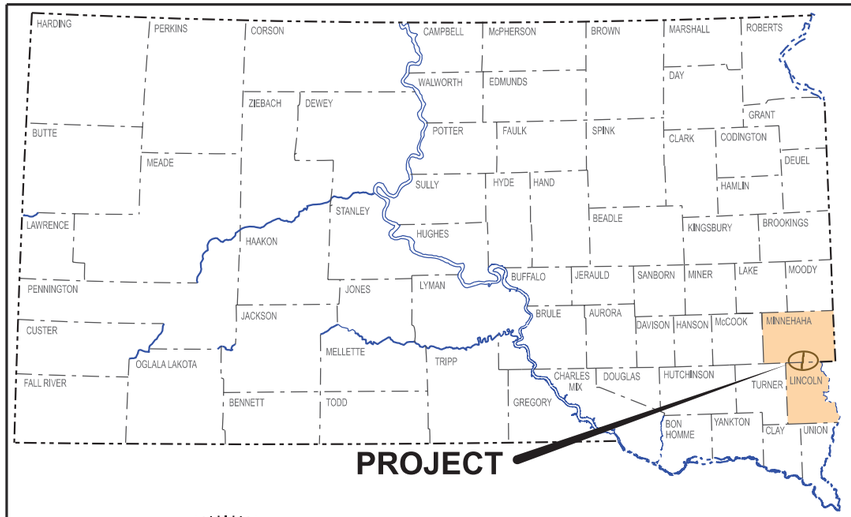

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
	PH 0022(443)	1	107

Plotting Date: 1/26/2026
Revised: 2/27/2026

PLANS FOR PROPOSED

PROJECT PH 0022(443)
INTERSTATE 29
MINNEHAHA & LINCOLN COUNTIES

MEDIAN CABLE BARRIER,
GUARDRAIL REPLACEMENT,
GUARDRAIL EMBANKMENT CONSTRUCTION
& SURFACING
PCN 08Q8

INDEX OF SHEETS

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Sheet 5-6	Typical In-Place Surfacing Sections
Sheet 7	Typical Median Cable Barrier Details and Typical Guardrail Embankment Construction & Surfacing Details
Sheets 8-9	Table of Median Cable Barrier Guardrail
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Sheets 21-24	Traffic Control Plan
Sheets 25	Legend
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Sheets 56-82	Layouts for Standalone Guardrail Installation
Sheets 83-84	Maintenance Crossover Signing Details
Sheets 85	High Tension Cable Guardrail Cylindrical Anchor Footing Details
Sheets 86-107	Standard Plates

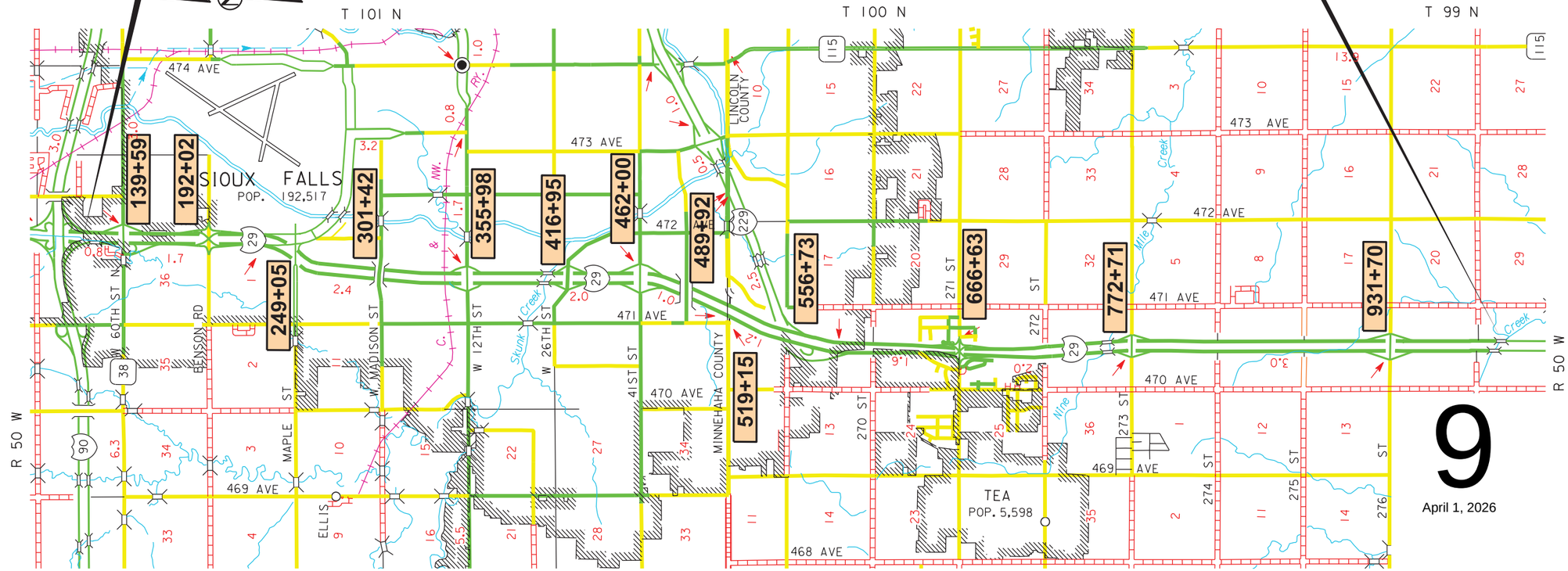
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
STATE OF SOUTH DAKOTA
2/27/2026

END 08Q8
STA. 101+78
MRM 84.14
(At I-90 Underpass)

BEGIN 08Q8
STA. 995+92
MRM 67.13
(At Beaver Creek Bridges)

STORM WATER PERMIT	
Roadway:	Interstate 29
MRM:	MRM 67.13 to MRM 84.14
Receiving Waters:	Skunk Creek, Ninemile Creek & Tributaries
Area Disturbed:	2.3 Acres
Total Area:	616 Acres
Latitude:	43.370 to 43.613
Longitude:	-96.796 to -96.770

DESIGN DESIGNATION		
ROUTE	I29S	I29N
ADT(2024)	23,142	23,246
ADT(2044)	36,998	37,195
DHV	4,084	4,104
D	52%	52%
T DHV	7.6%	7.6%
T ADT	16.8%	16.7%
V (URBAN)	65 MPH	65 MPH
V (RURAL)	80 MPH	80 MPH



9

April 1, 2026

ESTIMATE OF QUANTITIES

Plotting Date: 1/26/2026
Revised: 2/12/2026

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0022(443)	2	107

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3200	Construction Staking	Lump Sum	LS
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
110E0135	Remove Delineator	116	Each
110E0500	Remove Pipe Culvert	80	Ft
110E0510	Remove Pipe End Section	4	Each
110E0700	Remove 3 Cable Guardrail	15,169	Ft
110E0707	Remove High Tension 4 Cable Guardrail	2,412	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	81	Each
110E0745	Remove 3 Cable Guardrail Slip Base Anchor Assembly	11	Each
110E0749	Remove High Tension 4 Cable Guardrail Anchor Assembly	10	Each
110E1020	Remove Asphalt Concrete Pavement	101.0	CuYd
110E7150	Remove Sign for Reset	3	Each
120E0010	Unclassified Excavation	1,132	CuYd
120E0100	Unclassified Excavation, Digouts	100	CuYd
120E0600	Contractor Furnished Borrow Excavation	703	CuYd
230E0100	Remove and Replace Topsoil	Lump Sum	LS
260E1010	Base Course	2,069.7	Ton
320E1200	Asphalt Concrete Composite	932.0	Ton
320E5010	Saw and Seal Shoulder Joint	1,215	Ft
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	0.3	Mile
450E0122	18" RCP Class 2, Furnish	118	Ft
450E0130	18" RCP, Install	118	Ft
450E2304	18" RCP Safety End, Furnish	8	Each
450E2307	18" RCP Safety End, Install	8	Each
629E0110	High Tension 4 Cable Guardrail	82,907	Ft
629E0290	High Tension Cable Guardrail Anchor Assembly	150	Each
630E0010	Straight Class A Thrie Beam Guardrail with Wood Posts	62.5	Ft
630E0500	Type 1 MGS	1,000.3	Ft
630E0520	Type 2 MGS	37.5	Ft
630E0530	Type 3 MGS	37.5	Ft
630E2001	Asymmetrical W Beam to Thrie Beam Guardrail Transition	2	Each
630E2018	MGS MASH Tangent End Terminal	7	Each
630E2065	MGS Trailing End Terminal	7	Each
632E1340	2.5"x2.5" Perforated Tube Post	45.0	Ft
632E2008	4" Tubular Amber Delineator with 1.12 Lb/Ft Post	20	Each
632E2220	Guardrail Delineator	41	Each
632E2520	Type 2 Object Marker	165	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	20.0	SqFt
632E3500	Reset Sign	3	Each
634E0110	Traffic Control Signs	873.6	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0275	Type 3 Barricade	20	Each
634E0330	Temporary Raised Pavement Markers	21,090	Ft
634E0420	Type C Advance Warning Arrow Board	2	Each
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each
634E1255	Contractor Furnished Vehicle Speed Feedback Sign	2	Each
634E1260	Truck/Trailer Mounted Attenuator	2	Each
730E0212	Type G Permanent Seed Mixture	59	Lb
732E0100	Mulching	4.9	Ton
734E0604	High Flow Silt Fence	2,000	Ft
734E0610	Mucking Silt Fence	139	CuYd
734E0620	Repair Silt Fence	500	Ft
734E5010	Sweeping	40	Hour

ENVIRONMENTAL COMMITMENTS

Plotting Date: 1/26/2026
Revised: 2/12/2026

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0022(443)	3	107

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf >

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:
< https://sdleastwanted.sd.gov/maps/default.aspx>

< South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species: https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04 >

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance and/or work in a waterway.

Action Taken/Required:

The DANR General Permit for Stormwater Discharges Associated with Construction Activities is required for construction activity disturbing one or more acres of earth and work in a waterway. The SDDOT is the owner of this permit and will submit the NOI to DANR 15 days prior to project start in order to obtain coverage under the General Permit. Work can begin once the DANR letter of approval is received.

The Contractor must adhere to the "Special Provision Regarding Storm Water Discharges to Waters of the State."

The Contractor will complete the DANR Contractor Certification Form prior to the pre-construction meeting. The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the permit for this project. Work may not begin on this project until this form is signed and submitted to DANR.

The form can be found at:
<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_CGPAppendixCCA2018Fillable.pdf >

The Contractor is advised that permit coverage may also be required for off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) will be developed prior to the submittal of the NOI and will be implemented for all construction activities for compliance with the permit. The SWPPP must be kept on-site and updated as site conditions change. Erosion control measures and best management practices will be implemented in accordance with the SWPPP.

The DOT 298 Form will be used for site inspections and to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents and retained for a minimum of three years.

The inspection will include disturbed areas of the construction site that have not been finally stabilized, areas used for storage materials, structural control measures, and locations where vehicles enter or exit the site. These areas will be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWPPP will be observed to ensure that they are operating correctly, and sediment is not tracked off the site.

Information on storm water permits and SWPPPs are available on the following websites:

SDDOT: https://dot.sd.gov/doing-business/environmental/stormwater
DANR:
https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/default.aspx
EPA: https://www.epa.gov/npdes

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
2-12-2026

ENVIRONMENTAL COMMITMENTS

Plotting Date: 1/26/2026

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0022(443)	4	107

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Agriculture and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, “No Dumping Allowed”.

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.
Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

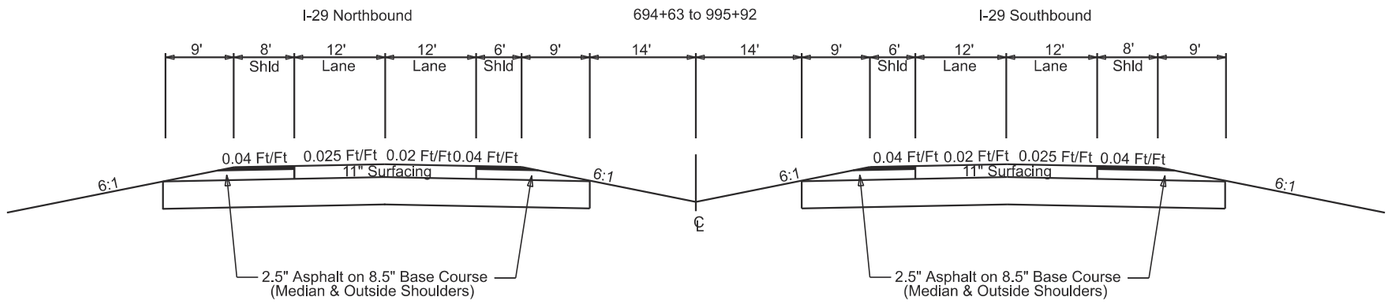
The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

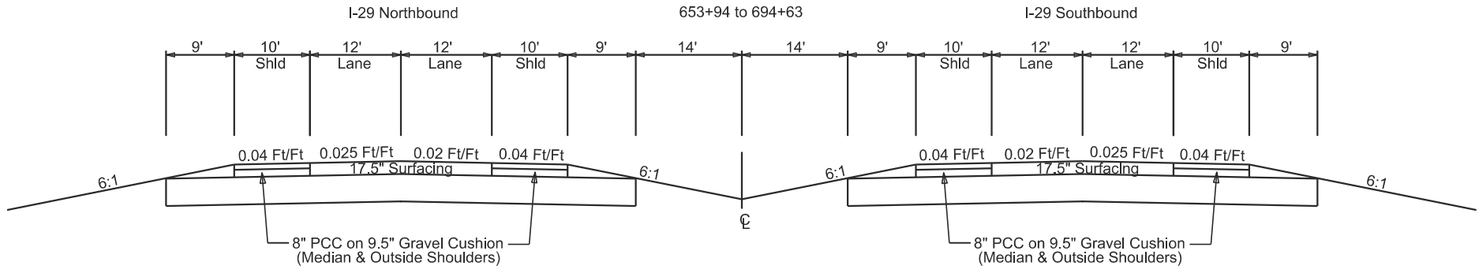
SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

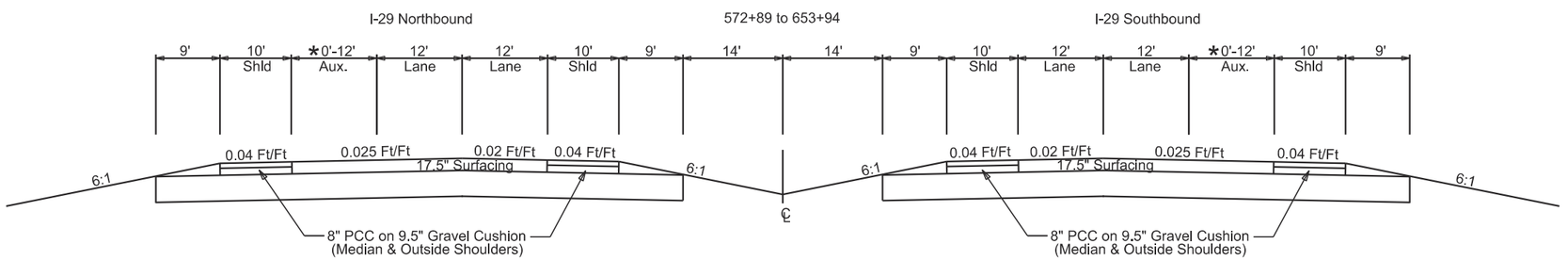
TYPICAL IN-PLACE SURFACING SECTIONS

694+63 - 995+92 (NB) Asphalt Shoulders



696+03 - 995+92 (SB) Asphalt Shoulders



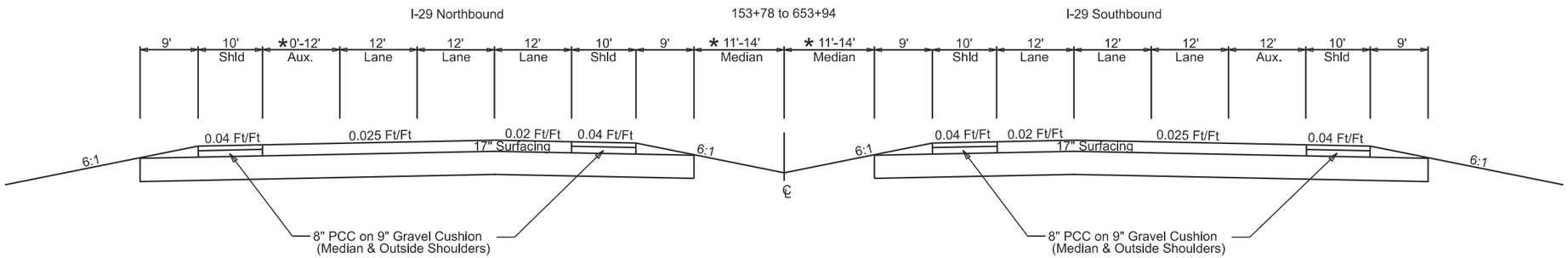


* Auxillary Lane Stationing:
451+37 - 539+47 (NB) 12' Auxillary Lane
572+89 - 645+53 (NB) 12' Auxillary Lane

* Auxillary Lane Stationing:
450+06 - 563+08 (SB) 12' Auxillary Lane
598+94 - 653+94 (SB) 12' Auxillary Lane

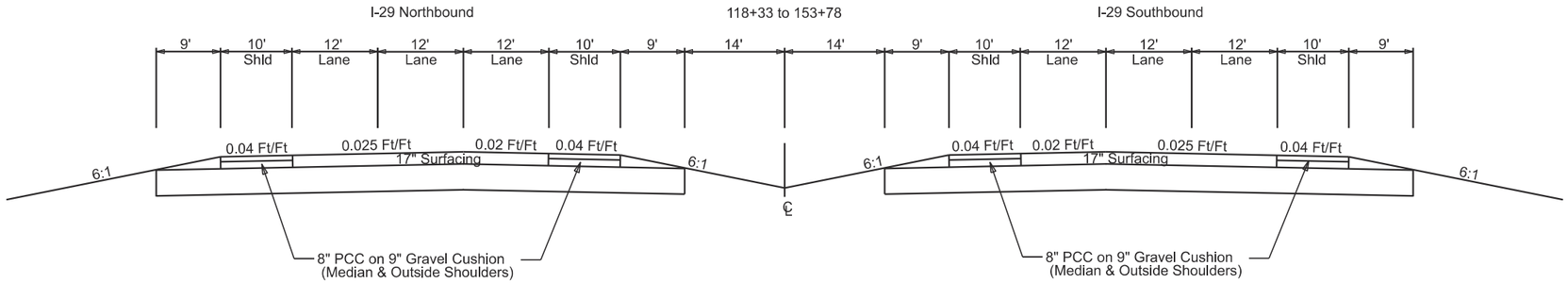
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

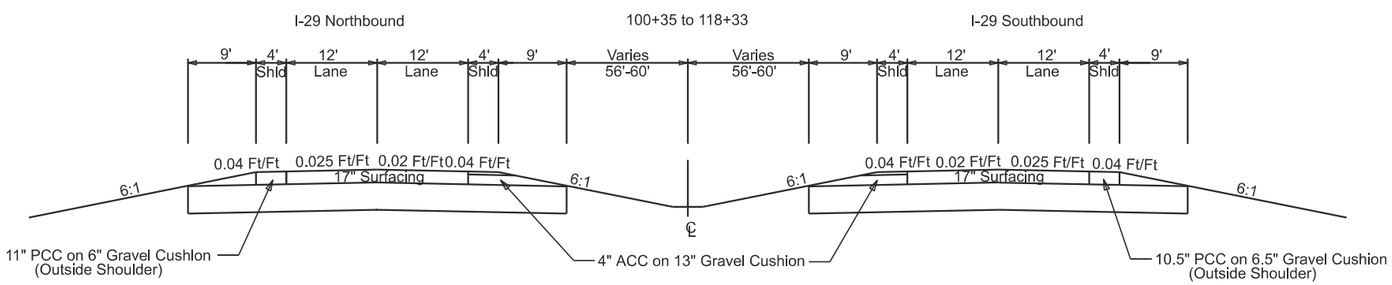
TYPICAL IN-PLACE SURFACING SECTIONS

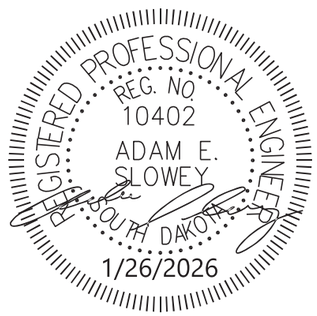


Auxillary Lane Stationing:
153+78 - 645+53 (NB) 12' Auxillary Lane
✱ 384+00 - 631+00 Median Width of 11'

✱ 384+00 - 631+00 Median Width of 11'

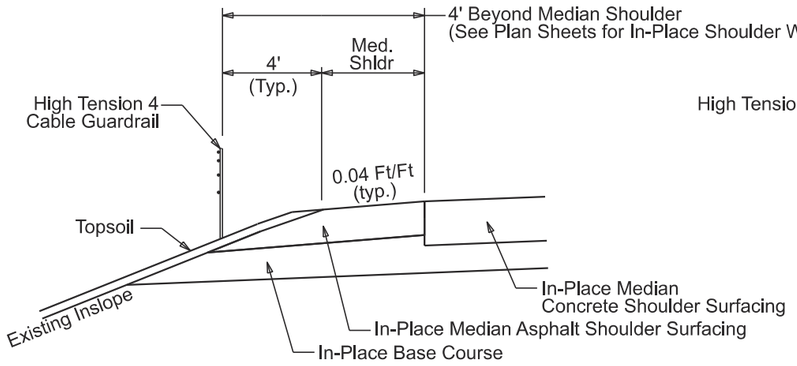




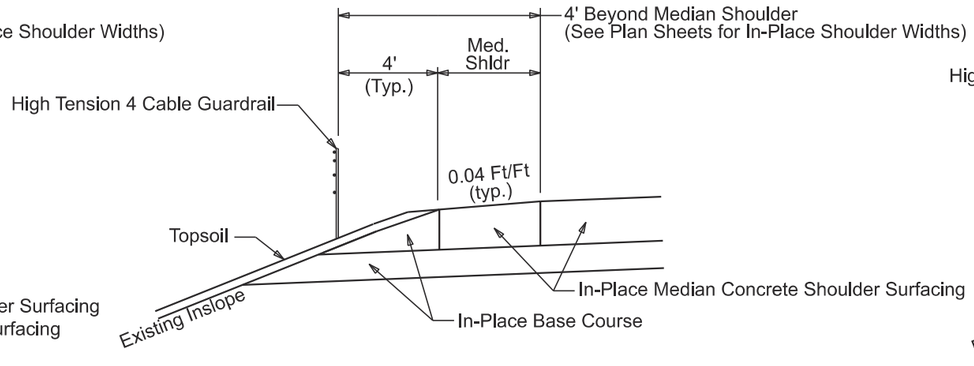


FOR BIDDING PURPOSES ONLY

TYPICAL MEDIAN CABLE BARRIER DETAIL

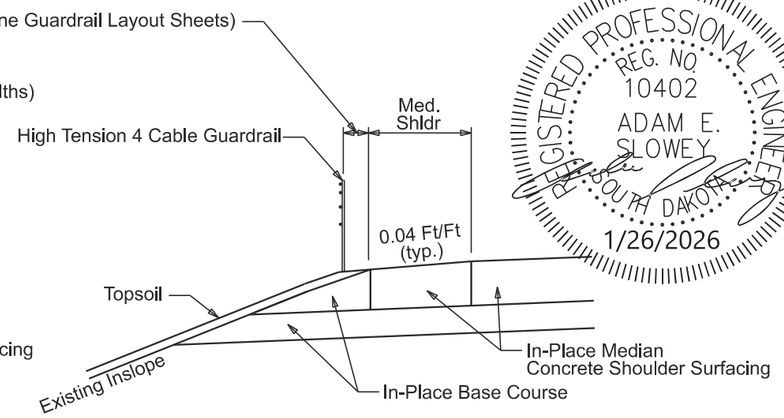


ASPHALT SHOULDER



CONCRETE SHOULDER

INSTALLATION AT PAVEMENT EDGE DETAIL



CONCRETE SHOULDER

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REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
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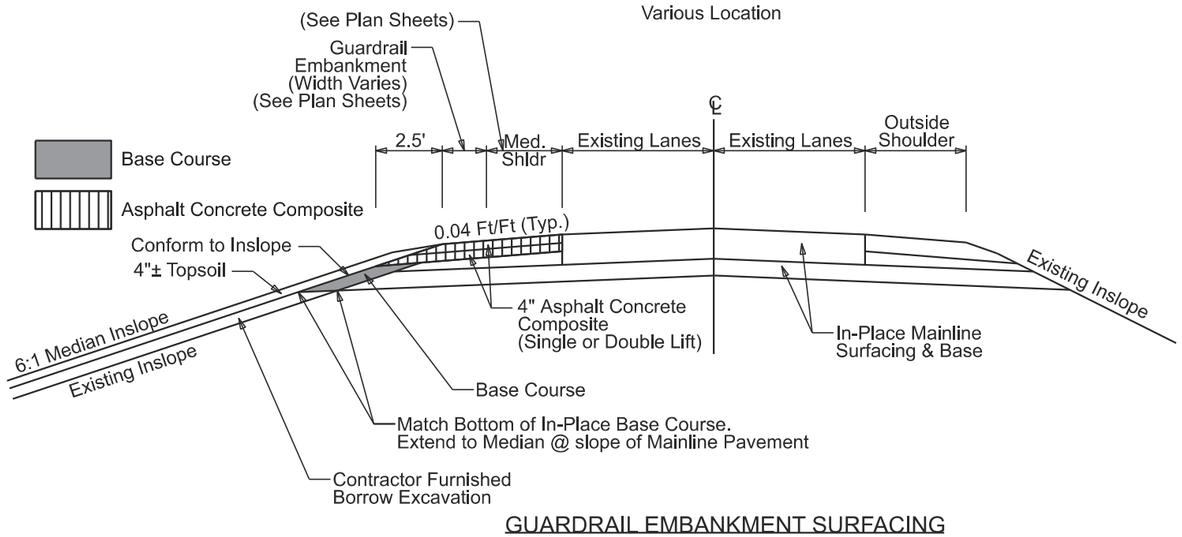
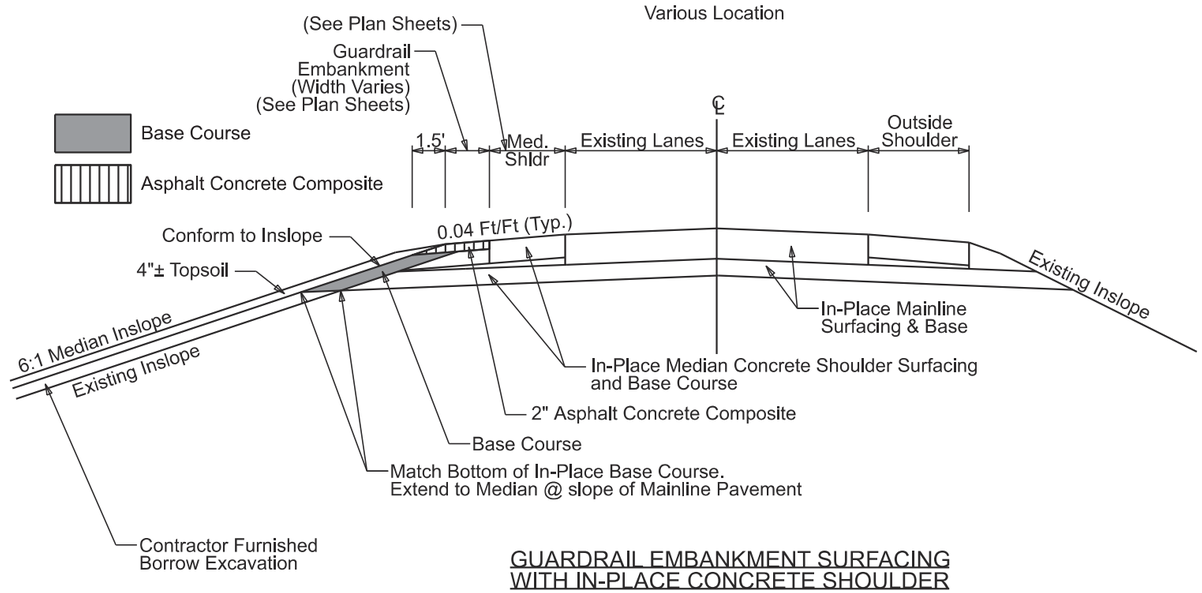
TYPICAL GUARDRAIL EMBANKMENT CONSTRUCTION & SURFACING DETAIL



GUARDRAIL EMBANKMENT SURFACING
WITH ASPHALT SHOULDER REPLACEMENT



GUARDRAIL EMBANKMENT SURFACING
WITH IN-PLACE CONCRETE SHOULDER

TABLE OF REMOVAL AND INSTALLATION OF GUARDRAIL AND RELATED ITEMS – MEDIAN CABLE BARRIER

Median Cable Barrier Location	Approximate MRM	Lane-Shoulder		Remove Delineator (1) (Each)	Remove 3 Cable Guardrail (Ft)	Remove High Tension 4 Cable Guardrail (Ft)	Remove 3 Cable Guardrail Anchor Assembly (Each)	Remove 3 Cable Guardrail Slip Base Anchor Assembly (Each)	Remove High Tension 4 Cable Guardrail Anchor Assembly (Each)	High Tension 4 Cable Guardrail (Ft)	High Tension Cable Guardrail Anchor Assembly (Each)	Type 2 Object Marker (2) (Each)
Median Cable Barrier Run #1												
102+05 to 112+61	84.00+0.169 to 83.38+0.505	SBL	Median							1057	2	2
Median Cable Barrier Run #2												
120+71 to 134+94	83.38+0.351 to 83.38+0.080	SBL	Median							1424	2	2
Median Cable Barrier Run #3												
135+71 to 144+70	83.38+0.066 to 82.41+0.288	NBL	Median	2	420		2			899	2	2
Median Cable Barrier Run #4												
141+49 to 174+73	82.41+0.348 to 82.41+0.309	SBL	Median							3325	2	2
Median Cable Barrier Run #5												
175+50 to 178+92	82.41+0.294 to 82.41+0.229	NBL	Median							343	2	2
Median Cable Barrier Run #6												
180+66 to 186+08	82.41+0.196 to 82.41+0.094	SBL	Median							542	2	2
Median Cable Barrier Run #7												
186+81 to 190+44	82.41+0.080 to 82.41+0.011	NBL	Median							364	2	2
Median Cable Barrier Run #8												
193+62 to 217+20	82.00+0.416 to 81.32+0.592	SBL	Median	2	340		2			2359	2	2
Median Cable Barrier Run #9												
217+97 to 227+33	81.32+0.578 to 81.32+0.398	NBL	Median							941	2	2
Median Cable Barrier Run #10												
229+28 to 239+69	81.32+0.361 to 81.32+0.169	NBL	Median							1046	2	2
Median Cable Barrier Run #11												
236+42 to 276+08	81.32+0.231 to 80.29+0.441	SBL	Median	4	840		4			3976	2	2
Median Cable Barrier Run #12												
275+40 to 279+88	80.73+0.000 to 80.29+0.369	NBL	Median	2	340		2			448	2	2
Median Cable Barrier Run #13												
285+08 to 294+81	80.29+0.271 to 80.29+0.087	SBL	Median							973	2	2
Median Cable Barrier Run #14												
295+58 to 298+89	80.29+0.072 to 80.29+0.009	NBL	Median							332	2	2
Median Cable Barrier Run #15												
303+97 to 323+65	80.00+0.252 to 79.54+0.345	SBL	Median							1970	2	2
Median Cable Barrier Run #16												
325+65 to 334+93	79.54+0.308 to 79.54+0.130	SBL	Median							941	2	2
Median Cable Barrier Run #17												
335+70 to 341+34	79.54+0.116 to 79.54+0.009	NBL	Median							563	2	2
Median Cable Barrier Run #18												
343+05 to 349+31	79.26+0.208 to 79.26+0.089	SBL	Median							626	2	2
Median Cable Barrier Run #19												
350+08 to 353+61	79.26+0.079 to 79.26+0.012	NBL	Median							353	2	2
Median Cable Barrier Run #20												
358+34 to 389+06	79.00+0.220 to 78.38+0.264	SBL	Median							3083	2	2
Median Cable Barrier Run #21												
390+99 to 398+09	78.38+0.228 to 78.38+0.093	SBL	Median							710	2	2
Median Cable Barrier Run #22												
398+81 to 402+23	78.38+0.080 to 78.38+0.015	NBL	Median							343	2	2
			Sheet Total:	10	1940	0	10	0	0	26618	44	44

(1) Existing Type 2 Object Markers at ends of existing cable barrier runs shall be removed with this item.
(2) New Type 2 Object Markers at ends of proposed cable barrier runs shall be installed with this item.

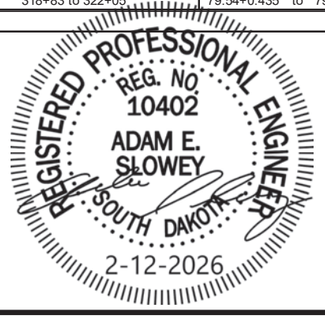
TABLE OF REMOVAL AND INSTALLATION OF GUARDRAIL AND RELATED ITEMS – MEDIAN CABLE BARRIER (CONTINUED)

Median Cable Barrier Location	Approximate MRM	Lane-Shoulder		Remove Delineator (1) (Each)	Remove 3 Cable Guardrail (Ft)	Remove High Tension 4 Cable Guardrail (Ft)	Remove 3 Cable Guardrail Anchor Assembly (Each)	Remove 3 Cable Guardrail Slip Base Anchor Assembly (Each)	Remove High Tension 4 Cable Guardrail Anchor Assembly (Each)	High Tension 4 Cable Guardrail (Ft)	High Tension Cable Guardrail Anchor Assembly (Each)	Type 2 Object Marker (2) (Each)
Median Cable Barrier Run #23												
405+77 to 420+33	78.12+0.199 to 78.00+0.045	SBL	Median	2	371		2			1456	2	2
Median Cable Barrier Run #24												
426+99 to 433+89	77.26+0.655 to 77.26+0.524	SBL	Median							689	2	2
Median Cable Barrier Run #25												
434+56 to 441+66	77.26+0.512 to 77.26+0.377	NBL	Median							710	2	2
Median Cable Barrier Run #26												
438+44 to 462+55	77.26+0.438 to 77.00+0.245	SBL	Median	4	224	535		2	2	2411	2	2
Median Cable Barrier Run #27												
460+74 to 481+20	77.26+0.016 to 76.72+0.155	NBL	Median	2		535			2	2054	2	2
Median Cable Barrier Run #28												
482+93 to 500+53	76.72+0.123 to 76.19+0.344	SBL	Median	2		362			2	1760	2	2
Median Cable Barrier Run #29												
506+71 to 515+28	76.19+0.227 to 76.19+0.064	SBL	Median							857	2	2
Median Cable Barrier Run #30												
515+88 to 524+35	76.19+0.053 to 76.00+0.079	NBL	Median	2		406			2	847	2	2
Median Cable Barrier Run #31												
521+10 to 547+08	76.00+0.142 to 75.50+0.149	SBL	Median							2600	2	2
Median Cable Barrier Run #32												
549+39 to 554+61	75.50+0.104 to 75.50+0.006	NBL	Median							521	2	2
Median Cable Barrier Run #33												
558+82 to 563+82	75.00+0.407 to 75.00+0.312	SBL	Median	1	580			1		500	2	2
Median Cable Barrier Run #34												
646+82 to 665+05	73.38+0.355 to 73.38+0.010	NBL	Median							1823	2	2
Median Cable Barrier Run #35												
668+22 to 687+08	73.00+0.340 to 72.00+0.985	SBL	Median							1886	2	2
Median Cable Barrier Run #36												
689+11 to 723+17	72.00+0.947 to 72.00+0.301	SBL	Median							3409	2	2
Median Cable Barrier Run #37												
725+22 to 749+33	72.00+0.262 to 71.36+0.438	SBL	Median							2411	2	2
Median Cable Barrier Run #38												
751+35 to 757+82	71.36+0.401 to 71.36+0.278	SBL	Median							647	2	2
Median Cable Barrier Run #39												
759+85 to 789+23	71.36+0.240 to 71.00+0.052	SBL	Median	2	180		2			2936	2	2
Median Cable Barrier Run #40												
791+25 to 865+23	71.00+0.013 to 69.00+0.599	SBL	Median							7399	2	2
Median Cable Barrier Run #41												
867+26 to 897+26	69.00+0.561 to 68.35+0.645	SBL	Median							2999	2	2
Median Cable Barrier Run #42												
899+27 to 963+91	68.35+0.607 to 67.13+0.605	SBL	Median	2	180		2			6464	2	2
Median Cable Barrier Run #43												
965+93 to 987+94	67.13+0.566 to 67.13+0.149	SBL	Median							2201	2	2
Median Cable Barrier Run #44												
993+09 to 995+57	67.13+0.052 to 67.13+0.005	NBL	Median							248	2	2
			Sheet Total:	17	1535	1838	6	3	8	46828	44	44
			Project Total:	27	3475	1838	16	3	8	73446	88	88

(1) Existing Type 2 Object Markers at ends of existing cable barrier runs shall be removed with this item.
(2) New Type 2 Object Markers at ends of proposed cable barrier runs shall be installed with this item.

TABLE OF REMOVAL AND INSTALLATION OF GUARDRAIL AND RELATED ITEMS – STANDALONE GUARDRAIL

Location	Approximate MRM	Lane-Shoulder		Remove Delineator (1) (Each)	Remove 3 Cable Guardrail (Ft)	Remove High Tension 4 Cable Guardrail (Ft)	Remove 3 Cable Guardrail Anchor Assembly (Each)	Remove 3 Cable Guardrail Slip Base Anchor Assembly (Each)	Remove High Tension 4 Cable Guardrail Anchor Assembly (Each)	Remove Asphalt Concrete Pavement (CuYd)	Unclassified Excavation (CuYd)	Contractor Furnished Borrow Excavation (CuYd)	Base Course (Ton)	Asphalt Concrete Composite (Ton)	Class A Thrie Beam Guardrail with Wood Posts (Ft)	Type 1 MGS (Ft)	Type 2 MGS (Ft)	Type 3 MGS (Ft)	Asym. W Beam to Thrie Beam Guardrail Transition (Each)	MGS Trailing End Terminal (Each)	MGS MASH Tangent End Terminal (Each)	Guardrail End Terminal Object Marker N.A.B.I. (Each)	Guardrail Delineator (Each)	High Tension 4 Cable Guardrail (Ft)	High Tension Cable Guardrail Anchor Assembly (Each)	Type 2 Object Marker (2) (Each)	Estimated Disturbed Area to Seed and Mulch (N.A.B.I.) (SqFt)
Structure No. 50-180-170																											
Sign Support																											
East Embankment																											
136+68 to 140+23	83.38+0.048 to 83.00+0.372	SBL	Median	2	620		2				87		128.5	53.9		293.8				1	1	1	8			1	10790
Sign Support																											
West Embankment																											
155+34 to 158+34	83.00+0.087 to 83.00+0.030	NBL	Median	2	300		2																	301	2	2	
East Embankment																											
155+34 to 158+34	83.00+0.087 to 83.00+0.030	NBL	Outside	2	300		2																	301	2	2	
Sign Support																											
West Embankment																											
160+51 to 165+58	82.41+0.578 to 82.41+0.482	SBL	Outside	2	476		2																	511	2	2	
Sign Support																											
East Embankment																											
168+98 to 171+72	82.41+0.418 to 82.41+0.366	NBL	Outside	2	300		2				105		159.1	23.8		212.5				1	1	1	7			1	2928
Sign Support																											
East Embankment																											
176+43 to 178+10	82.41+0.277 to 82.41+0.245	SBL	Median	2	296		2				68	16	170.1	48.2		106.3				1	1	1	5			1	6563
Sign Support																											
West Embankment																											
175+58 to 178+58	82.41+0.293 to 82.41+0.236	SBL	Outside	2	296		2																	301	2	2	
Sign Support																											
West Embankment																											
203+10 to 207+25	82.00+0.174 to 82.00+0.096	SBL	Outside	2	420		2																	416	2	2	
Sign Support																											
West Embankment																											
207+22 to 210+33	82.00+0.096 to 82.00+0.038	NBL	Median	2	340		2																	311	2	2	
East Embankment																											
207+23 to 209+81	82.00+0.096 to 82.00+0.047	NBL	Outside	2	308		2																	259	2	2	
Sign Support																											
West Embankment																											
217+99 to 221+01	81.32+0.585 to 81.32+0.520	SBL	Outside	2	300		2																	301	2	2	
Sign Support																											
East Embankment																											
218+83 to 220+51	81.32+0.561 to 81.32+0.530	SBL	Median	2	300		2				94		125.0	51.7		106.3				1	1	1	5			1	5083
Sign Support																											
East Embankment																											
219+27 to 221+75	81.32+0.549 to 81.32+0.506	NBL	Outside	2	248		2																	227	2	2	
Structure No. 50-178-191																											
Underpass																											
248+46 to 252+51	81.00+0.279 to 81.00+0.202	NBL	Median	2	500		2				59	22	212.3	55.2										406	2	2	11605
Pedestrian Bridge																											
East Embankment																											
275+40 to 278+72	80.73+0.000 to 80.29+0.391	NBL	Outside	2	340		2																	332	2	2	
Sign Support																											
West Embankment																											
277+07 to 279+97	80.29+0.422 to 80.29+0.367	SBL	Outside	2	296		2																	290	2	2	
Sign Support																											
East Embankment																											
277+71 to 279+51	80.29+0.410 to 80.29+0.376	SBL	Median	2	296		2				89		286.4	47.5		118.8				1	1	1	5			1	6756
Sign Support																											
West Embankment																											
315+77 to 320+31	79.54+0.495 to 79.54+0.409	SBL	Outside	2	300		2																	458	2	2	
Sign Support																											
West Embankment																											
318+82 to 321+51	79.54+0.435 to 79.54+0.384	NBL	Median	2	296		2																	269	2	2	
East Embankment																											
318+83 to 322+05	79.54+0.435 to 79.54+0.374	NBL	Outside	2	296		2																	322	2	2	
			Sheet Total =	40	6828	0	40	0	0	0.0	502	38	1081.4	280.3	0.0	837.7	0.0	0.0	0	5	5	5	30	5005	30	35	43725



(1) Existing Type 2 Object Markers at ends of existing cable barrier runs shall be removed with this item.
(2) New Type 2 Object Markers at ends of proposed cable barrier runs shall be installed with this item.

TABLE OF REMOVAL AND INSTALLATION OF GUARDRAIL AND RELATED ITEMS – STANDALONE GUARDRAIL (CONTINUED)

Location	Approximate MRM	Lane-Shoulder		Remove Delineator (1) (Each)	Remove 3 Cable Guardrail (Ft)	Remove High Tension 4 Cable Guardrail (Ft)	Remove 3 Cable Guardrail Anchor Assembly (Each)	Remove 3 Cable Guardrail Slip Base Anchor Assembly (Each)	Remove High Tension 4 Cable Guardrail Anchor Assembly (Each)	Remove Asphalt Concrete Pavement (CuYd)	Unclassified Excavation (CuYd)	Contractor Furnished Borrow Excavation (CuYd)	Base Course (Ton)	Asphalt Concrete Composite (Ton)	Class A Thrie Beam Guardrail with Wood Posts (Ft)	Type 1 MGS (Ft)	Type 2 MGS (Ft)	Type 3 MGS (Ft)	Asym. W Beam to Thrie Beam Guardrail Transition (Each)	MGS Trailing End Terminal (Each)	MGS MASH Tangent End Terminal (Each)	Guardrail End Terminal Object Marker N.A.B.I. (Each)	Guardrail Delineator (Each)	High Tension 4 Cable Guardrail (Ft)	High Tension Cable Guardrail Anchor Assembly (Each)	Type 2 Object Marker (2) (Each)	Estimated Disturbed Area to Seed and Mulch N.A.B.I. (SqFt)
Sign Support																												
East Embankment																												
332+55 to 335+98	79.54+0.176 to 79.54+0.111	NBL	Outside	2	296		2																		343	2	2	
Sign Support																												
West Embankment																												
375+46 to 378+36	78.38+0.522 to 78.38+0.467	NBL	Median	2	300		2																		290	2	2	
East Embankment																												
375+49 to 378+49	78.38+0.522 to 78.38+0.465	NBL	Outside	2	300		2																		301	2	2	
Sign Support																												
West Embankment																												
384+40 to 386+78	78.38+0.339 to 78.38+0.294	SBL	Outside	2	296		2																		238	2	2	
Structure No. 50-175-222																												
Underpass																												
416+53 to 419+95	78.12+0.001 to 78.00+0.053	NBL	Median	2	372		2				62		141.5	51.7											343	2	2	7684
Sign Support																												
East Embankment																												
430+69 to 433+07	77.26+0.585 to 77.26+0.540	NBL	Outside	2	252			2																	238	2	2	
Sign Support																												
West Embankment																												
434+74 to 437+74	77.26+0.508 to 77.26+0.451	SBL	Outside	2	236		2																		301	2	2	
Sign Support																												
East Embankment																												
435+60 to 437+15	77.26+0.492 to 77.26+0.463	SBL	Median	2	212			2			45		119.0	49.3		43.8	12.5	37.5		1	1	1	4			1	5648
Sign Support																												
East Embankment																												
442+20 to 445+10	77.26+0.367 to 77.26+0.312	NBL	Outside	2	244			2																	290	2	2	
West Embankment																												
442+96 to 445+23	77.26+0.353 to 77.26+0.310	NBL	Median	2	244			2																	227	2	2	
Structure No. 50-172-240																												
Sign Support																												
East Embankment																												
516+98 to 519+78	76.19+0.039 to 76.00+0.171	SBL	Median	2		574			2		60	7	156.6	65.8	62.5	118.8	25.0		2	1	1	1	7			1	8808
Structure No. 42-066-006																												
SB Bridge SW Quadrant																												
559+23 to 562+87	75.00+0.395 to 75.00+0.326	SBL	Outside	1	342		1																		364	2	2	
Box Culvert																												
West Embankment																												
721+50 to 723+77	72.00+0.331 to 72.00+0.288	SBL	Outside	2	320		2																		227	2	2	
East Embankment																												
724+98 to 727+14	72.00+0.267 to 72.00+0.225	NBL	Outside	2	332		2																		217	2	2	
Box Culvert																												
West Embankment																												
756+26 to 758+22	71.36+0.308 to 71.36+0.271	SBL	Outside	2	340		2																		196	2	2	
East Embankment																												
759+66 to 763+13	71.36+0.243 to 71.36+0.178	NBL	Outside	2	420		2																		353	2	2	
Structure No. 42-065-050																												
Underpass																												
772+72 to 775+20	71.00+0.363 to 71.00+0.316	NBL	Median	2	180		2			49.8	237		102.1	237.8											248	2	2	6660
Structure No. 42-065-080																												
Underpass																												
931+49 to 934+28	68.00+0.346 to 68.00+0.293	NBL	Median	2	180		2			51.2	24	110	78.5	247.1											280	2	2	9799
Sheet Total =				35	4866	574	25	8	2	101.0	428	117	597.7	651.7	62.5	162.6	37.5	37.5	2	2	2	2	11	4456	32	34	38599
Project Total =				75	11694	574	65	8	2	101.0	930	155	1679.1	932.0	62.5	1000.3	37.5	37.5	2	7	7	7	41	9461	62	69	82324

(1) Existing Type 2 Object Markers at ends of existing cable barrier runs shall be removed with this item.
(2) New Type 2 Object Markers at ends of proposed cable barrier runs shall be installed with this item.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
2-12-2026

TABLE OF REMOVAL AND INSTALLATION OF MAINTENANCE CROSSOVERS

Maintenance Crossover Location	Removal or Construction	Leave Ditch Block (1)	Remove Delineator (2) (Each)	Remove Delineator (Each)	Remove Pipe Culvert (Each)	Remove Pipe Culvert End Section (Each)	Remove Sign for Reset (3) (Each)	Unclassified Excavation (CuYd)	Contractor Furnished Borrow Excavation (CuYd)	Base Course (Ton)	18" RCP Class 2 (Ft)	18" RCP Safety End (Each)	2.5"x2.5" Perforated Tube Post (Ft)	48" Winged Slip Base Anchor (N.A.B.I.) (Each)	4" Tubular Amber Delineator with 1.12 Lb/Ft Post (Each)	Type 2 Object Marker (4) (Each)	Flat Aluminum Sign, Nonremovable Copy High Intensity (5) (SqFt)	Reset Sign (3) (Each)	Estimated Disturbed Area to Topsoil Seed and Mulch (N.A.B.I.) (SqFt)
Maintenance Crossover #1																			
Sta. 312+45, MRM 80.00+0.094	Removal	Yes		4			1	15											1541
Maintenance Crossover #2																			
Sta. 324+79, MRM 79.54+0.322	Construction	-							95	37.3	28	2	9.0	1	4	2		1	995
Maintenance Crossover #3																			
Sta. 331+08, MRM 79.54+0.203	Removal	Yes		4			1	15											1521
Maintenance Crossover #4																			
Sta. 379+30, MRM 78.38+0.449	Removal	No	2	4	50	2	1	112											3029
Maintenance Crossover #5																			
Sta. 390+13, MRM 78.38+0.244	Construction	-							90	33.9	30	2	9.0	1	4	2		1	913
Maintenance Crossover #6																			
Sta. 399+09, MRM 78.38+0.074	Removal	No			30	2		46											1588
Maintenance Crossover #7																			
Sta. 482+07, MRM 76.72+0.139	Construction	-							68	33.6	24	2	9.0	1	4	2		1	765
Maintenance Crossover #8																			
Sta. 492+58, MRM 76.19+0.494	Removal	Yes						14											1426
Maintenance Crossover #8																			
Sta. 688+22, MRM 72.00+0.961	Construction	-							172	46.4	36	2	9.0	1	4	2	10.0		1676
Maintenance Crossover #9																			
Sta. 866+41, MRM 69.00+0.579	Construction	-							123	39.4			9.0	1	4		10.0		2265
		Total:	2	12	80	4	3	202	548	190.6	118	8	45.0	5	20	8	20.0	3	15719

(1) At removal sites that leave the existing ditch block, the Contractor is to remove only the existing granular surfacing. All disturbed areas are to be topsoiled, seeded and mulched prior to completion.
(2) Existing Type 2 Object Markers at pipe ends proposed for removal shall be removed with this item.
(3) Existing back-to-back "Maintenance and Authorized Vehicles Only" signs are to be removed for reset at crossover removal sites and reset on new posts at crossover construction sites with these items (see detail).
(4) Type 2 Object Markers are to be installed at culvert ends per Standard Plate 632.03.
(5) New "Maintenance and Authorized Vehicles Only" signs to be installed back-to-back on new post at crossover construction sites with this item (see detail).

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
2-12-2026

SCOPE OF WORK

Work on this project involves the installation of Median High Tension Cable Guardrail along the Interstate 29 median in the Sioux Falls area. Numerous existing standalone guardrail installations will also be removed and replaced with this project. Some standalone replacement sites will also require the construction and asphalt surfacing of guardrail embankments prior to the installation of guardrail.

SEQUENCE OF OPERATIONS

The following Sequence of Operations will be adhered to at guardrail replacement sites:

1. Install traffic control signing to close adjacent driving lane.
2. Remove and store topsoil if applicable.
3. Complete surfacing and guardrail removals if applicable.
4. Complete guardrail embankment grading if applicable.
5. Complete base course installation if applicable.
6. Complete surfacing installations if applicable.
7. Install guardrail items.
8. Restore Topsoil.
9. Seed and mulch areas disturbed by construction activities.
10. Remove traffic control signing.
11. Complete any remaining project cleanup.

Contractor requests to deviate from the sequence of operations will be submitted in writing to the Engineer for review. Approval of an alternate sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work. An alternate sequence will be submitted for review a minimum of one week prior to potential implementation.

UTILITIES

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

Prior to excavation in or adjacent to BNSF (Burlington Northern Santa Fe) Railway ROW and in conjunction with contacting the SD One-Call, the Contractor will call the BNSF Utility Locate number 1-800-533-2891.

COORDINATION BETWEEN CONTRACTORS

A separate contract for Projects EM 0292(88)73 and IM 2292(104)0 – PCN 06JQ and 07D0 has been awarded to another for structures, grading, pcc pavement, curb & gutter, storm sewer roadway lighting, signals, pavement marking and permanent signing on I-29 adjacent to this project (PCN 08Q8). The median cable barrier for PCN 06JQ and 07D0 will begin at MRM 73.38 + 0.36 and end at MRM 75.00 + 0.28.

The Contractor will schedule work so as not to interfere with or hinder the progress of the work performed by the other Contractor on PCN 06JQ and 07D0. Conflicting traffic control devices may need to be temporarily adjusted or removed as directed by the Engineer and at no additional cost to the contract.

CONTROL OF ACCESS

If a Contractor's operations would require access to the interstate ROW in any location not currently designated as public access, prior approval must be obtained from the Department. All requests will be reviewed based on safety and construction sequencing. A Contractor will not assume that all requests will be granted.

The Contractor will be responsible for all safety control and signing measures.

Anytime Contractor operations have ceased for the day, any entrances approved in a control of access area will be closed by the Contractor.

The request for access will be provided in writing to the Engineer two weeks in advance of any proposed break in control of access.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

A Type 3 Barricade will be installed at the end of a lane closure taper as detailed in these plans. Additional Type 3 Barricades will be installed facing traffic within the closed lane at a spacing of ¼ mile.

Construction vehicles will exit or enter the construction work zone at locations identified by the Engineer. At no time will construction vehicles utilize the maintenance crossovers or the Interstate median to exit or enter Interstate traffic.

On Interstate projects with more than one construction site, slow moving equipment that operates at a speed less than 40 MPH may mobilize between sites if the equipment travels on the shoulder. The slow-moving equipment will also display a flashing amber light and a slow-moving sign.

TRAFFIC CONTROL SIGNS

Sufficient traffic control devices have been included in these plans to provide 2 lane closure workspaces, supplemental signing on 4 ramps, and 2 shoulder closures. If the Contractor elects to work on additional locations simultaneously, the cost for additional traffic control devices will be incidental to the contract unit price per square foot for Traffic Control Signs.

WORK ZONE SPEED REDUCTION

The Department is required to obtain a speed reduction resolution prior to the installation of any SPEED LIMIT (R2-1) signs shown on standard plate 634.63 or as shown in the plans. To provide adequate time for the resolution to be enacted, the Contractor will inform the Engineer a minimum of 3 weeks prior to the scheduled installation of any work zone speed reduction signs on the project. The information provided by the Contractor will include the anticipated date of sign installation, the newly reduced speed limit, the location of the work zone, and the anticipated completion date of work requiring the speed reduction.

TEMPORARY RAISED PAVEMENT MARKERS

Temporary raised pavement markers will be used as temporary pavement marking along lane closure tapers.

Temporary raised pavement markers will be attached to the roadway surface with a flexible non-permanent bituminous adhesive capable of being removed from the roadway surface or with an adhesive approved by the Engineer.

All costs to furnish, install, replace if necessary, and remove the markers will be incidental to the contract unit price per foot for “Temporary Raised Pavement Markers”.

The total length of temporary raised pavement markers on the project is estimated to be 21,090 feet for the 14 median lane closure locations, 9 outside lane closure locations, and 2 shoulder closure locations (5 median lane @ 960’, 9 median lane @ 780’, 2 outside lane @ 1125’, 7 outside lane @ 780’, 2 shoulder @ 780’).

INCIDENTS

An incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic such as a crash, hazardous materials spill, or other event.

The Contractor will set up a meeting prior to start of work to plan and coordinate responses to an incident. The Contractor will invite the Department of Transportation, the South Dakota Highway Patrol, the Minnehaha County Sheriff and local emergency response entities to the meeting.

The Contractor will assist to maintain traffic as required by these plan notes and as agreed to at that meeting.

Emergency vehicle access through the project will be considered and discussed at the meeting.

The Contractor may be required to modify messages on portable changeable message signs or relocate portable changeable message signs, and to provide flaggers to direct or detour traffic. The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

No additional payment will be made for the modification of portable changeable message sign messages or the relocation of portable changeable message signs. Cost for the relocation of an advance warning sign due to an incident will be 50% of the designated sign rate. Flaggers will be paid for at the contract unit price per hour for “Flagging”.

TRUCK/TRAILER MOUNTED ATTENUATOR

The Contractor will furnish truck or trailer mounted attenuator(s) to be used for the duration of the project. Truck or trailer mounted attenuators (TMAs) will meet the crashworthy requirements of NCHRP 350 or MASH Test Level 3. TMAs will be used and maintained in accordance with the manufacturers’ recommendations.

The TMAs should be utilized on the project where workers and/or equipment are working next to the centerline of the roadway with live traffic in the adjacent lane, or as directed by the Engineer. The TMAs will be removed from the roadway at the end of each working day. The TMAs will remain the property of the Contractor at the end of the project.

The TMAs will be paid for at the contract unit price per each for Truck/Trailer Mounted Attenuator. Payment will be full compensation for furnishing, maintaining, relocating and removing as many times as required by the Engineer and the Contractor’s operations.

