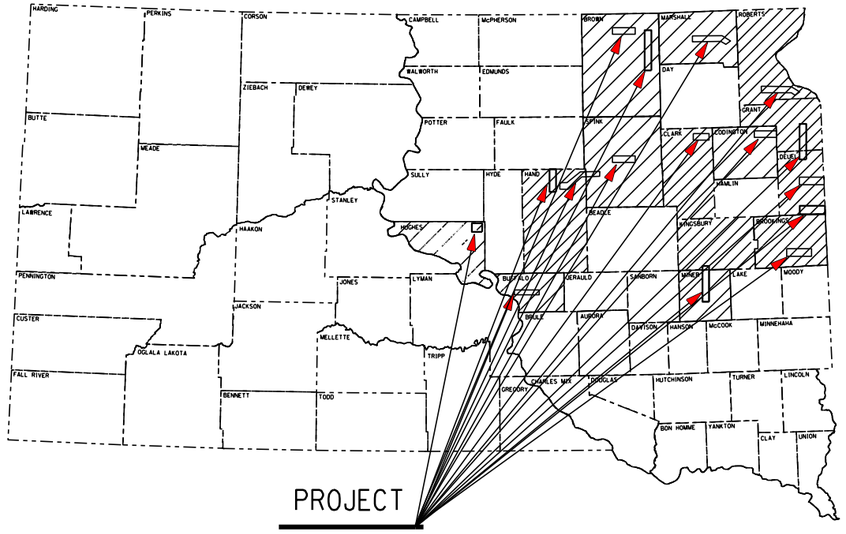
PLOT SCALE - 1:17299.5

PLOT NAME - 1

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	1	39

Plotting Date: 01/14/2026



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT PH 0010(232)

US HIGHWAY 14
SD HIGHWAY 10, 15, 20, 22, 25, 26, 28, 34, 37, 45, 324

BROOKINGS, BROWN, BUFFALO, CODINGTON, CLARK, DEUEL, GRANT, HAND, HUGHES, KINGSBURY, MARSHALL, MINER, ROBERTS & SPINK COUNTIES

CENTERLINE RUMBLE STRIPES

PCN 09UR

INDEX OF SECTIONS

Segment 1:
US HIGHWAY 14
HUGHES COUNTY
MRM 263.00+0.303 TO MRM 267.00+0.069

Segment 2:
SD HIGHWAY 20
CLARK COUNTY
MRM 363.00+0.733 TO MRM 372.00+0.740

Segment 3:
SD HIGHWAY 25
MINER & KINGSBURY COUNTIES
MRM 88.88+0.000 TO MRM 101.00+0.985

Segment 4:
SD HIGHWAY 26
HAND COUNTY
MRM 252.00+0.848 TO MRM 253.00+0.848

Segment 5:
SD HIGHWAY 26
SPINK COUNTY
MRM 267.00+0.748 TO MRM 269.00+0.000

Segment 6:
SD HIGHWAY 26
SPINK COUNTY
MRM 272.00+0.400 TO MRM 279.00+0.662

Segment 7:
SD HIGHWAY 34
BUFFALO COUNTY
MRM 269.00+0.443 TO MRM 274.00+0.754

Segment 8:
SD HIGHWAY 45
BUFFALO & HAND COUNTIES
MRM 88.00+0.126 TO MRM 101.00+0.245

Segment 9:
SD HIGHWAY 45
HAND COUNTY
MRM 129.62+0.000 TO MRM 137.00+0.517

Segment 10:
US HIGHWAY 37
BROWN COUNTY
MRM 208.00+0.902 TO MRM 231.00+0.499

Segment 11:
SD HIGHWAY 10
MARSHALL COUNTY
MRM 323.00+0.280 TO WB MRM 332.00+0.751

Segment 12:
SD HIGHWAY 10
BROWN COUNTY
MRM 282.30+0.020 TO MRM 296.00+0.268

Segment 13:
SD HIGHWAY 15
DEUEL & GRANT COUNTIES
MRM 155.32+0.019 TO MRM 160.00+0.311

Segment 14:
SD HIGHWAY 15
GRANT COUNTY
MRM 167.33+0.375 TO MRM 173.00+0.491

Segment 15:
SD HIGHWAY 15
ROBERTS COUNTY
MRM 182.00+0.434 TO MRM 198.00+0.236

Segment 16:
SD HIGHWAY 15
ROBERTS COUNTY
MRM 198.00+0.847 TO MRM 206.00+0.444

Segment 17:
SD HIGHWAY 20
CODINGTON COUNTY
MRM 418.00+0.637 TO MRM 424.00+0.673

Segment 18:
SD HIGHWAY 20
CODINGTON COUNTY
MRM 425.00+0.328 TO MRM 427.00+0.225

Segment 19:
SD HIGHWAY 20
GRANT COUNTY
MRM 439.00+0.257 TO MRM 446.00+0.252

Segment 20:
SD HIGHWAY 22
DEUEL COUNTY
MRM 370.00+0.350 TO MRM 383.00+0.921

Segment 21:
SD HIGHWAY 28
DEUEL COUNTY
MRM 365.00+0.617 TO MRM 367.00+0.308

Segment 22:
SD HIGHWAY 28
DEUEL COUNTY
MRM 367.00+0.908 TO MRM 377.00+0.028

Segment 23:
SD HIGHWAY 324
BROOKINGS COUNTY
MRM 358.00+0.346 TO MRM 366.00+0.082

8

March 18, 2026

STORM WATER PERMIT
None Required

PLOTTED FROM - TRAB17901

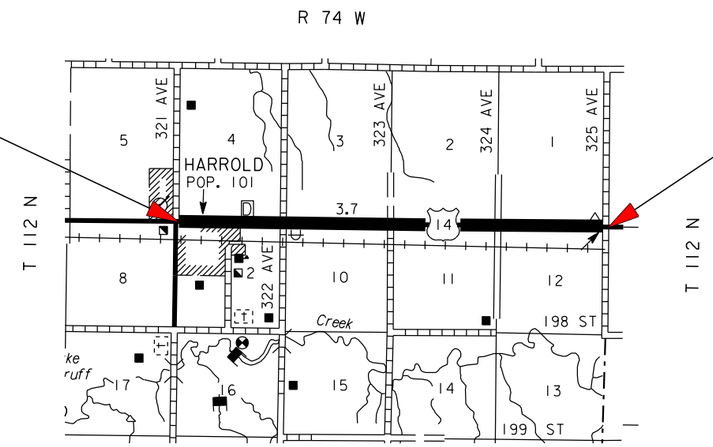
FILE - ...\09UR TITLE SHEET.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	2	39
Plotting Date: 01/07/2026			

US Highway 14
Hughes County
SEGMENT 1

Begin Project
MRM 263.00 +0.303
Mileage 146.555

End Project
MRM 267.00 +0.069
Mileage 150.318

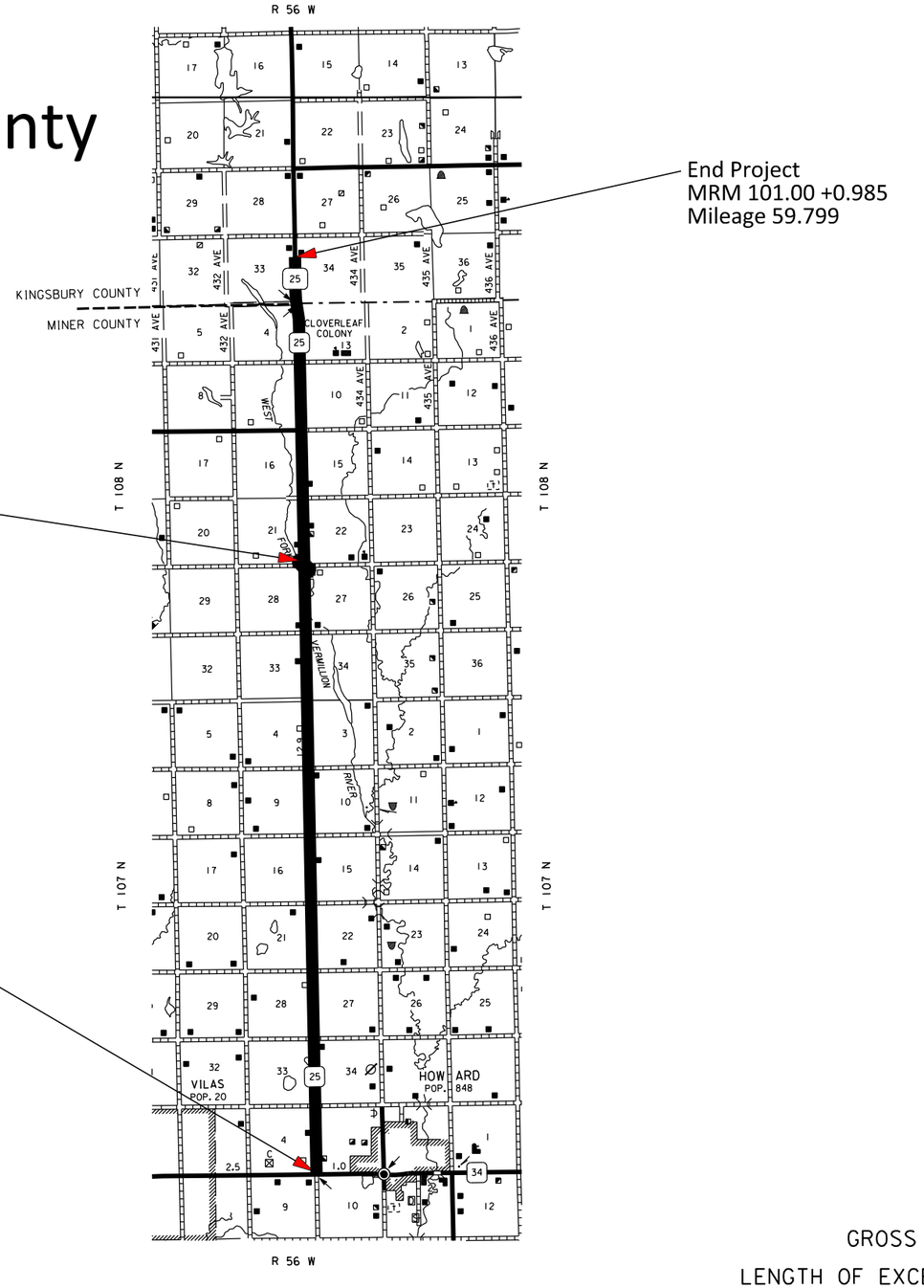


DESIGN DESIGNATION

AADT (2024)	1392
AADT (2044)	2165
DHV	280
D	50
DHV T%	9.9%
AADT T%	21.7%
V	65 MPH

GROSS LENGTH	19,868.64 FEET	3.763 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	19,868.64 FEET	3.763 MILES

SD Highway 25
Miner & Kingsbury County
SEGMENT 3



DESIGN DESIGNATION

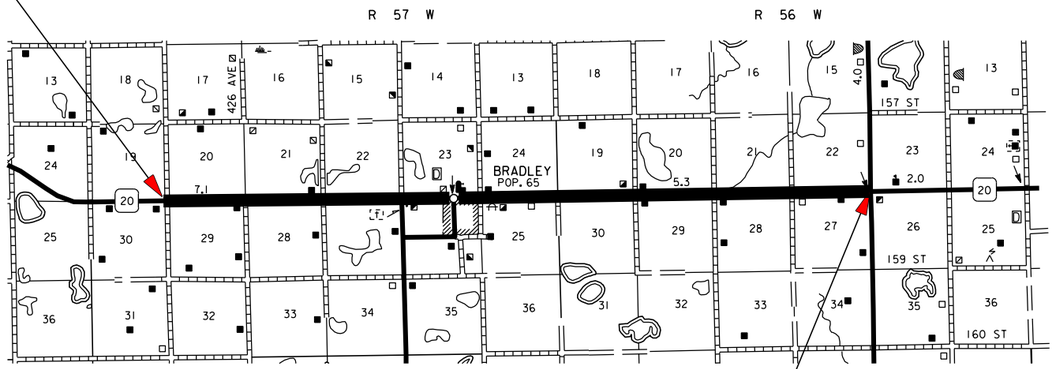
AADT (2024)	761
AADT (2044)	1238
DHV	256
D	50
DHV T%	10.7%
AADT T%	23.4%
V	65 MPH

GROSS LENGTH	69,115.20 FEET	13.090 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	69,115.20 FEET	13.090 MILES

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	4	39
Plotting Date: 01/07/2026			

SD Highway 20
Clark County
SEGMENT 2

Begin Project
MRM 363.00 +0.733
Mileage 311.522



End Project
MRM 372.00 +0.740
Mleage 320.509

DESIGN DESIGNATION

AADT (2024)	636
AADT (2044)	928
DHV	103
D	50
DHV T%	4.4%
AADT T%	9.8%
V	65 MPH

GROSS LENGTH	47,451.36 FEET	8.987 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	47,451.36 FEET	8.987 MILES

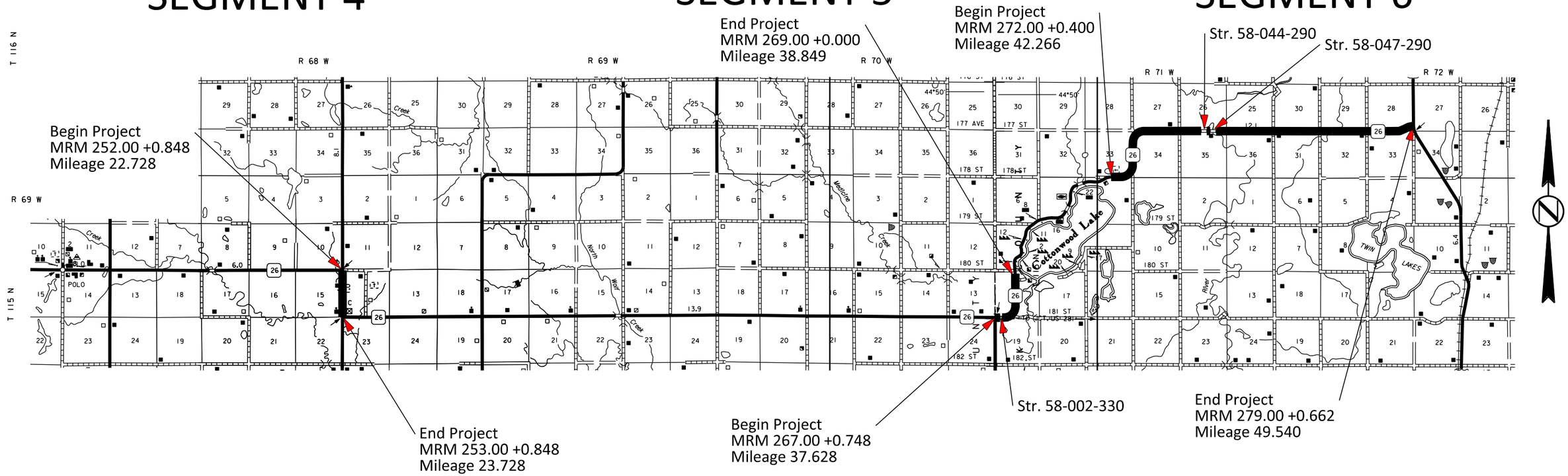
PLOT SCALE - 1:10215.2
PLOTTED FROM - TRAB17901
PLOT NAME - 4
FILE - ...\09UR TITLE SHEET.DGN

PLOT SCALE - 1:11262.2

SD Highway 26
Hand County
SEGMENT 4

SD Highway 26
Hand & Spink County
SEGMENT 5

SD Highway 26
Spink County
SEGMENT 6



GROSS LENGTH	5,280.00 FEET	1.000 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	5,280.00 FEET	1.000 MILES

DESIGN DESIGNATION

AADT (2024)	417
AADT (2044)	556
DHV	0
D	51
DHV T%	12.9%
AADT T%	28.4%
V	65 MPH

GROSS LENGTH	6,446.88 FEET	1.221 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	6,446.88 FEET	1.221 MILES

DESIGN DESIGNATION

AADT (2024)	301
AADT (2044)	401
DHV	0
D	51
DHV T%	9.0%
AADT T%	19.7%
V	65 MPH

GROSS LENGTH	38,406.72 FEET	7.274 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	38,406.72 FEET	7.274 MILES

DESIGN DESIGNATION

AADT (2024)	558
AADT (2044)	759
DHV	0
D	51
DHV T%	8.2%
AADT T%	18.1%
V	65 MPH

PLOTTED FROM - TRAB17901

PLOT NAME - 5

FILE - ...\09UR TITLE SHEET.DGN

PLOT SCALE - 1:10215.2

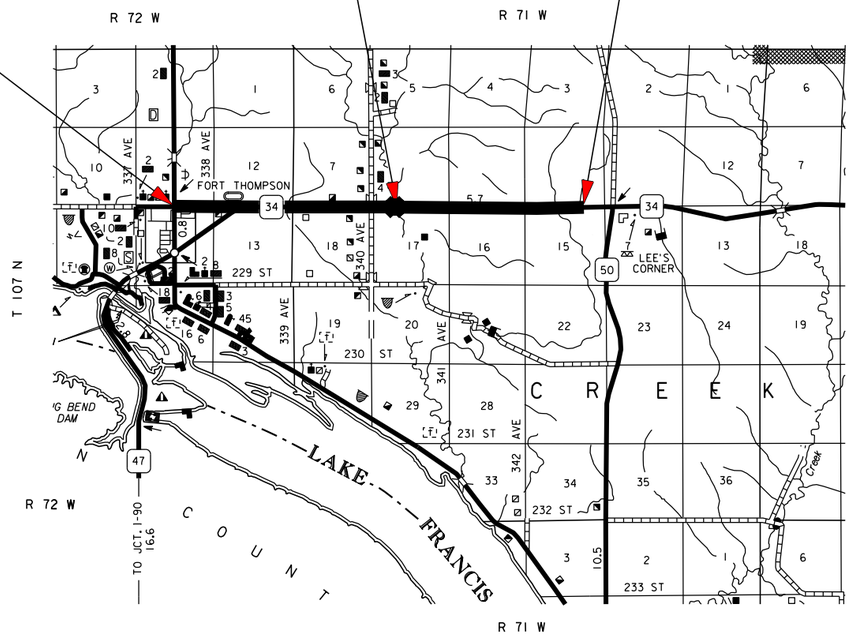
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	6	39
Plotting Date: 01/07/2026			

