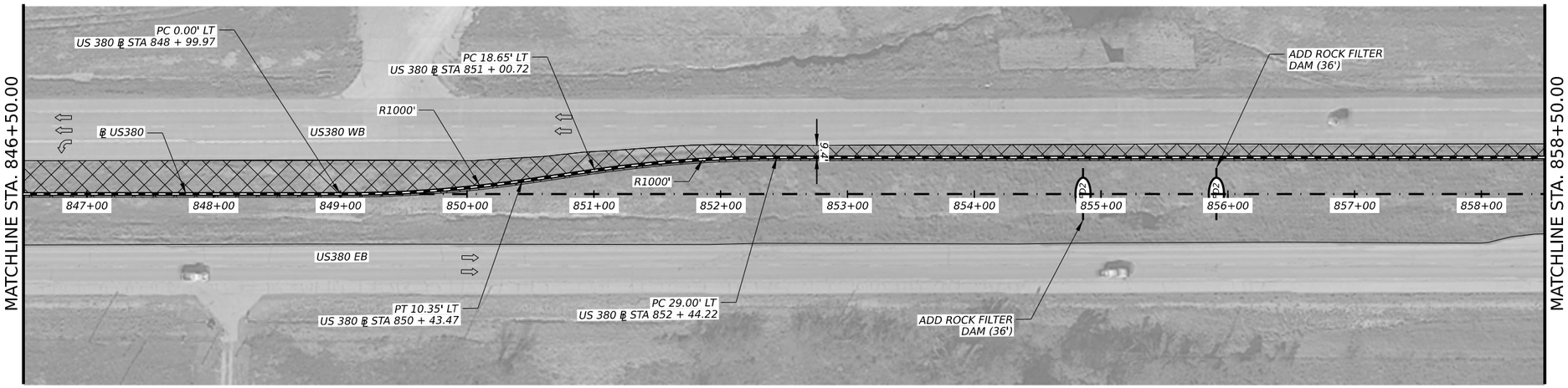
US 380

CABLE BARRIER LAYOUT
STA 822+50 TO 846+50

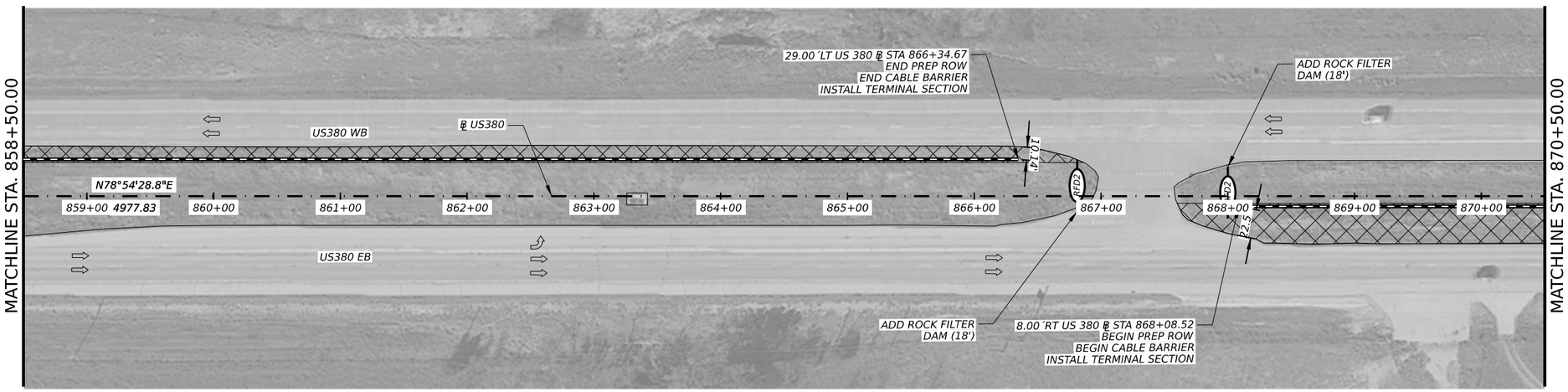
SHEET 33 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		62

DATE: 5/25/2023 11:02:52 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.79
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	4563
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2281
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2281
FERTILIZER *	TON	0.57
VEGETATIVE WATERING	MG	319.39
RIPRAP (MOW STRIP)(5 IN)	CY	103.43
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	108
ROCK FILTER DAMS (REMOVE)	LF	108
CABLE BARRIER SYSTEM (TL-4)	LF	2173
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100

SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

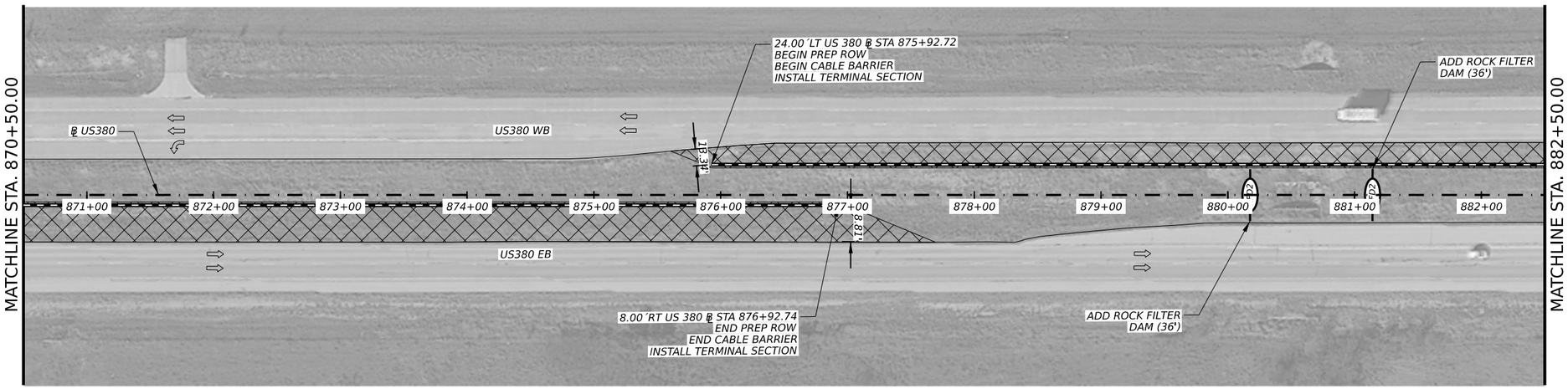
US 380

CABLE BARRIER LAYOUT
STA 846+50 TO 870+50

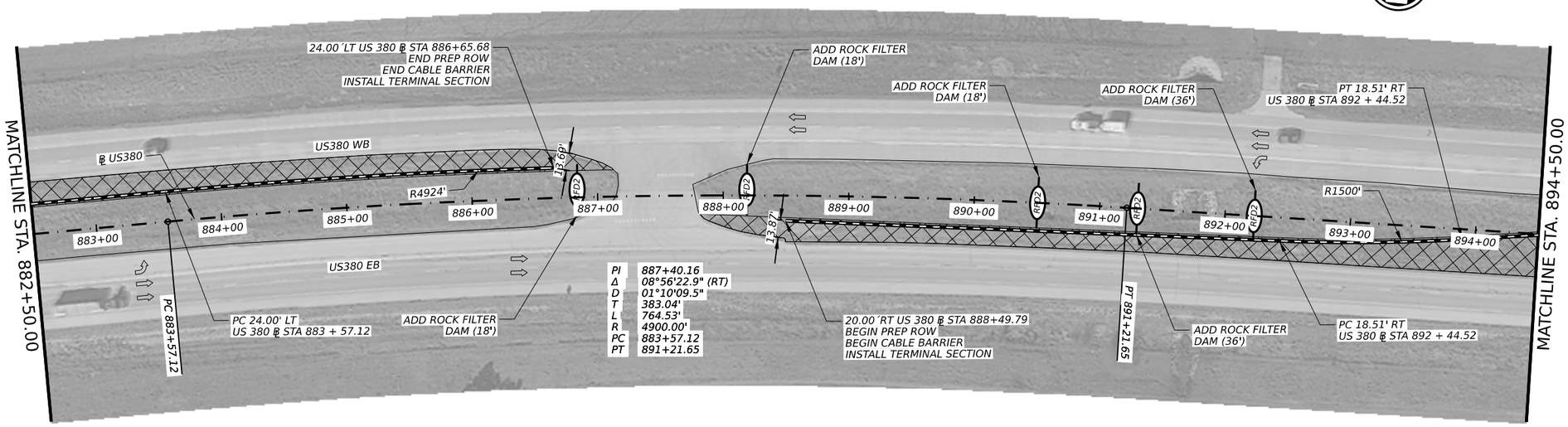
SHEET 34 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		63

DATE: 5/25/2023 11:03:29 AM
FILE: c:\pworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.11
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	6154
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3077
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3077
FERTILIZER *	TON	0.76
VEGETATIVE WATERING	MG	430.76
RIPRAP (MOW STRIP)(5 IN)	CY	107.82
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	198
ROCK FILTER DAMS (REMOVE)	LF	198
CABLE BARRIER SYSTEM (TL-4)	LF	2207
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

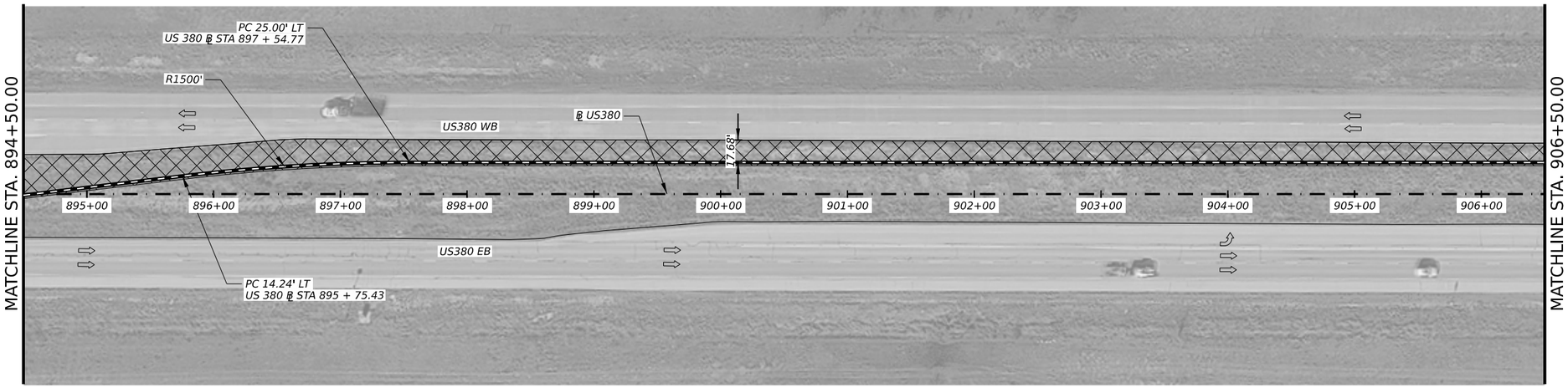
US 380

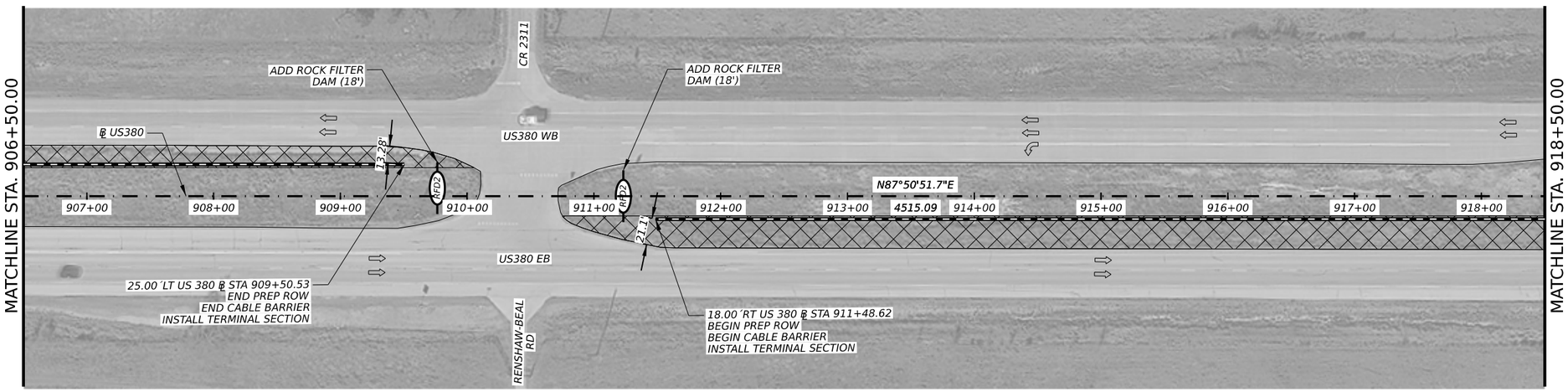
CABLE BARRIER LAYOUT
STA 870+50 TO 894+50

SHEET 35 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		64

DATE: 5/25/2023 11:04:06 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn





CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.99
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	5540
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2770
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2770
FERTILIZER *	TON	0.69
VEGETATIVE WATERING	MG	387.79
RIPRAP (MOW STRIP)(5 IN)	CY	102.27
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
CABLE BARRIER SYSTEM (TL-4)	LF	2148
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2

0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

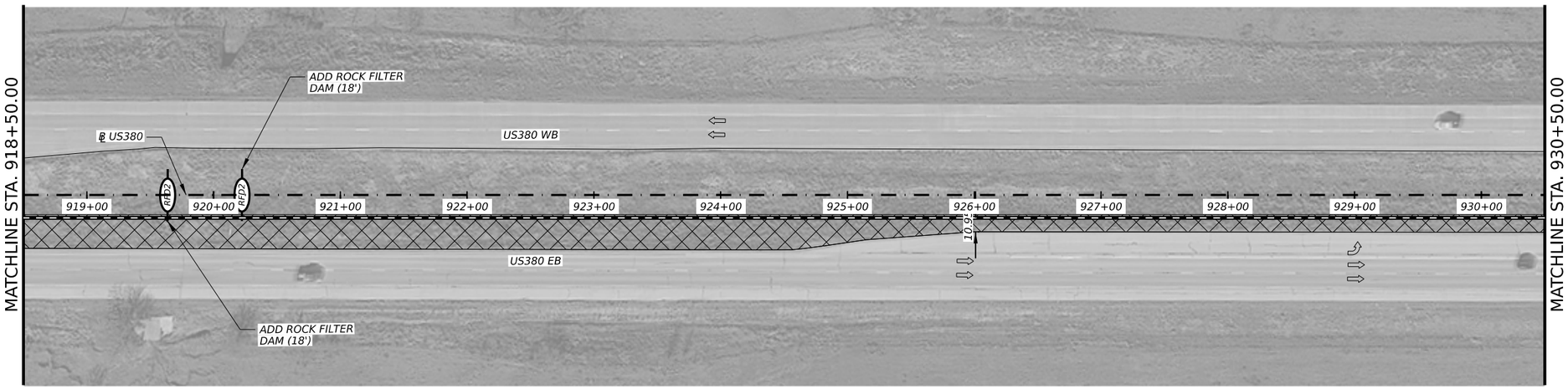
US 380

CABLE BARRIER LAYOUT STA 894+50 TO 918+50

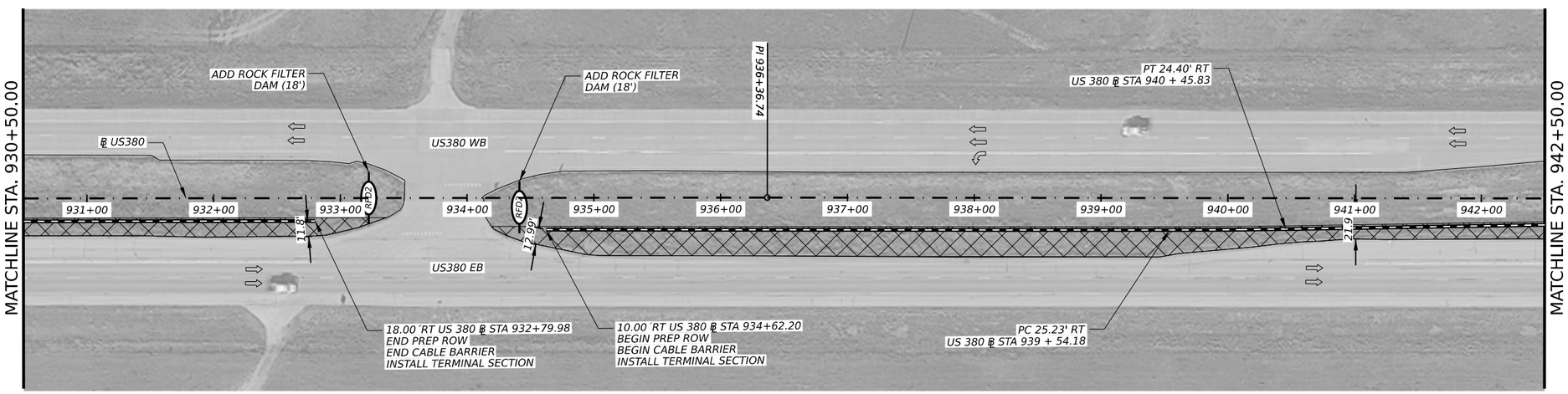
SHEET 36 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		65

DATE: 5/25/2023 11:04:41 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.88
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	5014
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2507
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2507
FERTILIZER *	TON	0.62
VEGETATIVE WATERING	MG	350.98
RIPRAP (MOW STRIP)(5 IN)	CY	102.96
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	72
ROCK FILTER DAMS (REMOVE)	LF	72
CABLE BARRIER SYSTEM (TL-4)	LF	2163
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Ramos, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

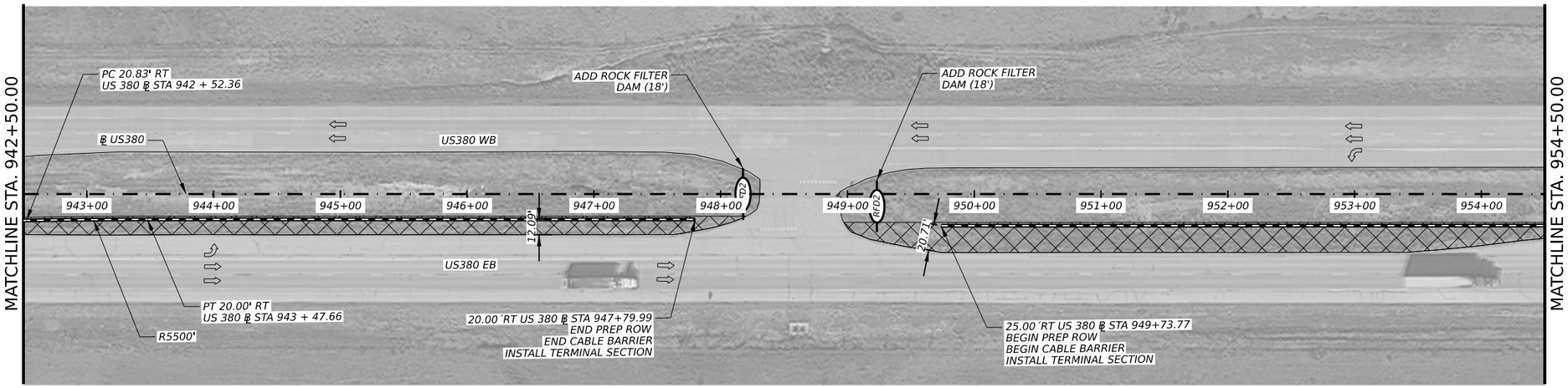
US 380

CABLE BARRIER LAYOUT
STA 918+50 TO 942+50

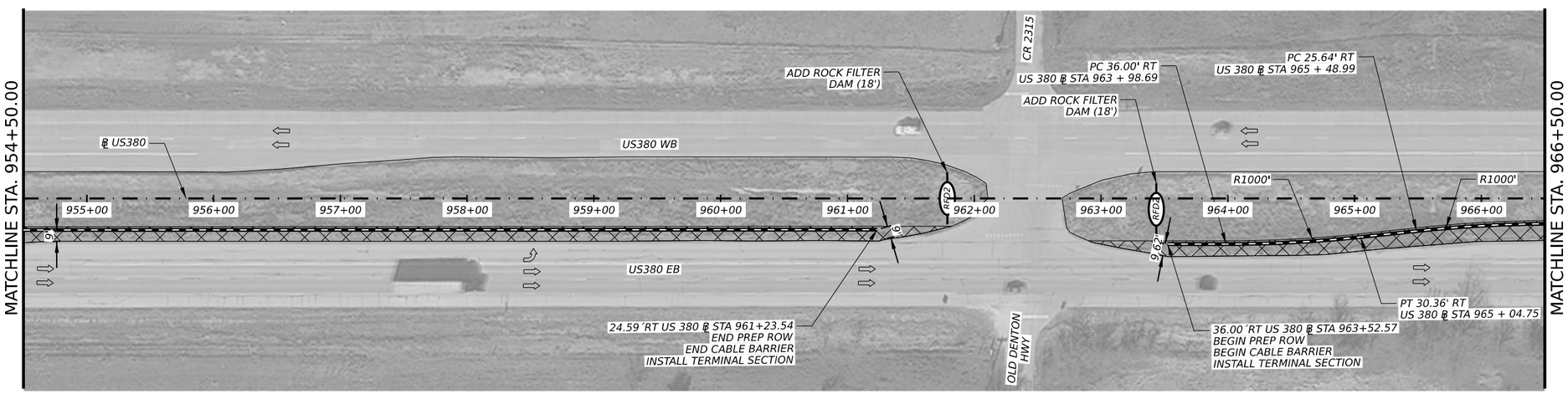
SHEET37 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		66

DATE: 5/25/2023 11:05:14 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.60
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3589
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1794
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1794
FERTILIZER *	TON	0.44
VEGETATIVE WATERING	MG	251.20
RIPRAP (MOW STRIP)(5 IN)	CY	92.13
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	72
ROCK FILTER DAMS (REMOVE)	LF	72
CABLE BARRIER SYSTEM (TL-4)	LF	1868
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

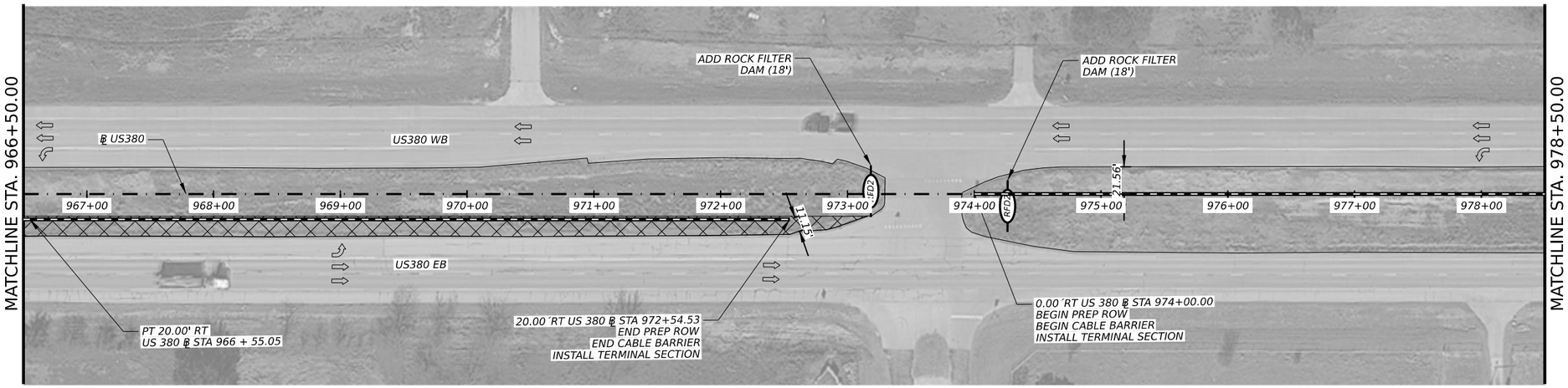
US 380

CABLE BARRIER LAYOUT
STA 942+50 TO 966+50

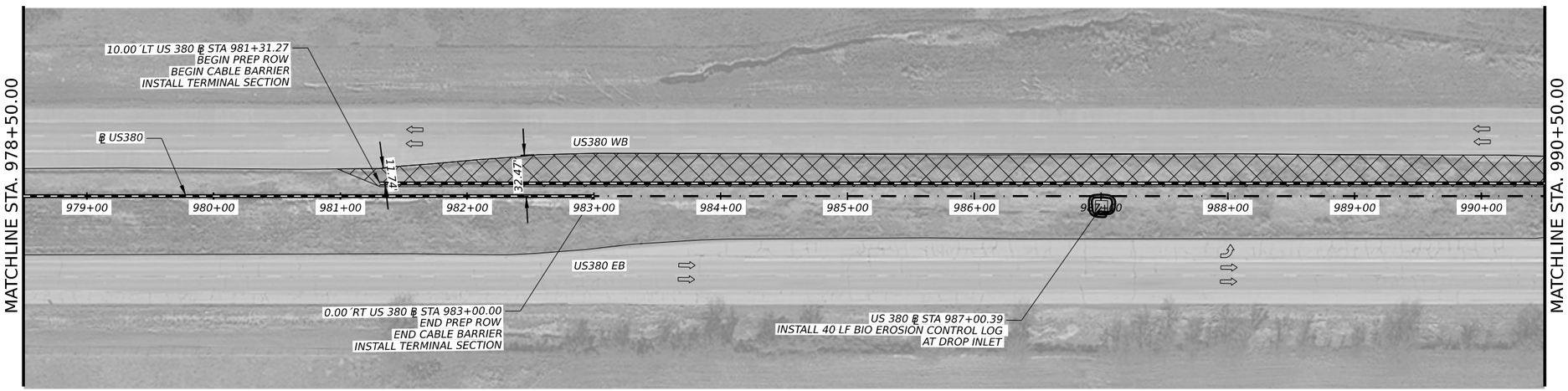
SHEET 38 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		67

