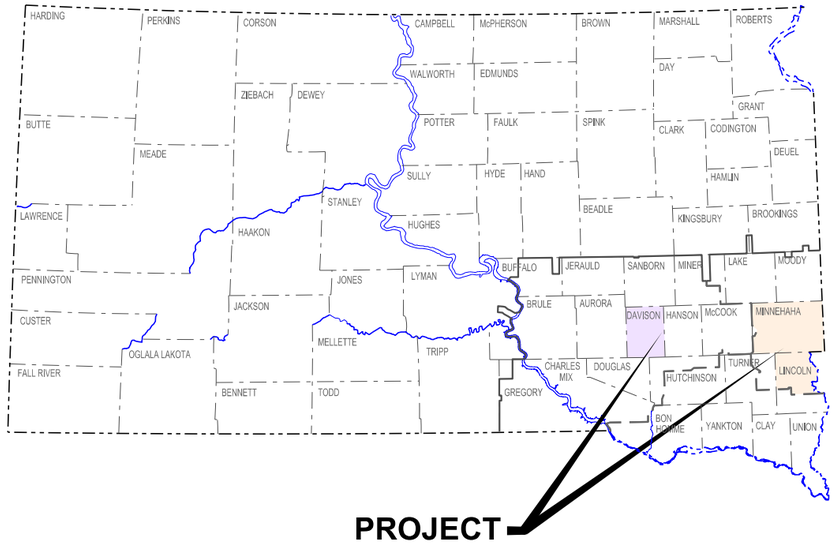
STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT IM 0023(238)
MITCHELL REGION

SLOPE PROTECTION & BRIDGE BERM REPAIR UNDER STRUCTURES
PCN 090T

INDEX OF SHEETS



Davison County SD37
NBL & SBL @ MRM 72.93 ADT (2024) 6802

Lincoln County I-229
SBL @ MRM 0.79 to 0.82 ADT (2024) 19,785

Minnehaha County I-229
SBL & NBL @ MRM 7.84 ADT (2024) 14,649

Minnehaha County I-90
EBL & WBL @ MRM 402.55 ADT (2024) 15,553

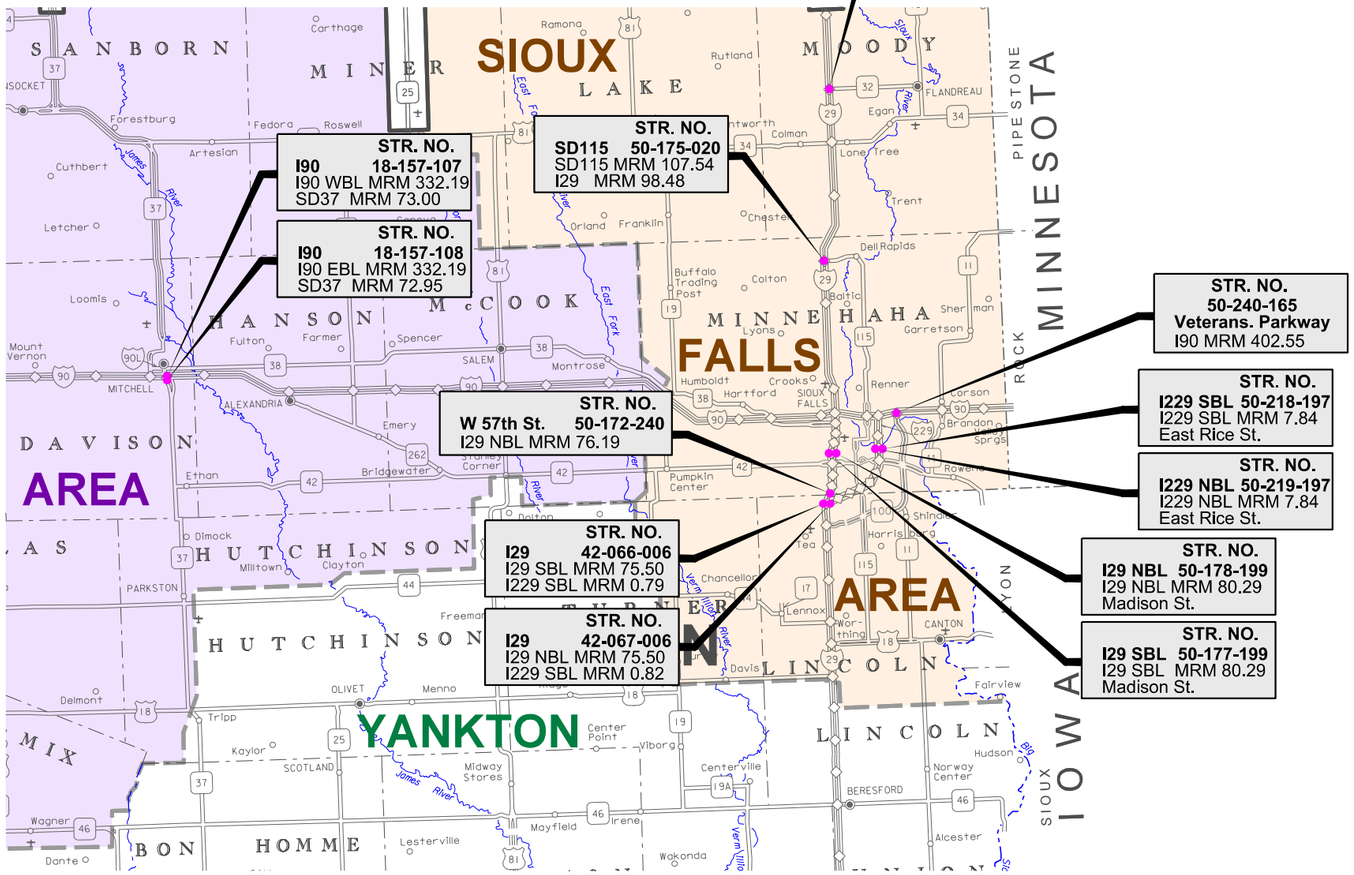
Minnehaha County I-29
SBL & NBL @ MRM 76.19 ADT (2024) 29,860

Minnehaha County I-29
SBL & NBL @ MRM 82.41 ADT (2024) 23,855

Minnehaha County I-29
SBL & NBL @ MRM 98.48 ADT (2024) 10,190

Moody County I-29
SBL & NBL @ MRM 114.83 ADT (2024) 7,785

STORM WATER PERMIT
(None required)



ESTIMATE OF QUANTITIES

REV. 08/28/25 pm

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0023(238)	2	16

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
120E0600	Contractor Furnished Borrow Excavation	25	CuYd
120E3120	Bridge Berm Repair	2	Each
634E0010	Flagging	20.0	Hour
634E0110	Traffic Control Signs	1,066.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	6	Each
634E0420	Type C Advance Warning Arrow Board	2	Each
634E1255	Contractor Furnished Speed Monitoring Radar Trailer	2	Each
734E2022	Bridge Berm Slope Protection, Quarried Aggregate	578.0	SqYd
734E2023	Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate	8,601.0	SqYd
831E0100	Type A Drainage Fabric	65	SqYd
998E0100	Railroad Protective Insurance	Lump Sum	LS

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 10-1-25 Version, Required Provisions, and Special Provisions as included in the Proposal. The Standard Specifications for Roads and Bridges is available for download and viewing at https://dot.sd.gov/doing-business/contractors/standard-specifications.

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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 B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

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.

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 D: WATER QUALITY STANDARDS

COMMITMENT D2: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to Section 4.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in Section 3.4 of the permit.

Refer to Commitment D1: Surface Water Quality for stream classification.

Action Taken/Required:

If construction dewatering is required and this project is not required to be covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the Contractor will obtain the General Permit for Temporary Discharge Activities from the DANR Surface Water Program, 605-773-3351.