SD Highway 34
Hughes County
SEGMENT 7

Begin Project
MRM 269.00 +0.443
Mileage 219.477

Str. 09-094-080

End Project
MRM 274.00 +0.754
Mileage 224.860



DESIGN DESIGNATION

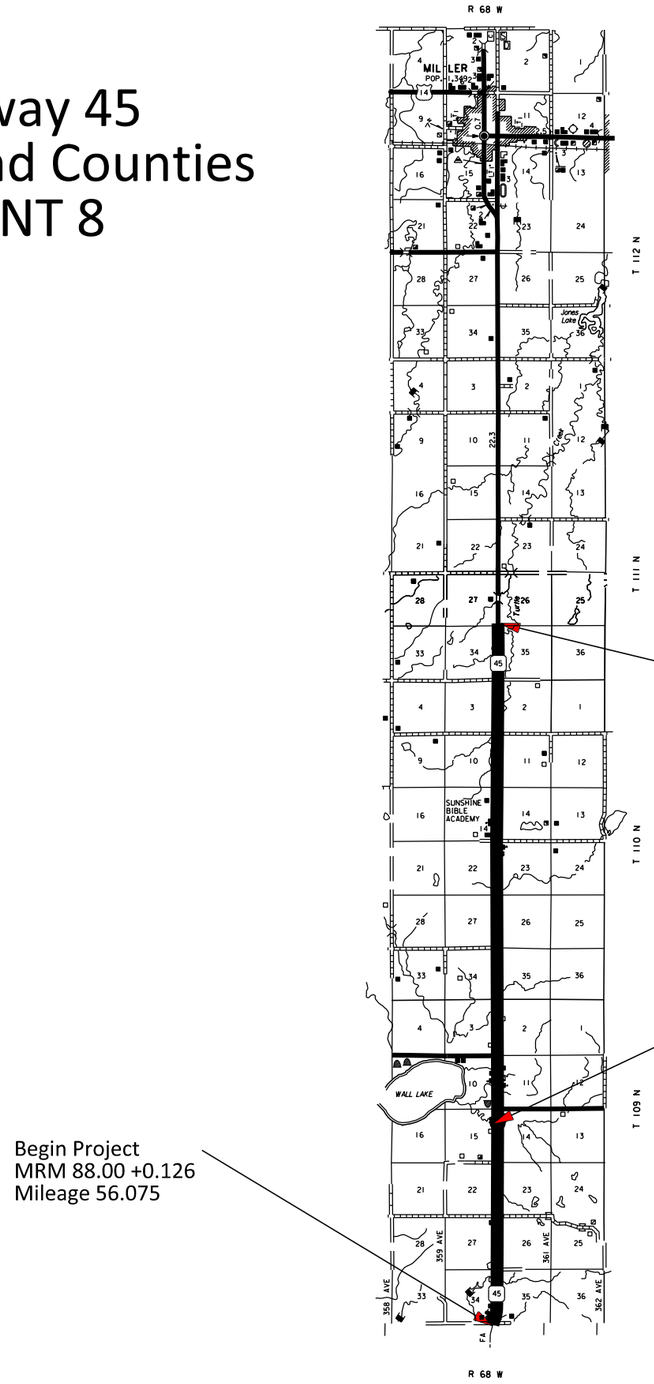
AADT (2024)	577
AADT (2044)	887
DHV	115
D	50
DHV T%	9.4%
AADT T%	20.7%
V	65 MPH

GROSS LENGTH	28,422.24 FEET	5.383 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	28,422.24 FEET	5.383 MILES

PLOTTED FROM - TRAB17901

PLOT NAME - 6
FILE - ...\09UR TITLE SHEET.DGN

SD Highway 45
Buffalo & Hand Counties
SEGMENT 8



End Project
MRM 101.00 +0.245
Mileage 69.209

Str. 30-160-442

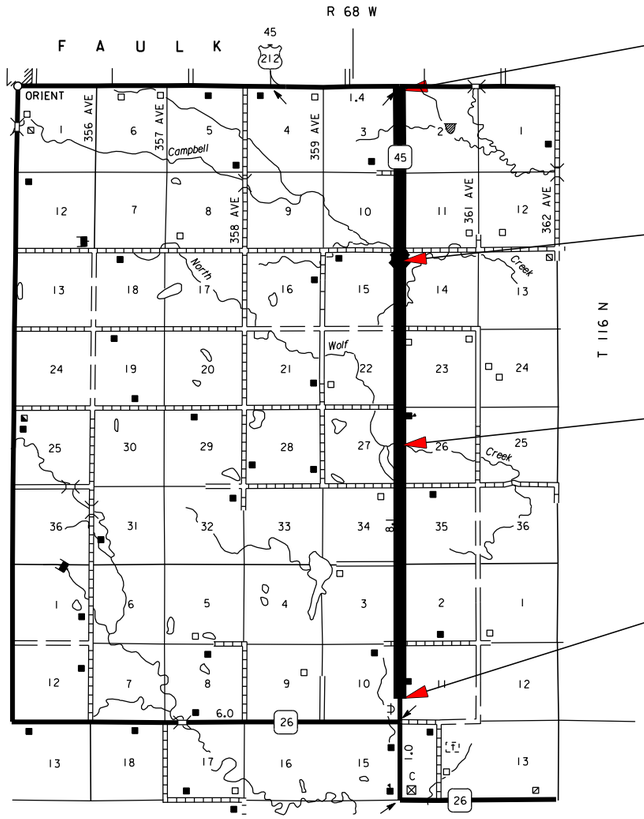
Begin Project
MRM 88.00 +0.126
Mileage 56.075

DESIGN DESIGNATION

AADT (2024)	517
AADT (2044)	734
DHV	90
D	50
DHV T%	11.5%
AADT T%	25.4%
V	65 MPH

GROSS LENGTH	69,347.52 FEET	13.134 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	69,347.52 FEET	13.134 MILES

SD Highway 45
Hand County
SEGMENT 9



DESIGN DESIGNATION

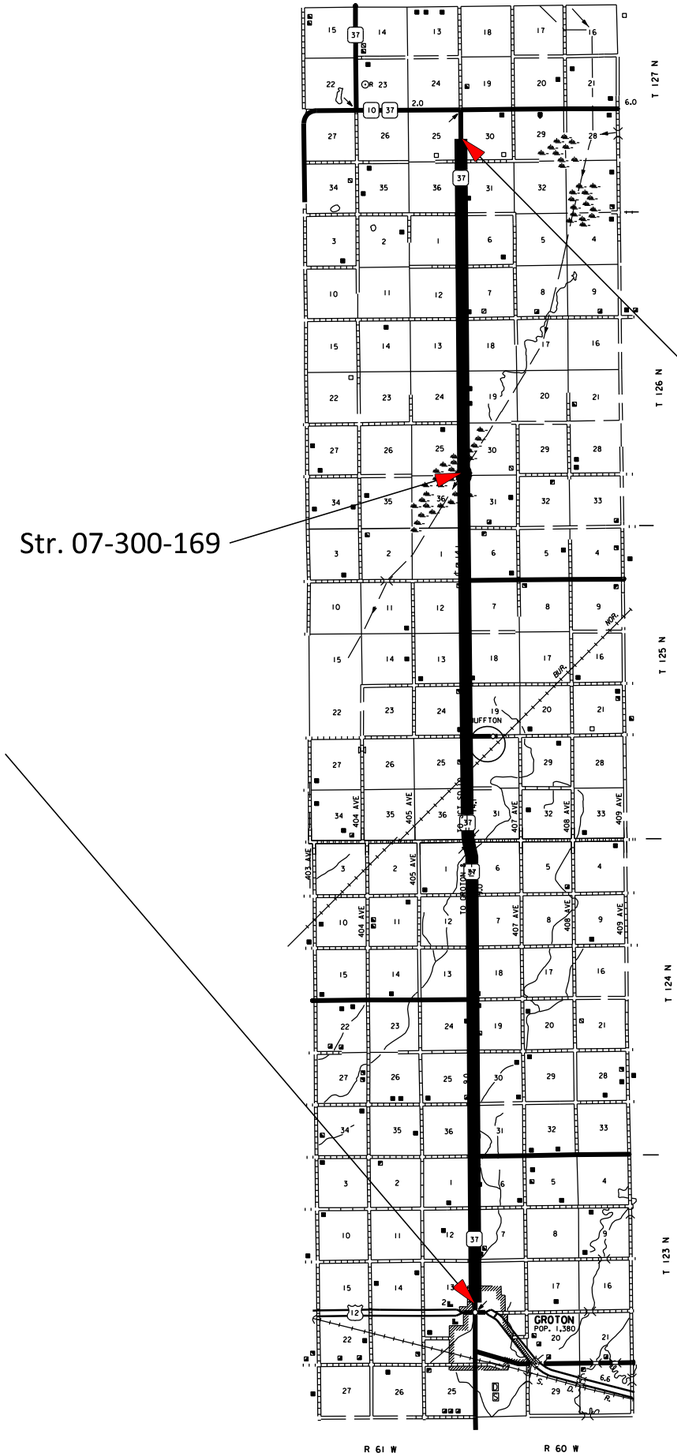
AADT (2024)	548
AADT (2044)	729
DHV	81
D	51
DHV T%	10.4%
AADT T%	22.9%
V	65 MPH

GROSS LENGTH	41,743.68 FEET	7.906 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	41,743.68 FEET	7.906 MILES

PLOT SCALE - 1:15322.8

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	9	39
Plotting Date: 01/07/2026			

SD Highway 37
Brown County
SEGMENT 10



DESIGN DESIGNATION

AADT (2024)	930
AADT (2044)	1233
DHV	137
D	50
DHV T%	12.3%
AADT T%	27.0%
V	65 MPH

GROSS LENGTH	119,127.40 FEET	22.562 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	119,127.40 FEET	22.562 MILES

PLOTTED FROM - TRAB17901
PLOT NAME - 18
FILE - ...\09UR TITLE SHEET.DGN

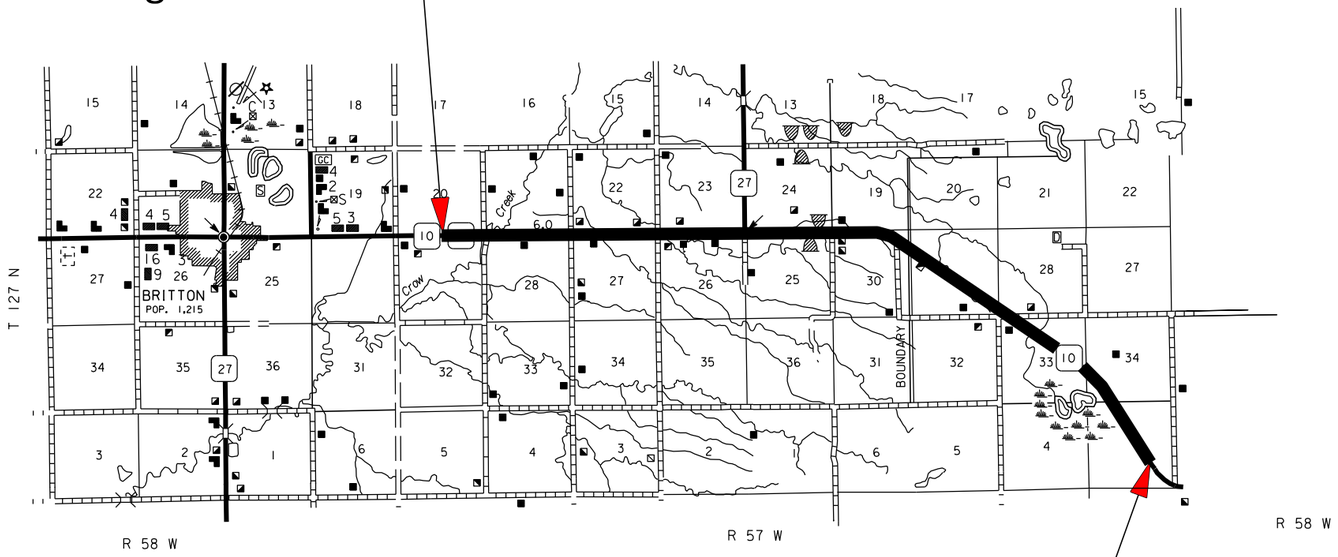
PLOT SCALE - 1.9193.67

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	10	39

Plotting Date: 01/07/2026

SD Highway 10
Marshall County
SEGMENT 11

Begin Project
MRM 323.00 +0.280
Mileage 127.843



End Project
MRM 332.00 +0.751
Mleage 137.320

DESIGN DESIGNATION

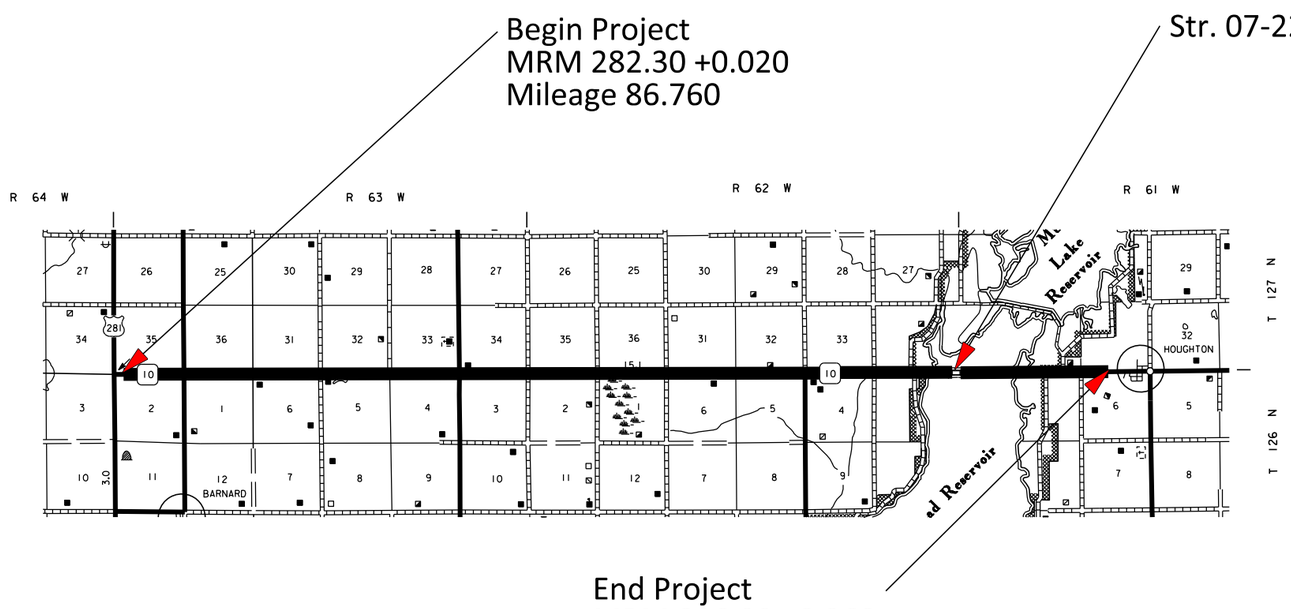
AADT (2024)	1022
AADT (2044)	1202
DHV	133
D	50
DHV T%	8.9%
AADT T%	19.6%
V	65 MPH

GROSS LENGTH	50,038.56 FEET	9.477 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	50,038.56 FEET	9.477 MILES

PLOTTED FROM - TRAB17901
PLOT NAME - 19
FILE - ...\09UR TITLE SHEET.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	11	39
Plotting Date: 01/07/2026			

SD Highway 10
Marshall County
SEGMENT 12



DESIGN DESIGNATION

AADT (2024)	866
AADT (2044)	920
DHV	96
D	50
DHV T%	16.8%
AADT T%	37.0%
V	65 MPH

GROSS LENGTH	73,856.64 FEET	13.988 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	73,856.64 FEET	13.988 MILES

PLOT SCALE - 1:11588.2

PLOTTED FROM - TRAB17901

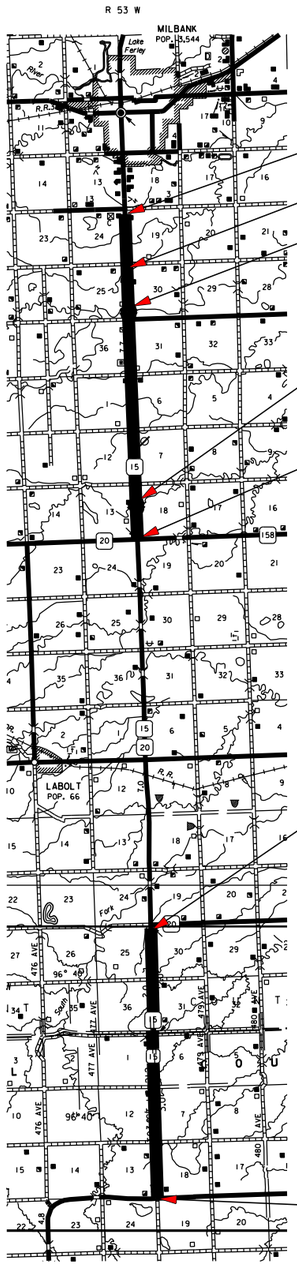
PLOT NAME - 20

FILE - ...\09UR TITLE SHEET.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	12	39