In the event a TMA is hit while in service, the manufacturer will assess the TMA and make a recommendation as to whether it can be repaired or needs to be replaced. The Department will reimburse the Contractor for repairs as documented by invoices or pay for another TMA to be deployed to the project as needed.

OBJECT MARKERS

At locations shown in the Table of Removal and Installation of Guardrail and Related Items – Median Cable Barrier, the Table of Removal and Installation of Guardrail and Related Items – Standalone Guardrail, and the Table of Removal and installation of Maintenance Crossovers, where Object Markers will be removed, cost for removing the existing Object Markers will be included in the contract unit price per each for Remove Delineator.

New Type 2 Object Markers and posts will be furnished and installed according to the details of Standard Plates 632.01, 632.03, and 632.40 by the Contractor at the locations shown in the respective quantity tables. Cost for new Type 2 Object Marker and post installation is included in the contract unit price per each for Type 2 Object Marker.

UNCLASSIFIED EXCAVATION

Payment will be based on plans quantity. Further measurements will not be made unless there is a change made in the limits of work.

UNSTABLE MATERIAL EXCAVATION

Included in the Estimate of Quantities are 100 CuYd of Unclassified Excavation, Digouts for the necessary removal of unstable material in shoulder areas.

Backfill will be paid for at the contract unit price per ton for Base Course. An additional quantity of 200 tons of Base Course has been added to the Estimate of Quantities for use in backfilling digout areas.

CONTRACTOR FURNISHED BORROW EXCAVATION

The Contractor will provide a suitable site for Contractor furnished borrow excavation material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site. The borrow material will be approved by the Engineer. The plans quantity for “Contractor Furnished Borrow Excavation” as shown in the Estimate of Quantities will be the basis of payment for this item.

At guardrail embankment locations, the Contractor will be allowed to place topsoil in lieu of fill material if the fill depth is one foot or less. By doing this the Contractor will not be required to remove and replace the four inches of in place topsoil.

Compaction of the fill material will be to the satisfaction of the Engineer.

It is not anticipated that water for compaction will be required; however, if in the opinion of the Engineer the fill material is extremely dry, water may be ordered and placed to the satisfaction of the Engineer. Cost for water will be incidental to the contract unit price per cubic yard for Contractor Furnished Borrow Excavation.

Restoration of the Contractor furnished borrow excavation site will be the responsibility of the Contractor.

SHRINKAGE FACTOR: Embankment +35%

UNDERDRAINS

Backwall, approach, roadway cutoff, and sleeper slab underdrains are currently in-place at multiple bridge locations throughout the project. Underdrains are known to exist adjacent to Structures 50-178-199/50-177-199 at Madison Street. Median Cable Barrier installations adjacent to these structures have been adjusted to avoid conflicts. Underdrain outlets are not to be disturbed or buried during completion of any project work.

Any damage to underdrain pipe due to work associated with this project will be repaired at the expense of the Contractor. The method of repair must be approved by the Engineer prior to commencement of the repair work.

HIGH TENSION CABLE GUARDRAIL

The Contractor will furnish and install a high tension cable guardrail system that meets the Test Level 3 crash testing requirements of the Manual for Assessing Safety Hardware (MASH). The maximum dynamic deflection of the system will be less than 10’-0” and the maximum post spacing will be 10’-6” unless specified otherwise in the plans. High Tension 4 Cable Guardrail will be one of the following products:

Valtir (Trinity) – CASS S3 M10
Brifen – 4 Rope O-Post System

HIGH TENSION CABLE GUARDRAIL (CONTINUED)

The following is a list of locations that will require allowable deflections less than 10'-0". The Contractor shall work with guardrail manufacturer to determine installation specifications that will limit deflections to less than the value specified below. Reduced post spacing for deflection control will begin no less than 100' upstream of the obstacle being shielded and continue no less than 25' past the obstacle.

Median Cable Barrier Installations

Station	Location	Hazard	Deflection (Feet)
561+50	Southbound Inside Shoulder	Sign Bridge	10.0

Standalone Guardrail Installations

Station	Location	Hazard	Deflection (Feet)
561+49	Southbound Outside Shoulder	Sign Bridge	9.1
442+98	Northbound Inside Shoulder	Sign Bridge	8.5
442+96	Northbound Outside Shoulder	Sign Bridge	8.4
436+98	Southbound Outside Shoulder	Sign Bridge	9.2
430+71	Northbound Outside Shoulder	Cant. Sign	8.9
386+77	Southbound Outside Shoulder	Cant. Sign	8.6
376+24	Northbound Outside Shoulder	Sign Bridge	9.0
376+21	Northbound Inside Shoulder	Sign Bridge	9.2
332+56	Northbound Outside Shoulder	Cant. Sign	8.7
319+57	Northbound Inside Shoulder	Sign Bridge	9.0
	Northbound Outside Shoulder	Sign Bridge	8.8
	Southbound Outside Shoulder	Cant. Sign	9.4
279+22	Southbound Outside Shoulder	Sign Bridge	8.9
220+25	Northbound Outside Shoulder	Cant. Sign	8.4
220+24	Southbound Outside Shoulder	Sign Bridge	9.1
207+25	Northbound Outside Shoulder	Sign Bridge	9.7
207+23	Southbound Outside Shoulder	Sign Bridge	9.7
177+83	Southbound Outside Shoulder	Sign Bridge	9.0
164+84	Southbound Outside Shoulder	Cant. Sign	8.0
156+09	Northbound Outside Shoulder	Sign Bridge	8.8
156+08	Northbound Inside Shoulder	Sign Bridge	9.3

The Contractor will install the system according to the manufacturer's installation recommendations except where stated otherwise in the plans. A copy of the detail drawings and installation instructions for the high tension cable guardrail and anchor assemblies will be given to the Engineer a minimum of 4 weeks prior to installation of the high tension cable guardrail system.

All posts will be galvanized and inserted into driven galvanized steel sleeves with soil plates. The driven sleeves must be designed for a minimum frost depth of 42" and to resist the additional lateral component of curved cable sections.

Delineation of the high tension cable guardrail will be in conformance with standard plate 632.40.

The cables provided will be pre-stretched in the factory.

The Contractor will check and adjust the tension of the cables a minimum of 3 weeks after installation and not longer than 6 weeks after installation. Cost for this work will be incidental to the contract unit price per foot for "High Tension 4 Cable Guardrail".

The lengths of high tension cable guardrail stated in the plans are based on a minimum effective length (length of need). The length and location of the high tension cable guardrail at each site will need to be adjusted during construction as necessary depending on the system provided and will be approved by the Design Engineer before installation. When the Valtir (Trinity) CASS S3 M10 system is installed adjacent to one-way traffic roadways, 26' of the anchor assembly on the approach end is considered non-effective, and 51' on the non-approach end is considered non-effective; however, when the same system is installed adjacent to two-way traffic roadways, 26' of the anchor assembly on both the approach and non-approach ends is considered non-effective. For Brifen 4 Rope O-Post System installations, the anchor assembly is non-effective.

The Contractor will provide a signed letter of compliance to the Engineer upon completion of the high tension cable guardrail installation(s) stating that the high tension cable barrier system has been installed in conformance to the manufacturer installation instructions and specifications, meets the Test Level 3 crash test requirements of MASH, and is terminated with an approved anchor assembly.

The high tension cable guardrail will be measured along the centerline of the cable guardrail from the beginning to the end of the minimum effective length.

All costs for furnishing and installing the high tension cable guardrail system including all labor, materials, and equipment will be incidental to the contract unit price per foot for "High Tension 4 Cable Guardrail".

HIGH TENSION CABLE GUARDRAIL ANCHOR ASSEMBLY

The beginning and end of each "run" of high tension cable guardrail will terminate with an anchor assembly. The High Tension Cable Anchor Assemblies will be one of the following products:

Valtir (Trinity) – CASS Cable Terminal (CCT)
Brifen – MASH Gating Terminal (MGT)

The anchor footing(s) for Valtir CCT installations will consist of driven cable release posts (CRP) with soil plates and driven post sleeves with soil plates.

The anchor footing(s) for Brifen MGT installations will conform to the High Tension Cable Guardrail Cylindrical Anchor Footing special detail. Sands and gravel along with high groundwater tables may be encountered throughout the project limits. These conditions are potential candidates for caving soils.

Delineation of the high tension cable guardrail anchor assembly will be in conformance with standard plate 632.40.

All costs for furnishing and installing the High Tension Cable Guardrail Anchor Assembly including all labor, equipment, and materials which include the anchor footing(s), hardware, and all attachments to the anchor footing(s), will be incidental to the contract unit price per each for "High Tension Cable Guardrail Anchor Assembly".

SURFACING THICKNESS DIMENSIONS

The Contractor may elect to install proposed asphalt surfacing in a single lift, or in multiple lifts. It is the Contractor's responsibility to ensure that surface water runoff may freely flow from adjacent concrete driving lanes onto the new asphalt shoulders and guardrail embankments without obstruction. If the flow of water is obstructed by the new asphalt surfacing, the deficiency will be corrected by the Contractor at no cost to the State.

At those locations where material must be placed to achieve a required elevation, the depth/quantity may be varied to achieve the required elevation.

ASPHALT CONCRETE COMPOSITE

Asphalt for Prime and SS-1h or CSS-1h asphalt for tack will not be needed prior to the placement of the bottom lift of Asphalt Concrete Composite placed on a granular surface.

Asphalt for tack SS-1h or CSS-1h will be applied prior to each lift of Asphalt Concrete Composite. Asphalt for tack will be applied at a rate of 0.09 gallons per square yard on existing pavement or milled asphalt concrete surfaces and at a rate of 0.06 gallons per square yard on primed base course or new asphalt concrete pavement. The asphalt for tack will be applied for the full width of the bottom layer of Asphalt Concrete Composite plus one-half foot additional on the outside shoulder.

FLUSH SEAL

Application of flush seal will be completed within 10 working days following completion of the asphalt concrete surfacing and rumble strip grinding.

Application of flush seal may be eliminated by the Engineer. If the paved surface remains tight, the Engineer will notify the Contractor as soon as possible that the flush seal is unnecessary.

GRIND RUMBLE STRIPS IN ASPHALT CONCRETE

Asphalt Concrete Rumble Strips will be constructed where existing asphalt shoulders are removed and replaced at structure 42-065-050 and 42-065-080 underpasses. Rumble Strips will be paid for at the contract unit price per mile for GRIND 12" RUMBLE STRIP OR STRIPE IN ASPHALT CONCRETE. It is estimated that 0.3 miles of asphalt concrete rumble strips/stripes will be required.

Sites requiring only the installation of guardrail embankment surfacing will not have rumble strips constructed.

REMOVE AND REPLACE TOPSOIL

Prior to beginning resurfacing operations and guardrail embankment construction, a 4" depth of topsoil will be removed or bladed down the respective inslope and left in a windrow at the toe of the proposed embankment. Following completion of construction, topsoil will be spread evenly over the disturbed areas. The Contractor will be responsible for identifying any utility junction boxes present within the area to receive topsoil stripping, through the 1-Call process or other means, and will be responsible for the repair of any junction boxes damaged during topsoil removal or replacement.

The estimated amount of topsoil to be removed and replaced is 1210 CuYd. No field measurements of topsoil removal or replacement will be made, and plans quantity will be the basis of payment for this item.

All costs associated with removing and replacing the topsoil along areas to be resurfaced will be incidental to the contract lump sum price for "Remove and Replace Topsoil". If the Contractor elects to furnish topsoil under the Contractor Furnished Borrow item, the item for Remove and Replace Topsoil will be eliminated from the project.

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include a minimum 25% the fungal species *Rhizophagus intraradices*. The remaining 75% may include other endomycorrhizal fungal species.

All seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

The Mycorrhizal Inoculum provided will be from the approved product list. The approved product list may be viewed at the following internet site:

https://apps.sd.gov/HC60ApprovedProducts/main.aspx

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits that do not receive hard surfacing.

Type G Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Switchgrass	Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer	3
Indiangrass	Holt, Tomahawk, Chief, Nebraska 54	3
Big Bluestem	Bison, Bonilla, Champ, Sunnyview, Rountree, Bonanza	3
Oats or Spring Wheat: April through May; Winter Wheat: August through November		10
	Total:	26

The areas to be seeded and mulched are estimated at 2.3 acres.

MULCHING (GRASS HAY OR STRAW) FOR TEMPORARY STABILIZATION

Grass Hay or Straw Mulch for temporary stabilization is to be used on this project at locations noted in the table and at locations determined by the Engineer during construction. Two applications of Grass Hay or Straw Mulch on areas that receive temporary Grass Hay or Straw Mulch will not be required if the Engineer determines that there is sufficient Mulch remaining at the time permanent seeding takes place.

An additional 0.5 tons of Grass Hay or Straw Mulch has been added to the Estimate of Quantities for temporary erosion control on areas determined by the Engineer during construction.

If the Contractor uses a no-till drill, mulch may be applied prior to seeding and the mulch can then be punched into the soil by the no-till drill. If the Contractor uses this process, the no-till drill seeding will be completed immediately following the mulch application and the mulch will be punched into the soil at a 3-inch depth.

TABLE OF MULCHING (GRASS HAY OR STRAW) FOR TEMPORARY STABILIZATION APPLIED AT 2 TONS/ACRE

Station	Location	Quantity (Ton)
134+71 to 141+40	Southbound Median Shoulder	0.5
168+43 to 172+71	Northbound Outside Shoulder	0.1
174+50 to 179+29	Southbound Median Shoulder	0.3
216+87 to 221+83	Southbound Median Shoulder	0.2
247+09 to 253+65	Northbound Median Shoulder	0.5
275+70 to 280+25	Southbound Median Shoulder	0.3
415+12 to 420+96	Northbound Median Shoulder	0.4
433+62 to 438+32	Southbound Median Shoulder	0.3
514+99 to 520+97	Southbound Median Shoulder	0.4
771+45 to 777+37	Northbound Median Shoulder	0.3
930+11 to 936+33	Northbound Median Shoulder	0.4
Various	Crossovers	0.7
	Additional Quantity	0.5
	Total Quantity:	**4.9**

HIGH FLOW SILT FENCE

The high flow silt fence fabric provided will be from the approved product list. The approved product list for high flow silt fence may be viewed at the following internet site:

https://apps.sd.gov/HC60ApprovedProducts/main.aspx

High flow silt fence will be placed at locations that will minimize siltation of existing median drains and drainage channels, or in locations that will prevent the discharge of sediment to adjacent streams, lakes, rivers, or other drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

A quantity of **2,000** feet of high flow silt fence has been added to the Estimate of Quantities for temporary sediment control.

STREET SWEEPING

Vehicle tracking of sediment from the construction site will be minimized. Street sweeping will be used if erosion and sediment control best management practices are not adequate to prevent sediment from being tracked onto the street.

The Contractor will use a pickup broom having integral self-contained storage to clean the roadway. The pickup broom used will be a minimum of 6 feet wide and have working gutter brooms.

At a minimum, sweeping will be required:
1. Prior to opening any segment or roadway to traffic.

All costs for cleaning the roadway with a pickup broom will be incidental to the contract unit price per hour for "Sweeping".

Plotting Date: 1/26/2026

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0022(443)	17	107

STORMWATER POLLUTION PREVENTION PLAN CHECKLIST

*(The numbers left of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (Stormwater Permit))*

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION

To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES

- **5.3 (3a): Project Limits** (See Title Sheet)
- **5.3 (3a): Project Description** (See Title Sheet)
- **5.3 (4): Site Map(s)** (See Title Sheet and Plans)
- **Major Soil Disturbing Activities** (check all that apply)
  - ☐ Clearing and grubbing
  - ☒ Excavation/borrow
  - ☒ Grading and shaping
  - ☒ Filling
  - ☐ Other (describe):
- **5.3 (3b): Total Project Area** 616 acres
- **5.3 (3b): Total Area to be Disturbed** 2.3 acres
- **5.3 (3c): Maximum Area Disturbed at One Time** 1.0 acres
- **5.3 (3d): Existing Vegetative Cover (%)** 85
- **5.3 (3d): Description of Vegetative Cover** Previously seeded highway ROW
- **5.3 (3e): Soil Properties:** AASHTO Soil Classification A-6, A-7-6, A-7-5
- **5.3 (3f): Name of Receiving Water Body/Bodies** Skunk Creek, Ninemile Creek & Tributaries
- **5.3 (3g): Location of Construction Support Activity Areas**

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES

The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Install traffic control signing	
Remove and stockpile topsoil	
Complete surfacing and guardrail removals	
Complete guardrail embankment grading	
Complete surfacing installations	
Install guardrail items	
Restore topsoil	
Seed and mulch disturbed areas	
Remove traffic control signing	
Complete any remaining project cleanup	

5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES

All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (check all that apply)

Perimeter Controls (See Detail Plan Sheets)

Description	Estimated Start Date
☐ Natural Buffers (within 50 ft of Waters of State)	
☒ Silt Fence	
☐ Erosion Control Wattles	
☐ Temporary Berm / Windrow	
☐ Floating Silt Curtain	
☐ Stabilized Construction Entrances	
☐ Entrance/Exit Equipment Tire Wash	
☐ Other:	

Structural Erosion and Sediment Controls

Description	Estimated Start Date
☒ Silt Fence	
☐ Temporary Berm/Windrow	
☐ Erosion Control Wattles	
☐ Temporary Sediment Barriers	
☐ Erosion Bales	
☐ Temporary Slope Drain	
☐ Turf Reinforcement Mat	
☐ Riprap	
☐ Gabions	
☐ Rock Check Dams	
☐ Sediment Traps/Basins	
☐ Culvert Inlet Protection	
☐ Transition Mats	
☐ Median/Area Drain Inlet Protection	
☐ Curb Inlet Protection	
☐ Interceptor Ditch	
☐ Concrete Washout Facility	
☐ Work Platform	
☐ Temporary Water Barrier	
☐ Temporary Water Crossing	
☐ Permanent Stormwater Ponds	
☐ Permanent Open Vegetated Swales	
☐ Natural Depressions to allow for Infiltration	
☐ Sequential Systems that combine several practices	
☐ Other:	

Dust Controls

Description	Estimated Start Date
☐ Tarps & Wind impervious fabrics	
☒ Watering	
☐ Stockpile location/orientation	
☐ Dust Control Chlorides	
☐ Other	

Dewatering BMPs

Description	Estimated Start Date
☐ Sediment Basins	
☐ Dewatering bags	
☐ Weir tanks	
☐ Temporary Diversion Channel	
☐ Other:	

Stabilization Practices (See Detail Plan Sheets)

(Stabilization measures will begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization will be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (**3.18**))

Description	Estimated Start Date
☐ Vegetation Buffer Strips	
☐ Temporary Seeding (Cover Crop Seeding)	
☒ Permanent Seeding	
☐ Sodding	
☐ Planting (Woody Vegetation for Soil Stabilization)	
☒ Mulching (Grass Hay or Straw)	
☐ Fiber Mulching (Wood Fiber Mulch)	
☐ Soil Stabilizer	
☐ Bonded Fiber Matrix	
☐ Fiber Reinforced Matrix	
☐ Erosion Control Blankets	
☐ Surface Roughening (e.g. tracking)	
☐ Other:	

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Wetland Avoidance
Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes ☐ No ☒ If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The SDDOT Project Engineer and Contractor's Erosion Control Supervisor are responsible for inspections. Maintenance and repair activities are the responsibility of the Contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT
Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

5.3 (8): POLLUTION PREVENTION PROCEDURES

5.3 (8a): Spill Prevention and Response Procedures

➢ **Material Management**

- Housekeeping
  - Only needed products will be stored on-site by the Contractor.
  - Except for bulk materials the contractor will store all materials under cover and/or in appropriate containers.
  - Products must be stored in original containers and labeled.
  - Material mixing will be conducted in accordance with the manufacturer's recommendations.
  - When possible, all products will be completely used before properly disposing of the container off-site.
  - The manufacturer's directions for disposal of materials and containers will be followed.
  - The Contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
  - Dust generated will be controlled in an environmentally safe manner.
- Hazardous Materials
  - Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
  - Original labels and material safety data sheets will be retained in a safe place to relay important product information.
  - If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
  - Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
  - Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any stormwater system or stormwater treatment system.
  - Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

➢ **Spill Control Practices**
In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill cleanup will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the Contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for cleanup purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The Contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator.

➢ **Spill Response**
The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The Contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the Contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SDDANR.
- Personnel with primary responsibility for spill response and cleanup will receive training by the Contractor's site superintendent or designee. The training must include identifying the location of the spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

5.3 (8b): WASTE MANAGEMENT PROCEDURES

➢ **Waste Disposal**

- All liquid waste materials will be collected and stored in approved sealed containers. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted. The Contractor is responsible for ensuring waste disposal procedures are followed.

➢ **Hazardous Waste**

- All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the Contractor will be responsible for seeing that these practices are followed.

➢ **Sanitary Waste**

- Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.

5.3 (9): CONSTRUCTION SITE POLLUTANTS

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the heading "POLLUTION PREVENTION PROCEDURES" (check all that apply).

- ☐ Concrete and Portland Cement
- ☐ Detergents
- ☐ Paints
- ☒ Metals
- ☒ Bituminous Materials
- ☒ Petroleum Based Products
- ☒ Diesel Exhaust Fluid
- ☐ Cleaning Solvents
- ☐ Wood
- ☐ Cure
- ☐ Texture
- ☐ Chemical Fertilizers
- ☐ Other:

Product Specific Practices

- **Petroleum Products**
  All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

- **Fertilizers**
  Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to stormwater. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

- **Paints**
  All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer's instructions and any applicable state and local regulations.

- **Concrete Trucks**
  Contractors will provide designated truck washout facilities on the site. These areas must be self-contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater discharges are anticipated during the course of this project (check all that apply).

- ☐ Discharges from water line flushing.
- ☐ Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
- ☐ Uncontaminated ground water associated with dewatering activities.

5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

7.0: SPILL NOTIFICATION

In the event of a spill, the Contractor's site superintendent will make the appropriate notification(s), consistent with the following procedures:

- A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to SDDANR immediately **if any one of the following** conditions exists:
  - The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
  - The release or spill causes an immediate danger to human health or safety
  - The release or spill exceeds 25 gallons
  - The release or spill causes a sheen on surface water
  - The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
  - The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01
  - The release or spill of any substance that harms or threatens to harm wildlife or aquatic life
  - The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

- To report a release or spill, call SDDANR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDANR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged, and the location of the discharge will be sent to SDDANR within 14 days of the discharge.

5.4: SWPPP CERTIFICATIONS

➢ **Certification of Compliance with Federal, State, and Local Regulations**

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

➢ **South Dakota Department of Transportation**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____

Authorized Signature (See the General Permit, Section 7.4 (1))

➢ **Prime Contractor**

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____

Authorized Signature

CONTACT INFORMATION

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

➢ **Contractor Information**:

- Prime Contractor Name: _____
- Contractor Contact Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **Erosion Control Supervisor**

- Name: _____
- Address: _____
- _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **SDDOT Project Engineer**

- Name: _____
- Business Address: _____
- Job Office Location: _____
- City: _____State: _____Zip: _____
- Office Phone: _____Field: _____
- Cell Phone: _____Fax: _____

➢ **SDDANR Contact Spill Reporting**
- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

➢ **SDDANR Contact for Hazardous Materials.**
- (605) 773-3153

➢ **National Response Center Hotline**
- (800) 424-8802.

➢ **SDDANR Stormwater Contact Information**
- SDDANR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351

5.5: REQUIRED SWPPP MODIFICATIONS

➢ **5.5 (1): Conditions Requiring SWPPP Modification**

The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part the SWPPP begins work on the site.
- When changes to the construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SDDANR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of application.

➢ **5.5 (2): Deadlines for SWPPP Modification**

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

➢ **5.5 (3): Documentation of Modifications to the Plan**

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

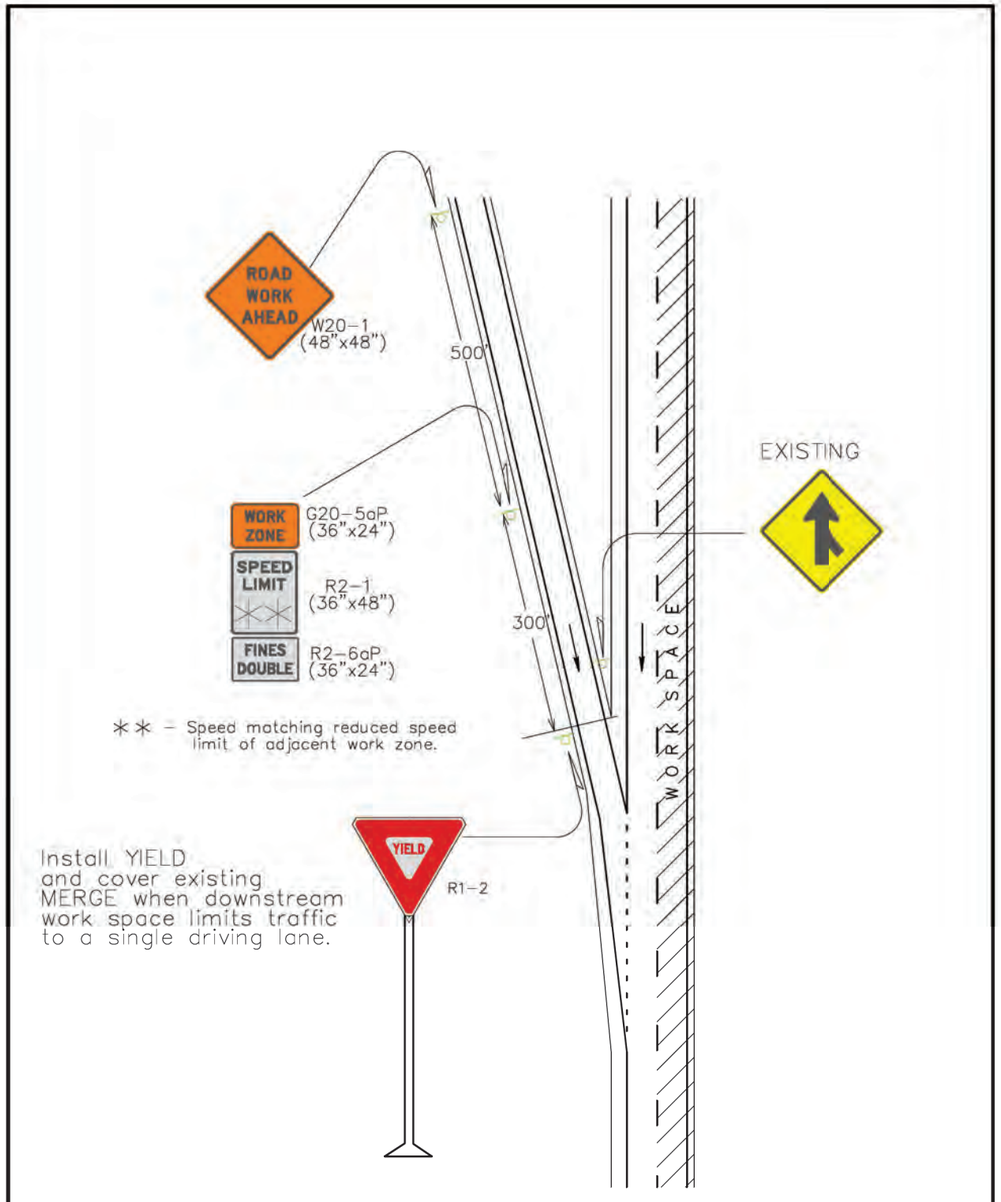
➢ **5.5 (4): Certification Requirements**

All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

➢ **5.5 (5): Required Notice to Other Operators**

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the needed changes. Copies of the DOT 298 forms and the SWPPP will be retained on site in a designated place for review throughout the course of the project. A copy of the DOT 298 form will be given to the Contractor Erosion Control Supervisor and a copy will be emailed to the SDDOT Environmental Section in accordance with the DOT 298 Form.



TYPICAL SUPPLEMENTAL SIGNING AT ENTRANCE RAMP

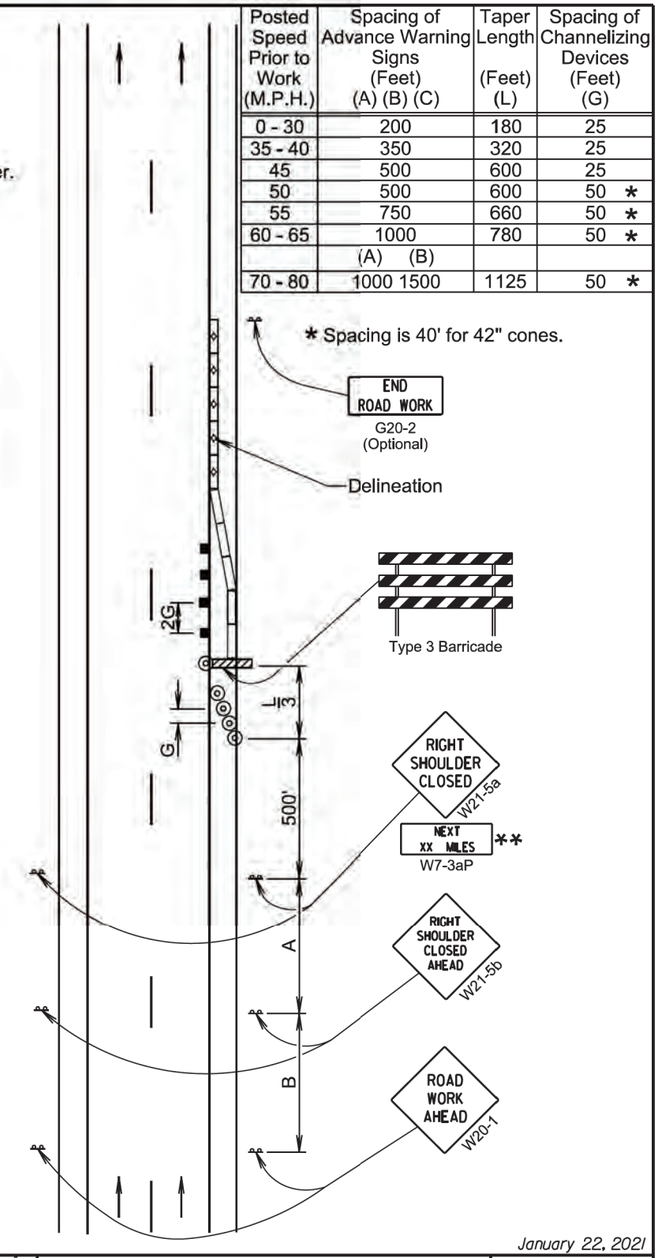
◎ Reflectorized Drum
■ Channelizing Device
▭ Movable Concrete Barrier
** For distances ½ mile or greater.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

This standard plate shows one method which may be used to close a shoulder of a roadway for a long term project. The Engineer will determine if the use of barriers is required. If barriers are required, the layout details will be included elsewhere in the plans.

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A) (B) (C)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *
	(A) (B)		
70 - 80	1000 1500	1125	50 *

* Spacing is 40' for 42" cones.



January 22, 2021

Published Date: 2026	SDDOT	SHOULDER CLOSED	PLATE NUMBER 634.61
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A) (B) (C)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
	(A) (B) (C)
70 - 80	1000 1500 2640

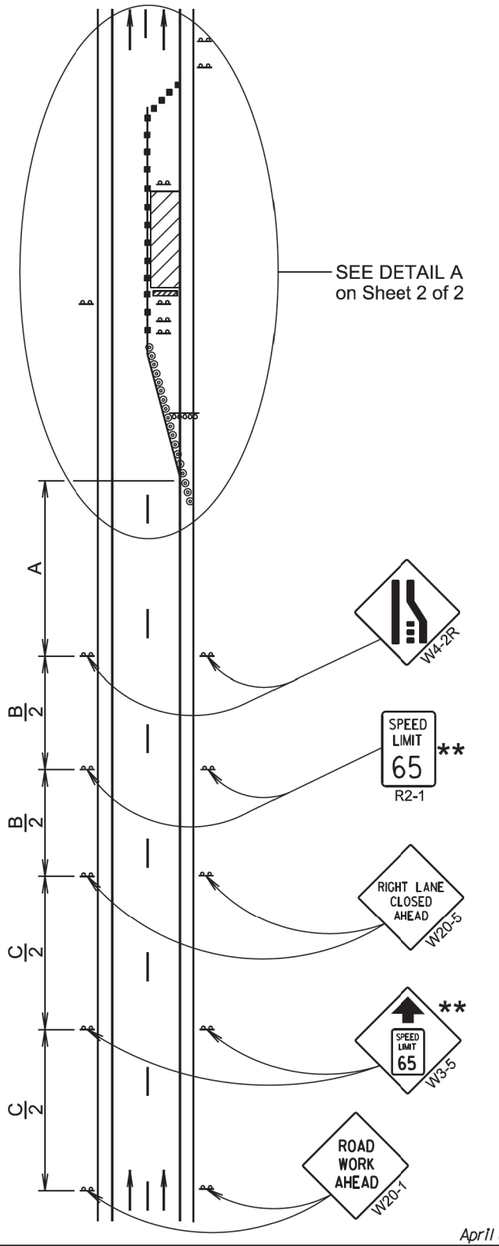
** Speed appropriate for location.

◎ Reflectorized Drum

■ Channelizing Device

ROAD WORK AHEAD sign is only required in advance of the first lane closure.

High speed is defined as having a posted speed limit greater than 45 mph.



April 8, 2025

Published Date: 2026	SDDOT	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63	Sheet 1 of 2

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)	Taper Length (Feet) (L)
0 -30	25	180
35 - 40	25	320
45	25	600
50	50 *	600
55	50 *	660
60 - 65	50 *	780
70 - 80	50 *	960

* Spacing is 40' for 42" cones.

** Speed appropriate for location.

*** Use speed limit designated for the condition when workers are present in the work space. Signs will be covered or removed when workers are not present.

◎ Reflectorized Drum

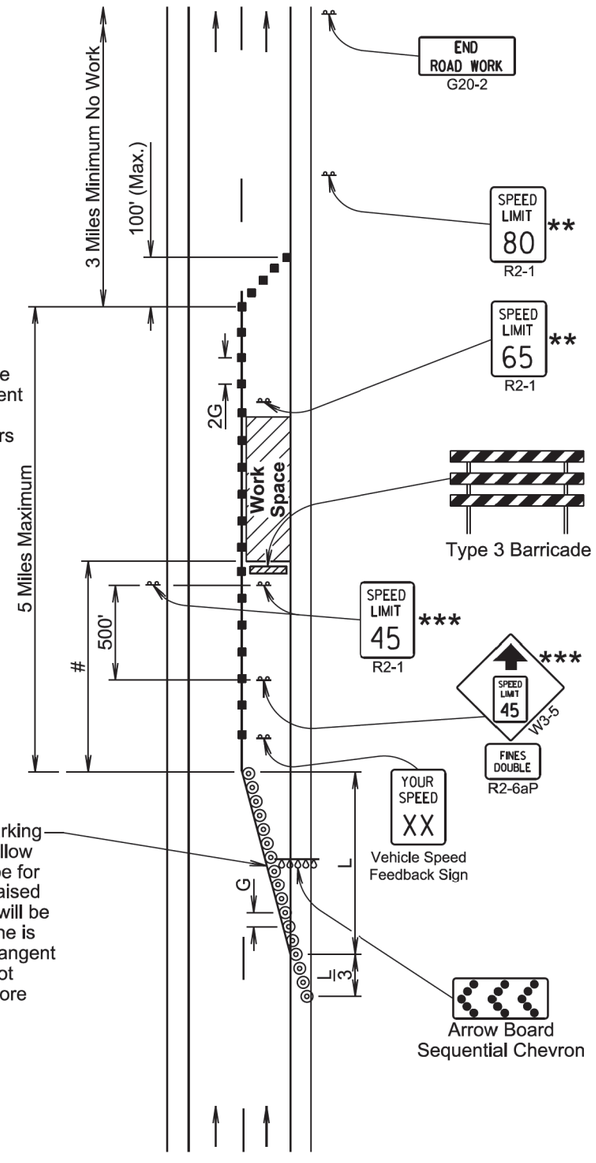
■ Channelizing Device

The Work Space will be a minimum of 500' from the end of the taper.

The channelizing devices will be 42" cones or drums.

42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.

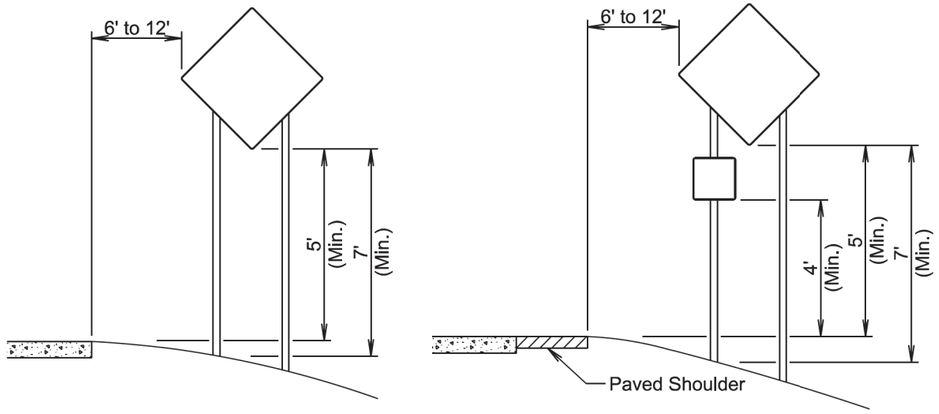
4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary raised pavement markers at 5' spacing will be installed in the taper when the lane is closed overnight, and along the tangent section where the skip lines do not exist and the lane is closed for more than 3 days.



DETAIL A

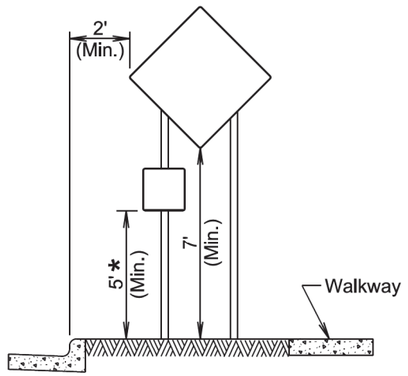
April 8, 2025

Published Date: 2026	SDDOT	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63	Sheet 2 of 2

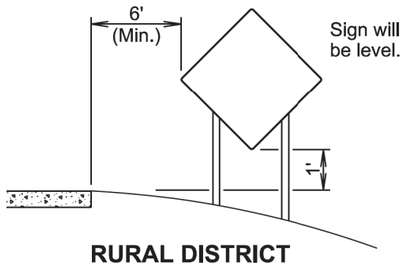


RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

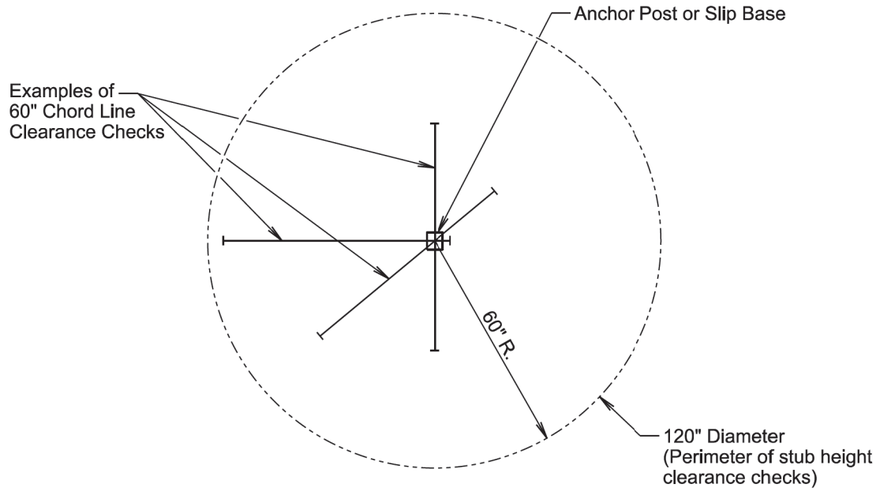


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

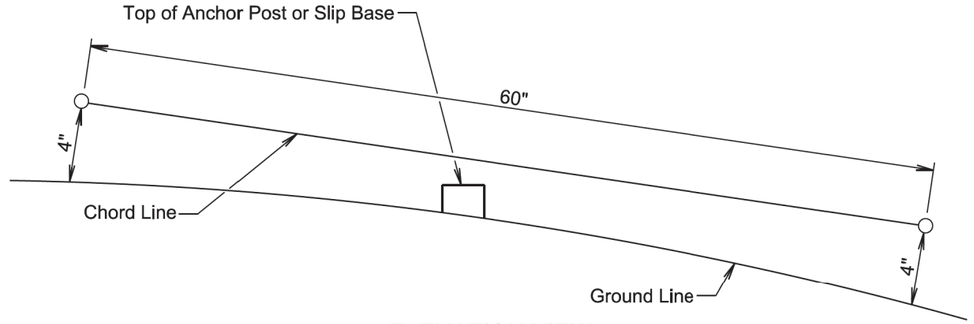
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2026	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 2026	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-2	YIELD	4	36"	3.9	15.6
R2-1	SPEED LIMIT 80	2	36" x 48"	12.0	24.0
R2-1	SPEED LIMIT 65	6	36" x 48"	12.0	72.0
R2-1	SPEED LIMIT 45	8	36" x 48"	12.0	96.0
R2-6aP	FINES DOUBLE (plaque)	6	36" x 24"	6.0	36.0
W3-5	SPEED REDUCTION AHEAD (65 MPH)	4	48" x 48"	16.0	64.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
W7-3aP	NEXT __ MILES (plaque)	4	36" x 30"	7.5	30.0
W20-1	ROAD WORK AHEAD	12	48" x 48"	16.0	192.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
W21-5a	LEFT or RIGHT SHOULDER CLOSED	4	48" x 48"	16.0	64.0
W21-5b	LEFT or RIGHT SHOULDER CLOSED AHEAD	4	48" x 48"	16.0	64.0
G20-2	END ROAD WORK	4	48" x 24"	8.0	32.0
G20-5aP	WORK ZONE (plaque)	4	36" x 24"	6.0	24.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			873.6

LEGEND

FOR BIDDING PURPOSES ONLY

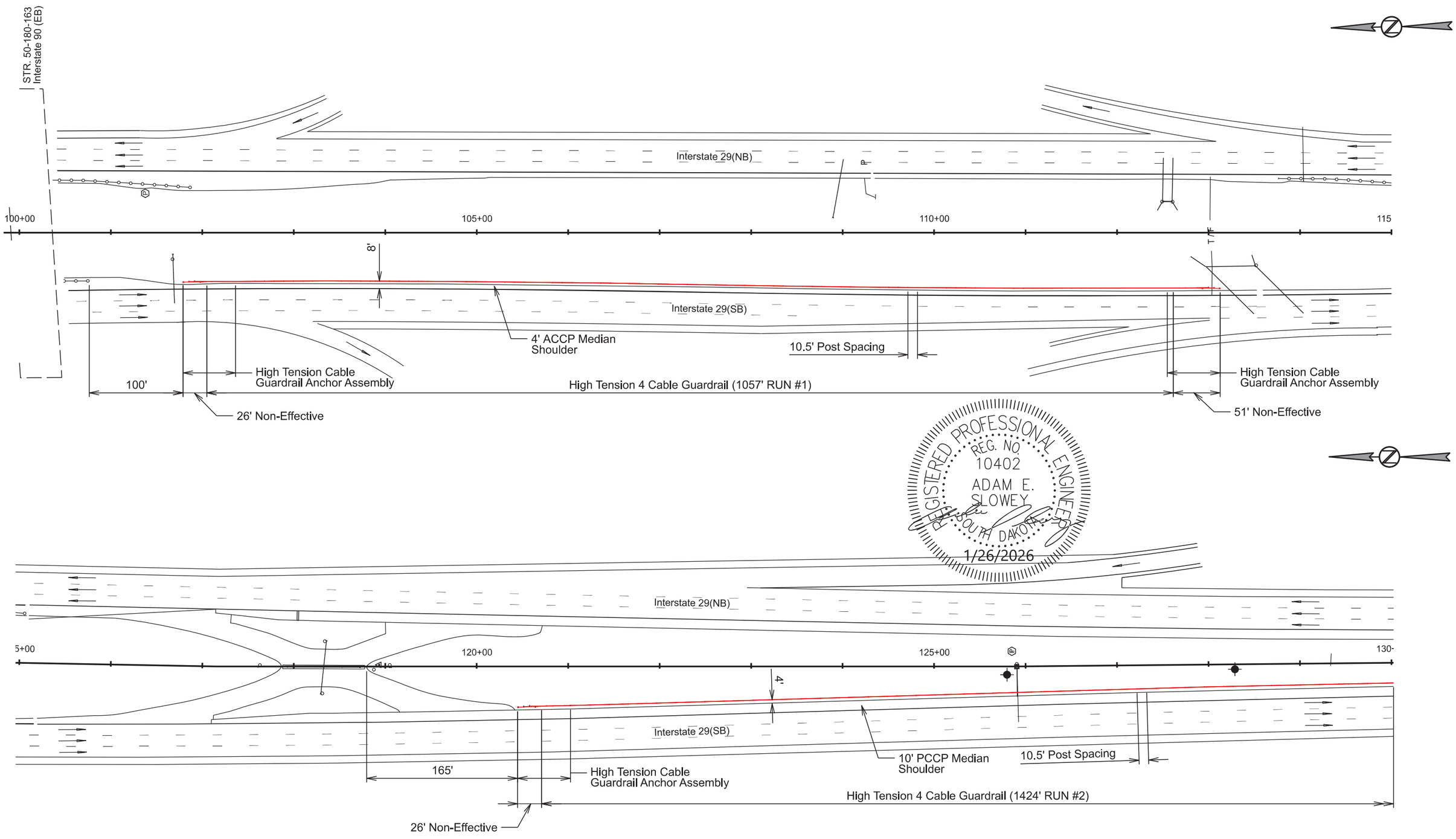
SD DOT	PROJECT	SHEET	TOTAL SHEETS
	PH 0022(443)	25	107

Plotting Date: 1/26/2026

- Anchor
- Antenna
- Approach
- Assumed Corner
- Azimuth Marker
- BBQ Grill/ Fireplace
- Bearing Tree
- Bench Mark
- Box Culvert
- Bridge
- Brush/Hedge
- Buildings
- Bulk Tank
- Cattle Guard
- Cemetery
- Centerline
- Cistern
- Clothes Line
- Concrete Symbol
- Control Point
- Creek Edge
- Curb/Gutter
- Curb
- Dam Grade/Dike/Levee
- Deck Edge
- Ditch Block
- Doorway Threshold
- Drainage Profile
- Drop Inlet
- Edge Of Asphalt
- Edge Of Concrete
- Edge Of Gravel
- Edge Of Other
- Edge Of Shoulder
- Electric Transformer/Power Junction Box
- Fence Barbwire
- Fence ChainIink
- Fence Electric
- Fence Miscellaneous
- Fence Rock
- Fence Snow
- Fence Wood
- Fence Woven
- Fire Hydrant
- Flag Pole
- Flower Bed
- Gas Valve Or Meter
- Gas Pump Island
- Grain Bin
- Guardrail
- Gutter
- Guy Pole
- Haystack
- Highway ROW Marker
- Interstate Close Gate
- Iron Pin
- Irrigation Ditch
- Lake Edge
- Lawn Sprinkler
- Mailbox
- Manhole Electric
- Manhole Gas
- Manhole Miscellaneous
- Manhole Sanitary Sewer
- Manhole Storm Sewer
- Manhole Telephone
- Manhole Water
- Merry-Go-Round
- Microwave Radio Tower
- Miscellaneous Line
- Miscellaneous Property Corner
- Miscellaneous Post
- Overhang Or Encroachment
- Overhead Utility Line — OH —
- Parking Meter
- Pedestrian Push Button Pole
- Pipe With End Section
- Pipe With Headwall
- Pipe Without End Section
- Playground Slide
- Playground Swing
- Power And Light Pole
- Power And Telephone Pole
- Power Meter
- Power Pole
- Power Pole And Transformer
- Power Tower Structure
- Propane Tank
- Property Pipe
- Property Pipe With Cap
- Property Stone
- Public Telephone
- Railroad Crossing Signal
- Railroad Milepost Marker
- Railroad Profile
- Railroad ROW Marker
- Railroad Signs
- Railroad Switch
- Railroad Track
- Railroad Trestle
- Rebar
- Rebar With Cap
- Reference Mark
- Retaining Wall
- Riprap
- River Edge
- Rock And Wire Baskets
- Rockpiles
- Satellite Dish
- Septic Tank
- Shrub Tree
- Sidewalk
- Sign Face
- Sign Post
- Slough Or Marsh
- Spring
- Stream Gauge
- Street Marker
- Subsurface Utility Exploration Test Hole
- Telephone Fiber Optics — T/F —
- Telephone Junction Box
- Telephone Pole
- Television Cable Jct Box
- Television Tower
- Test Wells/Bore Holes
- Traffic Sign Double Face
- Traffic Sign One Post
- Traffic Sign Two Post
- Traffic Signal
- Trash Barrel
- Tree Belt
- Tree Coniferous
- Tree Deciduous
- Tree Stumps
- Triangulation Station
- Underground Electric Line — P —
- Underground Gas Line — G —
- Underground High Pressure Gas Line — HG —
- Underground Sanitary Sewer — S —
- Underground Storm Sewer — S —
- Underground Tank
- Underground Telephone Line — T —
- Underground Television Cable — TV —
- Underground Water Line — W —
- Water Fountain
- Water Hydrant
- Water Meter
- Water Tower
- Water Valve
- Water Well
- Weir Rock
- Windmill
- Wingwall
- Witness Corner
- State and National Line
- County Line
- Section Line
- Quarter Line
- Sixteenth Line
- Property Line
- Construction Line
- ROW Line
- New ROW Line
- Cut and Fill Limits
- Control of Access
- New Control of Access
- Proposed ROW (After Property Disposal)
- Drainage Arrow
- Remove Concrete Pavement
- Remove Concrete Driveway Pavement
- Remove Asphalt Concrete Pavement
- Remove Concrete Sidewalk
- Remove Concrete Median Pavement
- Remove Concrete Curb and/or Gutter
- Detectable Warning Pedestrian Push Button Pole and 30" x 48" Clear Space with 1.5% slope

MEDIAN CABLE BARRIER LAYOUT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	26	107



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
STATE OF SOUTH DAKOTA
1/26/2026

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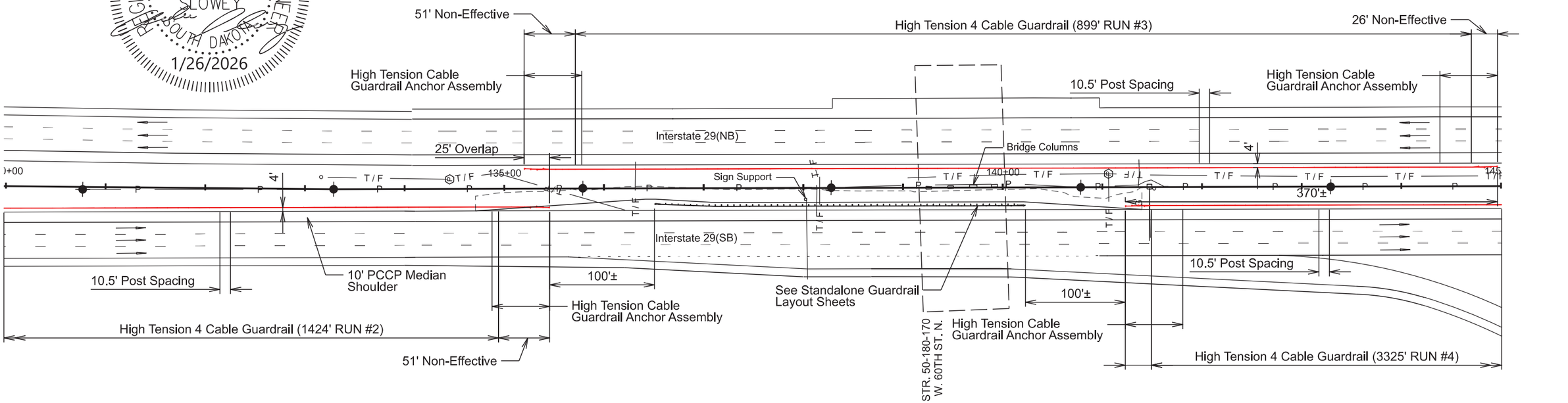
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	27	107

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

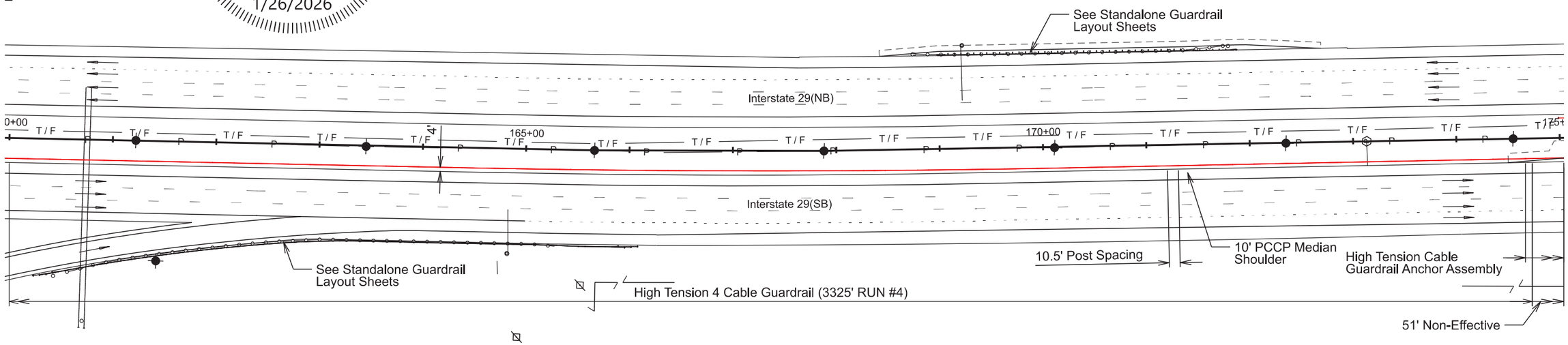


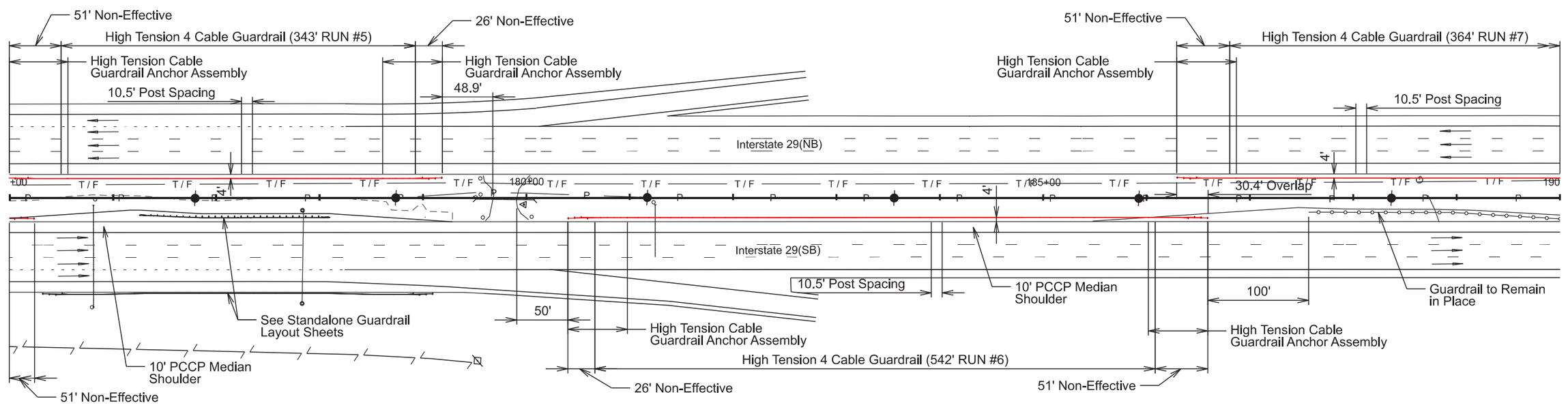
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	28	107

REGISTERED PROFESSIONAL ENGINEER
REG. NO 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