<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_TemporaryDischargeNOI2018Fillable.pdf >

The Contractor will provide a copy of the approved permit or the submitted dewatering information to the Project Engineer prior to proceeding with any dewatering activities. The approved permit or submitted dewatering information must be kept on-site and as part of the project records.

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at:

<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/swdpermitting/Ereporting.aspx>

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

ENVIRONMENTAL COMMITMENTS

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:

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

State Historic Preservation Office (SHPO or THPO) concurrence has not been obtained for this project.

Action Taken/Required:

All earth disturbing activities 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.

The Contractor is responsible 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.

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25; the Contractor will contact the Project Engineer to determine if project changes are necessary to avoid utility impacts.

CONTROL OF ACCESS

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

The Contractor will be responsible for 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.

SLOPE CLEARING

Prior to slope rehabilitation, vegetation on the existing slope protection area will be removed by the Contractor, to the satisfaction of the Engineer.

The Contractor may spray the existing vegetation in aide of removal. It will be to the satisfaction of the Engineer if the killed vegetation will need to be removed if it has not decayed.

Cost for this work will be included in the contract unit price per square yard for Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate.

BRIDGE BERM SLOPE PROTECTION REHABILITATION, COATED CRUSHED AGGREGATE

1. This work will consist of repairing the existing coated crushed aggregate slope protection for control and prevention of berm erosion.

2. The aggregate used in the crushed aggregate slope protection will conform to the requirements of Section 820 of the Construction Specifications for coarse aggregate for Class A Concrete (Size #1).

3. The asphalt material used in the crushed aggregate slope protection will be either Asphalt Type MC-70 or MC-250, or emulsified Asphalt Type RS-1, RS-2, CRS-1, or CRS-2 meeting the requirements of Section 890 of the Construction Specifications and AASHTO M82, AASHTO M140, and AASHTO M208 respectively.

4. The surface upon which the slope protection is to be placed will be smooth, uniform, and free from foreign material. The top surface of the slope protection will conform to the existing dimensions, elevations, and slopes.

5. At locations identified by the Engineer, the Contractor will repair the existing crushed aggregate slope protection. The crushed aggregate will be shaped and compacted to provide a stable, smooth, and uniform surface. It is anticipated that 11 tons of crushed aggregate will be required for repairing the existing bridge berm slope protection.

6. The asphalt material will be applied at a rate sufficient to assure penetration and binding of the aggregate in the upper 2 inches of the slope protection. (Estimated Rate = 1.3 gallons per square yard.) The surfaces of the adjacent structure and retaining walls will be protected from spattering or discoloration from the asphalt material. The entirety of the existing crushed aggregate slope protection will be re-coated with asphalt. The Contractor shall ensure that all surfaces of the crushed aggregate of entirely covered. It is anticipated that 8,601 sqyds of asphalt coating will be required.

7. Payment for crushed aggregate slope protection rehabilitation will be at the contract unit price per square yard for Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate and will be full compensation for slope paving, including furnishing all materials, labor, and equipment necessary or incidental to the satisfactory completion of this work. Payment will be for plans quantity.

CONTRACTOR FURNISHED BORROW EXCAVATION

Erosion that is below the crushed rock layer, identified by the Engineer, will be repaired with Contactor furnished borrow excavation material. It is anticipated that 25 cuyds of Contractor furnished borrow excavation material will be required and will be placed at locations satisfactory to the Engineer.

The Contractor will provide a suitable site for Contractor furnished borrow excavation material. The Contractor is responsible for obtaining 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.

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.

DRAINAGE FABRIC

Drainage Fabric that has been damaged or is missing will be replaced in areas where erosion has occurred to the satisfaction of the Engineer.

Included in the Estimate of Quantities are 65 sqyds of Type A Drainage Fabric.

BRIDGE BERM REPAIR At Str. No. 51-066-100

1. The bridge berms have erosion channels and settlement voids on the berm slope. The bridge berms will be rebuilt and reshaped to their original template.

2. Fill voids under the abutments and fill in erosion channels on the berm slope. Reconstruct the berms to at least 1-foot above the bottom of the abutment backwall. The berm slope will be benched into stable embankment during reshaping and reconstruction. The soil will be placed in horizontal lifts perpendicular to the centerline of the structure.

3. Shape the fill in front of the wing walls to divert runoff from the inslopes away from the face of the berm slope. Reshape the inslopes from the wing walls to the end of the sleeper slab.

4. At the upper part of the berm slope, clearance between the structure and berm will prohibit the use of large compaction equipment. The soil in this area will be compacted using hand operated compaction equipment. Berm material will be placed in reduced lift thicknesses with adequate moisture to obtain density requirements.

5. Soil used to reconstruct the berm slope will be furnished by the Contractor and approved by the Engineer. The soil will have 100% passing the 1 ½ inch sieve, a maximum of 70% passing the #4 sieve, have a maximum Liquid Limit (LL) of 45 and a Plastic Index (PI) greater than 10 but less than 25. The Contractor will be responsible for one gradation, LL and PI test for each borrow source for berm reconstruction. The test results will be supplied to the Engineer in writing.

6. Compaction of the reconstructed berm and inslopes will be governed by the Ordinary Compaction Method.

7. No informational quantities are available. The Contractor will visit the site prior to determine necessary quantities.

8. The cost of the berm reconstruction will be incidental to the contract unit price per each for Bridge Berm Repair. This payment will be full compensation for furnishing all materials, labor, tools, and equipment necessary or incidental to the reconstruction of the bridge berm.

QUARRIED AGGREGATE SLOPE PROTECTION At Str. No. 51-066-100

1. This work will consist of paving the bridge berm slopes with crushed aggregate slope protection for control and prevention of berm erosion.

2. The aggregate used in the crushed aggregate slope protection will be composed of durable fragments of quarried quartzite or an approved alternative. The material will be pink in color and well graded with 90 to 100% passing a 6-inch sieve and 0 to 10% passing a 2-inch sieve.

3. The Type A Drainage Fabric will be non-woven.

4. The surface upon which the slope protection is to be placed will be smooth, uniform, and free from foreign material. The top surface of the slope protection will conform to the dimensions, elevations, and slopes approved by the Engineer.

5. The crushed aggregate will be shaped and compacted to provide a stable, smooth, and uniform surface.

6. Payment for crushed aggregate slope protection will be at the contract unit price per square yard for Bridge Berm Slope Protection, Quarried Aggregate and will include furnishing all materials, labor, and equipment necessary or incidental to the satisfactory completion of this work. Payment will be for plans quantity.

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the 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.

GENERAL TRAFFIC CONTROL

Unless otherwise stated in these plans, no work will be allowed during hours of darkness.

Lane closures will be allowed only when required for manned workspaces or haul of materials into the work area. The lanes will be opened to traffic when manned workspaces or haul of materials is not in progress.

Lane closure will not be allowed during the morning peak hours from 7am to 9am and evening peak hours from 4pm to 6pm at all Exits in the Sioux Falls area.

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.

Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to traffic or Contractor's equipment will be repaired at no additional cost to the State.

During construction, all vehicles, equipment, and materials being used must be located within the workspace.

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 construction vehicles utilize the maintenance crossovers or the Interstate median to exit or enter Interstate traffic.