Plotting Date: 01/07/2026

SD Highway 15
Grant County
SEGMENT 14



DESIGN DESIGNATION

AADT (2024)	1756
AADT (2044)	2399
DHV	266
D	50
DHV T%	9.1%
AADT T%	20.1%
V	65 MPH

GROSS LENGTH	30,550.08 FEET	5.786 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	30,550.08 FEET	5.786 MILES

SD Highway 15
Deuel & Grant Counties
SEGMENT 13

DESIGN DESIGNATION

AADT (2024)	1190
AADT (2044)	1616
DHV	181
D	50
DHV T%	12.9%
AADT T%	28.4%
V	65 MPH

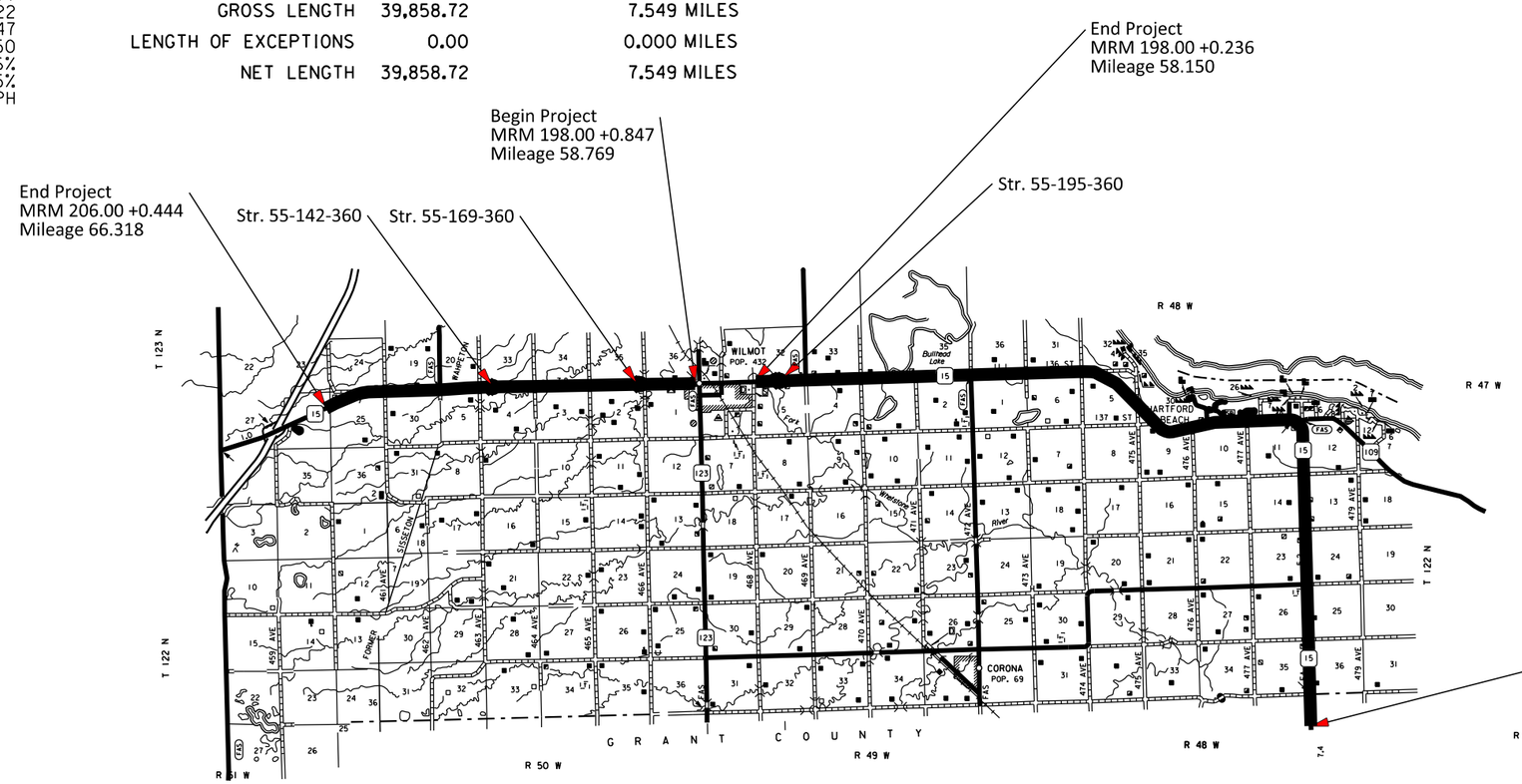
GROSS LENGTH	26,426.40 FEET	5.005 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	26,426.40 FEET	5.005 MILES

SD Highway 15
Roberts County
SEGMENT 16

DESIGN DESIGNATION

AADT (2024)	677
AADT (2044)	1322
DHV	147
D	50
DHV T%	6.6%
AADT T%	14.5%
V	65 MPH

GROSS LENGTH	39,858.72	7.549 MILES
LENGTH OF EXCEPTIONS	0.00	0.000 MILES
NET LENGTH	39,858.72	7.549 MILES



SD Highway 15
Roberts County
SEGMENT 15

DESIGN DESIGNATION

AADT (2024)	776
AADT (2044)	1494
DHV	166
D	50
DHV T%	7.7%
AADT T%	16.8%
V	65 MPH

GROSS LENGTH	83,466.24 FEET	15.808 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	83,466.24 FEET	15.808 MILES

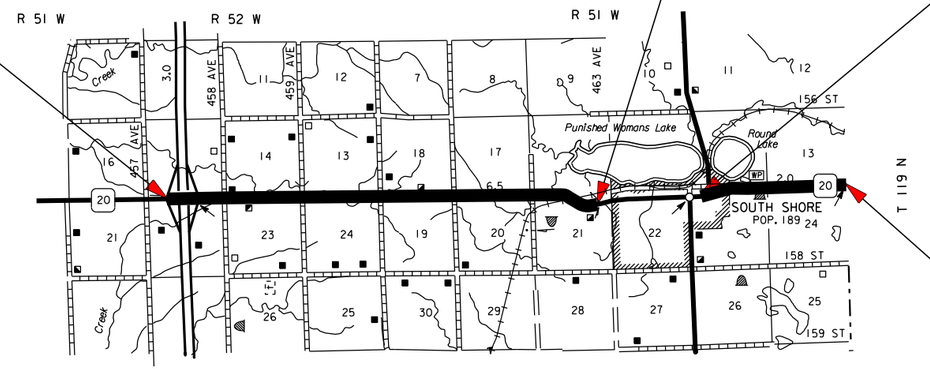
SD Highway 20
Codington County
SEGMENT 17

GROSS LENGTH	31,801.44 FEET	6.023 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	31,801.44 FEET	6.023 MILES

Begin Project
MRM 418.00 +0.637
Mileage 348.091

End Project
MRM 424.00 +0.673
Mileage 354.114

Begin Project
MRM 425.00 +0.328
Mileage 354.750



SD Highway 20
Codington County
SEGMENT 18

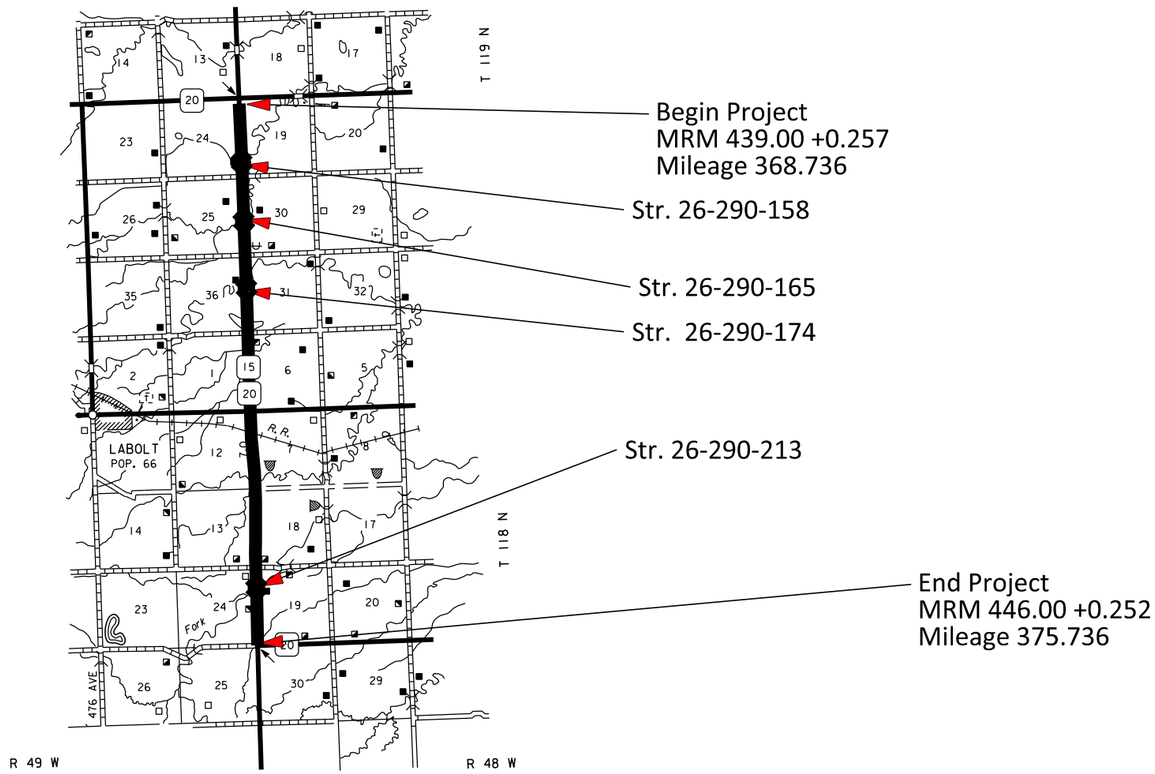
End Project
MRM 427.00 +0.225
Mileage 356.724

DESIGN DESIGNATION

AADT (2024)	824
AADT (2044)	1159
DHV	130
D	50
DHV T%	4.3%
AADT T%	9.5%
V	65 MPH

GROSS LENGTH	10,422.72 FEET	1.974 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	10,422.72 FEET	1.974 MILES

SD Highway 20
Grant County
SEGMENT 19

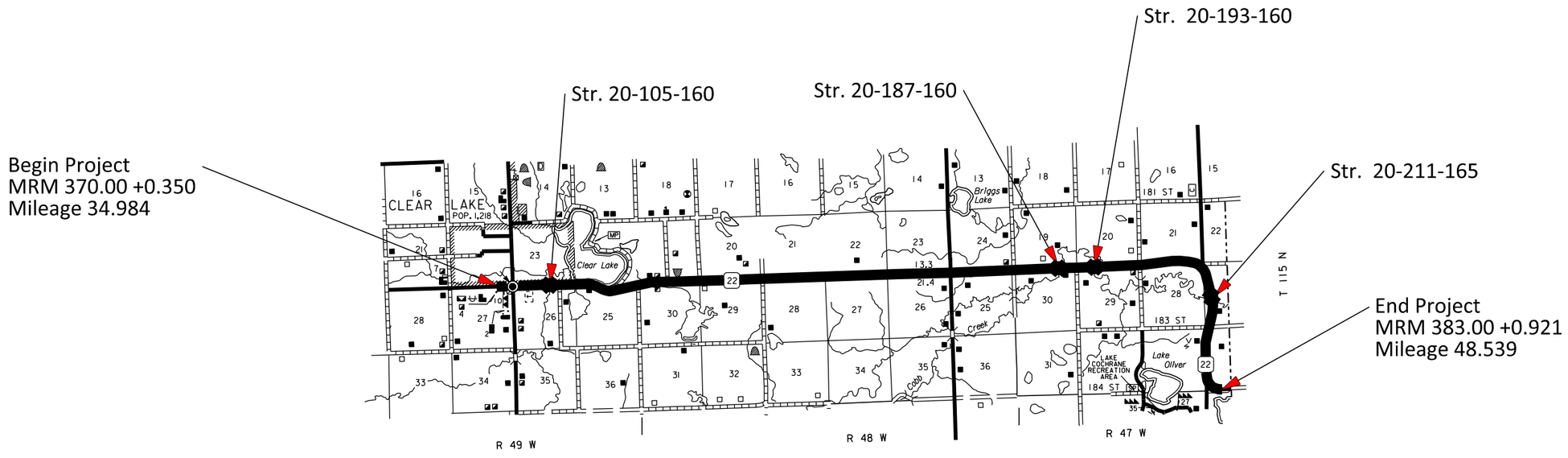


DESIGN DESIGNATION

AADT (2024)	1263
AADT (2044)	1725
DHV	194
D	50
DHV T%	12.6%
AADT T%	27.7%
V	65 MPH

GROSS LENGTH	36,960 FEET	7.000 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	36,960 FEET	7.000 MILES

SD Highway 22
Deuel County
SEGMENT 20



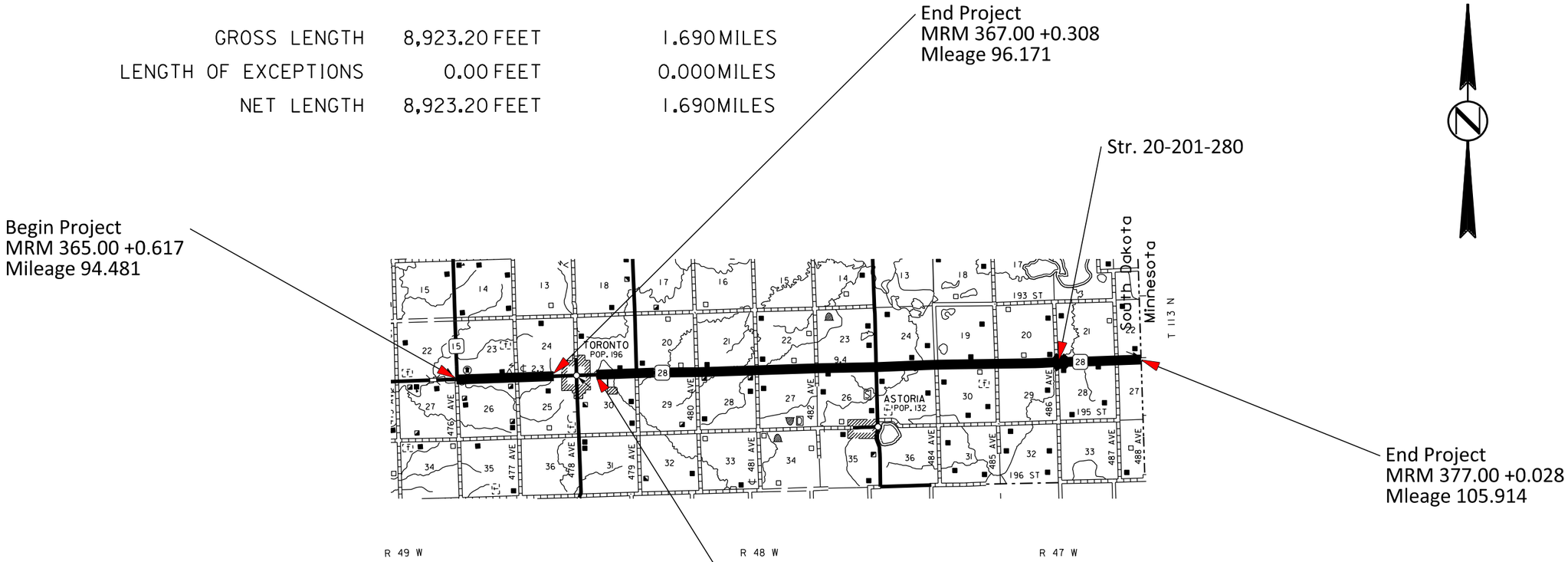
DESIGN DESIGNATION

AADT (2024)	936
AADT (2044)	1282
DHV	144
D	50
DHV T%	9.3%
AADT T%	20.4%
V	65 MPH

GROSS LENGTH	71,570.40 FEET	13.555 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	71,570.40 FEET	13.555 MILES

SD Highway 28
Deuel County
SEGMENT 21

GROSS LENGTH	8,923.20 FEET	1.690 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	8,923.20 FEET	1.690 MILES



SD Highway 28
Deuel County
SEGMENT 22

GROSS LENGTH	48,275.04 FEET	9.143 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	48,275.04 FEET	9.143 MILES