DATE: 5/25/2023 11:05:42 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.59
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3651
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1825
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1825
FERTILIZER *	TON	0.45
VEGETATIVE WATERING	MG	255.54
RIPRAP (MOW STRIP)(5 IN)	CY	112.73
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2313
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

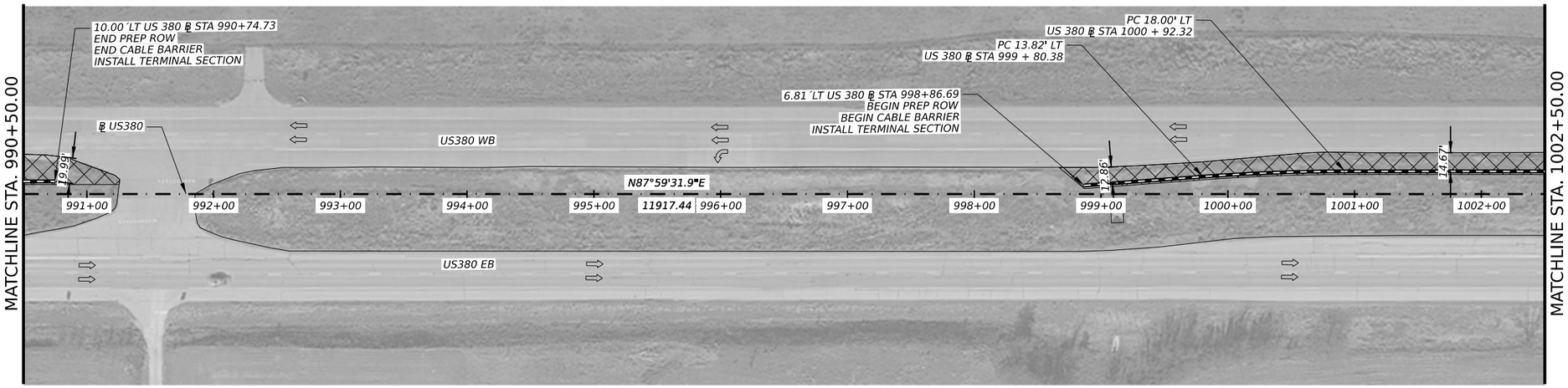
US 380

CABLE BARRIER LAYOUT STA 966+50 TO 990+50

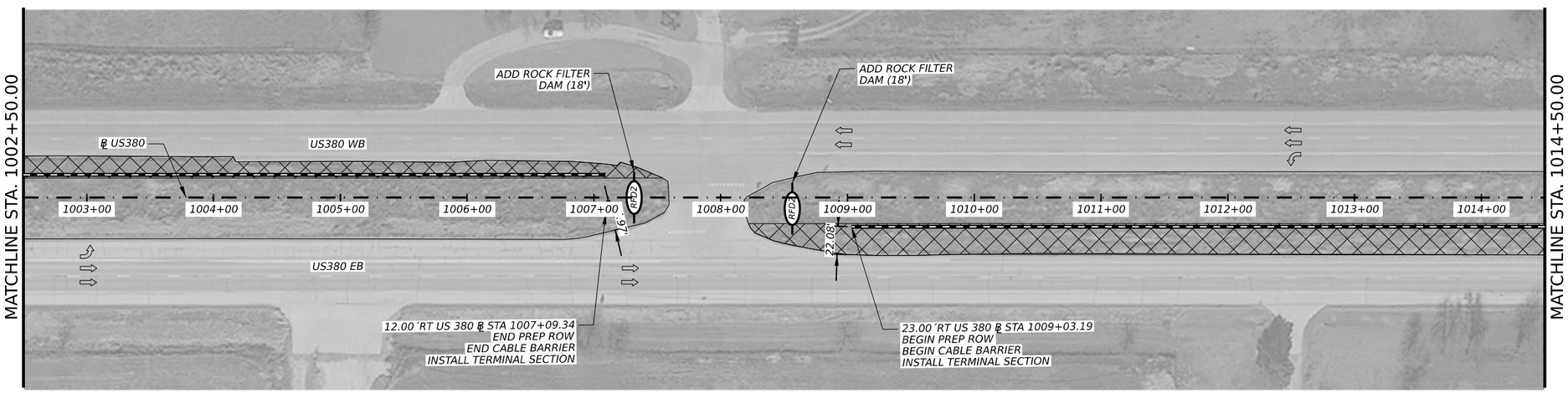
SHEET 39 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		68

DATE: 5/25/2023 11:06:09 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.57
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3232
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1616
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1616
FERTILIZER *	TON	0.40
VEGETATIVE WATERING	MG	226.24
RIPRAP (MOW STRIP)(5 IN)	CY	63.98
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
CABLE BARRIER SYSTEM (TL-4)	LF	1260
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Ernesto Salcido, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

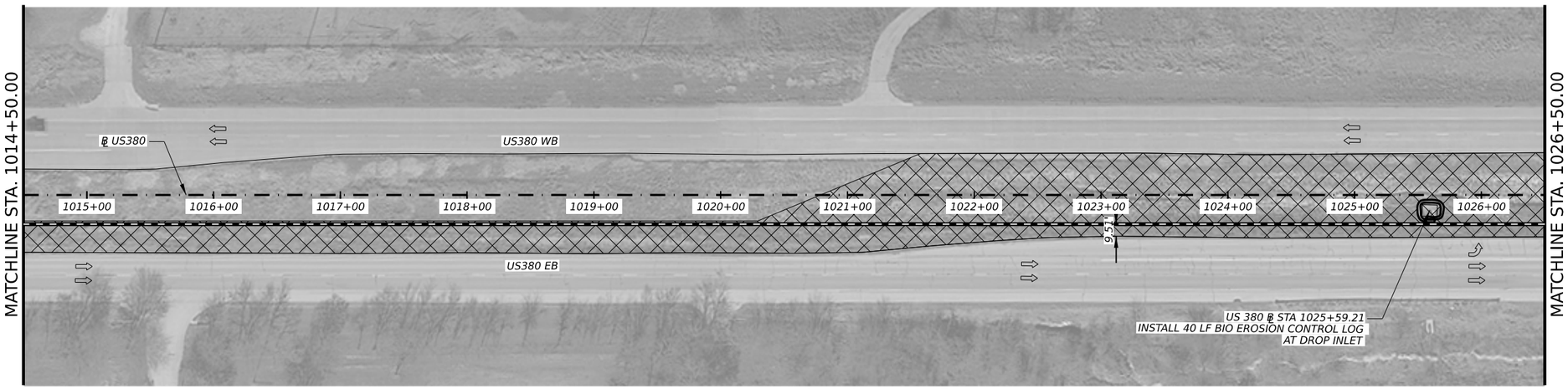
US 380

CABLE BARRIER LAYOUT
STA 990+50 TO 1014+50

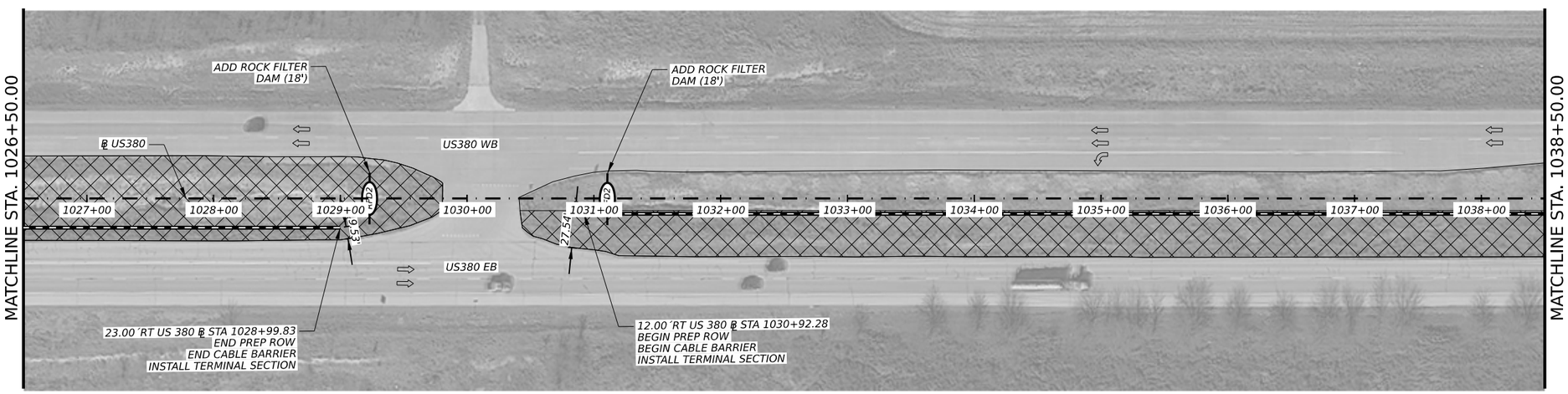
SHEET 40 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		69

DATE: 5/25/2023 11:06:37 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	2.22
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	11487
CELL FBR MLCH SEED(TEMP)(WARM)	SY	5744
CELL FBR MLCH SEED(TEMP)(COOL)	SY	5744
FERTILIZER *	TON	1.42
VEGETATIVE WATERING	MG	804.12
RIPRAP (MOW STRIP)(5 IN)	CY	102.50
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2153
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Pavia, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

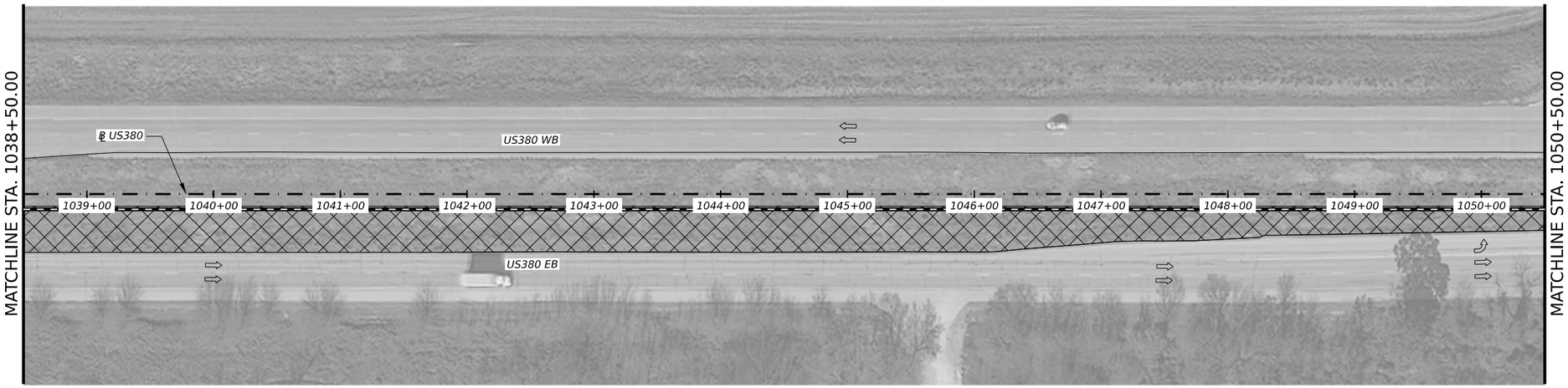
US 380

CABLE BARRIER LAYOUT
STA 1014+50 TO 1038+50

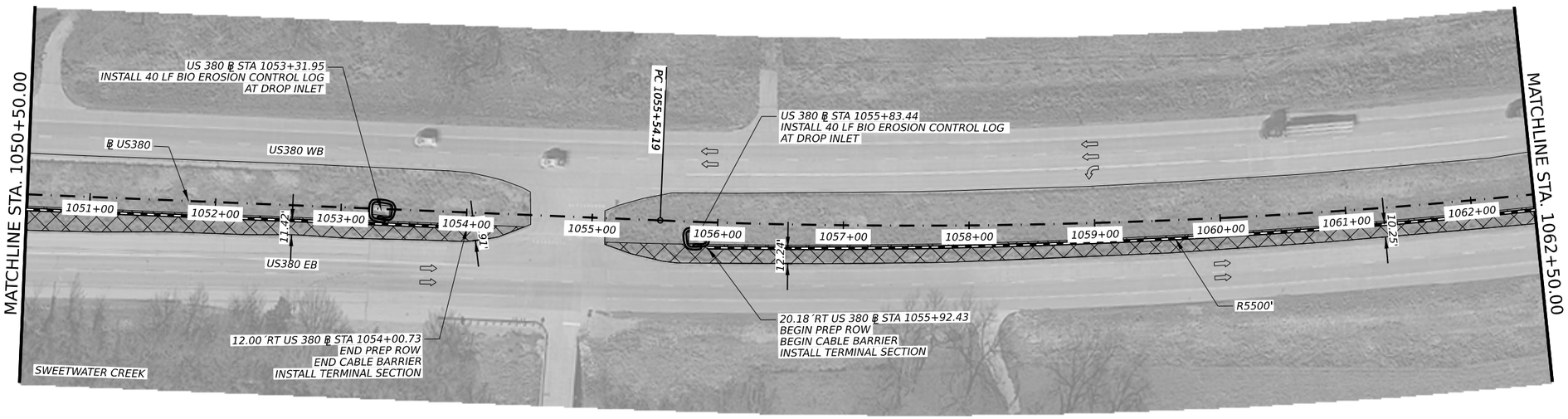
SHEET 41 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		70

DATE: 5/25/2023 11:07:09 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.10
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	6053
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3026
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3026
FERTILIZER *	TON	0.75
VEGETATIVE WATERING	MG	423.71
RIPRAP (MOW STRIP)(5 IN)	CY	102.59
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
BIODEG EROSN CONT LOGS (REMOVE)	LF	80
CABLE BARRIER SYSTEM (TL-4)	LF	2155
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100

SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Ramos, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

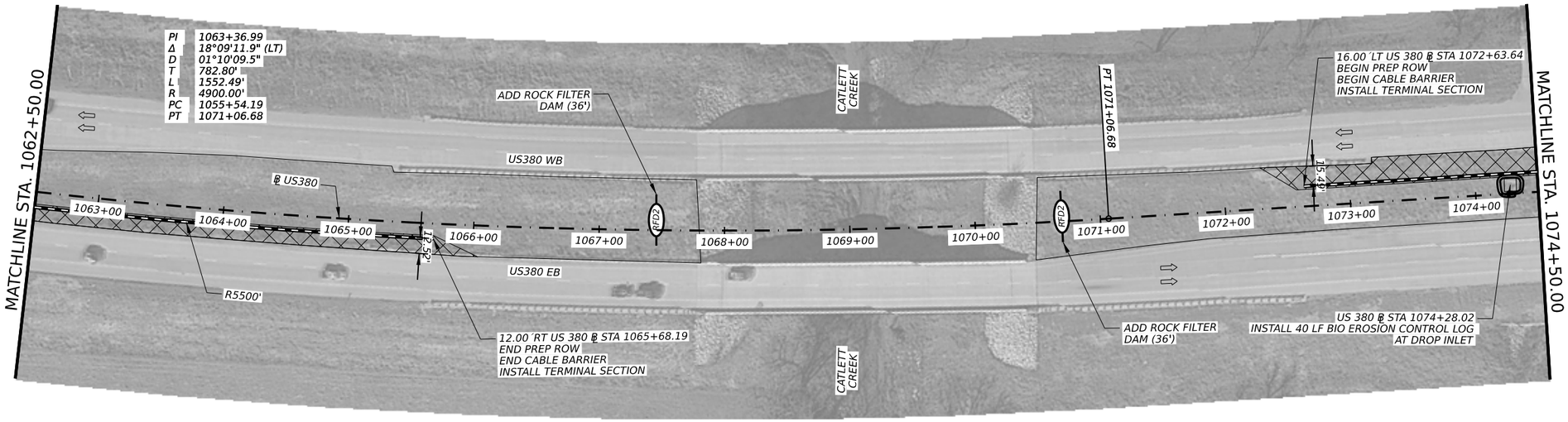
US 380

CABLE BARRIER LAYOUT STA 1038+50 TO 1062+50

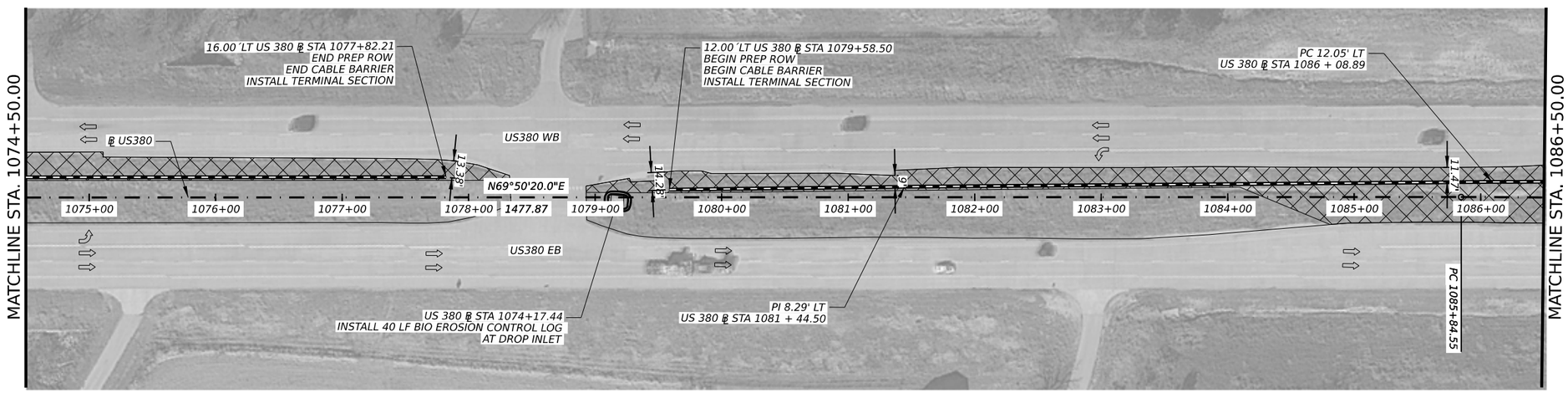
SHEET 42 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		71

DATE: 5/25/2023 11:07:47 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.65
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3671
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1835
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1835
FERTILIZER *	TON	0.46
VEGETATIVE WATERING	MG	256.97
RIPRAP (MOW STRIP)(5 IN)	CY	71.34
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	72
ROCK FILTER DAMS (REMOVE)	LF	72
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	80
BIODEG EROSN CONT LOGS (REMOVE)	LF	80
CABLE BARRIER SYSTEM (TL-4)	LF	1419
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

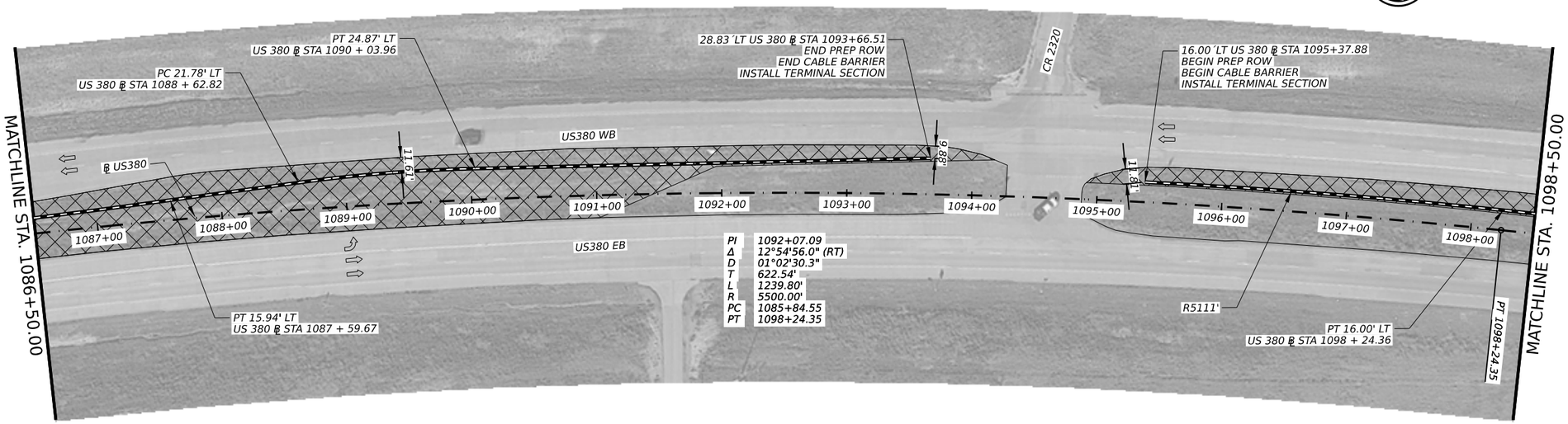
US 380

CABLE BARRIER LAYOUT STA 1062+50 TO 1086+50

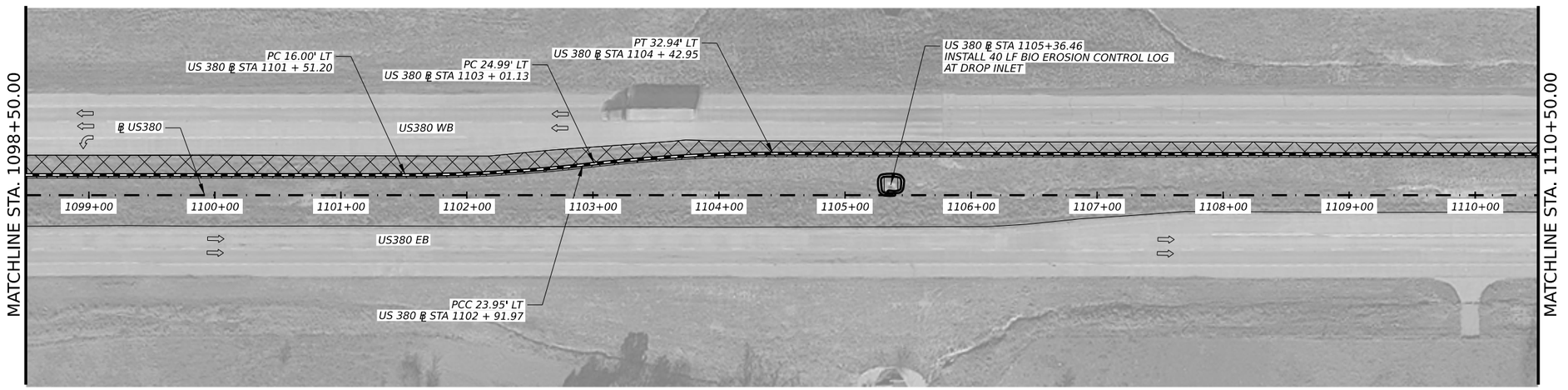
SHEET43 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		72

