SD DOT	PROJECT	SECTION	SHEET
	NH 0041(184)	non	1/15

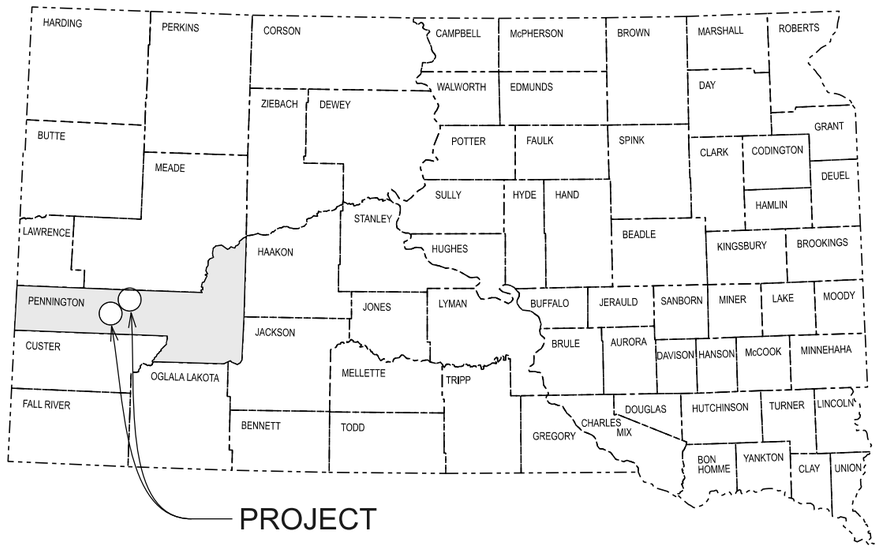
Plotting Date: 1/10/2025
Revised Date 1/10/25 jpr

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

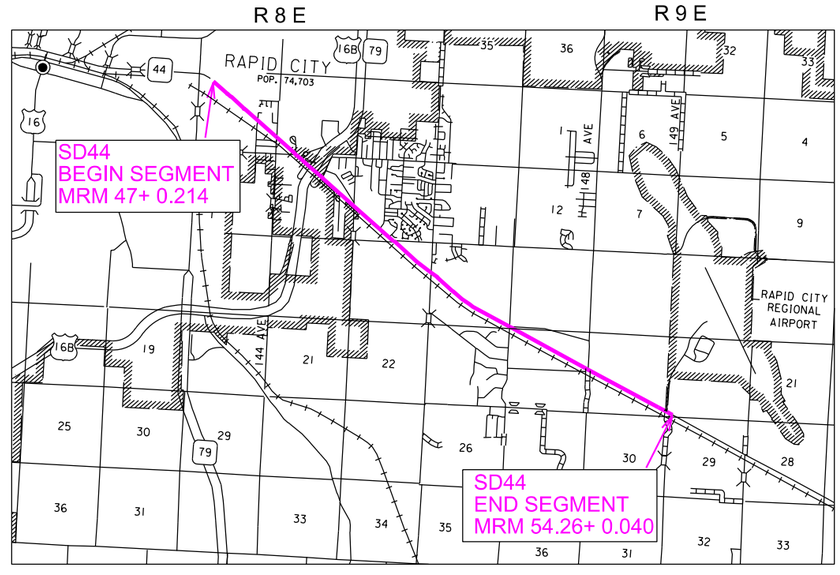
PROJECT NH 0041(184)
SD HIGHWAYS 44 and 79
PENNINGTON COUNTY

ASPHALT SURFACE TREATMENT
PCN 09L4



INDEX OF SHEETS

PENNINGTON COUNTY



STORM WATER PERMIT
No Permit Required

DESIGN DESIGNATION
(SD44, MRM 47+ 0.214 TO MRM 50.51)

ADT (2023)	17062
ADT (2043)	23460
DHV	1698
D	50%
T DHV	0.9%
T ADT	1.9%
V	40 MPH

Gross Length 3.516 Miles
Length of Exceptions 0.000 Miles
Net Length 3.516 Miles

DESIGN DESIGNATION
(SD44E, MRM 50.51 TO MRM 54.26+ 0.040)

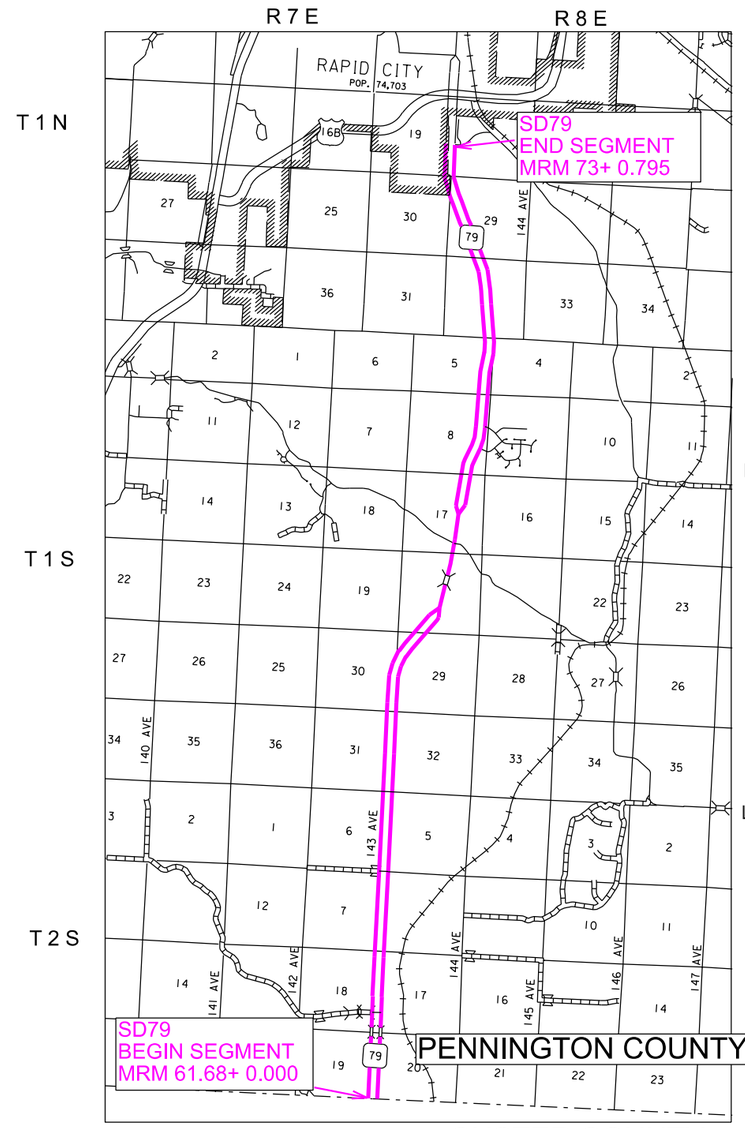
ADT (2023)	3239
ADT (2043)	4823
DHV	155
D	50%
T DHV	1.7%
T ADT	3.7%
V	65 MPH

Gross Length 4.055 Miles
Length of Exceptions 0.000 Miles
Net Length 4.055 Miles

DESIGN DESIGNATION
(SD44W, MRM 50.51 TO MRM 54.26+ 0.040)

ADT (2023)	3240
ADT (2043)	4824
DHV	155
D	50%
T DHV	1.7%
T ADT	3.7%
V	65 MPH

Gross Length 4.049 Miles
Length of Exceptions 0.000 Miles
Net Length 4.049 Miles



DESIGN DESIGNATION (SD79N)

ADT (2023)	4333
ADT (2043)	6947
DHV	1138
D	51%
T DHV	5.8%
T ADT	12.7%
V	75 MPH

Gross Length 12.038 Miles
Length of Exceptions 0.043 Miles
Net Length 11.995 Miles

DESIGN DESIGNATION (SD79S)

ADT (2023)	4290
ADT (2043)	6888
DHV	1128
D	51%
T DHV	5.7%
T ADT	12.5%
V	75 MPH

Gross Length 12.040 Miles
Length of Exceptions 0.043 Miles
Net Length 11.997 Miles