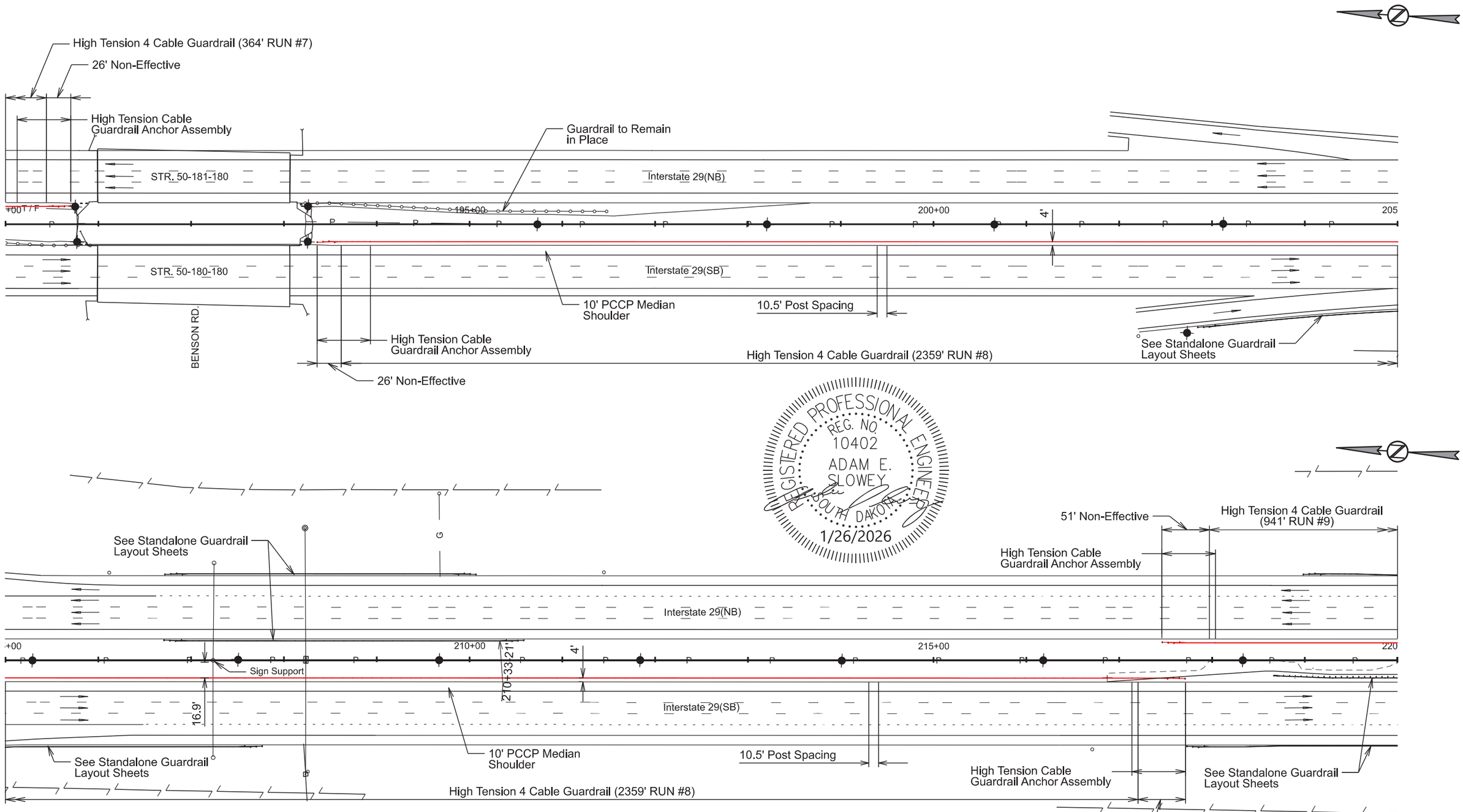




MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

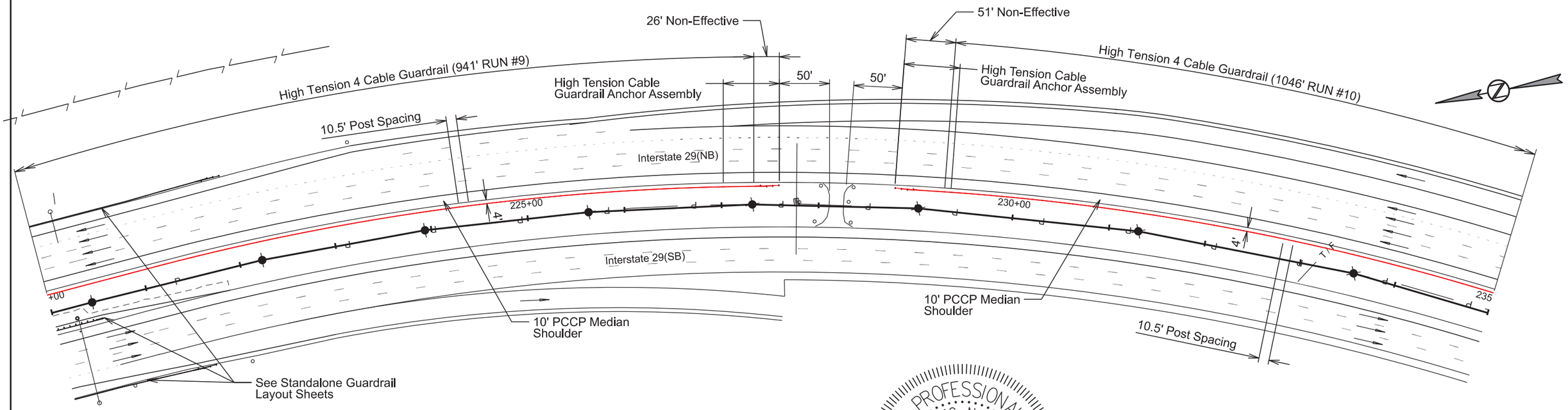
SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	29	107

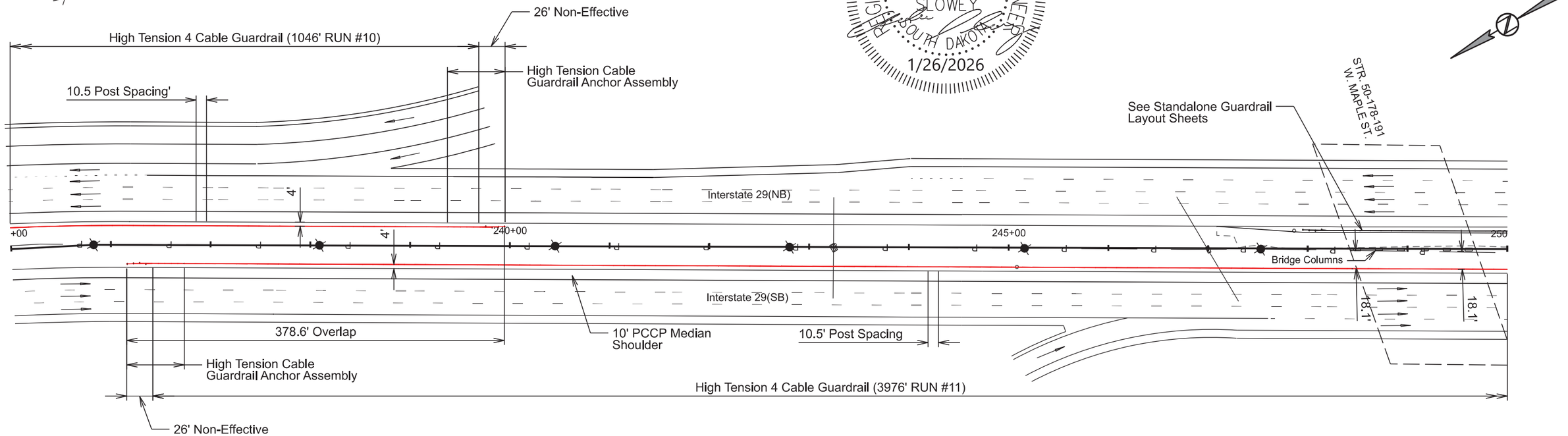


MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	30	107



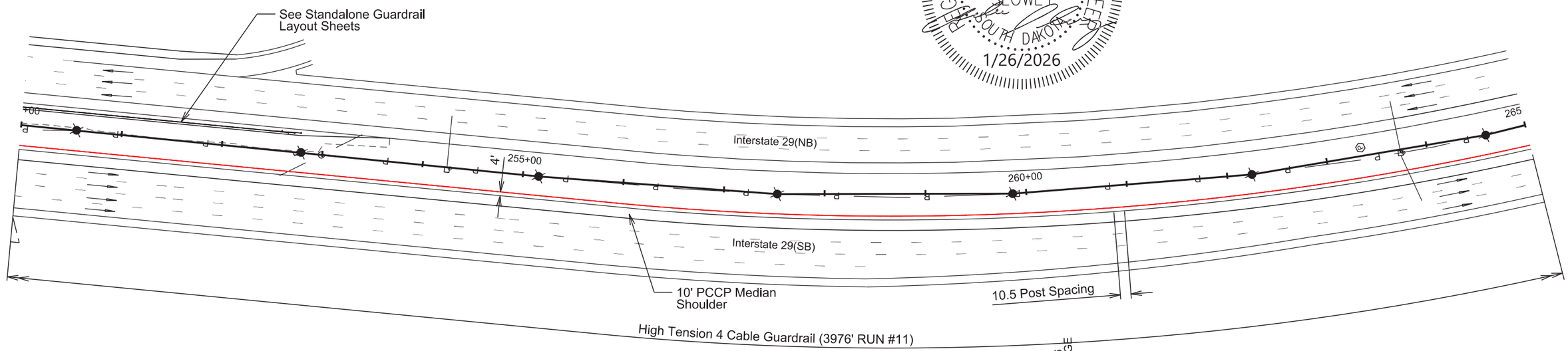


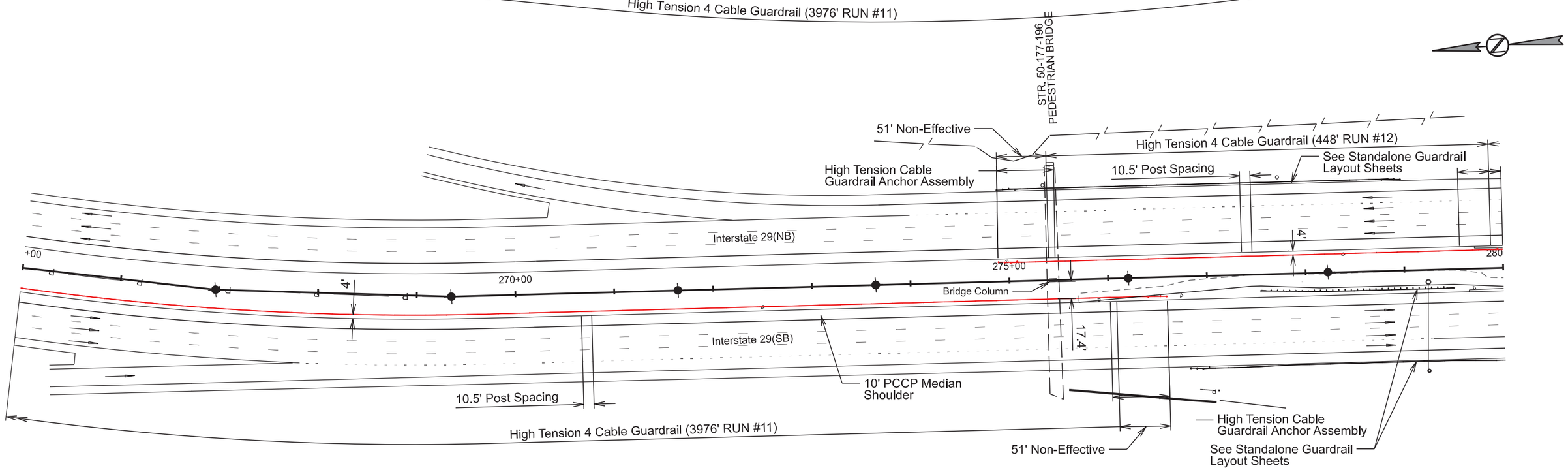
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	31	107

REGISTERED PROFESSIONAL ENGINEER
REG. NO
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

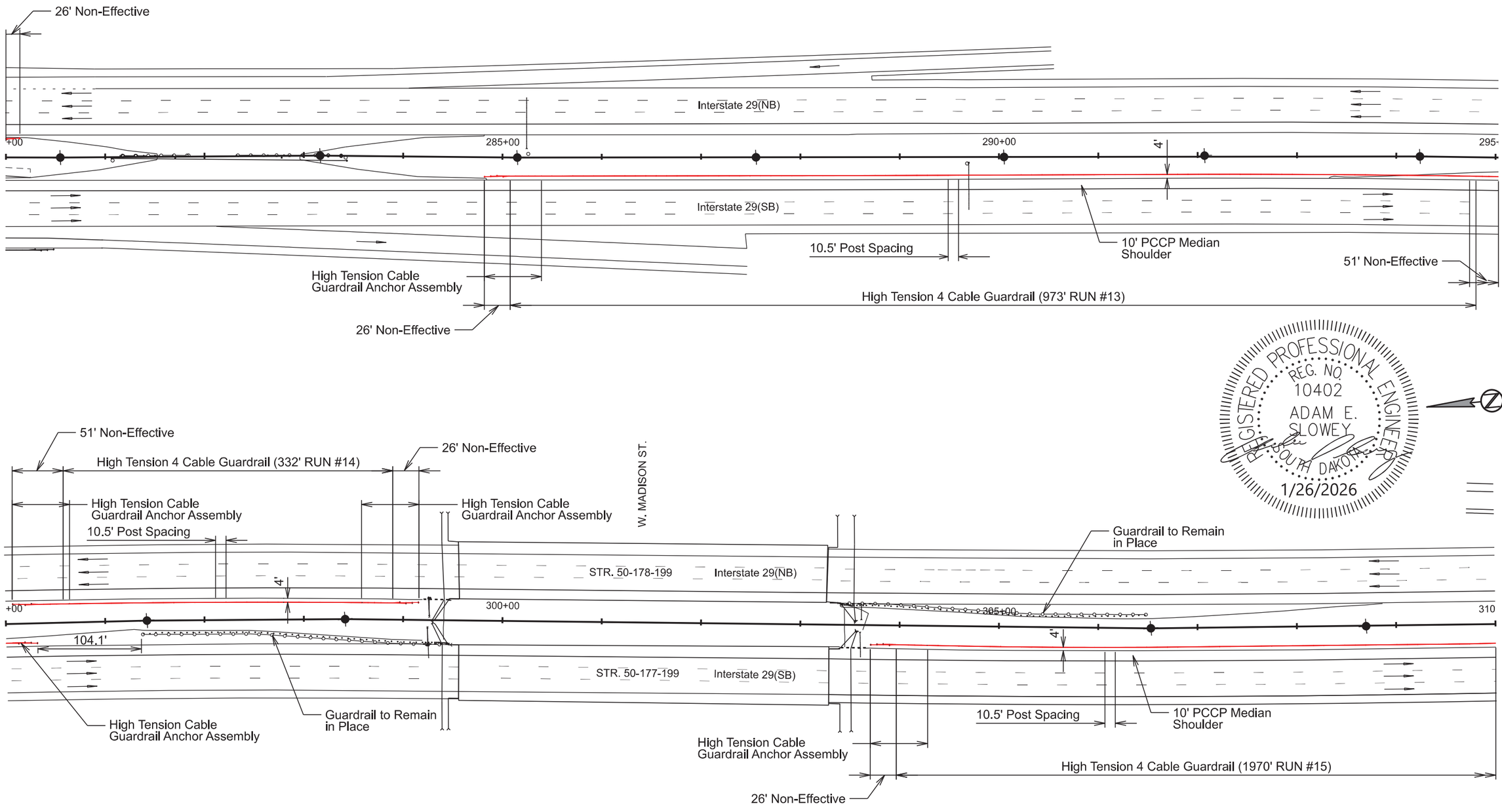




Plotted From - barry File - ...\Sta250mcb.dgn

MEDIAN CABLE BARRIER LAYOUT

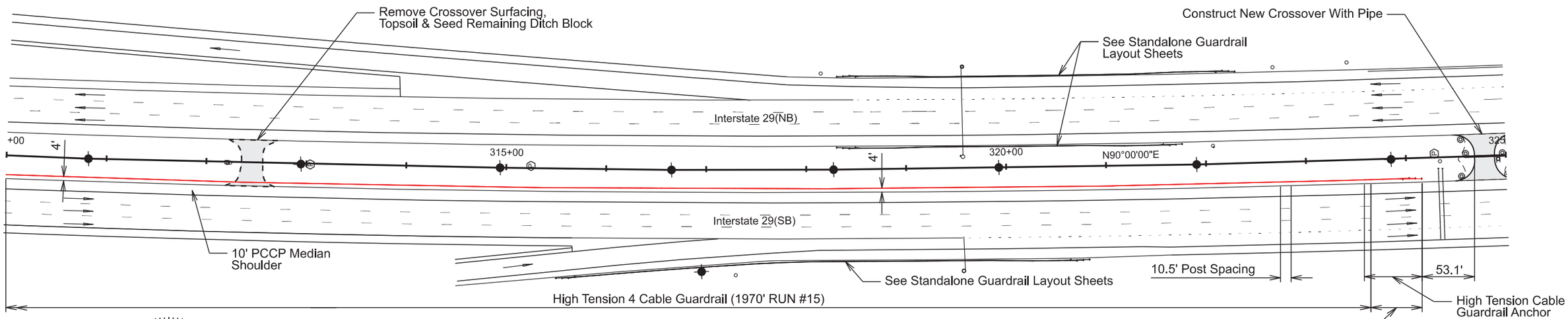
SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	32	107



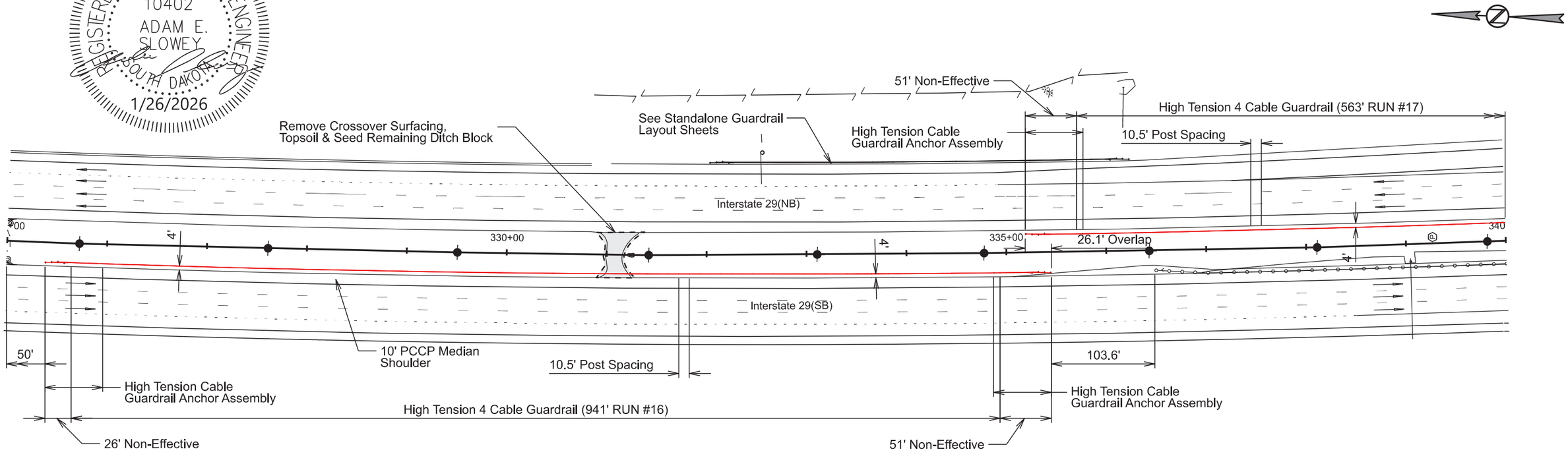
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

MEDIAN CABLE BARRIER LAYOUT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	33	107



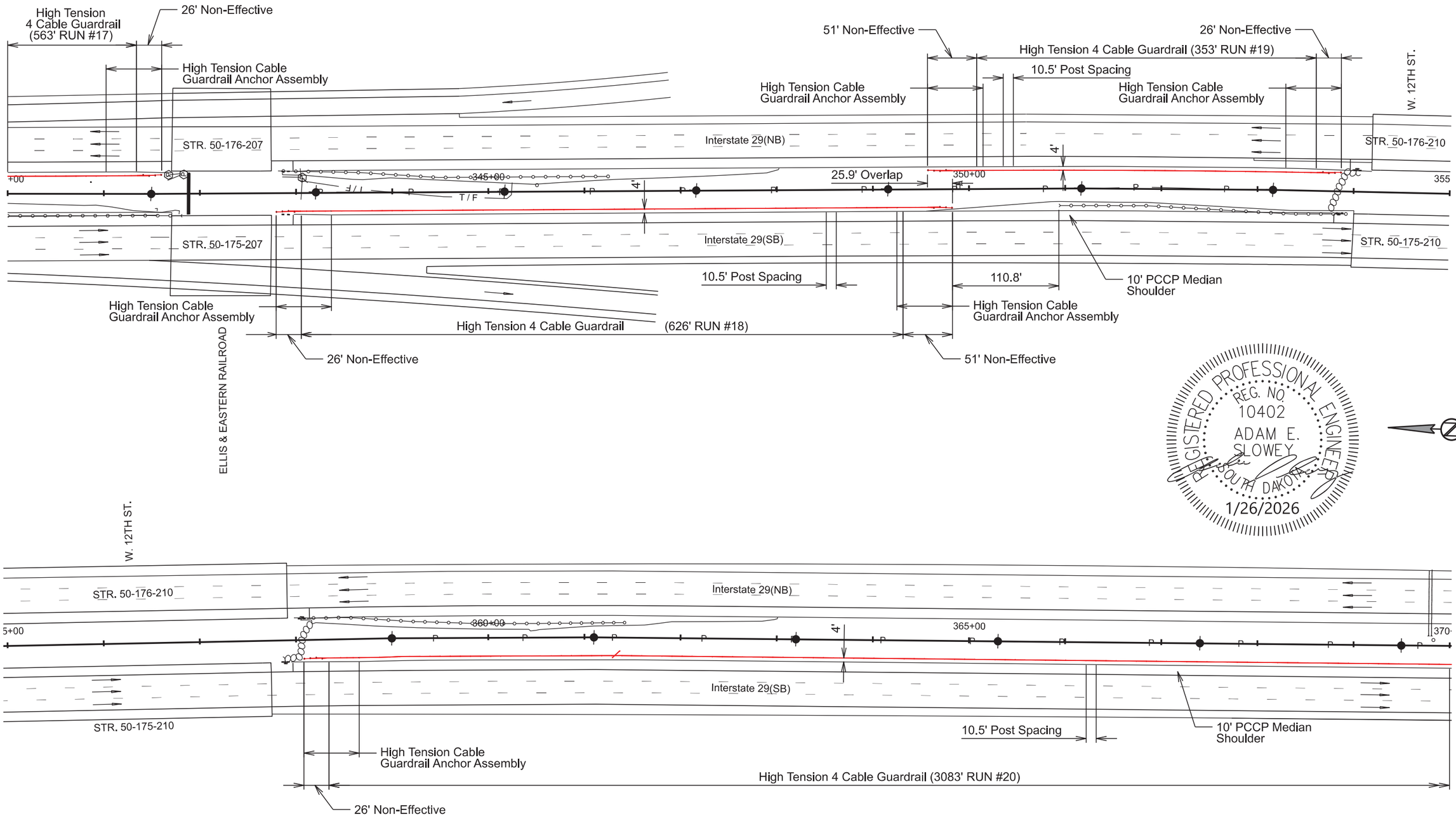
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026



MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	34	107



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

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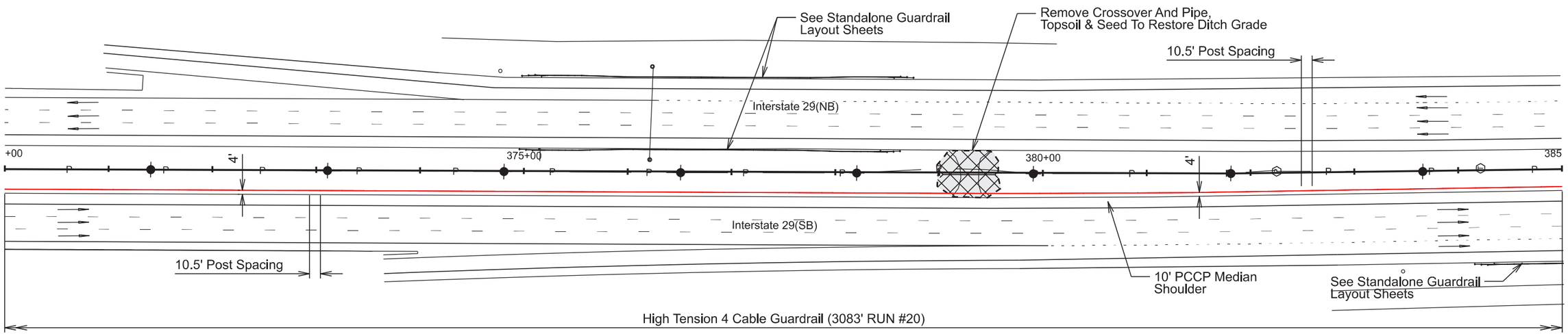
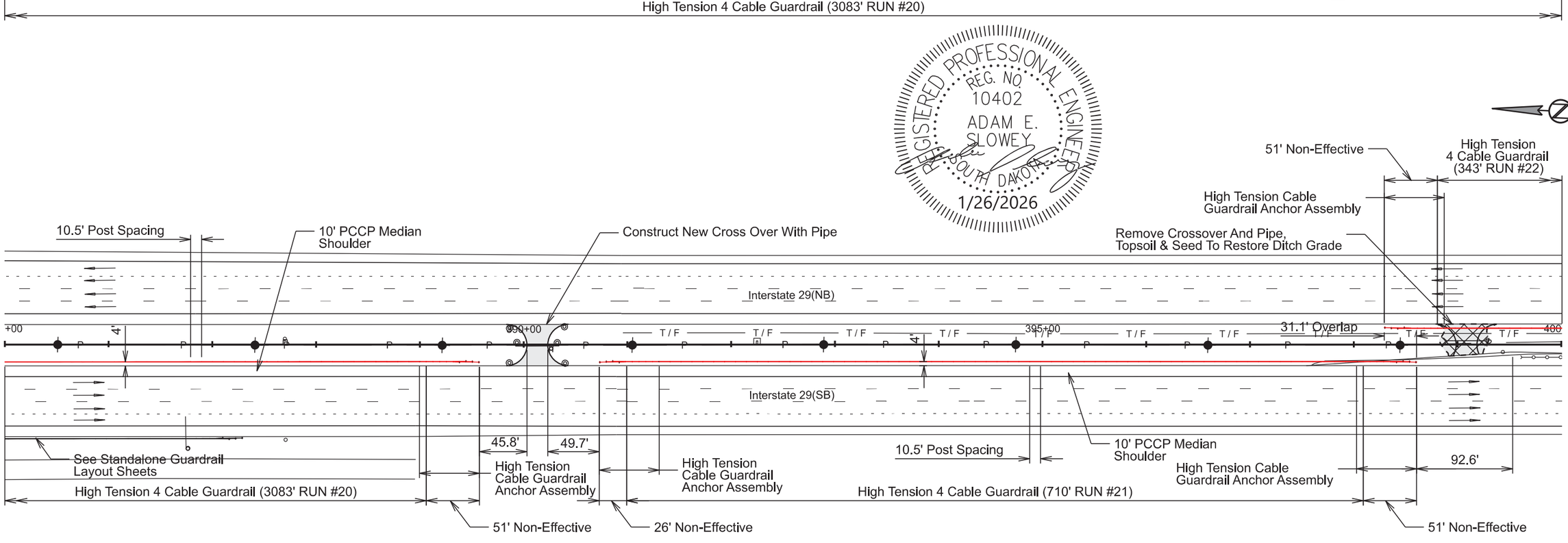
MEDIAN CABLE BARRIER LAYOUT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	35	107

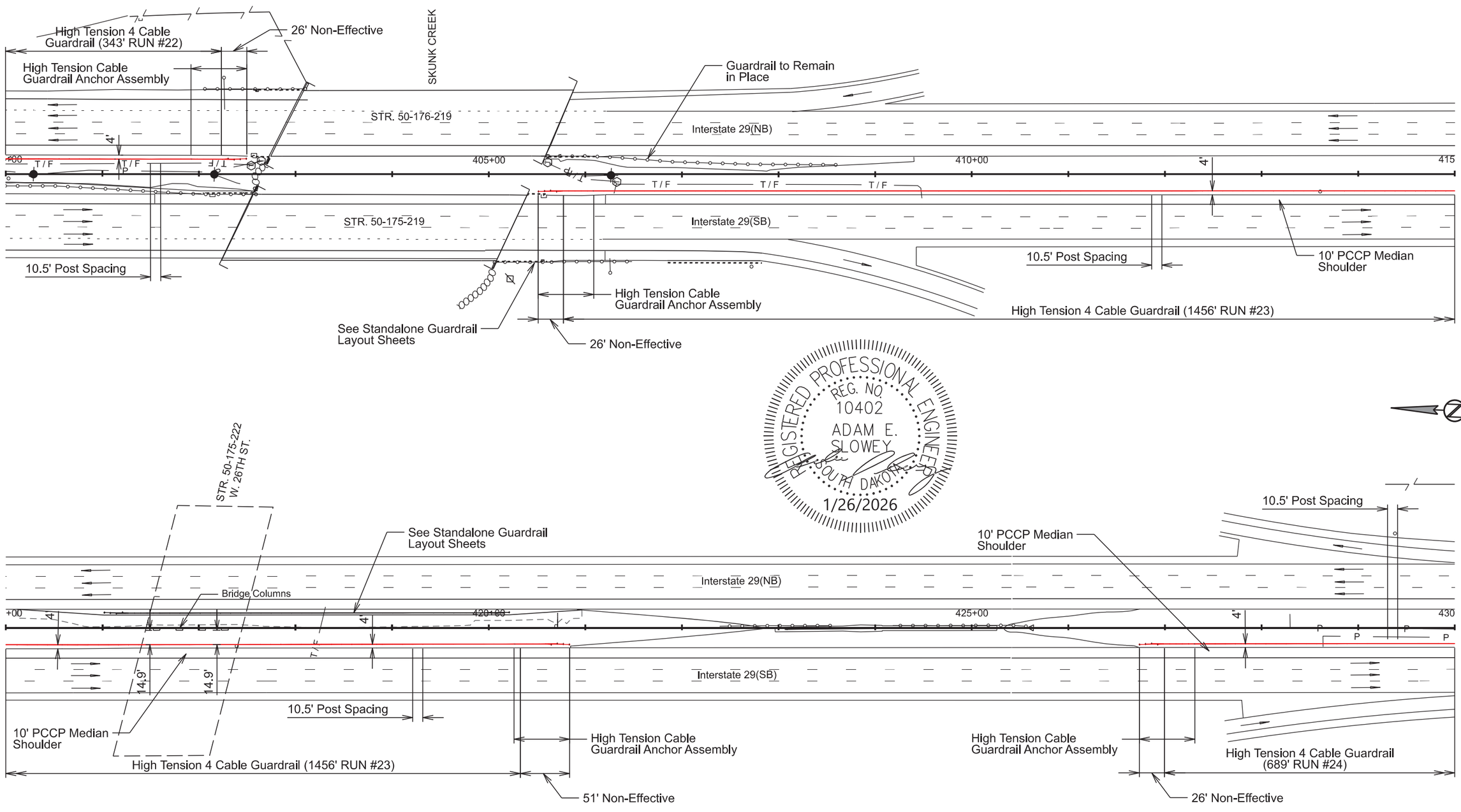




MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	36	107

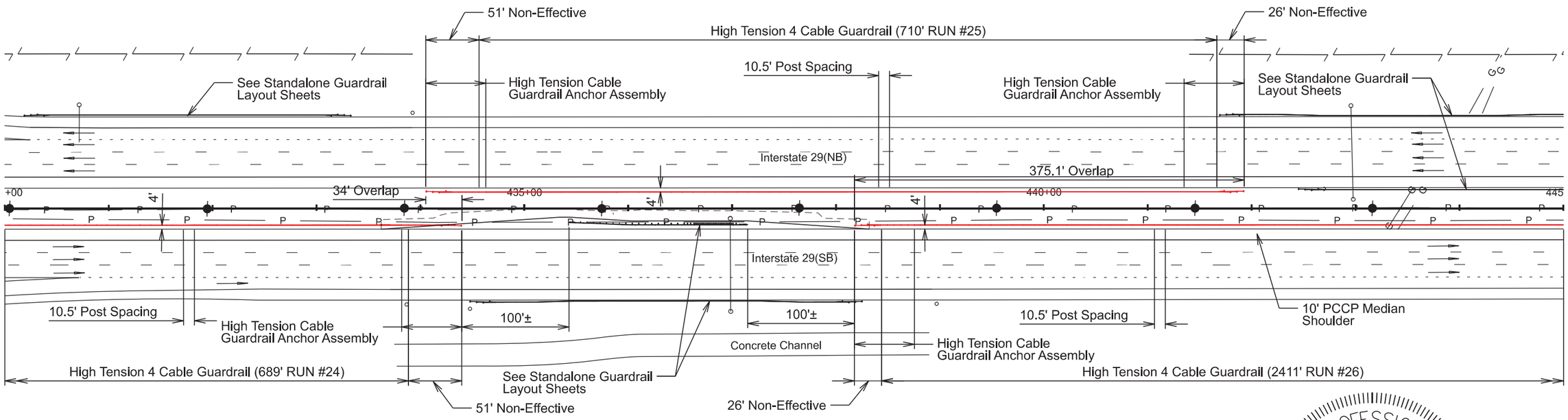


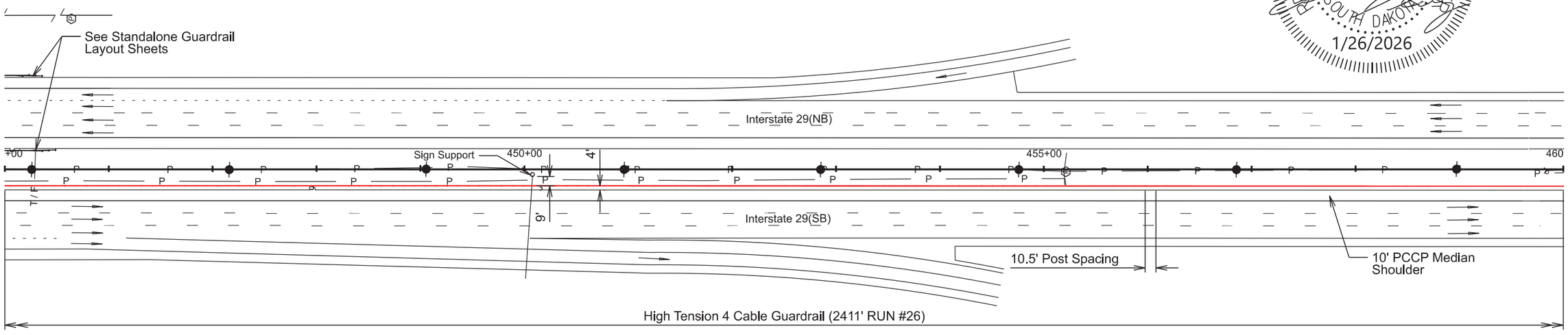
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	37	107





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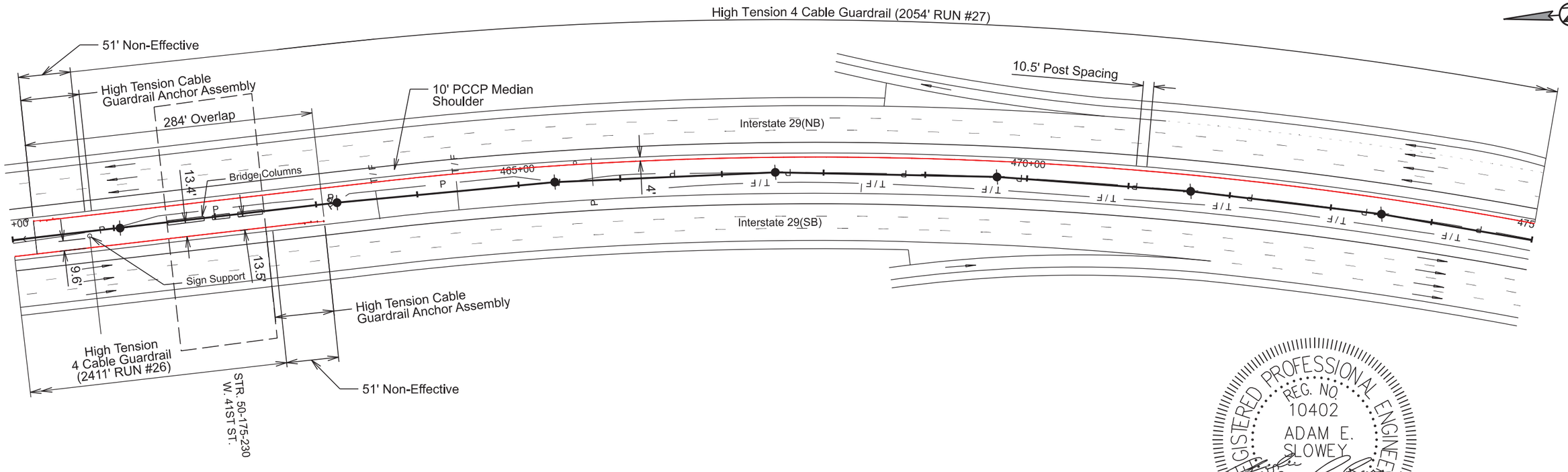
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

MEDIAN CABLE BARRIER LAYOUT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	38	107



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REG. NO 10402
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SOUTH DAKOTA
1/26/2026

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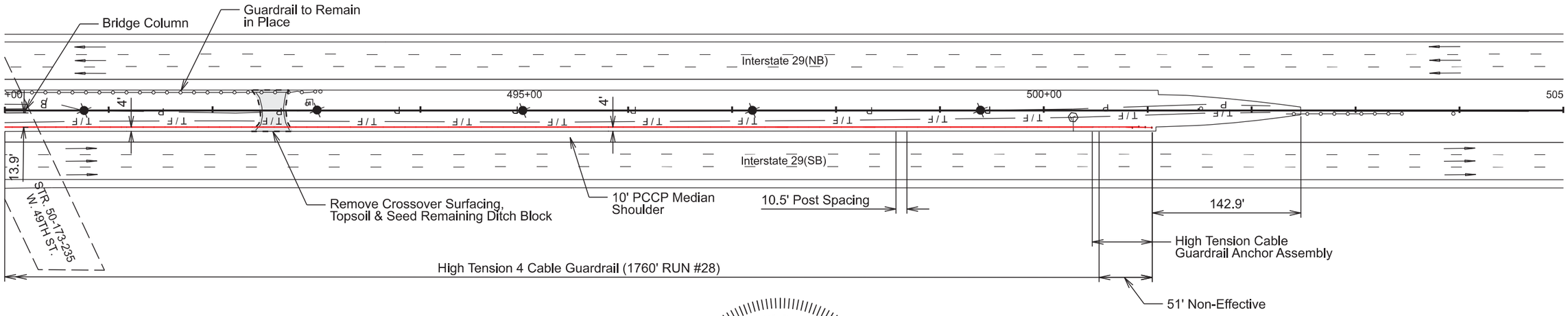
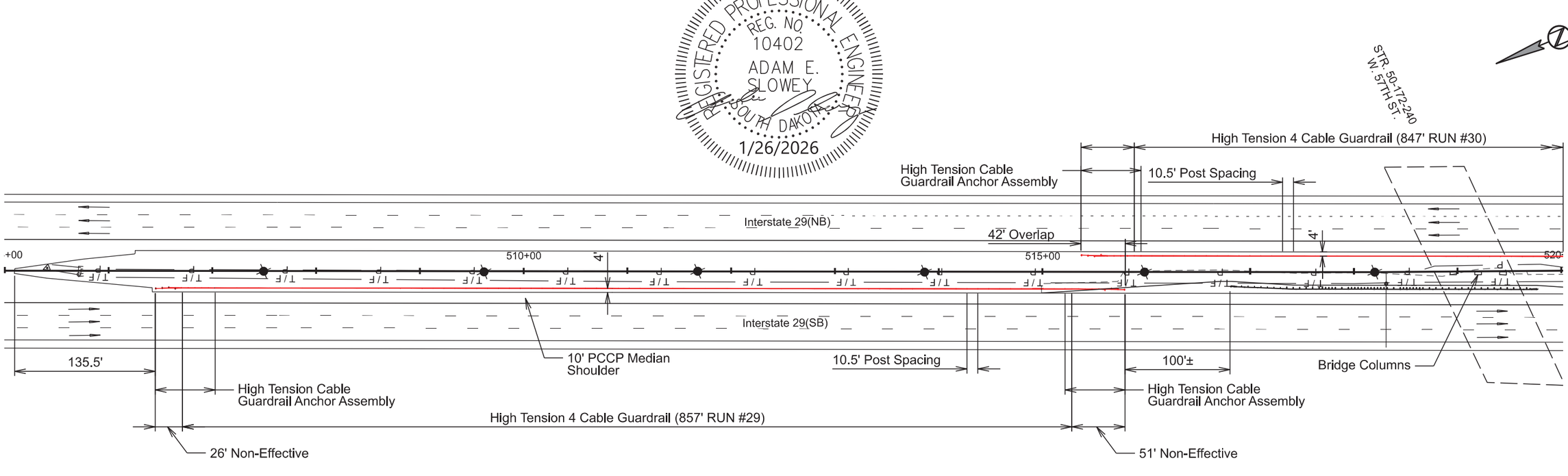
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	39	107



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026



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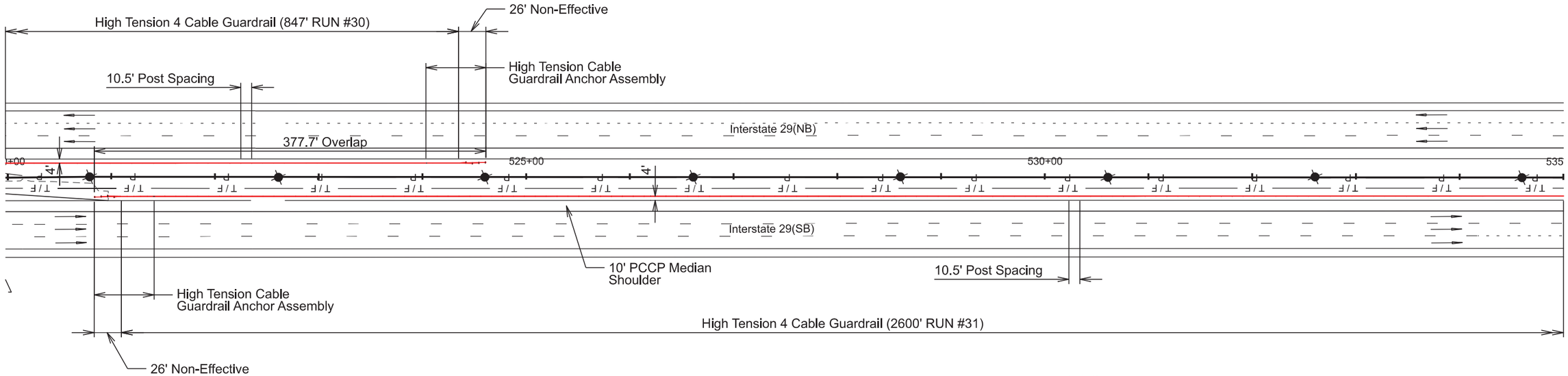
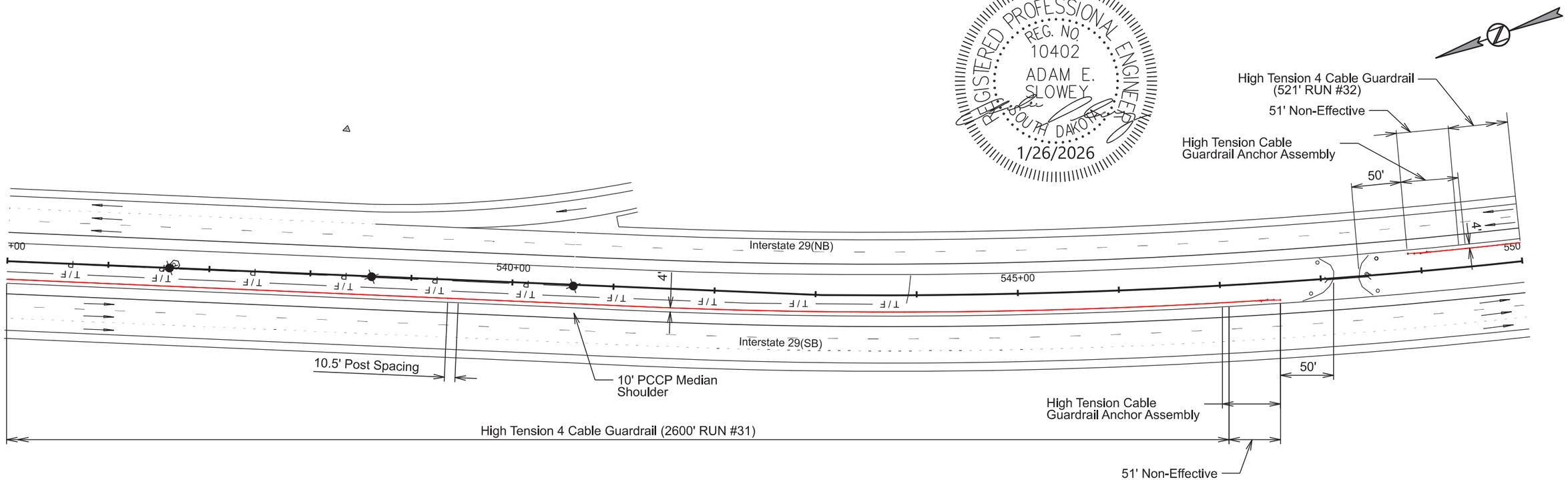
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	40	107



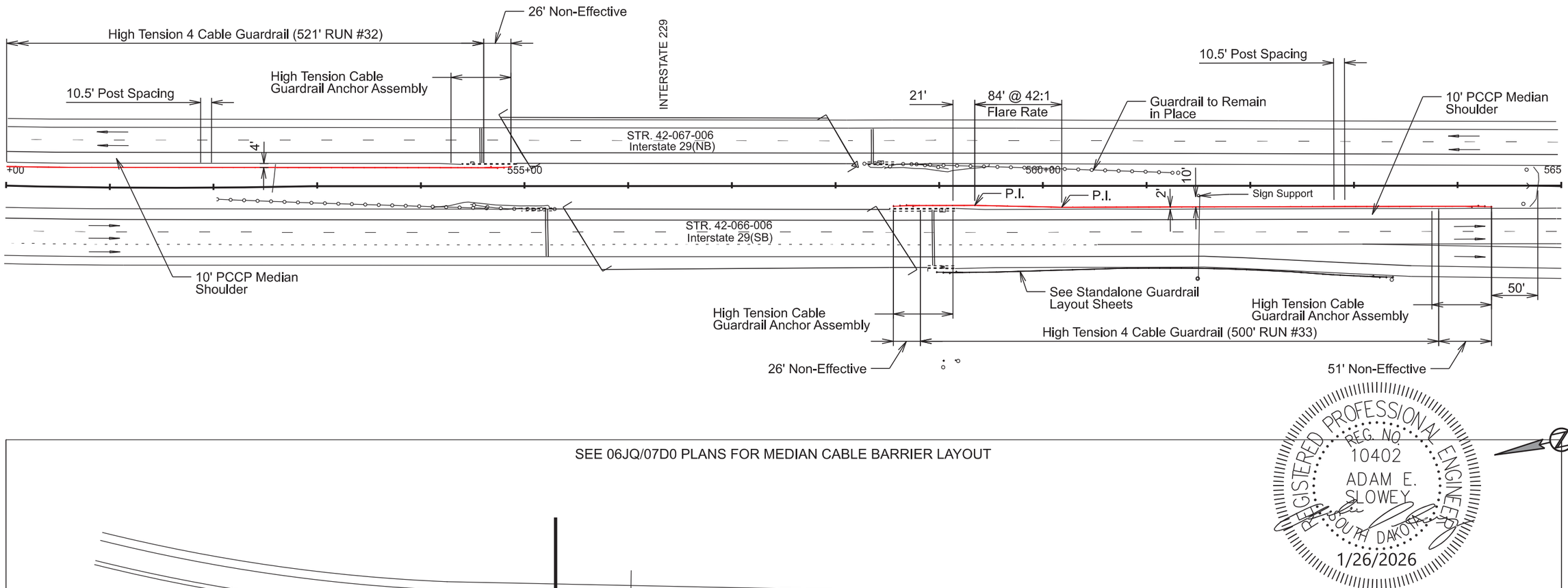
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026



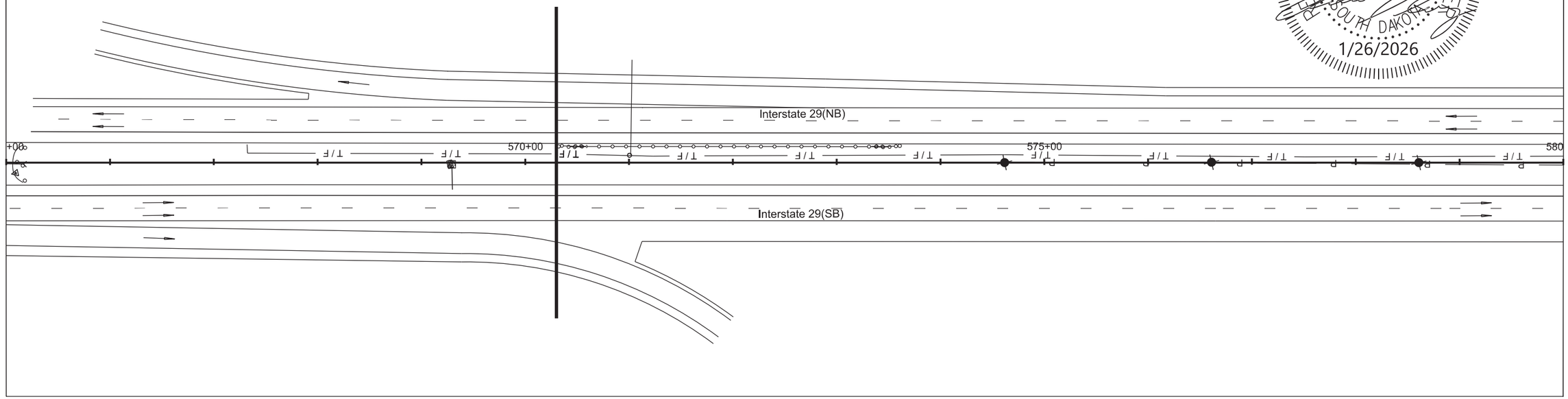
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	41	107



SEE 06JQ/07D0 PLANS FOR MEDIAN CABLE BARRIER LAYOUT

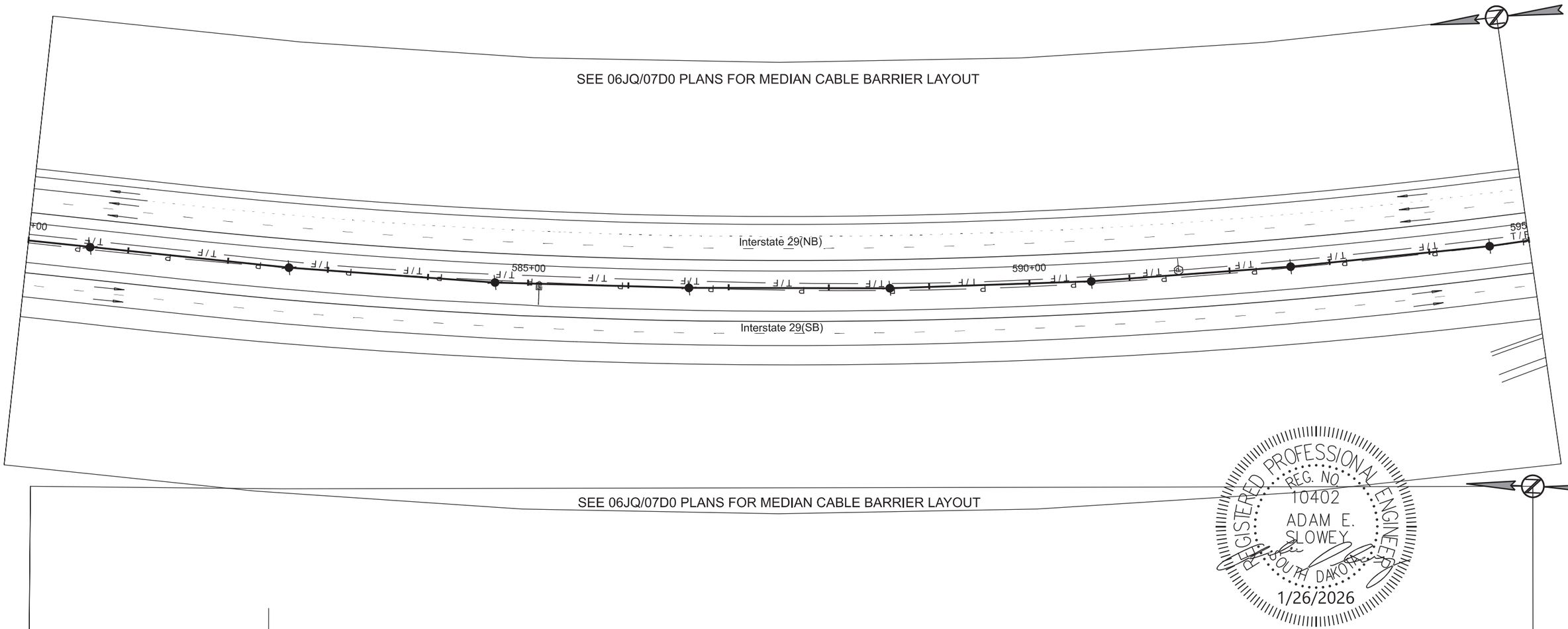


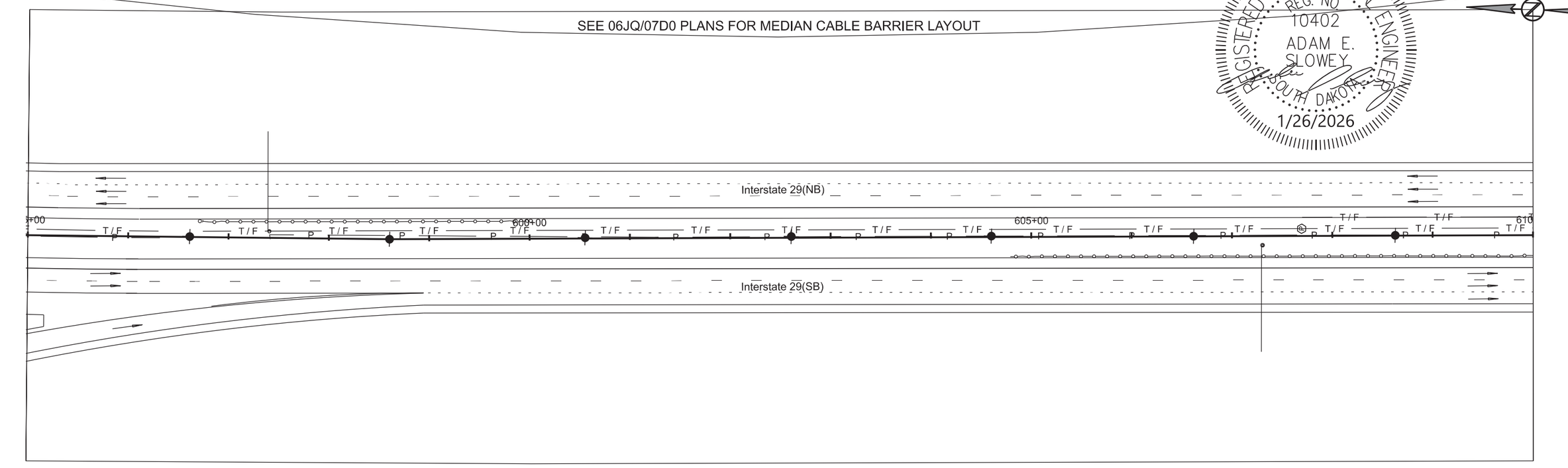
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	42	107





REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
STATE OF SOUTH DAKOTA
1/26/2026

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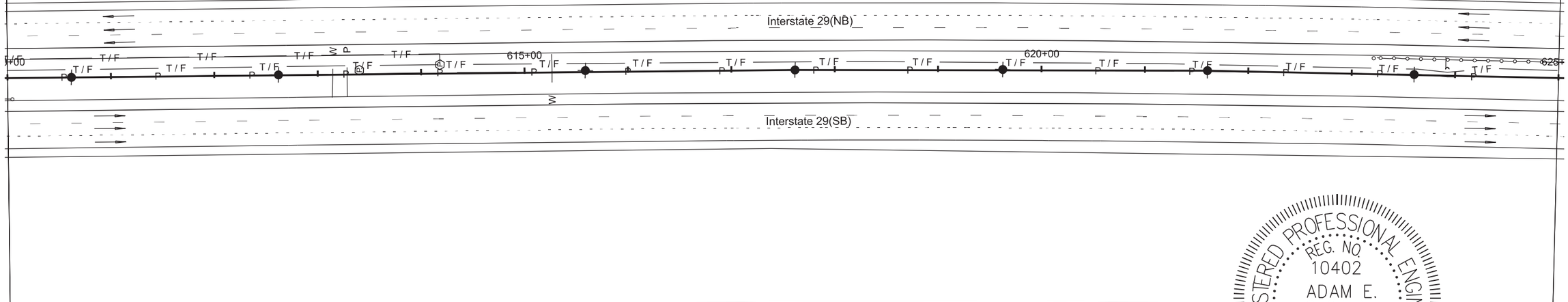
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
	PH 0022(443)	43	107