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. 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.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R2-1	SPEED LIMIT 65	4	36" x 48"	12.0	48.0
R2-1	SPEED LIMIT 80	2	36" x 48"	12.0	24.0
R2-1	SPEED LIMIT 45	4	36" x 48"	12.0	48.0
W3-4	BE PREPARED TO STOP	4	48" x 48"	16.0	64.0
W3-5	SPEED REDUCTION AHEAD 65 MPH	4	48" x 48"	16.0	64.0
W3-5	SPEED REDUCTION AHEAD 45 MPH	4	48" x 48"	16.0	64.0
W3-5	SPEED REDUCTION AHEAD (__ MPH)	4	48" x 48"	16.0	64.0
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
W16-2P	___ FEET (supplemental distance plaque)	4	30" x 24"	5.0	20.0
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
W20-7	FLAGGER (symbol)	6	48" x 48"	16.0	96.0
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	12	48" x 24"	8.0	96.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			1066.0

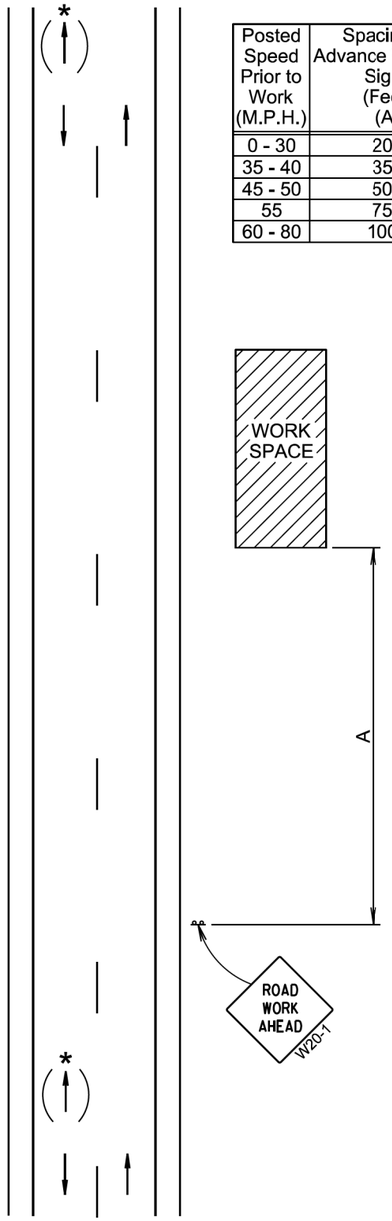
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



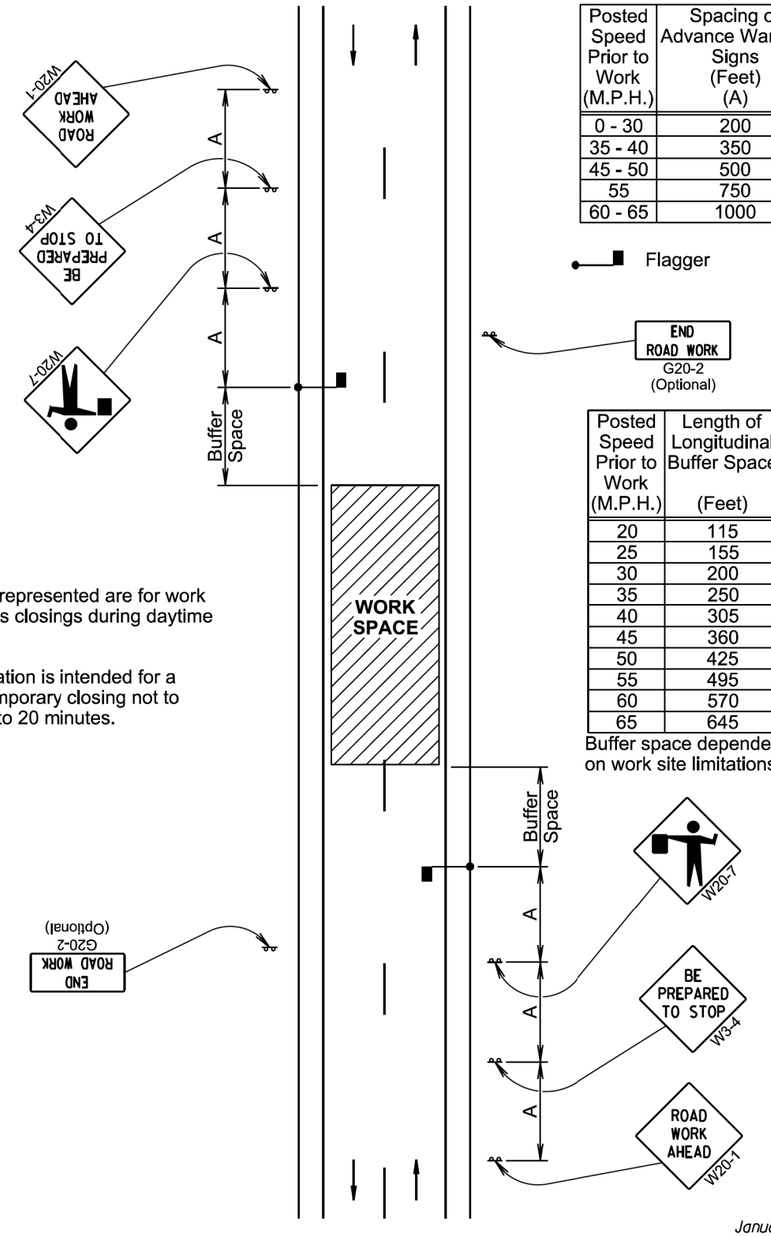
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000

January 22, 2021

Published Date: 2026	SDDOT	WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
			Sheet 1 of 1

Conditions represented are for work that requires closings during daytime hours only.

This application is intended for a planned temporary closing not to exceed 15 to 20 minutes.



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

Flagger

END ROAD WORK
G20-2
(Optional)

Posted Speed Prior to Work (M.P.H.)	Length of Longitudinal Buffer Space (Feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

Buffer space dependent on work site limitations.

January 22, 2021

Published Date: 2026	SDDOT	TEMPORARY ROAD WORK	PLATE NUMBER 634.30
			Sheet 1 of 1

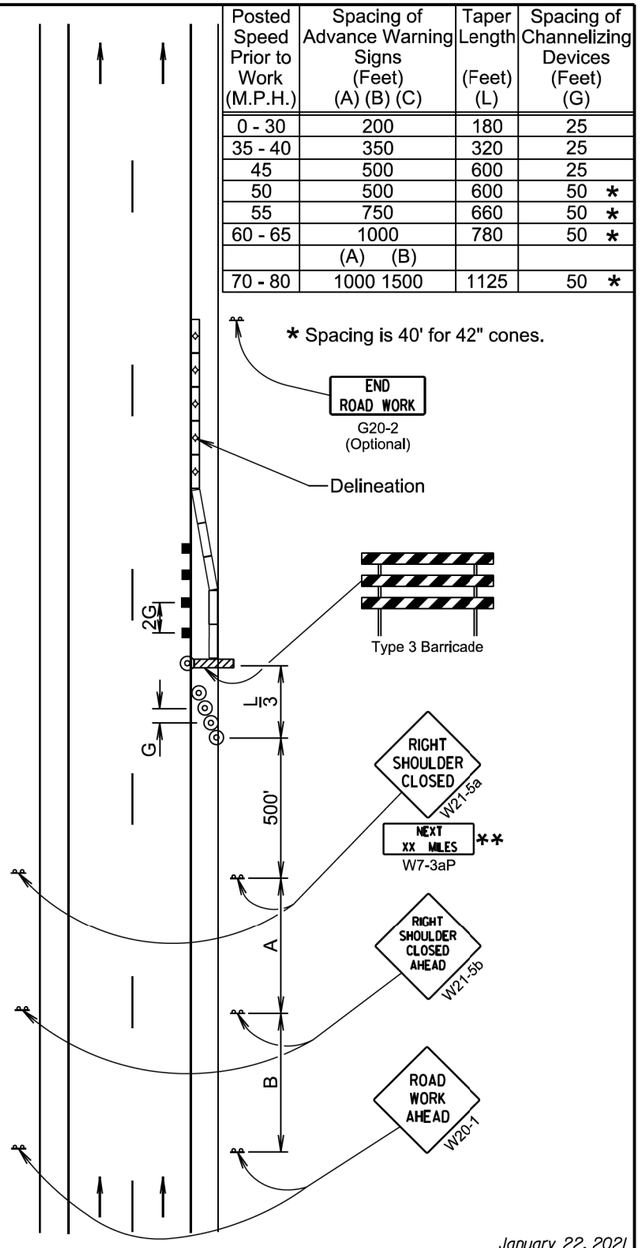
◎ Reflectorized Drum
■ Channelizing Device
▭ Movable Concrete Barrier
** For distances ½ mile or greater.