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March 5, 2025

STATE OF SOUTH DAKOTA	PROJECT	SECTION	SHEET
	NH 0041(184)	non	2/15

Revised Date 1/10/25 jpr

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	47.4	Ton
330E3000	Sand for Fog Seal	40.0	Ton
360E0044	HFMS-2 Asphalt for Surface Treatment	283.8	Ton
360E1030	Type 2A Cover Aggregate	1,091.2	Ton
360E1030	Type 2A Cover Aggregate	986.3	Ton
360E1030	Type 2A Cover Aggregate	126.3	Ton
360E1030	Type 2A Cover Aggregate	306.2	Ton
633E1201	High Build Waterborne Pavement Marking Paint with Reflective Elements, White	29	Gal
633E1206	High Build Waterborne Pavement Marking Paint with Reflective Elements, Yellow	681	Gal
633E6005	Pavement Marking Masking, 5"	12,730	Ft
633E6030	Pavement Marking Masking, Arrow	3	Each
634E0010	Flagging	200.0	Hour
634E0110	Traffic Control Signs	1,862.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	4	Each
634E0420	Type C Advance Warning Arrow Board	4	Each

TABLE OF QUANTITIES BY HIGHWAY SEGMENT

	SD79N	SD79S	SD44E	SD44W		
MRM to	**61.68**	**61.68**	**47+ 0.214**	**47+ 0.214**		
MRM	**73+ 0.795**	**73+ 0.795**	**54.26+ 0.040**	**54.26+ 0.040**	**Total**	
Item					**Quantity**	**Unit**
SS-1h or CSS-1h Asphalt for Fog Seal	20.2	18.3	5.6	2.3	**46.4**	**Ton**
Sand for Fog Seal	10.0	10.0	10.0	10.0	**40.0**	**Ton**
HFMS-2 Asphalt for Surface Treatment	121.0	109.3	33.9	14.0	**278.2**	**Ton**
Type 2A Cover Aggregate	1,091.2	986.3	306.2	126.3	**2,510.0**	**Ton**
High Build Waterborne Pavement Marking Paint, White			20	9	**29**	**Gal**
High Build Waterborne Pavement Marking Paint, Yellow	344	337			**681**	**Gal**
Flagging	50.0	50.0	50.0	50.0	**200.0**	**Hour**
Traffic Control Signs	465.5	465.5	465.5	465.5	**1,862.0**	**SQFT**
Traffic Control, Miscellaneous	Lump Sum	Lump Sum	Lump Sum	Lump Sum	**Lump Sum**	**LS**

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

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 B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

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 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.

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: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical 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.

COORDINATION BETWEEN CONTRACTORS

PCC Pavement Repair on project IM-NH 0041(185), PCN 09NW is scheduled for the construction season of 2025. The location of this project is SD44, MRM 46.98 to MRM 50.51. The Contractor on this project will coordinate with the Contractor on the PCC Pavement Repair project. All costs associated with this coordination will be incidental to the various bid items on the project.

The Contractor will schedule work so as not to interfere with or hinder the progress of the work performed by the other Contractors. 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.

ASPHALT SURFACE TREATMENT RATES OF MATERIALS

HFMS-2 Asphalt for Surface Treatment applied 0.30 gallons per square yard.

Type 2A Cover Aggregate applied 23 pounds per square yard.

SS-1h or CSS-1h Emulsified Asphalt for Fog Seal applied 0.05 gallons per square yard.

FOG SEAL APPLICATION

The Fog Seal will be applied within 1 to 4 days following the placement of the cover aggregate.

FOG SEAL

The fog seal will be placed following the completion of the asphalt surface treatment. Prior to the application of the fog seal, the Contractor will be required to broom the asphalt surface treatment. A CSS-1h or SS-1h emulsion will be used for the fog seal application. A water-to-emulsion rate of 1:1 should be used for the Fog Seal application.

The Contractor will fog seal the entire asphalt surface treatment surface.

The Contractor will plan the fog seal operation to allow adequate cure time for the fog seal and to minimize/eliminate the need to apply Sand for Fog Seal.

If adequate cure time for the Fog Seal is not available, to facilitate traffic, the Contractor will be allowed to place a minimum sufficient amount of blotting sand on the fog seal to allow traffic to cross the uncured portion of the fog seal, as permitted by the Engineer.

Sand for Fog Seal is only intended to be placed for accesses to businesses, intersection crossings, and as determined by the Engineer to facilitate traffic movements. Sand for Fog Seal will not be placed to accelerate the Contractor's schedule.

Sand that is applied will be broomed off the surface of the roadway once the fog seal has sufficiently cured as determined by the Engineer.

Sand for Fog Seal will conform to Section 879.1.B.

Prior to hauling, Sand for Fog Seal will be screened to minimize segregation, eliminate oversize, and effectively breakup or discard material bonded into chunks. All costs for supplying, hauling, placing, and brooming the blotting sand will be incidental to the contract unit price per ton for Sand for Fog Seal.

BROOMING

Upon completion of brooming operations a windrow of cover aggregate will not exist along the edge of the roadway. This material will be leveled to match the existing inslopes. Any remaining windrows of cover aggregate will be removed by the Contractor at the Contractor's expense.

TRANSVERSE RUMBLE STRIPS

If transverse rumble strips are located on a segment they will not be disturbed. The Contractor will only apply a fog seal to these rumble strips.

BRIDGES AND APPROACH SLABS

Asphalt surface treatment will not be placed on any bridges or approach slabs along the project. Bridge joints will be covered with an approved masking material to prevent the asphalt surface treatment from coming in contact with the bridge and/or bridge joint. All loose aggregate will be cleaned from the bridge and around the guardrail posts. All costs associated with this work will be incidental to the asphalt surface treatment bid items.