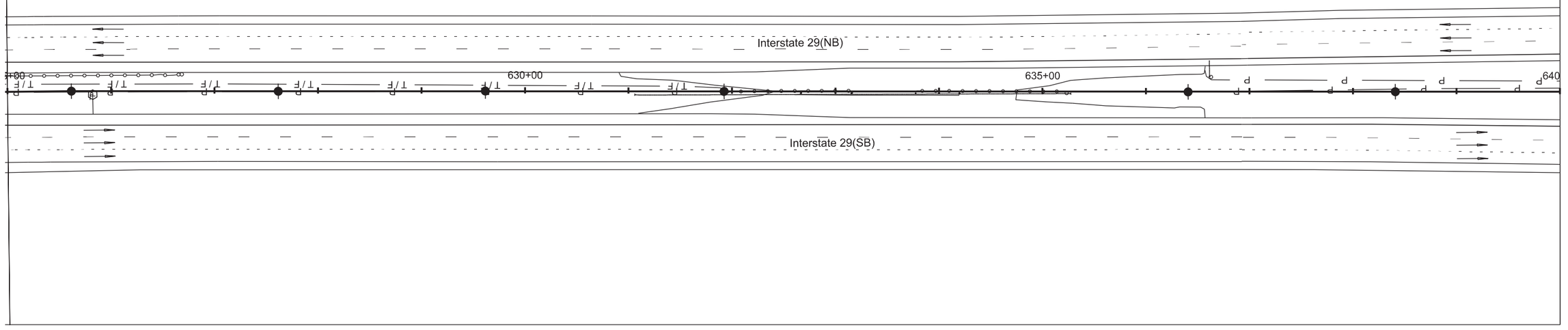
Plotting Date: 1/26/2026

SEE 06JQ/07D0 PLANS FOR MEDIAN CABLE BARRIER LAYOUT



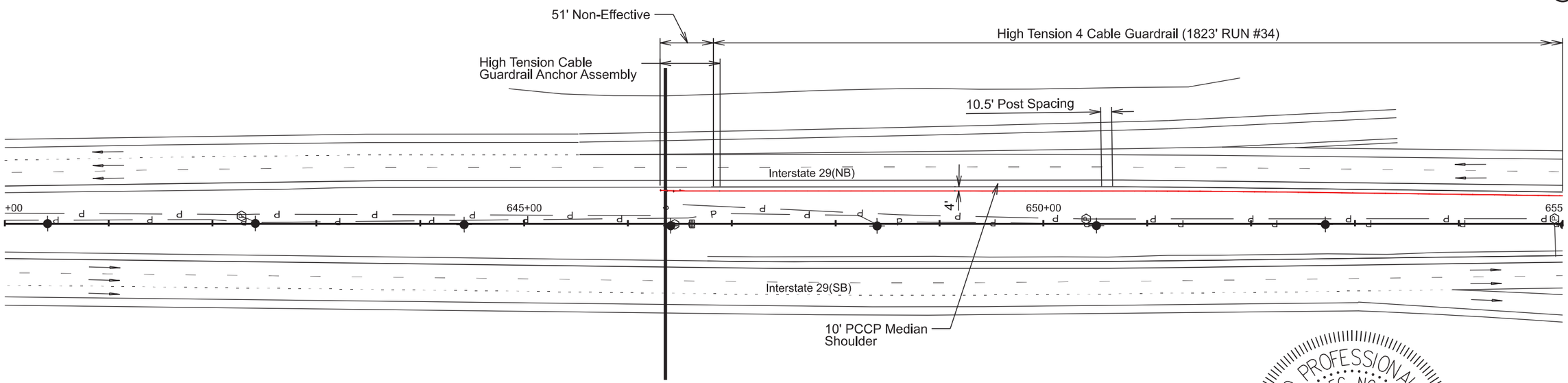
REGISTERED PROFESSIONAL ENGINEER
REG. NO.
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

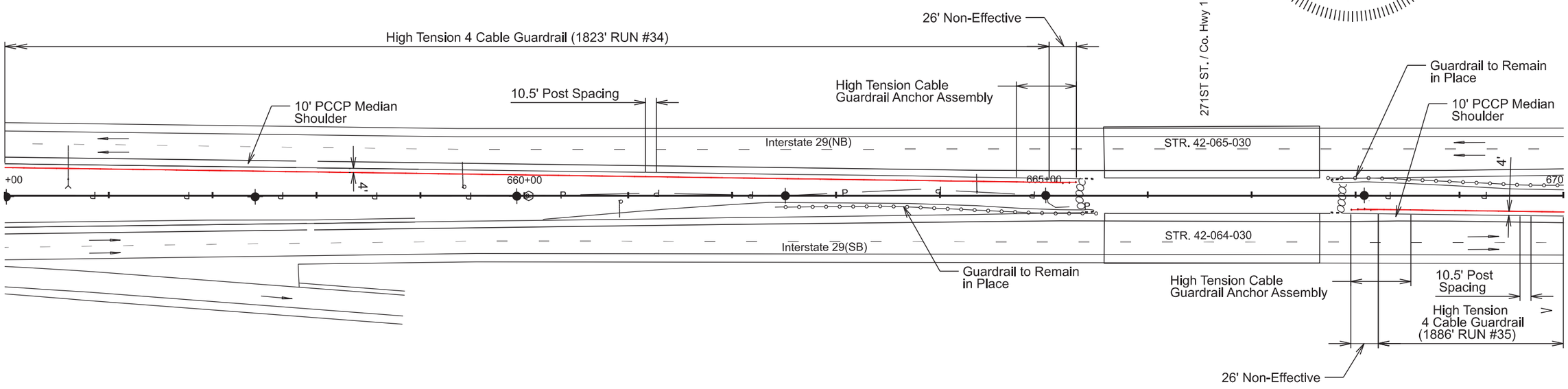
SEE 06JQ/07D0 PLANS FOR MEDIAN CABLE BARRIER LAYOUT



MEDIAN CABLE BARRIER LAYOUT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	44	107



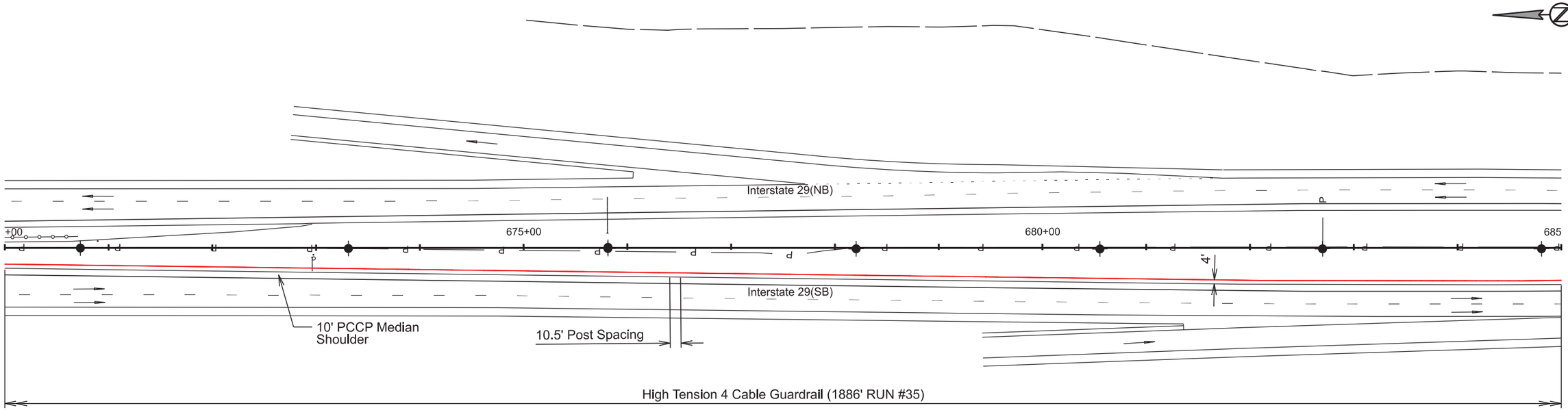


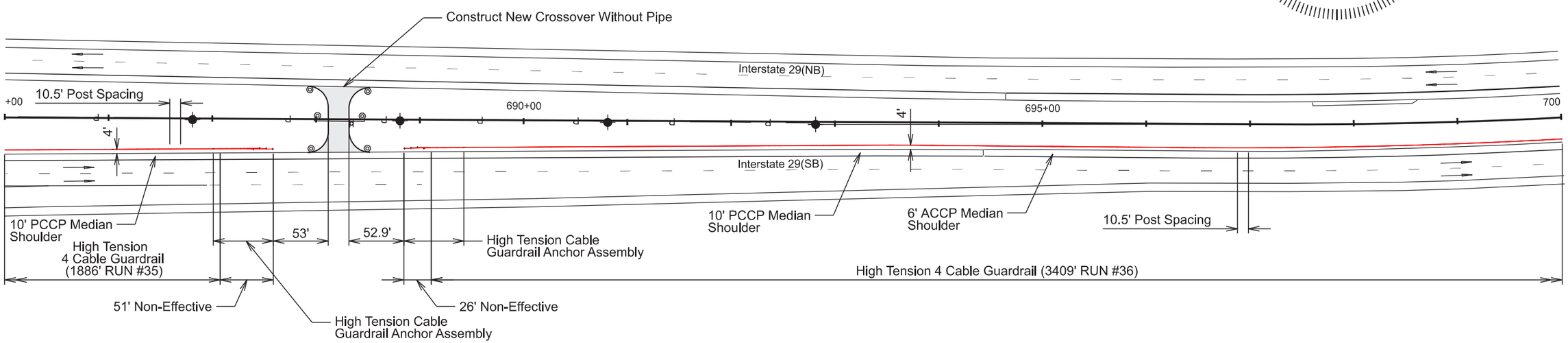
REGISTERED PROFESSIONAL ENGINEER
REG. NO.
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	45	107





REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

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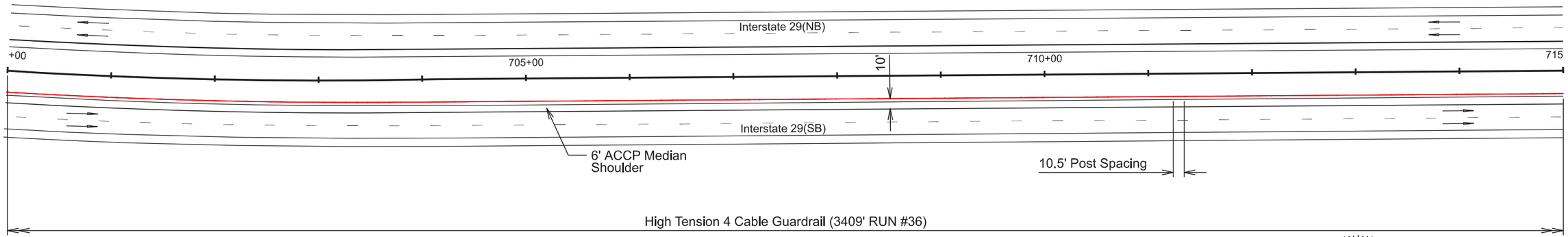
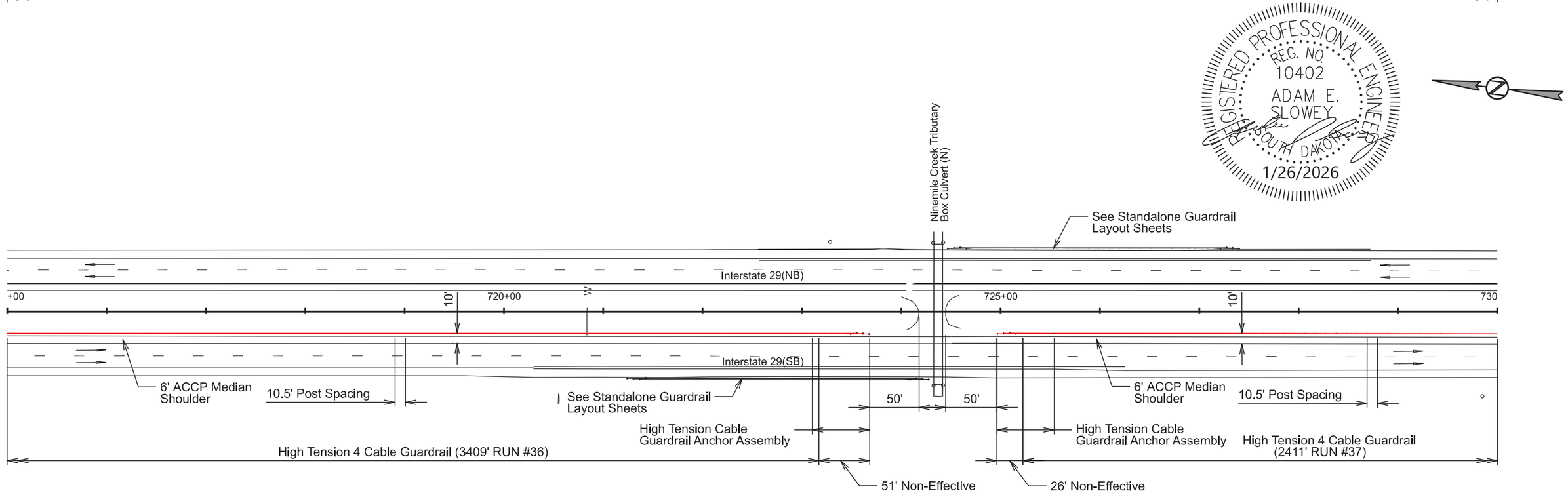
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	46	107





REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

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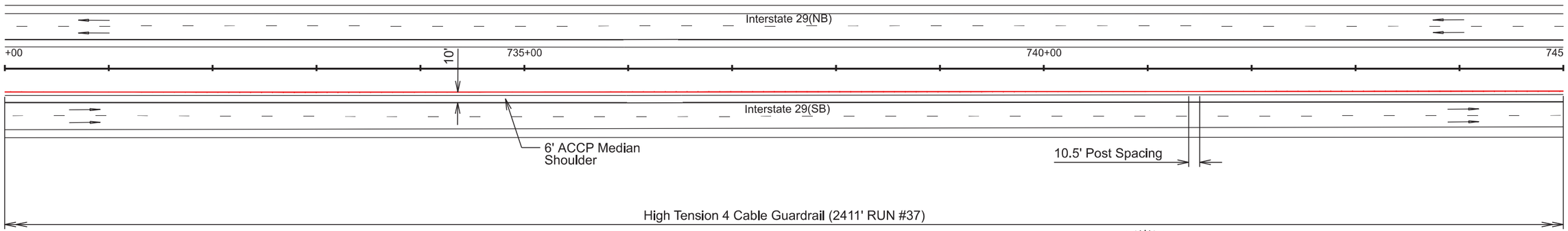
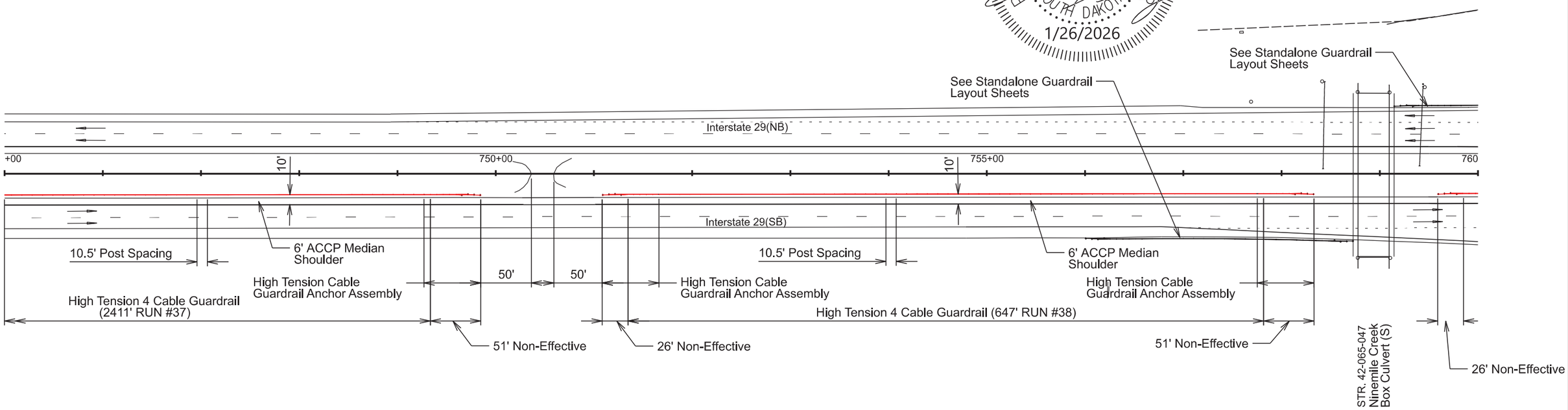
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	47	107



REGISTERED PROFESSIONAL ENGINEER
REG. NO 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026



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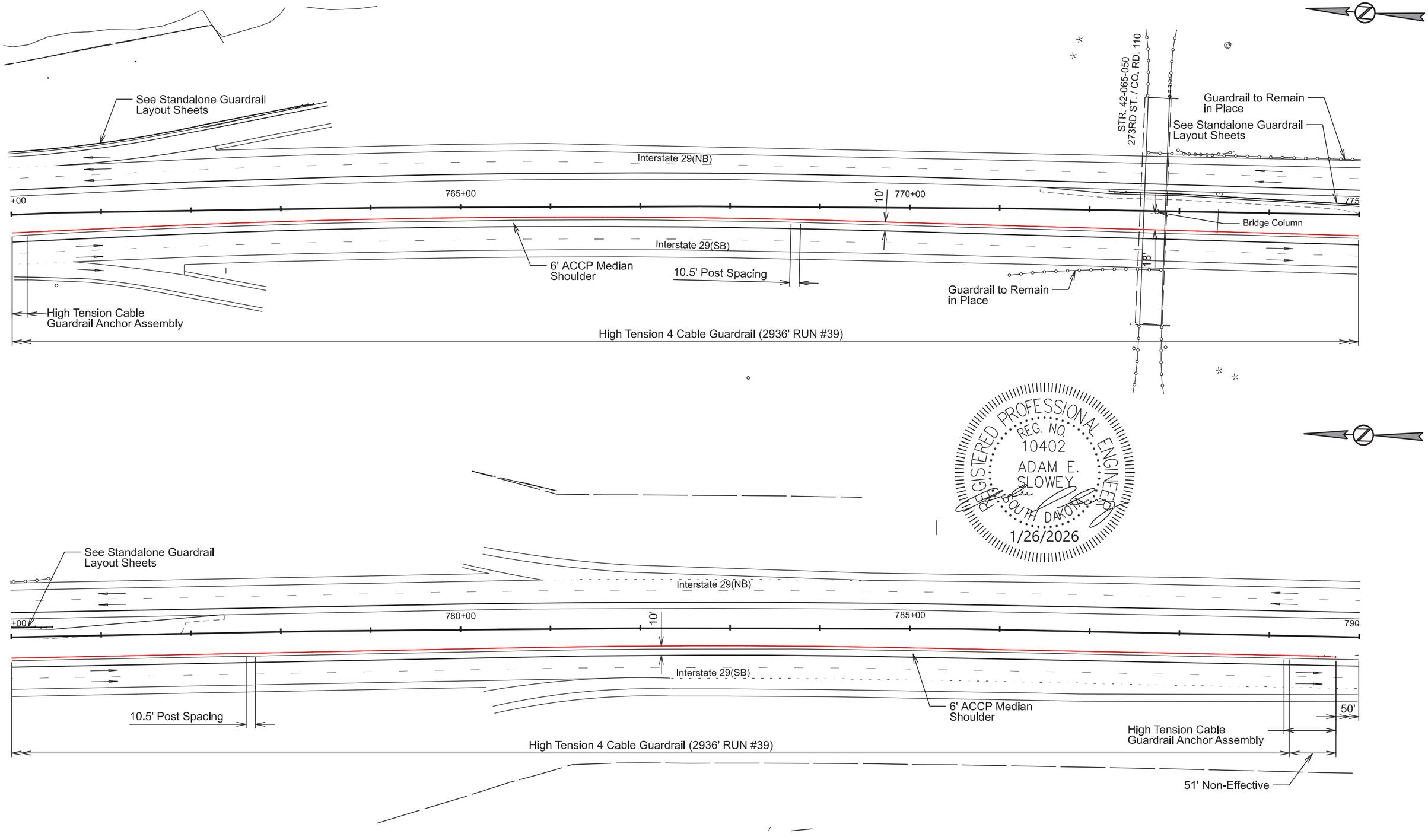
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	48	107



REGISTERED PROFESSIONAL ENGINEER
REG. NO 10402
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SOUTH DAKOTA
1/26/2026

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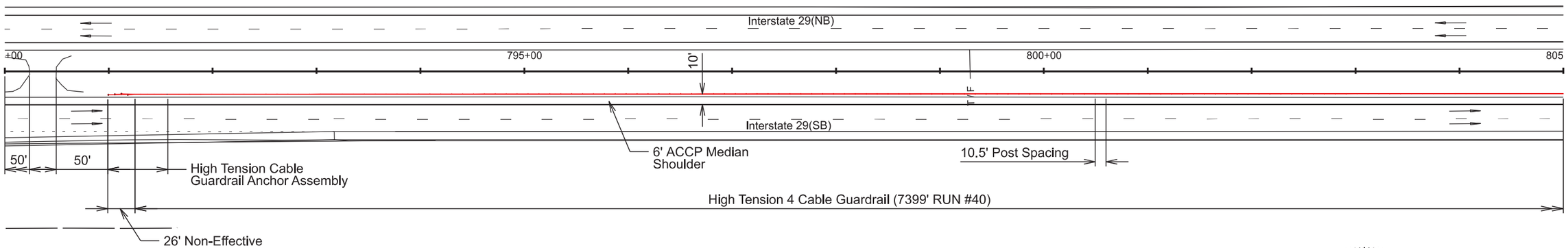
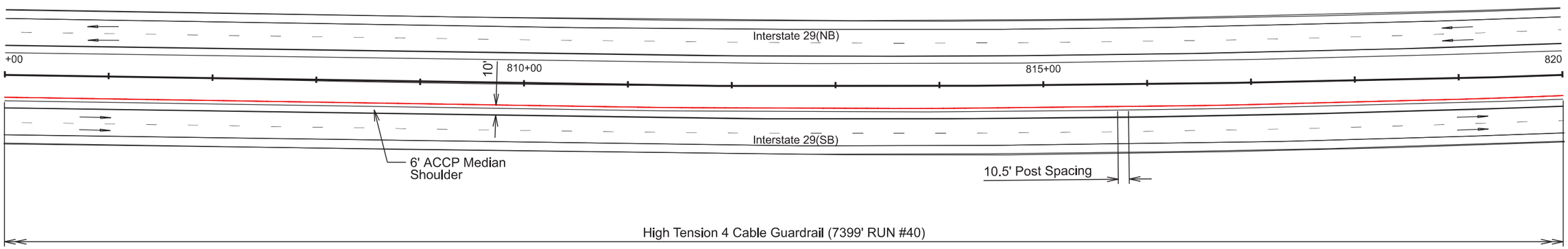
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	49	107

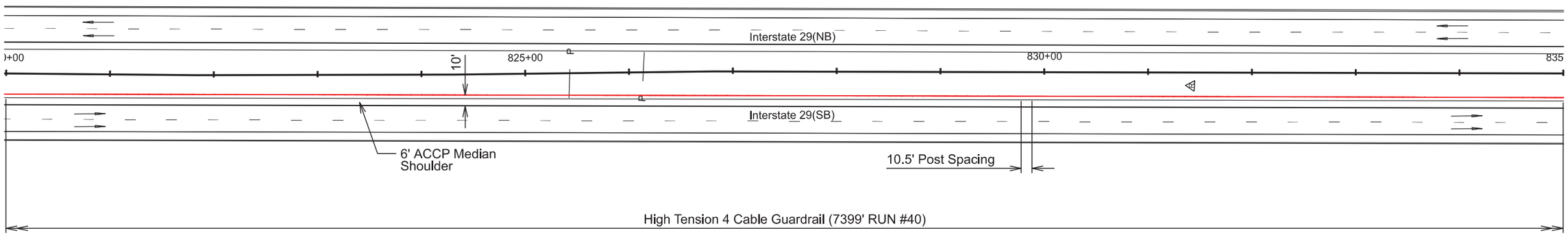




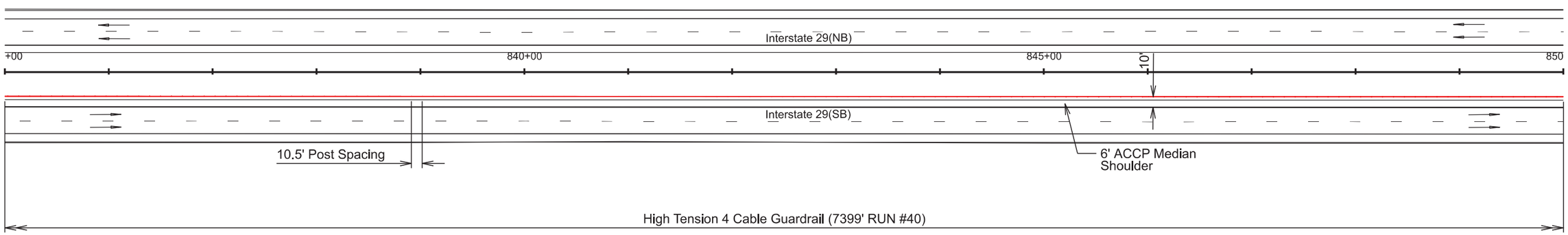
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	50	107



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
STATE OF SOUTH DAKOTA
1/26/2026



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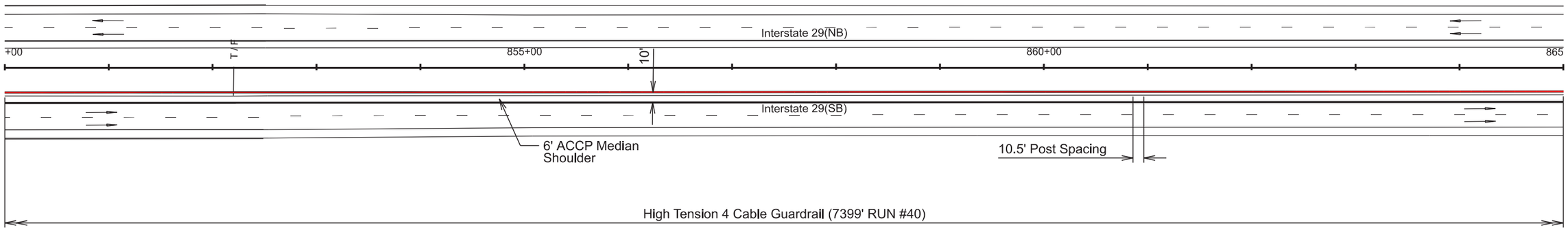
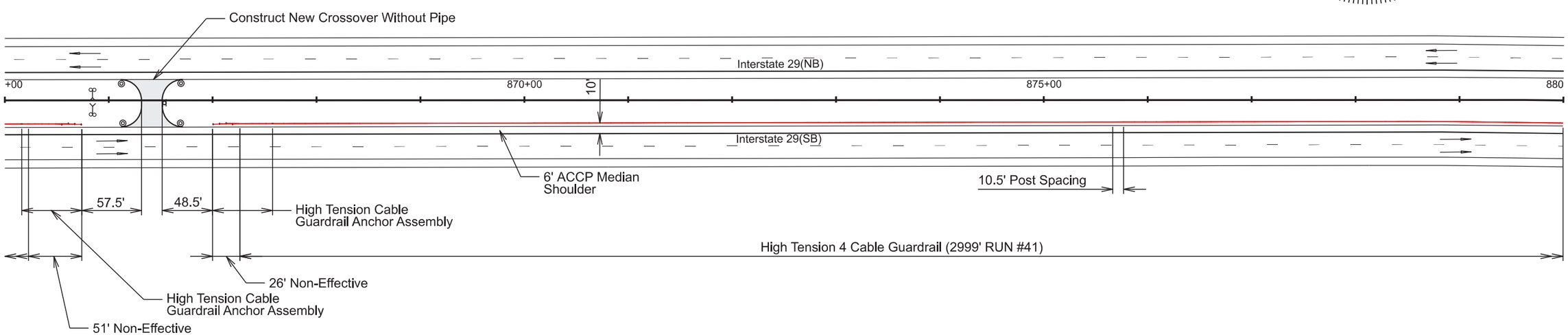
MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	51	107

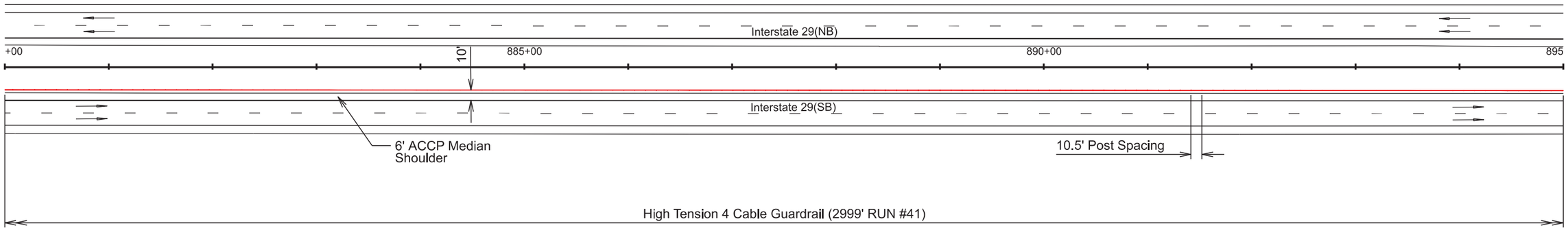


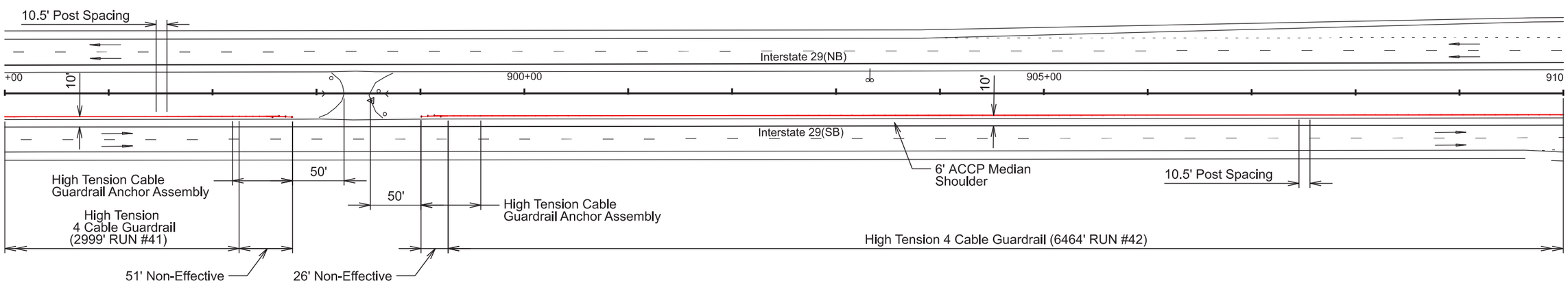
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
OF SOUTH DAKOTA, U.S.A.
1/26/2026



MEDIAN CABLE BARRIER LAYOUT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	52	107





REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
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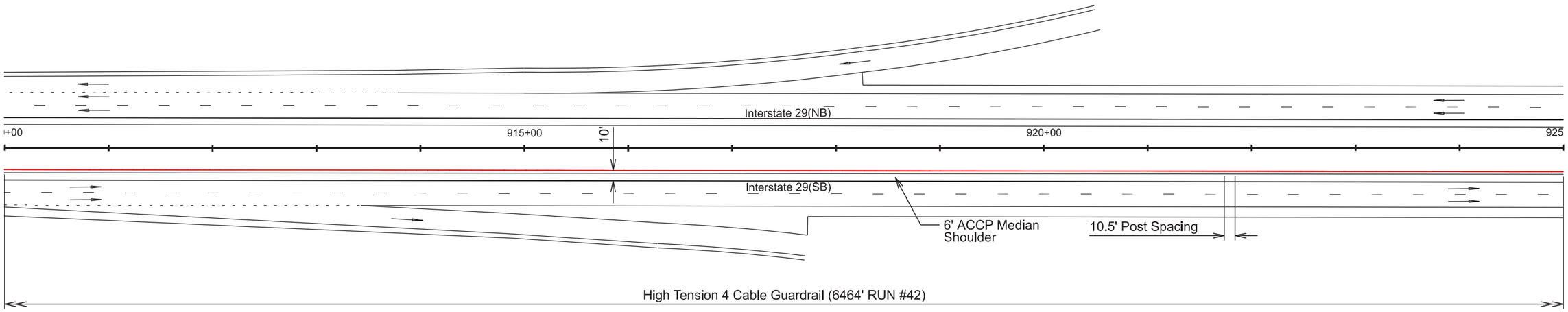
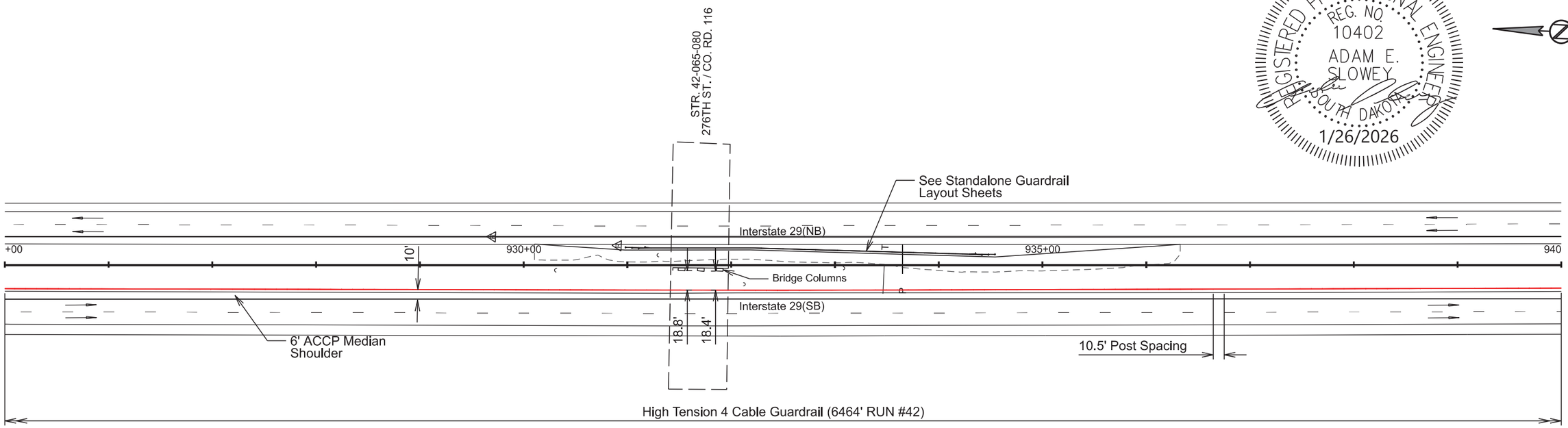
SOUTH DAKOTA
1/26/2026

MEDIAN CABLE BARRIER LAYOUT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	53	107





REGISTERED PROFESSIONAL ENGINEER
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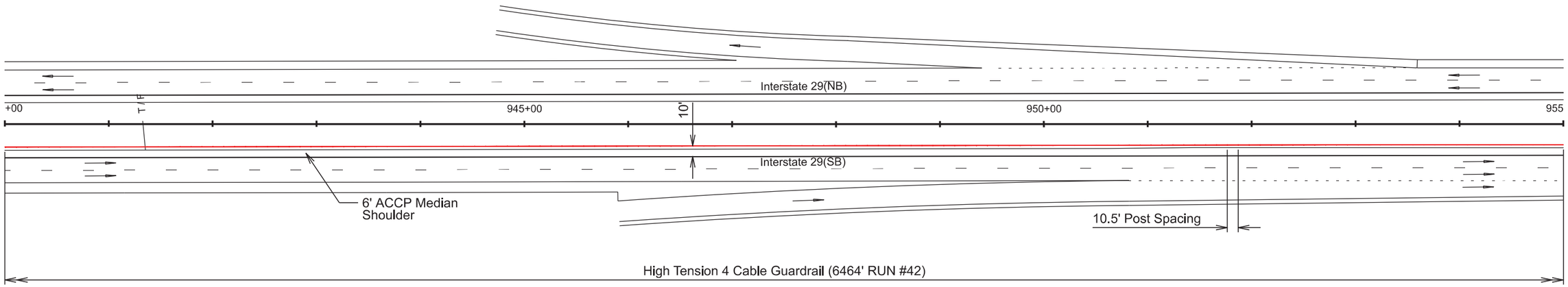
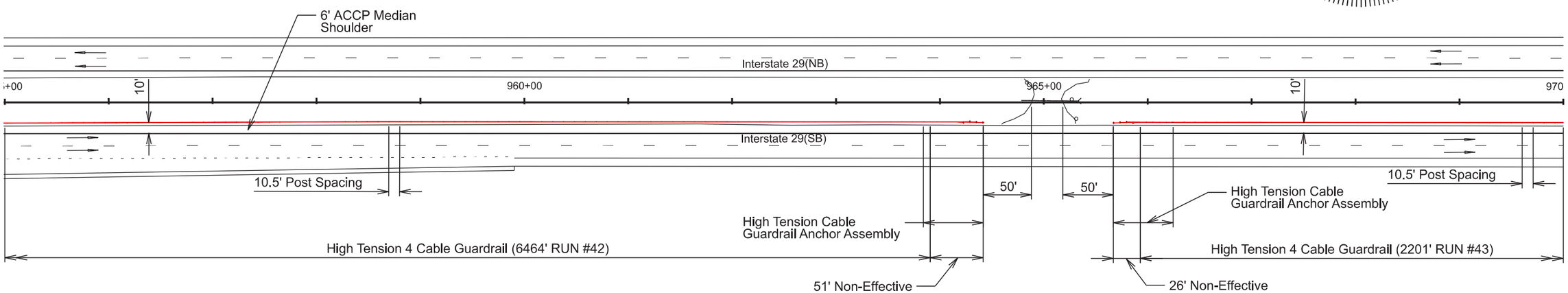
SOUTH DAKOTA
1/26/2026

MEDIAN CABLE BARRIER LAYOUT

FOR BIDDING PURPOSES ONLY

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	54	107



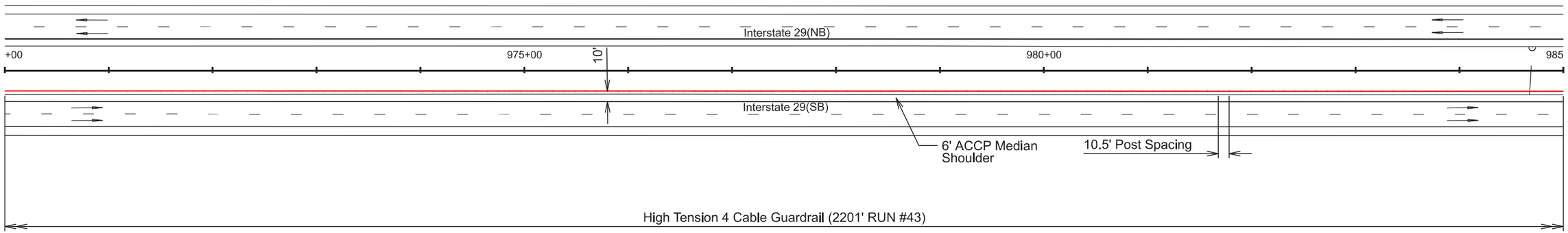


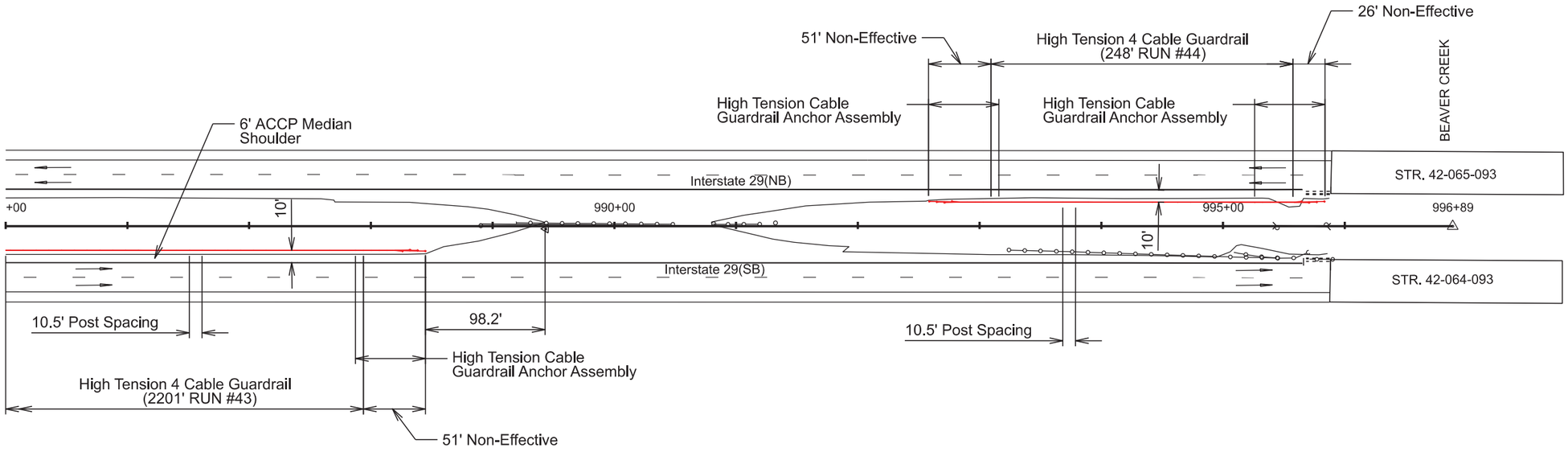
REGISTERED PROFESSIONAL ENGINEER
REG. NO.
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\Sta940mcb.dgn

MEDIAN CABLE BARRIER LAYOUT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	55	107





REGISTERED PROFESSIONAL ENGINEER
REG. NO 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\Sta970mcb.dgn

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	56	107

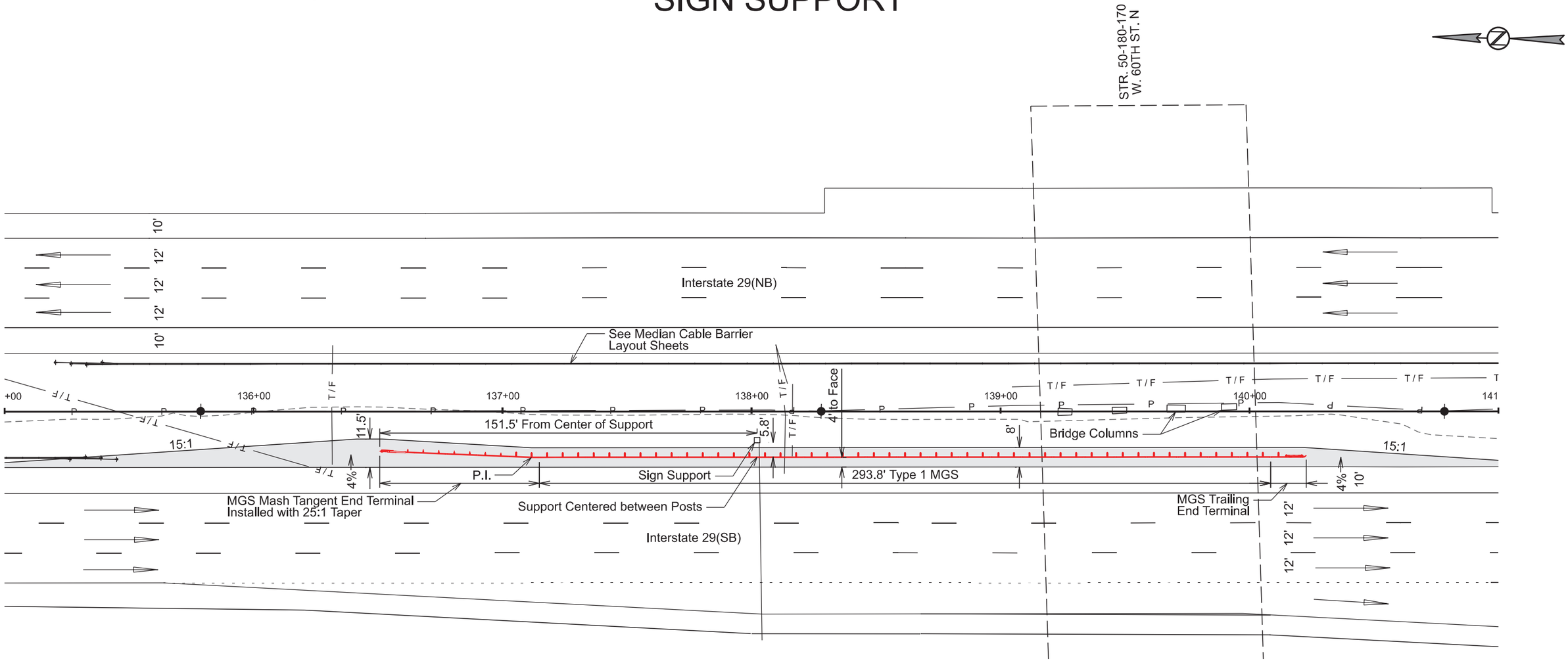
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 83.40
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta135gr.dgn

PROJECT	SHEET	TOTAL SHEETS
PH 0022(443)	57	107

Plotting Date: 1/26/2026

FOR BIDDING PURPOSES ONLY

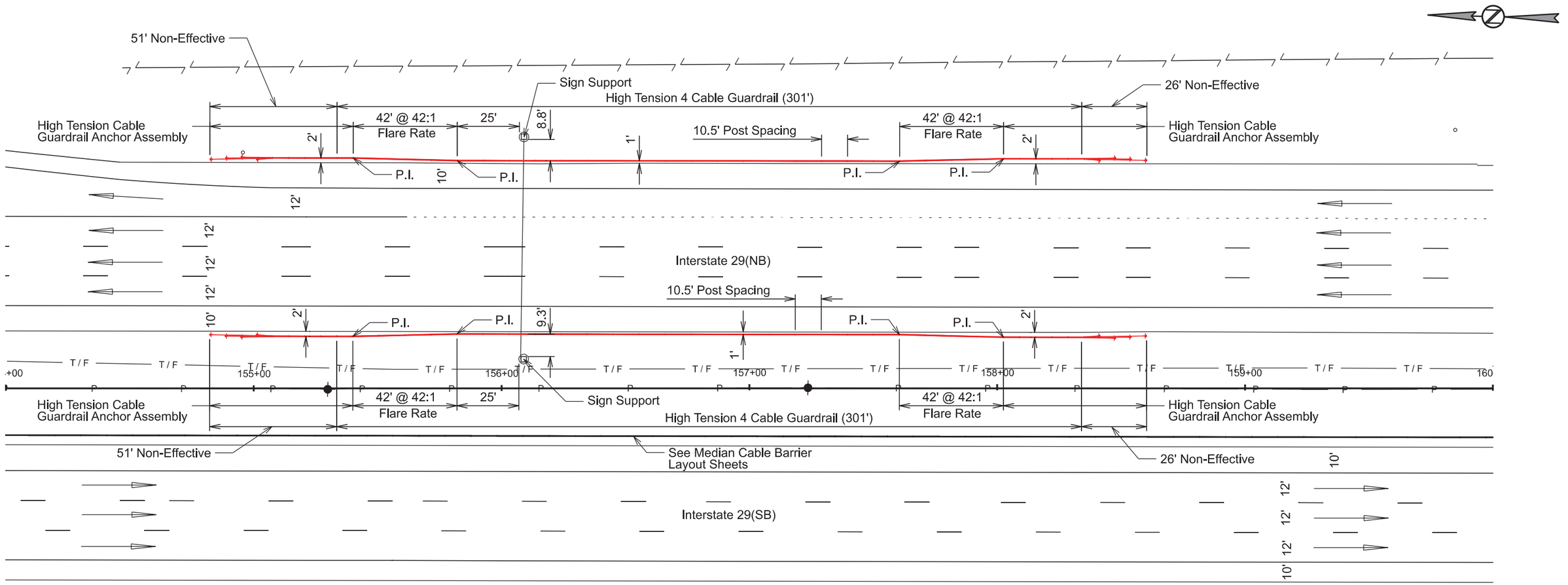
Guardrail Embankment Construction & Surfacing

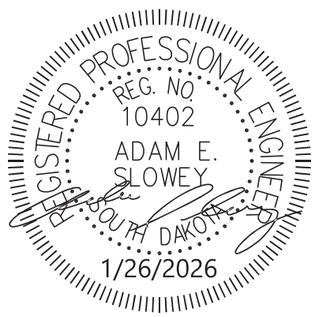
Proposed Embankment Grading Extents

STANDALONE GUARDRAIL LAYOUT

I29 MRM 83.12

SIGN SUPPORT





SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	58	107

FOR BIDDING PURPOSES ONLY

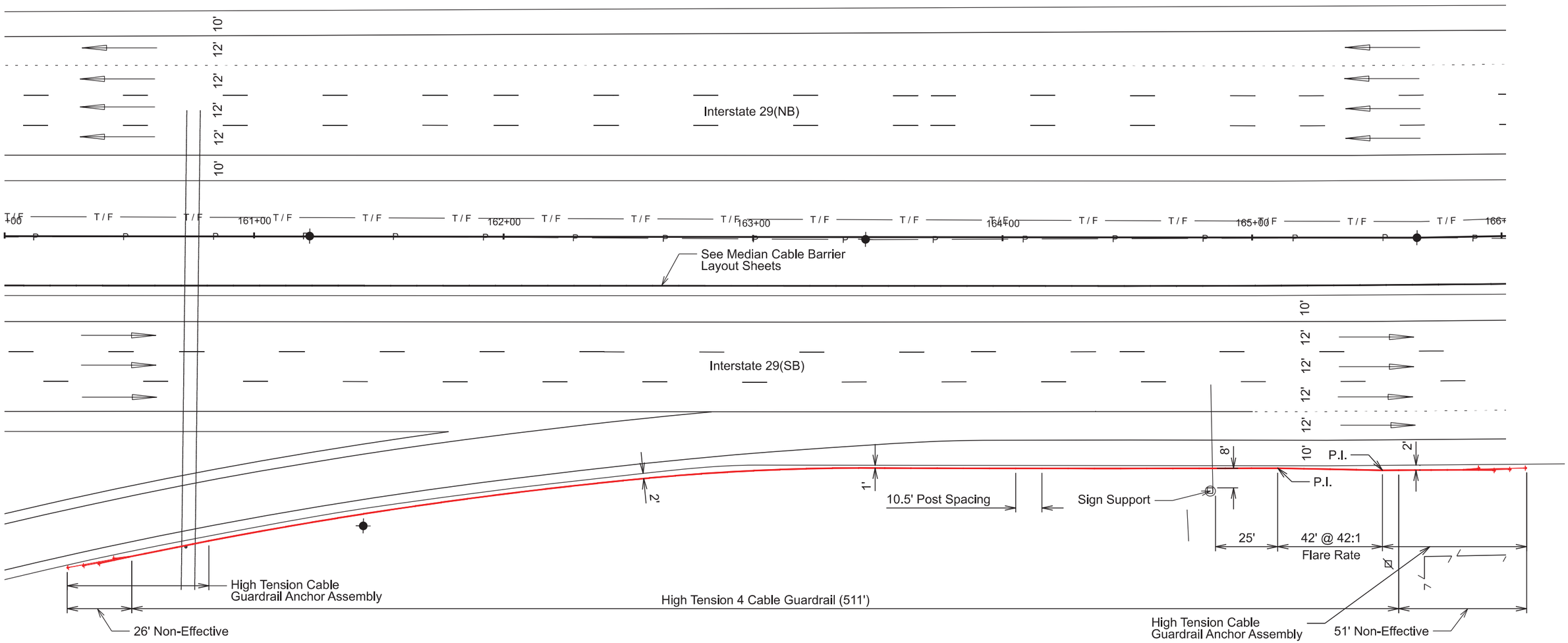
STANDALONE GUARDRAIL LAYOUT

I29 MRM 82.94
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026



PROJECT	SHEET	TOTAL SHEETS
PH 0022(443)	59	107

Plotting Date: 1/26/2026

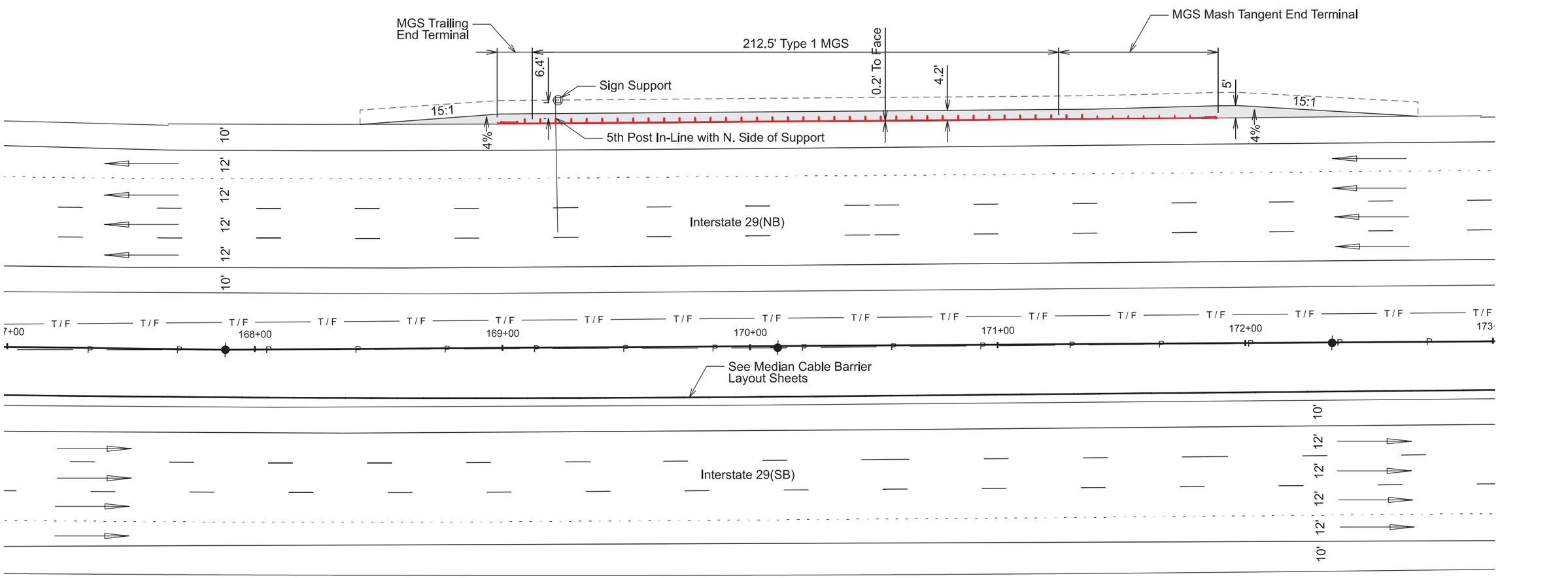
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 82.82
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta167gr.dgn

Guardrail Embankment Construction & Surfacing

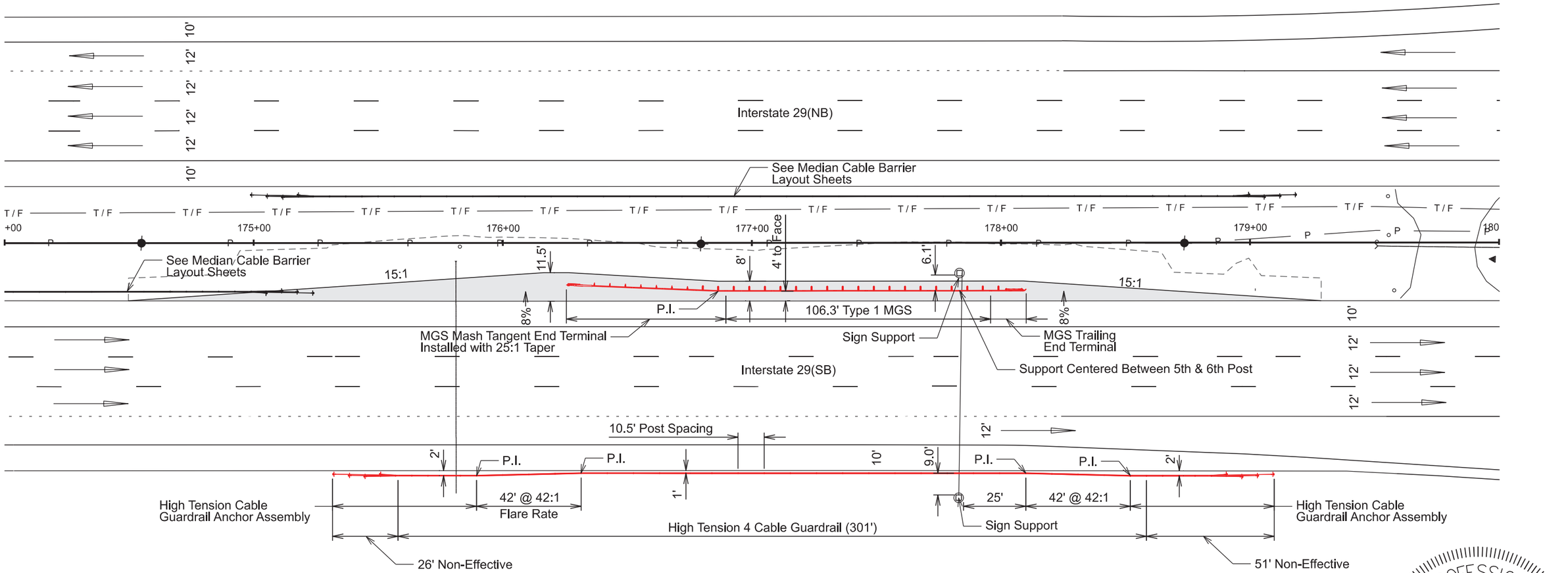
Proposed Embankment Grading Extents

STANDALONE GUARDRAIL LAYOUT

FOR BIDDING PURPOSES ONLY

I29 MRM 82.65
SIGN SUPPORT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	60	107



