

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0012(329)	1	7

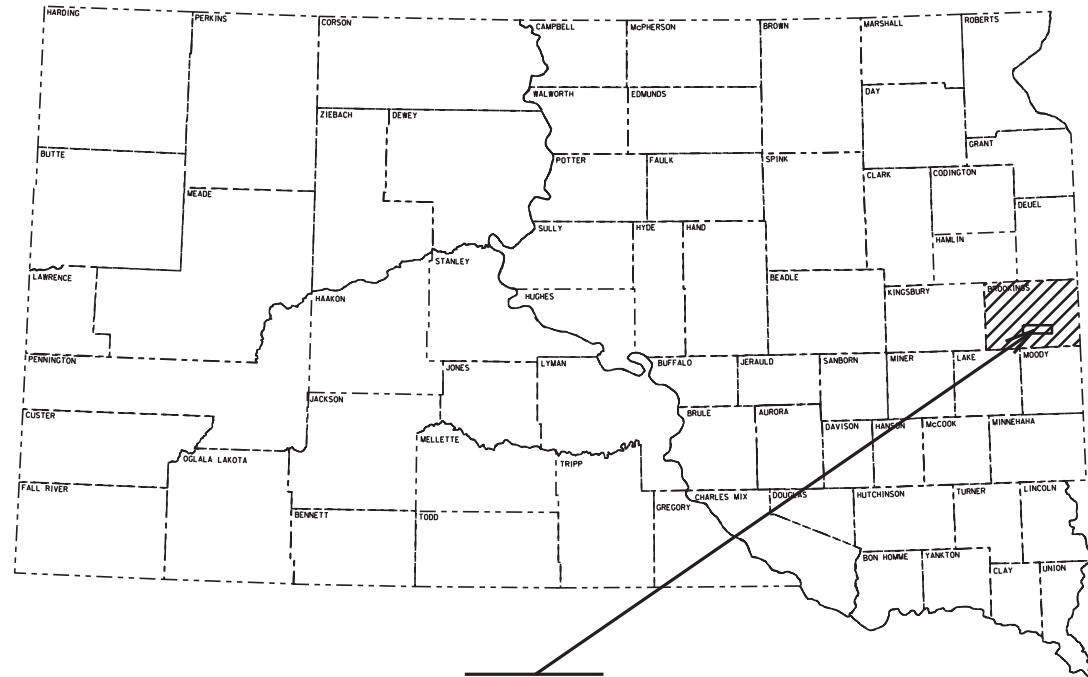
STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION  
PLANS FOR PROPOSED

**PROJECT NH-P 0012(329)**  
**US HIGHWAY 14 & 14B**  
**BROOKINGS COUNTY**

ASPHALT CONCRETE CRACK LEVELING  
PCN 09X1

INDEX OF SHEETS

- Sheet 1 Title Sheet and Layout Map
- Sheet 2-3 Estimate of Quantities and Environmental Commitments
- Sheet 4-5 Plan Notes and Tables
- Sheet 6 Typical Reservoir Section
- Sheet 7 Standard Plates



PROJECT

Segment 1  
US Highway 14E  
MRM 418.00 +0.070 to 419.27 +0.034  
Length 1.407 Miles

Segment 2  
US Highway 14W  
MRM 418.00 +0.002 to 419.27 +0.034  
Length 1.491 Miles

Segment 3  
US Highway 14EB  
MRM 418.11 +0.000 to 418.56 +0.000  
Length 0.583 Miles

Segment 4  
US Highway 14WB  
MRM 418.19 +0.000 to 418.56 +0.000  
Length 0.507 Miles

Segment 5  
US Highway 14B  
MRM 418.56 +0.000 to 423.24 +0.000  
Length 4.717 Miles

SEGMENT 1  
DESIGN DESIGNATION  
ADT (2025) 2045  
ADT (2045) 2971  
DHV 616  
D 50%  
T DHV 1.7%  
T ADT 3.7%  
V 40 & 55 MPH

SEGMENT 2  
DESIGN DESIGNATION  
ADT (2025) 2130  
ADT (2045) 3102  
DHV 643  
D 50%  
T DHV 1.8%  
T ADT 4.0%  
V 40 & 55 MPH

SEGMENT 3  
DESIGN DESIGNATION  
ADT (2025) 3376  
ADT (2045) 5018  
DHV 1040  
D 50%  
T DHV 4.0%  
T ADT 8.7%  
V 55 MPH