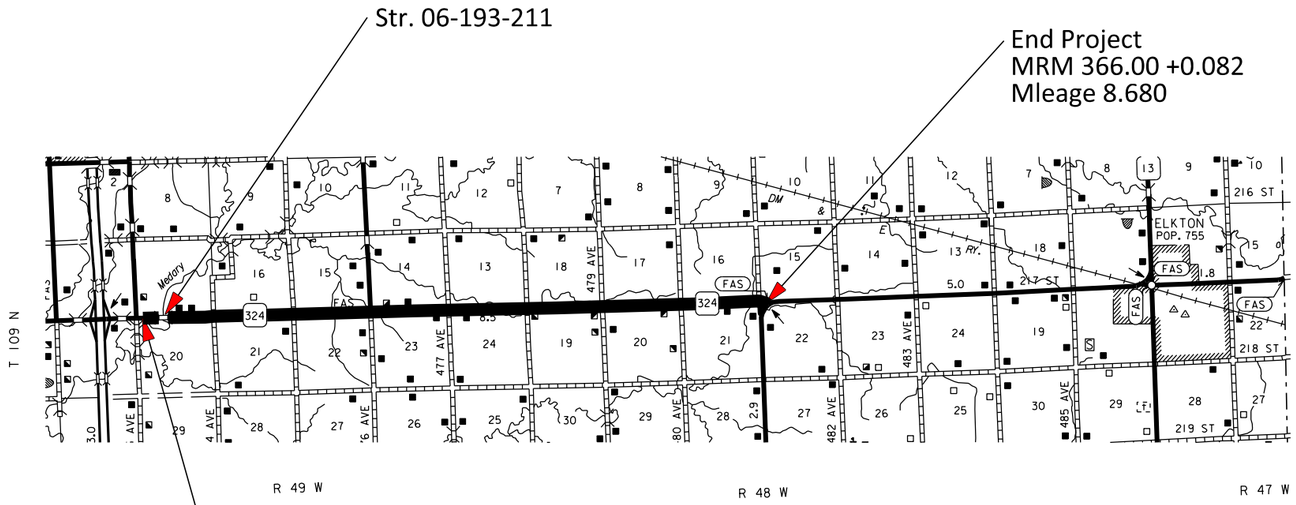
DESIGN DESIGNATION

AADT (2024)	565
AADT (2044)	768
DHV	86
D	50
DHV T%	7.7%
AADT T%	17.0%
V	65 MPH

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	18	39

Plotting Date: 01/07/2026

SD Highway 324
Brookings County
SEGMENT 23



DESIGN DESIGNATION

AADT (2024)	1164
AADT (2044)	1750
DHV	222
D	50
DHV T%	6.4%
AADT T%	14.0%
V	65 MPH

GROSS LENGTH	40,877.76 FEET	7.742 MILES
LENGTH OF EXCEPTIONS	0.00 FEET	0.000 MILES
NET LENGTH	40,877.76 FEET	7.742 MILES

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	PH 0010(232)	19	39

Revised 01/13/25 - PB

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
320E7028	Grind Centerline Rumble Stripe in Asphalt Concrete	140.1	Mile
320E7030	Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete	29.2	Mile
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	98.9	Ton
633E0030	Cold Applied Plastic Pavement Marking, 24"	464	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	5	Each
633E0055	Cold Applied Plastic Pavement Marking, Railroad Crossing	4	Each
633E1201	High Build Waterborne Pavement Marking Paint with Reflective Elements, White	10,512	Gal
633E1206	High Build Waterborne Pavement Marking Paint with Reflective Elements, Yellow	5,858	Gal
633E5050	Surface Preparation for Pavement Marking	464	Ft
633E5052	Surface Preparation for Pavement Marking	11	Each
634E0010	Flagging	300.0	Hour
634E0020	Pilot Car	100.0	Hour
634E0110	Traffic Control Signs	1,126.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0320	Temporary Flexible Vertical Markers (Tabs)	189.1	Mile

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 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 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.

Breakdown of Segments (For Information Only)

Segment	Hwy	Begin MRM	Begin Disp.	Begin Mileage	End MRM	End Disp.	End Mileage	Exceptions (Mile)	Gross Length (Mile)	Net Miles
1	14	263.00	0.303	146.555	267.00	0.069	150.318	0.000	3.763	3.763
2	20	363.00	0.733	311.522	372.00	0.740	320.509	0.000	8.987	8.987
3	25	88.88	0.000	46.709	101.00	0.985	59.799	0.000	13.090	13.090
4	26	252.00	0.848	22.728	253.00	0.848	23.728	0.000	1.000	1.000
5	26	267.00	0.748	37.628	269.00	0.000	38.849	0.000	1.221	1.221
6	26	272.00	0.400	42.266	279.00	0.662	49.540	0.000	7.274	7.274
7	34	269.00	0.443	219.477	274.00	0.754	224.860	0.000	5.383	5.383
8	45	88.00	0.126	56.075	101.00	0.245	69.209	0.000	13.134	13.134
9	45	129.62	0.000	95.789	137.00	0.517	103.695	0.000	7.906	7.906
10	37	208.00	0.902	146.955	231.00	0.499	169.517	0.000	22.562	22.562
11	10	323.00	0.280	127.843	332.00	0.751	137.320	0.000	9.477	9.477
12	10	282.30	0.020	86.760	296.00	0.268	100.748	0.000	13.988	13.988
13	15	155.32	0.019	22.147	160.00	0.311	27.152	0.000	5.005	5.005
14	15	167.33	0.375	27.565	173.00	0.491	33.351	0.000	5.786	5.786
15	15	182.00	0.434	42.350	198.00	0.236	58.158	0.000	15.808	15.808
16	15	198.00	0.847	58.769	206.00	0.444	66.318	0.000	7.549	7.549
17	20	418.00	0.637	348.091	424.00	0.673	354.114	0.000	6.023	6.023
18	20	425.00	0.328	354.750	427.00	0.225	356.724	0.000	1.974	1.974
19	20	439.00	0.257	368.736	446.00	0.252	375.736	0.000	7.000	7.000
20	22	370.00	0.350	34.984	383.00	0.921	48.539	0.000	13.555	13.555
21	28	365.00	0.617	94.481	367.00	0.308	96.171	0.000	1.690	1.690
22	28	367.00	0.908	96.771	377.00	0.028	105.914	0.000	9.143	9.143
23	324	358.00	0.346	0.938	366.00	0.082	8.680	0.000	7.742	7.742
								Total Project Less Exceptions:		**189.1**

Estimate of Quantites (For Information Only)

Segment	Highway	Length (Miles)	Grind 12'' Centerline Rumble Stripe in AC (Miles)	Grind 16'' Centerline Rumble Stripe in AC (Miles)	High Build Waterborne Pavement Marking Paint w/ Reflective Elements, Yellow (Gal)	High Build Waterborne Pavement Marking Paint w/ Reflective Elements, White (Gal)
1	US 14	3.763	-	3.229	31	209
2	SD 20	8.987	-	4.623	294	500
3	SD 25	13.090	-	9.065	382	728
4	SD 26	1.000	1.000	-	32	56
5	SD 26	1.221	-	1.221	42	68
6	SD 26	7.274	-	6.302	238	404
7	SD 34	5.383	5.383	-	179	299
8	SD 45	13.134	-	11.119	418	730
9	SD 45	7.906	7.906	-	228	440
10	SD 37	22.562	-	17.381	632	1254
11	SD 10	9.477	9.477	-	289	527
12	SD 10	13.988	13.988	-	410	778
13	SD 15	5.005	5.005	-	182	278
14	SD 15	5.786	5.786	-	175	322
15	SD 15	15.808	15.808	-	495	879
16	SD 15	7.549	7.549	-	254	420
17	SD 20	6.023	6.023	-	213	335
18	SD 20	1.974	1.974	-	76	110
19	SD 20	7.000	7.000	-	234	389
20	SD 22	13.555	13.555	-	470	754
21	SD 28	1.690	1.690	-	60	94
22	SD 28	9.143	9.143	-	300	508
23	SD 324	7.742	-	5.055	222	430
		Total:	111.3	58.0	5858	10512

Centerline Rumble Stripe Tables: Traditional and Sinusoidal

Table of Centerline Rumble Stripes		
Segment:	Traditional	Sinusoidal
1	-	-
	263.00+0.840 to 267.00+0.069	-
2	363.00+0.733 to 363.00+0.853	-
	364.00+0.093 to 364.00+0.593	-
	364.00+0.833 to 365.00+0.443	-
	365.00+0.880 to 366.00+0.803	-
	367.00+0.043 to 367.00+0.173	-
	368.00+0.353 to 369.00+0.413	-
	370.00+0.893 to 372.00+0.173	-
3	-	-
	90.00+0.010 to 91.00+0.500	-
	91.00+0.740 to 92.00+0.630	-
	93.00+0.600 to 94.00+0.670	-
	94.00+0.910 to 96.00+0.310	-
	96.00+0.550 to 97.00+0.930	-
	99.00+0.150 to 101.00+0.985	-
4	252.00+0.848 to 253.00+0.038	253.00+0.038 to 253.00+0.388
	253.00+0.388 to 253.00+0.848	-
5	267.00+0.748 to 269.00+0.000	-
6	272.00+0.400 to 274.00+0.310	-
	274.00+0.550 to 275.00+0.240	-
	275.00+0.480 to 276.00+0.680	-
	276.00+0.920 to 278.00+0.530	-
	278.00+0.770 to 279.00+0.662	-
7	-	269.00+0.443 to 270.00+0.163
	270.00+0.163 to 270.00+0.593	270.00+0.593 to 271.00+0.923
	271.00+0.923 to 274.00+0.754	-
8	88.00+0.126 to 89.00+0.106	-
	89.00+0.736 to 91.00+0.956	-
	92.00+0.196 to 93.00+0.596	-
	94.00+0.156 to 97.00+0.876	-
	98.00+0.446 to 101.00+0.245	-
9	129.62+0.000 to 130.00+0.020	130.00+0.020 to 130.00+0.260
	130.00+0.260 to 136.0+0.860	136.00+0.860 to 137.00+0.210
	137.00+0.210 to 137.00+0.517	-

Table of Centerline Rumble Stripes		
Segment:	Traditional	Sinusoidal
10	-	-
	209.00+0.025 to 209.00+0.341	-
	209.00+0.658 to 210.00+0.781	-
	211.00+0.027 to 211.00+0.562	-
	212.00+0.016 to 212.00+0.359	-
	212.00+0.623 to 213.00+0.655	-
	214.00+0.694 to 216.00+0.377	-
	216.00+0.882 to 218.00+0.929	-
	219.00+0.247 to 219.00+0.427	-
	219.00+0.683 to 220.00+0.281	-
	220.00+0.776 to 222.00+0.311	-
	222.00+0.585 to 225.00+0.695	-
	226.00+0.214 to 227.00+0.407	-
	227.00+0.567 to 229.00+0.657	-
	229.00+0.903 to 231.00+0.499	-
11	323.00+0.280 to 325.00+0.203	325.00+0.203 to 325.00+0.449
	325.00+0.449 to 325.00+0.720	325.00+0.720 to 326.00+0.811
	326.00+0.811 to 328.00+0.011	328.00+0.011 to 328.00+0.282
	328.00+0.282 to 328.00+0.605	328.00+0.605 to 328.00+0.851
	328.00+0.851 to 329.00+0.039	329.00+0.039 to 329.00+0.285
	329.00+0.285 to 330.00+0.233	330.00+0.233 to 330.00+0.559
	330.00+0.559 to 332.00+0.751	-
12	282.30+0.020 to 284.00+0.217	284.00+0.217 to 284.00+0.463
	284.00+0.463 to 284.00+0.985	284.00+0.985 to 285.00+0.491
	285.00+0.491 to 287.00+0.199	287.00+0.199 to 287.00+0.445
	287.00+0.445 to 292.00+0.181	292.00+0.181 to 292.00+0.534
	292.00+0.534 to 295.00+0.968	295.00+0.968 to 296.00+0.214
	296.00+0.214 to 296.00+0.268	-
13	155.32+0.019 to 155.00+0.965	155.00+0.965 to 156.00+0.211
	156.00+0.211 to 157.00+0.081	157.00+0.081 to 157.00+0.380
	157.00+0.380 to 157.00+0.966	157.00+0.966 to 158.00+0.212
	158.00+0.212 to 159.00+0.626	159.00+0.626 to 159.00+0.872
	159.00+0.872 to 160.00+0.311	-

Centerline Rumble Stripe Tables: Traditional and Sinusoidal

Table of Centerline Rumble Stripes		
Segment:	Traditional	Sinusoidal
14	167.33+0.375 to 167.33+0.449	167.33+0.449 to 168.00+0.025
	168.00+0.025 to 169.00+0.121	169.00+0.121 to 169.00+0.368
	169.00+0.368 to 170.00+0.126	170.00+0.126 to 170.00+0.495
	170.00+0.495 to 171.00+0.406	171.00+0.406 to 173.00+0.491
15	-	182.00+0.434 to 182.00+0.757
	182.00+0.757 to 183.00+0.295	183.00+0.295 to 184.00+0.001
	184.00+0.001 to 185.00+0.149	185.00+0.149 to 186.00+0.208
	186.00+0.208 to 187.00+0.210	187.00+0.210 to 187.00+0.456
	187.00+0.456 to 188.00+0.094	188.00+0.094 to 188.00+0.736
	188.00+0.736 to 189.00+0.990	189.00+0.990 to 190.00+0.236
	190.00+0.236 to 195.00+0.482	195.00+0.482 to 197.00+0.462
	197.00+0.462 to 198.00+0.100	198.00+0.100 to 198.00+0.236
16	-	198.00+0.847 to 198.00+0.943
	198.00+0.943 to 199.00+0.150	199.00+0.150 to 199.00+0.434
	199.00+0.434 to 199.00+0.789	199.00+0.789 to 200.00+0.035
	200.00+0.035 to 206.00+0.444	-
17	418.00+0.637 to 419.00+0.167	419.00+0.167 to 419.00+0.786
	419.00+0.786 to 421.00+0.649	421.00+0.649 to 421.00+0.935
	421.00+0.935 to 424.00+0.097	424.00+0.097 to 424.00+0.673
18	-	425.00+0.328 to 425.00+0.552
	425.00+0.552 to 427.00+0.225	-
19	439.00+0.257 to 439.00+0.897	439.00+0.897 to 440.00+0.190
	440.00+0.190 to 441.00+0.358	441.00+0.358 to 441.00+0.707
	441.00+0.707 to 442.00+0.164	442.00+0.164 to 442.00+0.442
	442.00+0.442 to 445.00+0.042	445.00+0.042 to 445.00+0.976
	445.00+0.976 to 446.00+0.252	-

Table of Centerline Rumble Stripes		
Segment:	Traditional	Sinusoidal
20	-	370.00+0.350 to 371.00+0.115
	371.00+0.115 to 371.00+0.593	371.00+0.593 to 373.00+0.095
	373.00+0.095 to 378.00+0.421	378.00+0.421 to 378.00+0.945
	378.00+0.945 to 379.00+0.308	379.00+0.308 to 379.00+0.554
	379.00+0.554 to 380.00+0.454	380.00+0.454 to 380.00+0.700
	380.00+0.700 to 380.00+0.965	380.00+0.965 to 381.00+0.212
	381.00+0.212 to 382.00+0.079	382.00+0.079 to 383.00+0.209
	383.00+0.209 to 383.00+0.391	383.00+0.391 to 383.00+0.921
21	-	365.00+0.617 to 365.00+0.935
	365.00+0.935 to 366.00+0.373	366.00+0.373 to 366.00+0.612
	366.00+0.612 to 367.00+0.004	367.00+0.004 to 367.00+0.308
22	367.00+0.908 to 368.00+0.230	368.00+0.230 to 368.00+0.477
	368.00+0.477 to 369.00+0.529	369.00+0.529 to 369.00+0.929
	369.00+0.929 to 370.00+0.368	370.00+0.368 to 370.00+0.687
	370.00+0.687 to 371.00+0.699	371.00+0.699 to 371.00+0.945
	371.00+0.945 to 373.00+0.131	373.00+0.131 to 373.00+0.377
	373.00+0.377 to 374.00+0.084	374.00+0.084 to 374.00+0.394
	374.00+0.394 to 374.00+0.904	374.00+0.904 to 375.00+0.150
	375.00+0.150 to 375.00+0.397	375.00+0.397 to 375.00+0.788
	375.00+0.788 to 376.00+0.179	376.00+0.179 to 376.00+0.426
	376.00+0.426 to 377.00+0.028	-
23	-	-
	358.00+0.684 to 359.00+0.309	-
	359.00+0.633 to 361.00+0.078	-
	361.00+0.931 to 362.00+0.884	-
	363.00+0.131 to 363.00+0.811	-
	364.00+0.057 to 364.00+0.523	-
	364.00+0.678 to 365.00+0.271	-
	365.00+0.518 to 365.00+0.811	-

SCOPE OF WORK

Work on this project includes Installation of Centerline Rumble Stripes and Permanent Pavement Marking.

SEQUENCE OF OPERATIONS

1. Install traffic control for 3-mile closure.
2. Grind centerline rumble stripes.
3. Repeat 3-mile process until project completion.
4. Place temporary pavement markings before the end of each day.
5. Install permanent pavement marking paint.

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

16'' CENTERLINE RUMBLE STRIPES

As shown in the "Estimate of Quantities" table, some segments will require 16'' Centerline Rumble Stripes matching the "16'' CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE" detail in this set of plans.

COORDINATION BETWEEN CONTRACTORS

A separate contract for Project NH-P 0013(173) – PCN 09WN will be awarded to another Contractor for Asphalt Surface Treatment on Hwy 14, SD 20, 26, and 45, adjacent to this project (PCN 09UR). The Asphalt Surface Treatment for PCN 09WN will be close to/within the project limits of Segments 1,2, 4 and 9. PCN 09WN must be completed prior to starting this project on the previously mentioned segments. In order to avoid the chip seal construction, rumble stripes on these segments are to be installed between August 15th and November 1st of the construction year.