DATE: 5/25/2023 11:08:17 AM
FILE: c:\pw\working\ustx\dms\17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.08
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	5967
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2983
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2983
FERTILIZER *	TON	0.74
VEGETATIVE WATERING	MG	417.66
RIPRAP (MOW STRIP)(5 IN)	CY	103.66
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2178
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

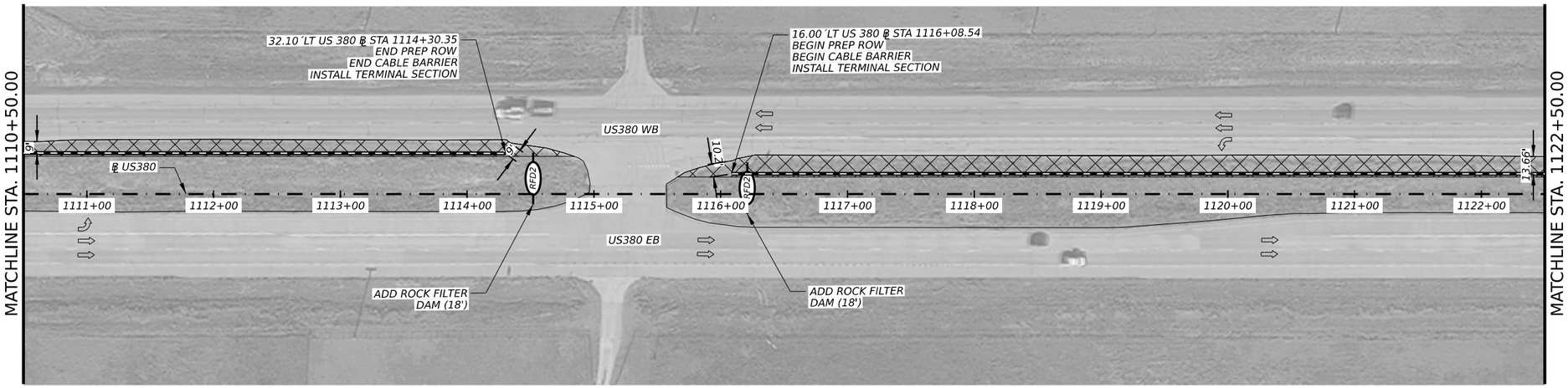
US 380

CABLE BARRIER LAYOUT STA 1086+50 TO 1110+50

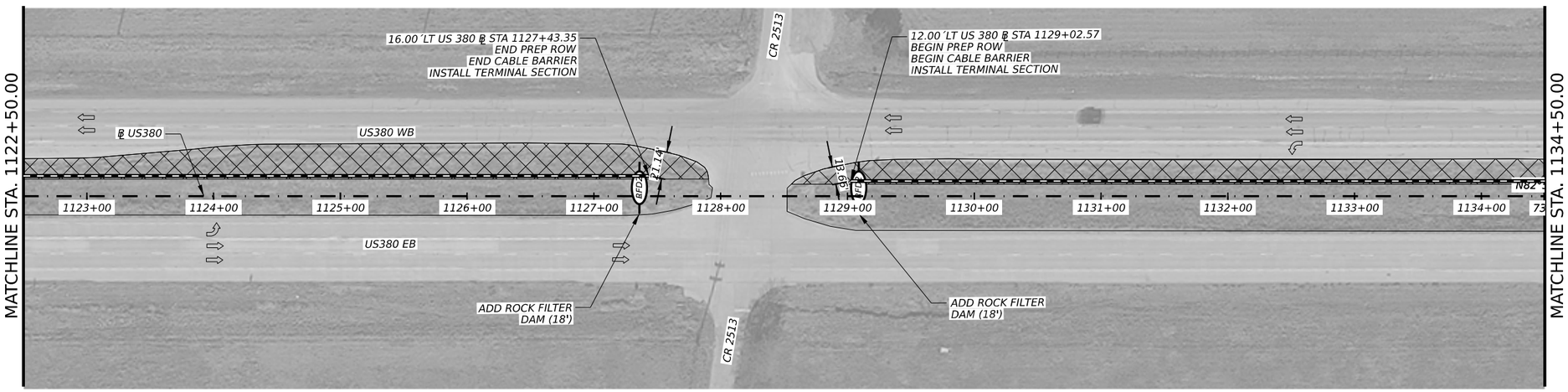
SHEET 44 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		73

DATE: 5/25/2023 11:08:46 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.80
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	4544
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2272
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2272
FERTILIZER *	TON	0.56
VEGETATIVE WATERING	MG	318.11
RIPRAP (MOW STRIP)(5 IN)	CY	96.06
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	72
ROCK FILTER DAMS (REMOVE)	LF	72
CABLE BARRIER SYSTEM (TL-4)	LF	1953
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	4



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

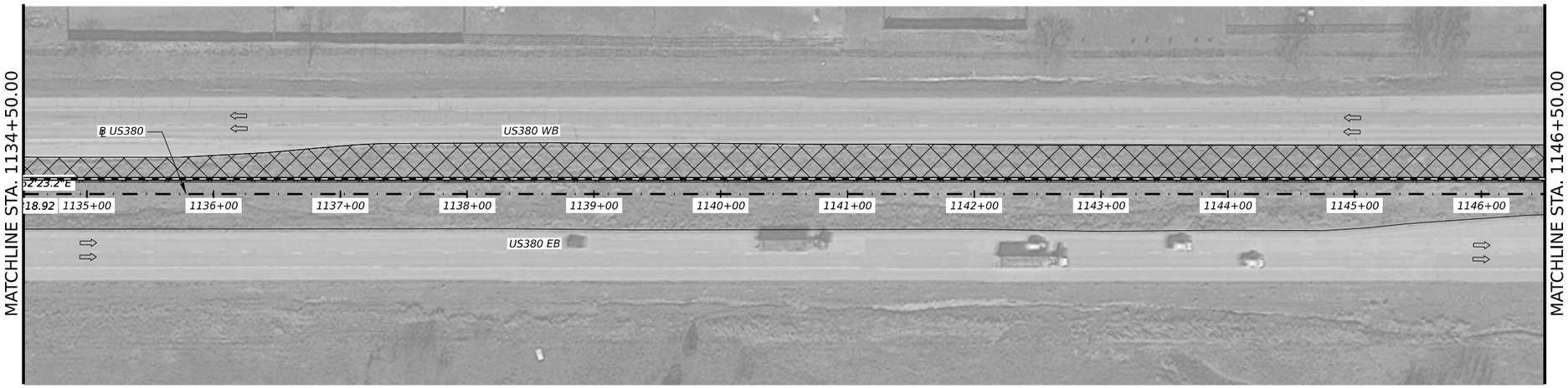
US 380

CABLE BARRIER LAYOUT STA 1110+50 TO 1134+50

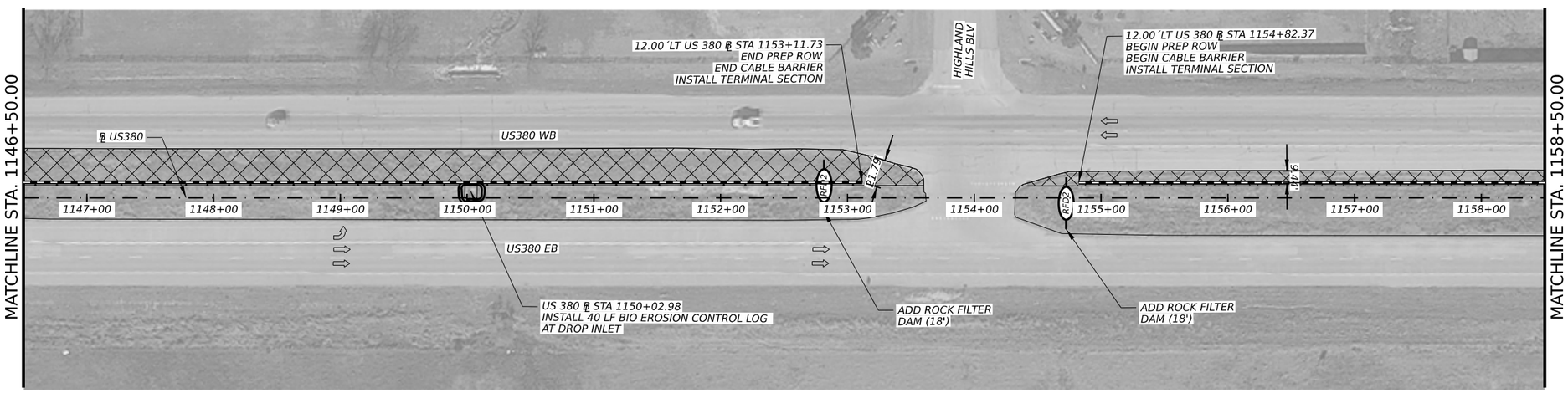
SHEET45 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		74

DATE: 5/25/2023 11:09:18 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	1.19
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	6486
CELL FBR MLCH SEED(TEMP)(WARM)	SY	3243
CELL FBR MLCH SEED(TEMP)(COOL)	SY	3243
FERTILIZER *	TON	0.80
VEGETATIVE WATERING	MG	453.99
RIPRAP (MOW STRIP)(5 IN)	CY	103.47
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	36
ROCK FILTER DAMS (REMOVE)	LF	36
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	40
BIODEG EROSN CONT LOGS (REMOVE)	LF	40
CABLE BARRIER SYSTEM (TL-4)	LF	2174
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

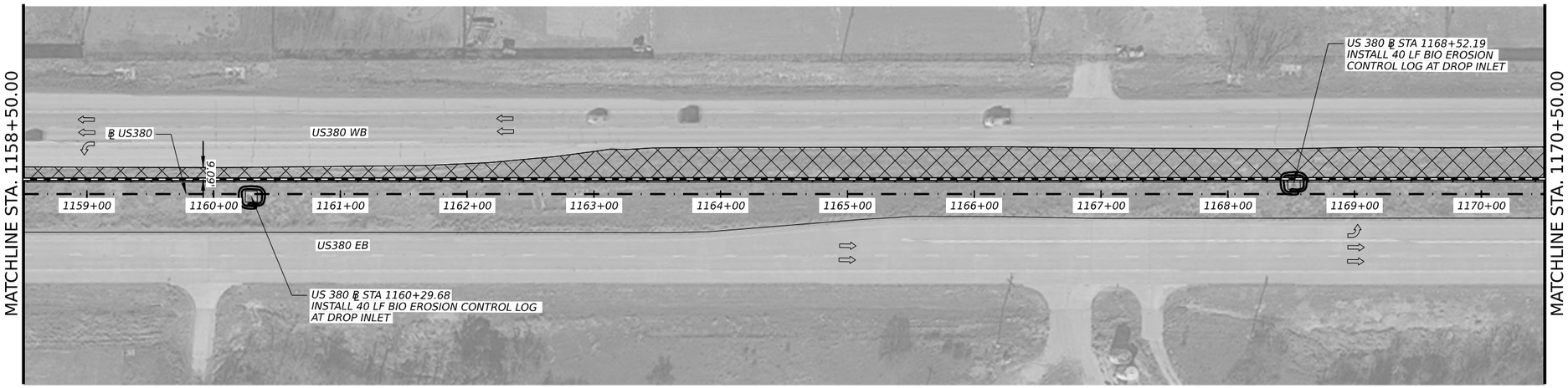
US 380

CABLE BARRIER LAYOUT STA 1134+50 TO 1158+50

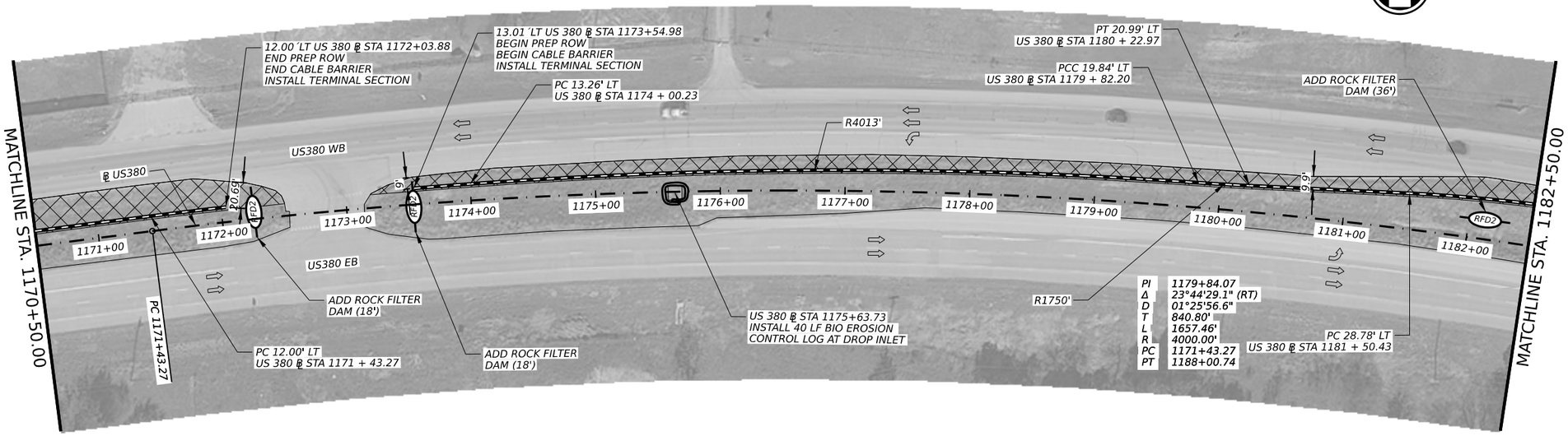
SHEET 46 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		75

DATE: 5/25/2023 11:09:53 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.87
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	4983
CELL FBR MLCH SEED(TEMP)(WARM)	SY	2491
CELL FBR MLCH SEED(TEMP)(COOL)	SY	2491
FERTILIZER *	TON	0.62
VEGETATIVE WATERING	MG	348.80
RIPRAP (MOW STRIP)(5 IN)	CY	104.63
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	72
ROCK FILTER DAMS (REMOVE)	LF	72
BIODEG EROSN CONT LOGS (INSTL) (12")	LF	120
BIODEG EROSN CONT LOGS (REMOVE)	LF	120
CABLE BARRIER SYSTEM (TL-4)	LF	2199
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	2



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

Salcido Pavia, P.E.

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

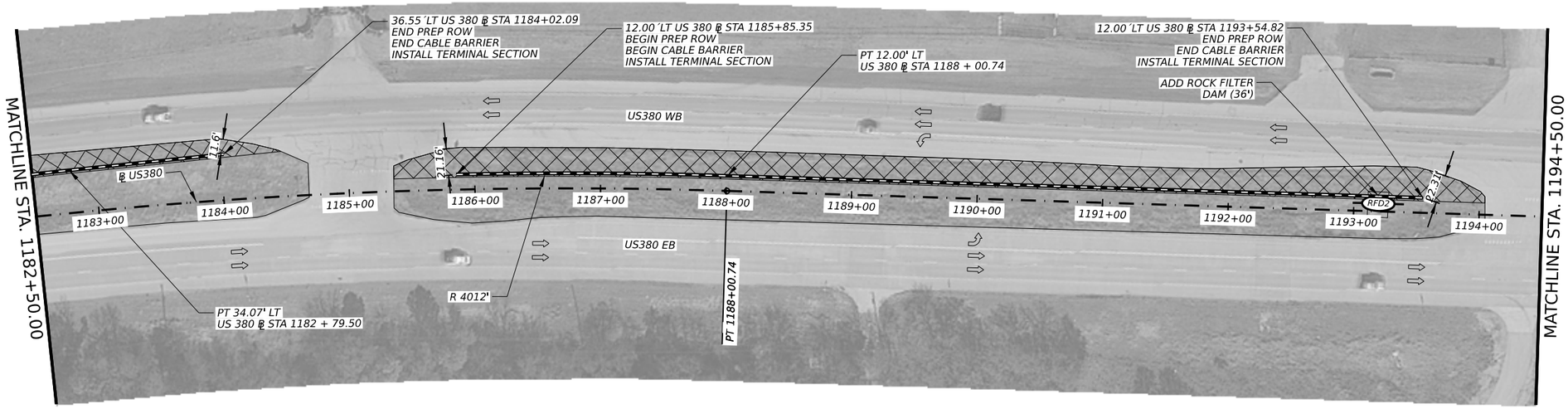
US 380

CABLE BARRIER LAYOUT STA 1158+50 TO 1182+50

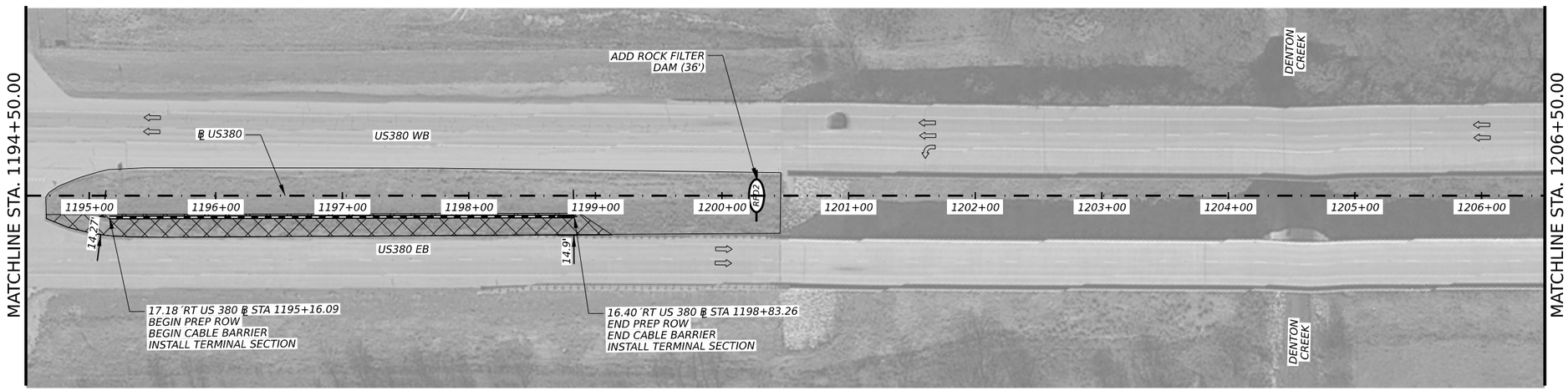
SHEET47 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		76

DATE: 5/25/2023 2:11:16 PM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.59
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3270
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1635
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1635
FERTILIZER *	TON	0.41
VEGETATIVE WATERING	MG	228.92
RIPRAP (MOW STRIP)(5 IN)	CY	60.46
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	108
ROCK FILTER DAMS (REMOVE)	LF	108
CABLE BARRIER SYSTEM (TL-4)	LF	1154
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	5



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

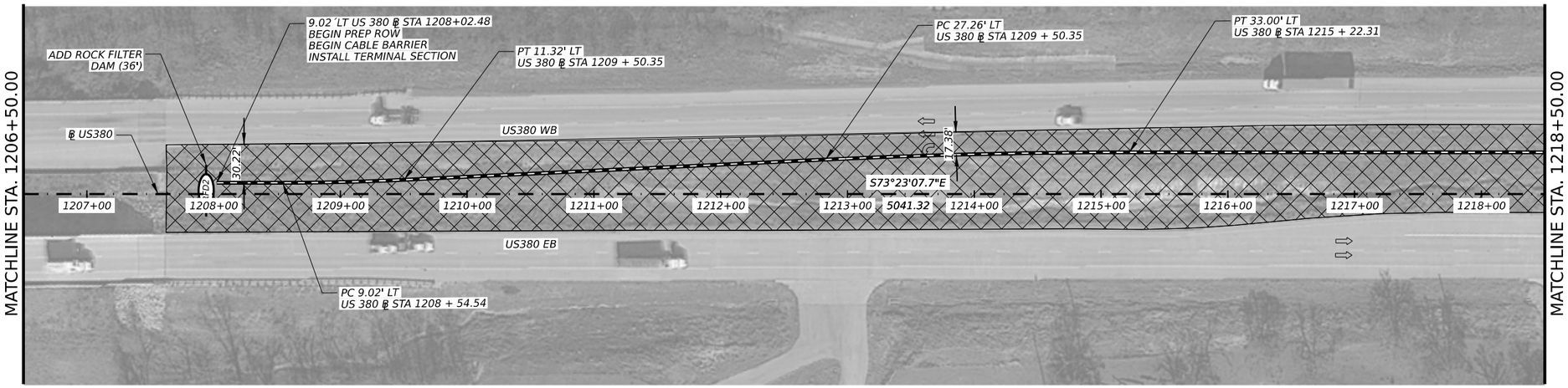
US 380

CABLE BARRIER LAYOUT STA 1182+50 TO 1206+50

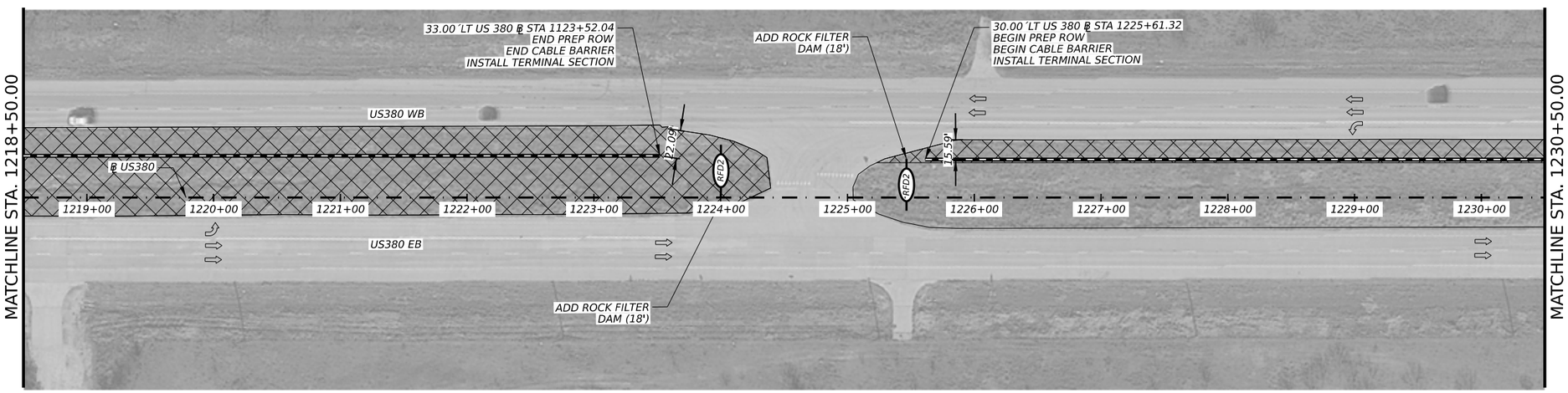
SHEET48 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		77

DATE: 5/25/2023 2:12:10 PM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	2.80
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	14243
CELL FBR MLCH SEED(TEMP)(WARM)	SY	7122
CELL FBR MLCH SEED(TEMP)(COOL)	SY	7122
FERTILIZER *	TON	1.77
VEGETATIVE WATERING	MG	997.03
RIPRAP (MOW STRIP)(5 IN)	CY	94.81
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	54
ROCK FILTER DAMS (REMOVE)	LF	54
CABLE BARRIER SYSTEM (TL-4)	LF	1957
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	3