SEGMENT 4  
DESIGN DESIGNATION  
ADT (2025) 3348  
ADT (2045) 4965  
DHV 1029  
D 50%  
T DHV 4.0%  
T ADT 8.9%  
V 55 MPH

SEGMENT 5  
DESIGN DESIGNATION  
ADT (2025) 6539  
ADT (2045) 9181  
DHV 1902  
D 50%  
T DHV 7.4%  
T ADT 16.3%  
V 55 & 65 MPH

**BEGIN PROJECT**

Segment 1 US 14E  
MRM 418.00 +0.007 (US 14E)  
Sta. 0+00  
Mileage 20.366

Segment 2 US 14W  
MRM 418.00 +0.002 (US 14W)  
Sta. 0+00  
Mileage 20.143

**BEGIN PROJECT**

Segment 3 US 14EB  
MRM 418.11 to 418.56(US 14EB)  
Sta. 0+00 to 23+76  
Mileage 0.000 to 0.583

Segment 4 US 14WB  
MRM 418.19 to 418.56(US 14WB)  
Sta. 0+00 to 19+53.6  
Mileage 0.000 to 0.507

Begin Segment 5 US 14B  
MRM 418.56 +0.000 (US 14B)  
Sta. 0+00  
Mileage 0.000

**BEGIN EXCEPTION**

**END EXCEPTION**

**END PROJECT**

Segment 5 US 14B  
MRM 423.24 (US 14B)  
Sta. 247+10.4  
Mileage 4.717

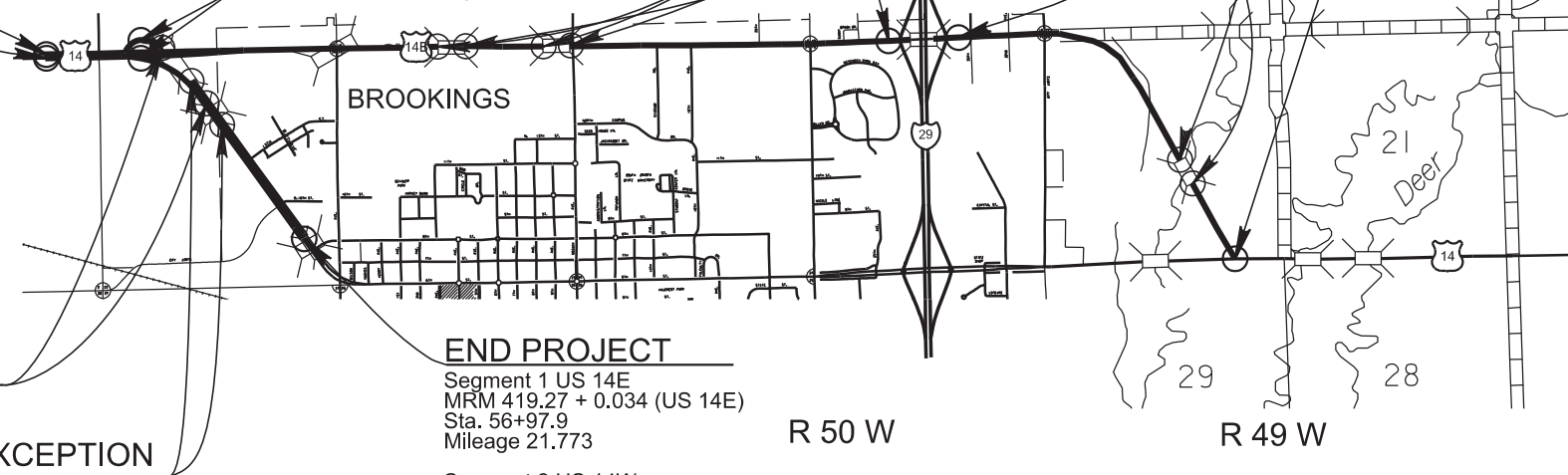
**BEGIN EXCEPTION**

**END EXCEPTION**

**END PROJECT**

Segment 1 US 14E  
MRM 419.27 + 0.034 (US 14E)  
Sta. 56+97.9  
Mileage 21.773

Segment 2 US 14W  
MRM 419.27 + 0.034 (US 14W)  
Sta. 56+97.9  
Mileage 21.634



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May 6, 2026

STORM WATER PERMIT  
(None Required)

PLOTTED FROM - TRVAINT114

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0012(329)	2	7

### ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
320E0402	Asphalt Repair Mastic Type 2	191,785	Lb
633E1200	High Build Waterborne Pavement Marking Paint, White	535	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	237	Gal
634E0010	Flagging	120.0	Hour
634E0020	Pilot Car	50.0	Hour
634E0110	Traffic Control Signs	264.2	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	2	Each
634E0420	Type C Advance Warning Arrow Board	1	Each

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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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 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 B4: BALD EAGLE**

Bald eagles are known to occur in this area.