STATE OF SOUTH DAKOTA	PROJECT	SECTION	SHEET
	NH 0041(184)	non	5/15

Revised Date 1/10/25 jpr

TABLE OF MATERIAL QUANTITIES

Highway							Total Length	Total Length	Length Exceptions	Net Length	Width	Type 2A Cover Aggregate		HFMS-2 Asphalt for Surface Treatment		SS-1h or CSS-1h Asphalt for Fog Seal	
	MRM to		MRM		Mileage to	Mileage	(miles)	(ft)	(ft)	(ft)	(ft)	(ton)	(tons/mile)	(ton)	(tons/mile)	(ton)	(tons/mile)
SD44 E 8' shoulder	47+	0.214	48+	0.583	18.196	19.559	1.363	7197		7197	8	73.6	54	8.2	6.0	1.4	1.0
PCC shoulder	48+	0.583	48+	0.838	19.559	19.814	0.255	1346		1346							
SD44 E 8' shoulder	48+	0.838	48+	0.921	19.814	19.897	0.083	438		438	8	4.5	54	0.5	6.0	0.1	1.2
PCC shoulder	48+	0.921	49+	0.084	19.897	20.077	0.180	950		950							
SD44 E 8' shoulder	49+	0.084	49+	0.518	20.077	20.511	0.434	2292		2292	8	23.4	54	2.6	6.0	0.4	0.9
PCC shoulder	49+	0.518	49+	0.578	20.511	20.571	0.060	317		317							
SD44 E 8' shoulder	49+	0.578	50+	0.018	20.571	21.007	0.436	2302		2302	8	23.5	54	2.6	6.0	0.4	0.9
SD44 E 8' shoulder	50+	0.018	50+	0.327	21.007	21.316	0.309	1632		1632	8	16.7	54	1.8	5.8	0.3	1.0
SD44 E 6' shoulder	50+	0.327	54.26+	0.040	1.710	5.773	4.063	21453		21453	6	164.5	40	18.2	4.5	3.0	0.7
					Segment Total		**7.183**	**37926**		37926		**306.2**		**33.9**		**5.6**	
SD44 W 8' shoulder	50+	0.018	50+	0.327	21.007	21.316	0.309	1632		1632	8	16.7	54	1.8	5.8	0.3	1.0
SD44 W 6' shoulder	50+	0.327	54.26+	0.040	1.710	5.773	4.063	21453		21453	4	109.6	27	12.2	3.0	2.0	0.5
					Segment Total		**4.372**	**23084**		**Segment Total**		**126.3**		**14.0**		**2.3**	
SD79 S 7' Shoulder	61.68+	0.000	67.97+	0.000	32.956	39.249	6.293	33227	226	33001	7	295.2	47	32.7	5.2	5.5	0.9
SD79 S 4' Shoulder	61.68+	0.000	67.97+	0.000	32.956	39.249	6.293	33227		33227	4	169.8	27	18.8	3.0	3.1	0.5
SD79 S 7' Shoulder	67.97+	0.000	69.20+	0.000	1.966	3.198	1.232	6505	1250	5255	7	47.0	47	5.2	5.2	0.9	0.9
SD79 S 16' Median	67.97+	0.000	69.20+	0.000	1.966	3.198	1.232	6505		6505	16	133.0	108	14.7	11.9	2.5	2.0
SD79 S 7' Shoulder	69.20+	0.000	73+	0.795	39.249	43.848	4.599	24283		24283	7	217.2	47	24.1	5.2	4.0	0.9
SD79 S 4' Shoulder	69.20+	0.000	73+	0.795	39.249	43.848	4.599	24283		24283	4	124.1	27	13.8	3.0	2.3	0.5
					Segment Total		**24.248**	**128029**		**128029**		**986.3**		**109.3**		**18.3**	0.8
SD79 N 7' Shoulder	61.68+	0.000	67.97+	0.795	39.259	45.804	6.545	34558	226	34332	7	307.1	47	34.0	5.2	5.7	0.9
SD79 N 4' Shoulder	61.68+	0.000	67.97+	0.795	39.259	45.804	6.545	34558		34558	4	176.6	27	19.6	3.0	3.3	0.5
SD79 N 7' Shoulder	67.97+	0.000	69.20+	0.000	1.966	3.198	1.232	6505		6505	7	58.2	47	6.5	5.3	1.1	0.9
SD79 N 7' Shoulder	69.20+	0.000	73+	0.795	39.259	43.867	4.608	24330		24330	7	217.6	47	24.1	5.2	4.0	0.9
SD79 N 4' Shoulder	69.20+	0.000	73+	0.795	39.259	43.867	4.608	24330		24330	4	124.4	27	13.8	3.0	2.3	0.5
Additional Quantities												207.3		23.0		3.8	
					Segment Total		**23.538**	**124281**		**Segment Total**		**1091.2**		**121.0**		**20.2**	

TABLE OF EXCEPTIONS

Highway	MRM	Structure Number or Other	Length (ft)
SD79 S	68.83	Spring Creek Rd Turn Lane	1250
SD79 S	68.36	52436393	226
SD79 N	68.36	52436393	226
		Total	**1702**

TABLE OF ADDITIONAL QUANTITIES

SD 79	# of locations	Type 2A Cover Aggregate (tons)	HFMS-2 Asphalt for Surface Treatment	Asphalt for Fog Seal (tons)
Median Crossovers	29	207.4	23.0	3.8
Total:		**207.3**	**23.0**	**3.8**

PERMANENT PAVEMENT MARKING – GENERAL NOTES

Application of permanent pavement marking may begin no sooner than 7 calendar days following completion of the fog seal and will be completed within 14 calendar days following completion of the fog seal.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4” line = 27.8 Gals/Mile
Dashed 4” line = 7.6 Gal/Mile
Glass Beads = 5.3 Lbs/Gal.
Composite Reflective Elements = 2.1 Lbs/Gal.

All cost for materials, labor and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

TABLE OF PAVEMENT MARKING QUANTITIES

Highway					Total Length	High Build Waterborne Pavement Marking Paint, Yellow	High Build Waterborne Pavement Marking Paint, White
	MRM to		MRM		(miles)	(Gal)	(Gal)
SD79 N Median	61.68+	0.000	73+	0.795	12.385	344	
SD79 S Median	61.68+	0.000	73+	0.795	12.124	337	
SD44 E 8' Shoulder	49+	0.592	50+	0.327	0.731		20
SD44 W 8' Shoulder	50+	0.018	50+	0.327	0.309		9
				Totals	**25.549**	**681**	**29**

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All materials will be applied as per manufacturer’s recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media consisting of glass beads as well as bonded core reflective elements will be adhered to the paint.

The bonded core reflective elements will contain either clear or yellow tinted microcrystalline ceramic beads bonded to the outer surface. The bonded core reflective elements will provide a 50/50 blend of dry to wet ratio of reflective element. All microcrystalline ceramic beads bonded to reflective elements will have a minimum index of refraction of 1.8 for dry retroreflectivity and 2.4 for wet retroreflectivity when tested using the liquid oil immersion method.

Reflective media will require a Certificate of Compliance for Certification for each type, source, and lot. Acceptance sampling will not be required.

The Department may take retroreflectivity readings on the pavement marking lines no sooner than 3 days and no later than 30 days after the completion of all line applications required for an individual highway route using a portable retroreflectometer conforming to 30-meter geometry. Retroreflectivity readings will be taken on a test location with cleaning being limited to light hand brooming.

Pavement markings not conforming to the retroreflectivity requirements will be removed and replaced. If replacement of markings cannot be applied within the same year, the Contractor will schedule subject work to be completed no later than June 15th in the following year. Upon replacement, the retroreflectivity testing process will be done again requiring new readings.

The Department will randomly select one test location per mile of each edge line including ramps and one test location per mile of centerline (solid and/or skip line will be considered as one centerline). Three retroreflectivity readings will be taken at each test location. The three readings will be averaged and become the reading for that test location.

Initial readings:

Pavement Marking Color	Minimum Value
White	350 mc/m^2/lux
Yellow	275 mc/m^2/lux

All pavement markings not conforming to the requirements provided in these plans will be considered deficient and will be removed and replaced. Additional retroreflectivity readings will be taken by the Department to determine the limits of removal. The removal will be accomplished using suitable sand blasting or grinding equipment unless the Engineer authorizes other means. The removal process will remove at least 90% of the deficient line, with no excessive scarring of the existing pavement. The removal width will be one inch wider all around the nominal width of the pavement marking to be removed. Removal and replacement of the pavement markings will be at the Contractor’s expense, with no cost incurred by the State.

PAVEMENT MARKING MASKING

Just prior to beginning the asphalt surface treatment, all pavement marking tape will be covered with an approved pavement marking masking material. HFMS-2 is known to penetrate some masking materials. The Contractor will use a masking material that will protect the pavement marking tape.

Tabs will be placed on each masking line to provide a guide for locating the masking material after the surface treatment has been applied. Masking application ahead of the surface treatment will not exceed the amount estimated for the current day's operation. Upon completion of the fog seal, all masking material will be removed and disposed of by the Contractor.

Typical masking products may require multiple layers installed prior to the asphalt surface treatment. The estimated quantity for payment is for one installation even though multiple layers of masking material was installed. Separate measurement and payment for each layer of masking material installed and removed will not be made.

The Contractor will remove and dispose of the masking material after completion of the work.

All costs associated with this work will be incidental to the various contract items for Pavement Marking Masking.

TABLE OF PAVEMENT MARKING MASKING

Hwy.	Begin MRM	End MRM	Description	Pavement Marking Masking, 5"	Pavement Marking Masking, Arrow
				(Ft)	(Each)
SD44	47.21	49.56 (Jolly Lane)	EB Driving Lane Edge Line	12730	
SD79 S	70.31	70.41	Left Turn Lane Black Gap Rd		3
			Segment Total	**12730**	**3**

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

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.

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

All construction operations will be conducted in the general direction of traffic movement.

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.

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.

The Contractor will furnish, install, maintain, and remove TRUCK CROSSING (W8-6) signs daily. The TRUCK CROSSING signs will be displayed always when haul vehicles are hauling material. When hauling conditions no longer exist, the signs will be covered or removed from view. The exact number and location will be determined during construction. Payment for additional signs will be based on the contract unit price per square foot for "Traffic Control Signs".

A mobile work operation may be allowed provided the fog sealing, and pavement marking can be completed satisfactorily by a continuously moving work operation. A mobile work operation will require approval by the Engineer.

A Type 3 Barricade will be installed at the end of a lane closure taper as detailed in these plans.