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	61	107

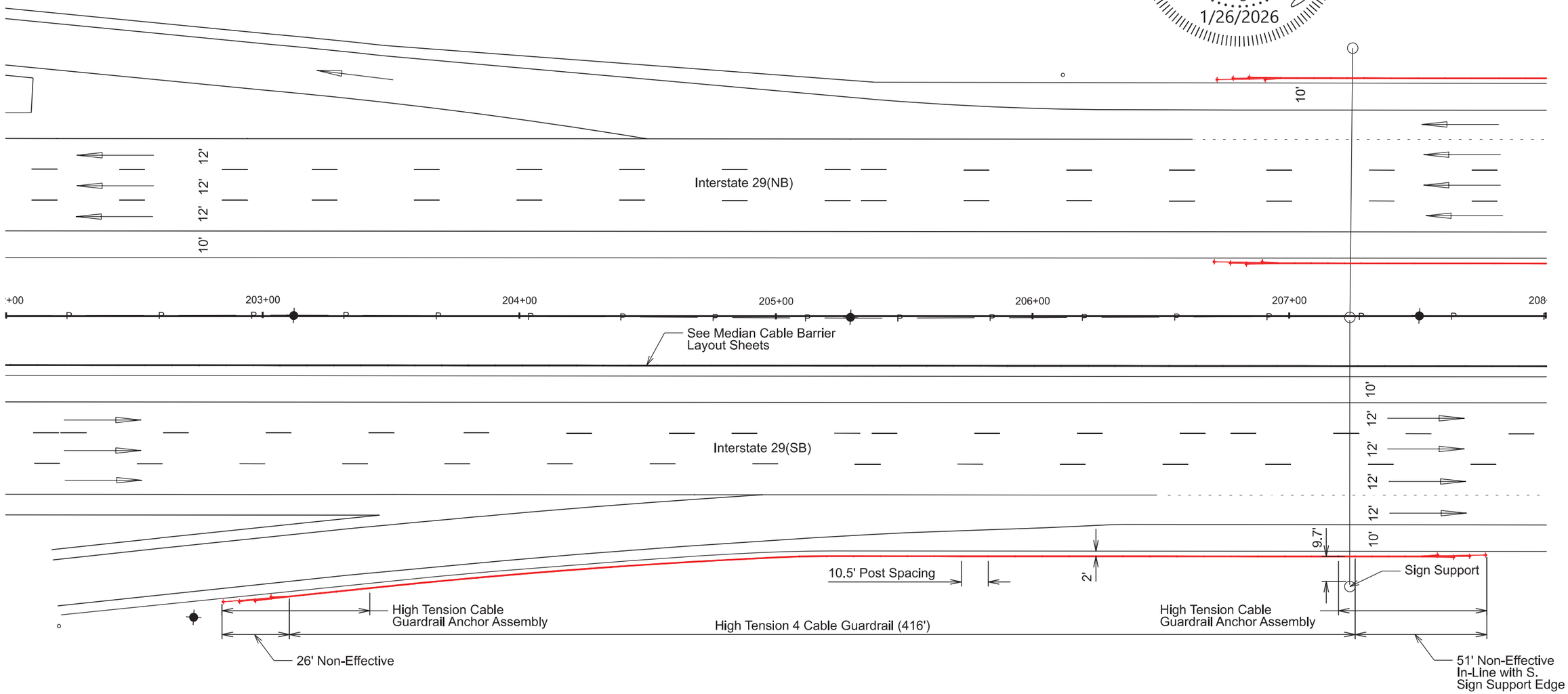
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 82.10
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



PROJECT	SHEET	TOTAL SHEETS
PH 0022(443)	62	107

Plotting Date: 1/26/2026

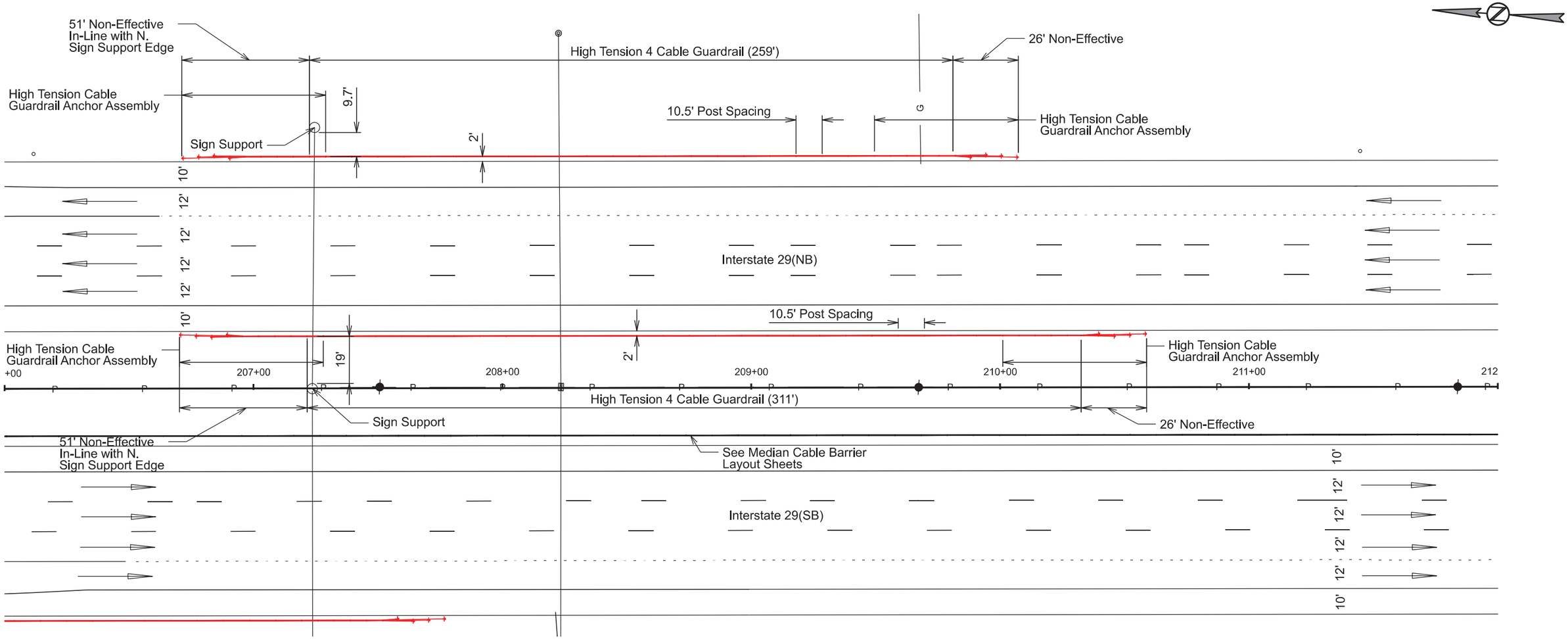
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 82.10
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	63	107

FOR BIDDING PURPOSES ONLY

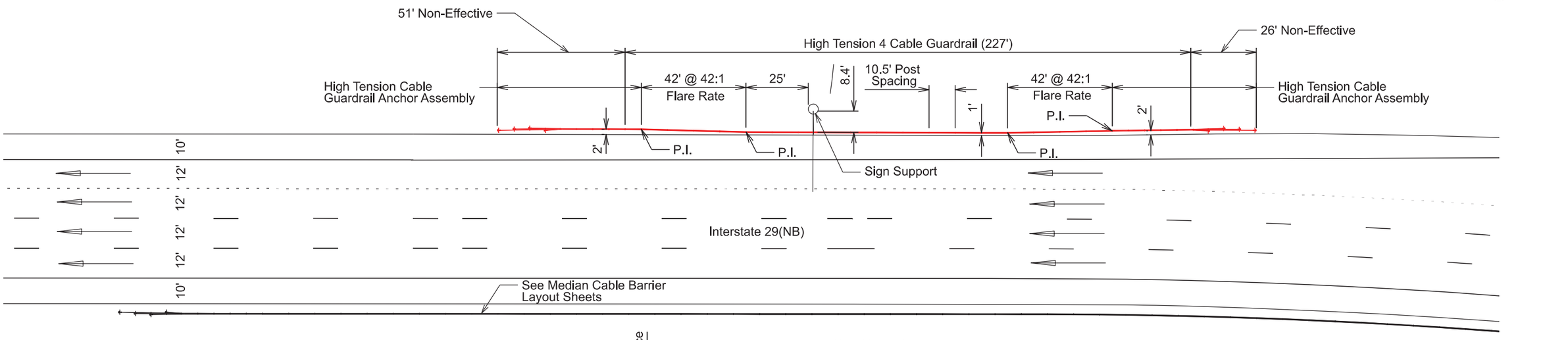
Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents

STANDALONE GUARDRAIL LAYOUT

I29 MRM 81.85

SIGN SUPPORT



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta217gr.dgn

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	64	107

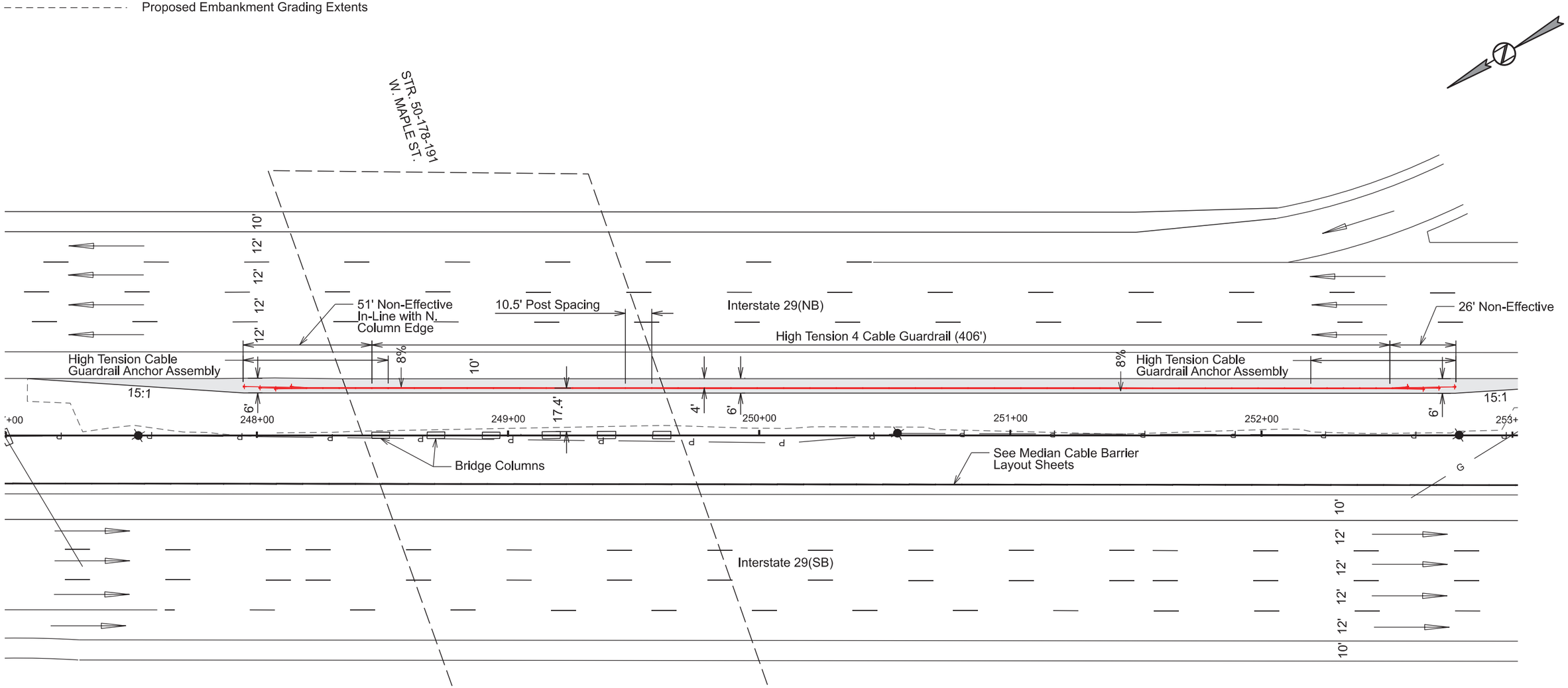
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

STR. 50-178-191 MRM 81.32

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	65	107

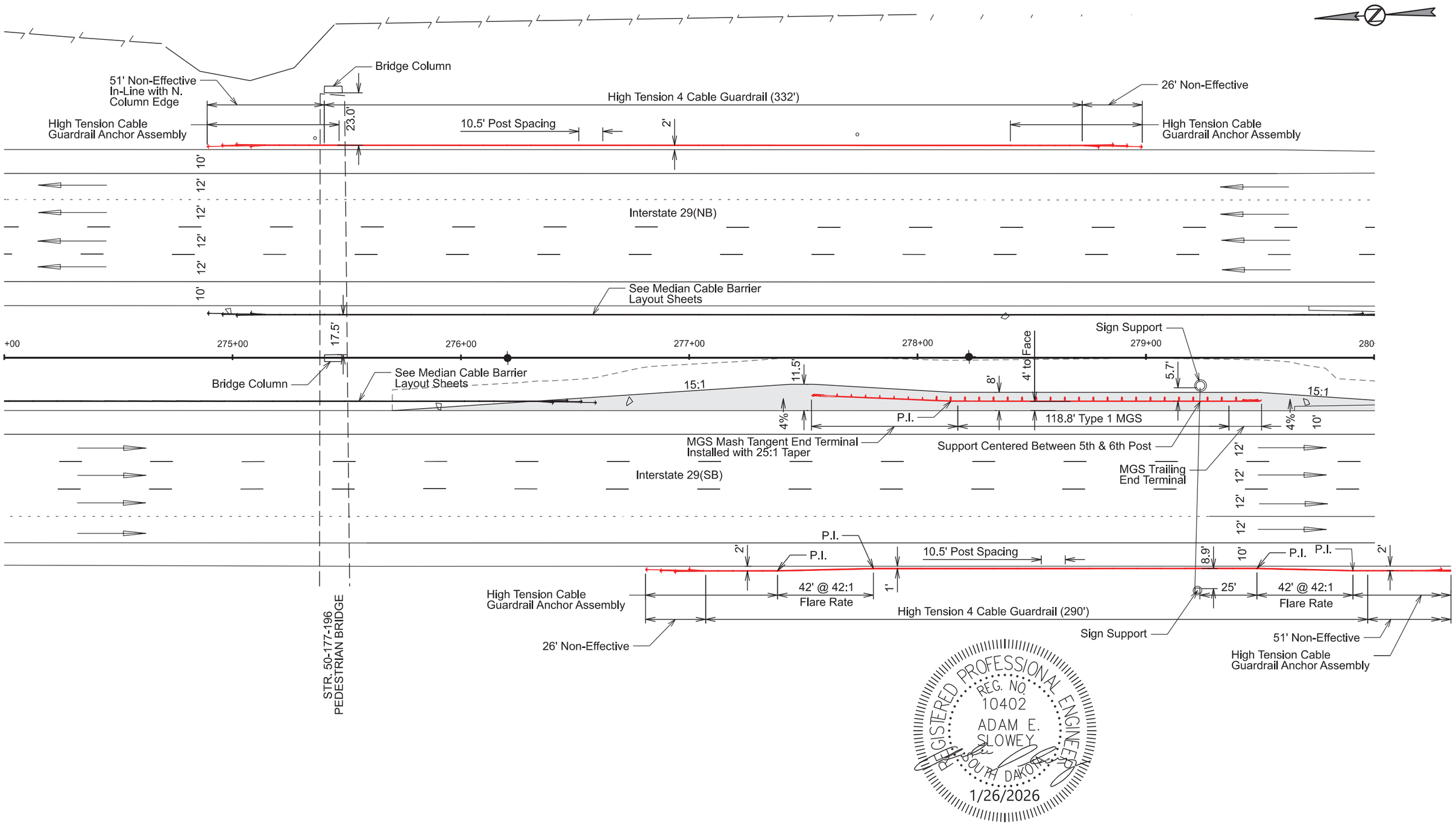
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

STR. 50-177-196 MRM 80.64
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta274gr.dgn

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	66	107

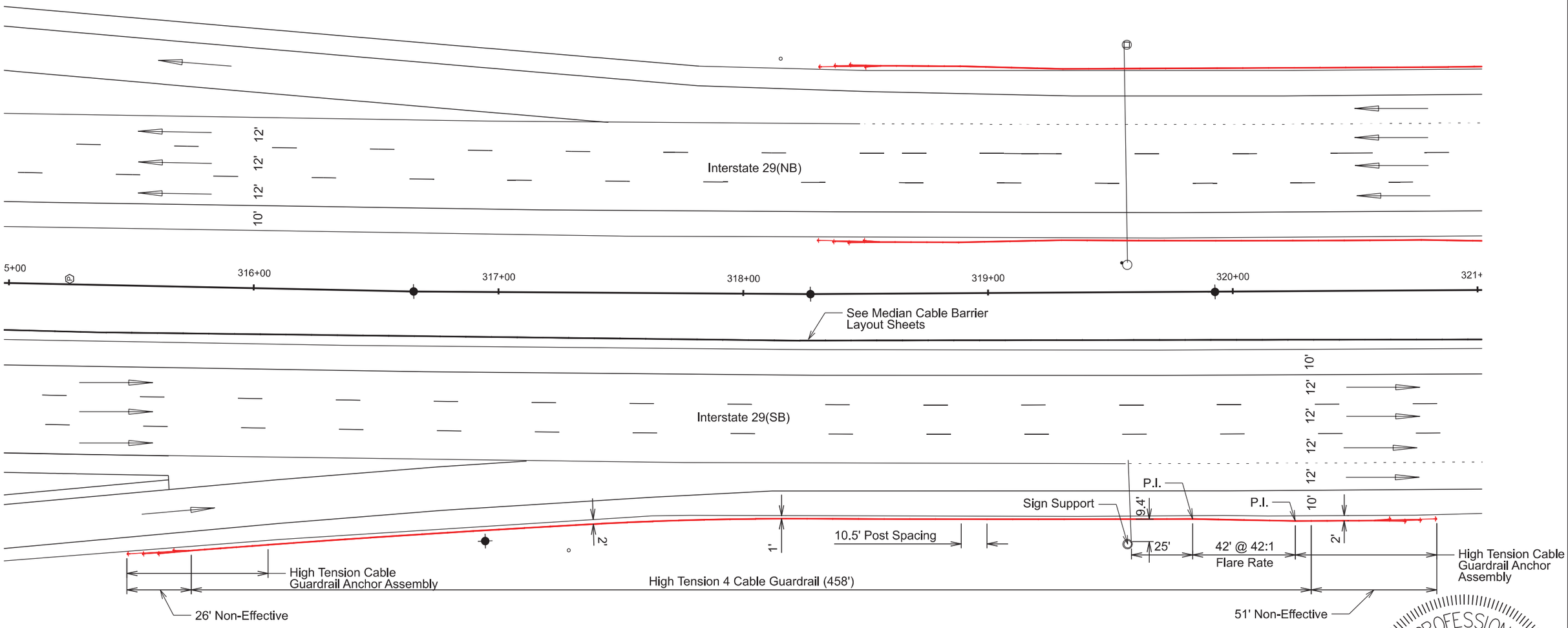
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 79.98
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026 Revision Date: 2/12/2026	PH 0022(443)	67	107

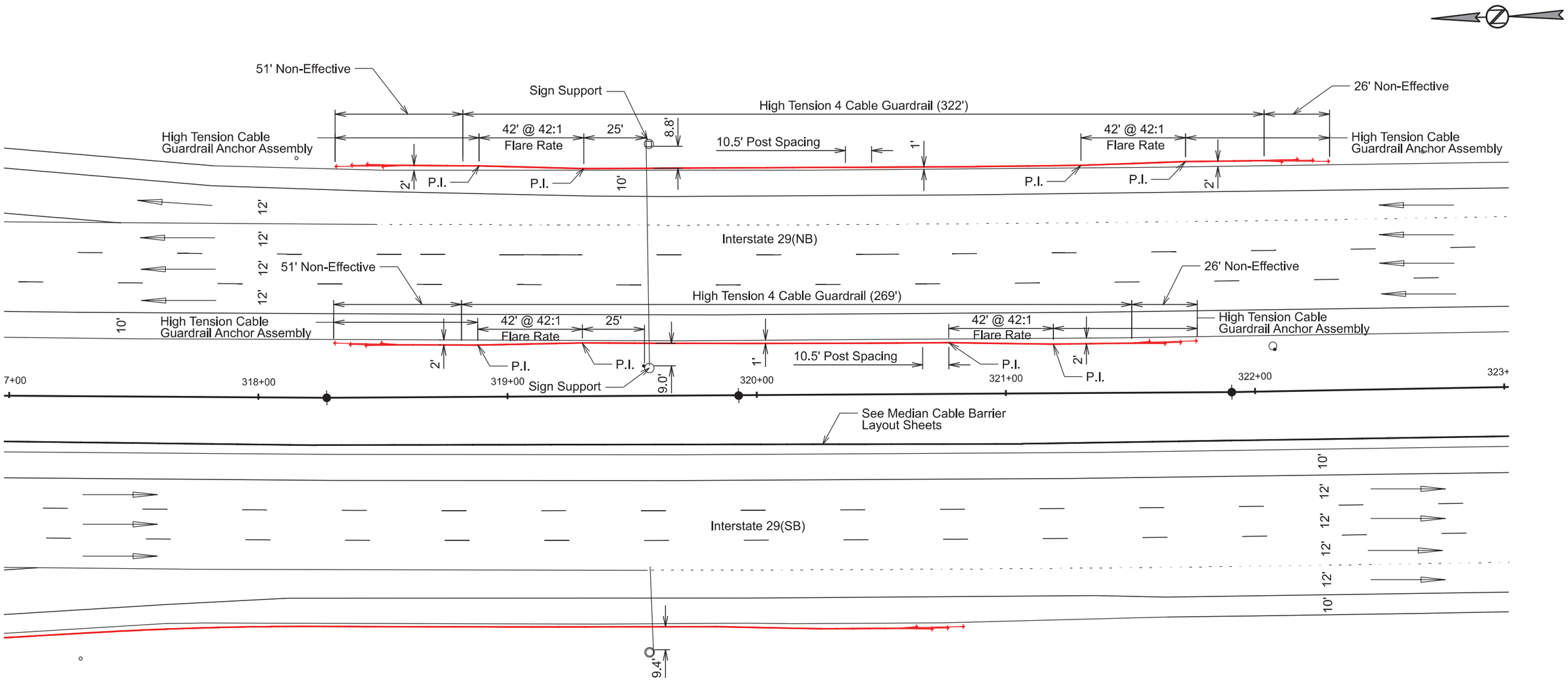
FOR BIDDING PURPOSES ONLY

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents

STANDALONE GUARDRAIL LAYOUT

I29 MRM 79.98
SIGN SUPPORT



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
2/12/2026

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	68	107

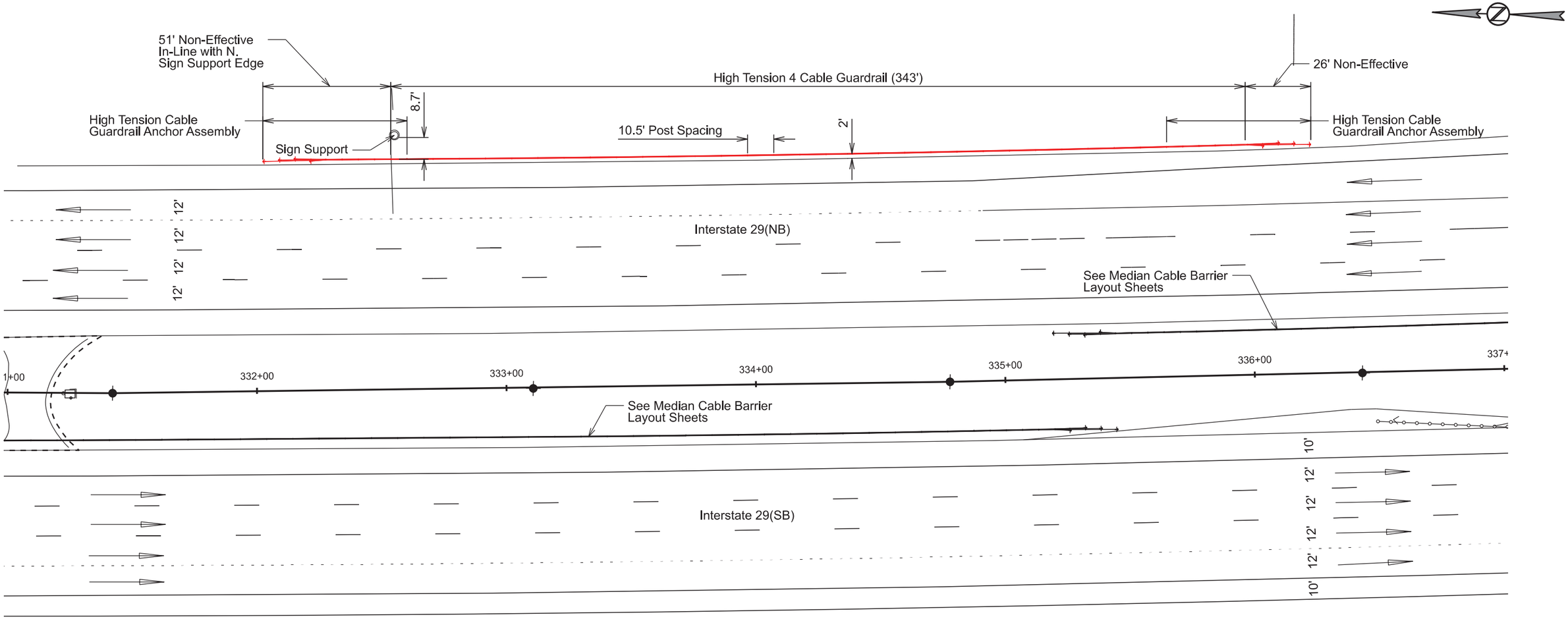
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 79.70
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	69	107

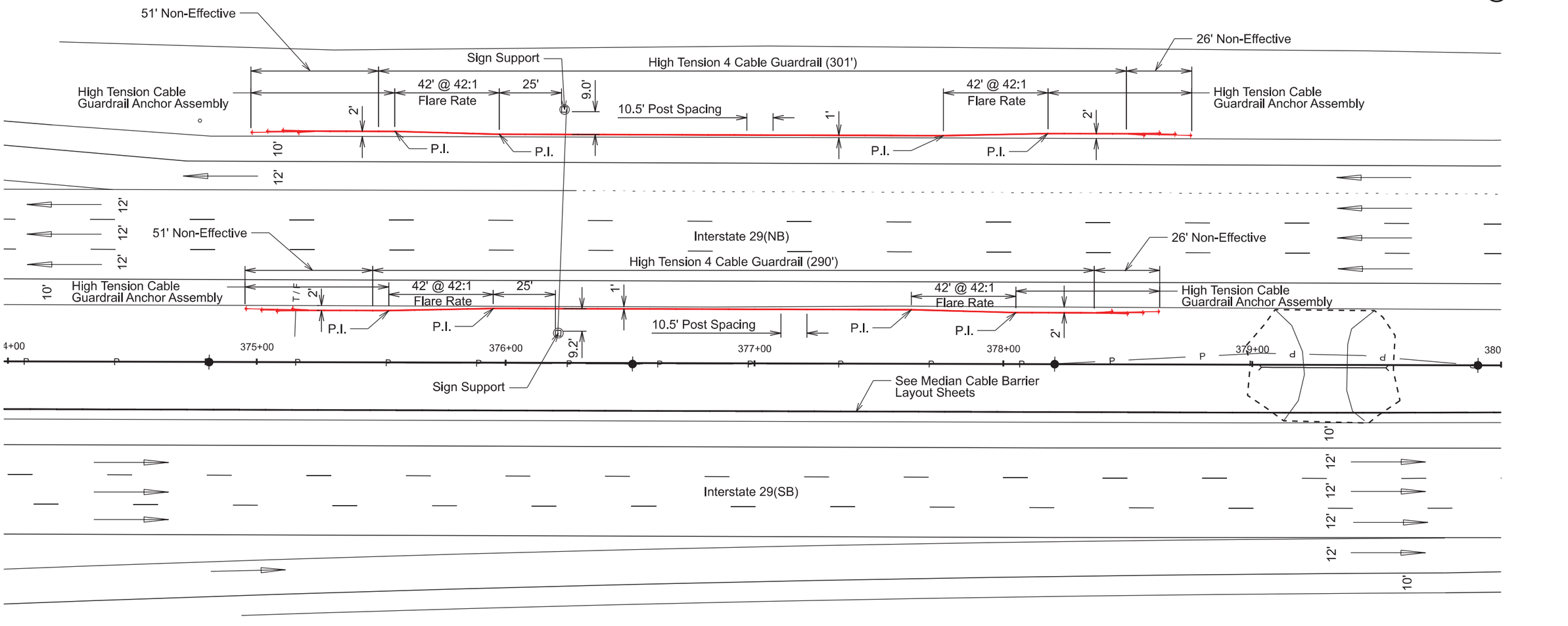
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 78.90
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



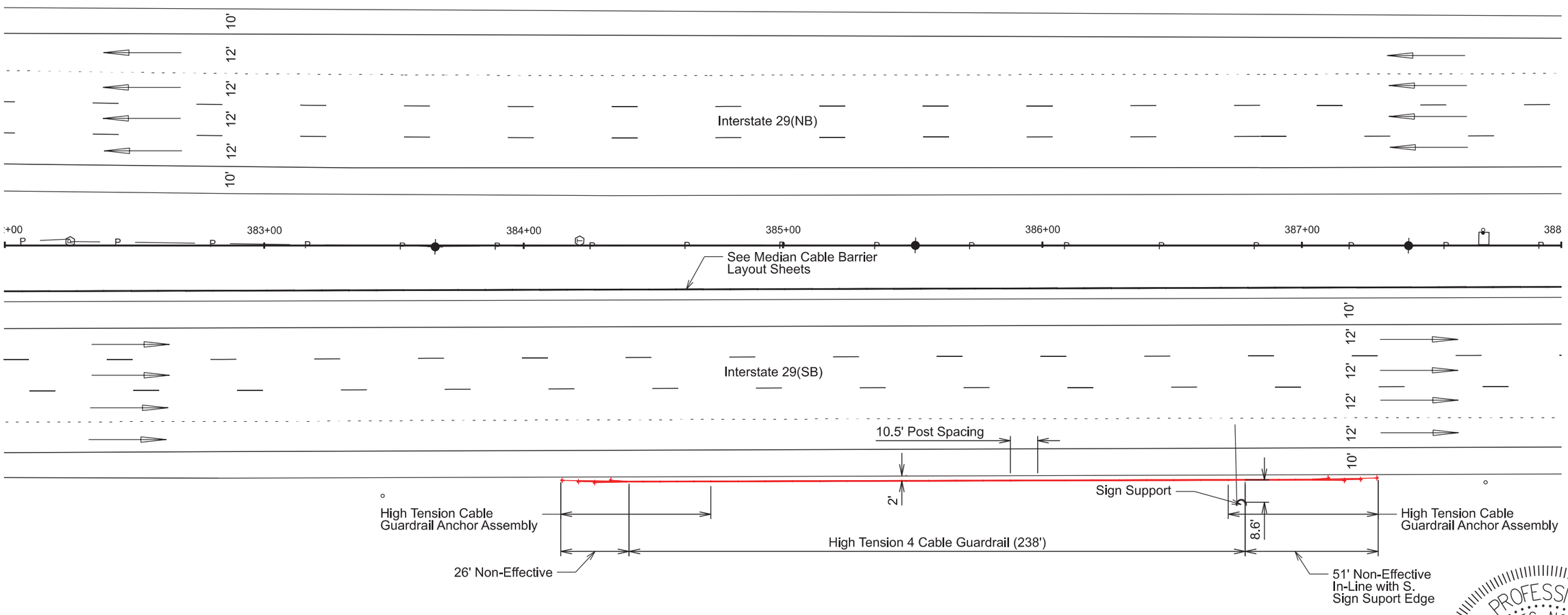
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

STANDALONE GUARDRAIL LAYOUT

I29 MRM 78.70
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

PROJECT	SHEET	TOTAL SHEETS
PH 0022(443)	71	107

Plotting Date: 1/26/2026

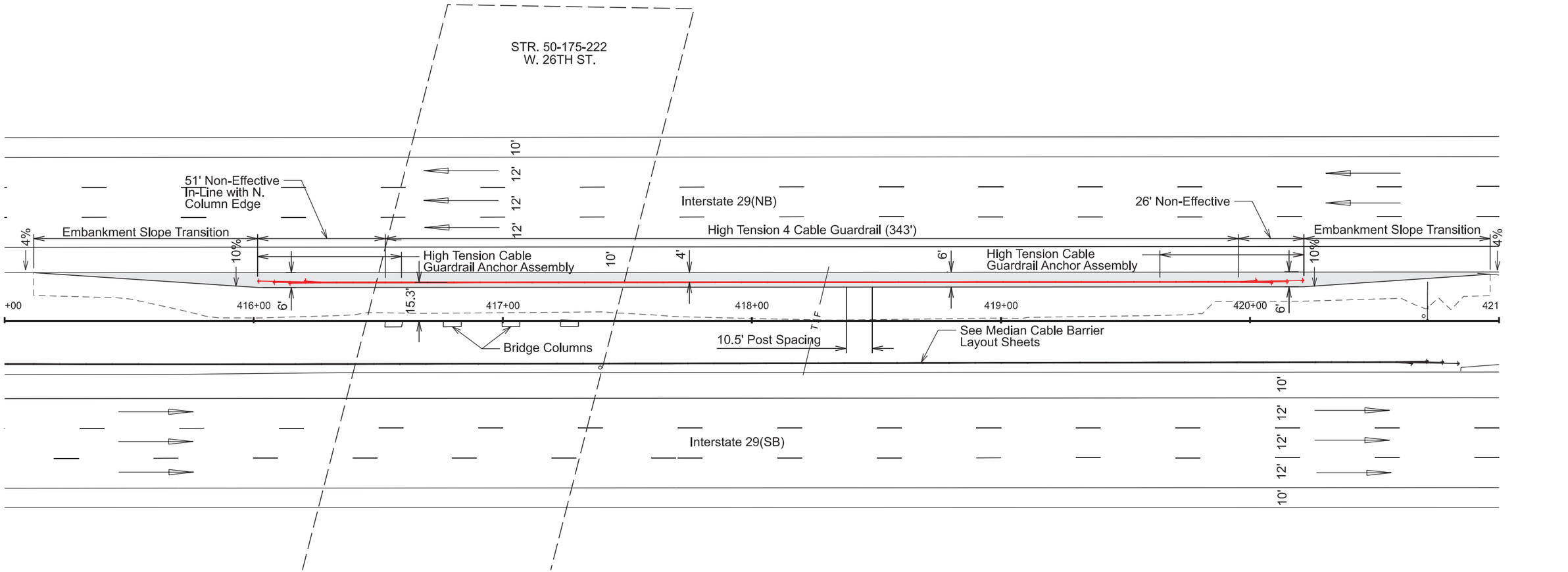
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

STR. 50-175-222 MRM 78.12

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	72	107

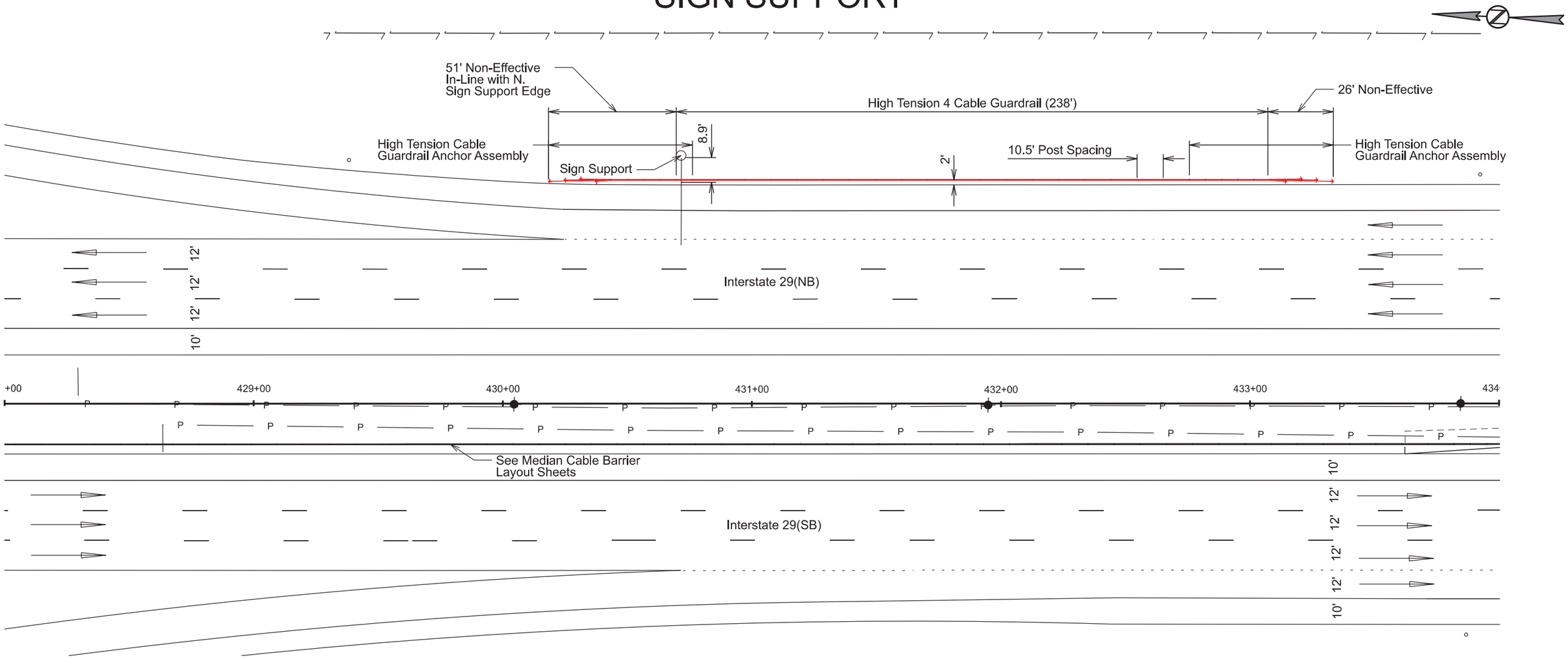
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 77.85
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta428gr.dgn

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	73	107

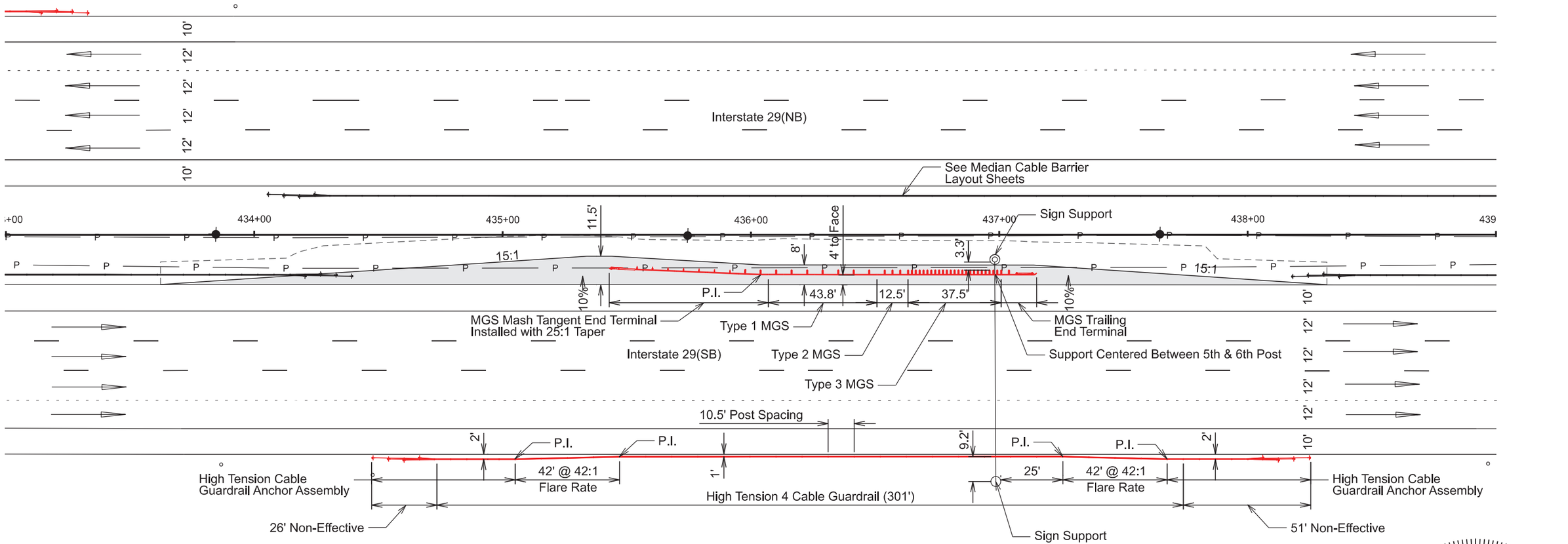
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 77.64
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta433gr.dgn

PROJECT	SHEET	TOTAL SHEETS
PH 0022(443)	74	107

Plotting Date: 1/26/2026

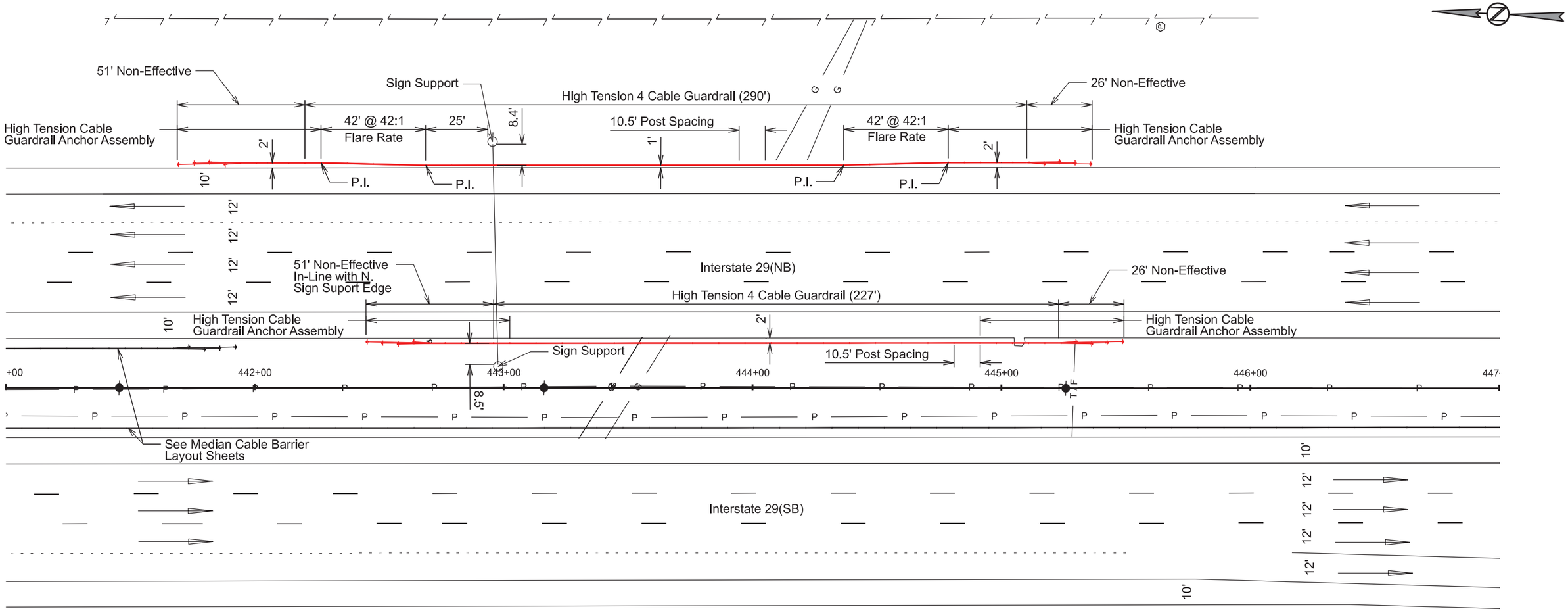
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 77.61
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry

File - ...\CAD\DWG\GuardRail\Sta441gr.dgn

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	75	107

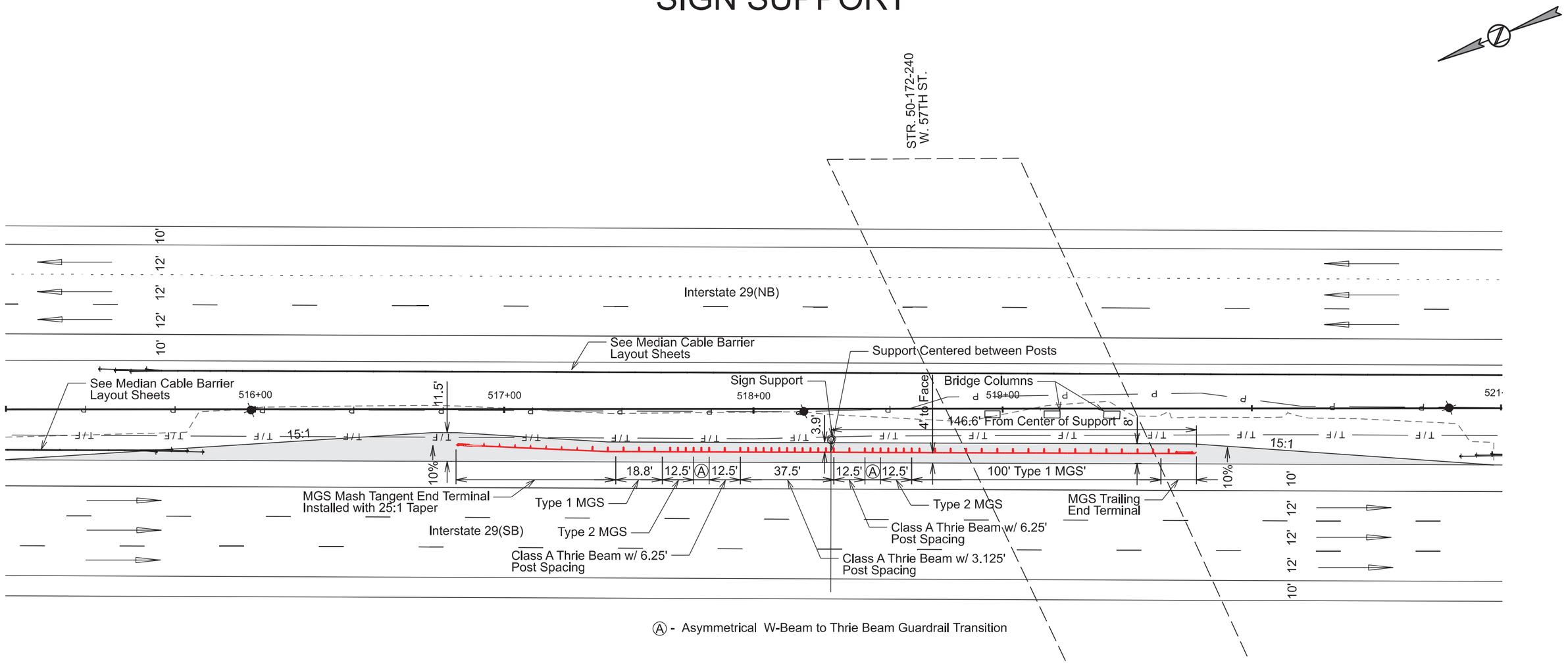
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

I29 MRM 76.20
SIGN SUPPORT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



Ⓐ - Asymmetrical W-Beam to Thrie Beam Guardrail Transition

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta516gr.dgn

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	76	107

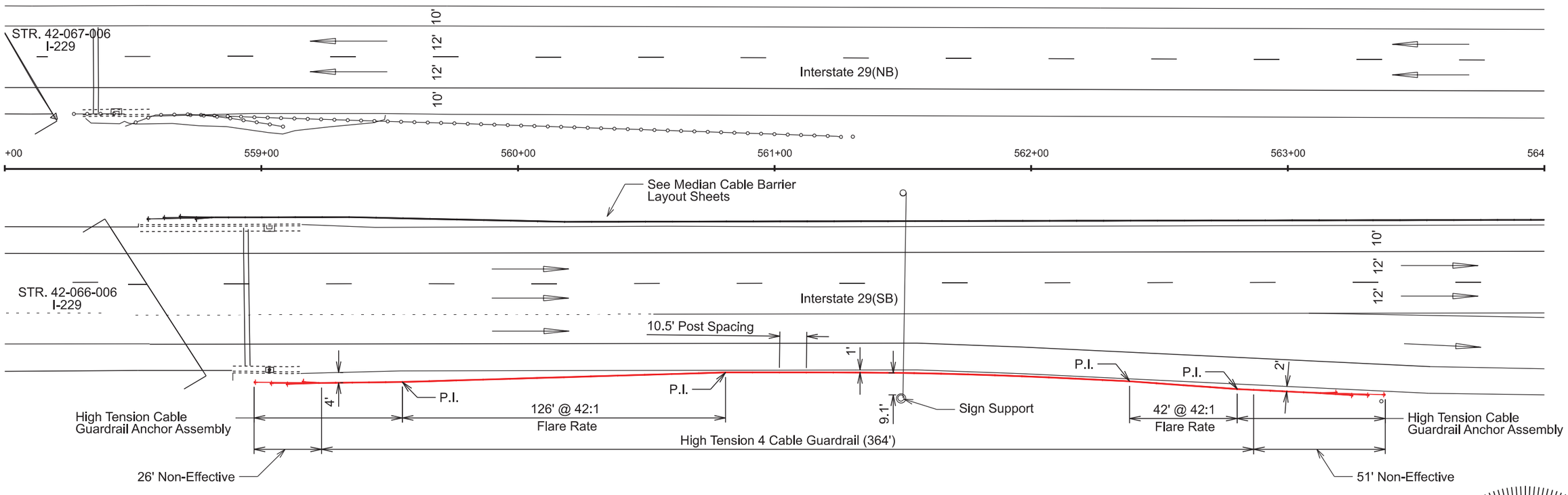
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

STR. 42-066-006 I29 MRM 75.50

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta558gr.dgn

Guardrail Embankment Construction & Surfacing

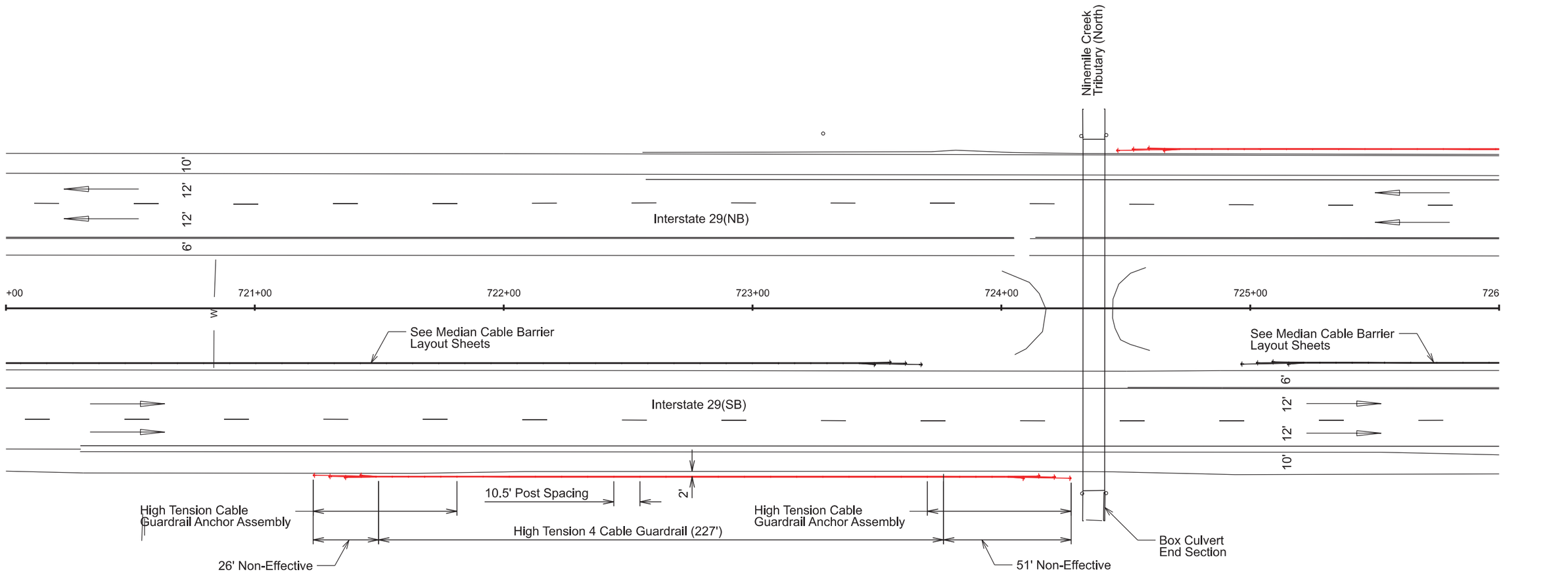
Proposed Embankment Grading Extents

STANDALONE GUARDRAIL LAYOUT

FOR BIDDING PURPOSES ONLY

I29 MRM 72.28
BOX CULVERT

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	77	107



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta720gr.dgn

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	78	107

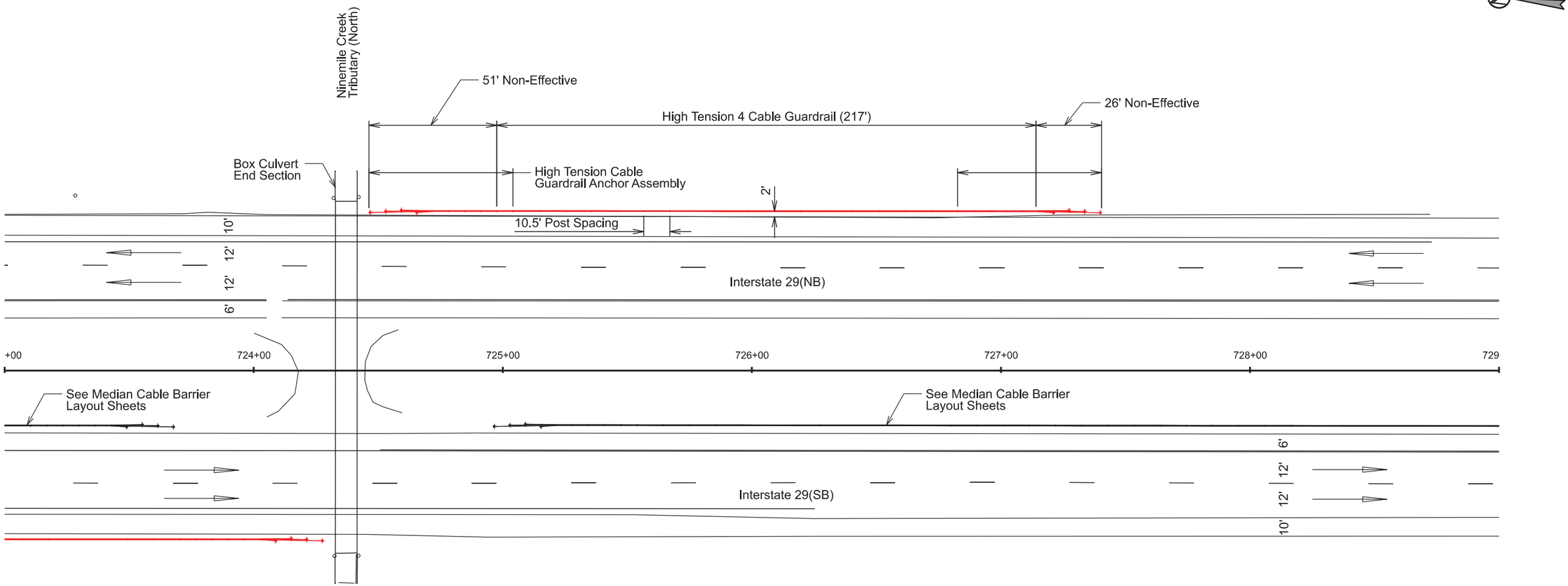
FOR BIDDING PURPOSES ONLY

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents

STANDALONE GUARDRAIL LAYOUT

I29 MRM 72.28
BOX CULVERT



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	79	107

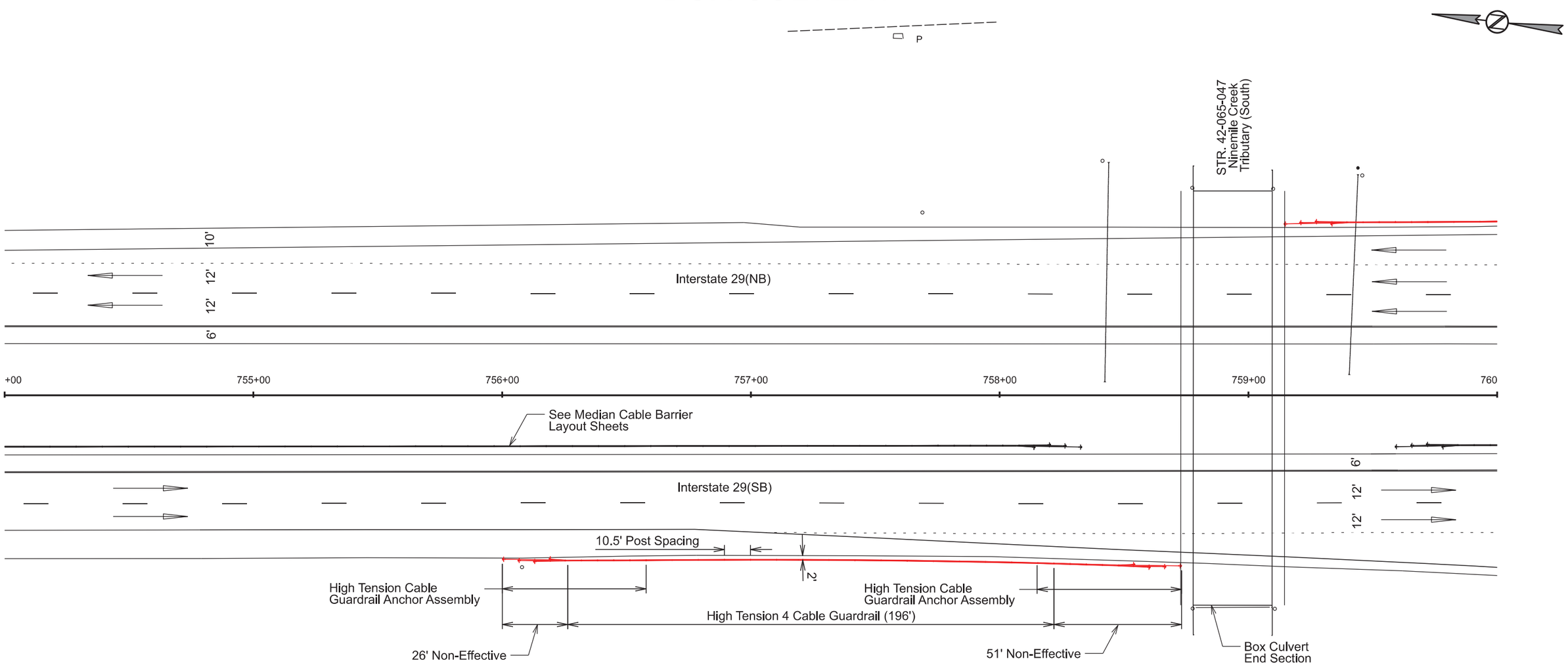
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