#### **Action Taken/Required:**

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

#### **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: 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.

**SEQUENCE OF OPERATIONS**

The Contractor will submit a proposed sequence of operations for the Engineer's review and approval at least 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.

The Contractor will coordinate the schedule of work to ensure that US Highway 14 and 14B are fully open to traffic prior to nightfall.

**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.

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.

Traffic on Segments 3-5 will be maintained on the driving lanes through the work area by use of flaggers and a pilot car. 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.

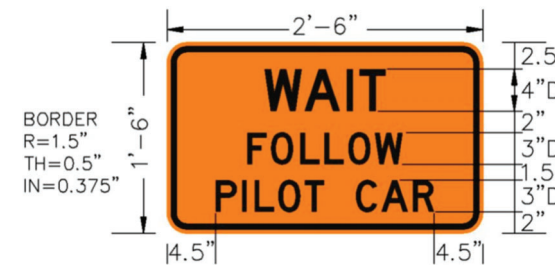
Crack Leveling on Segments 3-5 will include the Center Turn Lane and will be controlled according to Standard Plate 634.23. Center Turn Lane work will be completed with either WB or EB Driving Lane work within the same closure.

During construction operations, all Contractor's vehicles, equipment, and materials will be located within that half of the roadway which is closed to through traffic. No temporary parking or material storage will be permitted on that portion of the roadway open to through traffic.

**FLAGGING**

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

Additional flagger warning signs and flagger hours have been included in the Estimate of Quantities for use on intersecting roads. These flaggers will be used as directed by the Engineer and will be used primarily during daytime hours. Also included in the Estimate of Quantities are WAIT FOLLOW PILOT CAR signs for use on low volume intersecting roads as determined by the Engineer. WAIT FOLLOW PILOT CAR signs will not block the view of the stop sign.



It is required that the flaggers and pilot car operators be able to communicate with one another. If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price per hour for "Flagging".

**ASPHALT REPAIR MASTIC TYPE 2**

Only transverse joints will be repaired on the project. Repairs will be performed on transverse cracks from painted edge line to painted edge line at the direction of the Engineer. The top of the road will typically be at the width as listed in the above tables.

The average width of repair locations varies from 16 to 24 inches but some locations may be wider.

The average depth of the repair locations is 1/2", but some locations are over 1/2" deep.

It is estimated there are 41,844 Ft. of joints to be repaired. Some adjustments to the quantities have been made in the plans to account for questionable joints. The quantity of Asphalt Repair Mastic Type 2 may vary from the plans. No adjustment in the contract unit price for Asphalt Repair Mastic Type 2 will be made due to variation in quantities.

**PERMANENT PAVEMENT MARKING**

The Contractor will be required to repaint both centerline and edgelines with High Build Waterborne Pavement Marking Paint.

The application of Permanent Pavement Marking Paint will begin no sooner than 7 calendar days following completion of Crack Leveling and will be completed within 14 calendar days following completion of Crack Leveling.

**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 will consist of glass beads.

**RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT**

Solid 4" line = 27.8 Gals/Mile  
Dashed 4" line = 7.6 Gals/Mile  
Glass Beads = 8 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 ASPHALT REPAIR MASTIC TYPE 2**

US Highway 14 & 14B

(1 crack at 24ft = 1ft<sup>3</sup>) (110lbs/ft<sup>3</sup>)

Segment	MRM to MRM	# of Cracks	Length (ft)	Total (ft)
1	418 to 419.27	157	24	3,768
2	418 to 419.27	162	24	3,888
3	418.11 to 418.56	42	48	2,016
4	418.19 to 418.56	46	48	2,208
5	418.56 to 423.24	908	24 or 36	29,964