A separate contract for Project P 0010(158)296 – PCN 06Q9 will be awarded to another Contractor for Cold Milling and Asphalt Concrete Resurfacing on SD 10, adjacent to this project (PCN 09UR). The Cold Milling and Asphalt Concrete Resurfacing work for PCN 06Q9 will begin at the end of the project limits of Segment 10 on SD 37.

A separate contract for Project IM-NH-P 0012(332) – PCN 09WV will be awarded to another Contractor for Asphalt Surface Treatment on SD 15 and SD 20 adjacent to this project (PCN 09UR). The Asphalt Surface Treatment for PCN 09WV will be close to/within the project limits of Segments 12, 13, 14, and 19. PCN 09WV must be completed prior to starting this project on the previously mentioned segments. In order to avoid the chip seal construction, rumble stripes on these segments are to be installed between August 15th and November 1st of the construction year.

A separate contract for Project P 0028(43)355 – PCN 05Q7 has been awarded to Bowes Construction for Asphalt Surface Treatment on SD 28 adjacent to this project (PCN 09UR). The Asphalt Surface Treatment for PCN 05Q7 will be close to the project limits of Segment 21. PCN 05Q7 must be completed prior to starting this project on the previously mentioned segment. In order to avoid the chip seal construction, rumble stripes on these segments are to be installed between August 15th and November 1st of the construction year.

The Contractor will schedule work so as not to interfere with or hinder the progress of the work performed by the other Contractors on PCNs 09WN, 06Q9, 09WV, 05Q7. 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.

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.

A mobile operation will be used for permanent pavement marking application.

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

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.

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.

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.

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".

GRIND CENTERLINE RUMBLE STRIPES

The Engineer will provide the exact start and end locations for the rumble stripe installation. The Contractor will be responsible for marking minor exceptions, such as approaches and bridges.

The Contractor is responsible for inspecting project locations prior to letting to identify potential problems for installing the rumble stripes. Any damage to the existing shoulders and/or roadway during the construction of rumble stripes will be repaired by the Contractor at no cost to the State of South Dakota.

The Contractor will demonstrate to the Engineer on an initial 50' test section that the equipment and method will provide the desired ground rumble strip and surface inside each depression. If the desired results are not being provided, as determined by the Engineer, the Contactor will provide different equipment or method until satisfactory installation is completed. Any damage to the PCC concrete will be replaced by the Contractor at no addition cost to the State.

Construct rumble stripes in a uniform position according to the dimensions and at locations shown in the plans. Indentations must comply with the specified dimensions in the plans within 0.06 inch in depth and 10 percent in length and width. The depressions must have well defined edges and not snag or tear the existing pavement. Rumble stripes will be constructed in a way that does not spall the centerline joint of the existing pavement. Do not construct rumble stripes on structures or approach slabs.

The rumble stripe installation equipment requires a cutting head consisting of diamond blades. The grinding process will produce a surface uniform in appearance with longitudinal line-type texture. The line-type texture will contain corrugations parallel to the centerline and present a narrow ridge corduroy type appearance. The peaks of the ridges will be 3/8 inch ± 1/16 inch higher than the bottom of the grooves with evenly spaced ridges. It is the Contractor's responsibility to select the number of blades per foot to be used to provide the proper surface finish for the aggregate type and concrete present on the project.

If the grinding process requires the use of water, the Contractor will establish a positive means for vacuuming the grinding residue from the pavement surface leaving the surface in a clean, near-dry condition. Solid residue will be removed from the pavement surfaces before being blown by traffic action or wind. Residue will not be permitted to flow across lanes used by public traffic. Residue and wastewater will not be expelled on the roadway or shoulder surface. Residue will be disposed of in a manner that will prevent residue, whether in solid or slurry form, from reaching any waterway in a concentrated state. Residue may continuously flow on adjacent dry vegetated roadway slopes or ditches within the right-of-way. If the Engineer determines that the slurry is going to enter a waterway, drainage facility, or curb & gutter section, the slurry will be placed in storage tanks and deposited in settling basins, spread over flat vegetated areas, or filtered by other means approved by the Engineer at no additional cost. The Contractor will satisfactorily remove grinding material or wastes prior to returning traffic to the roadway.

All costs associated with the work on Segments 1- 23 will be incidental to the contract unit price per mile for "GRIND CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE".

RUMBLE STRIPE ROADWAY CLEANING

The Contractor will remove all loose materials from the driving surface and shoulders of the roadway on the daily basis. Loose material may be used as fill material adjacent to the paved shoulder. It will be Contractor's responsibility to ensure the loose material doesn't enter any vegetated areas and/or waterways.

All costs associated with rumble stripe grinding work will be incidental to the contract unit price per mile for "GRIND SINUSOIDAL CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE", and "GRIND CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE".

CENTERLINE RUMBLE STRIPES – ASPHALT FOR FLUSH SEAL

Asphalt for Flush Seal will be applied after the centerline rumble stripes have been installed and prior to the application of permanent pavement markings. The application width will extend 1 ft beyond the centerline of the roadway in each direction to create a total application rate of 0.10 Gal/SqYd on the centerline rumble stripes.

In the event the flush seal is eliminated from the contract, the Contractor will still be required to apply asphalt for flush seal to the newly installed centerline rumble stripes at a width of 24" and a rate of 0.10 Gal/SqYd. No adjustment in payment will be made and SS-1h or CSS-1h Asphalt for Flush Seal will be paid at the contract unit price per ton.

MARKINGS WITHIN SINUSOIDAL CENTERLINE RUMBLE STRIPES

The sinusoidal centerline rumble stripes are recessed below the pavement surface, so pavement marking grooving will not be required at these locations.

Retroreflectivity readings will not be taken for pavement markings within the sinusoidal rumble stripe. Restriping of pavement markings to meet the specified application rate requirements and to provide a quality retroreflective line will be at the expense of the Contractor with no additional cost to the Department. Sections to be restriped will be determined by the Engineer.

TEMPORARY PAVEMENT MARKINGS

A quantity of 189.1 miles of Temporary Pavement Markings has been included in the plans to mark centerline where grinding centerline rumble stripes has altered the centerline pavement markings.

Temporary flexible vertical markers (tabs) will be installed on one side of the centerline rumble for the temporary pavement marking. No passing zones will be marked in accordance with Specifications. DO NOT PASS (R4-1) and PASS WITH CARE (R4-2) signs will also be used in addition to the temporary flexible vertical markers (tabs) placed per Specifications to mark no passing zones.

The total length of no passing zone on this project is estimated to be 66.8 miles.

It is estimated that 177 DO NOT PASS and 177 PASS WITH CARE signs will be required.

The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

In the absence of a signed lane closure or pilot car operation, FLAGGER (W20-7) symbol signs and flaggers, or a shadow vehicle with rotating yellow lights or strobe lights will be positioned on the shoulder in advance of workers for both directions of traffic during the installation and removal of the temporary flexible vertical markers (tabs). The traffic control device used will be moved intermittently to provide proper warning of the work operation. A ROAD WORK AHEAD (W20-1) sign, a WORKER (W21-1) symbol sign or a BE PREPARED TO STOP (W3-4) sign will be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work must be approved by the Engineer.

Cost for furnishing and applying of the Temporary Pavement Marking Paint will be included in the contract unit price per mile for "TEMPORARY FLEXIBLE VERTICAL MARKERS (TABS)".

SURFACE PREPARATION FOR PAVEMENT MARKING

The Contractor will prepare the pavement surface prior to applying the durable pavement marking in accordance with the following.

In areas where the existing groove meets the required depth and existing markings are still in place, the Contractor will clean the existing groove without adding additional depth beyond the required depth for the new pavement marking, including reflective media as noted below.

Description	Specification	Tolerance
Depth of Groove	Marking Thickness[1] + 15 mils	+ 5 mils

[1] Marking thickness will include the thickness of marking material and reflective media.

The cleaning will result in the existing pavement marking being adequately scuffed, abraded, and removed by light grinding or abrasive blasting or both to allow proper adhesion of the new durable pavement marking as per the manufacturer's recommendations to comply with product warranties.

Revised 01/12/25 – PB

SURFACE PREPARATION FOR PAVEMENT MARKING (Continued)

Existing grooves not meeting the required depth will be re-grooved to the required depth for the new pavement marking, including reflective media. Equipment for grooving will be capable of the following:

- Grooving the total width of the groove in one pass or uniform depths with multiple passes.
- Grooving without causing damage to the pavement joints or joint sealant material.
- Provide uniform alignment and depth.
- Moving continuously to permit a mobile traffic work operation.

All costs associated with cleaning of the existing groove, including re-grooving, if needed, will be included in the contract unit price per foot for "SURFACE PREPARATION FOR PAVEMENT MARKING". Surface preparation will be measured as 4" equivalent.

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.

The Department will 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.

High Build Waterborne Pavement Marking Paint applied after October 15 must be formulated as cold-weather waterborne paint. Cold weather waterborne paint will meet the requirements of Section 980.1 C.

RATES OF MATERIALS FOR WATERBORNE PAVEMENT MARKING PAINT WITH HIGH GRADE POLYMER

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.

COLD APPLIED PLASTIC PAVEMENT MARKING

All materials will be applied as per the manufacturer's recommendations.

Cold Applied Plastic Pavement Markings will be 3M Series 380 AW or an approved equal.

Only the pavement markings shown in the layout sheets in these plans will be applied. The in-place markings shown by dashes will be left as-is on site, per the notes on layout sheets.

ITEM	LOCATION	QUANTITY
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 2- MRM 363.00+0.733	15 Ft
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 3- MRM 88.88+0.000	15 Ft
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 6- MRM 279.00+0.662	15 Ft
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 7- MRM 269.00+0.443	15 Ft
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 9- MRM 137.00 +0.517	15 Ft
Cold Applied Plastic Pavement Marking, Railroad Crossing	Segment 10- MRM 218.00+0.920	2 Each
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 10- MRM 231.00+0.499	15 Ft
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 11- MRM 327.00+0.040	15 Ft
Cold Applied Plastic Pavement Marking, 24" Yellow	Segment 11- MRM 327.00+0.040	122 Ft
Cold Applied Plastic Pavement Marking, Arrow	Segment 11- MRM 327.00+0.040	2 Each
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 12- MRM 282.30+0.020	15 Ft
Cold Applied Plastic Pavement Marking, Railroad Crossing	Segment 17- MRM 423.00+0.750	2 Each
Cold Applied Plastic Pavement Marking, 24" Yellow	Segment 20- MRM 381.00+0.360	172 Ft
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 20- MRM 381.00+0.360	35 Ft
Cold Applied Plastic Pavement Marking, Arrow	Segment 20- MRM 381.00+0.360	3 Each
Cold Applied Plastic Pavement Marking, 24" White (Stop Bar)	Segment 23- MRM 366.00+0.082	15 Each

Pavement markings wil be placed to match existing markings in the field. At locations where additional paint or cold applied markings are needed to match, beyond what is in the plans, apply at the discretion of the Engineer.

Along Hwy 20, all cold applied markings on Segments 13, 14, & 19 will be skipped due to new cold applied pavement markings from PCN 09L6.

* 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.

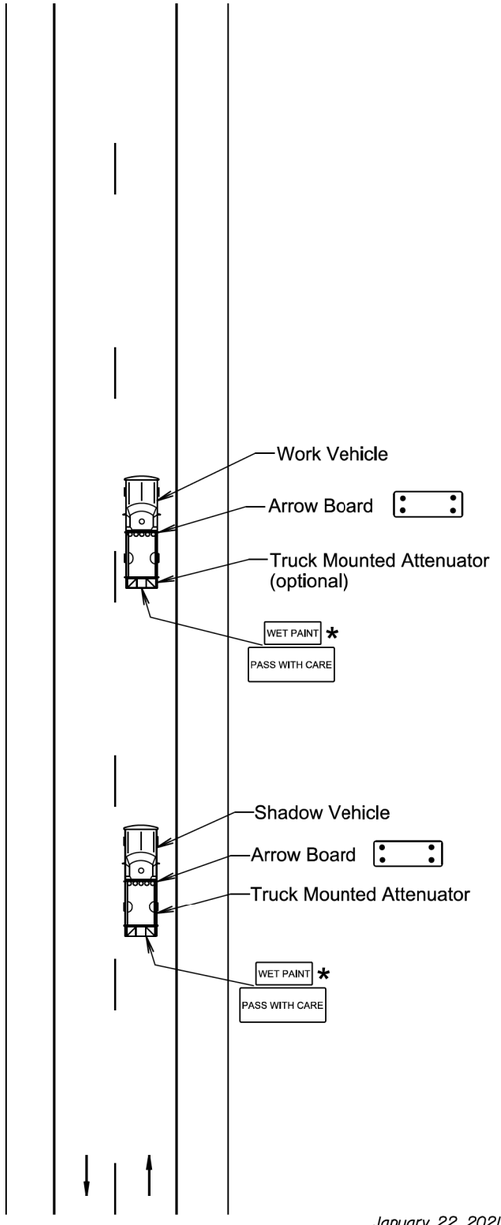
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

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

When an arrow board is used, it will be used in the caution mode. Marching Diamonds are acceptable.

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: 2026

SDDOT

MOBILE OPERATIONS ON 2-LANE ROAD

PLATE NUMBER 634.06

Sheet 1 of 1

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.

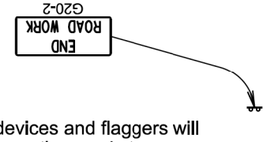
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

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.

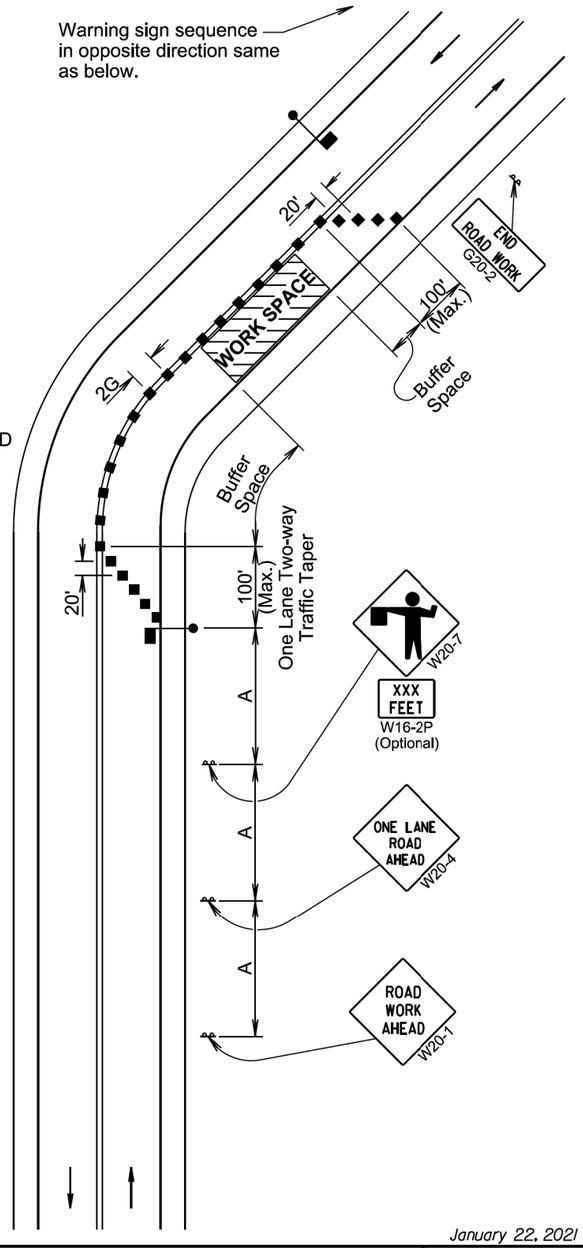
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



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

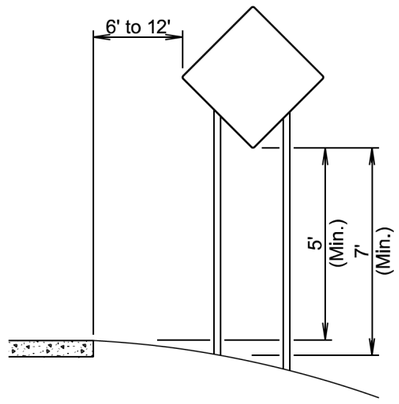
The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

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

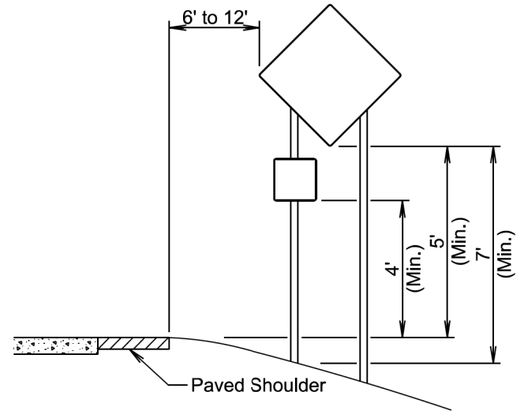


January 22, 2021

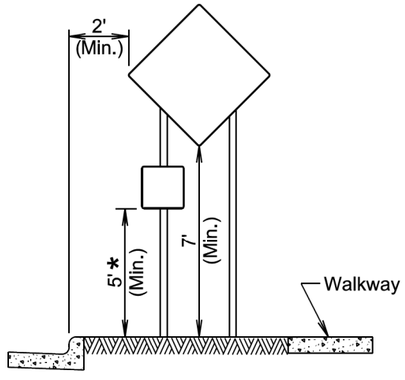
Published Date: 2026	SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1