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

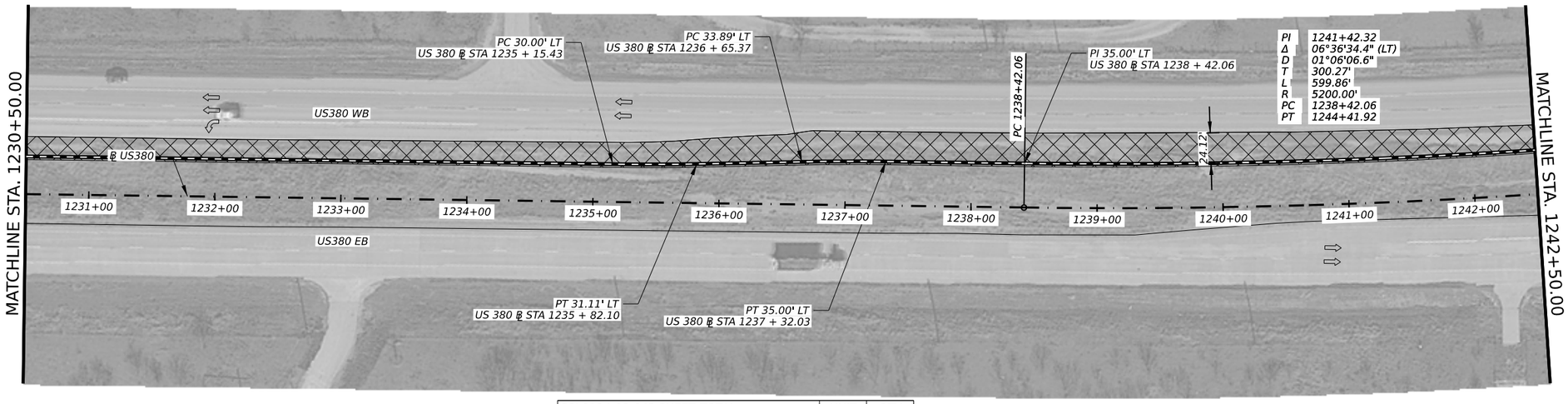
US 380

CABLE BARRIER LAYOUT STA 1206+50 TO 1230+50

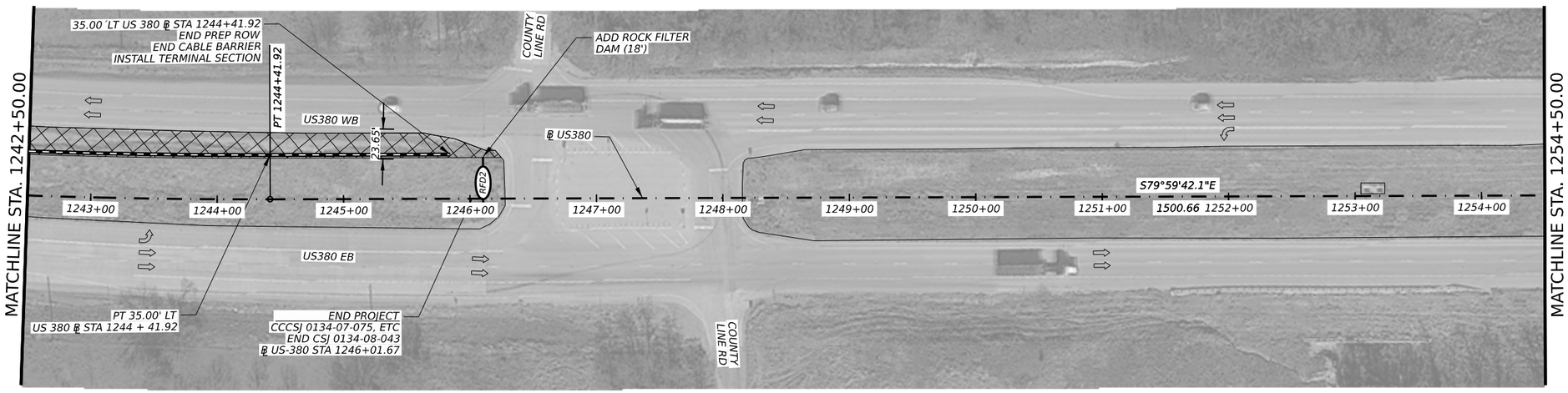
SHEET 49 OF 50

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		78

DATE: 5/25/2023 11:11:32 AM
FILE: c:\pw\working\ustx\dms17659\US380_AEC_PLN_001.dgn



CSJ 0134-08-043 SHEET TOTAL	UNIT	QTY
PREPARING ROW	AC	0.68
CELL FBR MLCH SEED(PERM)(RURAL)(SANDY)	SY	3804
CELL FBR MLCH SEED(TEMP)(WARM)	SY	1902
CELL FBR MLCH SEED(TEMP)(COOL)	SY	1902
FERTILIZER *	TON	0.47
VEGETATIVE WATERING	MG	266.27
RIPRAP (MOW STRIP)(5 IN)	CY	70.97
ROCK FILTER DAMS (INSTALL) (TY 2)	LF	18
ROCK FILTER DAMS (REMOVE)	LF	18
CABLE BARRIER SYSTEM (TL-4)	LF	1503
CABLE BARRIER TERMINAL SECTION (TL-4)	EA	1



0 50 100
SCALE IN FEET

LEGEND

- EXISTING LANES
- CABLE BARRIER SYSTEM (TL-4)
- PERMANENT SEEDING
- RFD2 — TYPE 2 ROCK FILTER DAM (TYPICAL 18 LF)
- EROSION CONTROL LOG AT DROP INLET (TYPICAL 40 LF UNLESS OTHERWISE NOTED)

NOTES:

1. MEDIAN CABLE BARRIER SHALL NOT BE PLACED WITHIN 10' OF CROSSOVER EDGE OF PAVEMENT. LOCATION SHALL BE FIELD VERIFIED BY ENGINEER.
2. PROPOSED LOCATION OF CABLE BARRIER WAS ESTABLISHED WITHOUT TOPOGRAPHIC INFORMATION. CABLE BARRIER SHALL HAVE A 12' MIN. CLEARANCE FROM EDGE OF TRAVEL LANE, A 9' MIN. CLEARANCE FROM EDGE OF PAVEMENT, AND SHALL BE 8' MIN. FROM THE DITCH FLOW LINE.
3. EXISTING DITCH LINE TO BE RE-GRADED TO DRAIN, AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO MOW STRIP BACKFILLING REQUIREMENTS.
4. CABLE BARRIER MAY NOT BE PLACED ON SLOPES EXCEEDING 6:1.
5. POST SPACING SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR MAY DECREASE POST SPACING TO AVOID OBSTRUCTION OR UTILITIES.
6. CROSS DRAINAGE STRUCTURES WITH LESS THAN 36" OF COVER POSE A CHALLANGE FOR PLACING POSTS. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS AND SPAN POSTS TO AVOID CONFLICT.
7. CABLE BARRIER TERMINAL SECTION ASSUMED TO BE 27.5' LONG, FOR ESTIMATING PURPOSES.

* FOR CONTRACTOR'S INFORMATION ONLY.

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
1335S Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

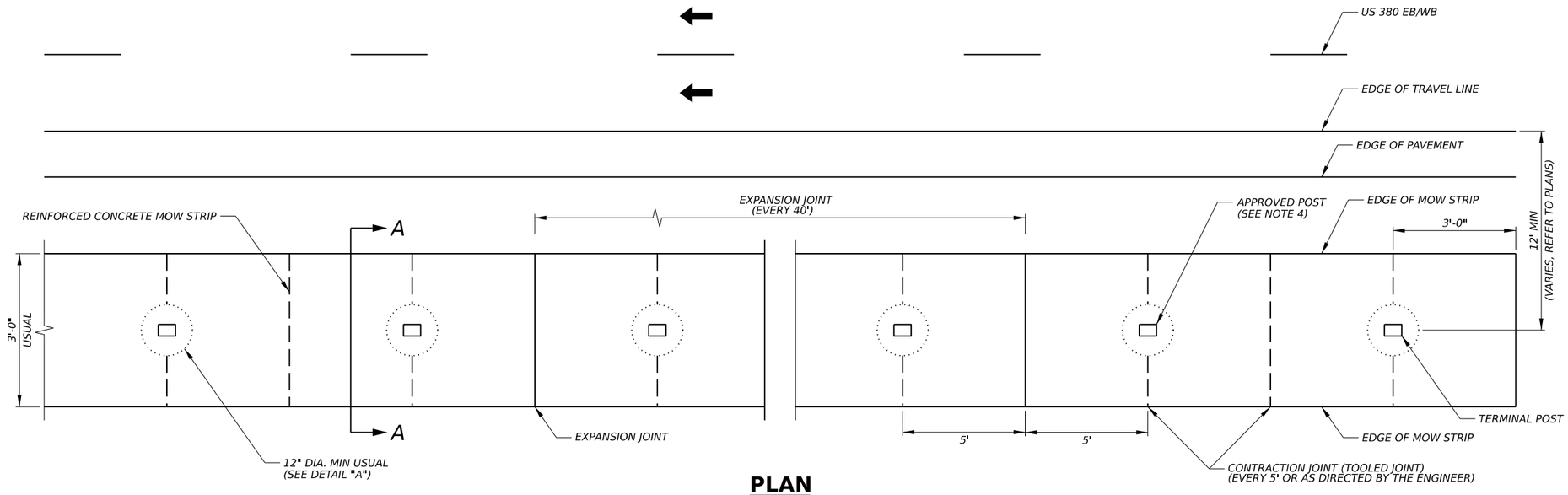
US 380

CABLE BARRIER LAYOUT STA 1230+50 TO 1254+50

SHEET 50 OF 50

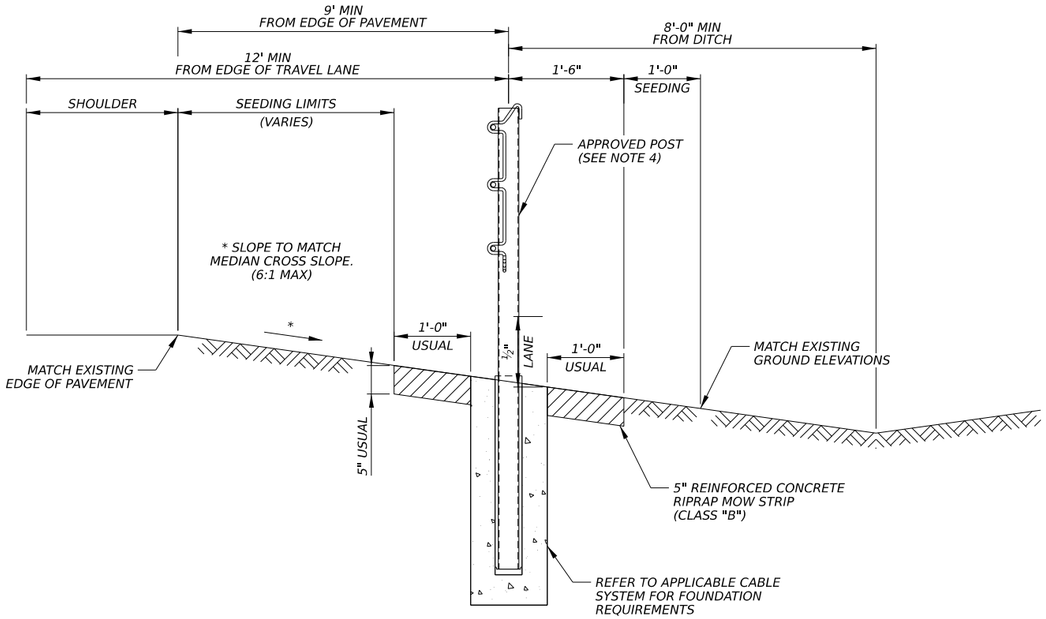
CONT	SECT	JOB	HIGHWAY
0134	07	075, etc	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		79

DATE: 5/25/2023 11:12:07 AM
FILE: c:\pwworking\ustx\dms17659\US380_AEC_PLN_001.dgn



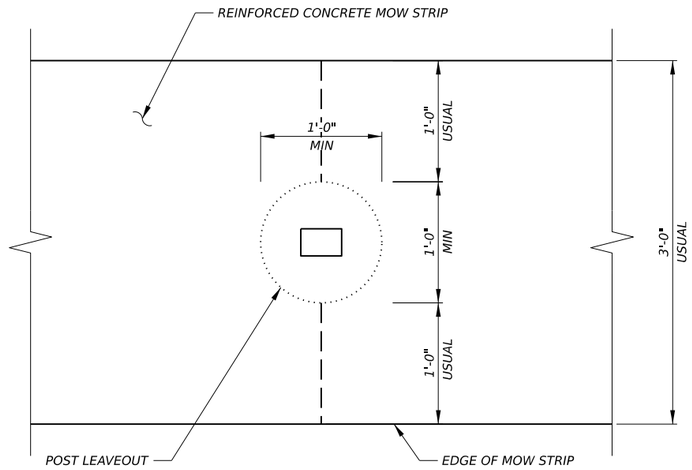
PLAN

N.T.S.



SECTION A-A

N.T.S.



DETAIL "A"

N.T.S.

GENERAL NOTES

1. *MOW STRIPS SHALL BE CONCRETE RIPRAP AS SHOWN ON THE PLANS AND WILL BE PLACED AND PAID FOR IN ACCORDANCE WITH ITEM 432, "RIPRAP (MOWSTRIP)".*
2. *MOW STRIPS SHALL BE REINFORCED WITH WIRE MESH OR CONVENTIONAL STEEL. FIBER REINFORCEMENT IS NOT ALLOWED IN LIEU OF STANDARD REINFORCEMENT.*
3. *RAP IS NOT ALLOWED AS EMBANKMENT UNDER MOW STRIP.*
4. *THE TYPE OF APPROVED POST WILL BE SHOWN ELSEWHERE IN THE PLANS. SEE THE APPLICABLE CABLE SYSTEM SHEETS FOR ADDITIONAL DETAILS AND INFORMATION.*
5. *DEPTH OF MOW STRIP MAY VARY (5" USUAL, 8" MAXIMUM), BUT PAYMENT WILL NOT INCLUDE DEPTHS GREATER THAN 5".*
6. *THE LIMITS OF PAYMENT FOR CONCRETE RIPRAP WILL INCLUDE LEAVEOUTS FOR POST.*
7. *EXPANSION MATERIAL WILL BE REDWOOD OR ASPHALT BOARD OR OTHER APPROVED MATERIAL AS DIRECTED BY THE ENGINEER. THE WORK AND MATERIAL FOR THE EXPANSION JOINTS WILL BE SUBSIDIARY TO ITEM 432, "RIPRAP (MOWSTRIP)".*
8. *CROSS DRAINAGE STRUCTURES LESS THAN 16' SHALL BE SPANNED. CONTRACTOR SHALL FIELD VERIFY THESE LOCATIONS PRIOR TO SETTING POST LOCATIONS.*

RECOMMENDED POST SPACING IN A CURVE	
RADIUS (FT)	*POST SPACING (FT)*
650-2500	*6'-8"*
2501-5500	*10'-0"*
>5500	*STANDARD RECOMMENDATIONS*

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

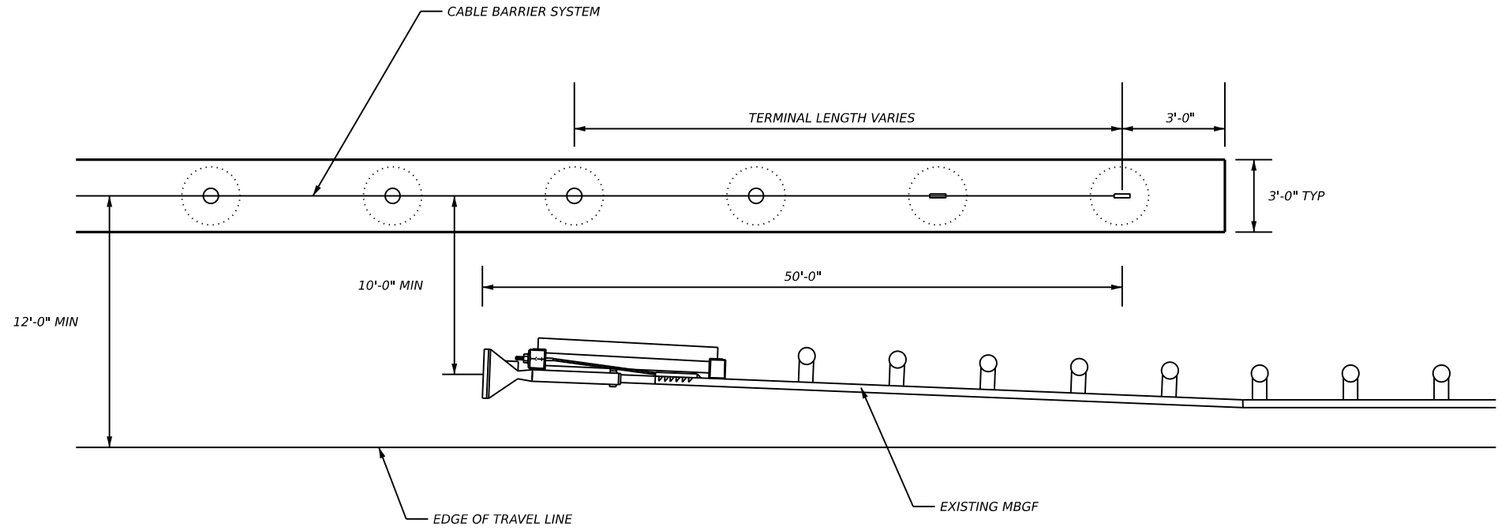
US 380

MISCELLANEOUS DETAIL

SHEET 1 OF 2

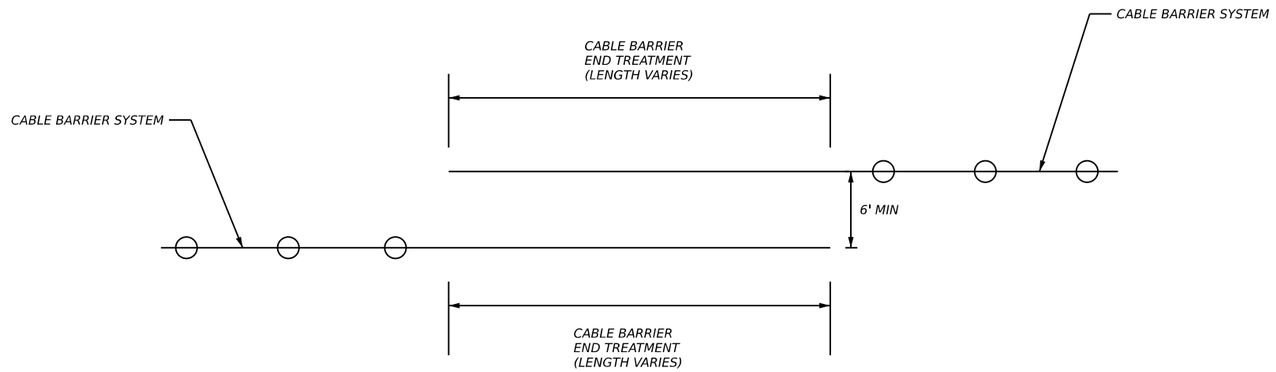
CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		80

DATE: 5/25/2023 11:39:50 AM
FILE: c:\pw\work\ing\usfx\dms17659\US380_AEC_RD_DET_001.dgn



CABLE BARRIER AT MBGF DETAIL

N.T.S.



CABLE BARRIER LAP LENGTH

N.T.S.

DATE: 5/25/2023 11:40:07 AM
FILE: c:\projects\US380_AEC_RD_DET_002.dgn

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023
Salcido Jamin, P.E.

AECOM
13355 Noel Road, Suite 400
Dallas, Texas 72540
(214) 741-7777
AECOM Technical Services, Inc.- F-3580

Texas Department of Transportation

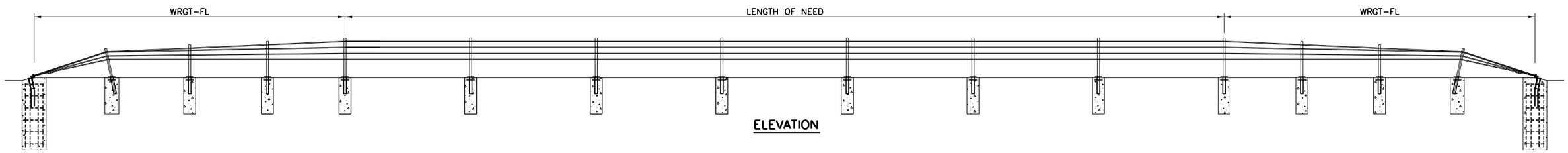
US 380

MISCELLANEOUS
DETAIL

SHEET 2 OF 2

CONT	SECT	JOB	HIGHWAY
0134	07	075, ETC	US 380
DIST	COUNTY		SHEET NO.
FTW	WISE		81

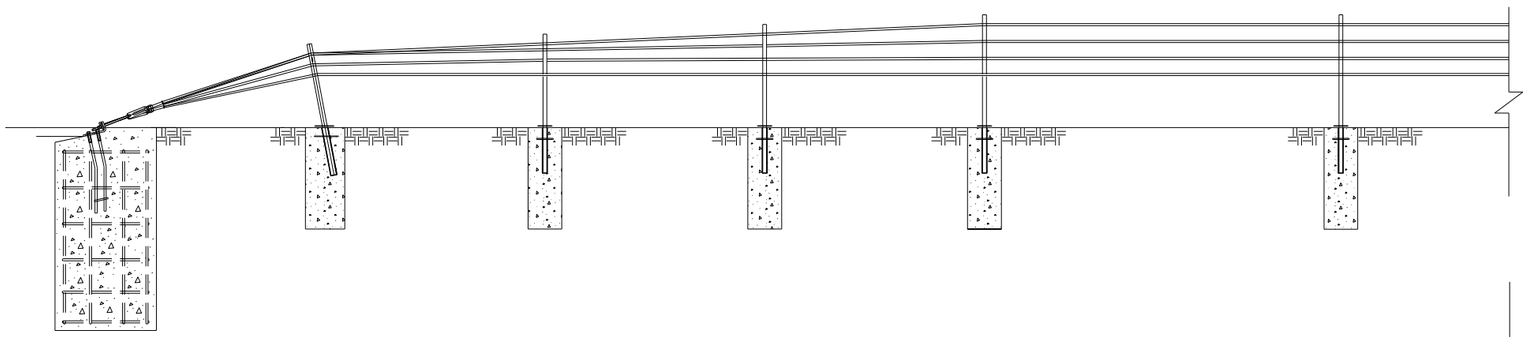
DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms17749\BRIFEN(TL4)-14_Sht1.dgn

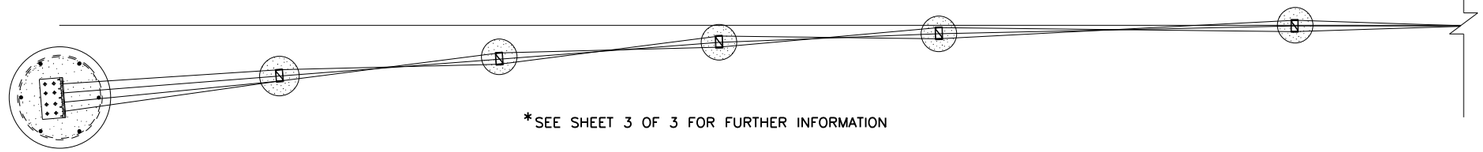


ELEVATION

PLAN

WRGT-FL END ANCHOR





*SEE SHEET 3 OF 3 FOR FURTHER INFORMATION

ROPE TENSION TABLE		
ROPE TEMP (°F)	TENSION (LBS)	TENSION (kN)
0	5700	25.4
5	5550	24.7
10	5400	24.0
15	5250	23.4
20	5100	22.7
25	4950	22.0
30	4800	21.4
35	4650	20.74
40	4500	20.0
45	4350	19.3
50	4200	18.7
55	4050	18.0
60	3900	17.3
65	3750	16.7
70	3600	16.0
75	3450	15.3
80	3300	14.7
85	3150	14.0
90	3000	13.3
95	2850	12.7
100	2700	12.0
105	2550	11.3
110	2400	10.7
115	2250	10.0
120	2100	9.3
125	1950	8.7
130	1800	8.0
135	1650	7.3
140	1500	6.7

*ROPE TENSION: ± 20% AFTER 2-WEEK INTERVAL

GENERAL NOTES:

1. BRIFEN DRAWINGS, SPECIFICATIONS, AND PRODUCT MANUAL SHOULD BE REVIEWED PRIOR TO STARTING AN INSTALLATION. FOR ADDITIONAL INFORMATION OR QUESTIONS, CONTACT BRIFEN USA, INC. AT 1-866-427-4336.