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

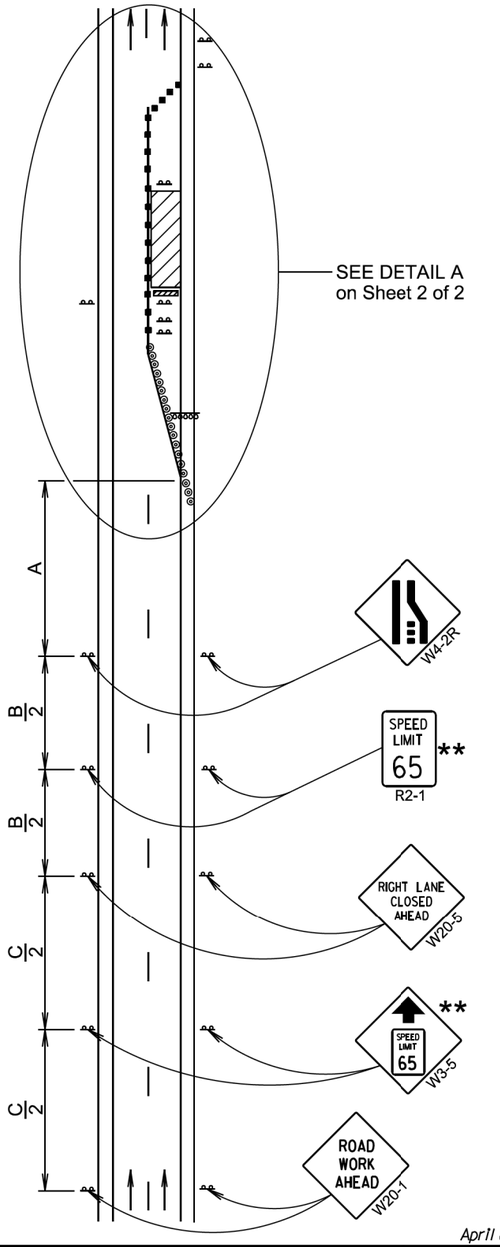
** Speed appropriate for location.

◎ 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

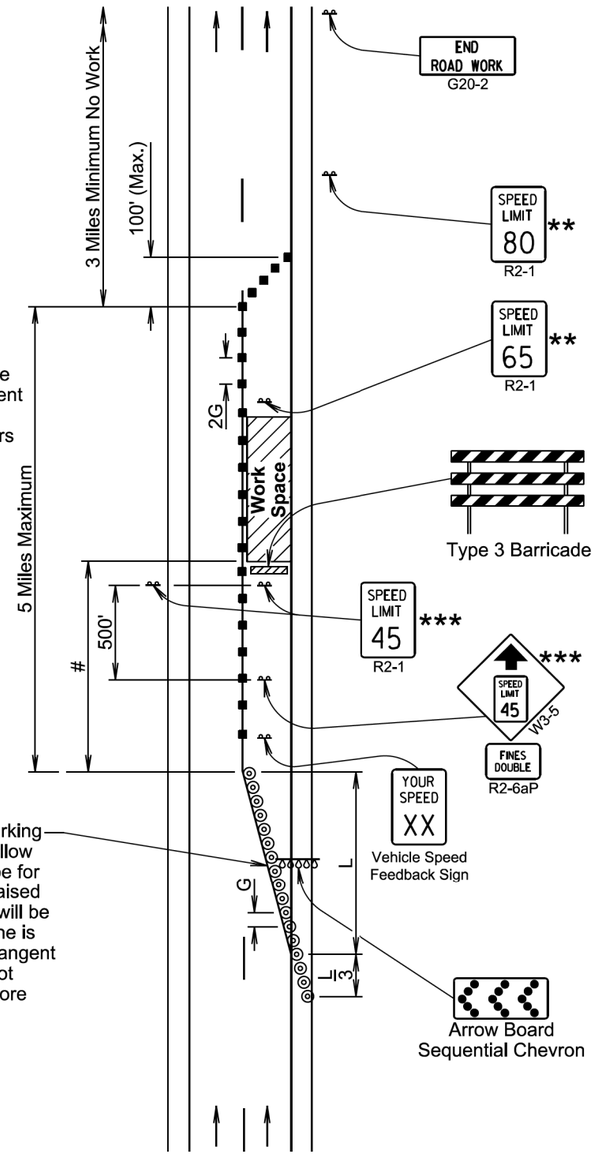
■ Channelizing Device

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.

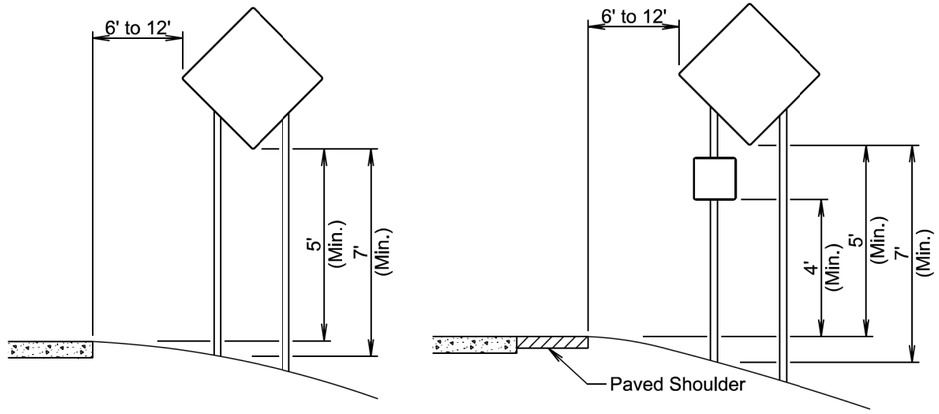
4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary raised pavement markers at 5' spacing will be installed in the taper when the lane is closed overnight, and along the tangent section where the skip lines do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