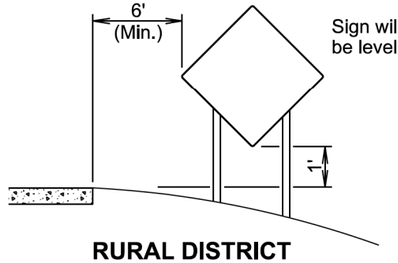
RURAL DISTRICT



RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

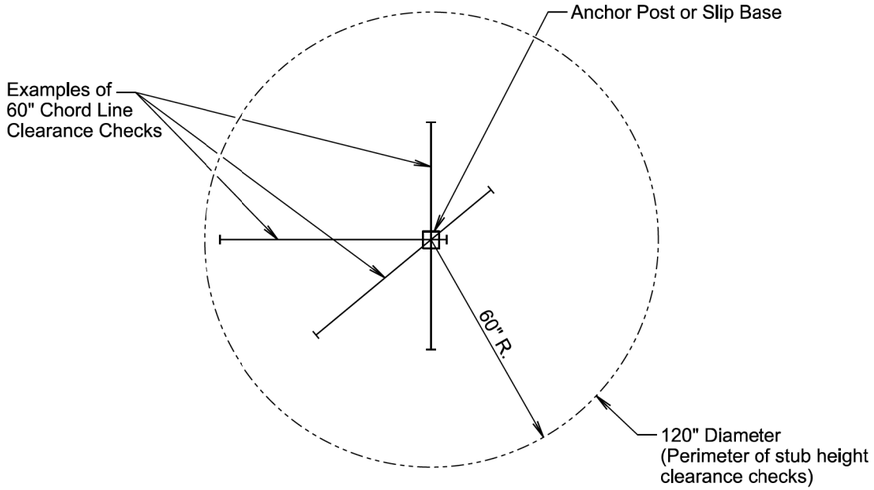


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

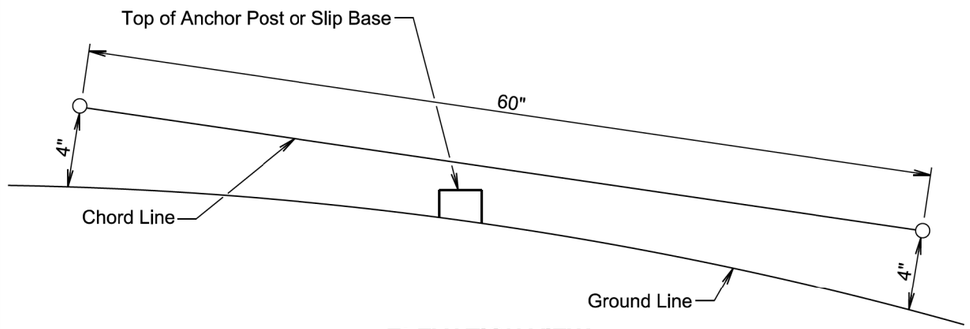
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

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



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

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

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

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

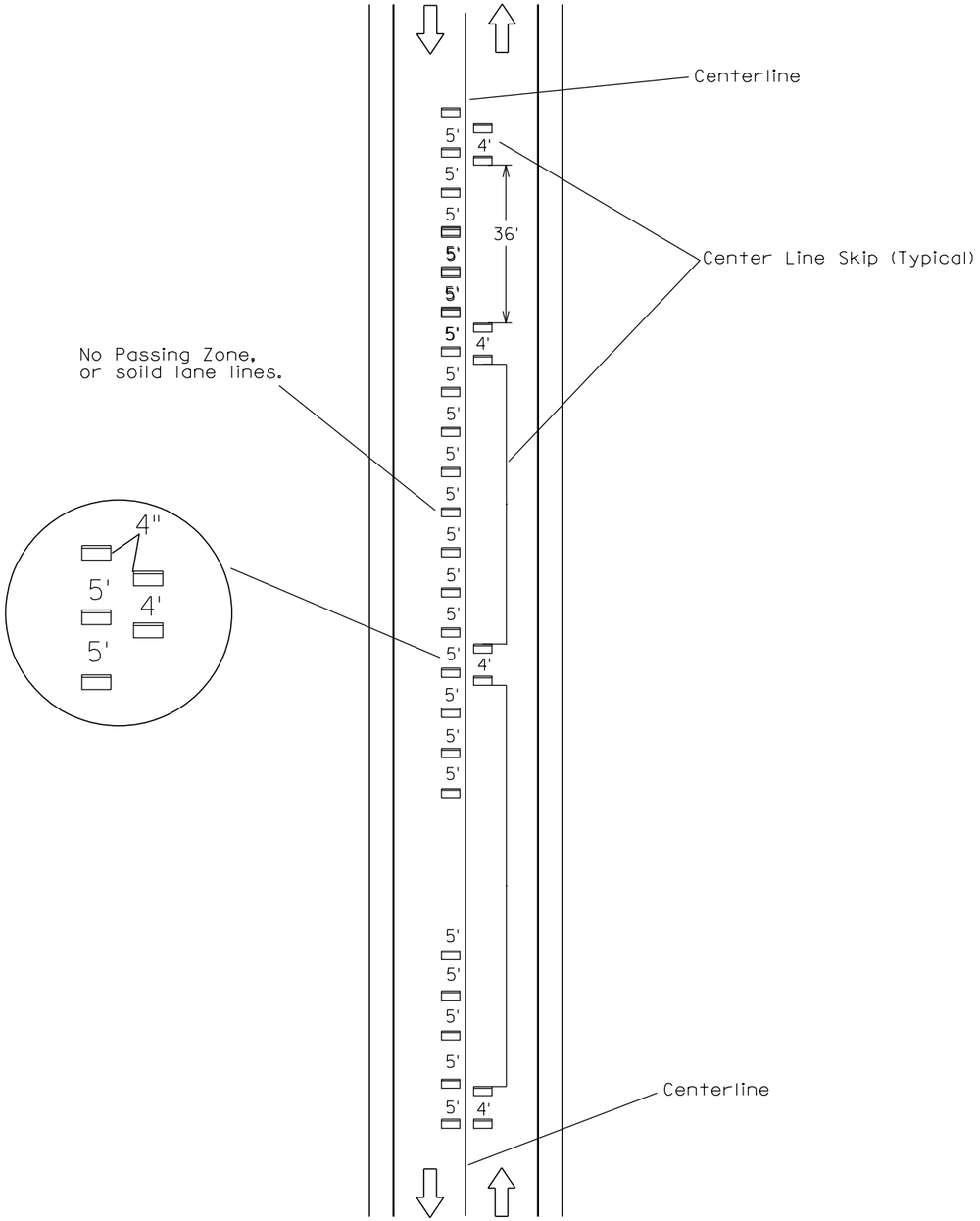
January 22, 2021

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

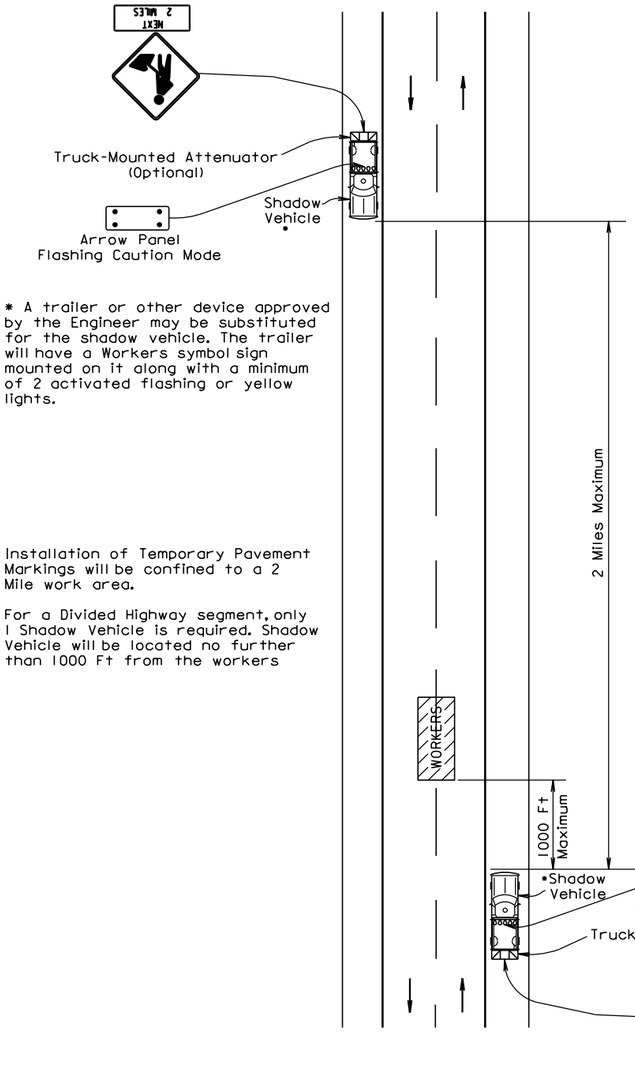
ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	20	48" x 48"	16.0	320.0
W20-4	ONE LANE ROAD AHEAD	20	48" x 48"	16.0	320.0
W20-7	FLAGGER (symbol)	20	48" x 48"	16.0	320.0
SPECIAL	WAIT FOLLOW PILOT CAR	20	30" x 18"	3.8	76.0
G20-2	END ROAD WORK	20	36" x 18"	4.5	90.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			1126.0

GUIDES FOR TRAFFIC CONTROL DEVICES TEMPORARY ROAD MARKER INSTALLATION



GUIDES FOR TRAFFIC CONTROL DEVICES APPLICATION OF TEMPORARY PAVEMENT MARKING TABS



* A trailer or other device approved by the Engineer may be substituted for the shadow vehicle. The trailer will have a Workers symbol sign mounted on it along with a minimum of 2 activated flashing or yellow lights.

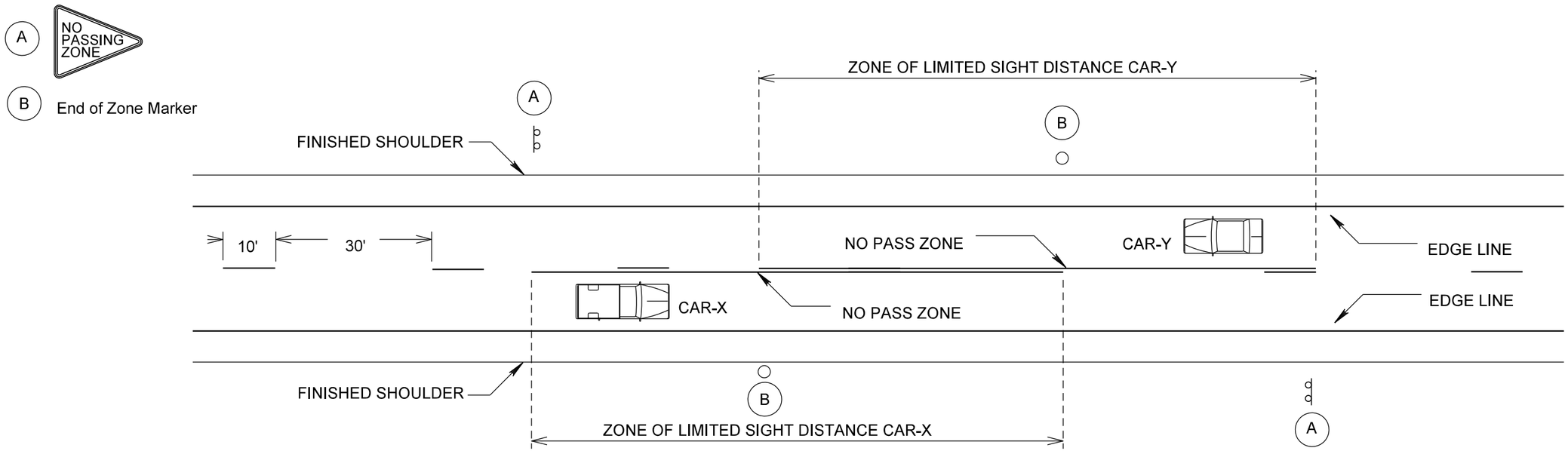
Installation of Temporary Pavement Markings will be confined to a 2 Mile work area.

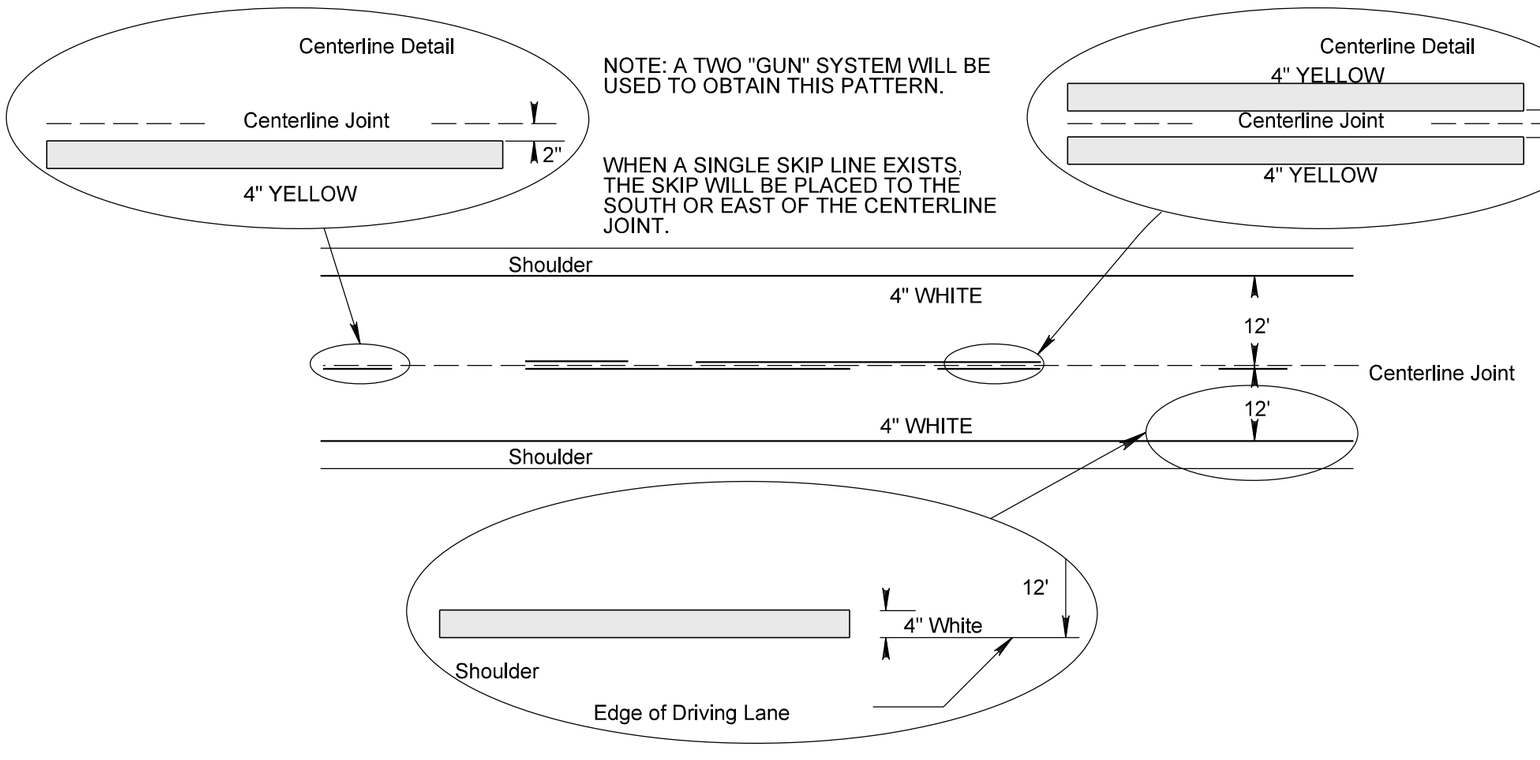
For a Divided Highway segment, only 1 Shadow Vehicle is required. Shadow Vehicle will be located no further than 1000 Ft from the workers

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	31	39

Plotting Date: 01/07/2026

TYPICAL PAVEMENT MARKING LAYOUT





FURNISHING AND APPLYING HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

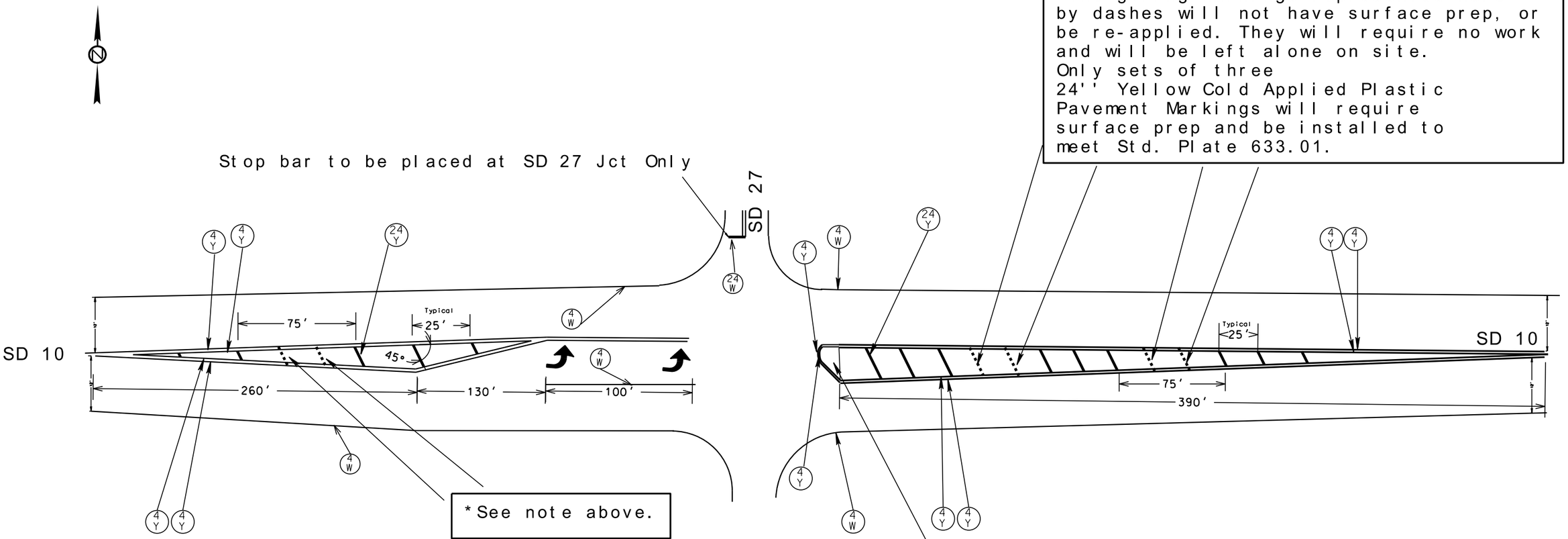
1. The typical pavement markings as shown on this sheet will be applied throughout the entire length of the project.
2. Exact location of the NO PASSING ZONE lines will be determined in the field by the Engineer. A dash of white paint will mark the beginning and end of all no passing zones. NO PASSING ZONE signs and the ending post in fence lines, if present, will not be used as the beginning and ending NO PASSING ZONE lines.
3. Traffic Control will be incidental to the cost of application. The striper and advance or trailing warning vehicle will be equipped with flashing amber lights or advance warning arrow panel.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	32	39

PAVEMENT MARKING DETAIL
Segment 11

SD 10 & 27 Intersection

*The goring markings represented here by dashes will not have surface prep, or be re-applied. They will require no work and will be left alone on site.
Only sets of three 24'' Yellow Cold Applied Plastic Pavement Markings will require surface prep and be installed to meet Std. Plate 633.01.