2. THE BRIFEN WRSF HAS BEEN SUCCESSFULLY TESTED TO NCHRP 350 TL-4 CONDITIONS ON SLOPES 6:1 OR FLATTER AND NCHRP 350 TL-3 CONDITIONS ON SLOPES 4:1 TO 6:1.

3. THE POST SPACING SHALL BE DETERMINED BY THE SPECIFYING AGENCY. POST SPACING MAY BE DECREASED TO AVOID OBSTRUCTIONS OR UTILITIES. IN NO EVENT SHALL THE POST SPACING EXCEED 21'-0".

4. BRIFEN WRSF SHALL BE PLACED ON A SMOOTH SURFACE, WITHOUT HUMPS, DROP-OFFS, HOLES, ETC THAT WOULD INTERFERE WITH THE STABILITY OF THE ERRANT VEHICLE. GRADING, FILL AND COMPACT MAY BE REQUIRED TO ASSURE THAT ROPES ARE INSTALLED AT THE DESIGN HEIGHT.

5. THE WRGT-FL END ANCHOR HAS BEEN SUCCESSFULLY TESTED TO NCHRP 350 TL-3 CONDITIONS. THE LENGTH OF NEED BEGINS 31'-0" FROM THE END ANCHOR. POSTS A THROUGH POST B3, SPACED 6'-6" APART, HAVE WEAKENED CUTS AT THE GROUND THAT SHALL FACE THE ANCHOR.

6. ANCHOR AND LINE POST DIMENSIONS AND STEEL REINFORCEMENT WILL BE DETERMINED ON PROJECT SPECIFIC SOIL CLASSIFICATION, PROPERTIES AND TEMPERATURE EXTREMES. CONTACT BRIFEN USA, INC. FOR ADDITIONAL INFORMATION.

7. ALL REINFORCEMENT AND CONCRETE FOR THE ANCHORS AND LINE POSTS PROVIDED BY OTHERS.

8. REINFORCEMENT AND CONCRETE PROPERTIES SHALL MEET AGENCY SPECIFICATIONS.

9. FOR PLACEMENT NEAR GUARDRAIL OR OTHER OBSTACLES CONTACT BRIFEN USA, INC. FOR ADDITIONAL DRAWINGS AND SUPPORT.

10. TAPER RATES FOR THE BRIFEN WRSF ARE AS FOLLOWS:
    HORIZONTAL: 25:1 MAXIMUM, 50:1 PREFERABLE
    VERTICAL: 25:1 MAXIMUM, 50:1 PREFERABLE

Texas Department of Transportation

Design Division Standard

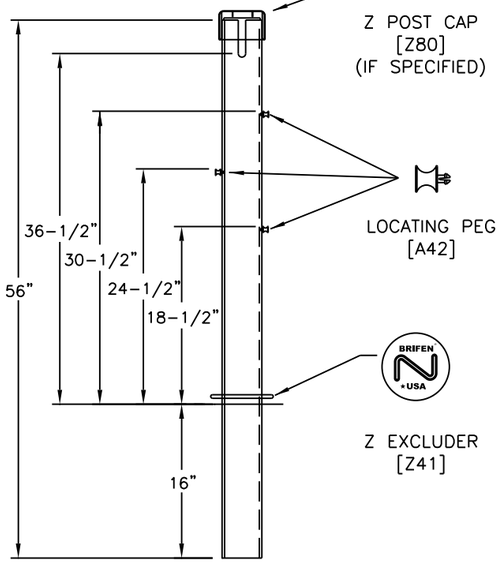
BRIFEN
WIRE ROPE SAFETY FENCE
(TL-4)

BRIFEN(TL4)-14

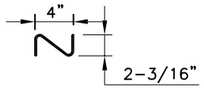
FILE: brifent1414.dgn	DN: TxDOT	CK: RM	DW: VP	CK:
©TxDOT: MARCH 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		82

DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms17749\BRIFEN(TL4)-14_Sht2.dgn

LINE POST ASSEMBLY [Z11]



ELEVATION

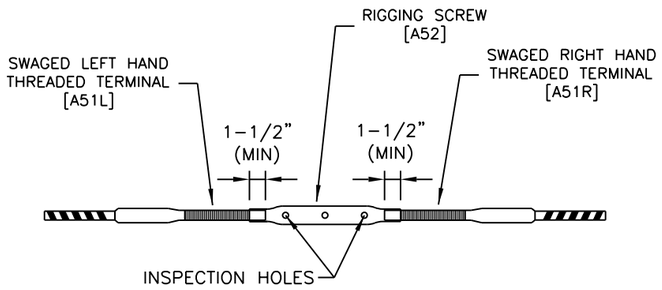


PLAN

NOTES SPECIFIC TO LINE POST ASSEMBLY

1. ROPE HEIGHTS SHALL BE ±1" TO GROUND LINE.
2. POST SHALL BE ±4" FROM VERTICAL PLUMB.
3. POST CAPS SHALL BE USED IF SPECIFIED.
4. REFLECTORS SHALL BE SPACED ACCORDING TO AGENCY SPECIFICATIONS.
5. REFLECTORS CAN BE PLACED ON THE POST CAP OR POST.

ROPE CONNECTION DETAIL

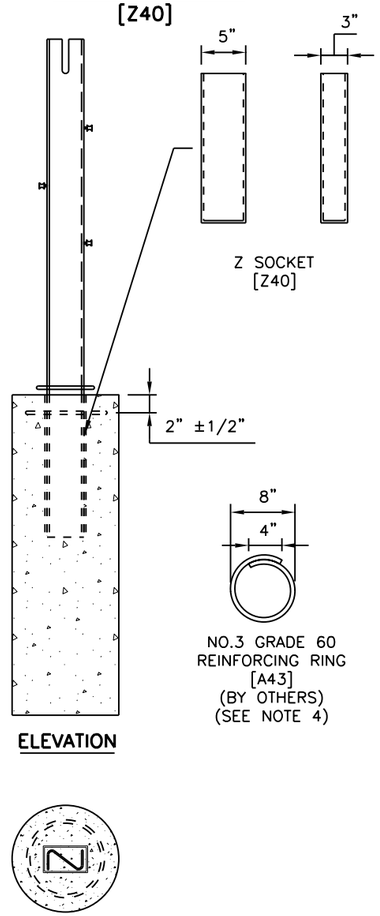


NOTES SPECIFIC TO ROPE CONNECTION DETAIL

1. THE WIRE ROPE TERMINALS SHALL BE THREADED A MINIMUM OF 1-1/2" INTO RIGGING SCREW.
2. AFTER FINAL TENSIONING, THE TERMINALS SHALL BE VISIBLE IN THE INSPECTION HOLES.

SOCKET ASSEMBLY

CONCRETE FOOTING [Z40]



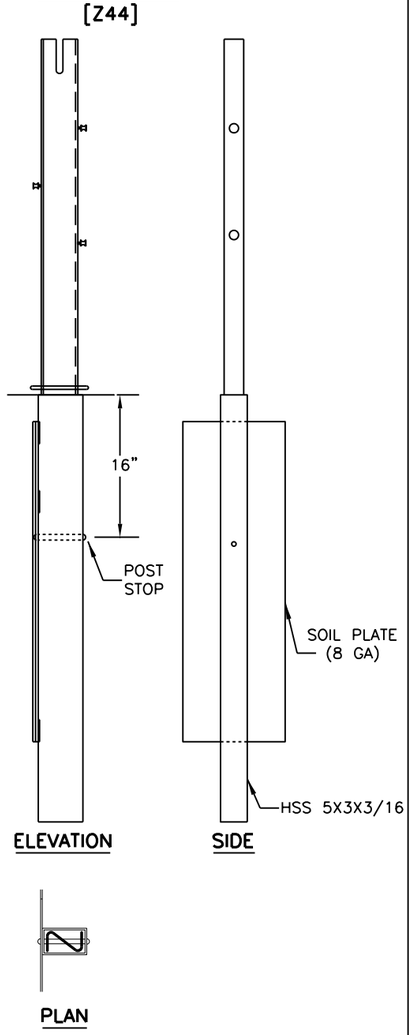
ELEVATION

PLAN

NOTES SPECIFIC TO CONCRETE FOOTING

1. SIZE OF FOOTING WILL BE DETERMINED BY SOIL CONDITIONS, FOUNDATION TYPE AND PROJECT CONDITIONS.
2. CONCRETE BASED ON AGENCY SPECIFICATIONS.
3. CONCRETE BY OTHERS.
4. REINFORCING RING (BY OTHERS) WILL BE USED ACCORDING TO FOUNDATION SIZE AND TYPE. THE REINFORCEING RING MAY BE OMITTED IF THE FOOTING IS PLACED IN A CONTINOUS CONCRETE MOW STRIP.
5. FOOTING SHALL BE FLUSH WITH THE GROUND LINE, TO A MAXIMUM OF 1 INCH BELOW OR ABOVE GROUND LINE.
6. SOCKET SHALL BE ±2° OF VERTICAL PLUMB.

DRIVE SOCKET [Z44]



ELEVATION

SIDE

PLAN

NOTES SPECIFIC TO DRIVE SOCKETS

1. SIZE OF SOIL PLATE WILL BE DETERMINED BY SOIL CONDITIONS AND PROJECT CONDITIONS.
2. THE SOIL PLATE SHALL BE PARALLEL TO ROADWAY AND CAN FACE TOWARD OR AWAY FROM THE TRAVEL LANE.
3. FOOTING SHALL BE FLUSH WITH THE GROUND LINE, TO A MAXIMUM OF 1 INCH BELOW OR ABOVE GROUND LINE.
4. SOCKET SHALL BE ±2° OF VERTICAL PLUM.
5. SOCKETS SHALL BE DRIVEN IN A MANNER TO NOT DISTORT OR DESTROY THE TOP OF SOCKET TO A DEGREE THAT PLACES THE SOCKET OR LINE POST OUT OF CONSTRUCTION TOLERANCES.

GENERAL NOTES:

1. BRIFEN DRAWINGS, SPECIFICATIONS, AND PRODUCT MANUAL SHOULD BE REVIEWED PRIOR TO STARTING AN INSTALLATION. FOR ADDITIONAL INFORMATION OR QUESTIONS, CONTACT BRIFEN USA, INC. 1-866-427-4336.
2. THE BRIFEN WRSF HAS BEEN SUCCESSFULLY TESTED TO NCHRP 350 TL-4 CONDITIONS ON SLOPES 6:1 OR FLATTER AND NCHRP 350 TL-3 CONDITIONS ON SLOPES 4:1 TO 6:1.
3. THE POST SPACING SHALL BE DETERMINED BY THE SPECIFYING AGENCY. POST SPACING MAY BE DECREASED TO AVOID OBSTRUCTIONS OR UTILITIES. IN NO EVENT SHALL THE POST SPACING EXCEED 21'-0".
4. BRIFEN WRSF SHALL BE PLACED ON A SMOOTH SURFACE, WITHOUT HUMPS, DROP-OFFS, HOLES, ETC THAT WOULD INTERFERE WITH THE STABILITY OF THE ERRANT VEHICLE. GRADING, FILL AND COMPACTION MAY BE REQUIRED TO ASSURE THAT ROPES ARE INSTALLED AT THE DESIGN HEIGHT.

Texas Department of Transportation

Design Division Standard

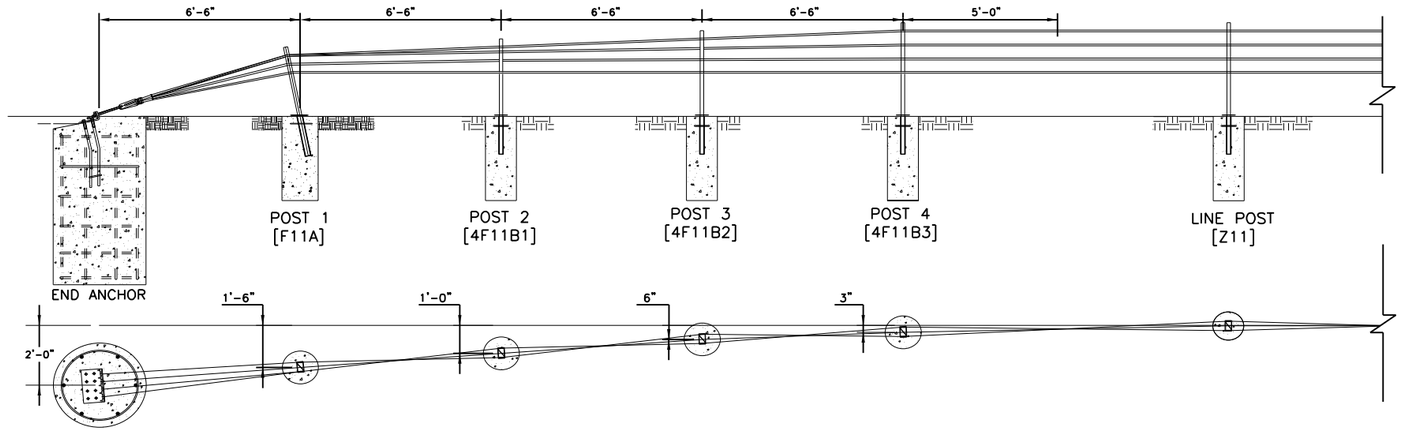
BRIFEN
WIRE ROPE SAFETY FENCE
(TL-4)

BRIFEN(TL4)-14

FILE: brifentl414.dgn	DN: TxDOT	CK: RM	DW: VP	CK:
© TxDOT: MARCH 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		83

DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms17749\BRIFEN(TL4)-14_Sht3.dgn

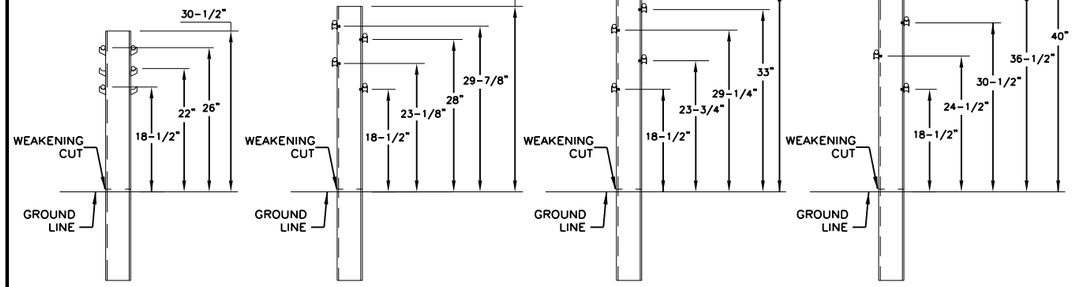
WRGT-FL END ANCHOR LAYOUT



GENERAL NOTES:

1. BRIFEN DRAWINGS, SPECIFICATIONS, AND PRODUCT MANUAL SHOULD BE REVIEWED PRIOR TO STARTING AN INSTALLATION. FOR ADDITIONAL INFORMATION OR QUESTIONS, CONTACT BRIFEN USA, INC. AT 1-866-427-4336.
2. THE WRGT-FL END ANCHOR HAS BEEN SUCCESSFULLY TESTED TO NCHRP 350 TL-3 CONDITIONS. THE LENGTH OF NEED BEGINS 31'-0" FROM THE END ANCHOR. POSTS A THROUGH POST B3, SPACED 6'-6" APART, HAVE WEAKENED CUTS AT THE GROUND THAT SHALL FACE THE ANCHOR.
3. ANCHOR AND LINE POST DIMENSIONS AND STEEL REINFORCEMENT WILL BE DETERMINED ON PROJECT SPECIFIC SOIL CLASSIFICATION, PROPERTIES AND TEMPERATURE EXTREMES. CONTACT BRIFEN USA, INC. FOR ADDITIONAL INFORMATION.
4. ALL REINFORCEMENT AND CONCRETE FOR THE ANCHORS AND LINE POSTS PROVIDED BY OTHERS.
5. REINFORCEMENT AND CONCRETE PROPERTIES SHALL MEET AGENCY SPECIFICATIONS.
6. FOR PLACEMENT NEAR GUARDRAIL OR OTHER OBSTACLES CONTACT BRIFEN USA, INC. FOR ADDITIONAL DRAWINGS AND SUPPORT.

WRGT-FL POST DETAILS

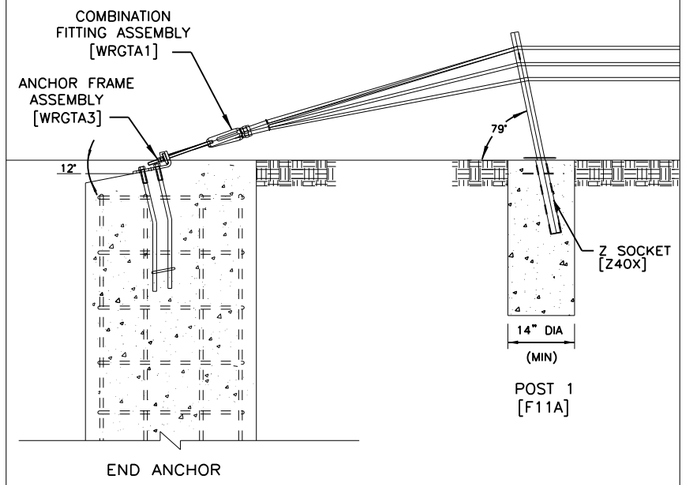


POST 1 [F11AL] | POST 2 [4F11B1L] | POST 3 [4F11B2L] | POST 4 [4F11B3L]

NOTES SPECIFIC TO WRGT-FL POST DETAIL

1. ROPE HEIGHTS SHALL BE ±1" TO GROUND LINE.
2. POST SHALL BE ±4" FROM VERTICAL PLUMB.
3. POST CAPS SHALL BE USED IF SPECIFIED.
4. REFLECTORS SHALL BE SPACED ACCORDING TO AGENCY SPECIFICATIONS.
5. REFLECTORS CAN BE PLACED ON THE POST CAP OR POST.
6. Z EXCLUDER (Z41) SHALL BE USED.
7. POST A & SOCKET SHALL BE PLACED 79" (±4") TOWARD END ANCHOR FROM THE HORIZONTAL PLANE.
8. POST A SOCKET SHALL BE PLACED IN 14" (MIN) CONCRETE FOUNDATION. DEPTH TO BE DETERMINED FROM SOIL CONDITIONS AND PROJECT CONDITIONS.
9. FOUNDATIONS FOR POST 2 THRU 4 SHALL BE THE SAME AS THE LINE POST ASSEMBLY'S FOR THE PROJECT.
10. WEAKENED CUTS SHALL FACE END ANCHOR.

END ANCHOR DETAILS

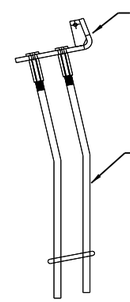


NOTES SPECIFIC TO END ANCHOR DETAIL

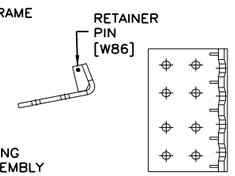
1. THE END ANCHOR ASSEMBLY SHALL BE PLACED 12" (+3", -1") BELOW HORIZONTAL PLANE.
2. POST 1 & SOCKET SHALL BE PLACED 79" (±4") TOWARD END ANCHOR FROM THE HORIZONTAL PLANE.
3. POST 1 SOCKET SHALL BE PLACED IN 14" (MIN) CONCRETE FOUNDATION. DEPTH TO BE DETERMINED FROM SOIL CONDITIONS AND PROJECT CONDITIONS.

END ANCHOR COMPONENTS

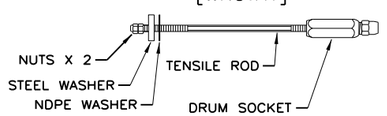
ANCHOR FRAME ASSEMBLY



ANCHOR FRAME [A70]



COMBINATION FITTING [WRGTA1]



SHEET 3 OF 3

Texas Department of Transportation — Design Division Standard

BRIFEN
WIRE ROPE SAFETY FENCE
(TL-4)

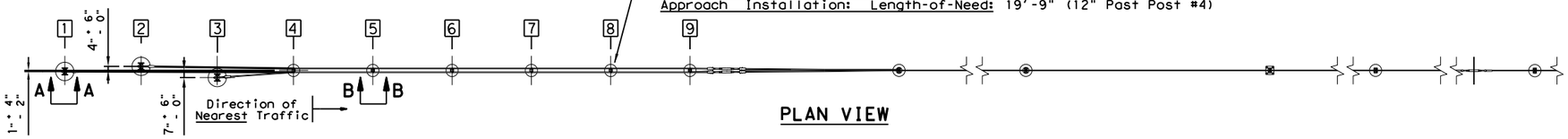
BRIFEN(TL4)-14

FILE: brifent1414.dgn	DN: TxDOT	CK: RM	DW: VP	CK:		
©TxDOT: MARCH 2014	CONT	SECT	JOB		HIGHWAY	
REVISIONS	0134	07	075, ETC		US 380	
	DIST	COUNTY			SHEET NO.	
	FTW	WISE			84	

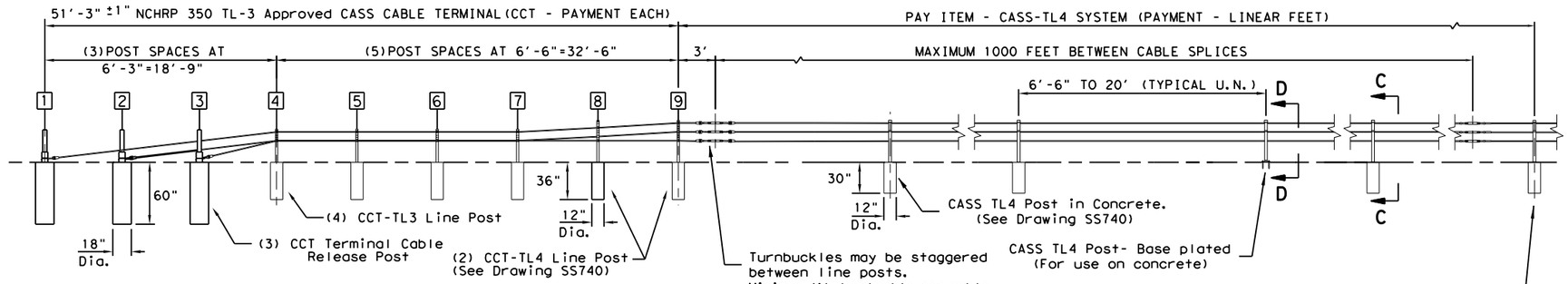
DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms17749\CASS(TL4)-14.dgn

Preferred Installation: Locate post #2 away from nearest traffic.
System has been succesfully tested with opposite installation.