DETAIL A

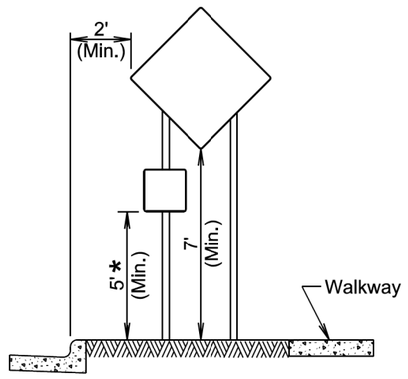
April 8, 2025

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

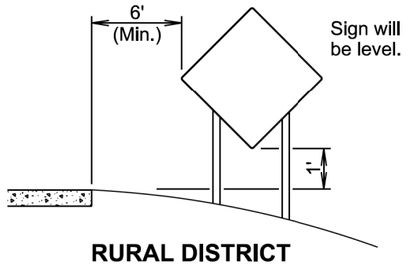


RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

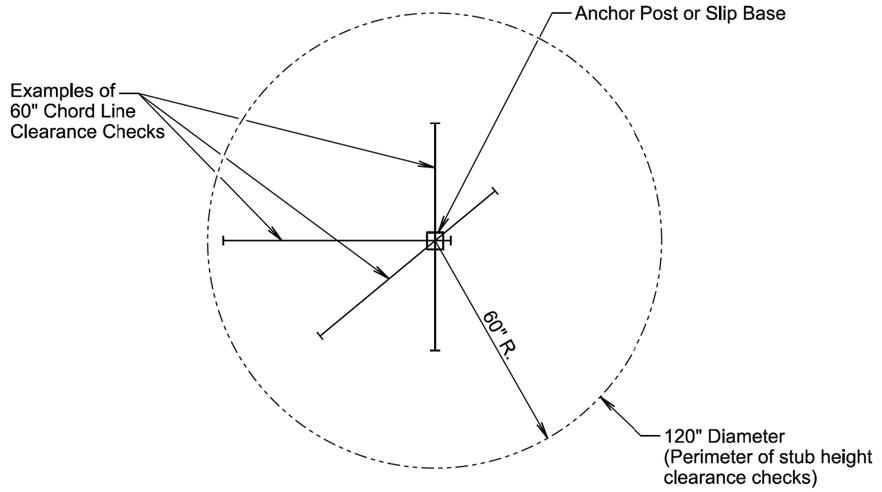


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

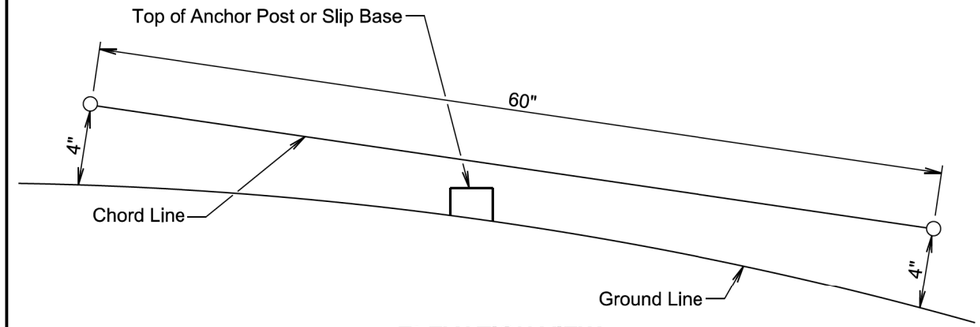
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

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

Table for Bridge Berm Slope Protection and Bridge Berm Repair

REV. 08/28/25 pm

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0023(238)	12	16

STRUCTURE	AREA	Highway	MRM	Highway Under	MRM Under	Location\ Description	Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate SqYds	Bridge Berm Repair Each	Bridge Berm Slope Protection, Quarried Aggregate SqYds
18-157-107	Mitchell	I90 W	332.19	SD37	73.00	SD37 S Interchange	1083	-	-
18-157-108	Mitchell	I90 E	332.19	SD37	72.97	SD37 S Interchange	1083	-	-
42-066-006	Sioux Falls	I29 S	75.50	I229 S	0.79	I29 & I229 Interchange	1249	-	-
42-067-006	Sioux Falls	I29 N	75.50	I229 S	0.82	I29 & I229 Interchange	1249	-	-
51-066-100	Sioux Falls	SD32	414.24	I29	114.83	SD32 & I29 Interchange	-	2	578
50-172-240	Sioux Falls	57th St.	na	I29	76.19	Intersection 57th & I29	38	-	-
50-175-020	Sioux Falls	SD115	107.54	I29	98.48	SD115 & I29 Interchange	427	-	-
50-177-199	Sioux Falls	I29 S	80.29	Madison St.	na	Madison St. Interchange	587	-	-
50-178-199	Sioux Falls	I29 N	80.29	Madison St.	na	Madison St. Interchange	587	-	-
50-218-197	Sioux Falls	I229 S	7.84	East Rice St.	na	East Rice St. Interchange	1100	-	-
50-219-197	Sioux Falls	I229 N	7.84	East Rice St.	na	East Rice St. Interchange	1100	-	-
50-240-165	Sioux Falls	Veterans Parkway	na	I90	402.55	Veterans Parkway Interchange	98	-	-
						Total	**8601**	**2**	**578**