Lane closures will be removed prior to nightfall.

Lane closures on SD44 from MRM 48.62 (East St. Patrick St) to MRM 49.90 (Jolly Lane) will be restricted in length to prevent traffic backups at the signalized intersections. The lane closures will only be allowed thru a maximum of two signalized intersections at any one time for each direction of travel.

Use LEFT or RIGHT SHOULDER CLOSED (W21-5a) signs when the asphalt surface treatment is curing and the adjacent lane is open to traffic. Remove these signs when traffic will not damage the asphalt surface treatment. Place these signs at 1 mile intervals or as directed by the Engineer.

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.

STATE OF SOUTH DAKOTA	PROJECT	SECTION	SHEET
	NH 0041(184)	non	8/15

Revised Date 1/10/25 jpr

TRAFFIC CONTROL SIGNS

Traffic control signs have been included in a table for each route. Payment will only be for those signs used on each route.

INVENTORY OF TRAFFIC CONTROL DEVICES (SD79 N, MRM 61.68 to MRM 73+ 0.795)

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	1	36"	7.5	7.5
R2-1	SPEED LIMIT __	5	36" x 48"	12.0	60.0
R2-6aP	FINES DOUBLE (plaque)	1	36" x 24"	6.0	6.0
W3-5	SPEED REDUCTION AHEAD (__ MPH)	3	48" x 48"	16.0	48.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	5	48" x 48"	16.0	80.0
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	1	48" x 48"	16.0	16.0
W21-5a	LEFT or RIGHT SHOULDER CLOSED	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 5 MILES	1	48" x 24"	8.0	8.0
G20-2	END ROAD WORK	5	48" x 24"	8.0	40.0
SPECIAL	ON SHOULDER	5	48" x 24"	8.0	40.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			465.5

INVENTORY OF TRAFFIC CONTROL DEVICES (SD79 S, MRM 61.68 to MRM 73+ 0.795)

SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	1	36"	7.5	7.5
R2-1	SPEED LIMIT __	5	36" x 48"	12.0	60.0
R2-6aP	FINES DOUBLE (plaque)	1	36" x 24"	6.0	6.0
W3-5	SPEED REDUCTION AHEAD (__ MPH)	3	48" x 48"	16.0	48.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	5	48" x 48"	16.0	80.0
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	1	48" x 48"	16.0	16.0
W21-5a	LEFT or RIGHT SHOULDER CLOSED	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 5 MILES	1	48" x 24"	8.0	8.0
G20-2	END ROAD WORK	5	48" x 24"	8.0	40.0
SPECIAL	ON SHOULDER	5	48" x 24"	8.0	40.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			465.5

INVENTORY OF TRAFFIC CONTROL DEVICES (SD44 E, MRM 47+ 0.214 to MRM 54.26+ 0.040)

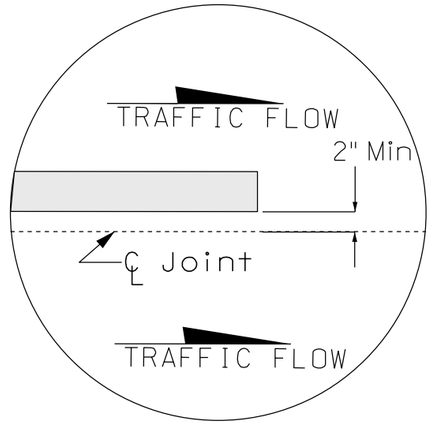
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	1	36"	7.5	7.5
R2-1	SPEED LIMIT __	5	36" x 48"	12.0	60.0
R2-6aP	FINES DOUBLE (plaque)	1	36" x 24"	6.0	6.0
W3-5	SPEED REDUCTION AHEAD (__ MPH)	3	48" x 48"	16.0	48.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	5	48" x 48"	16.0	80.0
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	1	48" x 48"	16.0	16.0
W21-5a	LEFT or RIGHT SHOULDER CLOSED	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 5 MILES	1	48" x 24"	8.0	8.0
G20-2	END ROAD WORK	5	48" x 24"	8.0	40.0
SPECIAL	ON SHOULDER	5	48" x 24"	8.0	40.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			465.5

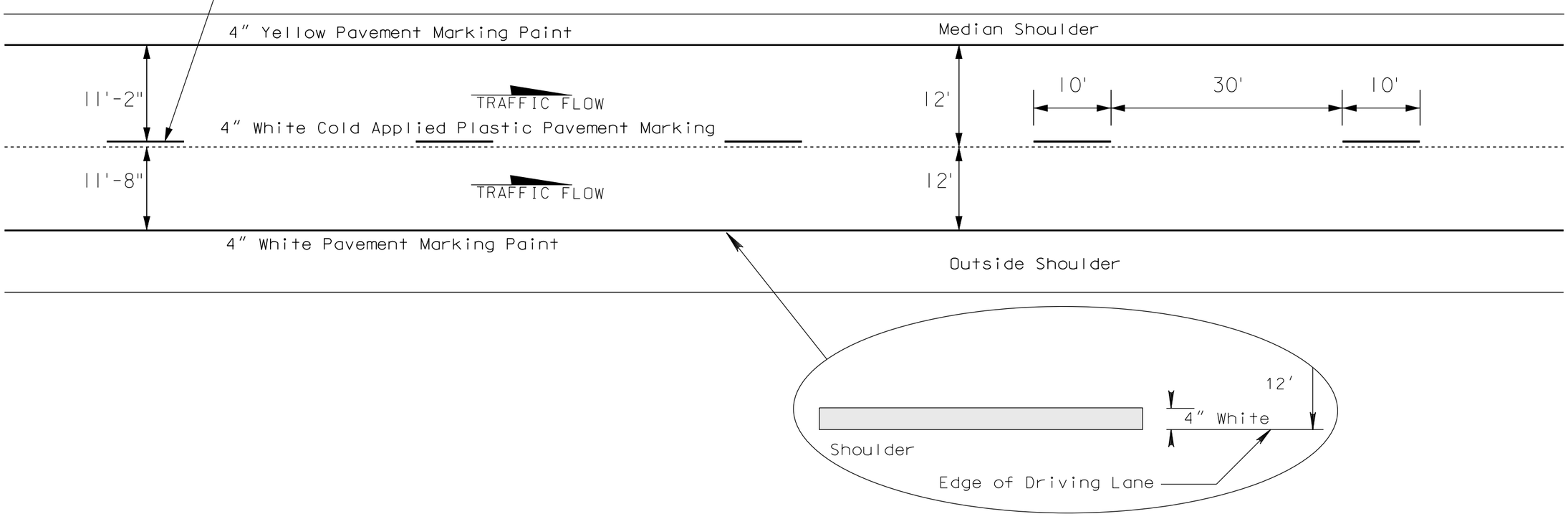
INVENTORY OF TRAFFIC CONTROL DEVICES (SD44 W, MRM 47+ 0.214 to MRM 54.26+ 0.040)

	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	1	36"	7.5	7.5
R2-1	SPEED LIMIT __	5	36" x 48"	12.0	60.0
R2-6aP	FINES DOUBLE (plaque)	1	36" x 24"	6.0	6.0
W3-5	SPEED REDUCTION AHEAD (__ MPH)	3	48" x 48"	16.0	48.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	5	48" x 48"	16.0	80.0
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	1	48" x 48"	16.0	16.0
W21-5a	LEFT or RIGHT SHOULDER CLOSED	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 5 MILES	1	48" x 24"	8.0	8.0
G20-2	END ROAD WORK	5	48" x 24"	8.0	40.0
SPECIAL	ON SHOULDER	5	48" x 24"	8.0	40.0
	EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT				465.5