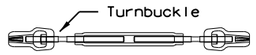
Length-of-Need Cass Cable Terminal (CCT):
Departure Installation: Length-of-Need: 44'-9" (At Post #8)
Approach Installation: Length-of-Need: 19'-9" (12" Past Post #4)



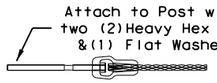
PLAN VIEW



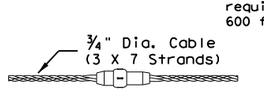
ELEVATION VIEW
(TYPICAL LAY-OUT)



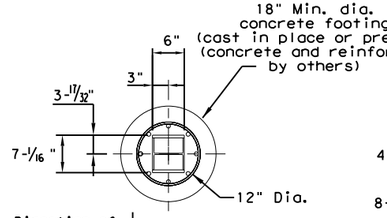
CABLE SPLICE WITH TURNBUCKLE
(OPEN BODY STYLE)



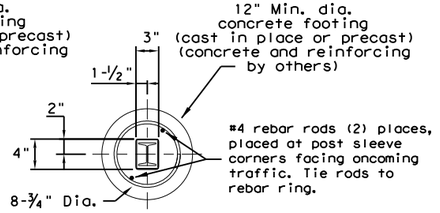
CABLE STUD ASSEMBLY



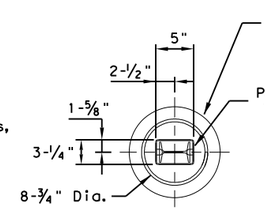
TORPEDO CABLE SPLICE



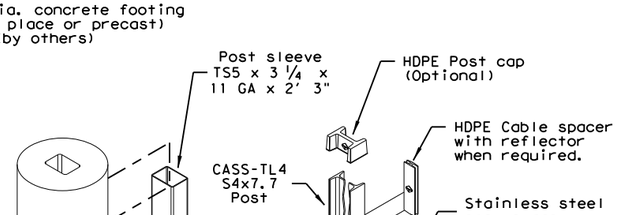
SECTION E-E



SECTION F-F

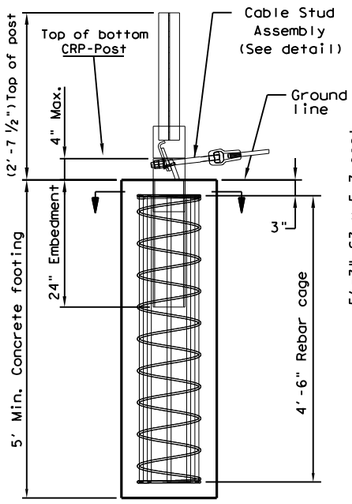


SECTION G-G

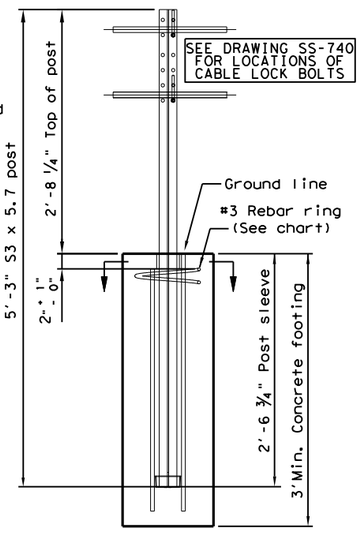


CONCRETE FOOTING
(IN QUALIFYING MOW STRIP SEE CHART)

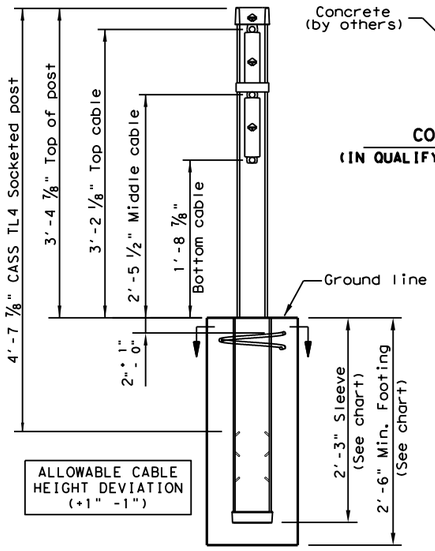
STANDARD POST & CONCRETE FOOTING
(SOCKETED POST)



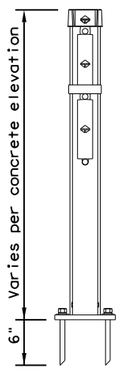
VIEW A-A
(CABLE RELEASE POST 1-3)



VIEW B-B
(TERMINAL LINE POST 4-7)



SECTION C-C
(SOCKETED POST)



SECTION D-D
(BASE PLATED POST)

GENERAL NOTES

1. This drawing is a general overview of CASS TL-4 Barrier System. See SS-740 (latest version) for specific details of CASS cable terminal (CCT) and cable safety system (CASS) requirements, proper installation, options and specification.
2. CASS is designed for bi-directional traffic flows and can be installed on either side of the median. Contact Trinity (800-527-6050) or consult the design, installation, or repair manual(s) for additional information.
3. All concrete for CASS footings shall be TxDOT class A. If class A or stronger concrete is utilized for the mowstrip, please see chart below for allowable footing depth and sleeve deviations.
4. All posts shall be socketed unless otherwise specified. All cables shall be pre-stretched unless otherwise specified.
5. For payment see Special Specification "Cable Barrier System".
6. CASS-TL4 shall be installed on shoulders or medians with slopes of 6:1 or flatter without obstructions, depressions, etc. That may significantly affect the stability of an errant vehicle. Grading of site and/or appropriate fill materials may be required. The designer/installer shall "Flatten" or "Round" various topographical inconsistencies that could interfere with the ability of the installer to consistently maintain the design height (in relation to the terrain) of the cables. Please consult manual(s) and / or TxDOT Memo(s) for installations in "Ditch Sections".
7. CASS TL-4 post spacing may be modified to avoid obstacles that conflict with the installation of cass-tl4 line posts or to reduce deflection on radiuses. No post space can exceed the maximum post TxDOT space limit of 20'. Reducing or increasing post spacing affects deflection. CASS TL-4 may be laterally transferred at a rate not to exceed 30:1.
8. Post foundations may be drilled through existing pavement. Please see line post foundation chart for minimum footing requirements in various applications.
9. For aesthetic purposes Trinity recommends all sleeves, driven posts, and lower cable release posts to be installed reasonably plumb (approximately 1/8" per foot).
10. CASS TL-4 shall be installed in well-drained, compacted, NCHRP Report 350 Standard soil. If soil does not meet this classification, if solid rock/concrete is encountered below grade or if soil is susceptable to severe freeze/thaw cycles, please contact Trinity about alternate footing design(s). Trinity suggests the use of "Mow strips" for erosion prevention and ease of maintenance / installation.
11. See the Texas MUTCD for proper "Barrier" Delineation.

MOW STRIP DETAIL*			CONCRETE FOOTING CHART		
MOW STRIP	DEPTH	WIDTH	FOOTING	TUBE SLEEVE	REBAR RING
NONE			30" Min.	27" Min.	YES
HMA	6" Min.	3' Min.	27" Min.	15" Min.	NO
HMA	8" Min.	3' Min.	24" Min.	15" Min.	NO
RC	3" Min.	3' Min.	24" Min.	15" Min.	NO

Chart does not apply to Terminal Posts 1 thru 9.
* Mow strip or pavement.
HMA = Hot Mix Asphalt (Not Recycled Asphalt Pavement).
RC = Reinforced Concrete (TxDOT Class A Minimum).

CABLE TENSION CHART	
FAHRENHEIT	PRE-STRETCHED
DEGREES	LB / FORCE
-10	7300
0	7000
10	6600
20	6300
30	6000
40	5600
50	5300
60	5000
70	4600
80	4300
90	4000
100	3600
110	3300
120	3000
130	2700
140	2500
150	2300

Allowable deviation from chart in tangent sections: +800, -200 pounds/force. Cable tension readings are typically higher in curved cable sections.

Trinity Highway Products, LLC.
2525 Stemmons Freeway
Dallas, TX 75207
Phone: (800) 644-7976

Product.INFO@TRIN.NET

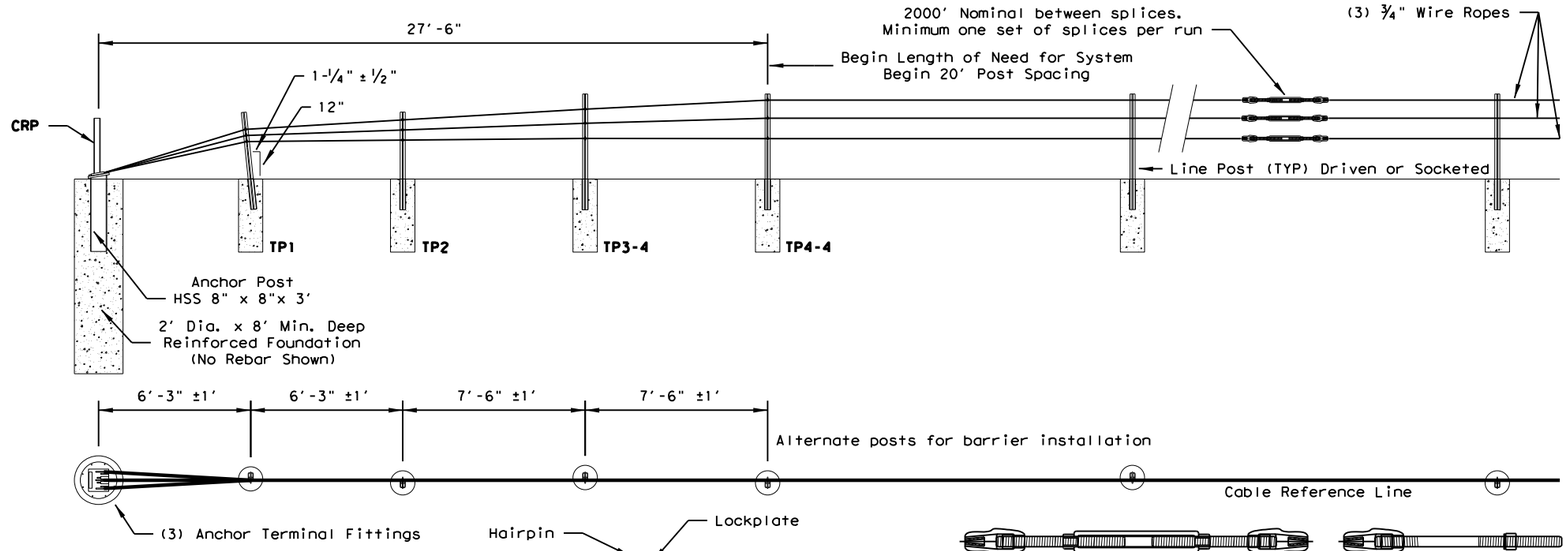
Texas Department of Transportation
Design Division Standard

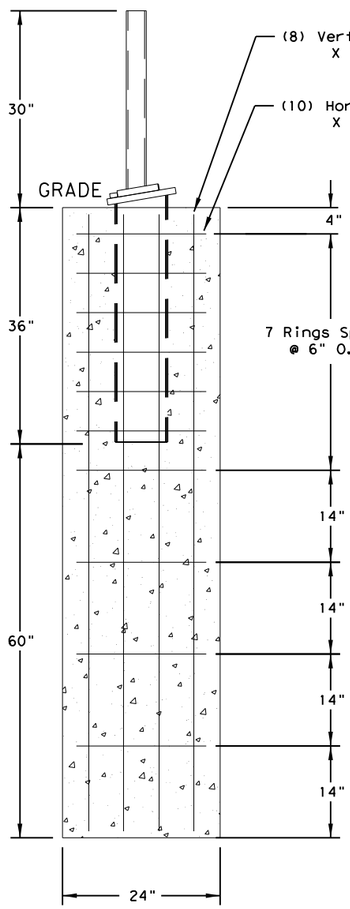
TRINITY CABLE SAFETY SYSTEM (TL-4)

CASS(TL4)-14

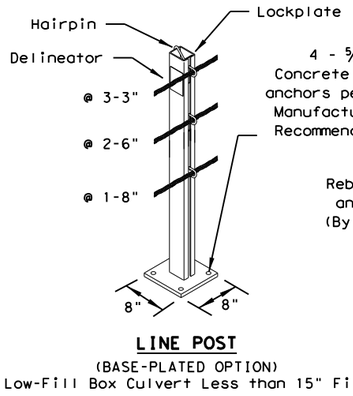
FILE: casstl414.dgn	DN: TxDOT	CK: RM	DW: VP	CK:	
©TxDOT: March 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0134	07	075, ETC	US 380	
	DIST	COUNTY		SHEET NO.	
	FTW	WISE		85	

DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms17749\GBRLTR(TL4)-14.dgn

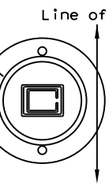




CABLE RELEASE AND ANCHOR POST



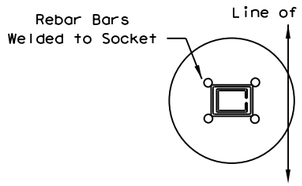
LINE POST
(BASE-PLATED OPTION)
Low-Fill Box Culvert Less than 15" Fill



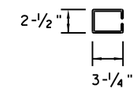
SECTION A

¾" MIN
T/B CABLE SPLICE FITTING

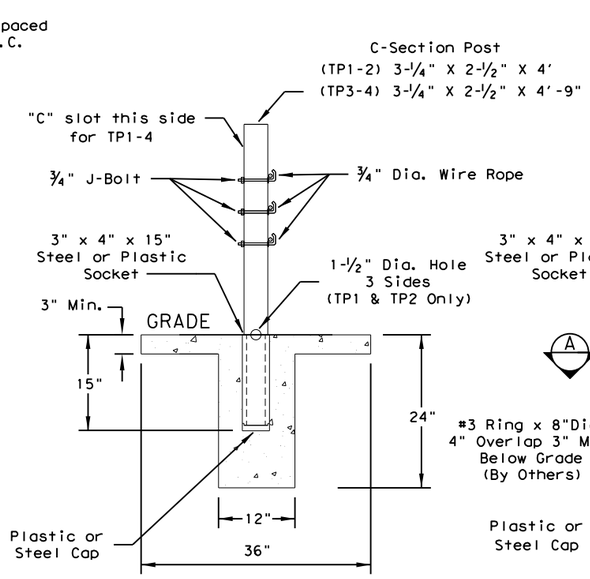
¾" MIN
TERMINAL FITTING



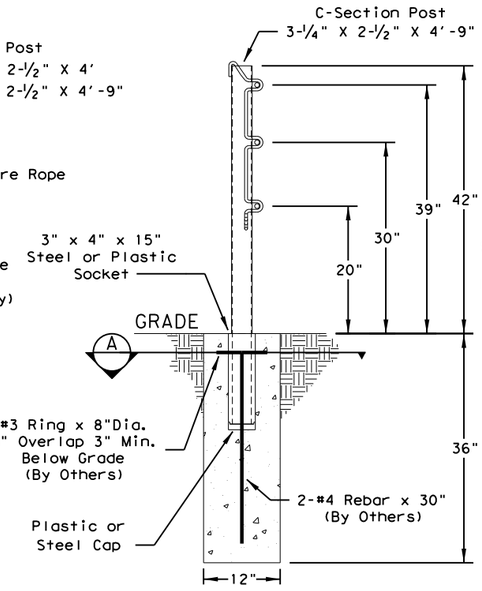
SECTION B



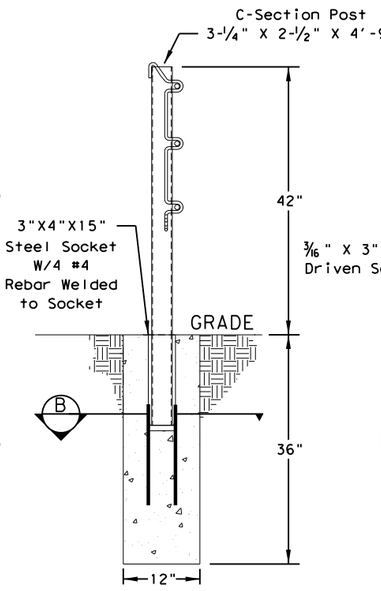
C-SECTION POST



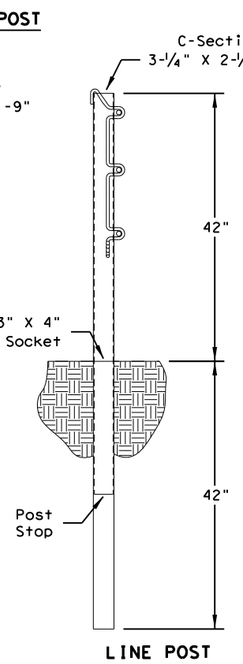
TERMINAL POST
(SHOWN WITH CONCRETE MOWSTRIP)
(Shown with Tube Plate Option)
(See Note 10)



LINE POST SOCKETED
(Shown with Rebar Ring/Bars Socket Option)
(See Note 9)



LINE POST SOCKETED
(Shown with Welded Rebar Socket Option)
(See Note 9)



LINE POST
(DRIVEN OPTION)
(Shown with Driven
Socket Option)
(See Note 9)

GENERAL NOTES

1. For additional information contact Gibraltar, Inc. at 1-800-495-8957, 830-798-5444, or see the manufacturer's product manual.
2. All concrete shall be CLASS A.
3. The Cable Barrier System shall be installed on shoulders or on medians with slopes of 6:1 or flatter. If installed on slopes steeper than 6:1 up to 4:1 the TL-4 system performs as a TL-3 and Gibraltar must be contacted for various guidelines related to placement.
4. The Cable Barrier System is accepted by the FHWA Test Level - 4.
5. See the Texas MUTCD for proper "Barrier" delineation.
6. Rock Clause: Where solid rock is encountered:
   A. For socketed post, continue digging 12" diameter, 15" deep into rock or the required plan depth, whichever comes first.
   B. For driven post, core drill a 4" diameter hole 18" deep into rock or the required plan depth, whichever comes first.
   C. For Anchor post, continue digging 24" diameter, 30" deep into rock or the required plan depth, whichever comes first.
7. Tolerances:
   * LP = 3" out of plumb, at top
   * Cable height = 1"
   * Anchor Post = 5" off of Cable Reference Line
8. The Gibraltar cable barrier system shall be installed in NCHRP Report 350 standard compacted soil. Soil must be well drained.
9. All non-welded rebar by others.
10. Minimum recommended line post foundation.
    A. Without mowstrip, 36" Deep x 12" diameter foundations with #3 rebar ring x 8" diameter with two #4 rebar vertical bars 30" long
    B. With 4" minimum depth hot mix asphalt, 30" deep x 12" diameter foundations with #3 rebar ring x 8" diameter with two #4 rebar vertical bars 30" long.
    C. With 3" minimum depth concrete mowstrip, 24" deep x 12" diameter foundations. (No rebar required)
    D. Direct drive post 42" deep.

CABLE TENSION CHART*	
-10 °F	8000
0 °F	7600
10 °F	7200
20 °F	6800
30 °F	6400
40 °F	6000
50 °F	5600
60 °F	5200
70 °F	4800
80 °F	4400
90 °F	4000
100 °F	3600
110 °F	3200

DEFLECTION	
Deflection	Post Spacing
8'-0"	20 FT
7'-0"	12 FT
6'-8"	10 FT

* Allowable Deviation from Chart +/- 10%

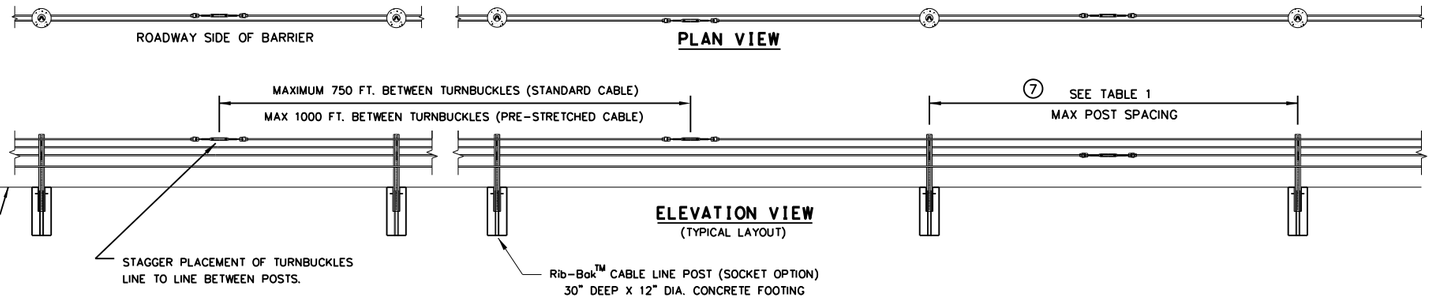
Texas Department of Transportation — Design Division Standard

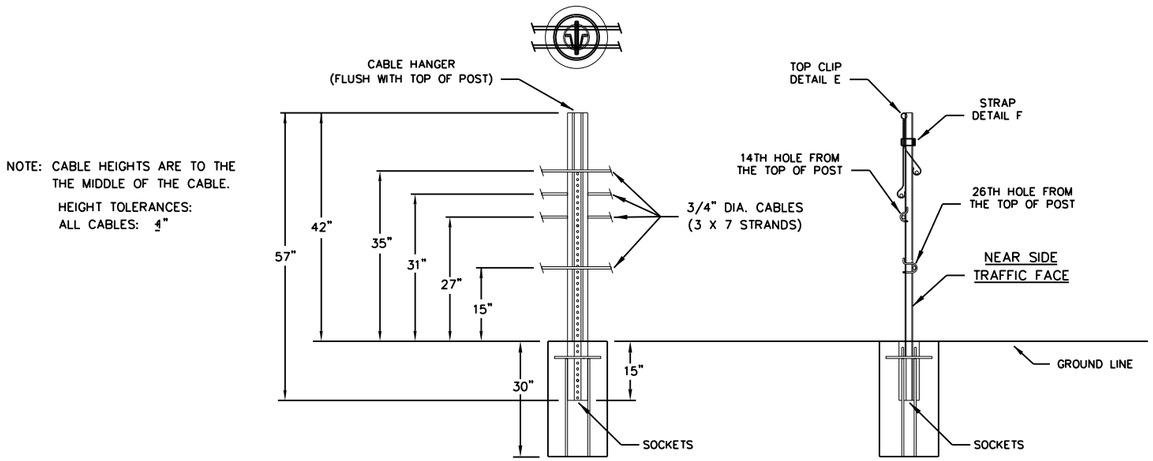
GIBRALTAR
CABLE BARRIER SYSTEM
(TL-4)

GBRLTR(TL4)-14

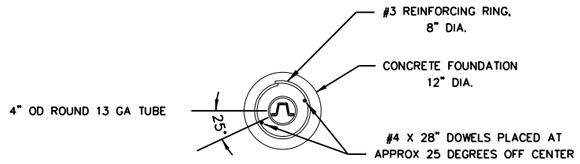
FILE: gbrltrtl414.dgn	DN: TxDOT	CK: RM	DW: VP	CK:
©TxDOT: March 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		86

DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms11749\NU-CABLE(TL4)-14_Sht1.dgn

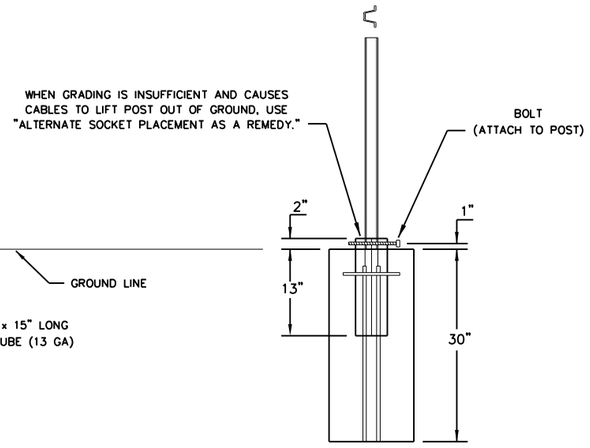




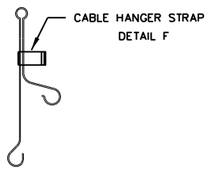
INSTALLATION DETAIL
4 CABLE 6:1



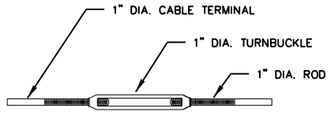
⑪ **SOCKETED POST OPTION**
(TYPE S POST)



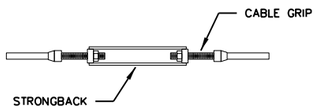
ALTERNATE SOCKET PLACEMENT
(TYPE S POST)



CABLE HANGER BRACKET
DETAIL E
(SUBJECT TO MANUFACTURER'S TOLERANCES)



WEDGED FITTING
TURNBUCKLE DETAIL
(TYPICAL)



STRONGBACK (SELF-SWAGING)
TURNBUCKLE DETAIL
(OPTIONAL)

GENERAL NOTES

1. FOR ADDITIONAL INFORMATION CONTACT YOUR DISTRIBUTOR OR NUCOR STEEL MARION, INC. AT (740) 383-4011.
2. FOR PAYMENT SEE SPECIAL SPECIFICATION "CABLE BARRIER SYSTEM".
3. FOR ADDITIONAL INFORMATION SEE THE MANUFACTURER'S PRODUCT MANUAL.
4. THE NU-CABLE SYSTEM IS DESIGNED FOR BI-DIRECTIONAL TRAFFIC FLOWS. SEE THE MANUFACTURER'S PRODUCT MANUAL FOR PLACEMENT ADJACENT TO GUARDRAIL END TREATMENTS.
5. THE NU-CABLE SYSTEM SHALL BE INSTALLED ON MEDIANS WITH SLOPES OF 6:1 OR FLATTER WITHOUT OBSTRUCTIONS, DEPRESSIONS, ETC; THAT MAY SIGNIFICANTLY AFFECT THE STABILITY OF AN ERRANT VEHICLE.
6. THE NU-CABLE SYSTEM MAY BE INSTALLED ON EITHER SIDE OF THE ROADWAY. Rib-Bak™ CABLE LINE POSTS MAY BE SOCKETED OR DRIVEN DESIGN.
7. THE TL-4 FOR 6:1 SLOPES CAN USE 4# / LF POST. SEE TABLE #1 FOR POST SIZE PER SPACING.
8. SEE (TABLE 2) FOR TENSION AMOUNT AT SPECIFIC CABLE TEMPERATURE FOR INITIAL INSTALLATION.
9. SEE (TABLE 3) FOR TENSION AMOUNT AT SPECIFIC CABLE TEMPERATURE FOR MAINTENANCE.
10. FOURTH (LOWEST) CABLE IS NOT OPTIONAL ON THE TL-4 SYSTEM.
11. CONSULT YOUR PROJECT PLAN SHEETS AND CABLE BARRIER SPECIFICATIONS FOR DESIRED SOCKET MATERIAL.
12. ALL FOUNDATION DESIGNS ARE BASED ON NCHRP 350 STRONG (S1) SOIL. CONSULT THE MANUFACTURER FOR SPECIFIC FOUNDATION DESIGN IF SOIL TYPES DIFFER.