The in-place Cold Applied Area inside the bullnose will require no work and will be left alone on site.

(24 W) 24" White Cold Applied Plastic Pavement Marking

(24 Y) 24" Yellow Cold Applied Plastic Pavement Marking

(4 W) 4" White Pavement Marking Paint

(4 Y) 4" Yellow Pavement Marking Paint

Cold Applied Plastic Pavement Marking, Arrow

(Drawing Not to Scale)

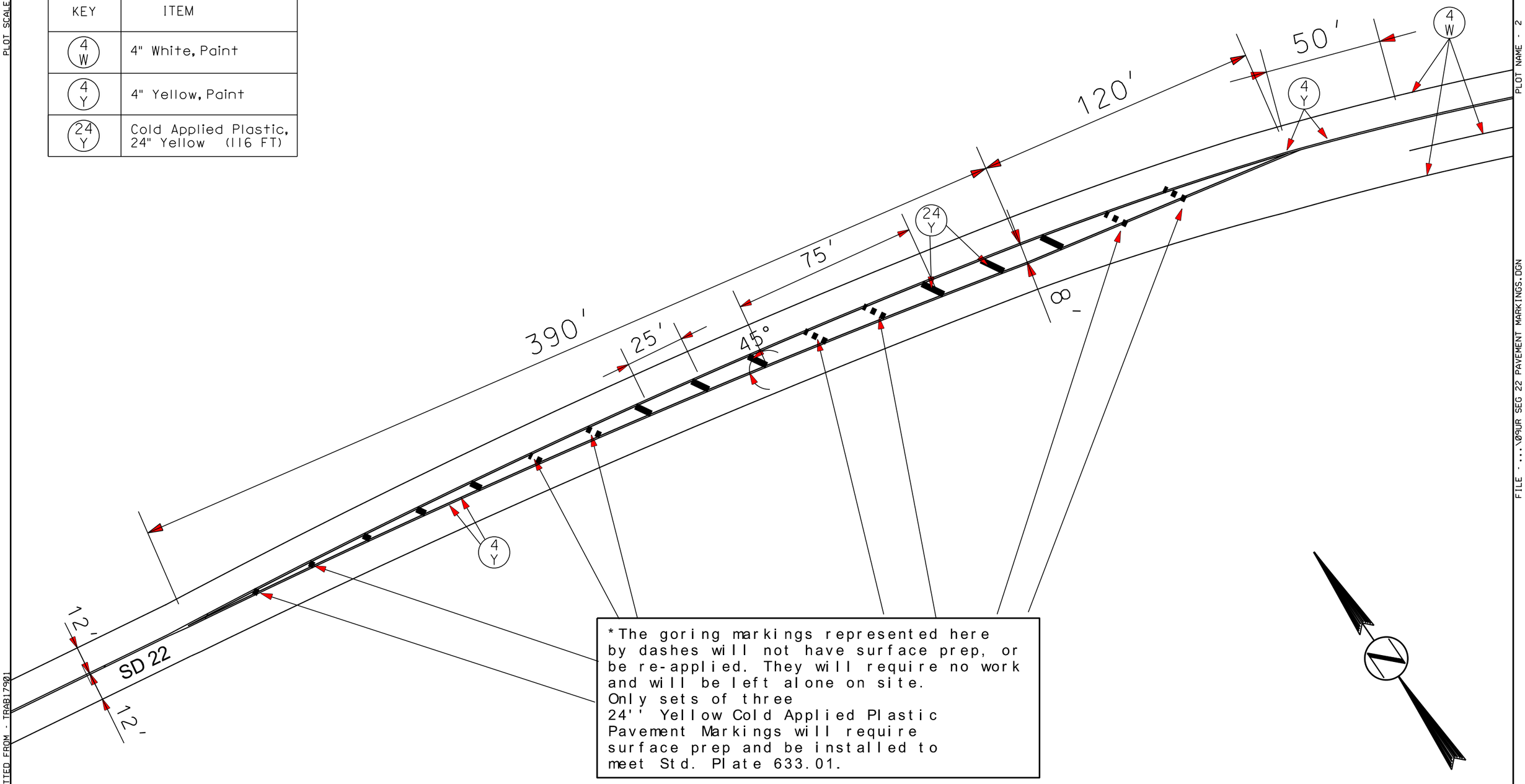
PLOTTED FROM - TRAB17901

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	33	39
Plotting Date: 01/08/2026			

PAVEMENT MARKING LAYOUT AT SD 22 & SD 101 JCT

SEGMENT 20

KEY	ITEM
(4 W)	4" White, Paint
(4 Y)	4" Yellow, Paint
(24 Y)	Cold Applied Plastic, 24" Yellow (116 FT)



*The goring markings represented here by dashes will not have surface prep, or be re-applied. They will require no work and will be left alone on site. Only sets of three 24'' Yellow Cold Applied Plastic Pavement Markings will require surface prep and be installed to meet Std. Plate 633.01.

PLOT SCALE - 1:40

PLOTTED FROM - TRAB17301

PLOT NAME - 2

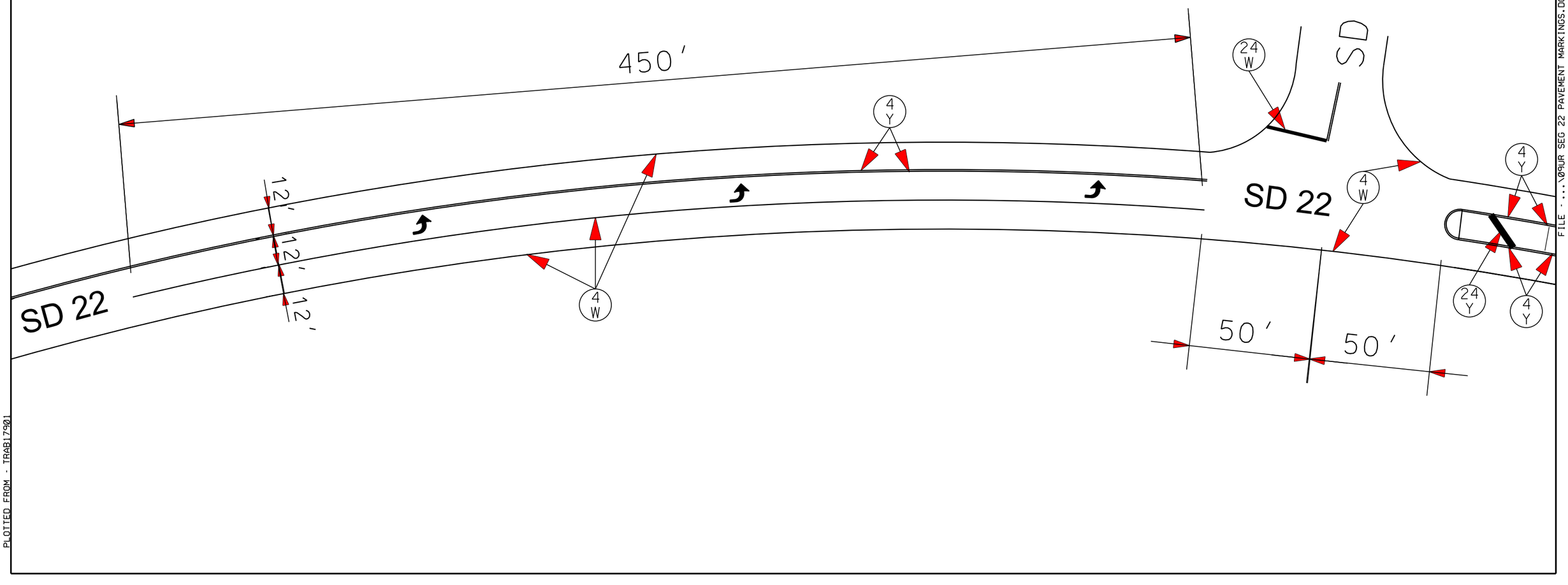
FILE - ...\09UR SEG 22 PAVEMENT MARKINGS.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	34	39
Plotting Date: 01/08/2026			

PAVEMENT MARKING LAYOUT AT SD 22 & SD 101 JCT

SEGMENT 20

KEY	ITEM
4 W	4" White, Paint
4 Y	4" Yellow, Paint
24 Y	Cold Applied Plastic, 24" Yellow
24 W	Cold Applied Plastic, 24" White (35 FT)
↰	Cold Applied Plastic, Arrow (3 Each)



PLOT SCALE - 1:40

PLOT NAME - 3

FILE - ...\09UR SEG 22 PAVEMENT MARKINGS.DGN

PLOTTED FROM - TRAB17901

PAVEMENT MARKING LAYOUT AT SD 22 & SD 101 JCT

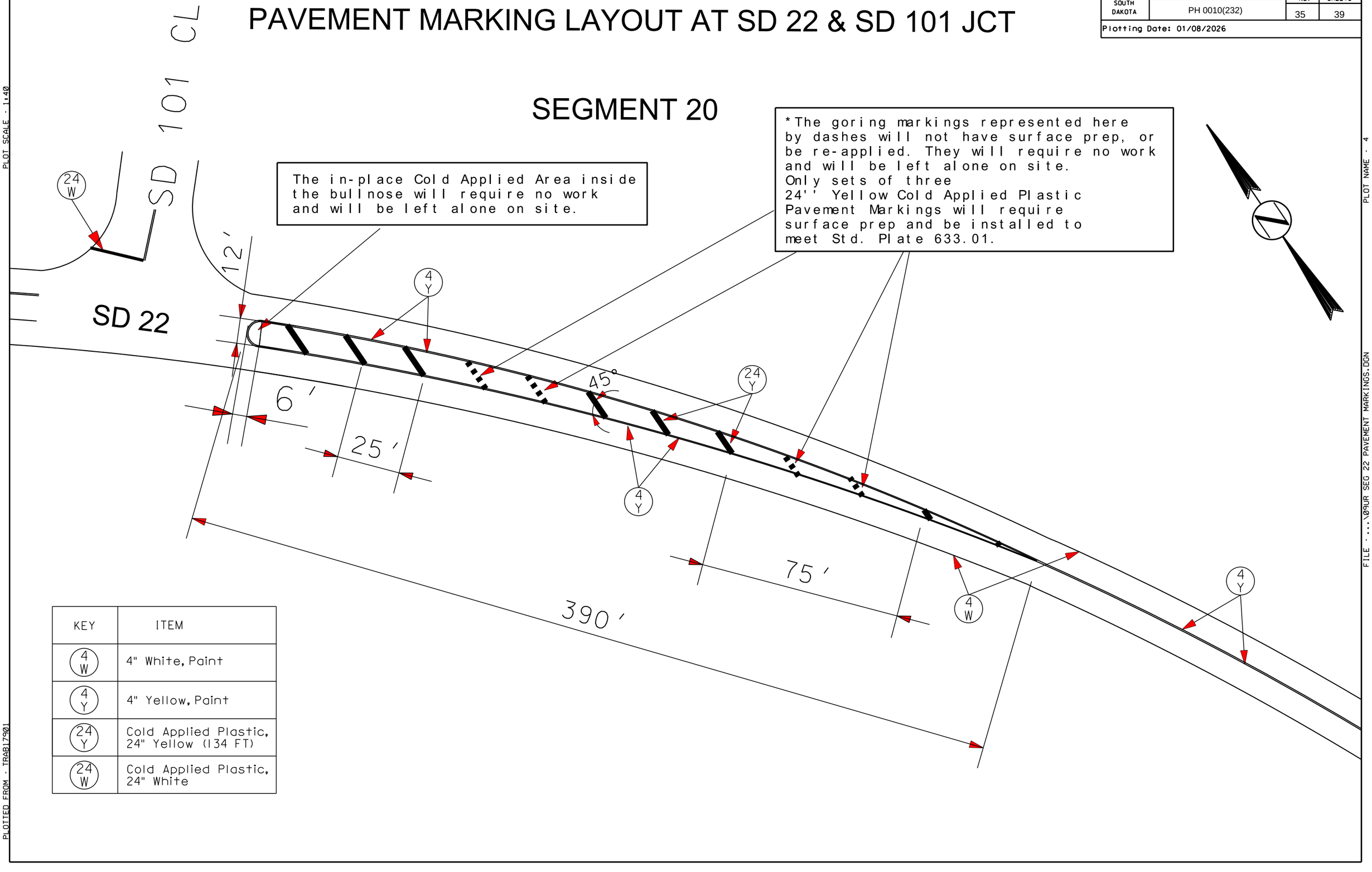
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	PH 0010(232)	35	39

Plotting Date: 01/08/2026

SEGMENT 20

The in-place Cold Applied Area inside the bullnose will require no work and will be left alone on site.

*The goring markings represented here by dashes will not have surface prep, or be re-applied. They will require no work and will be left alone on site.
Only sets of three 24'' Yellow Cold Applied Plastic Pavement Markings will require surface prep and be installed to meet Std. Plate 633.01.



KEY	ITEM
4 W	4" White, Paint
4 Y	4" Yellow, Paint
24 Y	Cold Applied Plastic, 24" Yellow (134 FT)
24 W	Cold Applied Plastic, 24" White

PLOT SCALE - 1:40

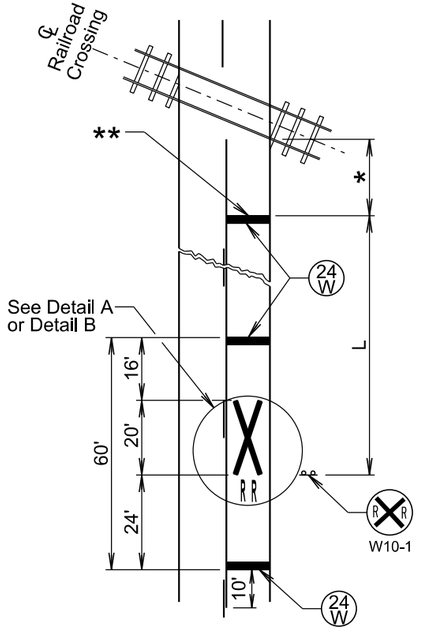
PLOTTED FROM - TRAB17901

PLOT NAME - 4

FILE - ...\09UR SEG 22 PAVEMENT MARKINGS.DGN

PAVEMENT MARKINGS AT RAILROAD CROSSING

Sheet 1 of 2



PLAN VIEW

KEY	ITEM
24 W	24" White
RXR	White

Posted Speed Limit (M.P.H.)	L (Ft.)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730

* Stop line will be no closer than 15' in advance of the nearest rail when no gate or flashing-light signal is present.

** Stop line will be approximately 8' in advance of gate or flashing-light signal (if present), whichever is furthest from the tracks, but no closer than 15' in advance of the nearest rail.

GENERAL NOTES:

The railroad crossing pavement markings will be placed symmetrically about the centerline of the railroad crossing. DETAIL A should be used unless the railroad crossing pavement markings are installed in existing grooves that match DETAIL B.

When pavement markings are used, a portion of the RXR symbol will be placed directly opposite of the advance warning sign W10-1.