TYPICAL PAVEMENT MARKING LAYOUT

4 LANE DIVIDED HIGHWAY



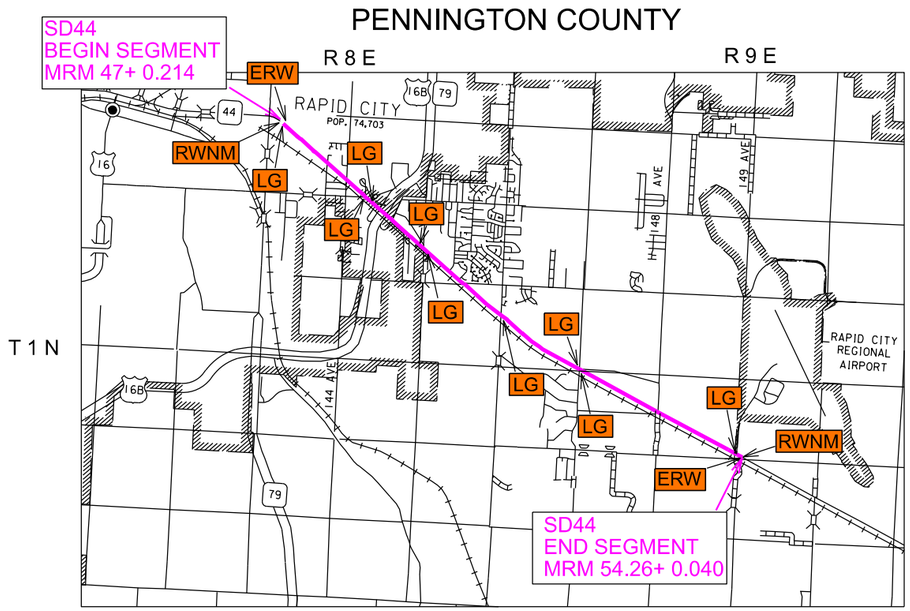


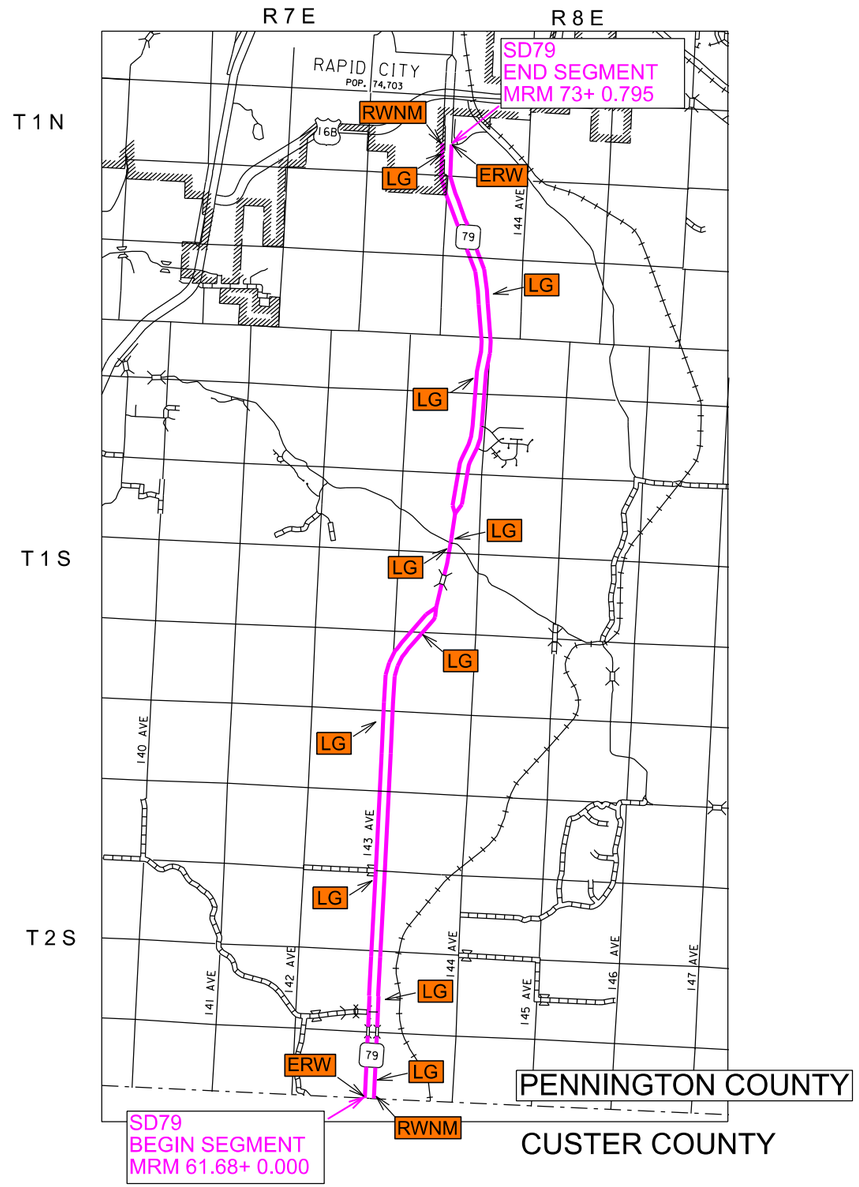
SD DOT	PROJECT	SECTION	SHEET
	NH 0041(184)	non	10/15

Plotting Date: 1/6/2025

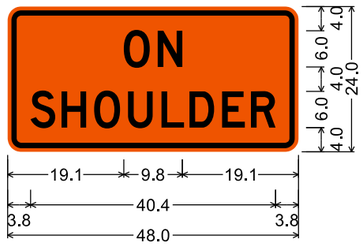
RWNM ROAD WORK NEXT XX MILES
ERW END ROAD WORK
LG LOOSE GRAVEL with ON SHOULDER plaques

FIXED LOCATION SIGNS





SIGN DESIGN



2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"ON", D 2K;
"SHOULDER", D 2K;
Table of letter and object lefts

O	N
19.1	24.8

S	H	O	U	L	D	E	R
3.8	8.9	14.3	19.9	25.4	30.0	35.4	40.1

* Messages on signs will vary depending on the operation being conducted.

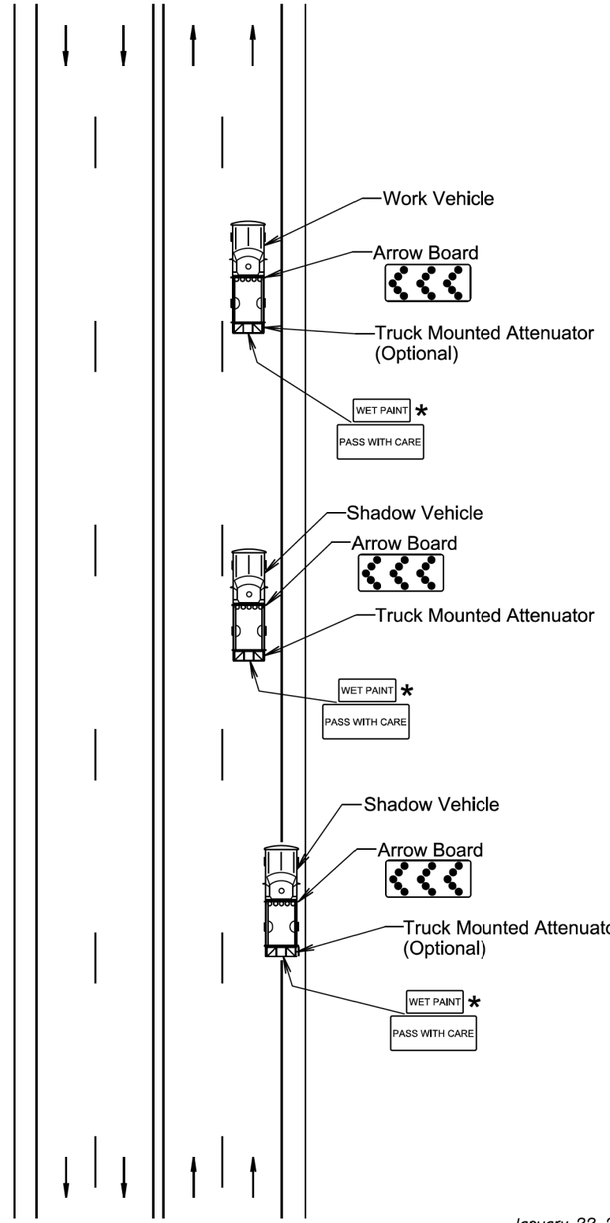
Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

Vehicle hazard warning signals will not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Arrow boards will, as a minimum, be Type B, with a size of 60" x 30".