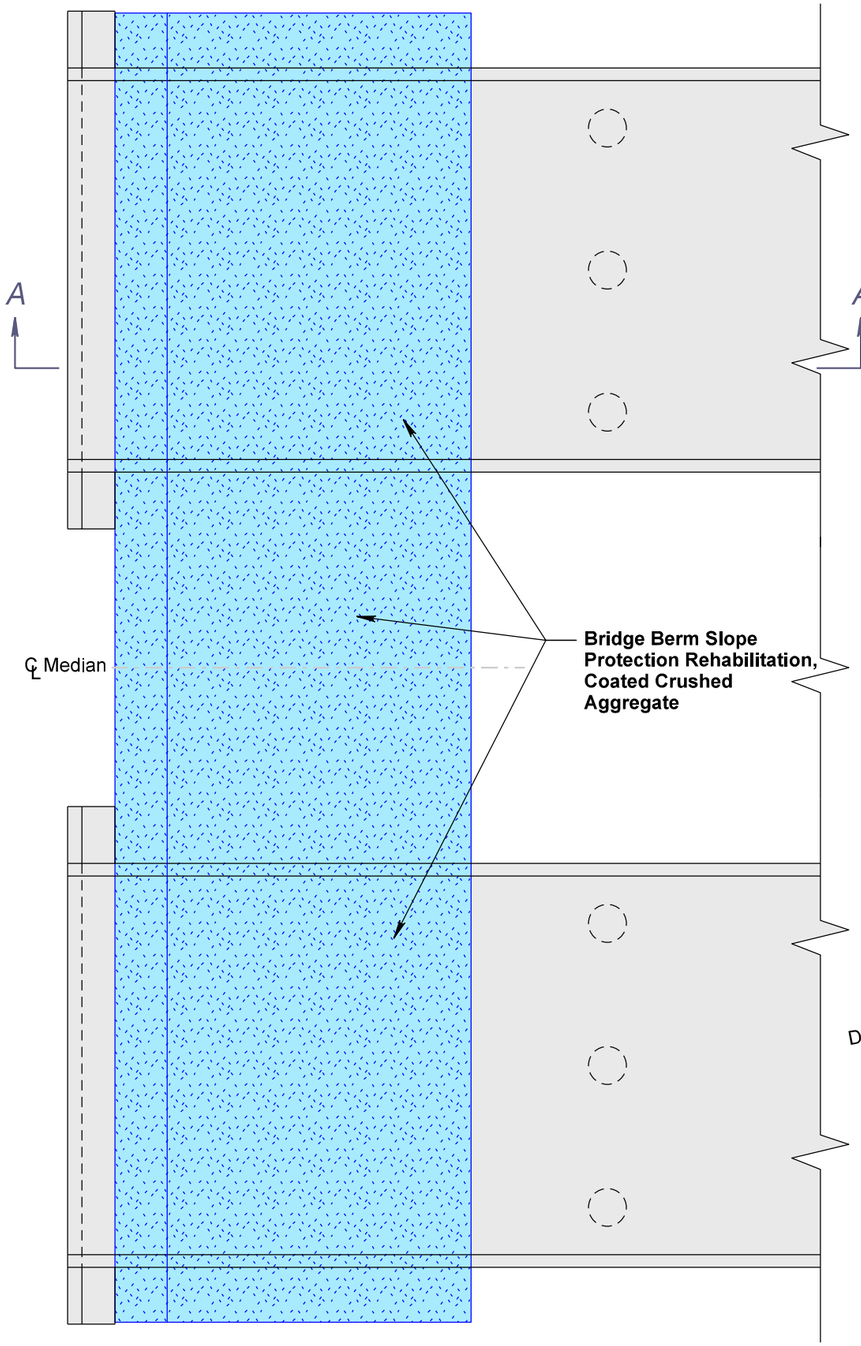
TYPICAL SLOPE PROTECTION REPAIR

Under & Between Twin Bridges

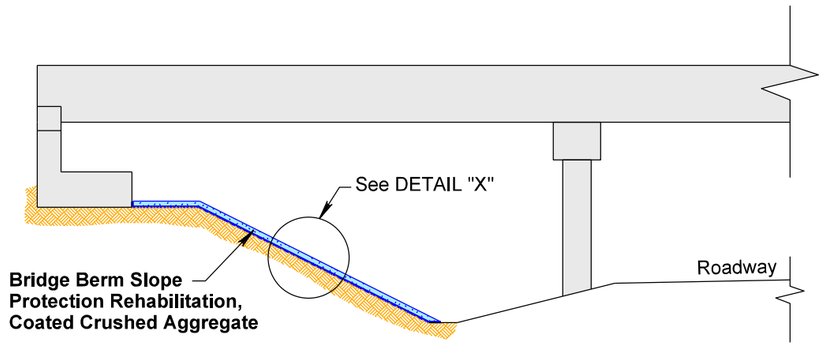
REV. 08/27/25 pm

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0023(238)	13	16

Plotting Date: 08/27/2025

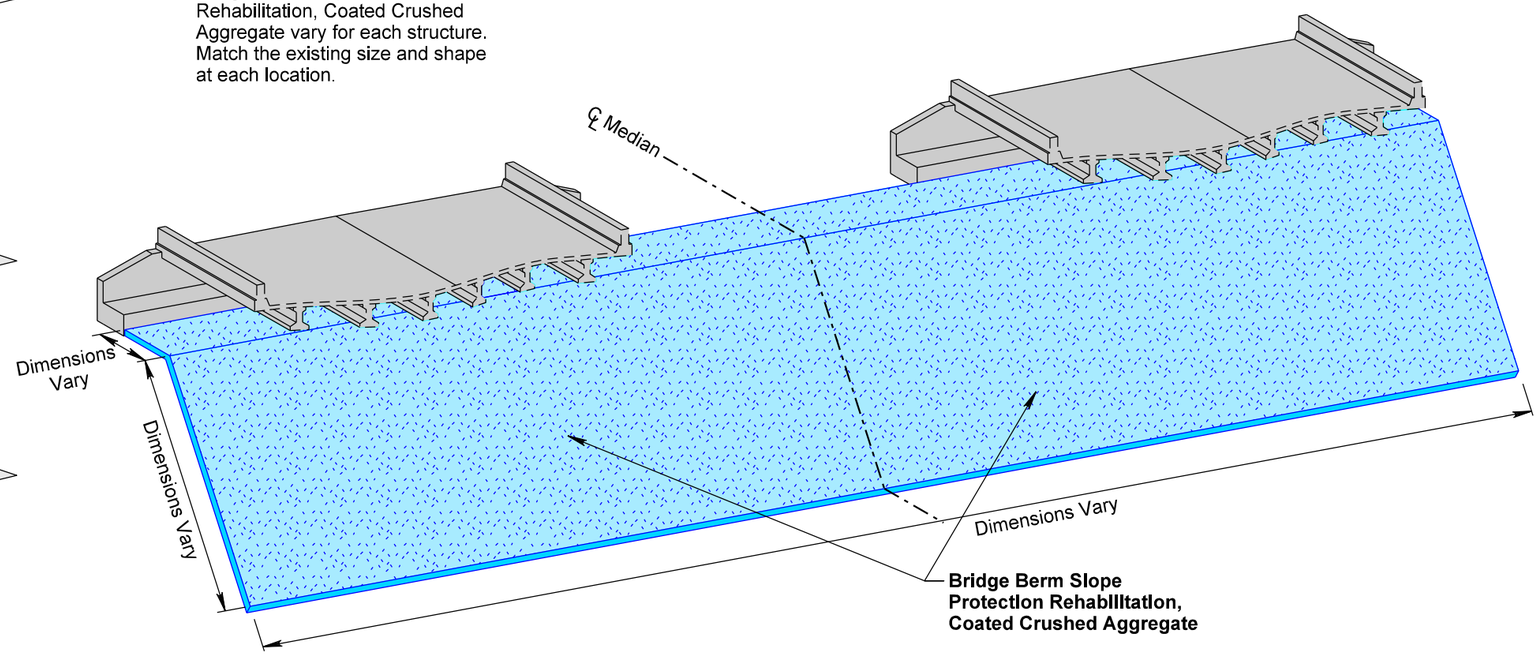


PLAN VIEW



SECTION A-A

Note:
The size and shape of the area for Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate vary for each structure. Match the existing size and shape at each location.

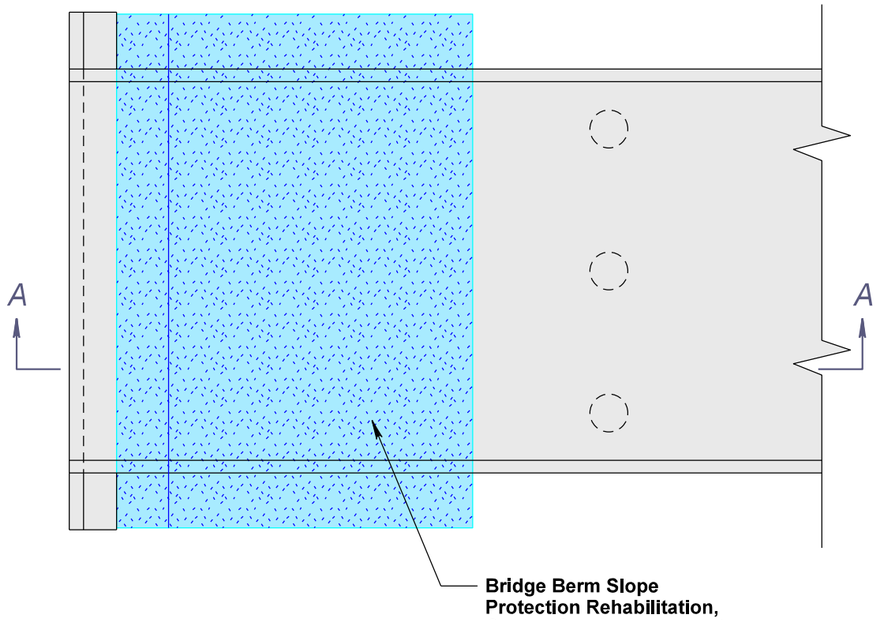


ISOMETRIC VIEW

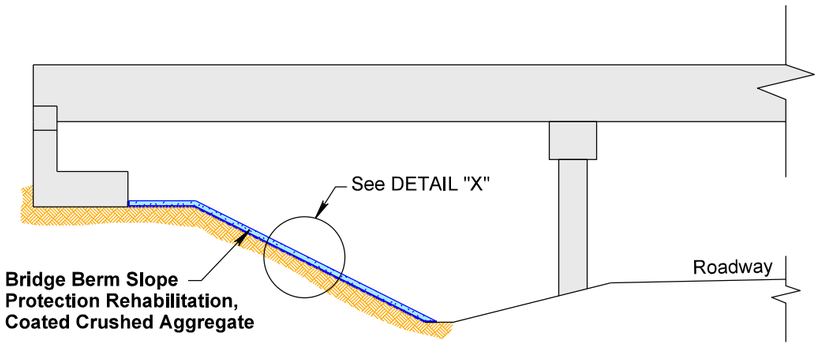
PLOT SCALE - 1:16
PLOTTED FROM - TRM1INT16
PLOT NAME - 2
FILE - ...\TYP_BRIDGE_SLOPEPROTECTION_UPDATED.DGN