**TOTAL LENGTH OF CRACKS = 41,844 ft**

**Project Total= 191,785 lbs**

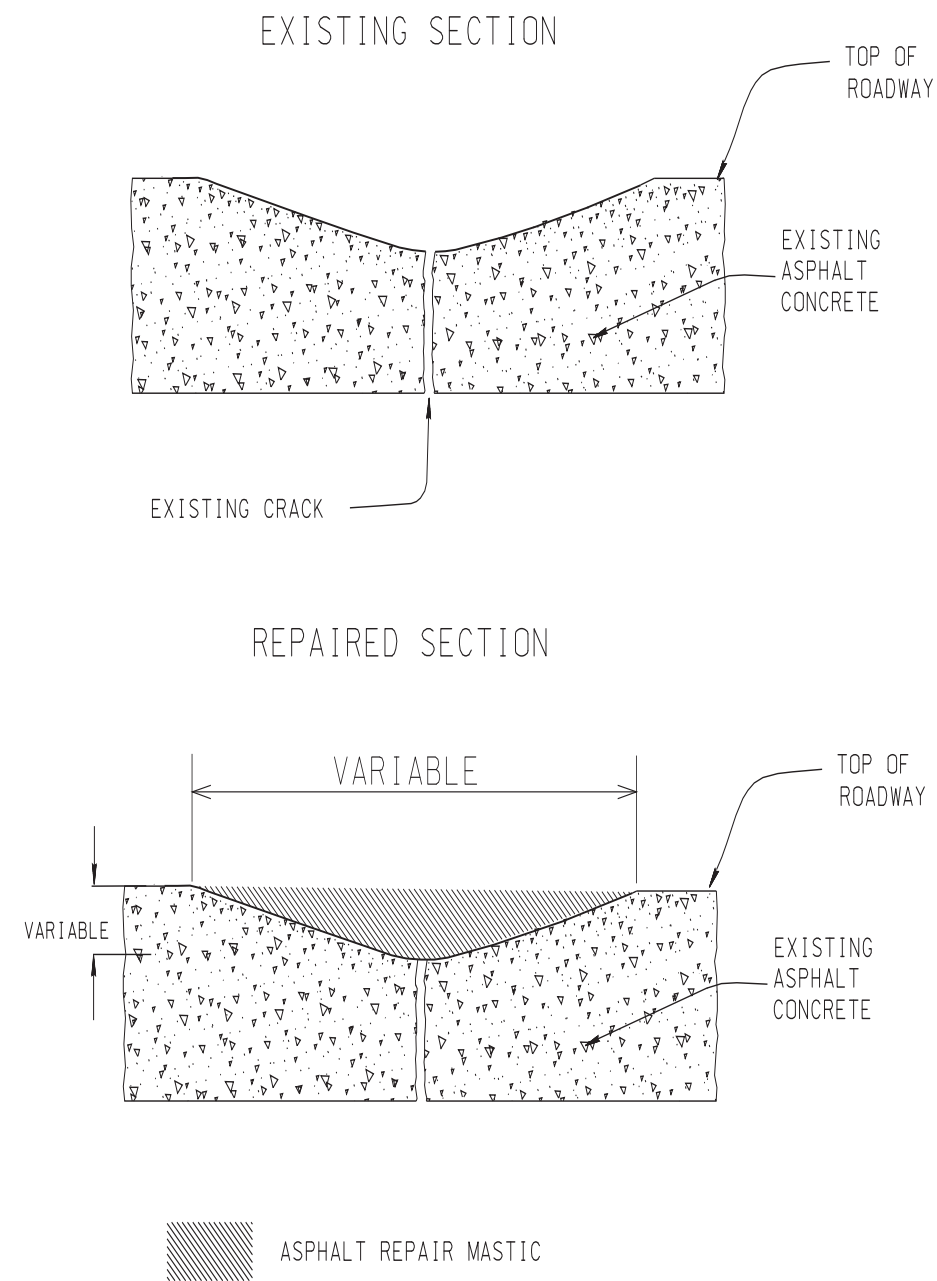
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**ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS**

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W20-1	ROAD WORK AHEAD	5	48" x 48"	16.0	80.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
SPECIAL	WAIT FOLLOW PILOT CAR	4	30" x 18"	3.8	15.2
		<b>CONVENTIONAL ROAD</b>			
		<b>TRAFFIC CONTROL SIGNS SQFT</b>			<b>264.2</b>

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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TYPICAL RESERVOIR SECTION WITHOUT MILLING



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	25
35 - 40	350	25
45	500	25
50	500	50
55	750	50
60 - 65	1000	50

- Flagger
- Channelizing Device

For low-volume traffic situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger may be used.