STR. 42-065-047 MRM 71.63
BOX CULVERT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 10402
ADAM E. SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta754gr.dgn

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	80	107

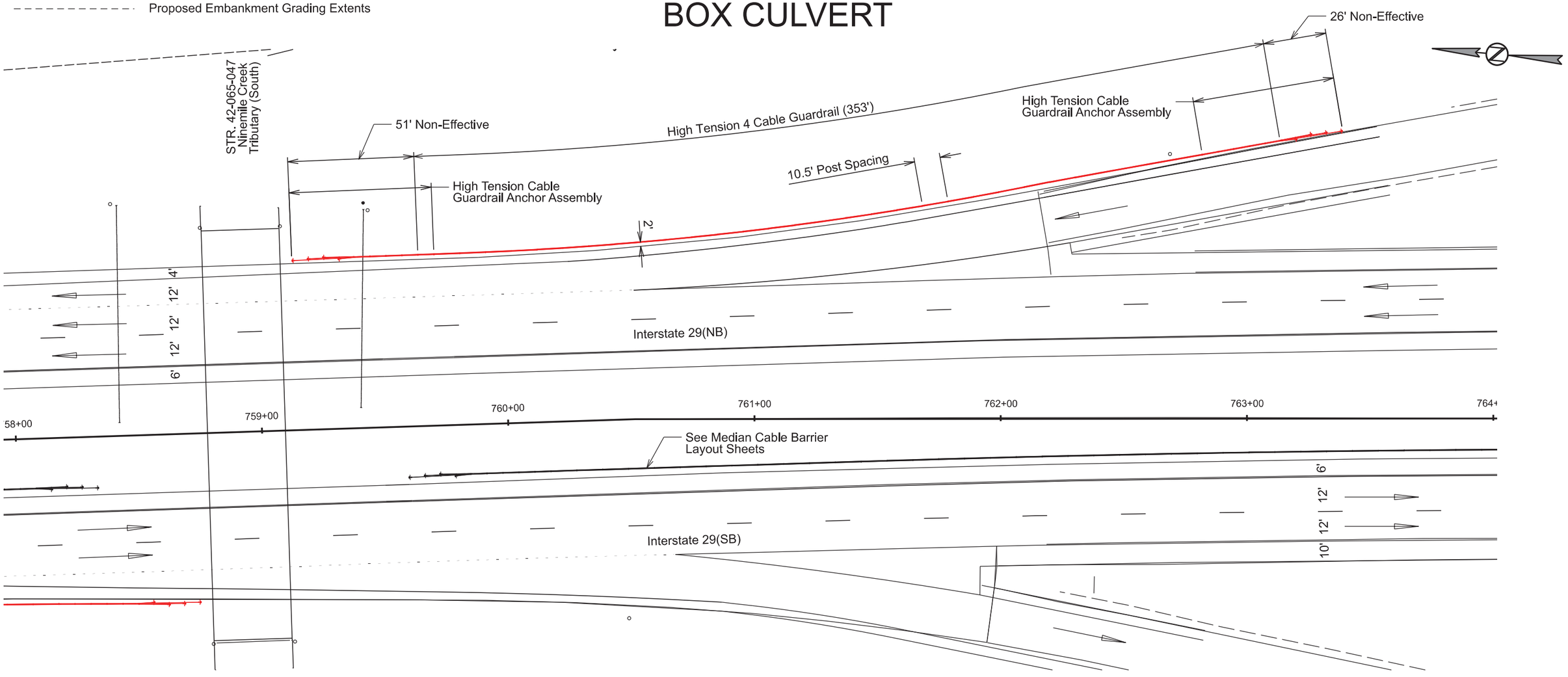
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

STR. 42-065-047 MRM 71.63
BOX CULVERT

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	81	107

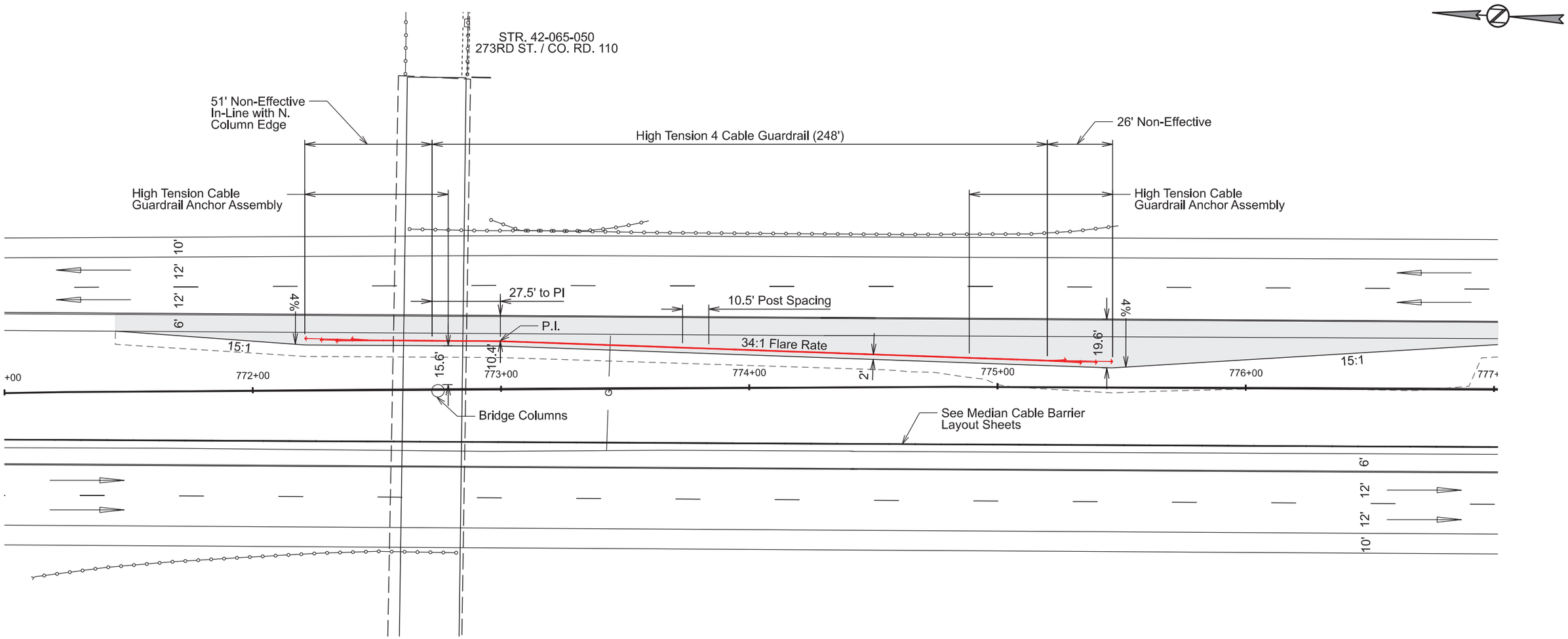
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

STR. 42-065-050 I29 MRM 71.36

Guardrail Embankment Construction & Surfacing

Proposed Embankment Grading Extents



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

Plotted From - barry File - ...\CAD\DWG\GuardRail\Sta770gr.dgn

SD DOT	PROJECT	SHEET	TOTAL SHEETS
Plotting Date: 1/26/2026	PH 0022(443)	82	107

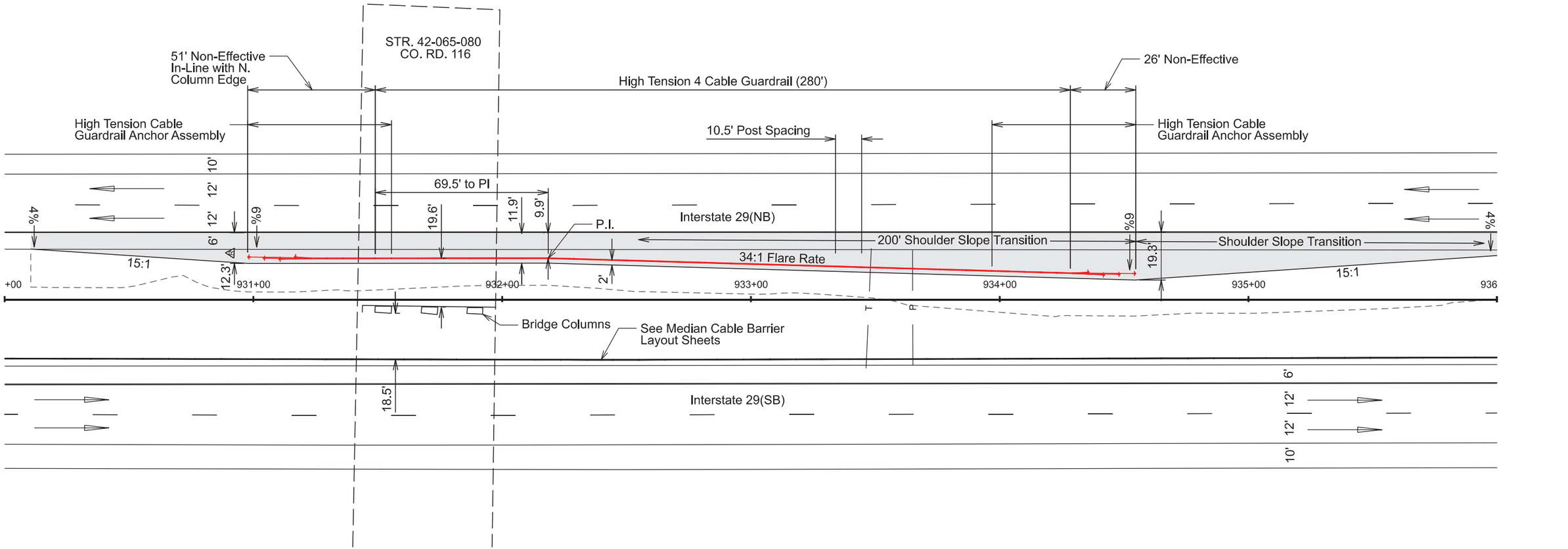
FOR BIDDING PURPOSES ONLY

STANDALONE GUARDRAIL LAYOUT

STR. 42-065-080 I29 MRM 68.35

Guardrail Embankment Construction & Surfacing

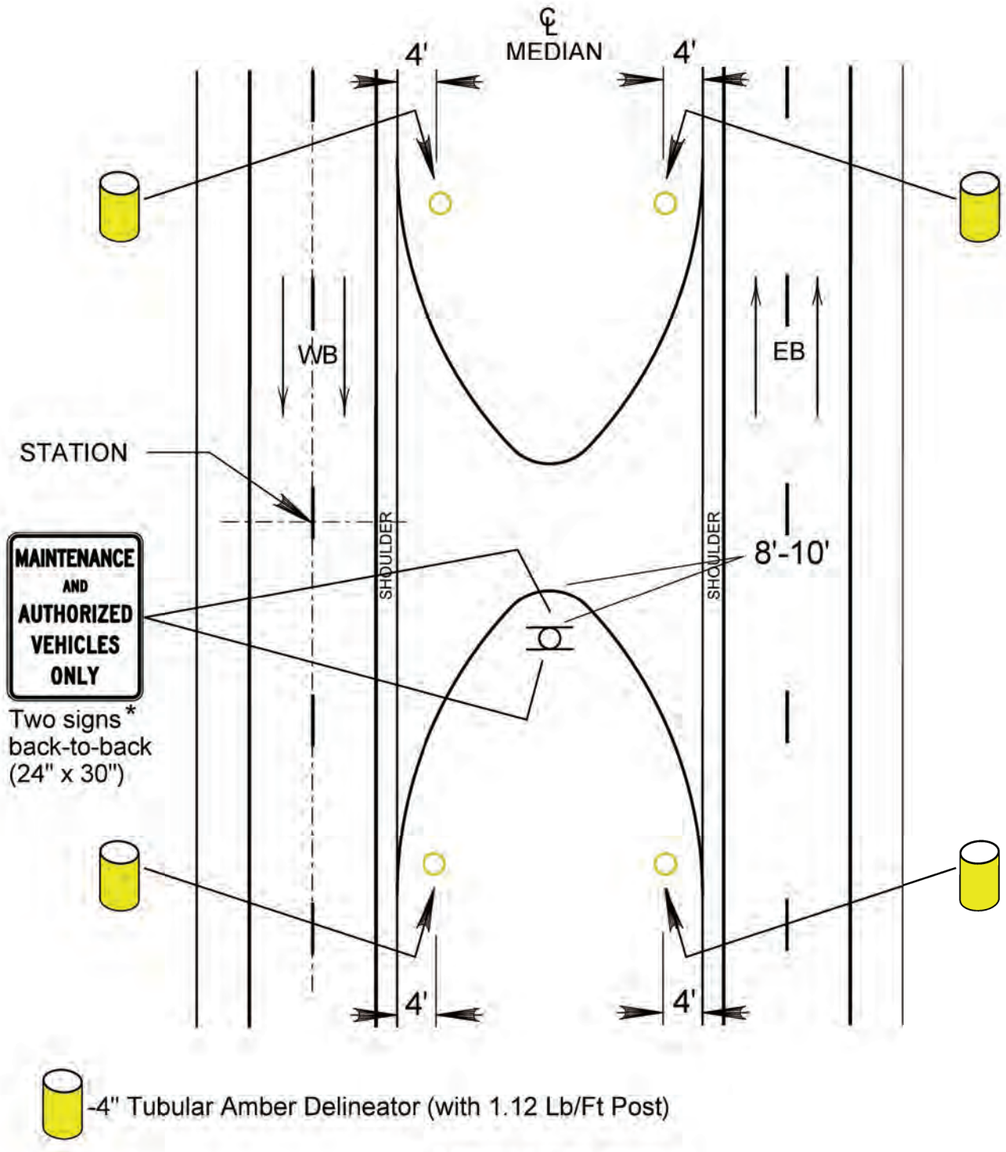
Proposed Embankment Grading Extents



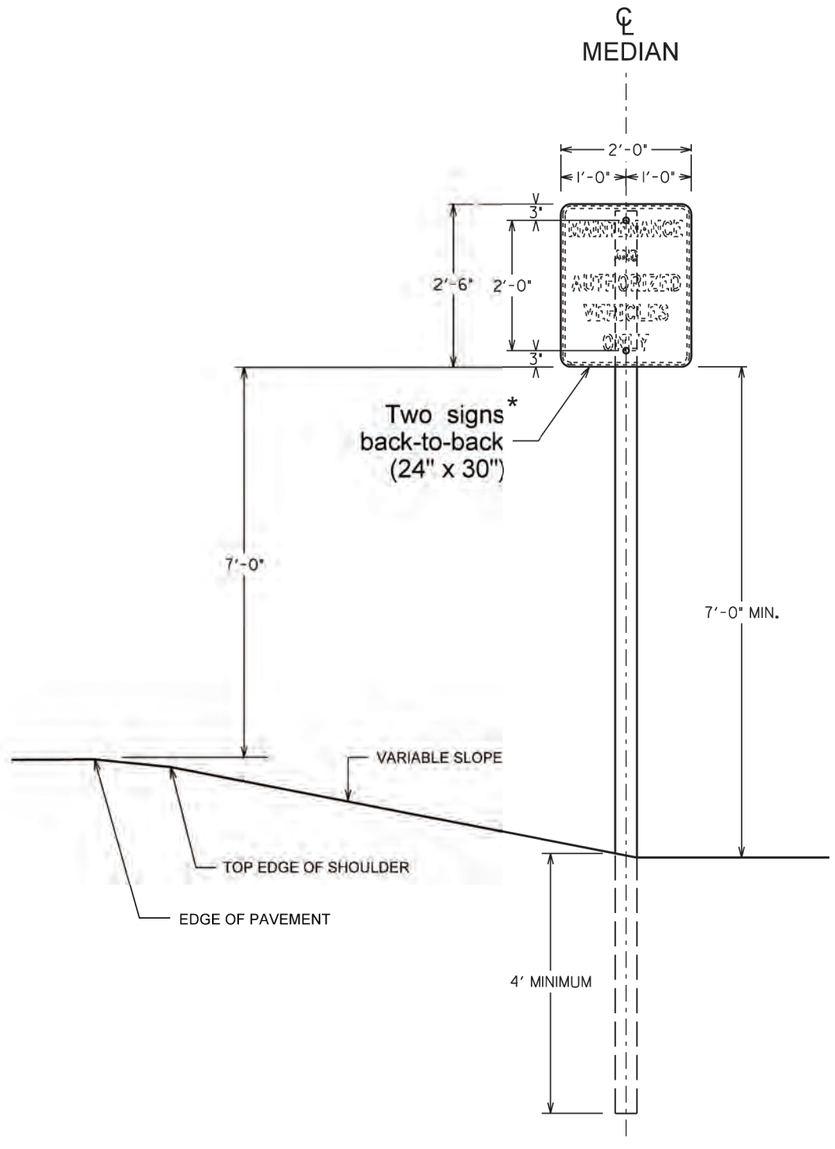
REGISTERED PROFESSIONAL ENGINEER
REG. NO
10402
ADAM E.
SLOWEY
SOUTH DAKOTA
1/26/2026

ERECTION DETAILS FOR INTERSTATE HIGHWAY SIGNS

MEDIAN X-OVERS



MEDIAN X-OVER
(TYPICAL)



MAINTENANCE AND AUTHORIZED
VEHICLES ONLY ASSEMBLY

SPECIAL SIGN DETAILS

FLAT ALUMINUM SIGNS WITH NONREMOVABLE COPY-HIGH INTENSITY

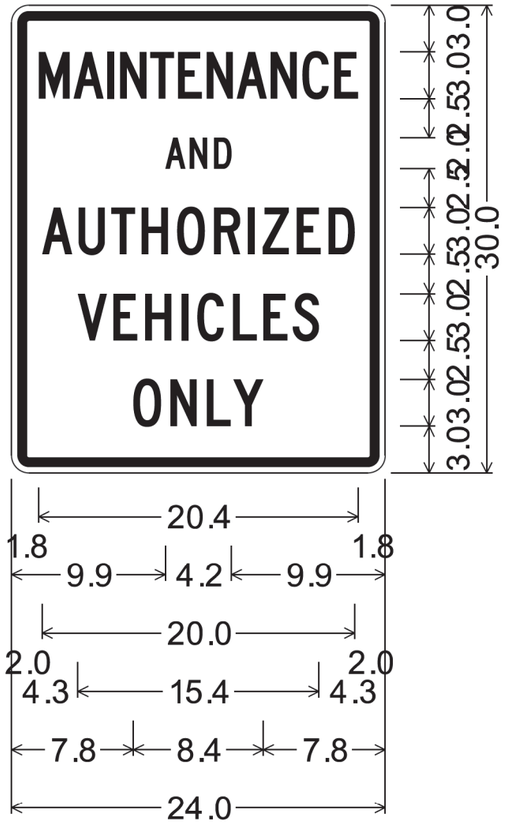


Table of distances between letter and object lefts

	M	A	I	N	T	E	N	A	N	C	E	
1.8	2.2	2.2	0.8	1.9	1.8	1.8	2.0	2.1	2.1	2.0	1.5	1.8

	A	N	D	
9.9	1.5	1.6	1.1	9.9

	A	U	T	H	O	R	I	Z	E	D	
2.0	2.3	2.1	2.0	2.2	2.4	2.2	0.9	2.2	2.1	1.6	2.0

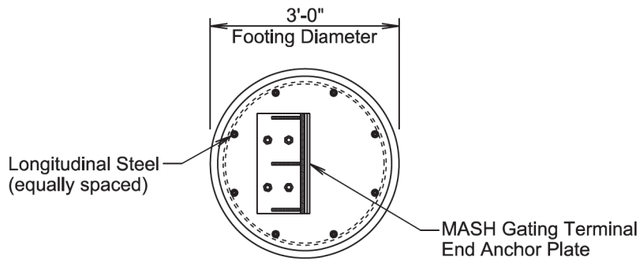
	V	E	H	I	C	L	E	S		
4.3	2.2	2.1	2.3	1.0	2.3	2.0	1.9	1.6	4.3	

	O	N	L	Y		
7.8	2.4	2.3	1.8	1.9	7.8	

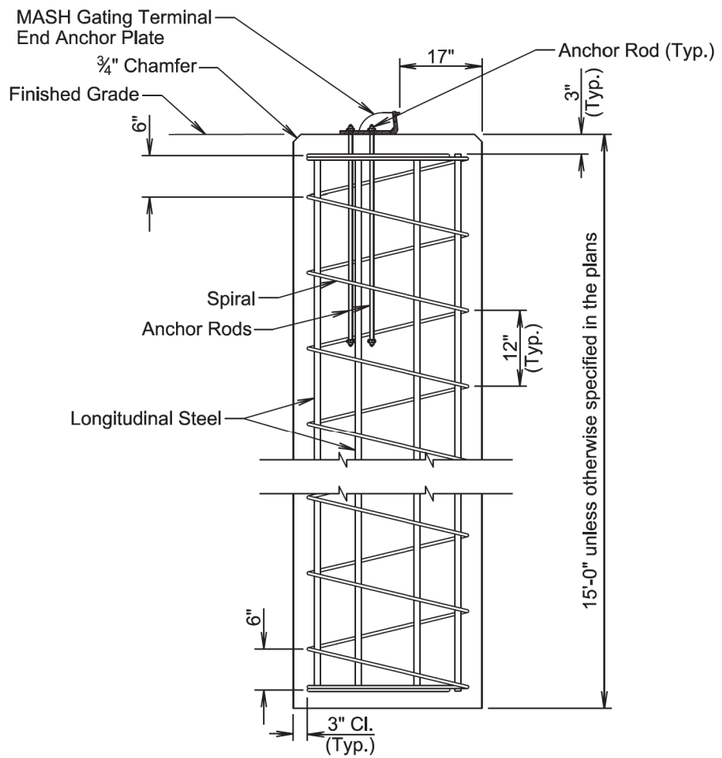
1.1" Radius, 0.6" Border, 0.4" Indent, Black on White;
"MAINTENANCE", C 2K 60% spacing;
"AND", C 2K;
"AUTHORIZED", C 2K;
"VEHICLES", C 2K;
"ONLY", C 2K;

HIGH TENSION CABLE GUARDRAIL CYLINDRICAL ANCHOR FOOTING

Sheet 1 of 2



PLAN VIEW



ELEVATION VIEW

HIGH TENSION CABLE GUARDRAIL CYLINDRICAL ANCHOR FOOTING

Sheet 2 of 2

INFORMATIONAL QUANTITIES

* Footing Dimensions		Longitudinal Steel			Spiral Steel			Concrete
Dia.	Depth	No.	Size	Length	Dia.	Size	Length	Cu. Yd.
3'-0"	12'-0"	8	10	11'-6"	2'-6"	5	114'-0"	3.1
3'-0"	13'-0"	8	10	12'-6"	2'-6"	5	122'-0"	3.4
3'-0"	14'-0"	8	10	13'-6"	2'-6"	5	130'-0"	3.7
3'-0"	15'-0"	8	10	14'-6"	2'-6"	5	138'-0"	3.9

GENERAL NOTES:

* Footing dimensions will be 3'-0" diameter and 15'-0" depth unless specified otherwise in the plans.

Circular ties may be used in lieu of the spiral ties. The No. 5 ties will be spaced 12 inches apart except for the top and bottom two which will be spaced 6 inches apart. The ties will be lapped 18 inches and the laps will be staggered around the cage.

Spiral ties will have 1-1/2 extra turns at each end.

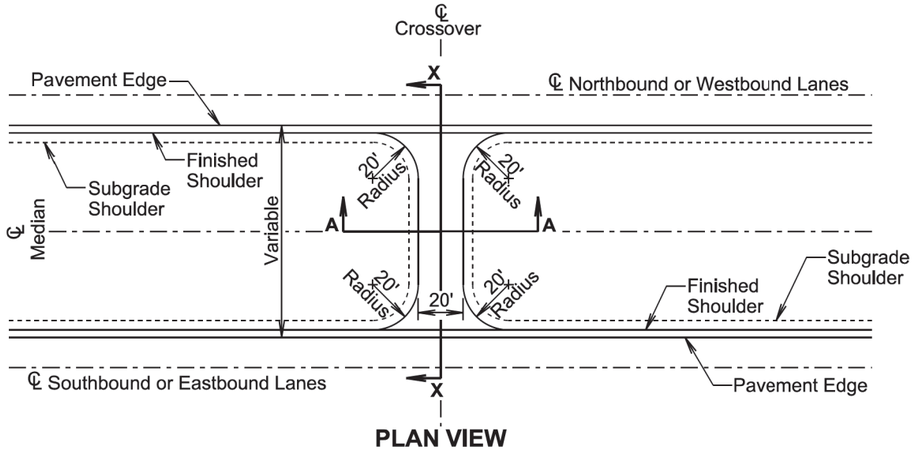
The longer excavations are left open, the more likely caving will occur. Operations should be sequenced so that concrete placement operations closely follow excavation procedures but at a minimum placed the same working day.

The High Tension Cable Guardrail Cylindrical Anchor Footings will be constructed in accordance with the Special Provision for Cylindrical Concrete Footings, except all costs for materials, labor, and equipment necessary to construct the footings will be incidental to the contract unit price per each for "High Tension Cable Guardrail Anchor Assembly".

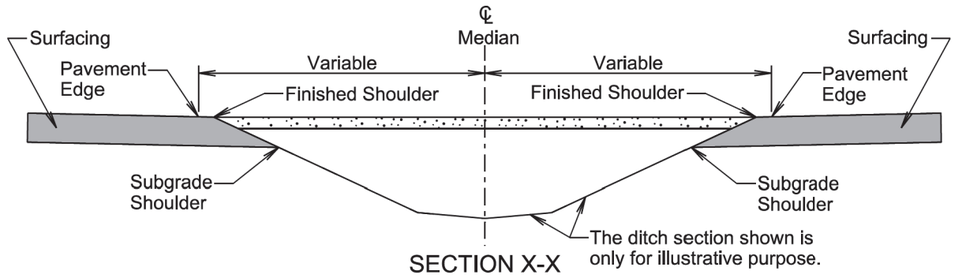
All exposed edges will be chamfered ¾ inch.

All reinforcing steel will conform to ASTM A615 Grade 60.

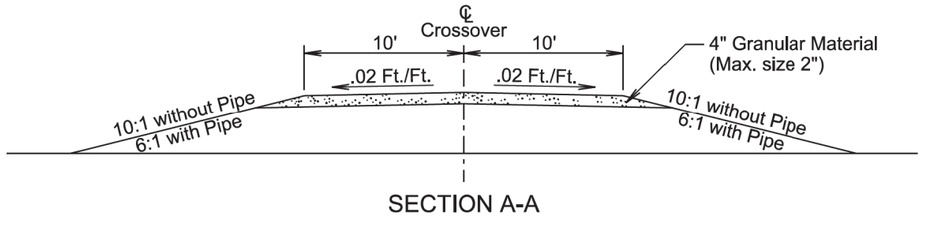
MASH Gating Terminal end anchor plate and assembly shown is a proprietary system. The anchor hardware will be installed according to the manufacturer's installation instructions.



PLAN VIEW



SECTION X-X



SECTION A-A

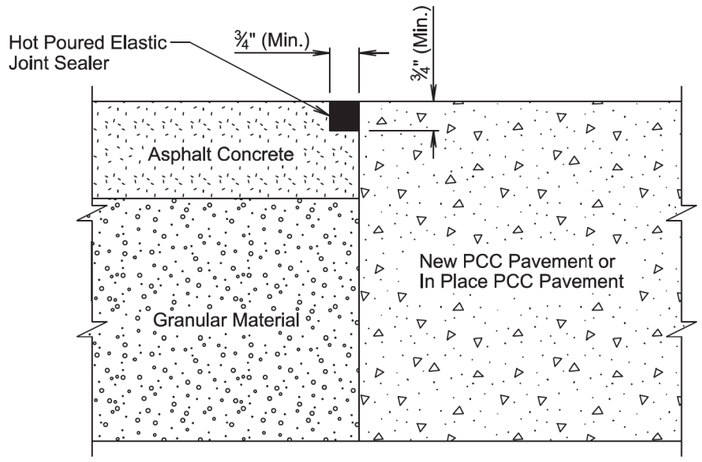
GENERAL NOTES:

The inslopes of the maintenance crossovers will be 6:1 when there is a pipe, 10:1 without pipe, or as specified in the plans.

The quantities of materials necessary for construction of the maintenance crossovers are as provided in the plans and will be paid for at their respective contract unit prices for the various materials used.

September 14, 2018

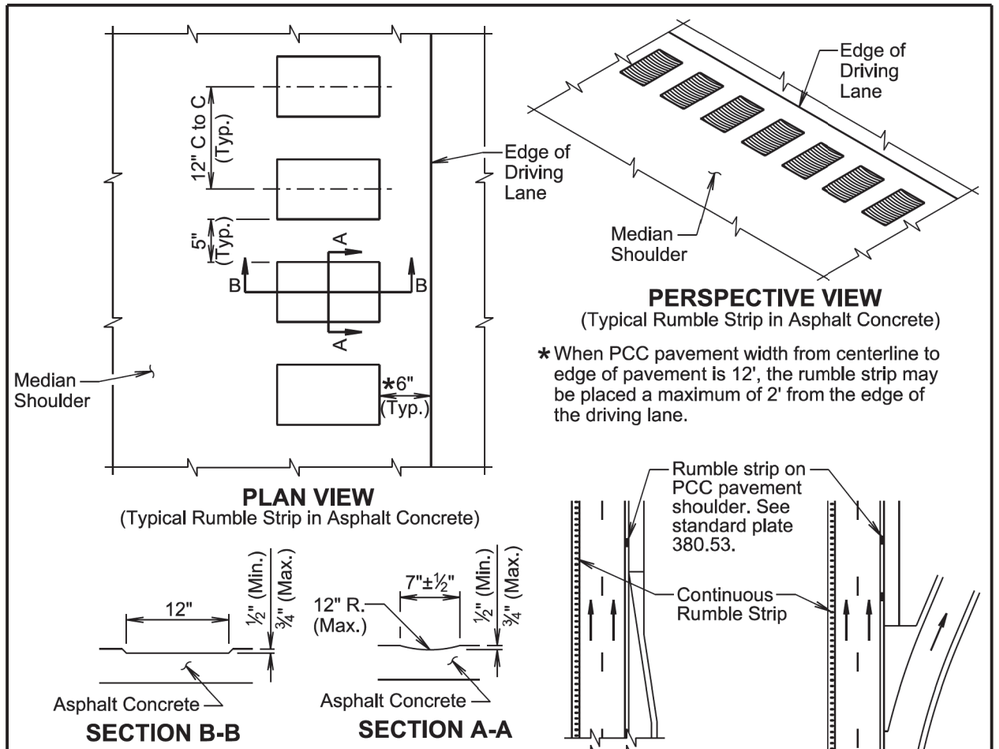
Published Date: 2026	SDDOT	STANDARD MAINTENANCE CROSSOVER FOR INTERSTATE HIGHWAYS	PLATE NUMBER 120.04 Sheet 1 of 1



TRANSVERSE SECTION
(Asphalt Concrete Shoulder Joint)

September 14, 2019

Published Date: 2026	SDDOT	ASPHALT CONCRETE SHOULDER JOINT ADJACENT TO PCC PAVEMENT	PLATE NUMBER 320.15 Sheet 1 of 1



PLAN VIEW
(Typical Rumble Strip in Asphalt Concrete)

PERSPECTIVE VIEW
(Typical Rumble Strip in Asphalt Concrete)

*When PCC pavement width from centerline to edge of pavement is 12', the rumble strip may be placed a maximum of 2' from the edge of the driving lane.

SECTION B-B

SECTION A-A

GENERAL NOTES:

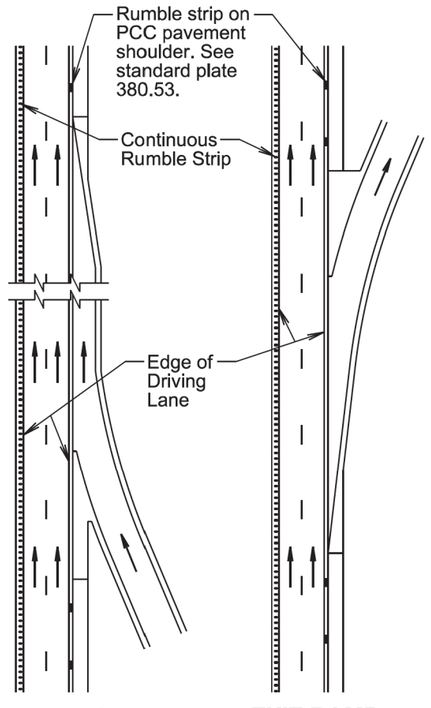
A rumble strip will be constructed on all of the asphalt concrete median shoulders by grinding continuous indentations in the asphalt concrete. The rumble strip will receive a flush seal or asphalt surface treatment as specified in the plans.

A rumble strip should be placed through median crossovers as directed by the Engineer.

A rumble strip will not be constructed through entrance ramps, exit ramps, gore areas, bridge decks, and bridge approach slabs.

Prior to constructing the rumble strip the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble strip.

Measurement of the rumble strip will be to the nearest 0.1 of a mile for each median shoulder. Measurement and payment of the rumble strip will include the segments adjacent to median crossovers, entrance ramps, exit ramps, gore areas, bridge decks, and bridge approach slabs without rumble strips. Payment for constructing the rumble strip will be at the contract unit price per mile for "Grind 12" Rumble Strip or Stripe in Asphalt Concrete".



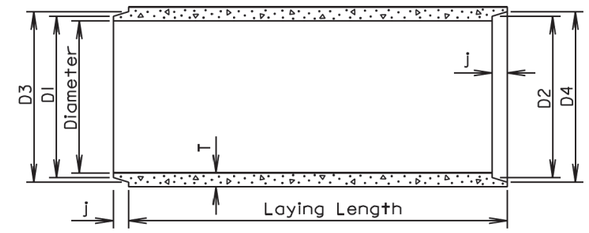
ENTRANCE RAMP **EXIT RAMP**
PLAN VIEW

March 31, 2024

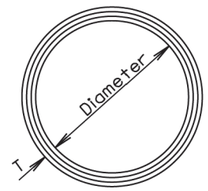
Published Date: 2026	SDDOT	12" RUMBLE STRIP IN ASPHALT CONCRETE ON INTERSTATE MEDIAN SHOULDER	PLATE NUMBER 320.30
			Sheet 1 of 1

TOLERANCES IN DIMENSIONS

Diameter: ±1.5% for 24" Dia. or less and ±1% or ⅜" whichever is more for 27" Dia. or greater.
Diameters at joints: ± 3/16" for 30" Dia. or less and ± ¼" for 36" or greater.
Length of joint (j): ± ¼".
Wall thickness (T): not less than design T by more than 5% or 3/16", whichever is greater.
Laying length: shall not underrun by more than ½".



LONGITUDINAL SECTION



END VIEW

GENERAL NOTES:

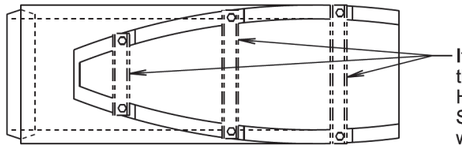
Construction of R. C. P. shall conform to the requirements of Section 990 of the Specifications.

Not more than 2 four-foot sections shall be permitted near the ends of any culvert. Four-foot lengths shall be used only to secure the required length of culvert.

Diam. (in.)	Approx. Wt. /Ft. (lb.)	T (in.)	J (in.)	D1 (in.)	D2 (in.)	D3 (in.)	D4 (in.)
12	92	2	1¾	13¼	13⅝	13⅞	14¼
15	127	2¼	2	16½	16⅞	17¼	17⅝
18	168	2½	2¼	19⅝	20	20⅜	20¾
21	214	2¾	2½	22⅞	23¼	23¾	24⅛
24	265	3	2¾	26	26⅜	27	27⅜
27	322	3¼	3	29¼	29⅝	30¼	30⅝
30	384	3½	3¼	32⅜	32¾	33½	33⅞
36	524	4	3¾	38¾	39¼	40	40½
42	685	4½	4	45⅛	45⅝	46½	47
48	867	5	4½	51½	52	53	53½
54	1070	5½	4½	57⅞	58⅜	59⅜	59⅞
60	1296	6	5	64¼	64¾	66	66½
66	1542	6½	5½	70⅝	71⅛	72½	73
72	1810	7	6	77	77½	79	79½
78	2098	7½	6½	83⅜	83⅞	85⅝	86⅛
84	2410	8	7	89¾	90¼	92⅛	92⅝
90	2740	8½	7	95¾	96¼	98⅛	98⅝
96	2950	9	7	102⅛	102⅝	104½	105
102	3075	9½	7½	109	109½	111½	112
108	3870	10	7½	115½	116	118	118½

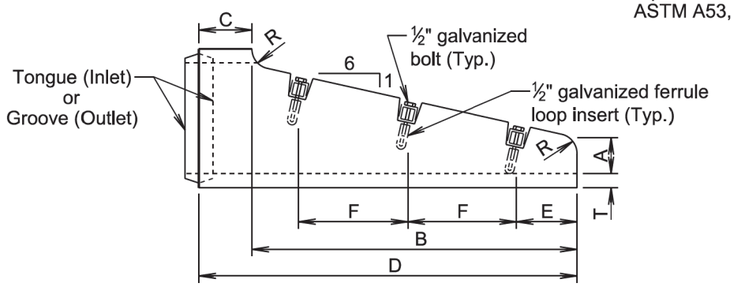
June 26, 2015

Published Date: 2026	SDDOT	REINFORCED CONCRETE PIPE	PLATE NUMBER 450.01
			Sheet 1 of 1

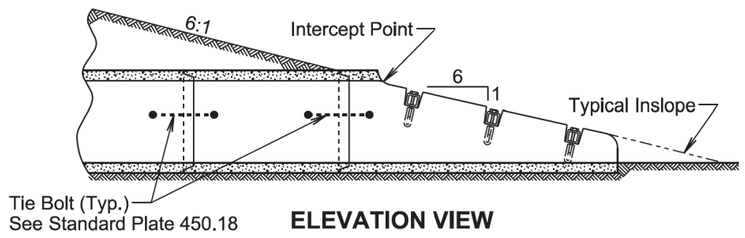


TOP VIEW

If bars are specified in the plans then provide HSS 2.5x2.5x.1875 Structural Steel Tubing in conformance with ASTM A500, Grade B or C or 3" Diameter Schedule 40 Pipe in conformance with ASTM A53, Grade B.



SIDE VIEW



ELEVATION VIEW

R. C. P. SAFETY ENDS										
Dia. (in.)	T (in.)	R (in.)	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	No. Sections	No. Bars
FOR CIRCULAR PIPE										
15	2¼	3	6	48	9	57	6	18	1	3
18	2½	3	6	69	9	78	9	24	1	3
*24	3	3	6	111	9	120	6	24	1 or 2	5
FOR ARCH PIPE										
**18	2½	1	6	39	33	72	6	24	1	2

* The use of 2 sections must be an approved design.
** Equivalent Diameter of Circular R.C.P.

GENERAL NOTES:

The length of concrete pipe shown on the plans is between safety ends.

Safety ends without bars are acceptable with or without the bar notches.

Bars will be galvanized after fabrication in accordance with ASTM A123.

April 8, 2025

Published Date: 2026 | SDDOT | R.C.P. SAFETY ENDS WITH OR WITHOUT BARS | PLATE NUMBER 450.12 | Sheet 1 of 1

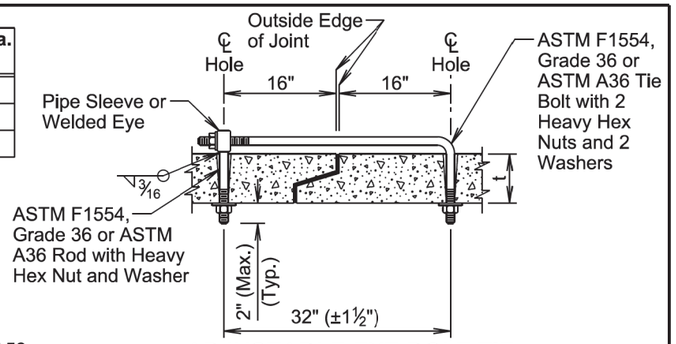
Wall "t" (in.)	Rod Dia. (in.)	Pipe Sleeve Dia. (nominal)
≤ 3¼	⅝	¾
3½-6½	¾	1
≥ 7	1	1¼

GENERAL NOTES:

Tie bolts will conform to ASTM F1554, Grade 36 or ASTM A36. Nuts will be heavy hex conforming to ASTM A563. Washers will conform to ASTM F436.

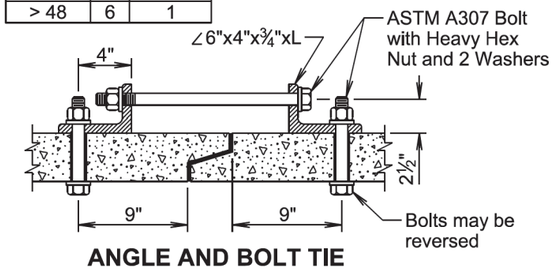
Pipe Sleeve will conform to ASTM A53, Grade B or ASTM A500, Grade B or C.

Galvanize adjustable eye bolt tie assembly in accordance with ASTM A153.



ADJUSTABLE EYE BOLT TIE

Pipe Dia. (in.)	"L" (in.)	Bolt Dia. (in.)
≤ 48	4	¾
> 48	6	1



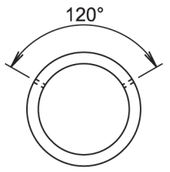
ANGLE AND BOLT TIE

GENERAL NOTES:

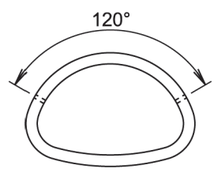
Angles will conform to ASTM A36.

Bolts will conform to ASTM A307. Nuts will be heavy hex conforming to ASTM A563. Washers will conform to ASTM F436.

Galvanize angles, bolts, nuts, and washers in accordance with ASTM A153.



END VIEW (Circular)



END VIEW (Arch)

GENERAL NOTES:

In lieu of the tie bolts detailed above other types of tie bolt connections may be installed as approved by the Office of Bridge Design.

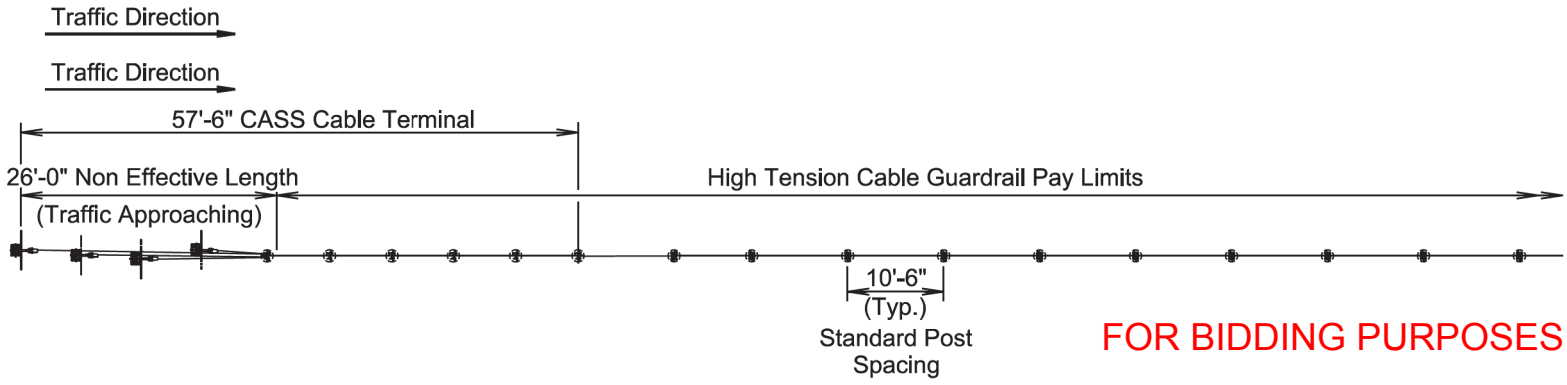
All pipe sections of R.C.P. and R.C.P. Arch will be tied with tie bolts except for pipe located between drop inlets, manholes, and junction boxes. All pipe sections of pipes that only enter or exit drop inlets, manholes, and junction boxes will be tied with tie bolts.

There will be no separate measurement or payment for the tie bolts. The cost for furnishing and installing the tie bolts will be incidental to the contract unit price per foot for the corresponding bid item for R.C.P. or R.C.P. Arch.

April 8, 2025

Published Date: 2026 | SDDOT | TIE BOLTS FOR R.C.P. AND R.C.P. ARCH | PLATE NUMBER 450.18 | Sheet 1 of 1

Pay Limits for One-Way Traffic Roadways
Valtir (Trinity) System



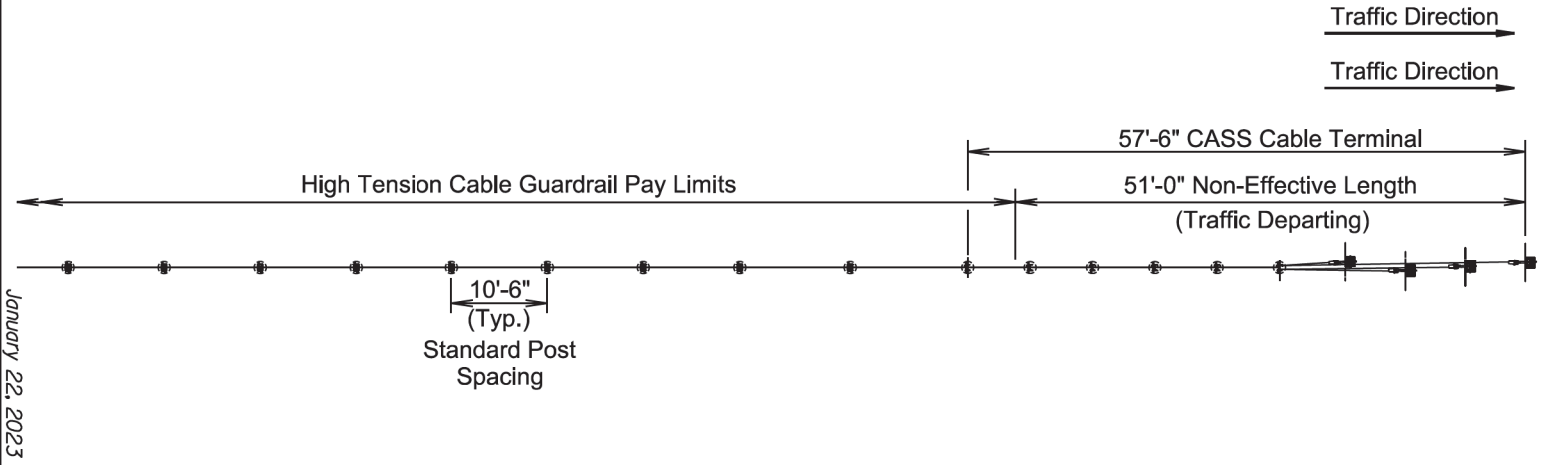
FOR BIDDING PURPOSES ONLY

GENERAL NOTES:

Valtir (Trinity) CASS Cable Terminal has a total length of 57'-6". On one-way traffic roadways, it has 31'-6" effective length on the approach end of the terminal and 6'-6" effective length on the non-approach (departure) end. On two-way traffic roadways, it has 31'-6" effective length on both the approach and the non-approach ends of the terminal.

The High Tension Cable Guardrail pay limits will be the length of need (LON) or the effective length.

The High Tension Cable Guardrail Anchor Assembly pay limits will be the non-effective length of the terminal.



Published Date: 2026

SDDOT

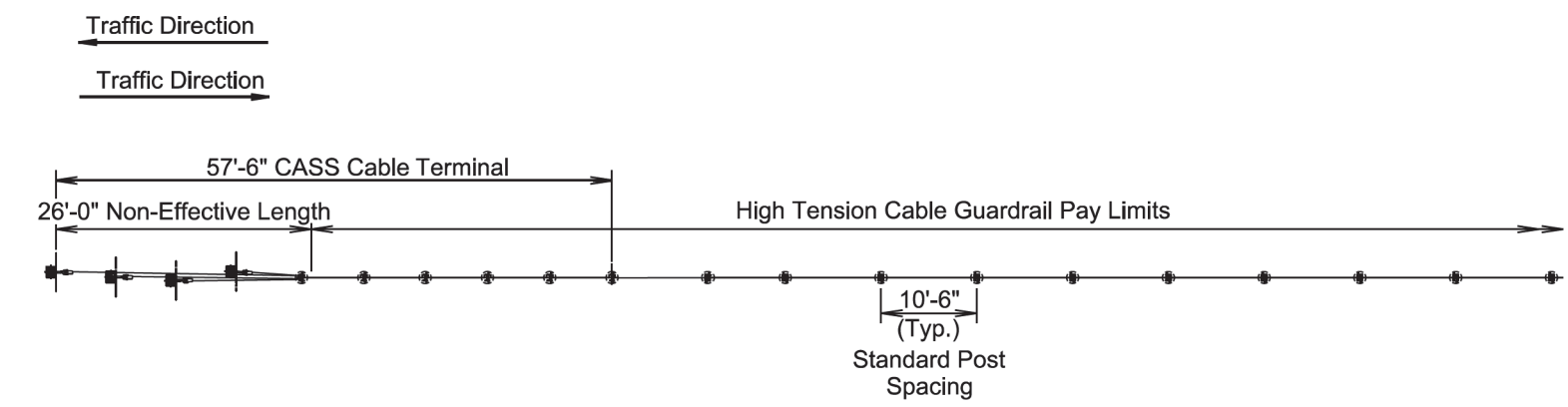
HIGH TENSION CABLE GUARDRAIL

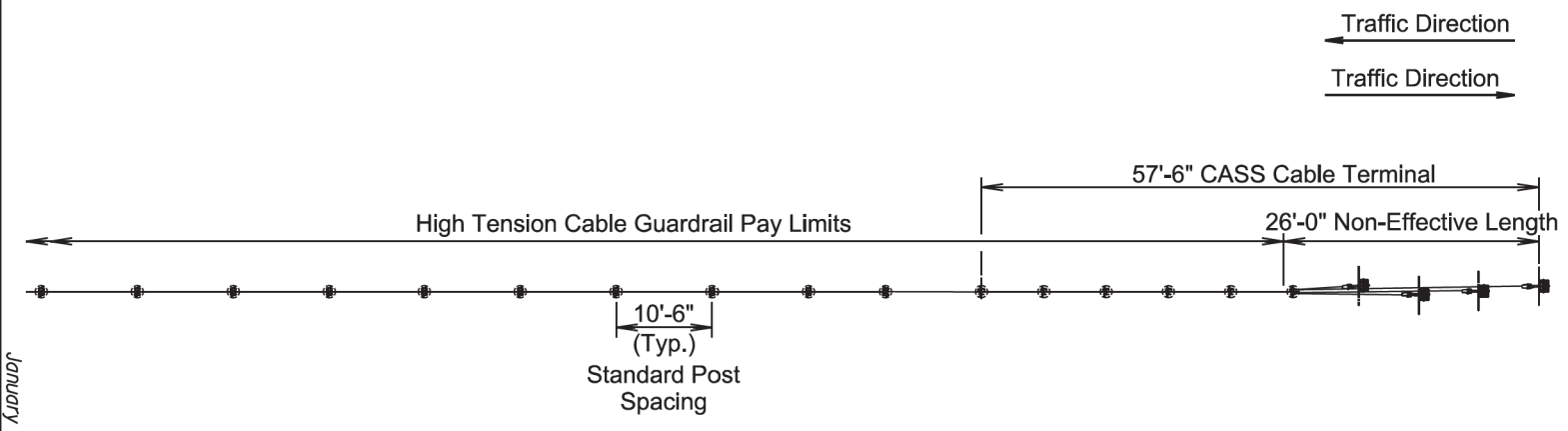
PLATE NUMBER 629.50

Sheet 1 of 3

January 22, 2023

Pay Limits for Two-Way Traffic Roadways
Valtir (Trinity) System





Published Date: 2026

SDDOT

HIGH TENSION CABLE GUARDRAIL

PLATE NUMBER 629.50

Sheet 2 of 3

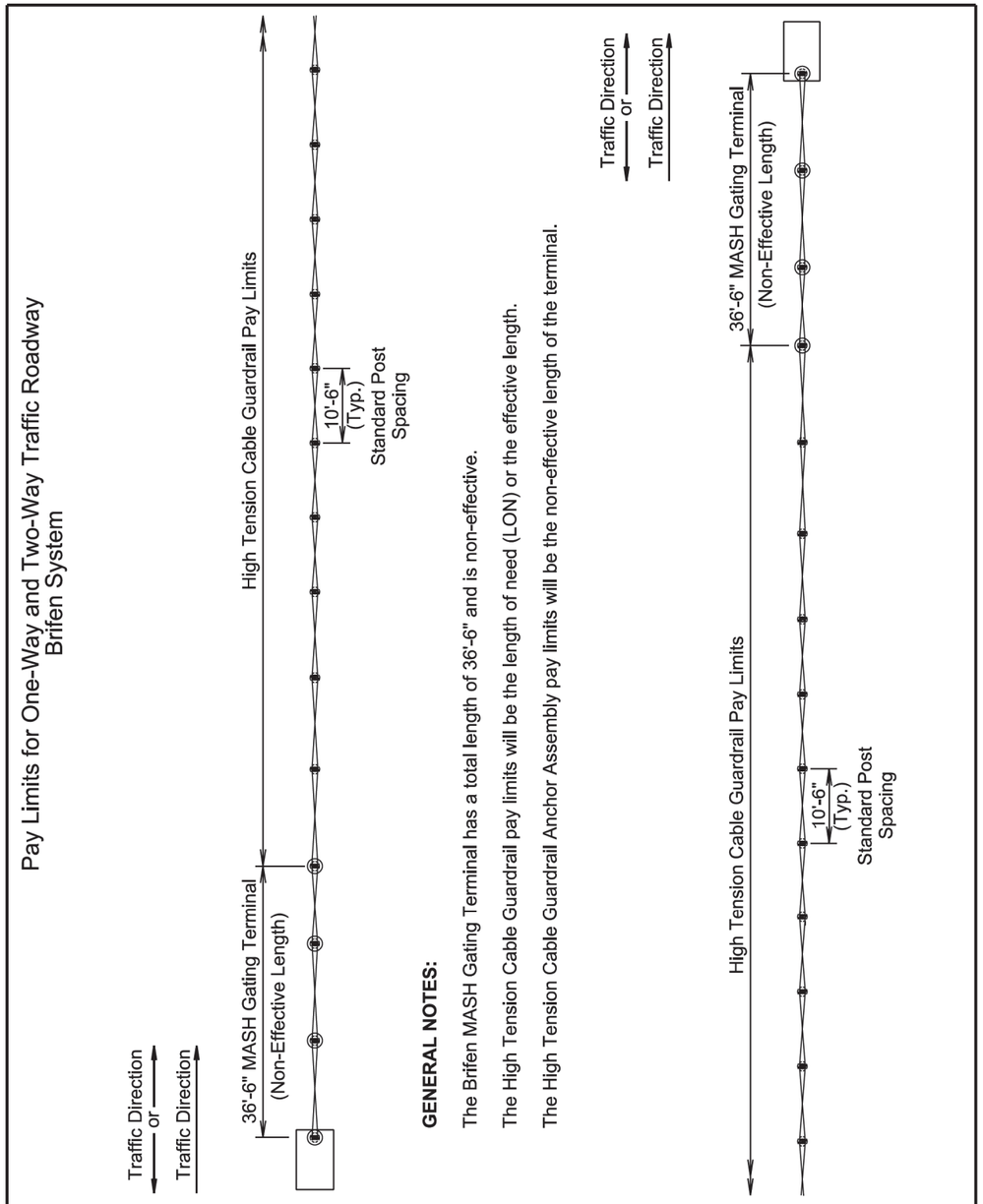
January 22, 2023

PROJECT PH 0022(443)

SHEET 89

TOTAL SHEETS 107

Plotting Date: 1/26/2026



GENERAL NOTES:

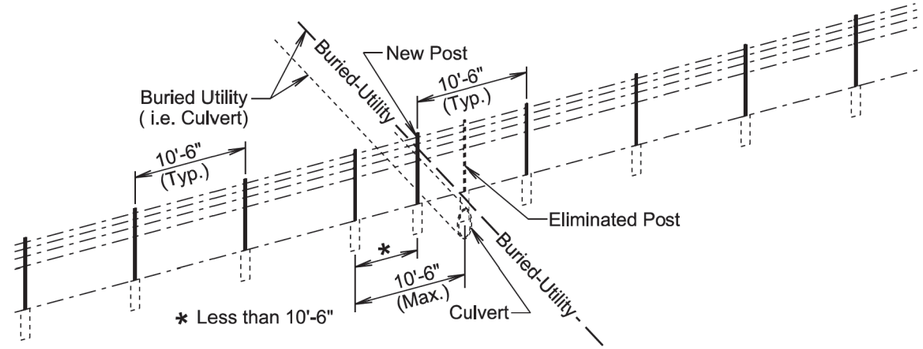
The Brifen MASH Gating Terminal has a total length of 36'-6" and is non-effective.