TYPICAL SLOPE PROTECTION REPAIR

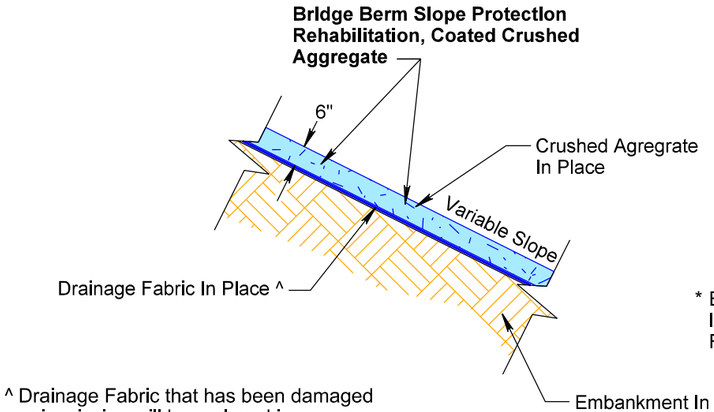
Under Bridge



PLAN VIEW



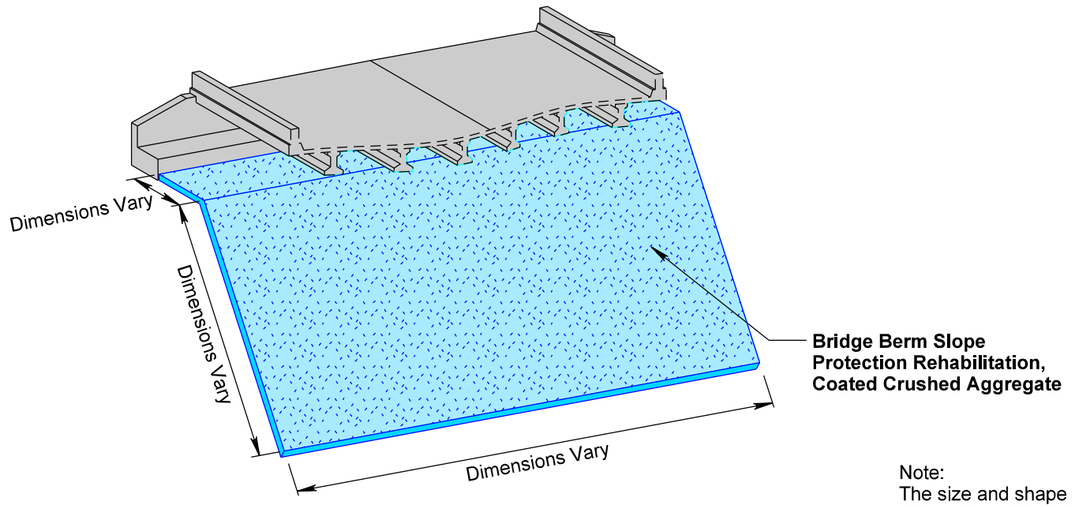
SECTION A-A



^ Drainage Fabric that has been damaged or is missing will be replaced in areas where erosion has occurred to the satisfaction of the Engineer.

* Erosion that is below the crushed rock layer will be repaired with Contactor Furnished Borrow Excavation material.

DETAIL "X"

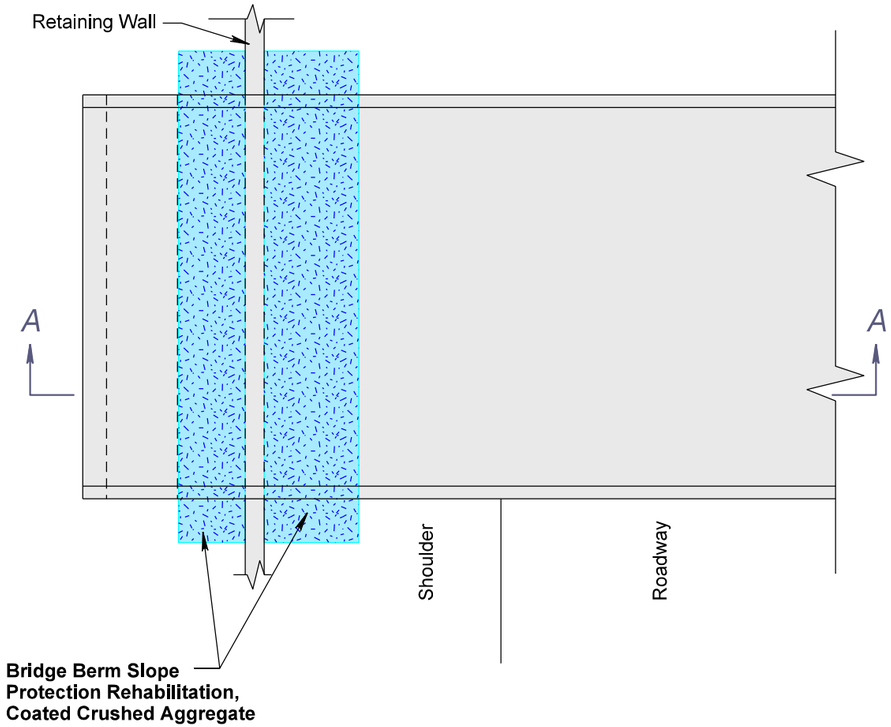


ISOMETRIC VIEW

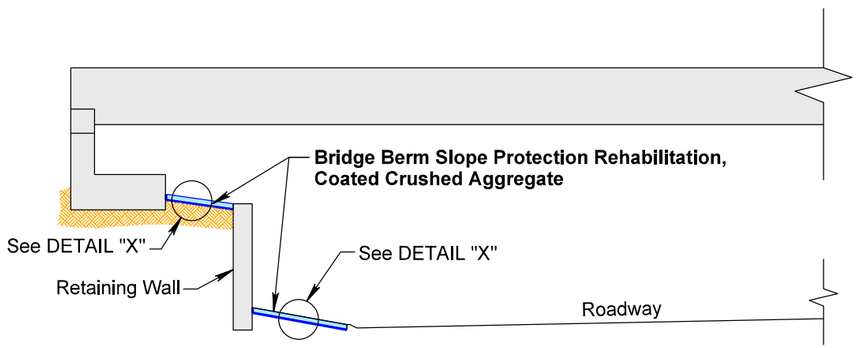
Note:
The size and shape of the area for Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate vary for each structure. Match the existing size and shape at each location.