All costs associated with the traffic control for mobile operation including signs, arrow boards and equipment will be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".



January 22, 2021

Published Date: 2025

SDDOT

MOBILE OPERATIONS ON MULTI-LANE HIGHWAYS

PLATE NUMBER 634.08

Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	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 *

* Spacing is 40' for 42" cones.

◎ Reflectorized Drum

■ Channelizing Device

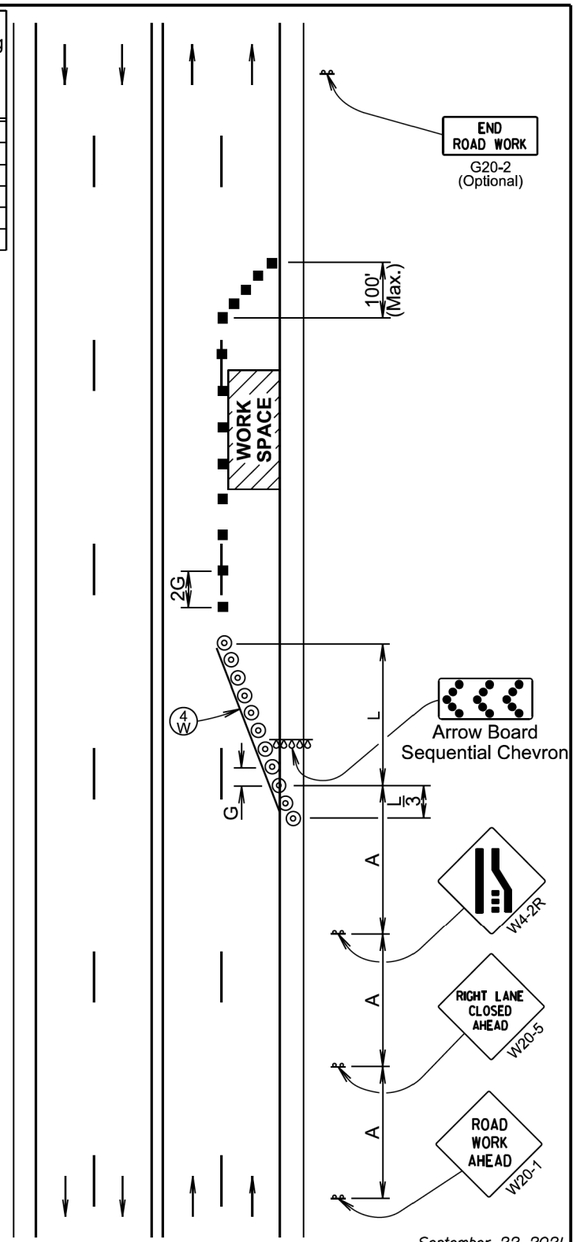
(4W) 4" White Temporary Pavement Marking

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.

Temporary pavement markings will be used if traffic control must remain overnight.

The length of A and L may be adjusted to fit field conditions.



September 22, 2021

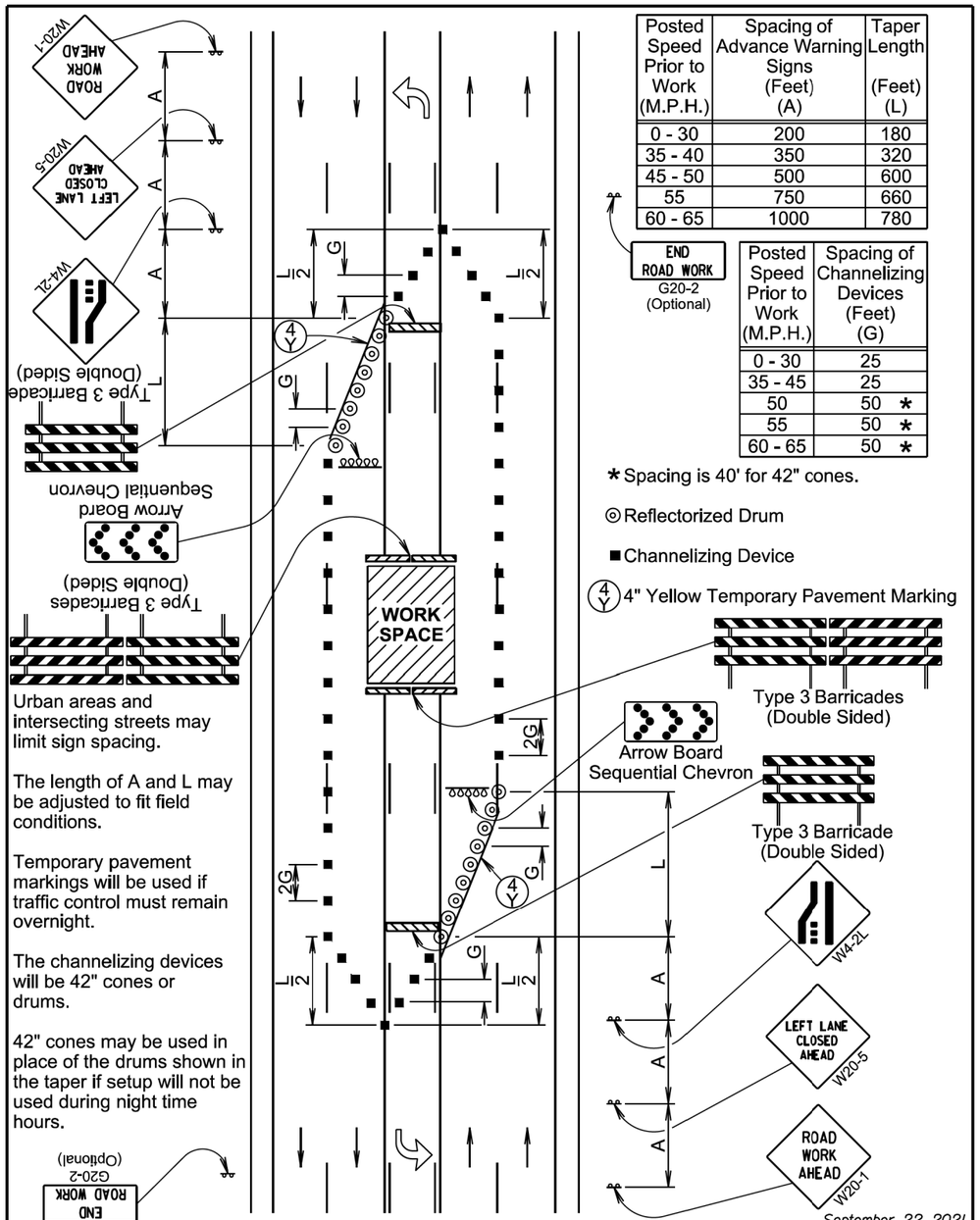
Published Date: 2025

SDDOT

4-LANE UNDIVIDED, RIGHT LANE CLOSED

PLATE NUMBER 634.47

Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780

END ROAD WORK G20-2 (Optional)

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 65	50 *

* Spacing is 40' for 42" cones.

◎ Reflectorized Drum

■ Channelizing Device

(4Y) 4" Yellow Temporary Pavement Marking

Urban areas and intersecting streets may limit sign spacing.

The length of A and L may be adjusted to fit field conditions.

Temporary pavement markings will be used if traffic control must remain overnight.