⑦ TABLE 1

POST SIZE TABLE	
POST SPACING	POST SIZE
0' - 17'-6"	4# / LF X 4' OR 6' POST
17'-6" - 20'	5# / LF X 4' POST

POST SPACING IS PER 8 FOOT DEFLECTION REQUIRMENTS.
CONSULT PRODUCT MANUAL IF GREATER DEFLECTION IS PERMISSIBLE.

⑧ TABLE 2

CABLE TENSION CHART	
INITIAL INSTALL	
F	LBF
120	4624
110	4986
100	5350
90	5713
80	6077
70	6440
60	7167
50	7894
40	8619
30	9346
20	10073
10	10800
0	11525
-10	12252
-20	12979
-30	13706

⑨ TABLE 3

CABLE TENSION CHART	
MAINTENANCE	
F	LBF
120	4021
110	4336
100	4652
90	4968
80	5284
70	5600
60	6232
50	6864
40	7495
30	8127
20	8759
10	9391
0	10022
-10	10654
-20	11286
-30	11918

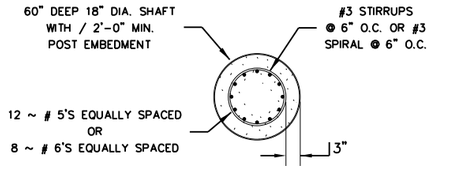
Texas Department of Transportation — Design Division Standard

NU-CABLE BARRIER SYSTEM (TL-4) (4 CABLE)

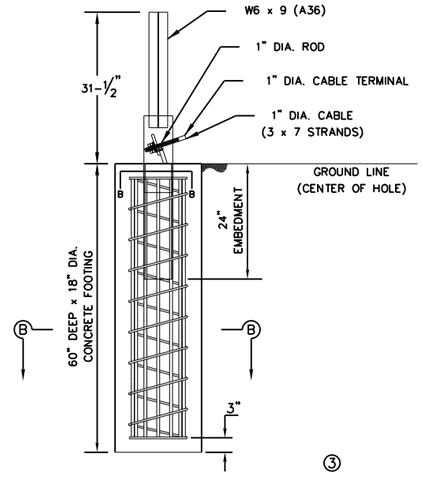
NU-CABLE(TL4)-14

FILE: nucable1414	DN: TxDOT	CK: RM	DW: VP	CK:	
©TxDOT: March 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0134	07	075, ETC	US 380	
	DIST	COUNTY		SHEET NO.	
	FTW	WISE		87	

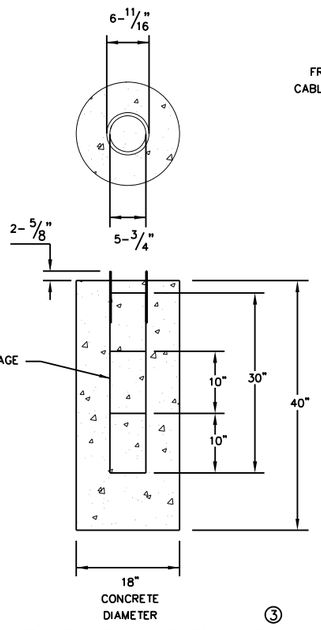
DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms11749\NU-CABLE(TL4)-14_Sht2.dgn



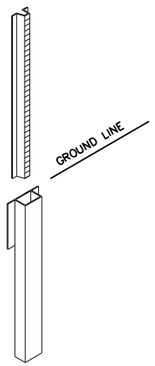
SECTION B-B
(CABLE RELEASE POST)



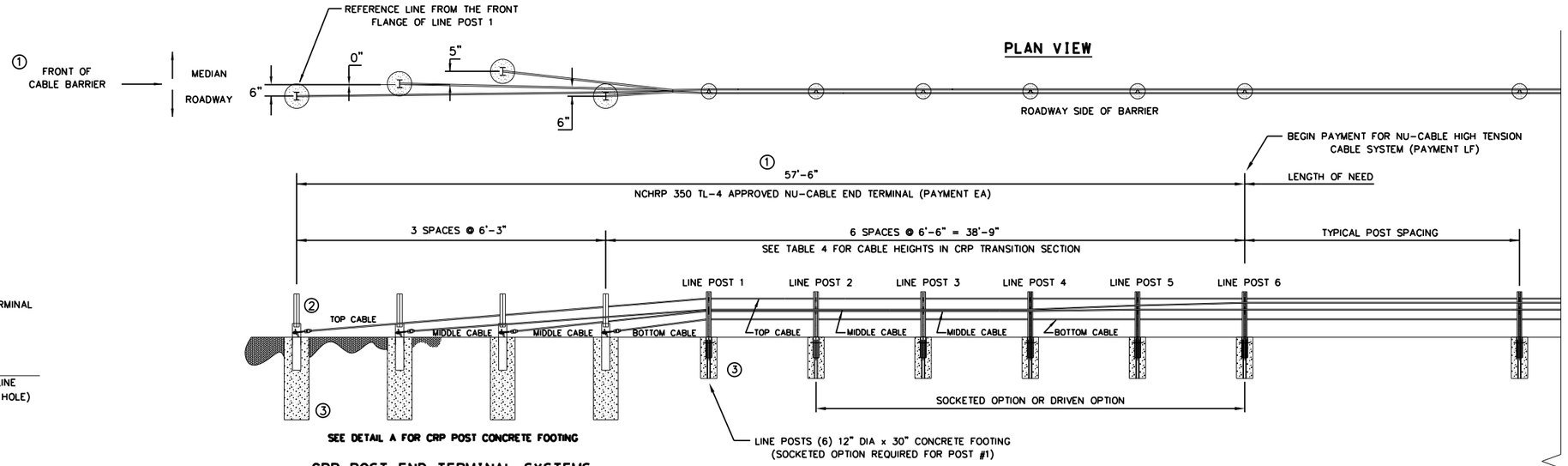
DETAIL A – CRP IN CONCRETE FOOTING ③
(3000 PSI MIN CONCRETE)



NU-TEN CONCRETE FOOTING DETAIL ③

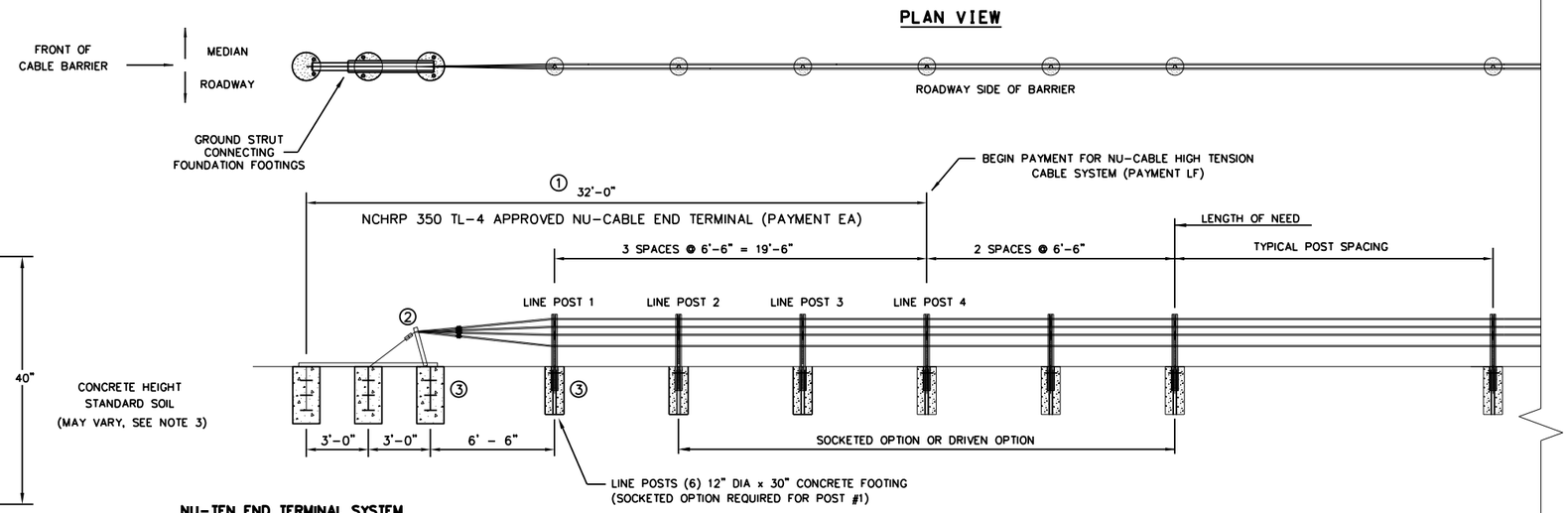


DRIVEN SOCKET OPTION



CRP POST END TERMINAL SYSTEMS

① THE OPPOSING END TREATMENTS ON A PARTICULAR RUN ARE MIRRORED IN THEIR LAYOUT.



NU-TEN END TERMINAL SYSTEM

④ **TABLE 4**

CRP END TERMINAL CABLE HEIGHTS - TL-4						
	LP 1	LP 2	LP 3	LP 4	LP 5	LP 6
TOP CABLE	34"	34"	34"	34"	34"	34"
UPPER-MIDDLE CABLE	27"	27"	27"	27"	28"	31"
BOTTOM-MIDDLE CABLE	24"	24"	24"	24"	24"	24"
BOTTOM CABLE	15"	15"	15"	15"	15"	15"

NOTES

1. THE OPPOSING END TREATMENTS ON A PARTICULAR RUN ARE MIRRORED IN THEIR LAYOUT. SYSTEM PAYMENT IS PER EACH (EA). REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL PAYMENT INFORMATION
2. REFER TO INSTALLATION MANUAL FOR CABLE END ASSEMBLY DETAIL.
3. ALL FOUNDATION DESIGNS ARE BASED ON NCHRP 350 STRONG (S1) SOIL. CONSULT THE MANUFACTURER FOR SPECIFIC FOUNDATION DESIGNS IF SOIL TYPES DIFFER.
4. SEE TABLE 4 CABLE HEIGHTS IN CRP TRANSITION SECTION.

Texas Department of Transportation
Design Division Standard

NU-CABLE BARRIER SYSTEM (TL-4) (4 CABLE)

NU-CABLE(TL4)-14

FILE: nucable1414	DN: TxDOT	CK: RM	DW: VP	CK:
©TxDOT: March 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		88

DATE: DATE TIME
FILE: DOCUMENT NAME

I. STORMWATER POLLUTION PREVENTION-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Permit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 506.

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

1.

2.

☒ No Action Required ☐ Required Action

Action No.

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

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

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

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

☒ No Permit Required

☐ Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)

☐ Nationwide Permit 14 - PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)

☐ Individual 404 Permit Required

☐ Other Nationwide Permit Required: NWP# _____

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

1.

2.

3.

4.

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

Best Management Practices:

Erosion	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

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

During construction, efforts would be taken to avoid and minimize disturbance of vegetation and soils. Areas within the existing ROW, but outside the limits of construction, would not be disturbed. Every effort would be made to preserve trees where they would neither compromise safety nor substantially interfere with the proposed projects.

No landscaping would be a part of the proposed project activities. Re-vegetation of disturbed areas would be in compliance with the Executive Memorandum on Beneficial Landscaping (26Apr94) and the Executive Order on Invasive Species (EO 13112). Regionally native and non-invasive plants would be used to the extent practicable in landscaping and re-vegetation.

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

☐ No Action Required ☒ Required Action

No disturbing, destroying, or removing active nests of Bald Eagles, including ground nesting birds, during the nesting season. Avoid the removal of unoccupied, inactive nests as practicable. Prevent the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair. No collecting, capturing, relocating or transporting birds, eggs, young or active nests without a permit. The Eagle Protection Act prohibits the taking or possession of and commerce in eagles, parts, feathers, nests, or eggs with limited exceptions. The definition of take includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. Eagles may not be taken for any purpose unless a permit is issued prior to the taking.

Between October 1 and February 15, the contractor would remove all old migratory bird nests from any structure that would be affected by theproposed project, and complete any bridge work/demolition and/or vegetation clearing. In addition, the contractor would be prepared to prevent migratory birds from building nests by utilizing nest prevention methods, such as bird-deterrent netting and bird-repelling sprays and/or gels, between February 15 and October 1. In the event that migratory birds are encountered on-site during project construction, adverse impacts on protected birds,active nests, eggs, and/or young would be avoided.

The contractor and/or TxDOT personnel would be advised of the potential for Whooping Cranes to occur within the project limits. Construction personnel would be advised to avoid adverse impacts to this species and to report any sightings to TxDOT District Environmental staff. Drainage modifications would be limited to the extent practical to accommodate the additional paved surface needed to bring the roadway up to current TxDOTsafety standards. The construction personnel would report all sightings to TxDOT Fort Worth District Environmental staff. Reports should include the time, date and location and any available photos.

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

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 Enviromental Quality
MOU:	Memorandum of Understanding	TPDES:	Texas Pollutant Discharge Elimination System
MS4:	Municipal Separate Stormwater Sewer System	TPWD:	Texas Parks and Wildlife Department
MBTA:	Migratory Bird Treaty Act	TxDOT:	Texas Department of Transportation
NOT:	Notice of Termination	T&E:	Threatened and Endangered Species
NWP:	Nationwide Permit	USACE:	U.S. Army Corps of Engineers
NOI:	Notice of Intent	USFWS:	U.S. Fish and Wildlife Service

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):

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

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

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

Contact the Engineer if any of the following are detected:
- Dead or distressed vegetation (not identified as normal)
- Trash piles, drums, canister, barrels, etc.
- Undesirable smells or odors
- Evidence of leaching or seepage of substances

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

☐ Yes ☒ No

If "No", then no further action is required.
If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

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

☐ Yes ☐ No

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

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

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

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

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

VII. OTHER ENVIRONMENTAL ISSUES

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

☒ No Action Required ☐ Required Action

Action No.

1.

2.

STATE OF TEXAS
EDREAN CHENG
98263
LICENSED PROFESSIONAL ENGINEER

DocuSigned by:
Edrean Cheng, PE
1C2C4AEE88A847B...

Texas Department of Transportation

Design Division Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS

EPIC

FILE: epic.dgn	DN: TxDOT	CK: RG	DW: VP	CK: AR
©TxDOT: February 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS 12-12-2011 (DS) 05-07-14 ADDED NOTE SECTION IV. 01-23-2015 SECTION I (CHANGED ITEM 1122 TO ITEM 506, ADDED GRASSY SWALES.	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		89

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 any soil disturbing activities, TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office. If no field office is available, then this SWP3 shall be kept in the appropriate TxDOT Area Office.

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):
0134-07-075, ETC

1.2 PROJECT LIMITS:
From: *SH 101 / SH 114*

To: *DENTON COUNTY LINE*

1.3 PROJECT COORDINATES:
BEGIN: (Lat) *33°13'23.92"N* ,(Long) *97°46'8.71"N*

END: (Lat) *33°14'44.98"N* ,(Long) *97°23'24.37"N*

1.4 TOTAL PROJECT AREA (Acres): *640*

1.5 TOTAL AREA TO BE DISTURBED (Acres): *51.33*

1.6 NATURE OF CONSTRUCTION ACTIVITY:
CONSTRUCTION OF SAFETY IMPROVEMENT WORK CONSISTING OF CABLE BARRIER

1.7 MAJOR SOIL TYPES:

Soil Type	Description
TuB TRUCE FINE SAND	*SOILS HAVING A VERY SLOW INFILTRATION RATE WHEN THROUGHLY WET. THESE CONSIST CHIEFLY OF CLAYS.*
ByE BRACKETT	*CONSIST OF SHALLOW TO PARALITHIC BEDROCK, WELL DRAINED SOILS FORMED IN RESIDUUM WEATHERED FROM LIMESTONE.*
KtC KEETER VERY FINE SAND	*CONSIST OF MODERATELY DEEP OVER NON CEMENTED SANDSTONE BEDROCK, WELL DRAINED, MODERATELY SLOWLY PERMEABLE.*

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):
PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below:

- ☐ PSLs determined during preconstruction meeting
- ☐ PSLs determined during construction
- ☒ No PSLs planned for construction

Type	Sheet #s

All off-ROW PSLs required by the Contractor are the Contractor's responsibility. The Contractor shall secure all permits required by local, state, federal laws for off-ROW PSLs. The contractor shall provide diagrams, areas of disturbance, acreage, and BMPs for all off-ROW PSLs within one mile of the project.

1.9 CONSTRUCTION ACTIVITIES:
(Use the following list as a starting point when developing the Construction Activity Schedule and Ceasing Record in Attachment 2.5.)

- ☒ Mobilization
- ☒ Install sediment and erosion controls
- ☒ Blade existing topsoil into windrows, prep ROW, clear and grub
- ☐ Remove existing pavement
- ☐ Grading operations, excavation, and embankment
- ☐ Excavate and prepare subgrade for proposed pavement widening
- ☐ Remove existing culverts, safety end treatments (SETs)
- ☐ Remove existing metal beam guard fence (MBGF), bridge rail
- ☐ Install proposed pavement per plans
- ☐ Install culverts, culvert extensions, SETs
- ☒ Install mow strip, MBGF, bridge rail
- ☐ Place flex base
- ☐ Rework slopes, grade ditches
- ☐ Blade windrowed material back across slopes
- ☒ Revegetation of unpaved areas
- ☐ Achieve site stabilization and remove sediment and erosion control measures
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.10 POTENTIAL POLLUTANTS AND SOURCES:

- ☐ Sediment laden stormwater from stormwater conveyance over disturbed area
- ☐ Fuels, oils, and lubricants from construction vehicles, equipment, and storage
- ☐ Solvents, paints, adhesives, etc. from various construction activities
- ☐ Transported soils from offsite vehicle tracking
- ☐ Construction debris and waste from various construction activities
- ☐ Contaminated water from excavation or dewatering pump-out water
- ☐ Sanitary waste from onsite restroom facilities
- ☐ Trash from various construction activities/receptacles
- ☐ Long-term stockpiles of material and waste
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.11 RECEIVING WATERS:
Receiving waters must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. Include Segment # for receiving waters.

Tributaries	Classified Waterbody

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

- ☒ Development of plans and specifications
- ☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
- ☒ Post Construction Site Notice
- ☒ Submit NOI/CSN to local MS4
- ☒ Perform SWP3 inspections
- ☒ Maintain SWP3 records and update to reflect daily operations
- ☒ Complete and submit Notice of Termination to TCEQ
- ☒ Maintain SWP3 records for 3 years
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

- ☒ Day To Day Operational Control
- ☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
- ☒ Post Construction Site Notice
- ☒ Submit NOI/CSN to local MS4
- ☒ Maintain schedule of major construction activities
- ☒ Install, maintain and modify BMPs
- ☒ Complete and submit Notice of Termination to TCEQ
- ☒ Maintain SWP3 records for 3 years
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity

STATE OF TEXAS
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

US 380

Sheet 1 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			90
STATE	STATE DIST.	COUNTY	
TEXAS	FTW	WISE	
CONT.	SECT.	JOB	HIGHWAY NO.
0134	07	075, ETC	US 380

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

2.0 BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS, INSPECTION, AND MAINTENANCE

The Contractor shall be the responsible party for implementing the BMPs described herein and for complying with the SWP3 for control of erosion and sedimentation during day-to-day operations. The Contractor shall implement changes to this SWP3 approved by TxDOT within the times specified in this SWP3 or the CGP.

2.1 EROSION CONTROL AND SOIL STABILIZATION BMPs:

T / P

- ☐ ☐ Protection of Existing Vegetation
- ☐ ☐ Vegetated Buffer Zones
- ☐ ☐ Soil Retention Blankets
- ☐ ☐ Geotextiles
- ☒ ☒ Mulching/ Hydromulching
- ☐ ☐ Soil Surface Treatments
- ☒ ☐ Temporary Seeding
- ☒ ☒ Permanent Planting, Sodding or Seeding
- ☒ ☐ Biodegradable Erosion Control Logs
- ☒ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Vertical Tracking
- ☐ ☐ Interceptor Swale
- ☐ ☐ Riprap
- ☐ ☐ Diversion Dike
- ☐ ☐ Temporary Pipe Slope Drain
- ☐ ☐ Embankment for Erosion Control
- ☐ ☐ Paved Flumes
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

2.2 SEDIMENT CONTROL BMPs:

T / P

- ☐ ☐ Biodegradable Erosion Control Logs
- ☐ ☐ Dewatering Controls
- ☐ ☐ Inlet Protection
- ☐ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Sandbag Berms
- ☐ ☐ Sediment Control Fence
- ☐ ☐ Stabilized Construction Exit
- ☐ ☐ Floating Turbidity Barrier
- ☐ ☐ Vegetated Buffer Zones
- ☐ ☐ Vegetated Filter Strips
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____
- ☐ ☐ Other: _____

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

Sediment control BMPs requiring design capacity calculations (See SWP3 Attachment 1.3.):

T / P

- ☐ ☐ Sediment Trap
  - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
  - ☐ 3,600 cubic feet of storage per acre drained
- ☐ ☐ Sedimentation Basin
  - ☐ Not required (<10 acres disturbed)
  - ☐ Required (>10 acres) and implemented.
    - ☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
    - ☐ 3,600 cubic feet of storage per acre drained
  - ☐ Required (>10 acres), but not feasible due to:
    - ☐ Available area/Site geometry
    - ☐ Site slope/Drainage patterns
    - ☐ Site soils/Geotechnical factors
    - ☐ Public safety
    - ☐ Other: _____

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Stationing	
	From	To

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

- ☐ Excess dirt/mud on road removed daily
- ☐ Haul roads dampened for dust control
- ☐ Loaded haul trucks to be covered with tarpaulin
- ☐ Stabilized construction exit
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

2.5 POLLUTION PREVENTION MEASURES:

- ☐ Chemical Management
- ☒ Concrete and Materials Waste Management
- ☐ Debris and Trash Management
- ☐ Dust Control
- ☐ Sanitary Facilities
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____
- ☐ 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

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- ☒ Fire hydrant flushings
- ☒ Irrigation drainage
- ☒ Pavement washwater (where spills or leaks have not occurred, and detergents are not used)
- ☒ Potable water sources
- ☒ Springs
- ☒ Uncontaminated groundwater
- ☒ Water used to wash vehicles or control dust
- ☒ Other allowable non-stormwater discharges as allowed by TPDES GP TXR150000.