The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) will be displayed in advance of the liquid asphalt areas.

Flashing warning lights and/or flags may be used to call attention to the advance warning signs.

The channelizing devices will be drums or 42" cones.

Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.

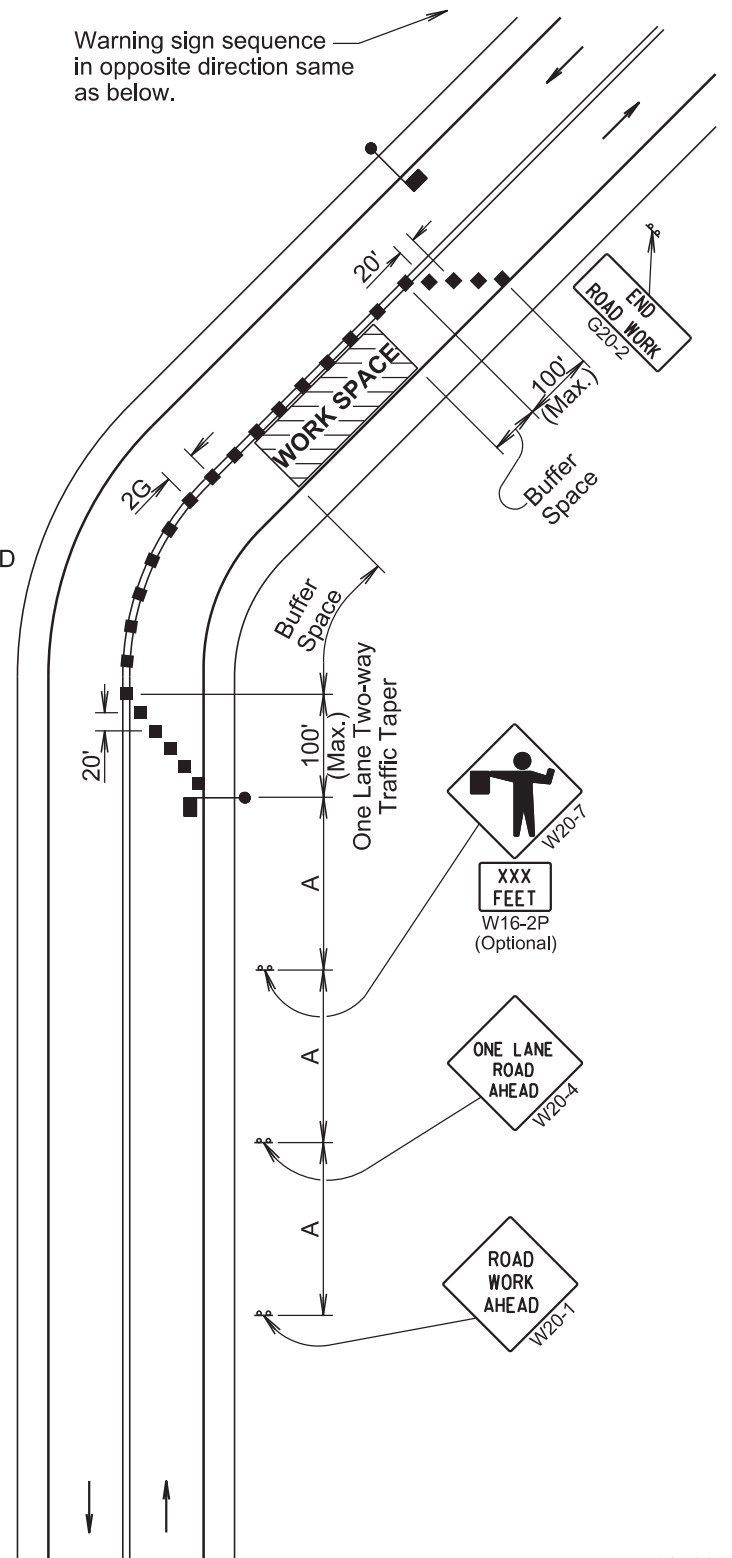
END ROAD WORK G20-2

Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

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

Warning sign sequence in opposite direction same as below.



January 22, 2021

Published Date: 2026	S D D O T	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1

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
70	730
75	820
80	910

- ⊙ Reflectorized Drum
- Channelizing Device
- ④ 4" White Temporary Pavement Marking

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

This procedure also applies when work is being performed in the lane adjacent to the median on a divided highway. Under these conditions, LEFT LANE CLOSED signs and the corresponding LANE REDUCTION symbol signs will be used.