TYPICAL SLOPE PROTECTION REPAIR

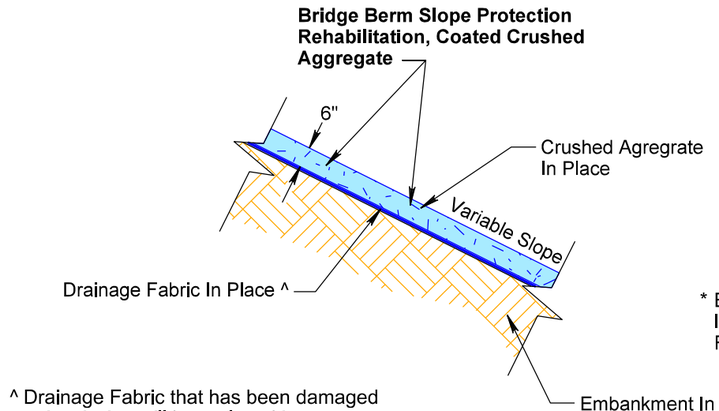
Under Bridges with Retaining Walls



PLAN VIEW



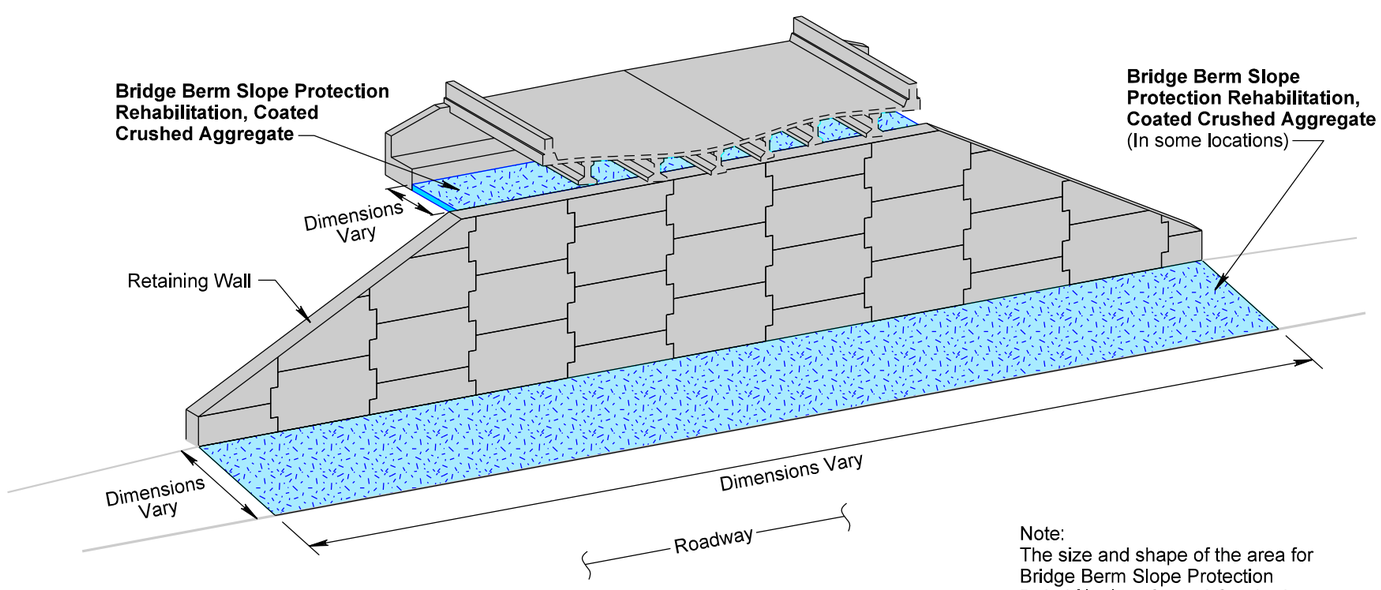
SECTION A-A



^ Drainage Fabric that has been damaged or is missing will be replaced in areas where erosion has occurred to the satisfaction of the Engineer.

* Erosion that is below the crushed rock layer will be repaired with Contactor Furnished Borrow Excavation material.

DETAIL "X"



ISOMETRIC VIEW

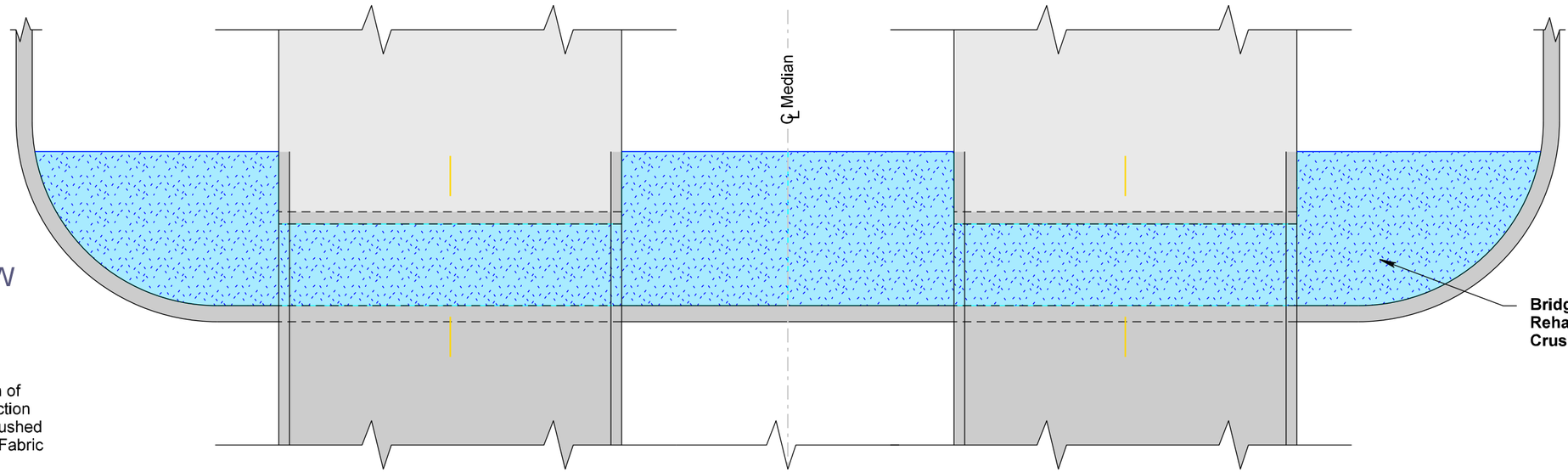
Note:
The size and shape of the area for Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate vary for each structure. Match the existing size and shape at each location.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0023(238)	16	16

Plotting Date: 08/26/2025

TYPICAL SLOPE PROTECTION REPAIR

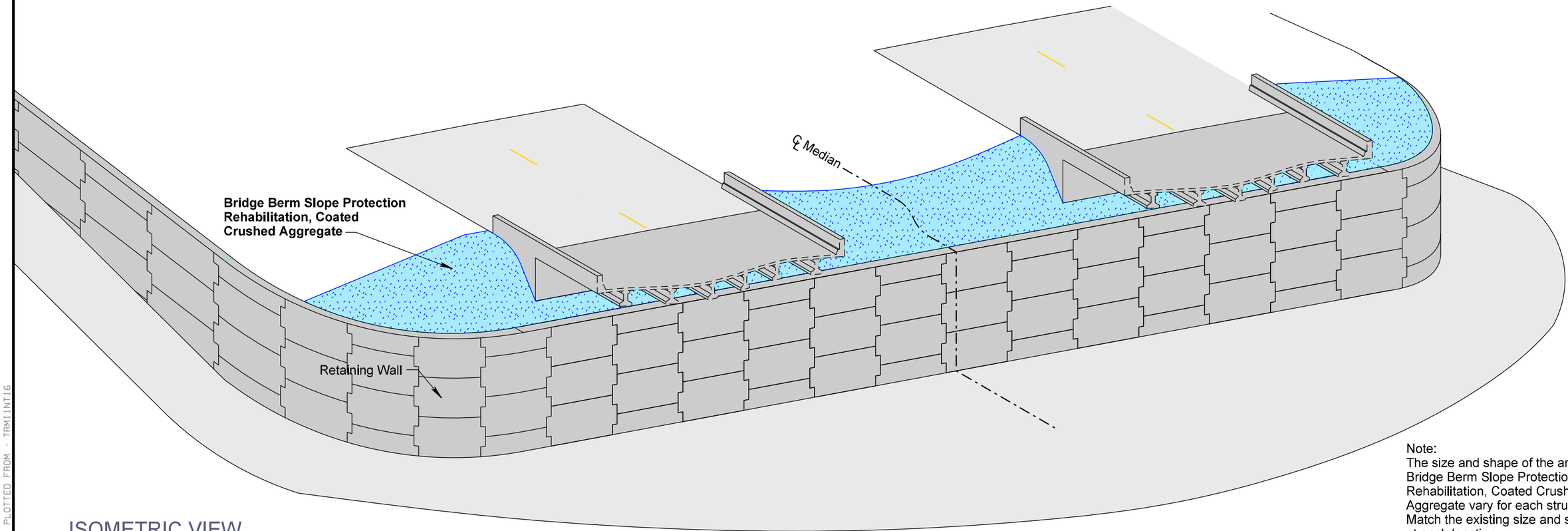
Under & Between Twin Bridges with Swept Back Wingwalls and Retaining Wall



PLAN VIEW

Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate

See DETAIL "X" for depth of Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate and Drainage Fabric



ISOMETRIC VIEW

Note:
The size and shape of the area for Bridge Berm Slope Protection Rehabilitation, Coated Crushed Aggregate vary for each structure. Match the existing size and shape at each location.