2.8 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 .

2.9 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
ERNESTO SALCIDO
100177
LICENSED
PROFESSIONAL ENGINEER
5/25/2023
Ernesto Salcido, P.E.

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

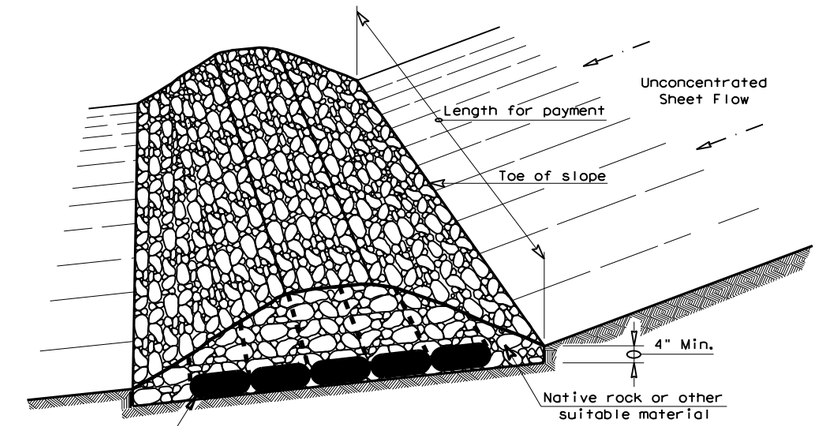
US 380

Sheet 2 of 2

Texas Department of Transportation

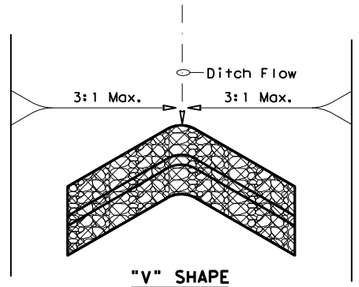
FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6			91
STATE	STATE DIST.	COUNTY	
TEXAS	FTW	WISE	
CONT.	SECT.	JOB	HIGHWAY NO.
0134	07	075, ETC	US 380

DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms17749\EC(2)-16.dgn

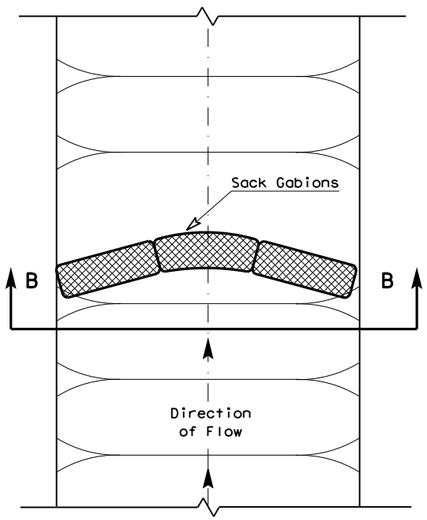


FILTER DAM AT TOE OF SLOPE

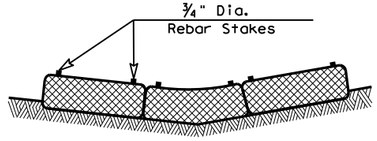
RFD1



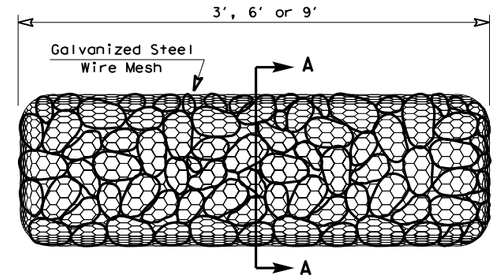
"V" SHAPE PLAN VIEW



PLAN VIEW

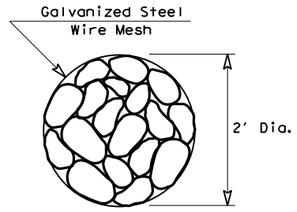


SECTION B-B

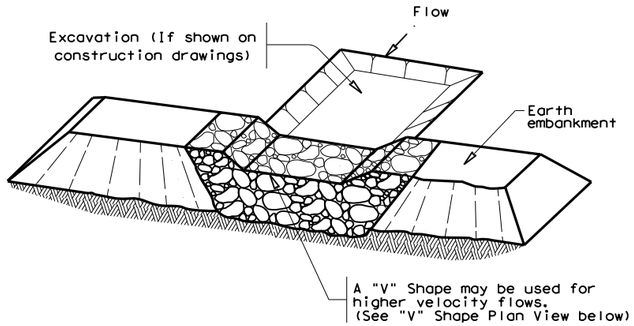


TYPE 4 (SACK GABIONS)

RFD4

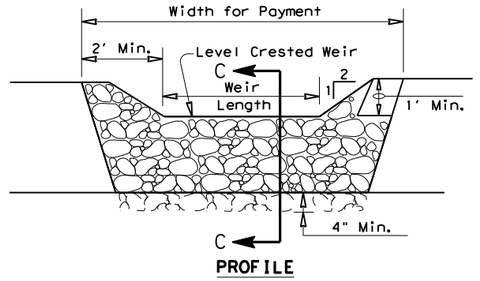


SECTION A-A

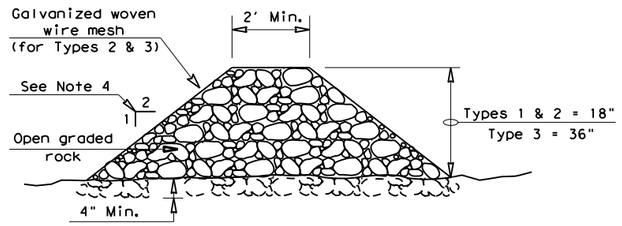


FILTER DAM AT SEDIMENT TRAP

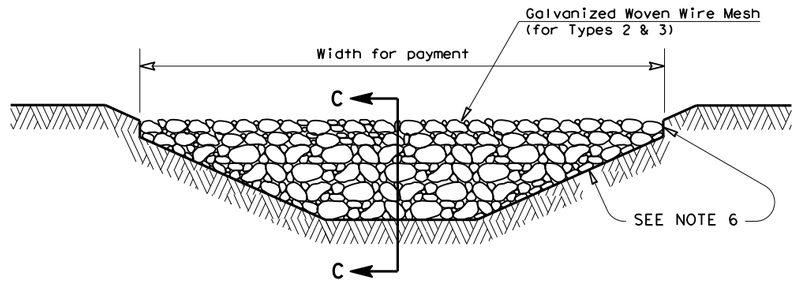
RFD1 OR RFD2



PROFILE



SECTION C-C



FILTER DAM AT CHANNEL SECTIONS

RFD1 OR RFD2 OR RFD3

ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT^2 of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

Type 1 (18" high with no wire mesh) (3" to 6" aggregate): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approximently 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh) (3" to 6" aggregate): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh) (4" to 8" aggregate): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions) (3" to 6" aggregate): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

Type 5: Provide rock filter dams as shown on plans.

GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. For in stream use, the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with ¾" dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 ½" x 3 ¼"
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

PLAN SHEET LEGEND

Type 1 Rock Filter Dam — RFD1
Type 2 Rock Filter Dam — RFD2
Type 3 Rock Filter Dam — RFD3
Type 4 Rock Filter Dam — RFD4

Texas Department of Transportation | Design Division Standard

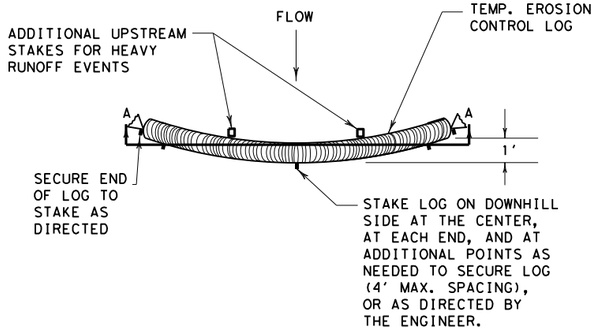
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

ROCK FILTER DAMS

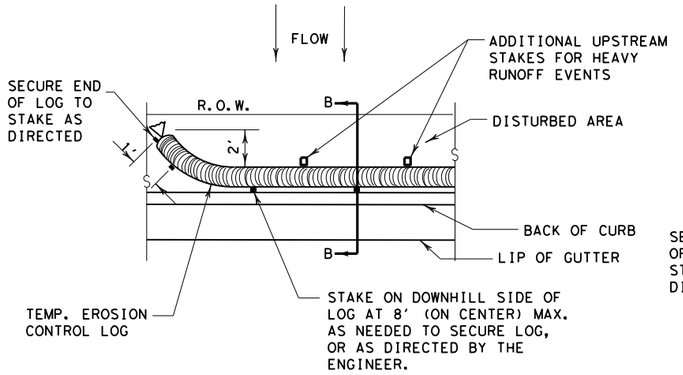
EC(2)-16

FILE: ec216	DN: TxDOT	CK: KM	DW: VP	DN/CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		92

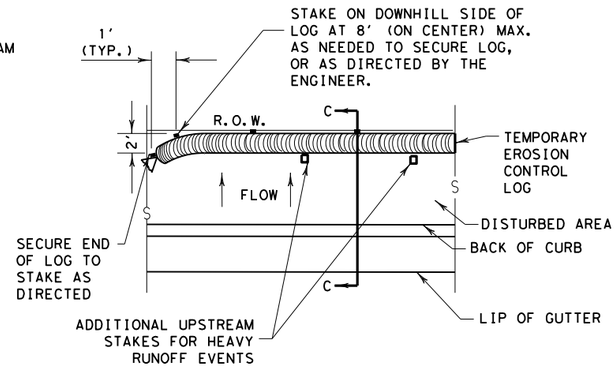
DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms17749\EC(9)-16_Sht1.dgn



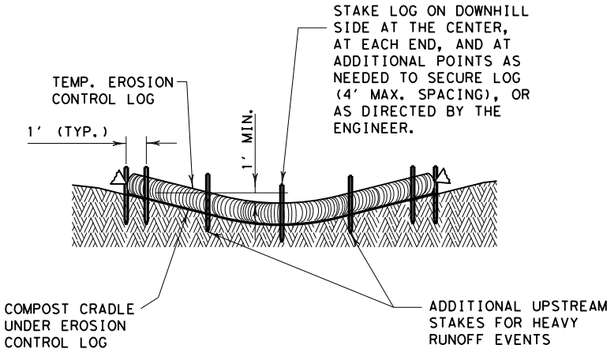
PLAN VIEW



PLAN VIEW



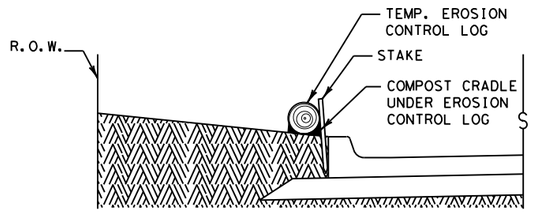
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

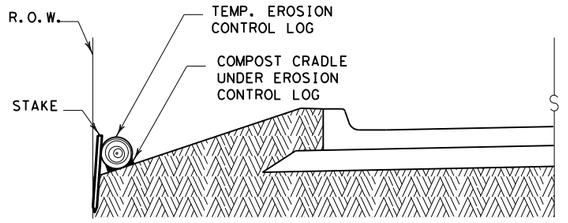
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

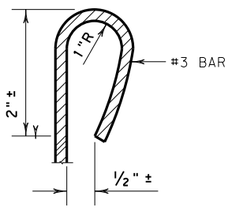
CL-BOC



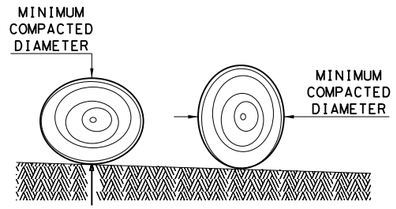
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW



REBAR STAKE DETAIL



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.

Texas Department of Transportation

Design Division Standard

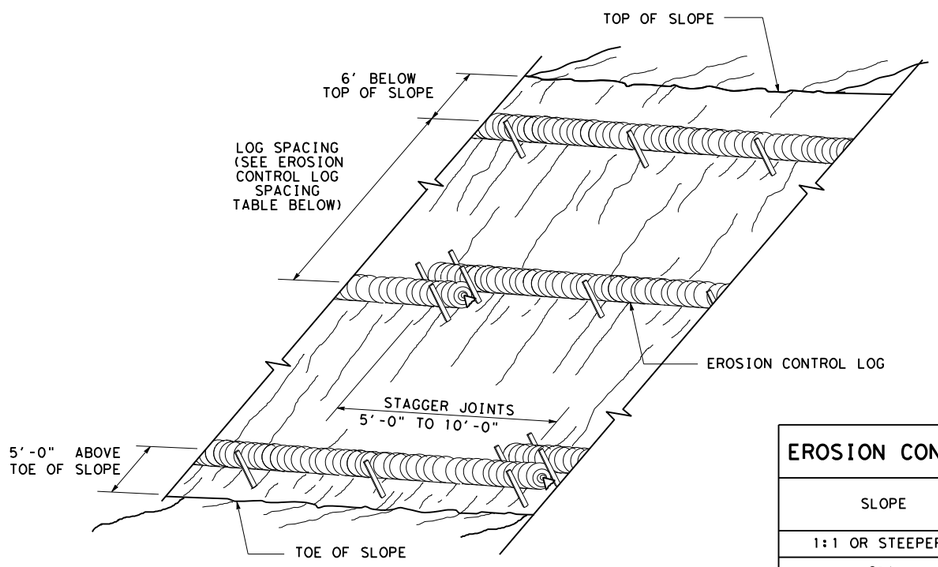
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

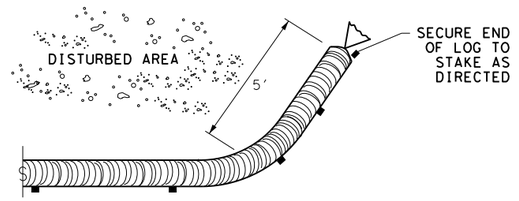
FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		93

DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms17749\EC(9)-16_Sht2.dgn



EROSION CONTROL LOGS ON SLOPES
STAKE AND TRENCHING ANCHORING

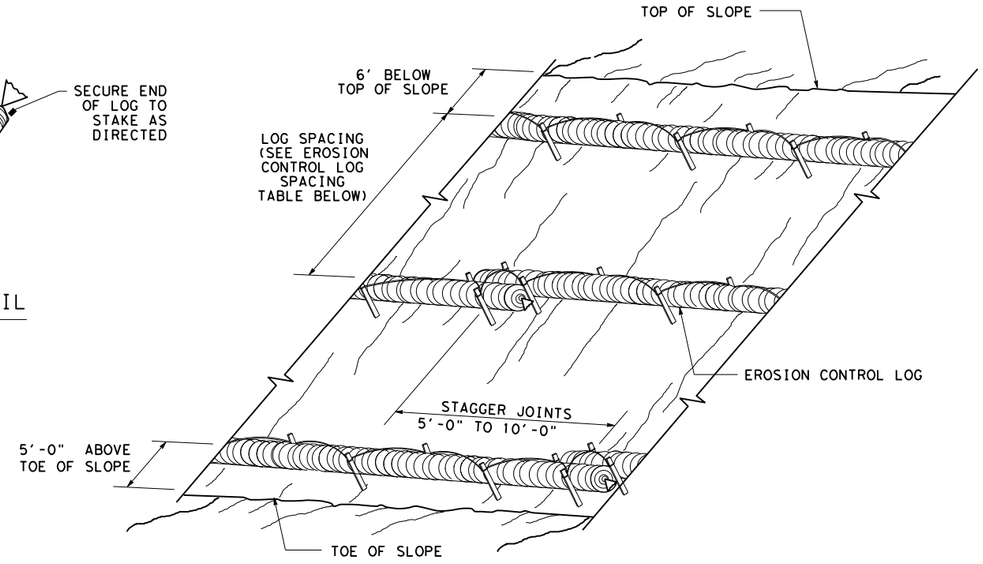
CL-SST



END SECTION RAP DETAIL

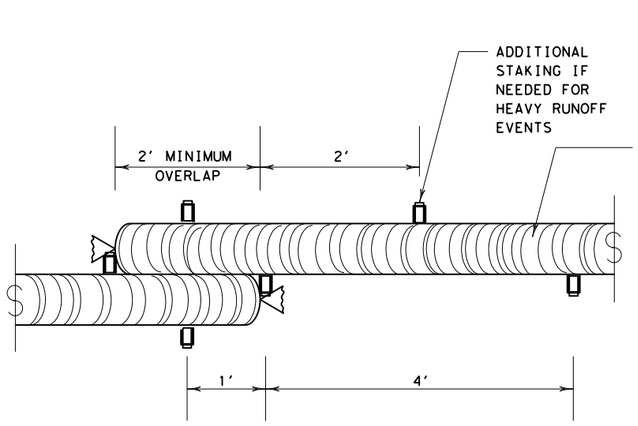
EROSION CONTROL LOG SPACING TABLE				
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5'	10'	15'	20'
2:1	10'	20'	30'	40'
3:1	15'	30'	45'	60'
4:1 OR FLATTER	20'	40'	60'	80'

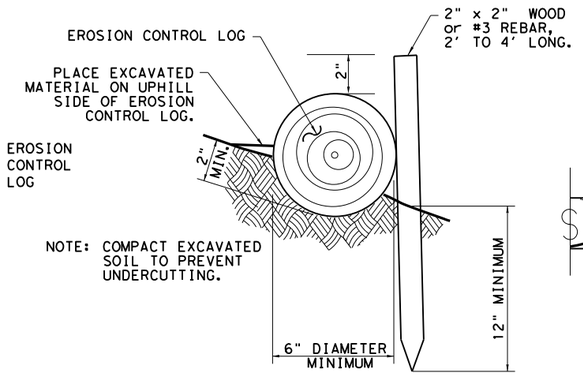
* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:
SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;
HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



EROSION CONTROL LOGS ON SLOPES
STAKE AND LASHING ANCHORING

CL-SSL

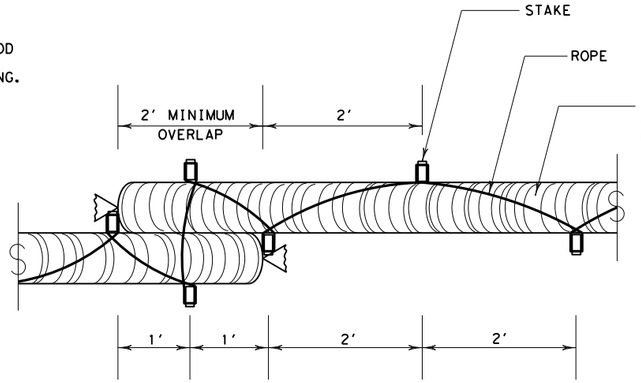


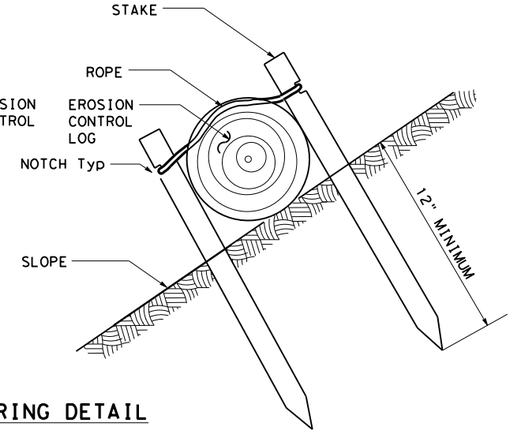


STAKE AND TRENCHING ANCHORING DETAIL

CL-SST

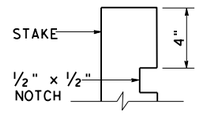
TRENCH DEPTH TABLE	
LOG DIAMETER	DEPTH
6"	2"
8"	3"
12"	4"
18"	5"





STAKE AND LASHING ANCHORING DETAIL

CL-SSL



STAKE NOTCH DETAIL

SHEET 2 OF 3

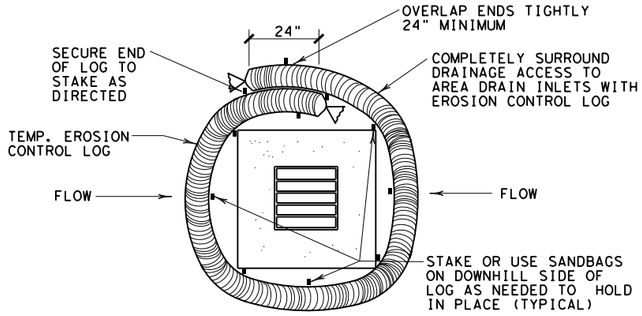
Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
EROSION CONTROL LOG
EC(9)-16

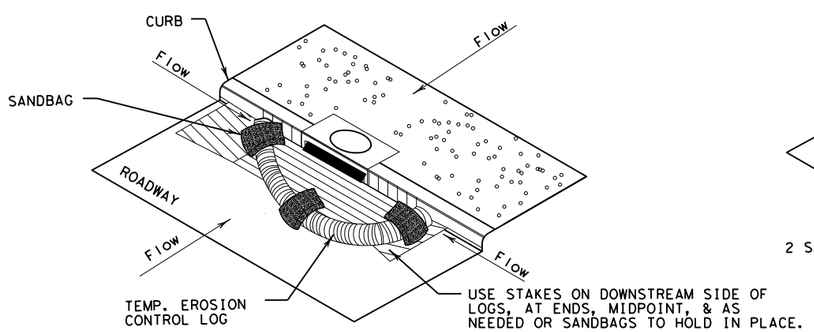
FILE: ec116	DN: TxDOT		CK: KM		DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY	
REVISIONS	0134	07	075, ETC		US 380	
	DIST	COUNTY			SHEET NO.	
	FTW	WISE			94	

DATE: 5/25/2023
FILE: c:\pwworking\ustx\dms17749\EC(9)-16_Sht3.dgn



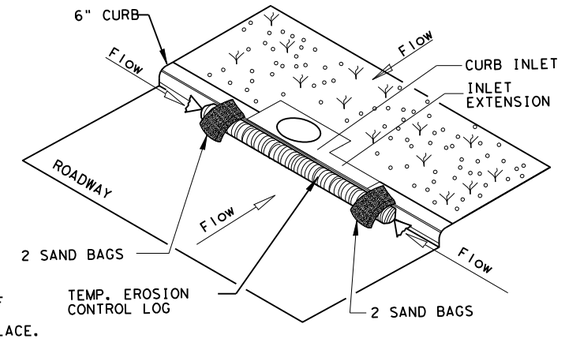
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

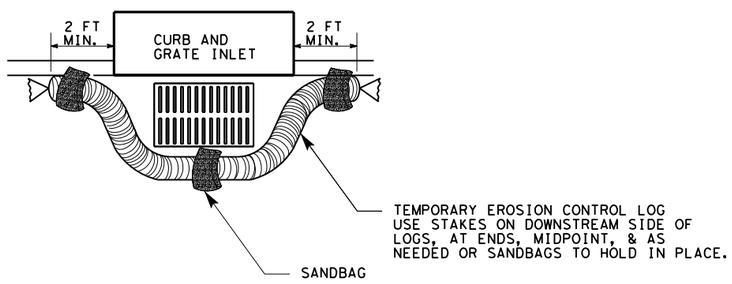
CL-CI



EROSION CONTROL LOG AT CURB INLET

CL-CI

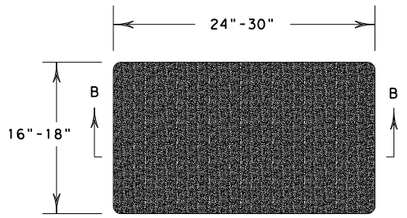
NOTE:
EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



EROSION CONTROL LOG AT CURB & GRADE INLET

CL-GI

SECTION B-B



SANDBAG DETAIL

SHEET 3 OF 3

Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0134	07	075, ETC	US 380
	DIST	COUNTY		SHEET NO.
	FTW	WISE		95