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.

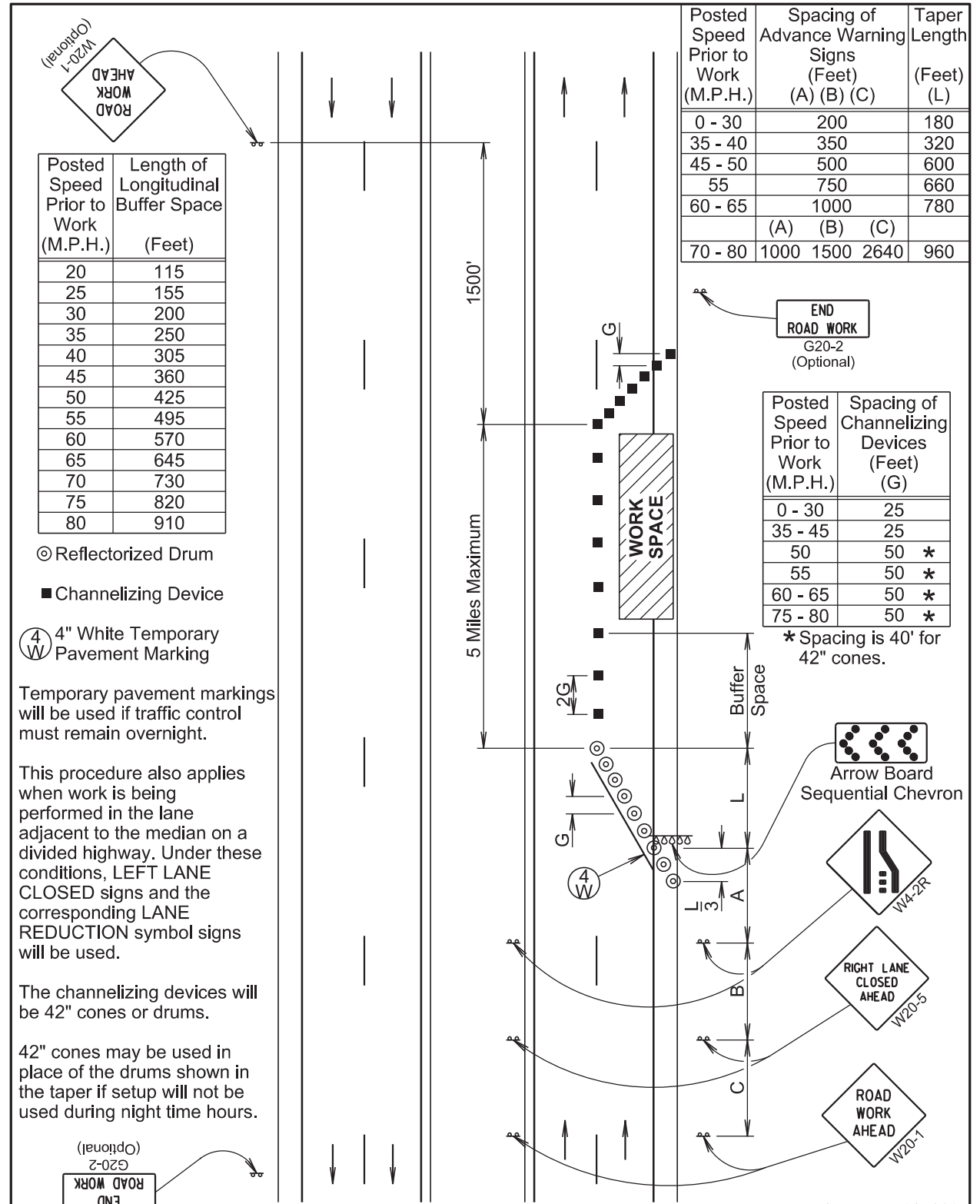
END ROAD WORK G20-2 (Optional)

Published Date: 2026	S D D O T	LANE CLOSURE WITHOUT BARRIER	PLATE NUMBER 634.64
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet)			Taper Length (Feet) (L)
	(A)	(B)	(C)	
0 - 30	200			180
35 - 40	350			320
45 - 50	500			600
55	750			660
60 - 65	1000			780
70 - 80	1000	1500	2640	960

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 *
75 - 80	50 *

\* Spacing is 40' for 42" cones.



September 22, 2021

PLOTTED FROM - TRVAINT14