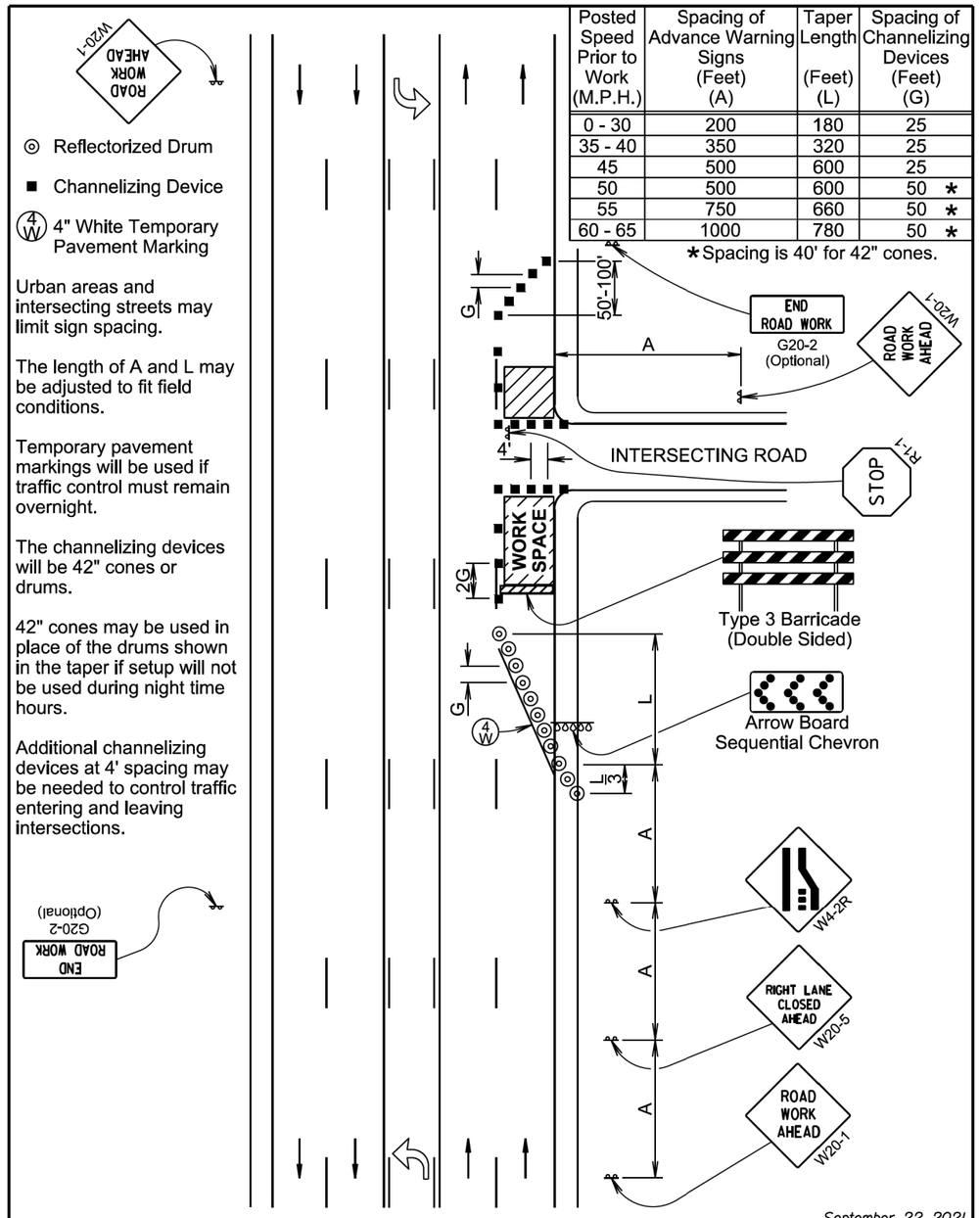
The channelizing devices will be 42" cones or drums.

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

END ROAD WORK G20-2 (Optional)

September 22, 2021

Published Date: 2025	SDDOT	5-LANE, CENTER 3 LANES CLOSED	PLATE NUMBER 634.57
			Sheet 1 of 1



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	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 *

* Spacing is 40' for 42" cones.

September 22, 2021

Published Date: 2025	SDDOT	5-LANE, OUTSIDE LANE CLOSED	PLATE NUMBER 634.60
			Sheet 1 of 1

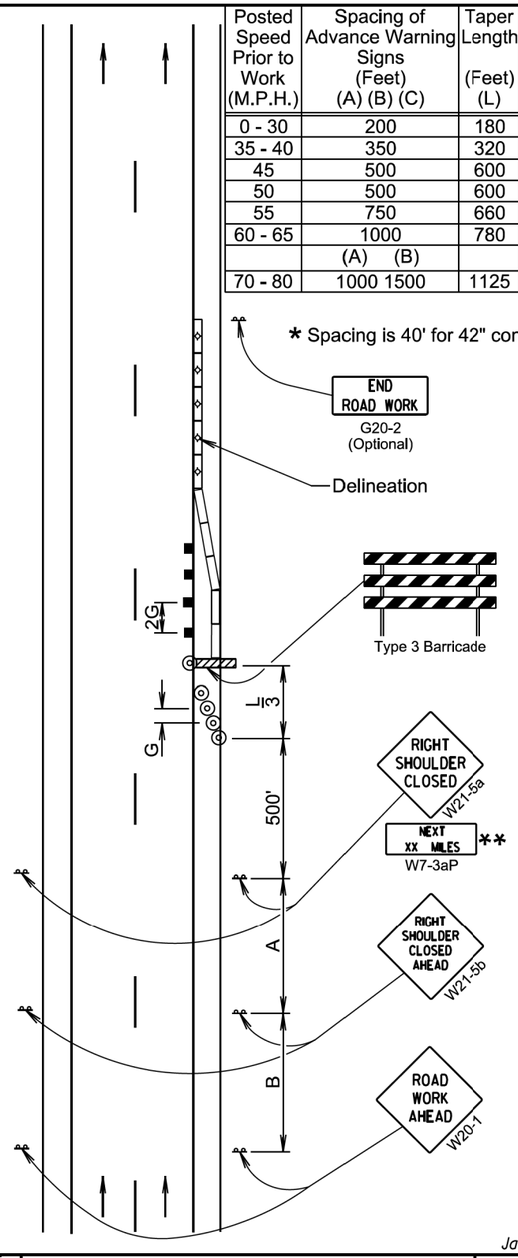
◎ Reflectorized Drum
■ Channelizing Device
▭ Movable Concrete Barrier
** For distances ½ mile or greater.

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: 2025 | 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

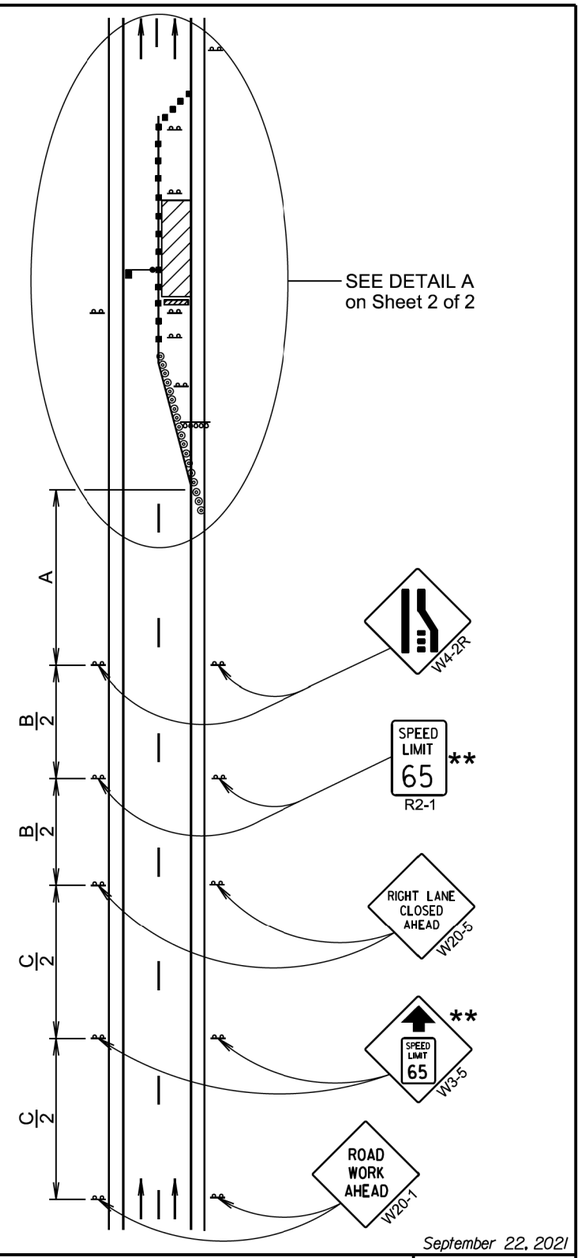
** Speed appropriate for location.