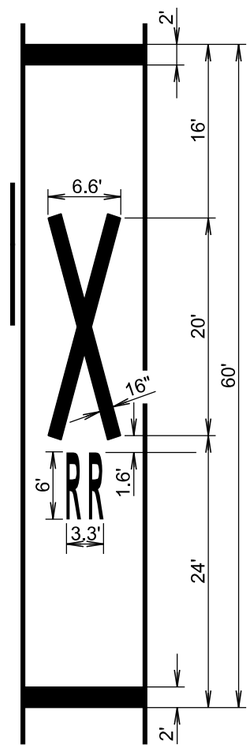
On multi-lane roads the transverse bands will extend across all approach lanes and individual RXR symbols will be placed in each approach lane.

The railroad crossing pavement markings will consist of all the transverse bands, stop lines, and RXR symbols.

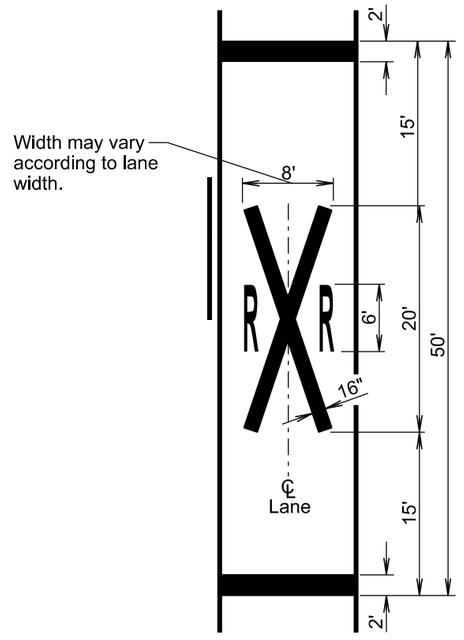
All costs for furnishing and installing the markings, materials, labor, and necessary equipment for the railroad crossing markings will be paid for at the contract unit price per gallon or per each for the type of marking material specified in the plans.

PAVEMENT MARKINGS AT RAILROAD CROSSING

Sheet 2 of 2



DETAIL A

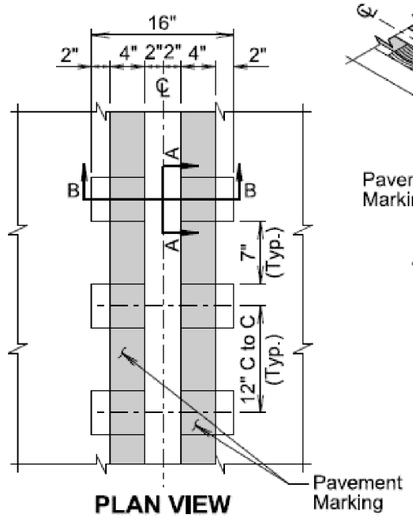


DETAIL B

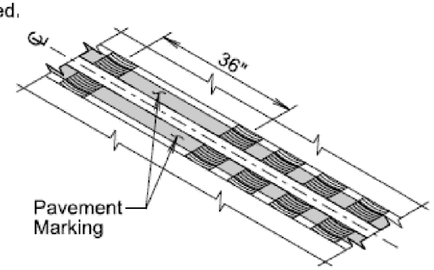
16" CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE

Sheet 1 of 1

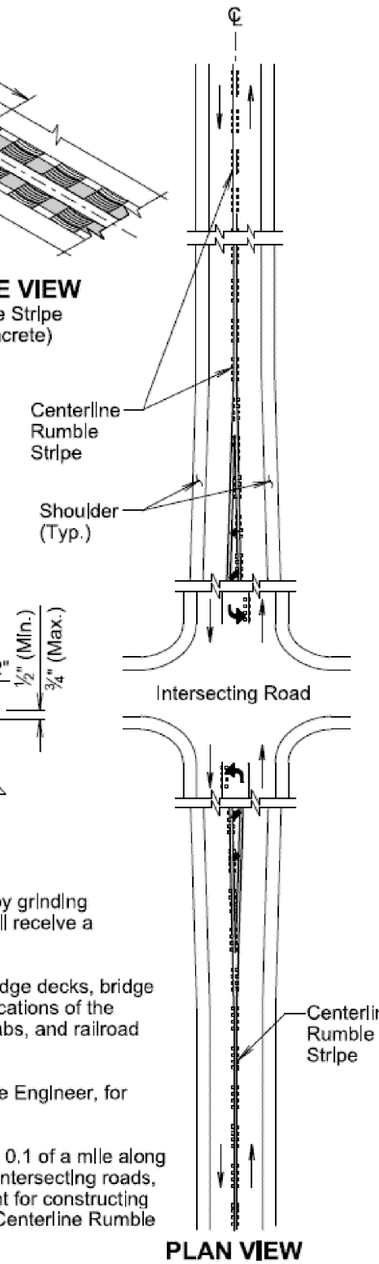
* Four sets of rumbles at 12" on center spacing followed by a 36" on center gap and continue as needed.



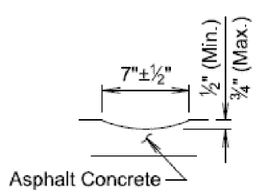
PLAN VIEW
(Typical Rumble Stripe in Asphalt Concrete)



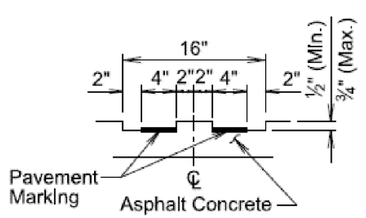
***PERSPECTIVE VIEW**
(Typical Rumble Stripe In Asphalt Concrete)



PLAN VIEW



SECTION A-A



SECTION B-B

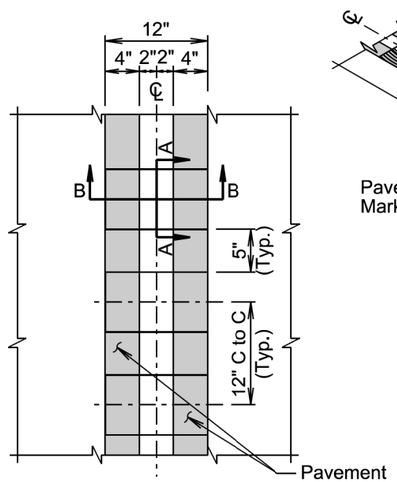
GENERAL NOTES:

A rumble stripe will be constructed on the centerline of the roadway by grinding continuous indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

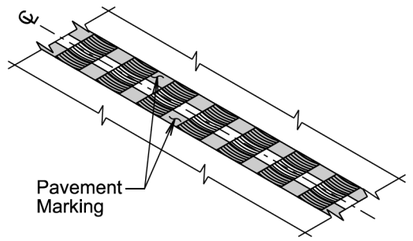
A rumble stripe will not be constructed through intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. The beginning and ending locations of the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

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

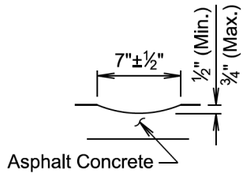
Measurement and payment of the rumble stripe will be to the nearest 0.1 of a mile along the centerline and will include segments without the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind Centerline Rumble Stripe in Asphalt Concrete".



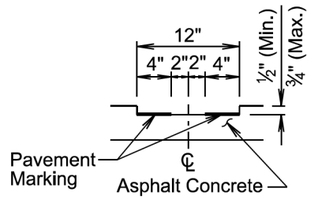
PLAN VIEW
(Typical Rumble Stripe in Asphalt Concrete)



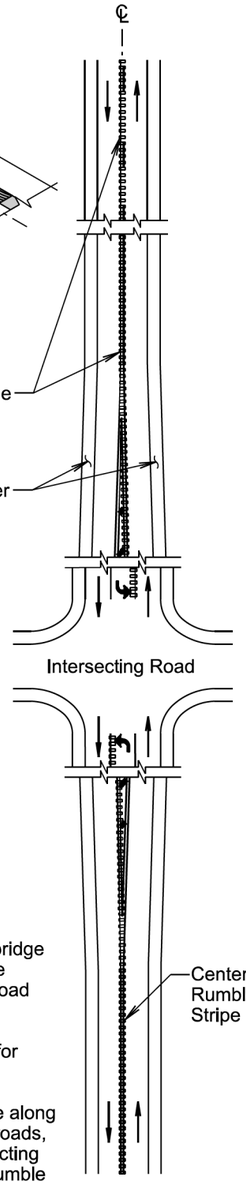
PERSPECTIVE VIEW
(Typical Rumble Stripe in Asphalt Concrete)



SECTION A-A



SECTION B-B



PLAN VIEW

GENERAL NOTES:

A rumble stripe will be constructed on the centerline of the roadway by grinding continuous indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

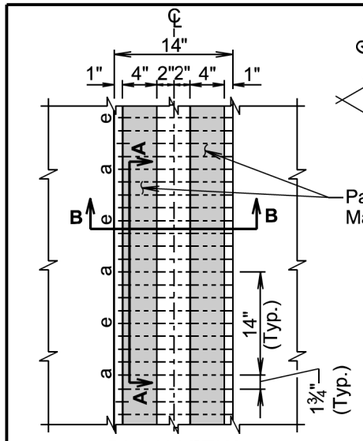
A rumble stripe will not be constructed through intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. The beginning and ending locations of the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

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

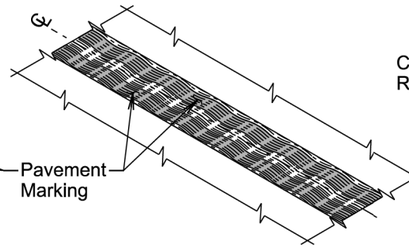
Measurement and payment of the rumble stripe will be to the nearest 0.1 of a mile along the centerline and will include segments without the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind Centerline Rumble Stripe in Asphalt Concrete".

November 19, 2020

Published Date: 2026	SDDOT	12" CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE	PLATE NUMBER 320.18
			Sheet 1 of 1

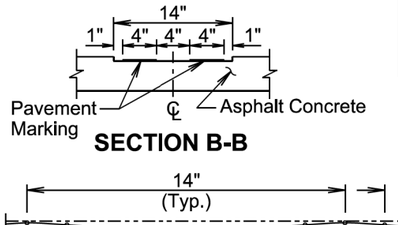


PLAN VIEW
(Typical Rumble Strip in Asphalt Concrete)

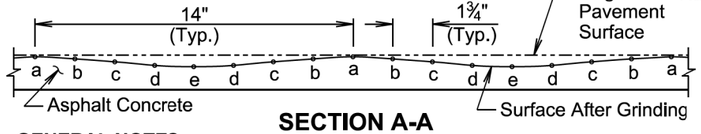


PERSPECTIVE VIEW
(Typical Rumble Strip in Asphalt Concrete)

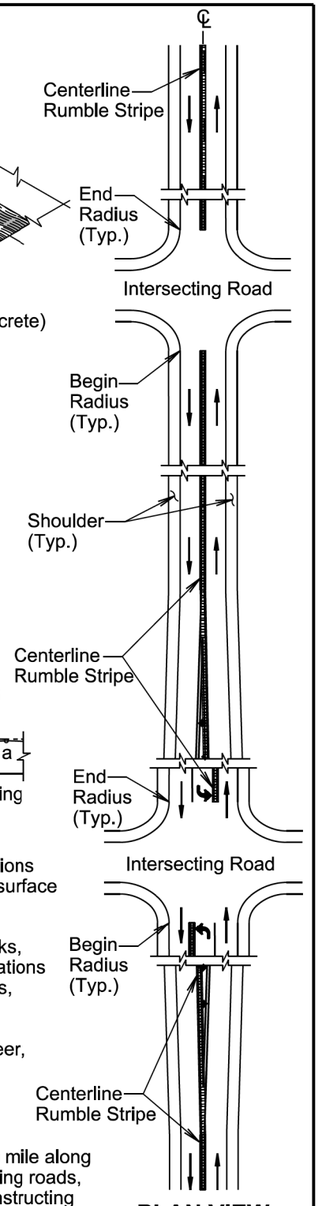
SINUSOIDAL GRINDING	
Location	* Depth (In.)
a	1/16
b	5/32
c	9/32
d	7/16
e	½



SECTION B-B



SECTION A-A



PLAN VIEW

GENERAL NOTES:

A rumble stripe will be constructed by grinding continuous sinusoidal indentations in the asphalt concrete. The rumble stripe will receive a flush seal or asphalt surface treatment as specified in the plans.

A rumble stripe will not be constructed through intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. The beginning and ending locations of the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings will be adjusted as approved by the Engineer.

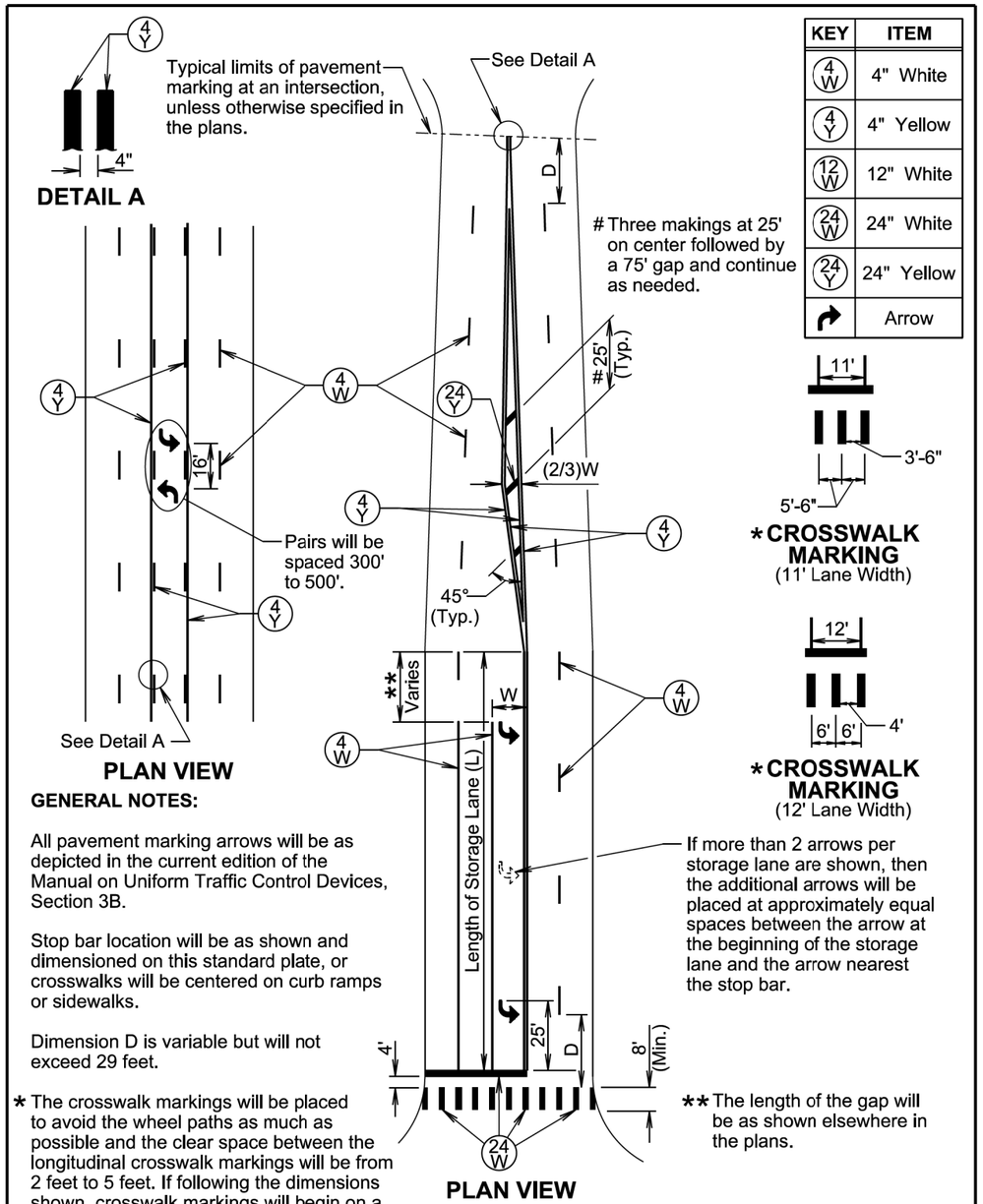
Prior to constructing the rumble stripe the Contractor will submit to the Engineer, for approval, the proposed method of constructing the rumble stripe.

* The sinusoidal rumble stripe construction grinding tolerance will be ± 1/16 inch.

Measurement and payment of the rumble stripe will be to the nearest 0.1 of a mile along the centerline and will include segments without the rumble stripe at intersecting roads, bridge decks, bridge approach slabs, and railroad crossings. Payment for constructing the rumble stripe will be at the contract unit price per mile for "Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete".

September 14, 2019

Published Date: 2026	SDDOT	SINUSOIDAL CENTERLINE RUMBLE STRIPE IN ASPHALT CONCRETE	PLATE NUMBER 320.40
			Sheet 1 of 1



GENERAL NOTES:

All pavement marking arrows will be as depicted in the current edition of the Manual on Uniform Traffic Control Devices, Section 3B.

Stop bar location will be as shown and dimensioned on this standard plate, or crosswalks will be centered on curb ramps or sidewalks.

Dimension D is variable but will not exceed 29 feet.

* The crosswalk markings will be placed to avoid the wheel paths as much as possible and the clear space between the longitudinal crosswalk markings will be from 2 feet to 5 feet. If following the dimensions shown, crosswalk markings will begin on a lane line or centerline.

March 31, 2024

Published Date: 2026

SDDOT

PAVEMENT MARKINGS FOR ADJACENT INTERSECTIONS AND CENTER TURN LANE

PLATE NUMBER 633.01

Sheet 1 of 1