The High Tension Cable Guardrail pay limits will be the length of need (LON) or the effective length.

The High Tension Cable Guardrail Anchor Assembly pay limits will be the non-effective length of the terminal.

January 22, 2023

Published Date: 2026	SDDOT	HIGH TENSION CABLE GUARDRAIL	PLATE NUMBER 629.50
			Sheet 3 of 3



POST SPACING AT UTILITY CROSSING

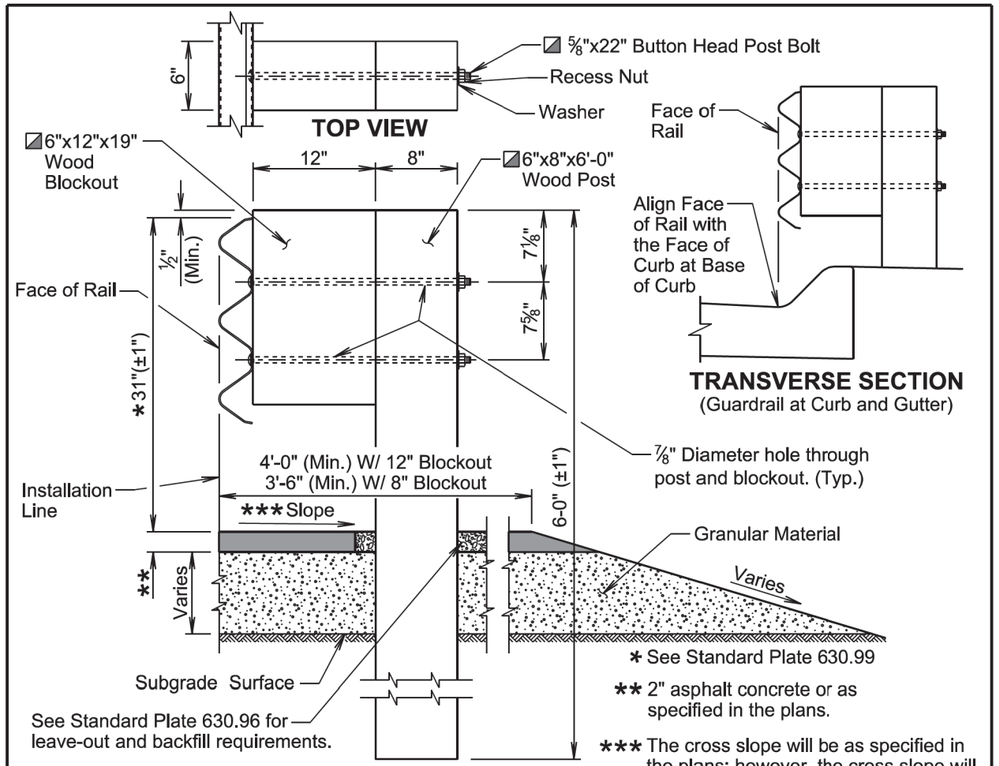
GENERAL NOTES:

The post spacing may be modified to avoid utility conflicts; however, the post spacing will not exceed 10'-6".

All costs for materials, labor, equipment, and incidentals necessary to install the high tension cable guardrail at an utility crossing will be incidental to the contract unit price per foot for "High Tension 3 Cable Guardrail" or "High Tension 4 Cable Guardrail".

March 31, 2024

Published Date: 2026	SDDOT	HIGH TENSION CABLE GUARDRAIL UTILITY CROSSING	PLATE NUMBER 629.70
			Sheet 1 of 1



GENERAL NOTES:

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite."

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

Topsoil is not shown in the transverse section drawing.

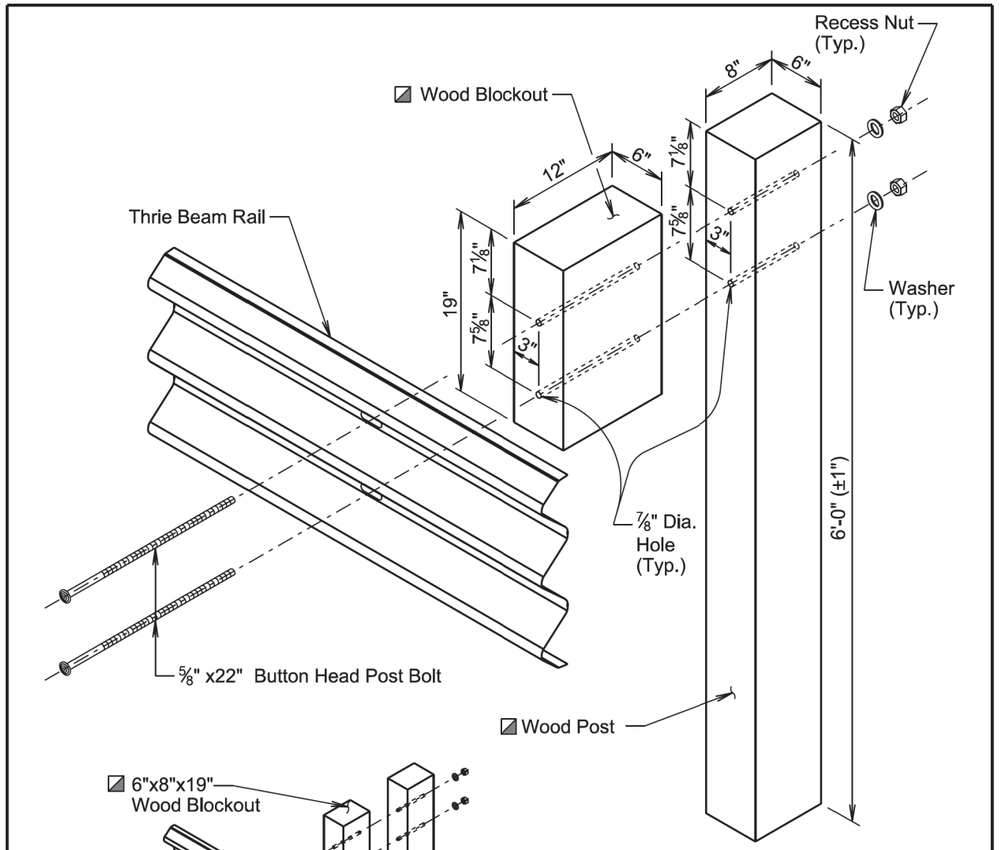
☑ The post and blockout illustrated above is typical for single thrie beam guardrail. When other variations of posts and blockouts are specified on other standard plates (e.g. transitions) then the posts and blockouts will be as specified on the other standard plates or as specified in the plans.

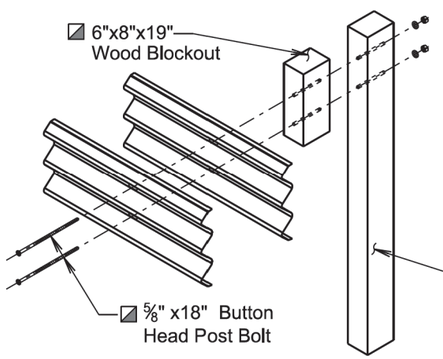
Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

The top of post and top of block will have a true square cut. The top of block will be a maximum of ±½ inch from the top of the post.

April 8, 2025

Published Date: 2026	SDDOT	THRIE BEAM GUARDRAIL	PLATE NUMBER 630.01
			Sheet 1 of 5





EXPANDED ISOMETRIC VIEW OF DOUBLE (NESTED) THRIE BEAM GUARDRAIL AT MIDSPAN
(For Information Only, Not to Scale)

☑ For single thrie beam guardrail use 6"x12"x19" wood blockout, ⅝"x22" button head post bolt, and 6"x8"x6'-0" wood post. For double (nested) thrie beam guardrail use 6"x8"x19" wood blockout, ⅝"x18" button head post bolt, and 6"x8"x7'-0" wood post.

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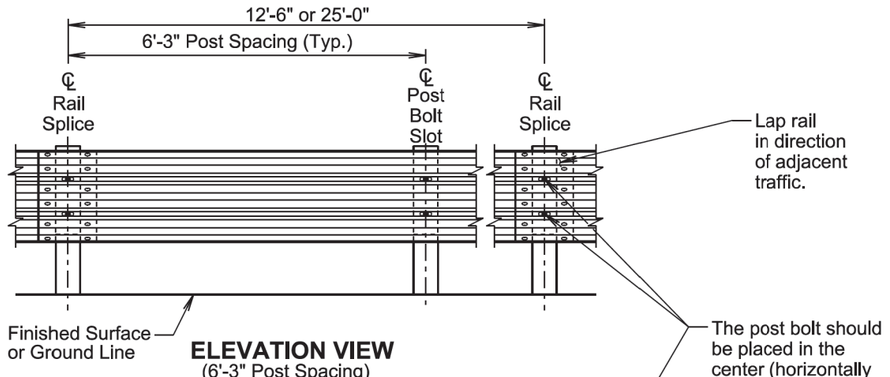
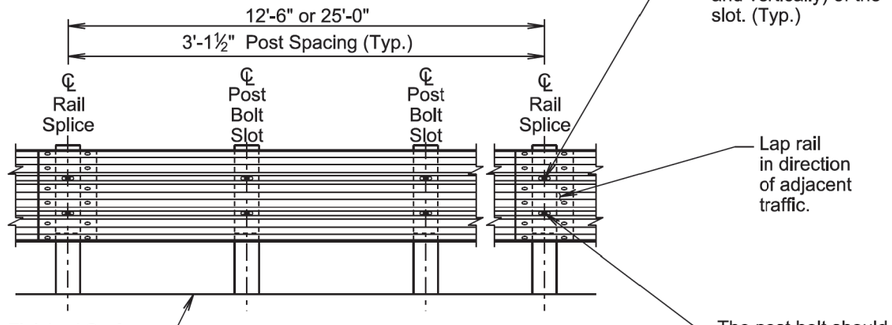
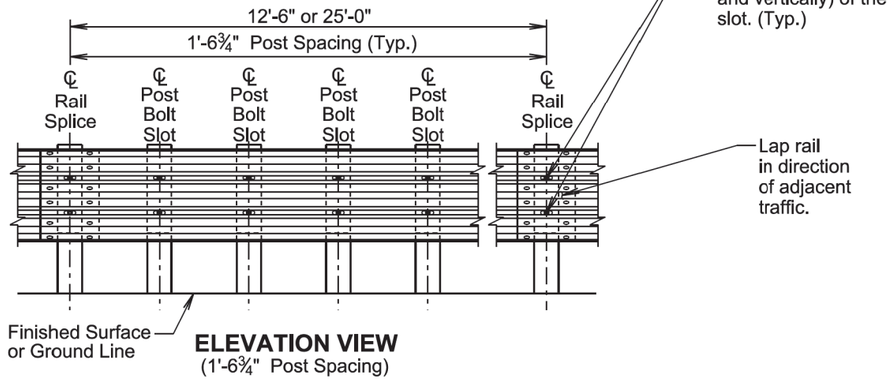
			Sheet 2 of 5

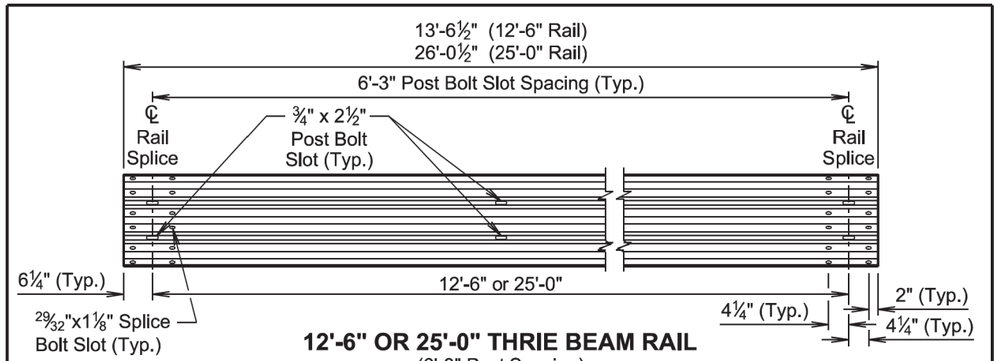




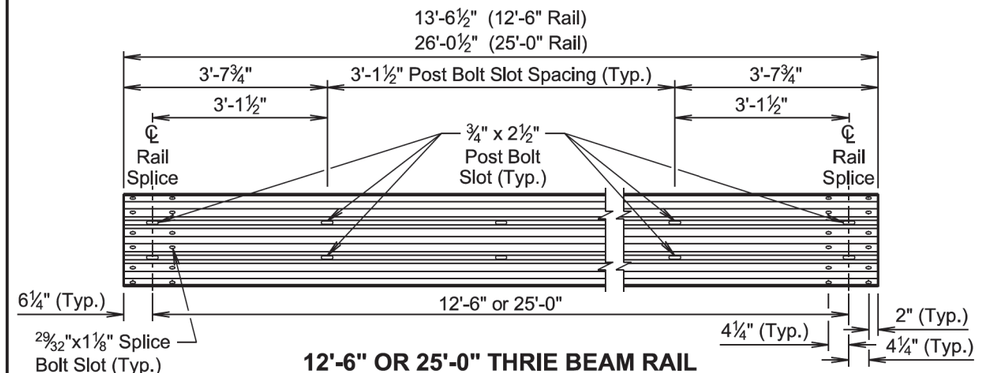


April 8, 2025

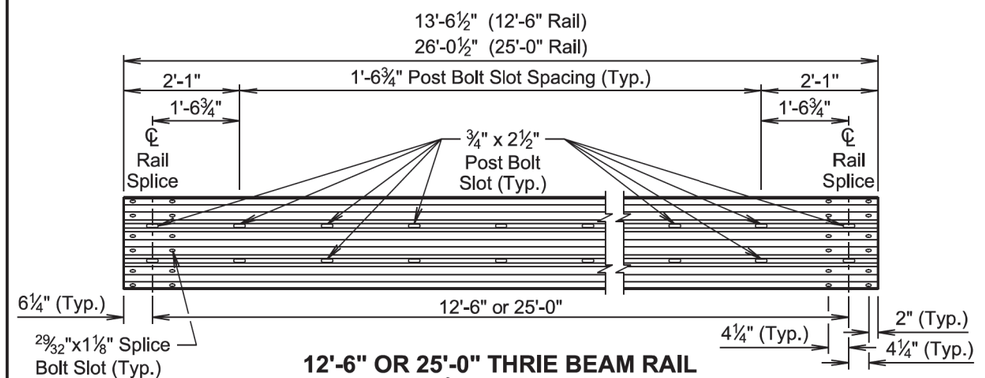
Published Date: 2026	SDDOT	THRIE BEAM GUARDRAIL	PLATE NUMBER 630.01
			Sheet 3 of 5



12'-6" OR 25'-0" THRIE BEAM RAIL
(6'-3" Post Spacing)



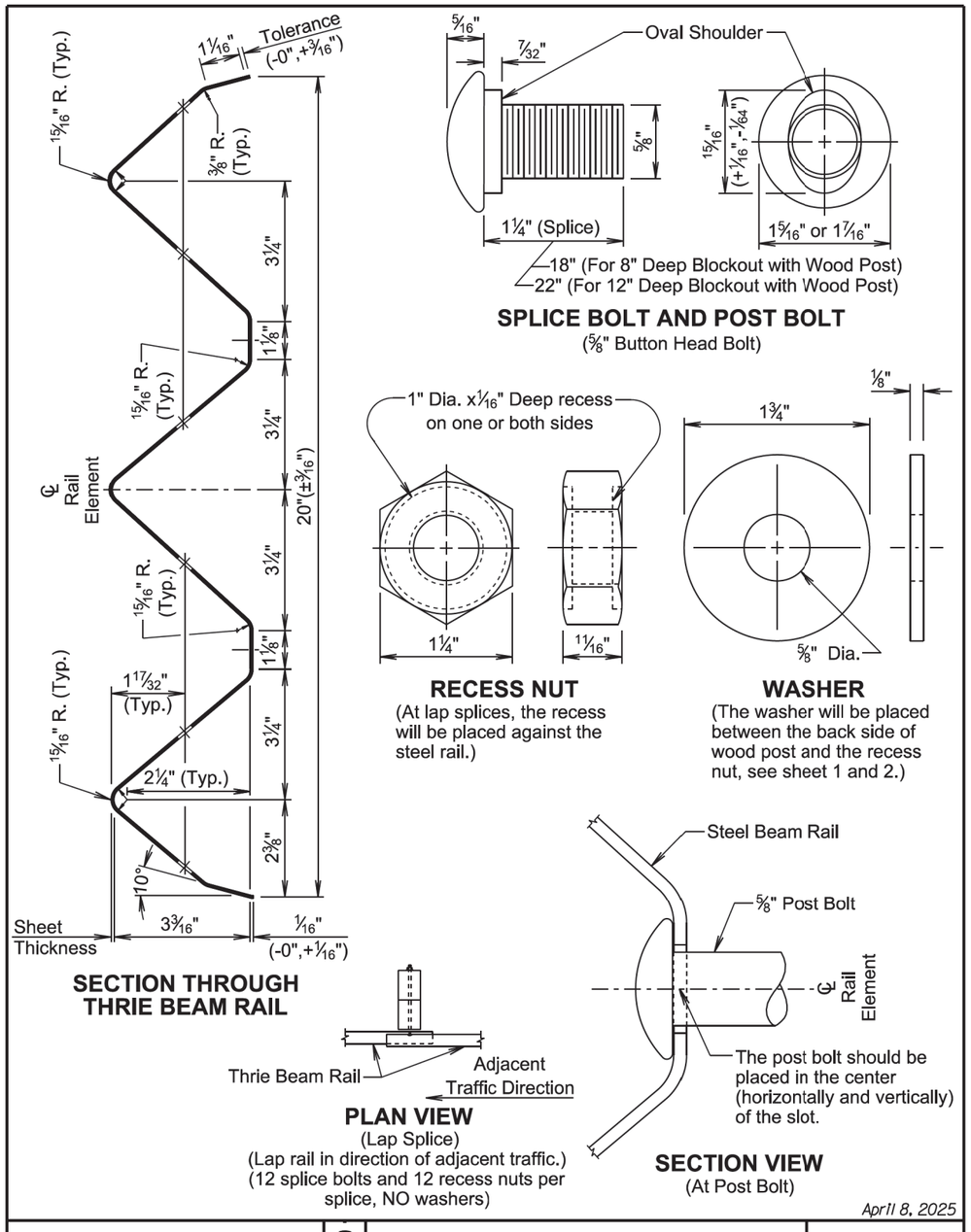
12'-6" OR 25'-0" THRIE BEAM RAIL
(3'-1½" Post Spacing)



12'-6" OR 25'-0" THRIE BEAM RAIL
(1'-6¾" Post Spacing)

April 8, 2025

Published Date: 2026	SDDOT	THRIE BEAM GUARDRAIL	PLATE NUMBER 630.01
			Sheet 4 of 5



SECTION THROUGH THRIE BEAM RAIL

SPLICE BOLT AND POST BOLT
(5/8" Button Head Bolt)

RECESS NUT
(At lap splices, the recess will be placed against the steel rail.)

WASHER
(The washer will be placed between the back side of wood post and the recess nut, see sheet 1 and 2.)

PLAN VIEW
(Lap Splice)
(Lap rail in direction of adjacent traffic.)
(12 splice bolts and 12 recess nuts per splice, NO washers)

SECTION VIEW
(At Post Bolt)

April 8, 2025

Published Date: 2026	SDDOT	THRIE BEAM GUARDRAIL	PLATE NUMBER 630.01
			Sheet 5 of 5

TYPE AND DETAILS OF MGS

Type of MGS	W Beam Rail Single or Double (Nested)	Blockout Size	Blockout Material	Post Size	Post Material	Post Spacing
1	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"
1C	Single	6"x12"x14"	Wood	6"x8"x7'-6"	Wood	6'-3"
2	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	3'-1½"
3	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	1'-6¾"
4	Double	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"

STANDARD PLATE REFERENCE

Type of MGS	See Standard Plate(s)
1	630.20, 630.22
1C	630.20, 630.25
2	630.20
3	630.20
4	630.20

GENERAL NOTES:

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite".

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

Topsoil is not shown in the transverse section drawing on sheet 2 of 6.

All W beam rail will be Type 1 and Class A (12 Ga.) unless specified otherwise in the plans.

W beam rail section lengths may be 12'-6" and/or 25'-0". The combination of section lengths used will be compatible with the total length of rail per site as shown in the plans.

Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for constructing the MGS including labor, equipment, and materials including all posts, blockouts, steel beam rail, and hardware will be incidental to the contract unit price per foot for the respective MGS contract item.

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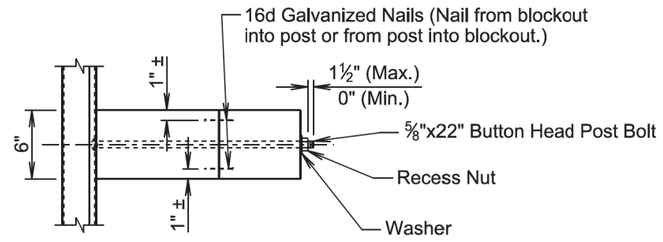
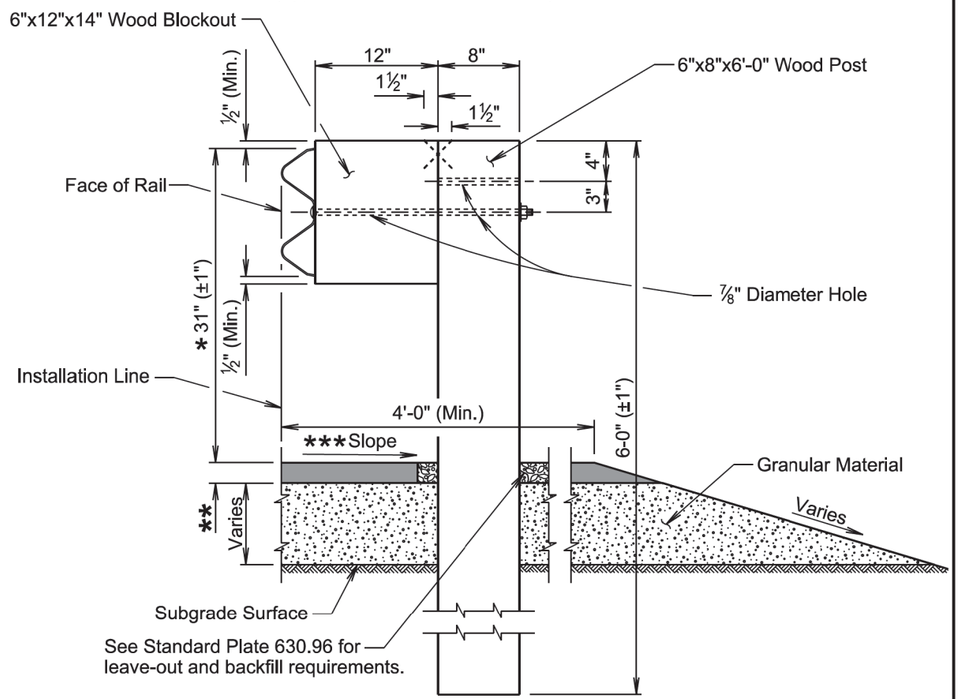
Published Date: 2026	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 1 of 6



TOP VIEW
(Type 1, 2, or 3 MGS Installation)



TRANSVERSE SECTION
(Type 1, 2, or 3 MGS Installation)

* See Standard Plate 630.99

** 2" asphalt concrete or as specified in the plans.

*** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.

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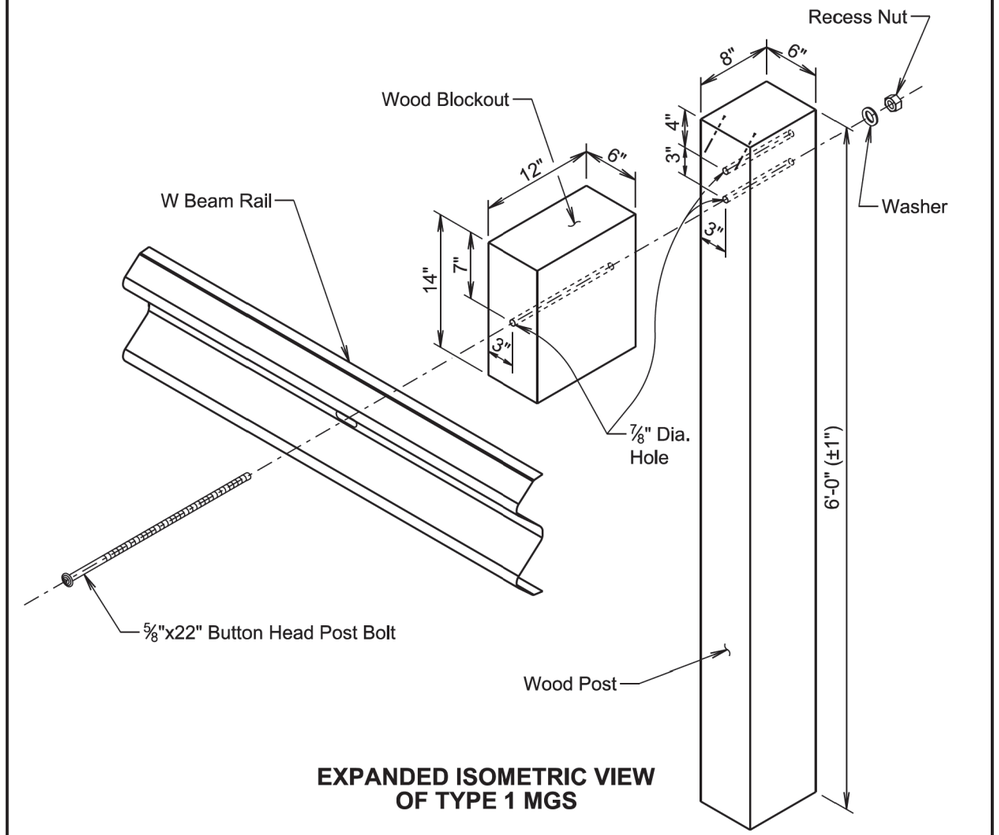
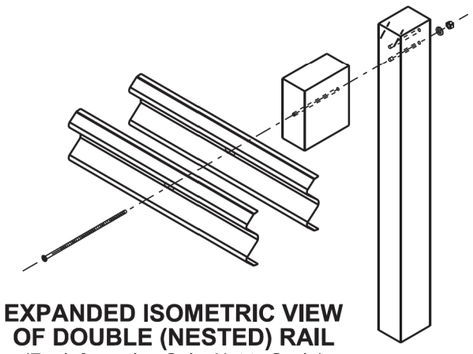
Published Date: 2026	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 2 of 6



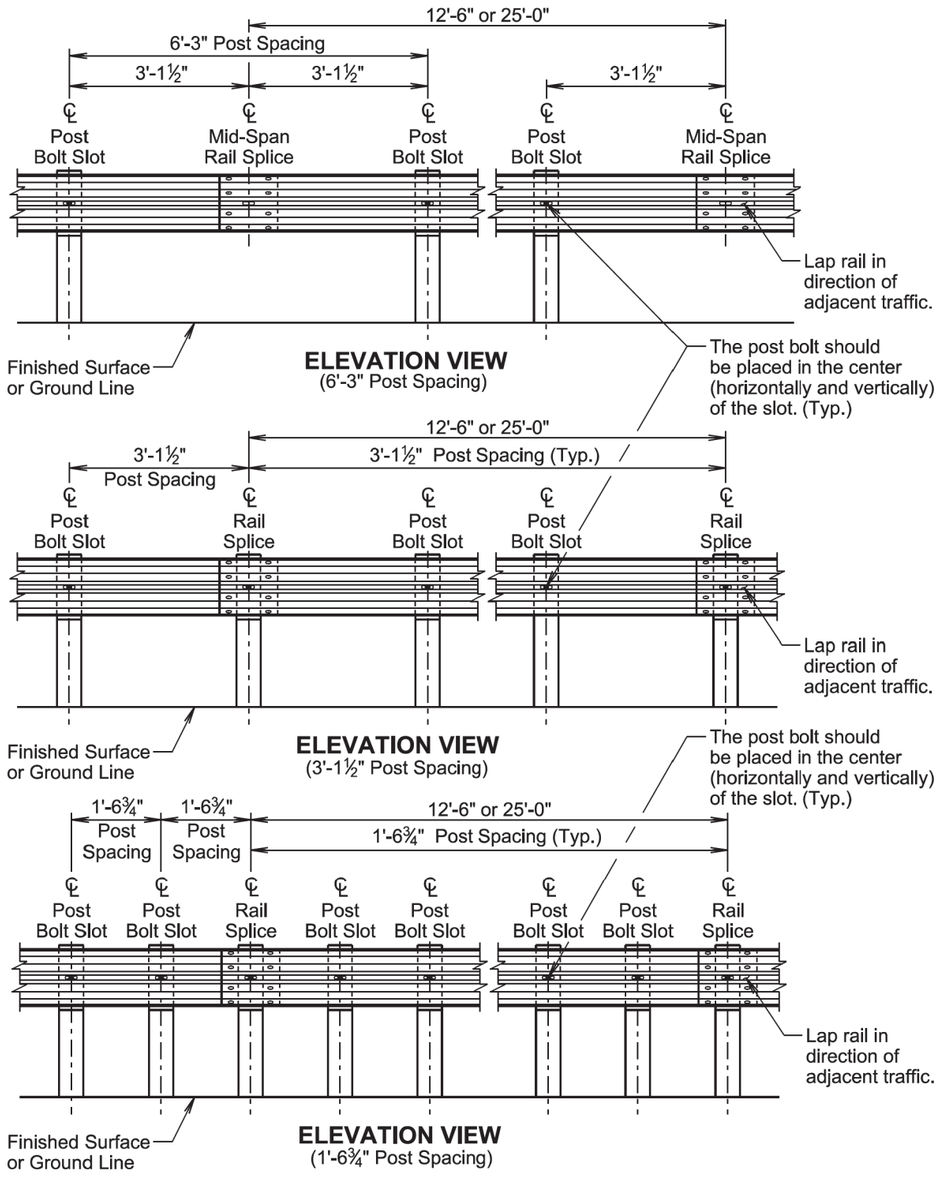
EXPANDED ISOMETRIC VIEW OF TYPE 1 MGS



EXPANDED ISOMETRIC VIEW OF DOUBLE (NESTED) RAIL
(For Information Only, Not to Scale)

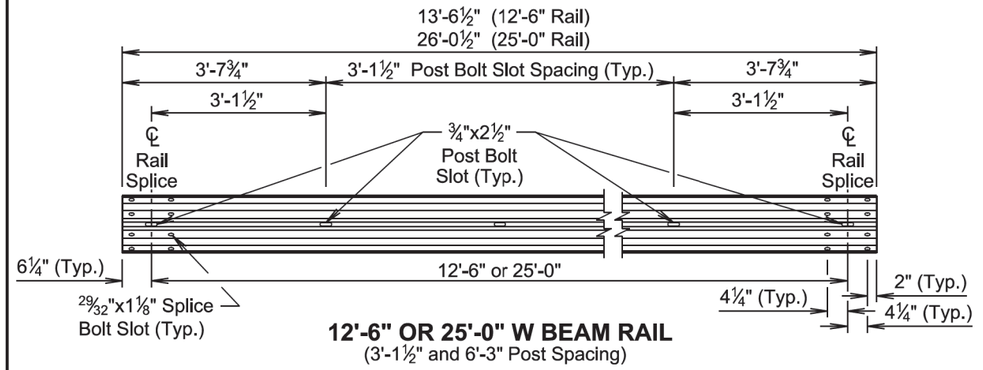
April 8, 2025

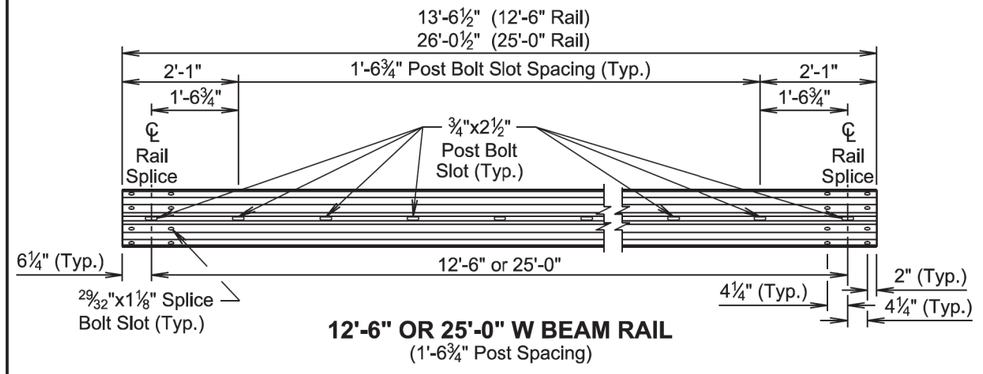
Published Date: 2026	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 3 of 6



April 8, 2025

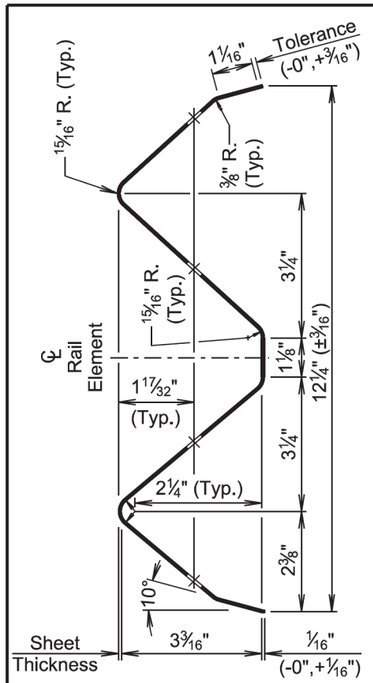
Published Date: 2026	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 4 of 6



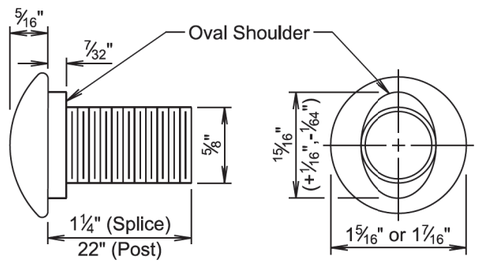


April 8, 2025

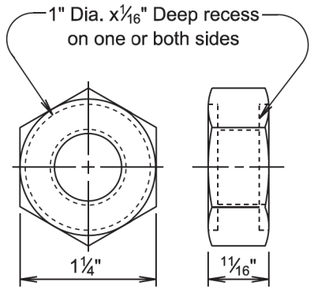
Published Date: 2026	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 5 of 6



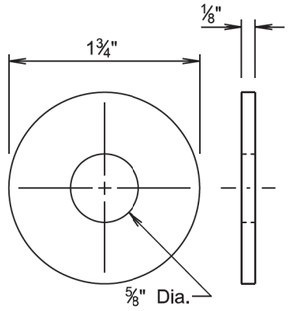
SECTION THROUGH W BEAM RAIL



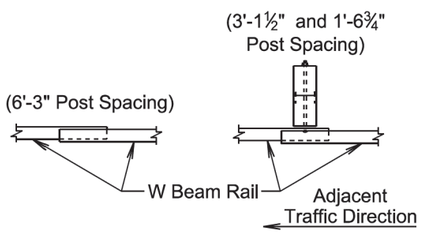
SPLICE BOLT AND POST BOLT
(5/8" Button Head Bolt)



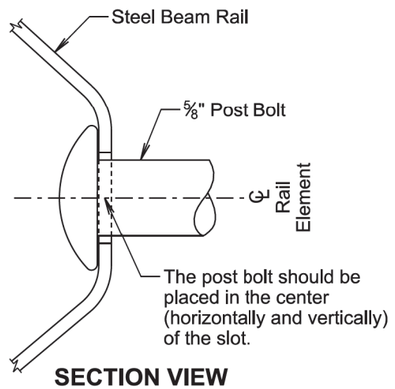
RECESS NUT
(At lap splices, the recess will be placed against the steel rail.)



WASHER
(The washer will be placed between the back side of wood post and the recess nut, see sheet 2 and 3.)



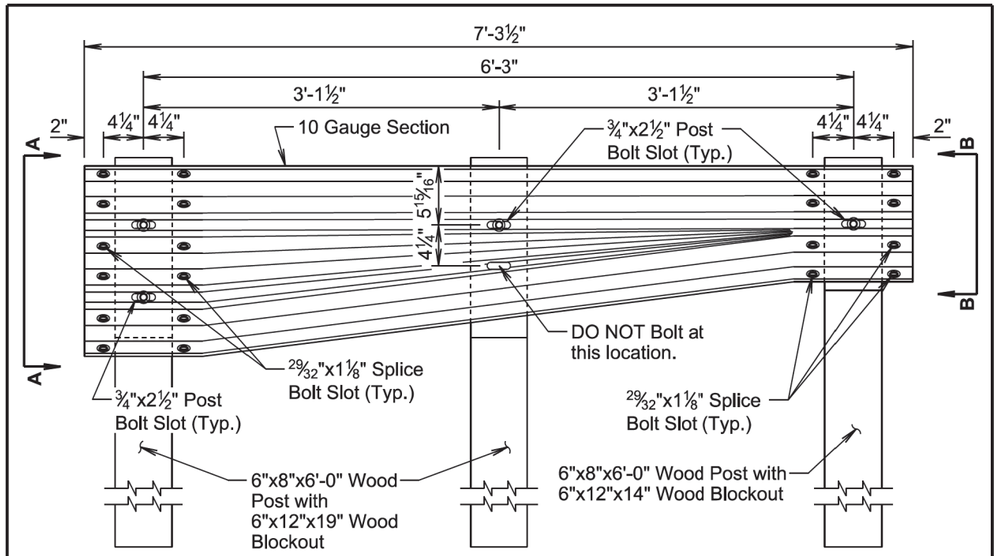
PLAN VIEW
(Lap Splice)
(Lap rail in direction of adjacent traffic.)
(8 splice bolts and 8 recess nuts per splice, NO washers)



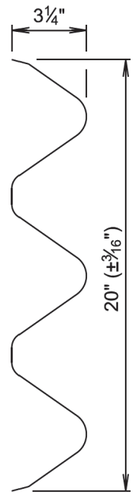
SECTION VIEW
(At Post Bolt)

April 8, 2025

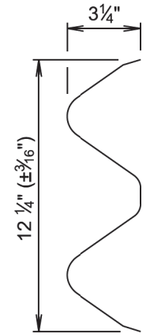
Published Date: 2026	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 6 of 6



ELEVATION VIEW



VIEW A-A



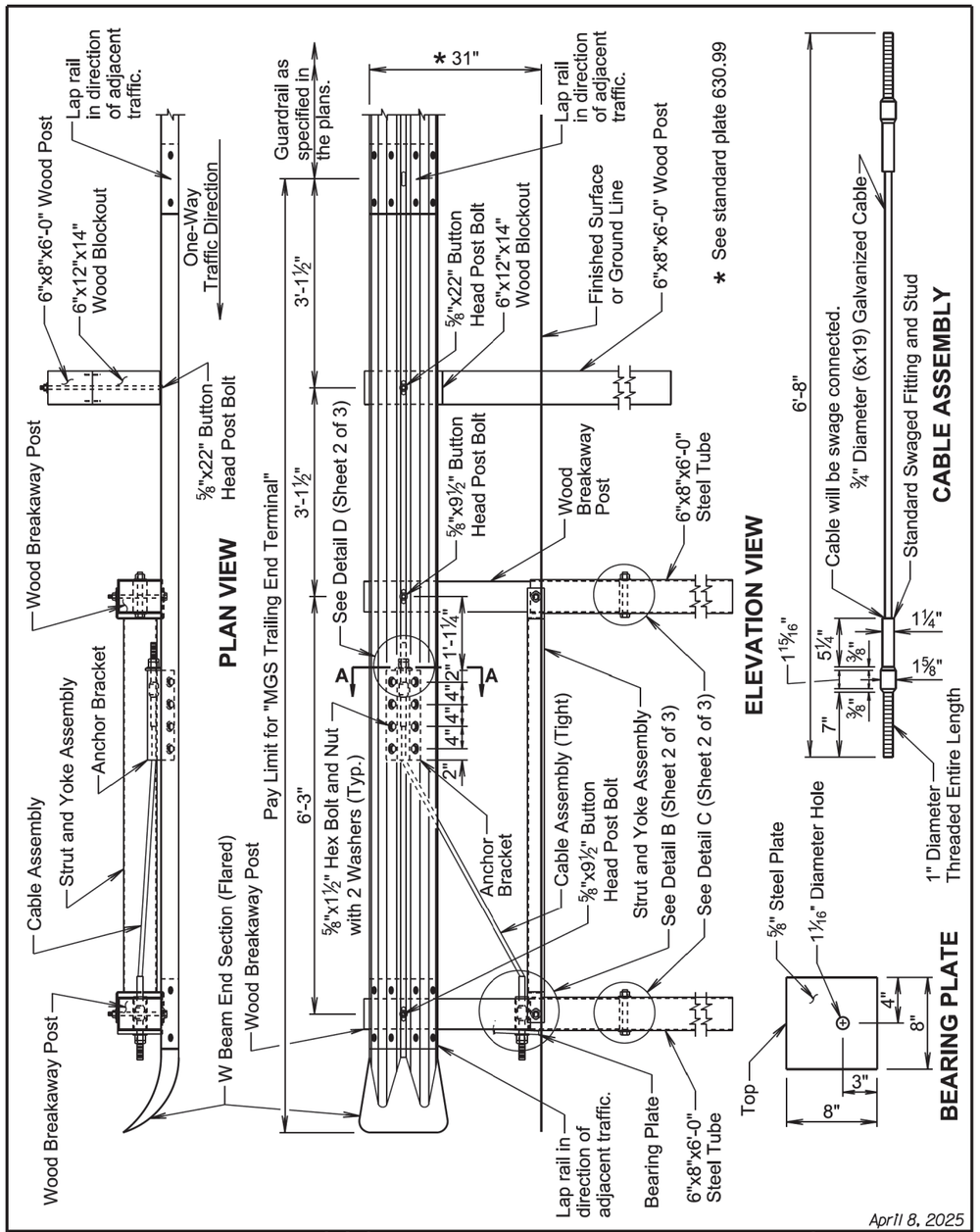
VIEW B-B

GENERAL NOTES:

All costs for furnishing and installing the asymmetrical W beam to thrie beam guardrail transition including labor, equipment, and materials including two posts, two blocks, asymmetrical W beam to thrie beam transition section, and hardware will be incidental to the contract unit price per each for the corresponding guardrail transition contract item.

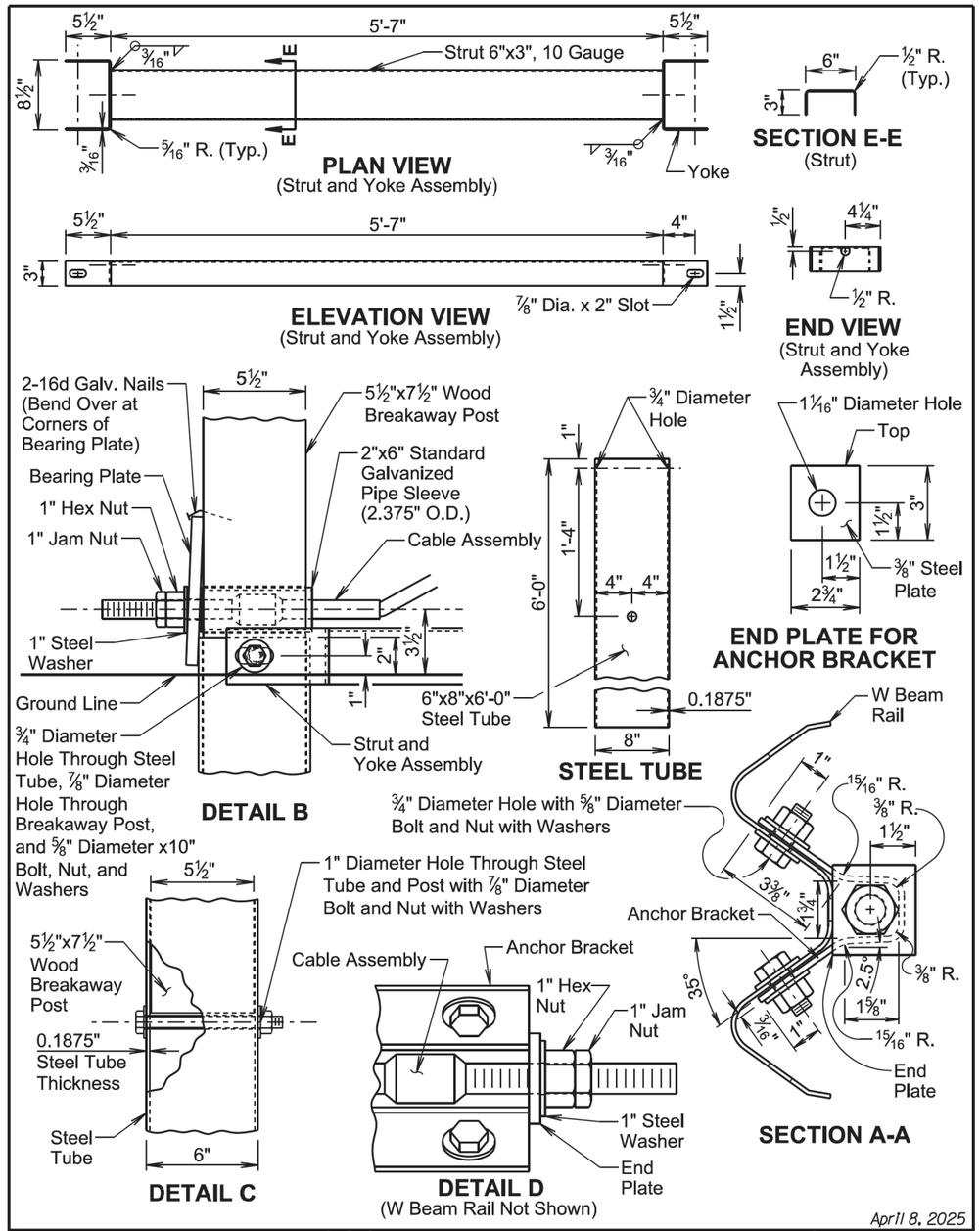
September 14, 2019

Published Date: 2026	SDDOT	ASYMMETRICAL W BEAM TO THRIE BEAM GUARDRAIL TRANSITION SECTION	PLATE NUMBER 630.49
			Sheet 1 of 1



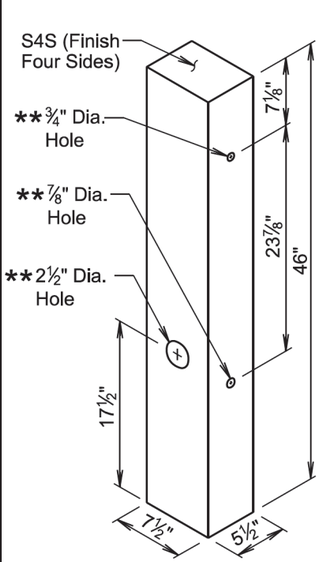
April 8, 2025

Published Date: 2026	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS) TRAILING END TERMINAL	PLATE NUMBER 630.82
			Sheet 1 of 3



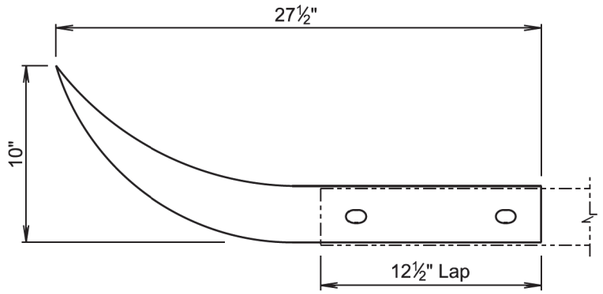
April 8, 2025

Published Date: 2026	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS) TRAILING END TERMINAL	PLATE NUMBER 630.82
			Sheet 2 of 3

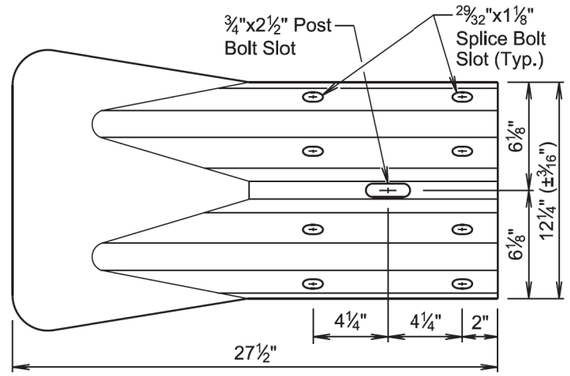


**All holes will be centered on respective sides.

WOOD BREAKAWAY POST



PLAN VIEW
(W Beam End Section (Flared))



ELEVATION VIEW
(W Beam End Section (Flared))

GENERAL NOTES:

The MGS trailing end terminal will only be used in a one-way traffic situation on the downstream traffic flow end.

W beam end section (flared) will be 12 gauge.

The cable will be ¾", Type II, with Class A coating in conformance with AASHTO M30.

The steel tube will meet the requirements of ASTM A500, Grade B or C, and will be galvanized after fabrication in accordance with the requirements of AASHTO M111.

All hardware will be galvanized in accordance with ASTM A153.

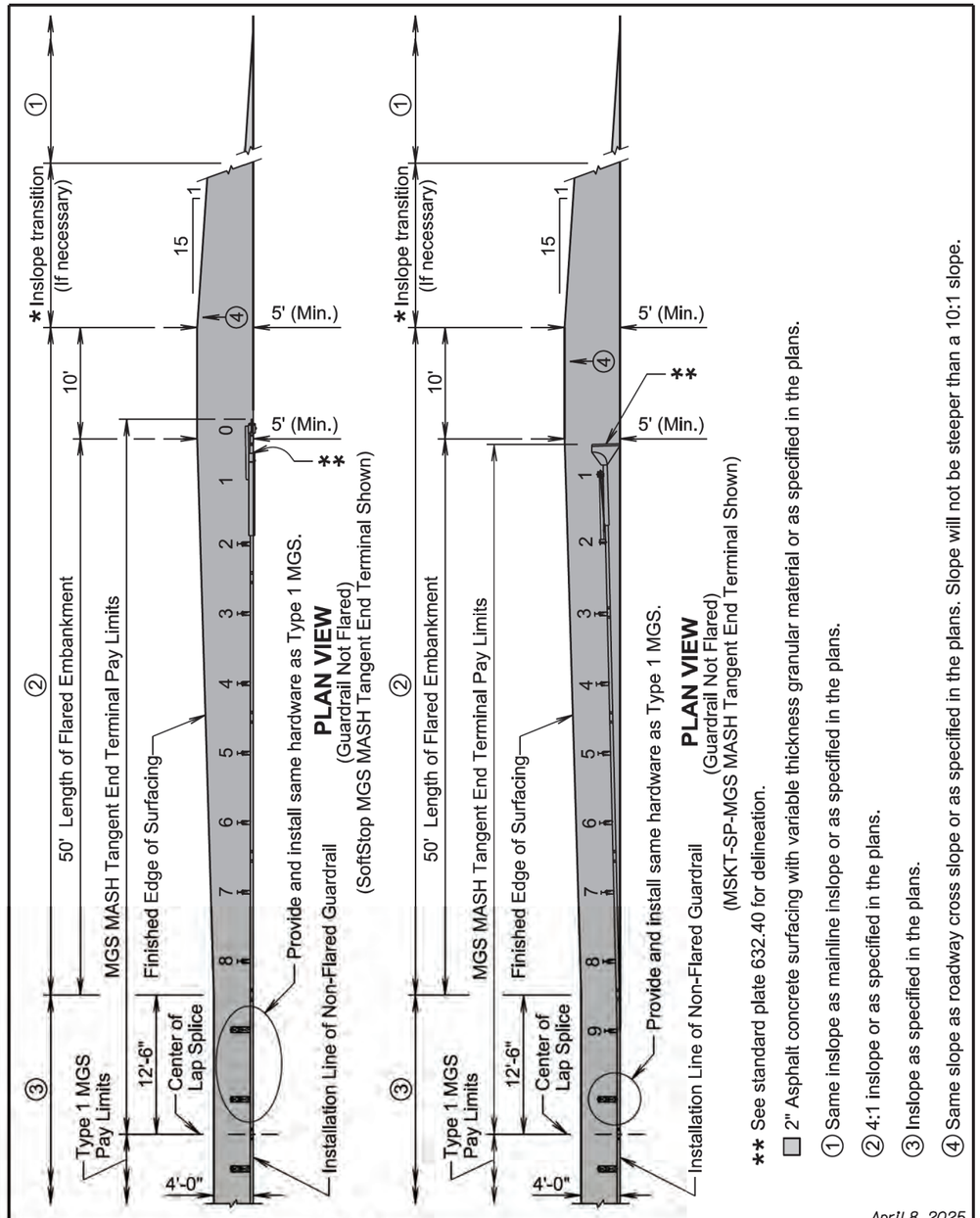
The anchor bracket, strut and yoke assembly, and bearing plate will be fabricated from steel that meets ASTM A36 Specifications. They will be galvanized after fabrication in accordance with ASTM A123.

Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for furnishing and constructing the MGS trailing end terminal including labor, equipment, materials which includes W beam rail section, two wood breakaway posts, steel tubes, strut and yoke assembly, cable assembly, bearing plate, anchor bracket, W beam end section (flared), one MGS wood post and blockout, hardware, and incidentals will be included in the contract unit price per each for "MGS Trailing End Terminal".