◎ 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.



September 22, 2021

Published Date: 2025 | 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.

Flagger (As Necessary)

◎ Reflectorized Drum

■ Channelizing Device

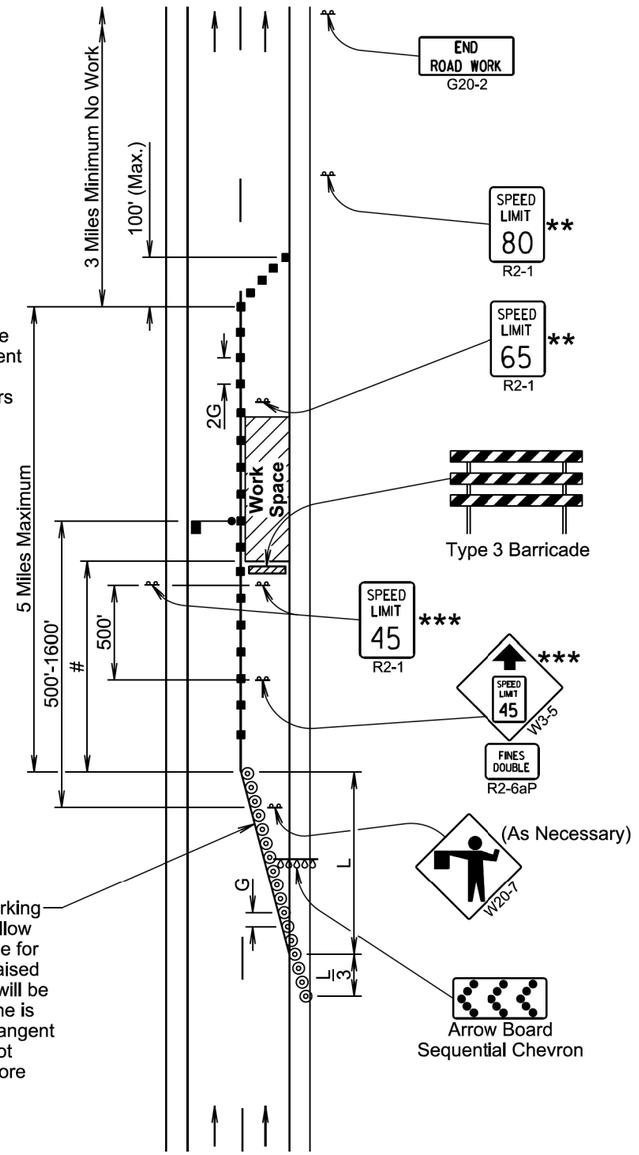
The Work Space will be a minimum of 500' from the end of the taper.

The FLAGGER sign will be used whenever there is a Flagger present.

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.

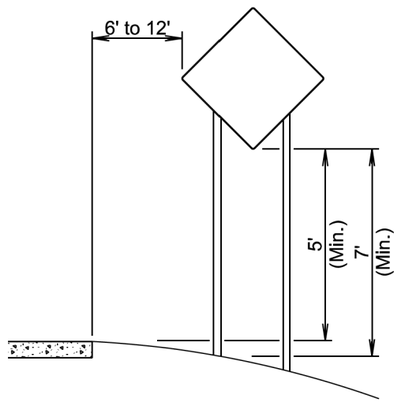
4" white temporary pavement marking tape for right lane closures, 4" yellow temporary pavement marking tape for left lane closures, or temporary raised pavement markers at 5' spacing will be installed in the taper when the lane is closed overnight, and along the tangent section where the skip lines do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



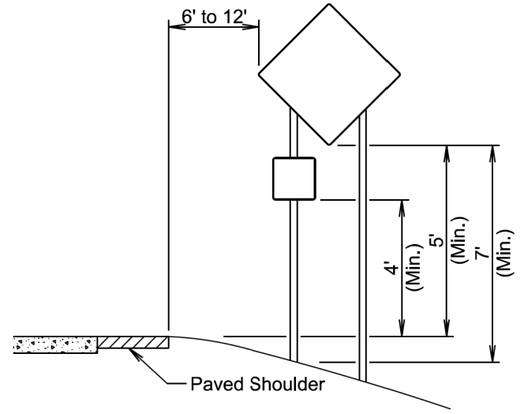
DETAIL A

September 22, 2021

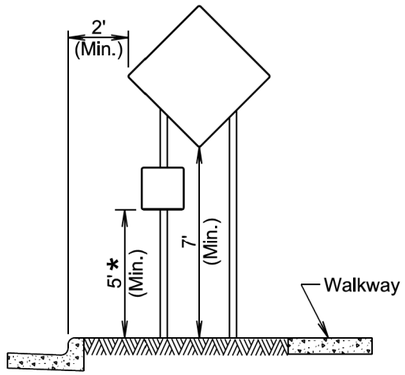
Published Date: 2025	SDDOT	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63
			Sheet 2 of 2



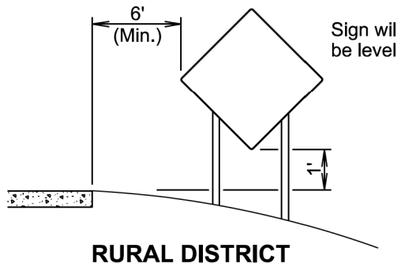
RURAL DISTRICT



RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT



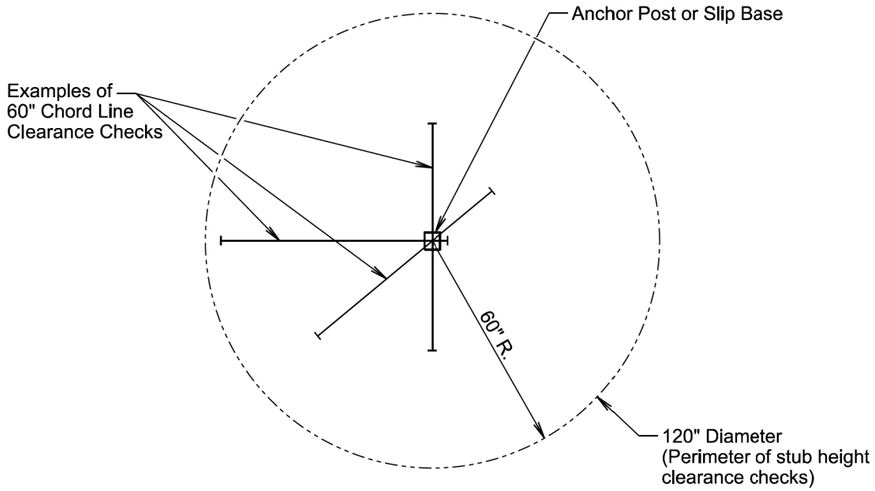
RURAL DISTRICT 3 DAY MAXIMUM

(Not applicable to regulatory signs)

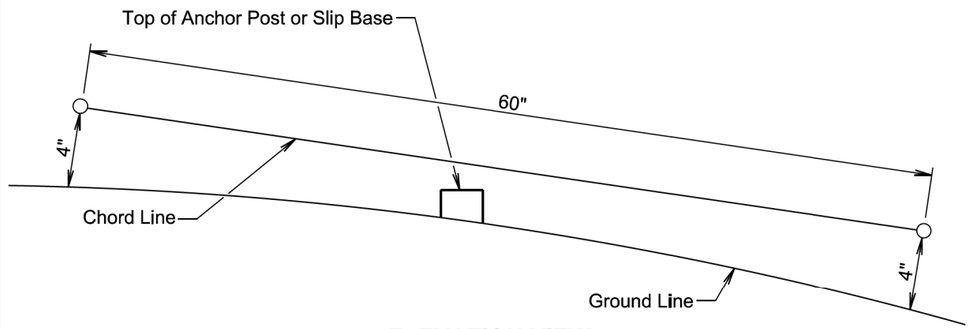
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2025	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: 2025	SDDOT	***BREAKAWAY SUPPORT STUB CLEARANCE***	PLATE NUMBER 634.99 *Sheet 1 of 1*