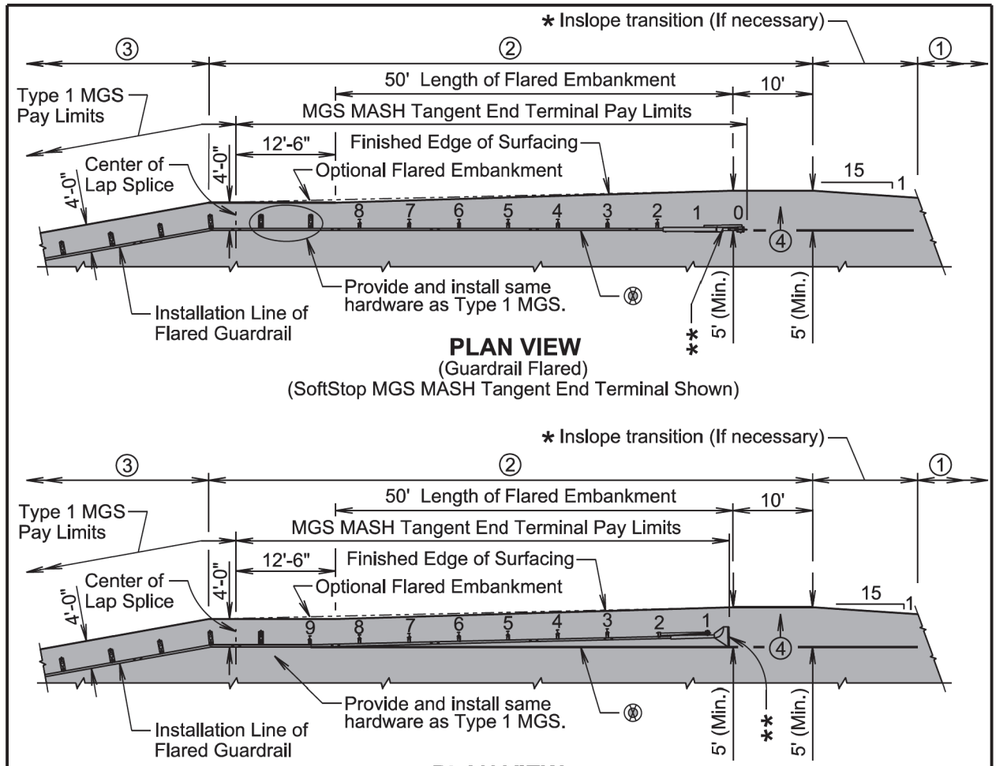
April 8, 2025

Published Date: 2026	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS) TRAILING END TERMINAL	PLATE NUMBER 630.82
			Sheet 3 of 3



April 8, 2025

Published Date: 2026	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL	PLATE NUMBER 630.89
			Sheet 1 of 3



PLAN VIEW
(Guardrail Flared)
(SoftStop MGS MASH Tangent End Terminal Shown)

PLAN VIEW
(Guardrail Flared)
(MSKT-SP-MGS MASH Tangent End Terminal Shown)

GENERAL NOTES:

The MGS MASH tangent end terminals above are for illustrative purpose only. Pay limit length of the MGS MASH tangent end terminal is 62'-6".

* The length of inslope transition varies with the amount of change between inslopes. The length of the transition will change 100' for every whole number change in the inslope. For Example: If the inslope changes from a 5:1 to a 4:1 the length of the inslope transition would be 100'. If the inslope changes from a 6:1 to a 4:1 the length of the inslope transition would be 200'.

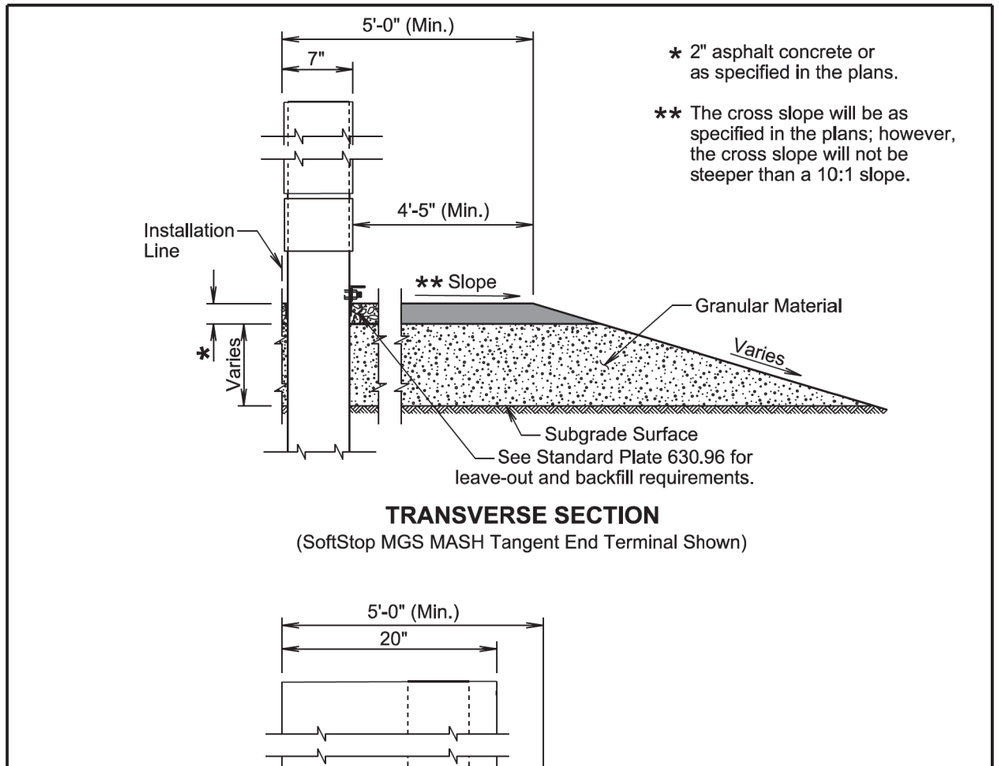
Ⓜ The installation reference line for MGS MASH tangent end terminals will always be parallel to the roadway.

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite."

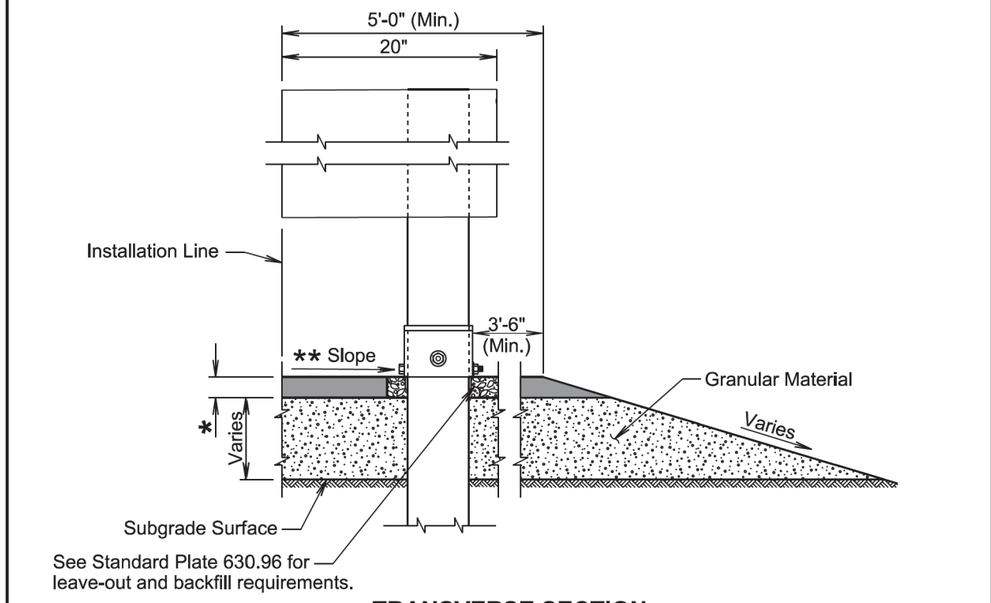
Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

April 8, 2025

Published Date: 2026	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL	PLATE NUMBER 630.89
			Sheet 2 of 3



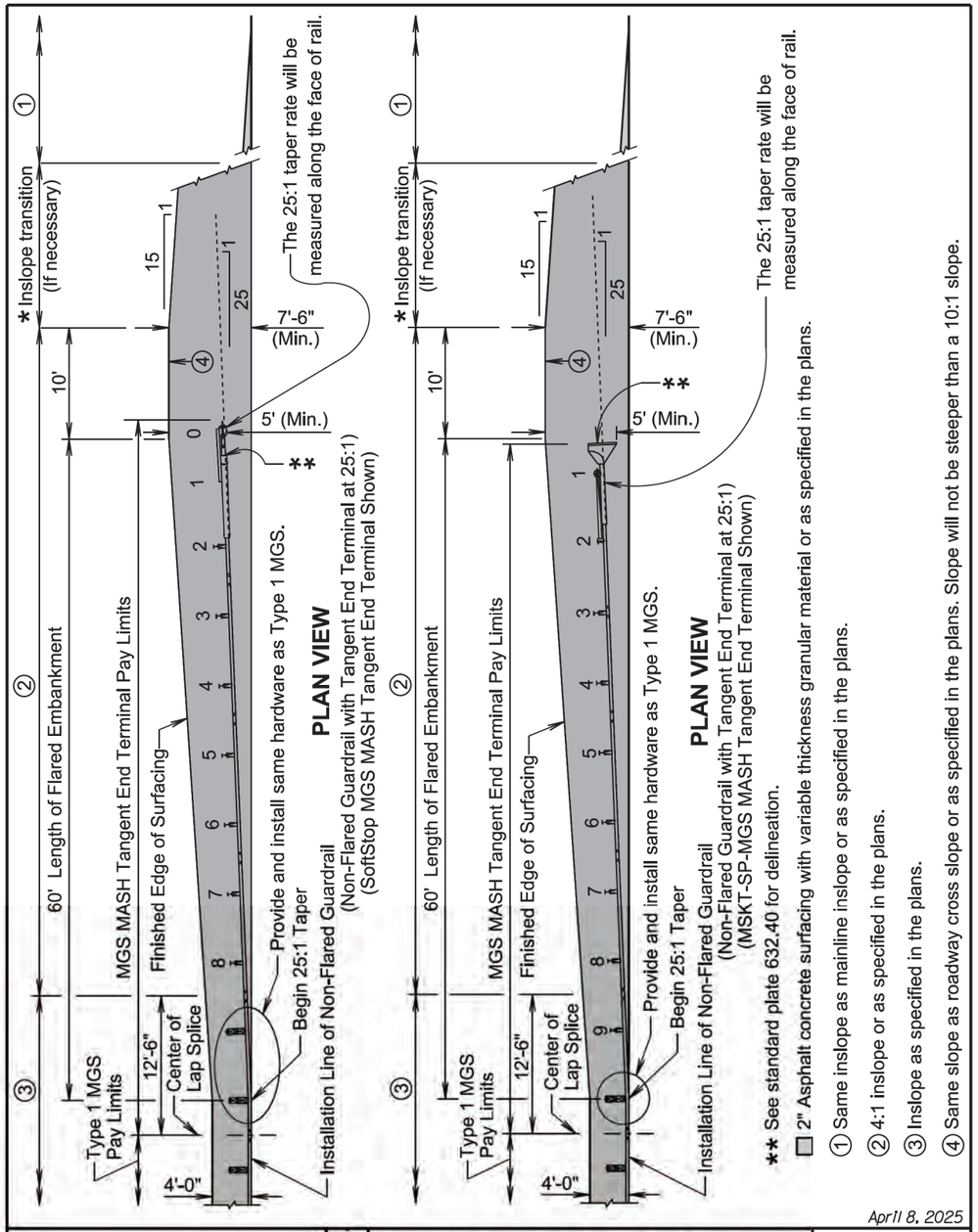
TRANSVERSE SECTION
(SoftStop MGS MASH Tangent End Terminal Shown)



TRANSVERSE SECTION
(MSKT-SP-MGS MASH Tangent End Terminal Shown)

April 8, 2025

Published Date: 2026	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL	PLATE NUMBER 630.89
			Sheet 3 of 3



** See standard plate 632.40 for delineation.

□ 2" Asphalt concrete surfacing with variable thickness granular material or as specified in the plans.

① Same inslope as mainline inslope or as specified in the plans.

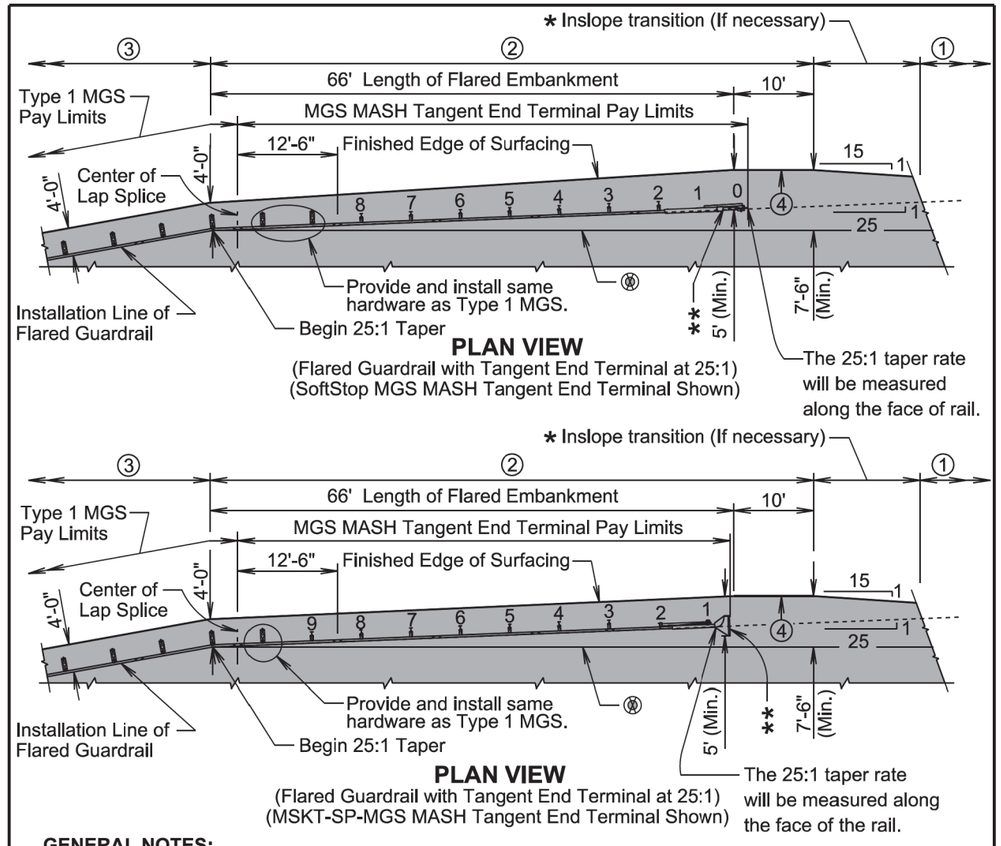
② 4:1 inslope or as specified in the plans.

③ Inslope as specified in the plans.

④ Same slope as roadway cross slope or as specified in the plans. Slope will not be steeper than a 10:1 slope.

April 8, 2025

Published Date: 2026	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL INSTALLED WITH 25:1 TAPER	PLATE NUMBER 630.90	Sheet 1 of 3



GENERAL NOTES:

The MGS MASH tangent end terminals above are for illustrative purpose only. Pay limit length of the MGS MASH tangent end terminal is 62'-6".

* The length of inslope transition varies with the amount of change between inslopes. The length of the transition will change 100' for every whole number change in the inslope. For Example: If the inslope changes from a 5:1 to a 4:1 the length of the inslope transition would be 100'. If the inslope changes from a 6:1 to a 4:1 the length of the inslope transition would be 200'.

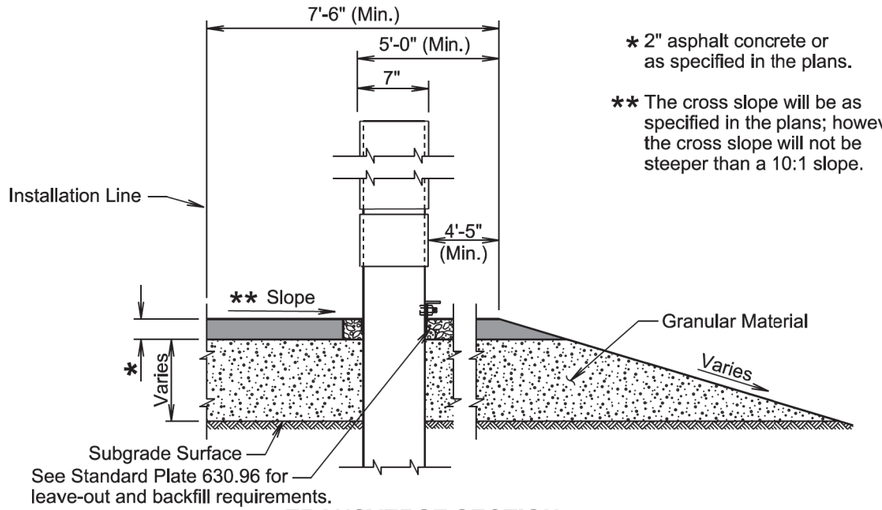
Ⓜ The installation reference line for MGS MASH tangent end terminals will always be parallel to the roadway.

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite."

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

April 8, 2025

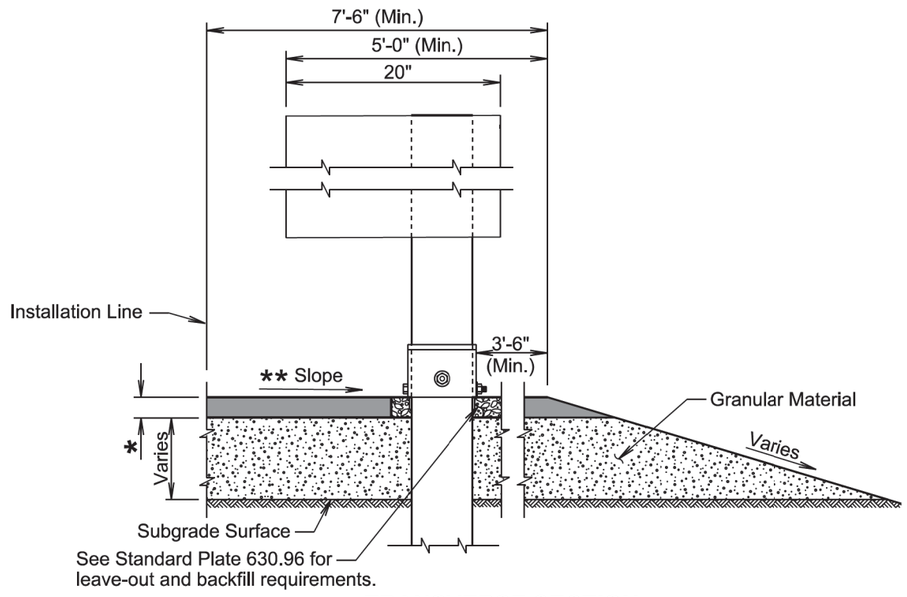
Published Date: 2026	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL INSTALLED WITH 25:1 TAPER	PLATE NUMBER 630.90	Sheet 2 of 3



TRANSVERSE SECTION
(SoftStop MGS MASH Tangent End Terminal Shown)

* 2" asphalt concrete or as specified in the plans.

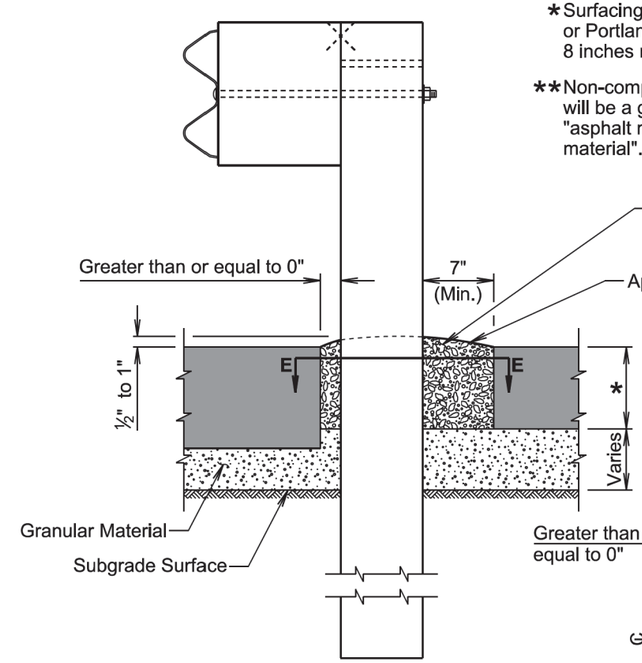
** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.



TRANSVERSE SECTION
(MSKT-SP-MGS MASH Tangent End Terminal Shown)

April 8, 2025

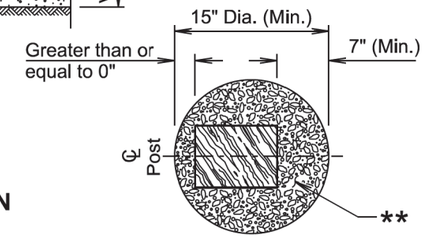
Published Date: 2026	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL INSTALLED WITH 25:1 TAPER	PLATE NUMBER 630.90
			Sheet 3 of 3



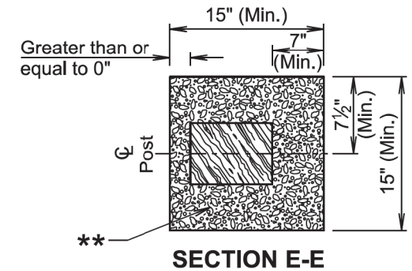
TRANSVERSE SECTION
(Wood post shown for illustrative purpose only)

* Surfacing Material (Asphalt Concrete or Portland Cement Concrete) 8 inches maximum

** Non-compacted backfill material will be a granular material or "asphalt mix and granular base material".



SECTION E-E
(Round option for leave-out and backfill limits)
(Wood post shown for illustrative purpose only)



SECTION E-E
(Square option for leave-out and backfill limits)
(Wood post shown for illustrative purpose only)

GENERAL NOTES:

The leave-out limits may be increased to accommodate construction equipment and tolerances.

When posts are installed in augured or dug holes, the backfill material will be compacted to the bottom of the pavement surfacing material to the satisfaction of the Engineer. The backfill material for the thickness of the pavement surfacing material will be non-compacted.

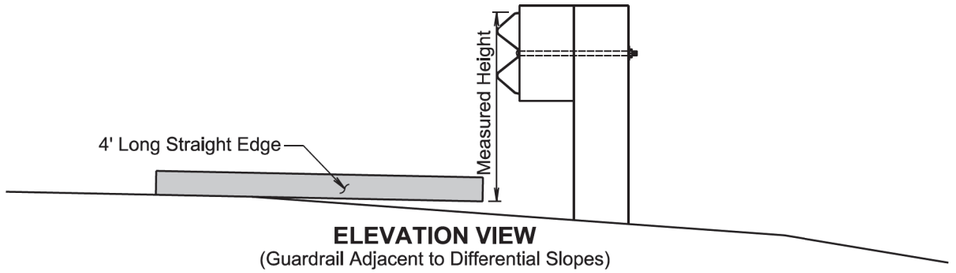
The backfill material will be mounded ½ inch to 1 inch above the top of the adjacent surfacing as illustrated above.

Asphalt for tack will be applied to the surface of the backfill material at the rate of 0.15 to 0.20 gallons per square yard.

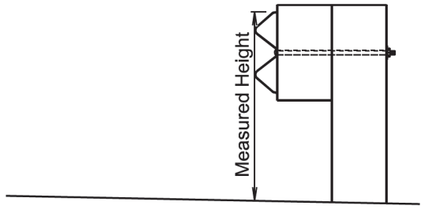
All costs for constructing the leave-out including labor, equipment, and materials which includes the backfill material and tack coat will be incidental to the contract unit price for the respective guardrail contract item.

November 19, 2021

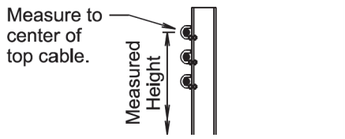
Published Date: 2026	SDDOT	GUARDRAIL POST INSTALLED IN ASPHALT CONCRETE OR PORTLAND CEMENT CONCRETE	PLATE NUMBER 630.96
			Sheet 1 of 1



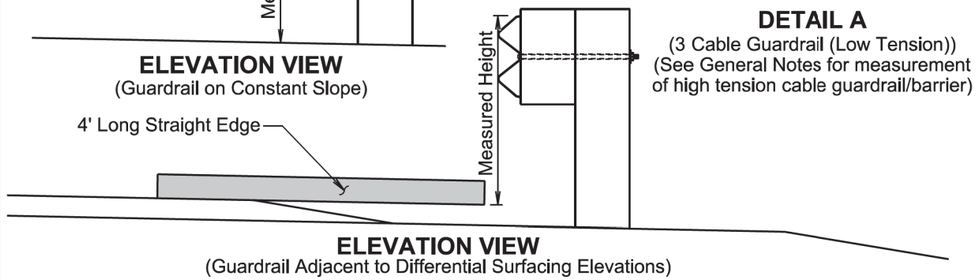
ELEVATION VIEW
(Guardrail Adjacent to Differential Slopes)



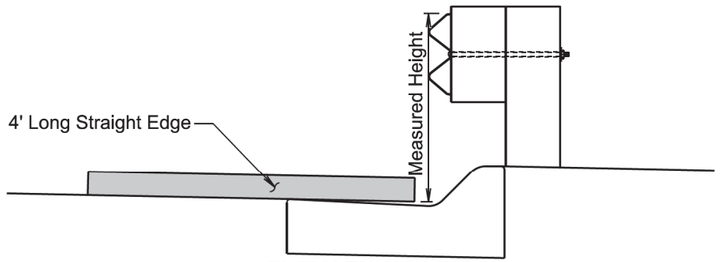
ELEVATION VIEW
(Guardrail on Constant Slope)



DETAIL A
(3 Cable Guardrail (Low Tension))
(See General Notes for measurement of high tension cable guardrail/barrier)



ELEVATION VIEW
(Guardrail Adjacent to Differential Surfacing Elevations)



ELEVATION VIEW
(Guardrail at Curb and Gutter)

GENERAL NOTES:

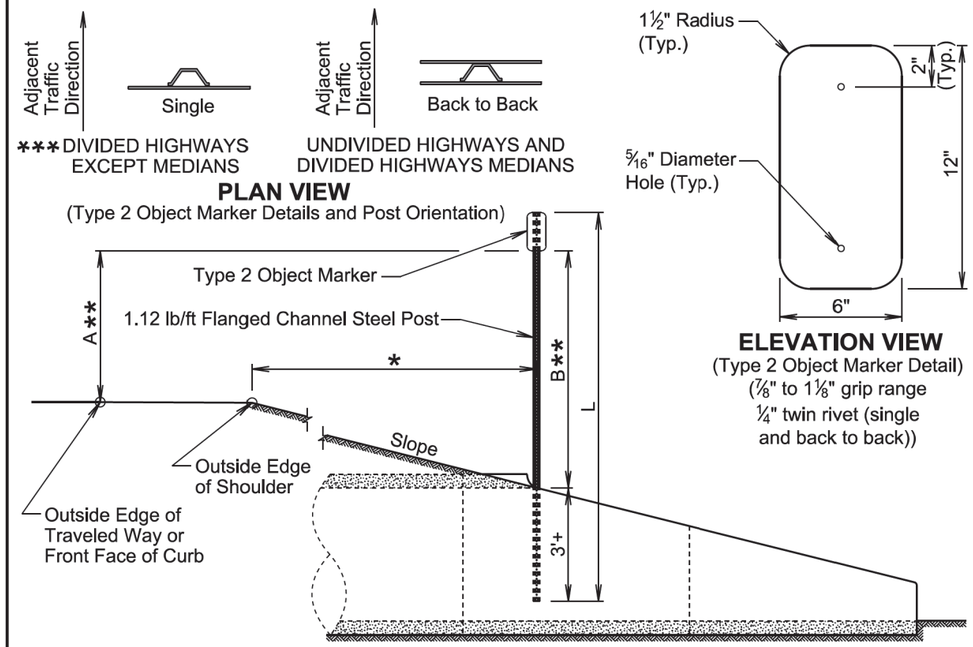
The W Beam guardrail shown is for illustrative purpose. The guardrail height for all types of guardrail systems except for high tension cable guardrail/barrier will be measured in accordance with this standard plate.

When measuring height of 3 cable guardrail (low tension) the height will be measured to the center of the top cable. See Detail A.

The height of high tension cable guardrail/barrier will be measured in accordance with the Manufacturer's installation instructions.

September 14, 2019

Published Date: 2026	SDDOT	***MEASURING GUARDRAIL HEIGHT***	*PLATE NUMBER* 630.99
			Sheet 1 of 1



ELEVATION VIEW
(Type 2 Object Marker Detail)
(⅞" to 1⅛" grip range
¼" twin rivet (single and back to back))

ELEVATION VIEW
(Pipe culvert shown for illustrative purpose.)

TYPE 2 OBJECT MARKER POST LENGTHS

OFFSET (*)		1'	2'	3'	4'	5'	6'	7'	8'	Greater Than 8'
		POST LENGTH (L)								
SLOPE	3:1	8'-6"	8'-9"	9'-3"	9'-6"	9'-9"	10'-3"	10'-6"	10'-9"	8'-0"
	4:1	8'-6"	8'-9"	9'-0"	9'-3"	9'-9"	9'-9"	10'-0"	10'-3"	8'-0"
	5:1	8'-3"	8'-6"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	9'-9"	8'-0"
	6:1	8'-3"	8'-6"	8'-9"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	8'-0"

GENERAL NOTES:

*** The type 2 object marker may be installed back to back when specified in the plans.

Post Length L was calculated based on a shoulder width of 6 feet at a crosslope of 4 percent and L was rounded up to the nearest 3 inches.

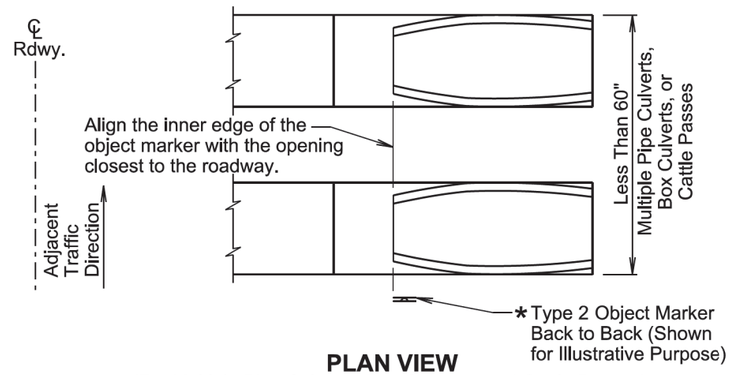
** Dimension A is 4 feet when the Offset * is 8 feet and less. Dimension B is 4 feet when Offset * is greater than 8 feet.

The type 2 object marker and the 1.12 lb/ft flanged channel steel post will be in conformance with Specifications Section 982.2 J.

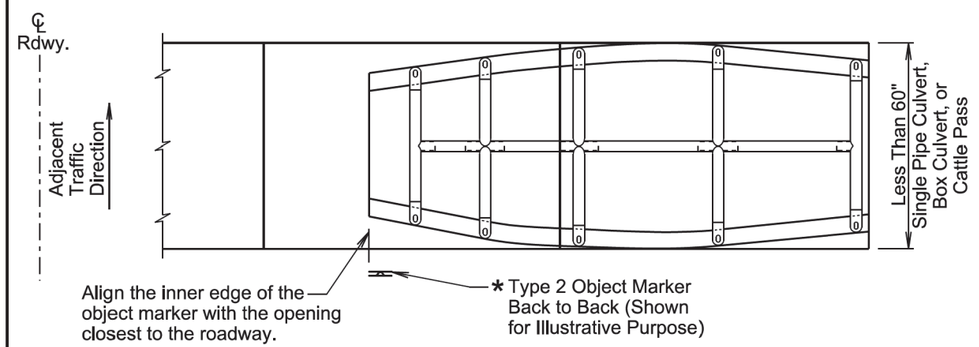
Payment for the type 2 object marker will be in conformance with Specification Section 632.5 B.

December 23, 2019

Published Date: 2026	SDDOT	***TYPE 2 OBJECT MARKER (DIRECT DRIVE)***	*PLATE NUMBER* 632.01
			Sheet 1 of 1



PLAN VIEW
(For Multiple Pipe Culverts, Box Culverts, and Cattle Passes)
(Pipe culverts shown for illustrative purpose.)
(Embankment is not shown.)



PLAN VIEW
(For Single Pipe Culvert, Box Culvert, and Cattle Pass)
(Pipe culvert shown for illustrative purpose.)
(Embankment is not shown.)

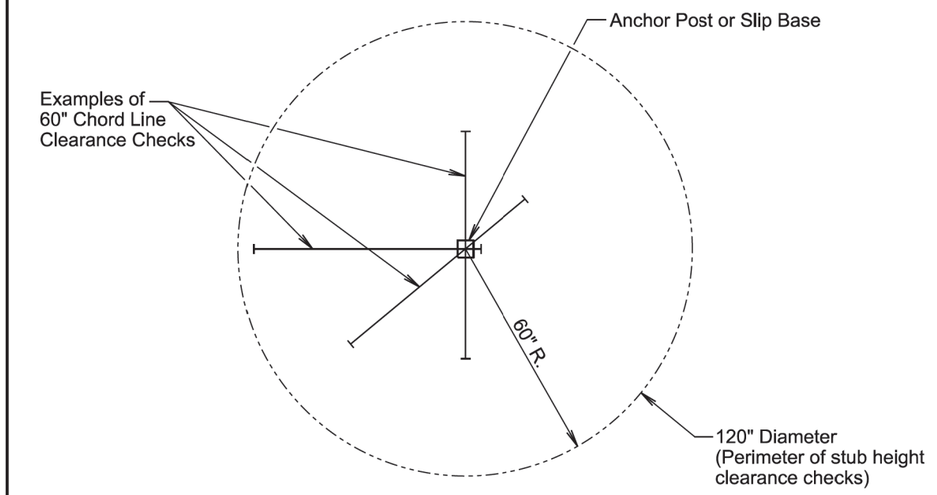
GENERAL NOTES:

This standard plate will be used in conjunction with standard plate 632.01.

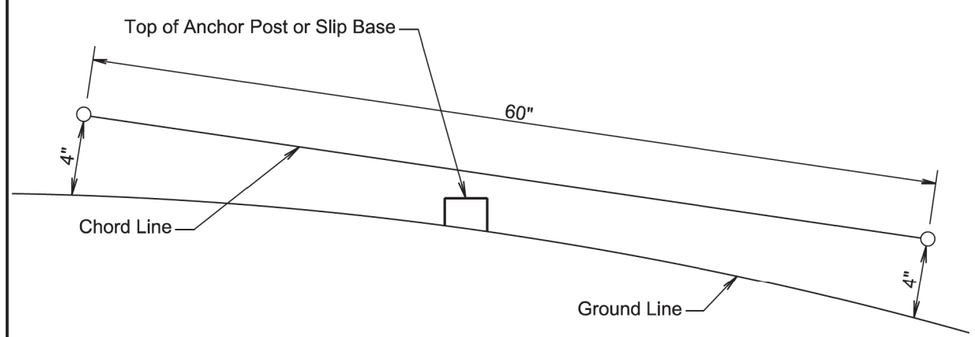
* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

December 23, 2019

Published Date: 2026	SDDOT	TYPE 2 OBJECT MARKER AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES (Less than 60" Overall Width)	PLATE NUMBER 632.03 Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

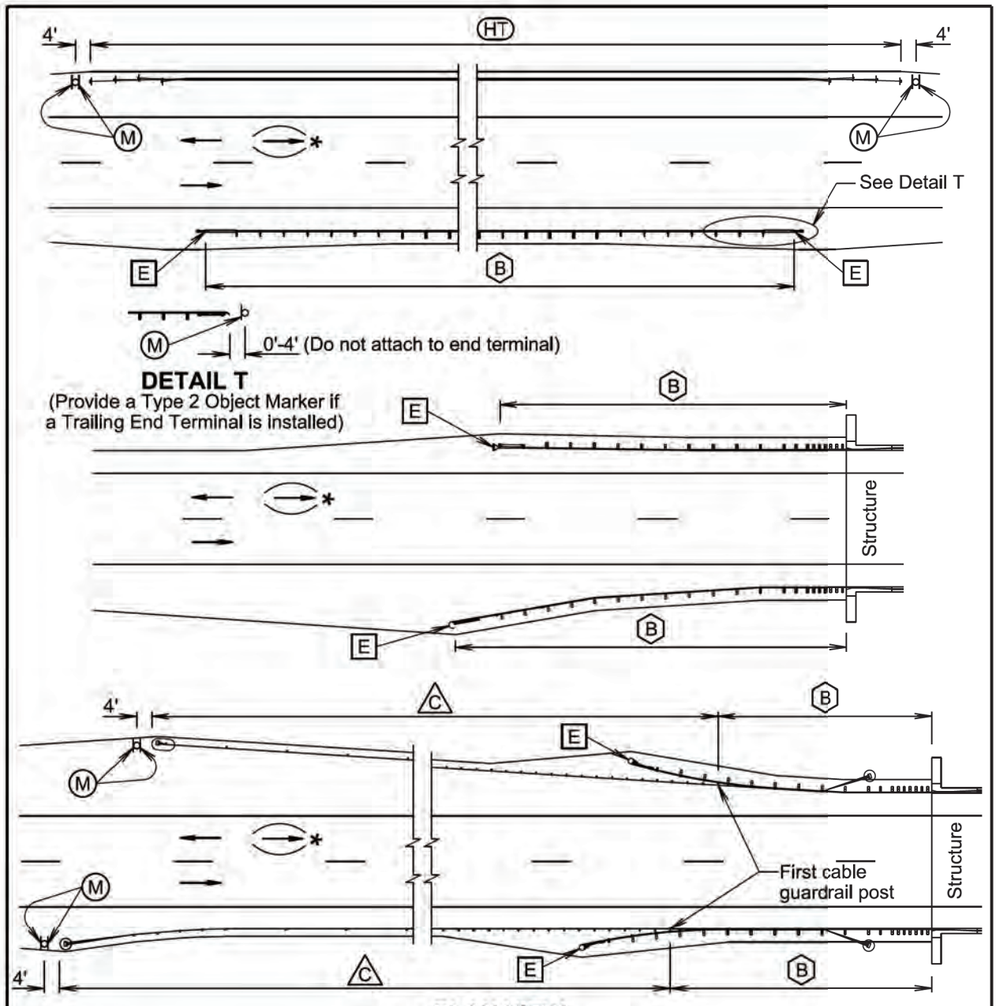
GENERAL NOTES:

The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

January 22, 2021

Published Date: 2026	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 632.18 Sheet 1 of 1



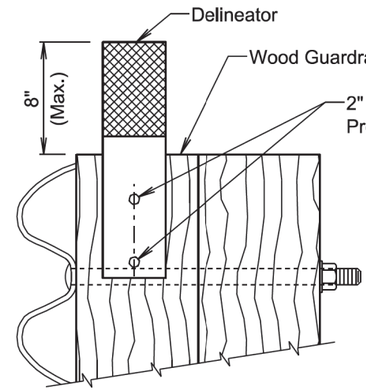
PLAN VIEW
(Typical Guardrail Layouts)

- (B) Steel Beam Guardrail Delineation
- [E] Guardrail End Terminal Object Marker
- (C) 3 Cable Guardrail (Low Tension) Delineation
- (HT) High Tension Cable Guardrail Delineation
- (M) Type 2 Object Marker

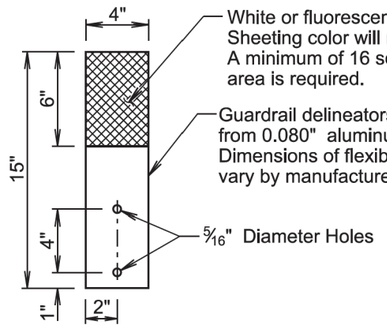
*For two-way traffic, install delineation at the opposite end of structure the same as shown. Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

April 8, 2025

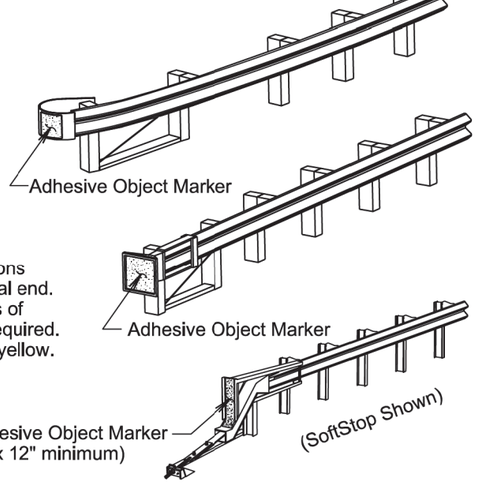
Published Date: 2026	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40
			Sheet 1 of 4

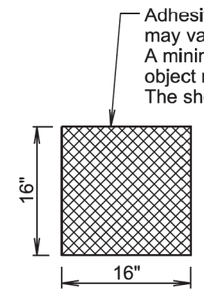


(B) STEEL BEAM GUARDRAIL DELINEATION



DELINEATOR
(For Steel Beam Guardrail)



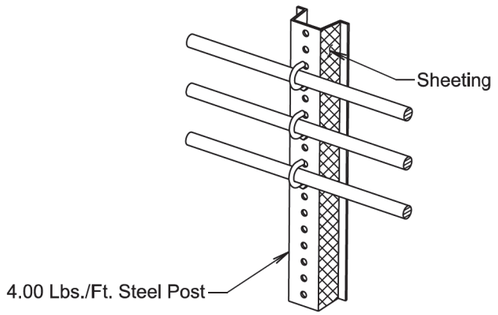


ADHESIVE OBJECT MARKER

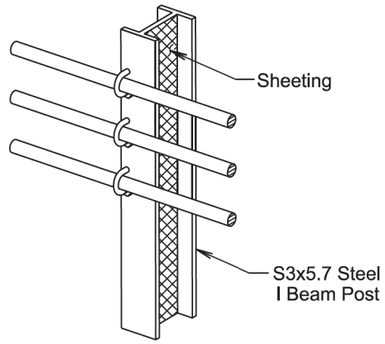
[E] GUARDRAIL END TERMINAL OBJECT MARKER

April 8, 2025

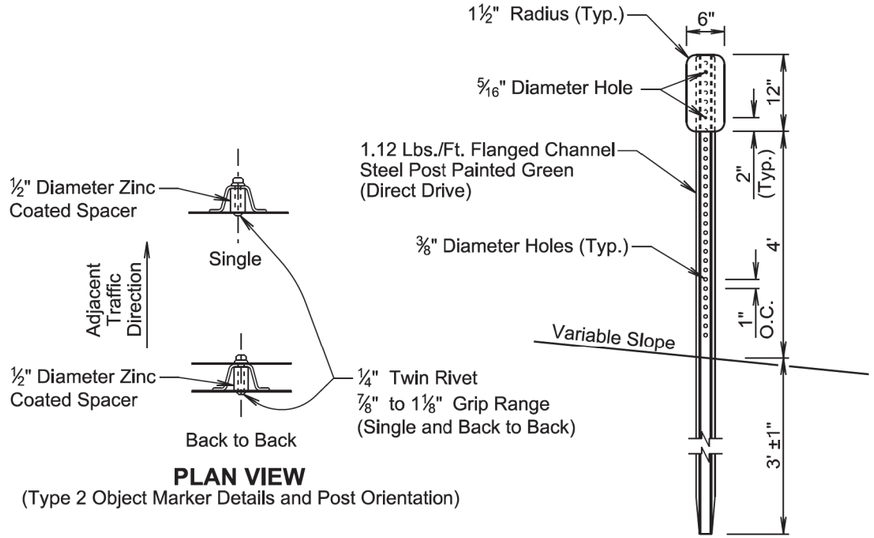
Published Date: 2026	SDDOT	DELINEATION GUARDRAIL	PLATE NUMBER 632.40
			Sheet 2 of 4



Ⓒ 3 CABLE GUARDRAIL (LOW TENSION) DELINEATION



Ⓒ 3 CABLE GUARDRAIL (LOW TENSION) DELINEATION



PLAN VIEW
(Type 2 Object Marker Details and Post Orientation)

ELEVATION VIEW
Ⓜ (Type 2 Object Marker)
(For Marking 3 Cable Guardrail (Low Tension) Anchor, High Tension Cable Guardrail Anchor, and Trailing End Terminal)

April 8, 2025

Published Date: 2026	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40
			Sheet 3 of 4

GENERAL NOTES:

The delineation of high tension cable guardrail will be reflective sheeting placed back to back on every third post cap or cable spacer. Maximum spacing of delineation will not exceed 35 feet. The sheeting will be type XI in conformance with ASTM D4956. The color of the reflective sheeting will be the same as the nearest pavement marking.

The delineators for steel beam guardrail and sheeting on 3 cable guardrail (low tension) posts will be covered with a minimum of 16 square inches of reflective sheeting. The reflective sheeting will be type XI in conformance with ASTM D4956. Along two-way roadways the sheeting will be on both sides of the delineators and guardrail posts and will be white in color. For one-way roadways the sheeting will only be required on the side facing traffic and the color will be the same as the nearest pavement marking, yellow on the left side of the roadway and white on the right side.

When steel beam guardrail is attached to a bridge the first delineator will be attached to the post nearest the bridge.

At bridges with guardrail less than 200 feet in length, a minimum of 4 delineators will be placed in addition to the end terminal yellow object marker. The spacing between the delineators will be approximately one third of the length of the guardrail.

At bridges with guardrail 200 feet and greater in length, including bridges that have steel beam guardrail transitioning to 3 cable guardrail (low tension), the delineators will be placed at a spacing of approximately 50 feet. Delineation will extend throughout the length of the guardrail system.

Steel beam guardrail that is not attached to a bridge and is less than 200 feet in length, a minimum of 4 delineators will be placed in addition to the end terminal yellow object markers. The spacing between the delineators will be approximately one third of the length of the guardrail.

Steel beam guardrail that is not attached to a bridge and is 200 feet and greater in length, including steel beam guardrail transitioning to 3 cable guardrail (low tension), the delineators will be placed at a spacing of approximately 50 feet. Delineation will extend throughout the length of the guardrail system.

All costs for furnishing and installing single or back to back guardrail delineation on 3 cable guardrail and steel beam guardrail will be included in the contract unit price per each for "Guardrail Delineator".

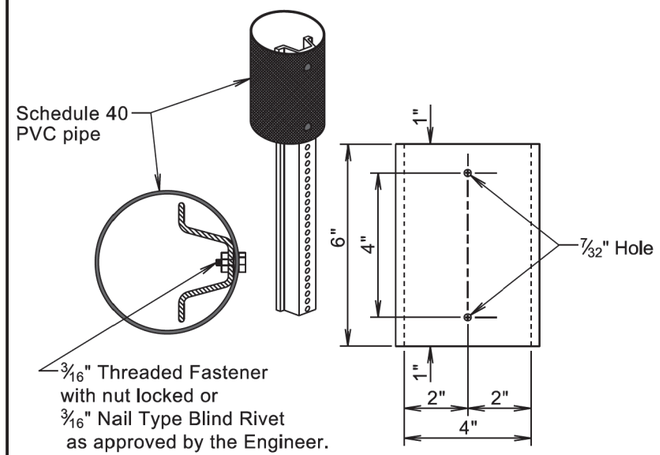
All costs for furnishing and installing the reflective sheeting on the cable spacers or post caps for the high tension cable guardrail will be incidental to the respective high tension cable guardrail contract item.

An adhesive object marker will be placed on the end of the W beam guardrail or MGS end terminal. The adhesive object marker dimensions may vary due to the shape of the terminal end. A minimum of 256 square inches of object marker reflective sheeting area is required on end terminals with sufficient surface area. Other end terminals (SoftStop) will require an adhesive object marker with a minimum size of 6" x 12". The reflective sheeting will be fluorescent yellow type XI sheeting in conformance with ASTM D4956. All costs for furnishing and installing the adhesive object marker will be incidental to various contract items.

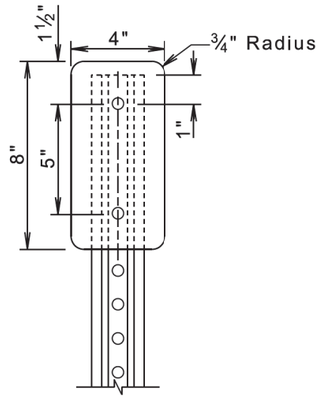
A type 2 object marker will be placed such that the edges of the type 2 object marker and the 3 cable guardrail (low tension) anchor, high tension cable guardrail anchor, or the trailing end terminal that are nearest to the roadway will be installed in line with the same lateral offset from the traveled way at the location as noted on sheet 1 of this standard plate. The type 2 object marker (6" x 12") will have fluorescent yellow type XI sheeting in conformance with ASTM D4956. All costs for furnishing and installing the type 2 object marker including the steel post, 6" x 12" reflective panel, and hardware will be included in the contract unit price per each for "Type 2 Object Marker" for single-sided and "Type 2 Object Marker Back to Back" for back to back type 2 object markers.

April 8, 2025

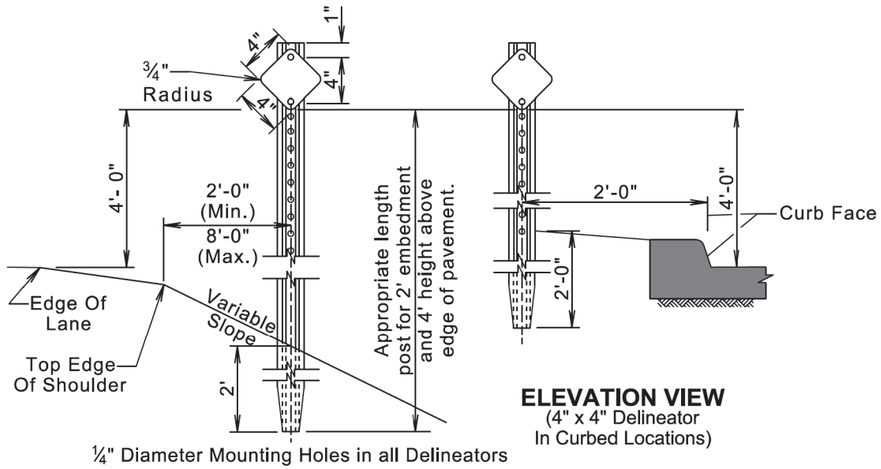
Published Date: 2026	SDDOT	DELINEATION OF GUARDRAIL	PLATE NUMBER 632.40
			Sheet 4 of 4



ELEVATION VIEW
(4" Tubular delineator
mounted on post)



ELEVATION VIEW
(4" x 8" Delineator)



ELEVATION VIEW
(4" x 4" Delineator
In Curbed Locations)

¼" Diameter Mounting Holes in all Delineators

ELEVATION VIEW
(4" x 4" Delineators)

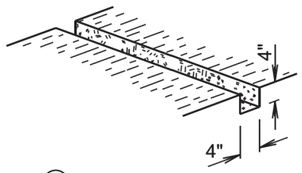
GENERAL NOTES:

Back-to-back delineation is required for two-way traffic, single-sided delineation for one-way traffic.

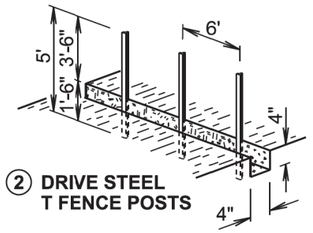
March 31, 2024

Published Date: 2026	SDDOT	***DELINEATOR INSTALLATION DETAIL***	***PLATE NUMBER*** 632.42
			Sheet 1 of 1

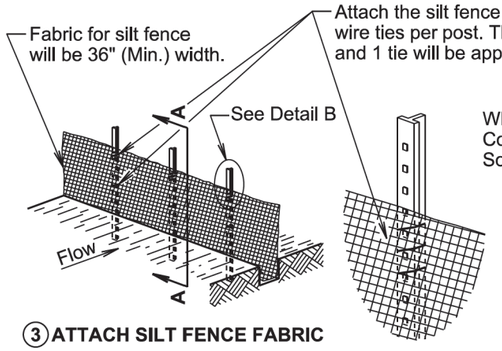
MANUAL HIGH FLOW SILT FENCE INSTALLATION



(1) EXCAVATE TRENCH

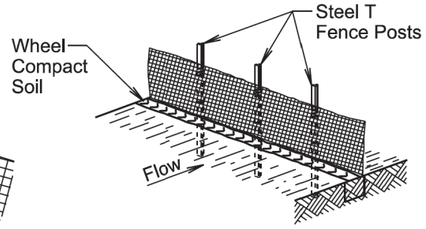


(2) DRIVE STEEL T FENCE POSTS

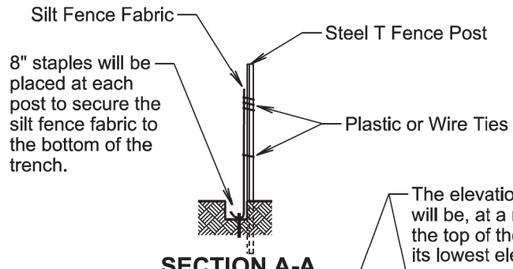


(3) ATTACH SILT FENCE FABRIC

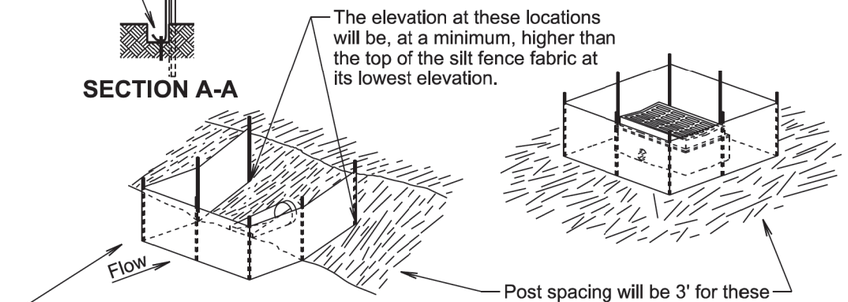
DETAIL B



(4) BACKFILL TRENCH AND WHEEL COMPACT SOIL



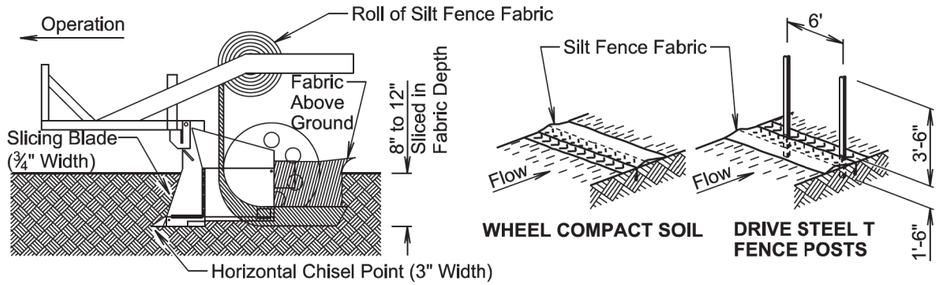
SECTION A-A



February 14, 2020

Published Date: 2026	SDDOT	***HIGH FLOW SILT FENCE***	***PLATE NUMBER*** 734.05
			Sheet 1 of 2

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION

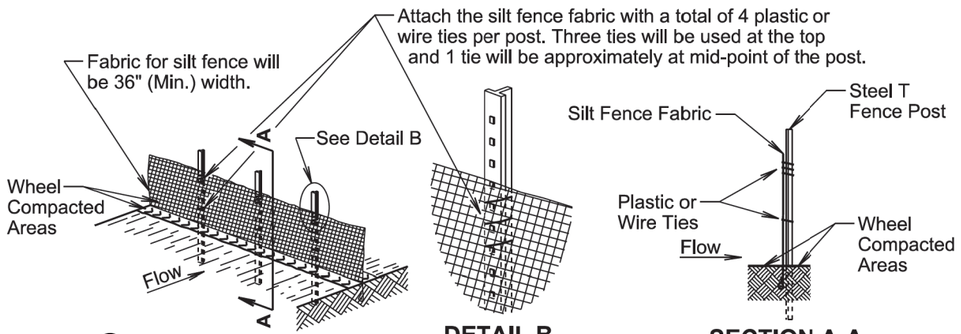


(1) INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.

WHEEL COMPACT SOIL

DRIVE STEEL T FENCE POSTS

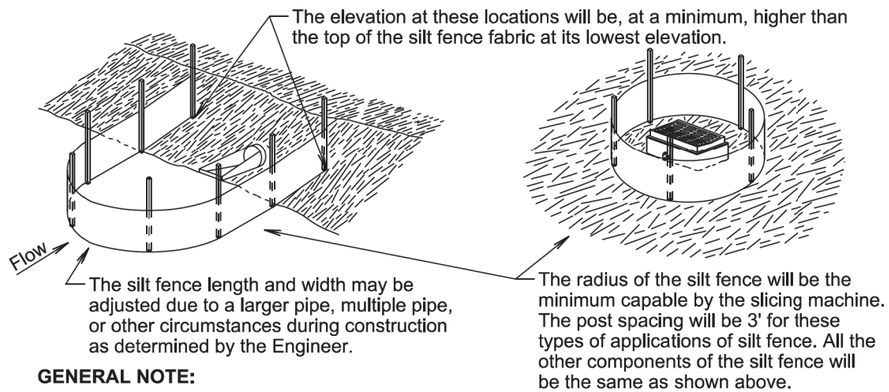
(2) WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.



(3) ATTACH SILT FENCE FABRIC

DETAIL B

SECTION A-A



GENERAL NOTE:

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

February 14, 2020

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