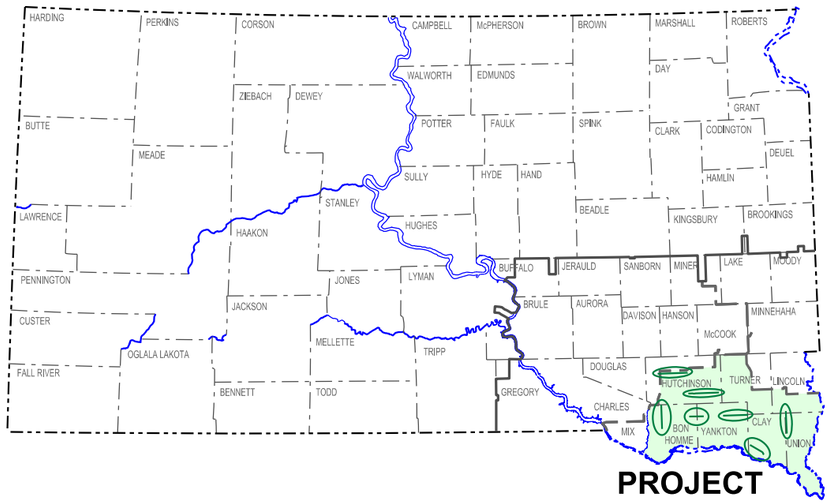
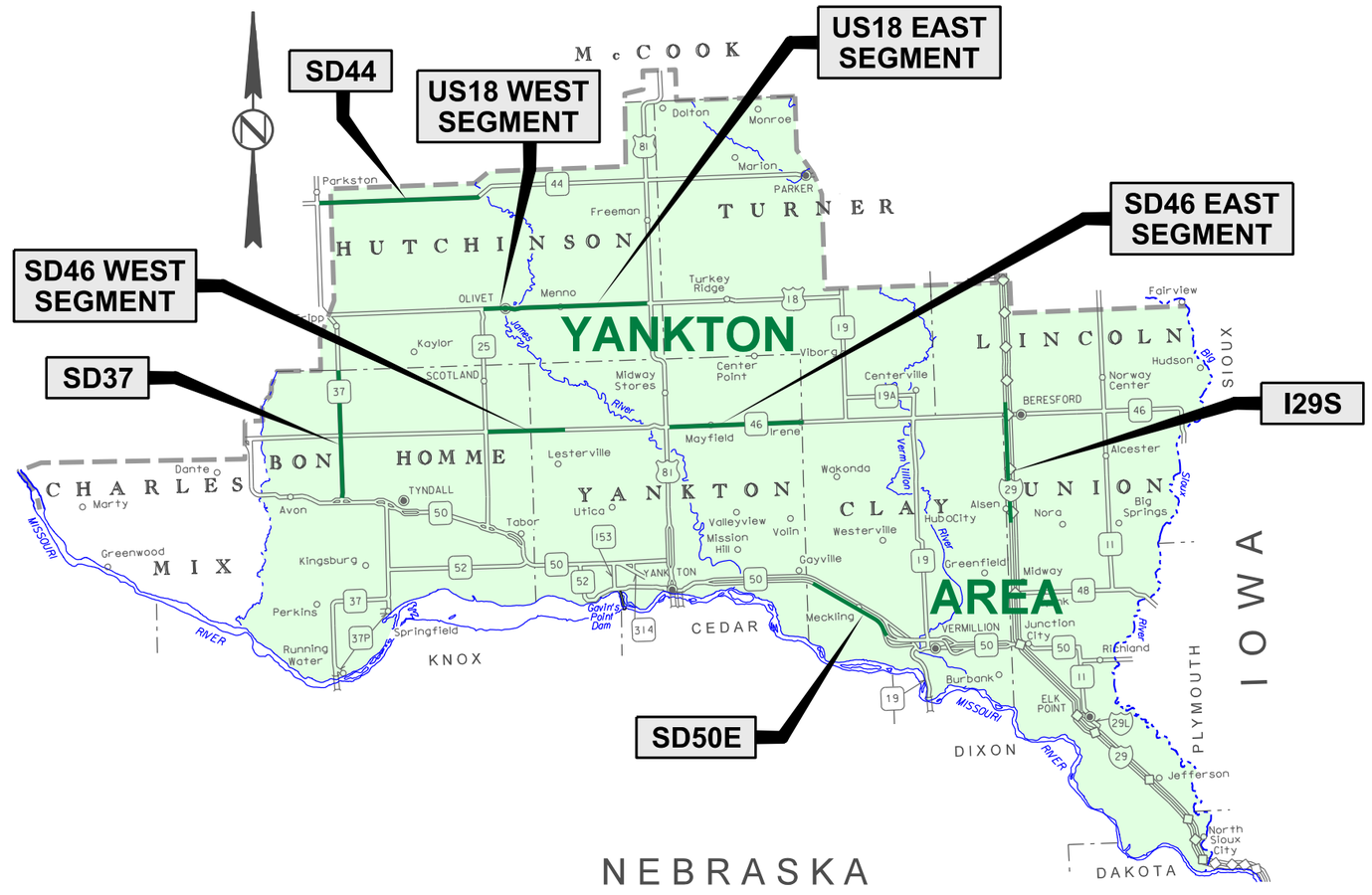
STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT IM–NH–P 0023(71)

INTERSTATE 29, US HIGHWAY 18, SD HIGHWAYS 37, 44, 46, & 50E
BON HOMME, CLAY, HUTCHINSON, LINCOLN, TURNER, UNION & YANKTON COUNTIES
ASPHALT SURFACE TREATMENT & ASPHALT SURFACE TREATMENT OF SHOULDERS
PCN 09L8





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STORM WATER PERMIT
(None required)

5
May 7, 2025

US HIGHWAY 18 WEST SEGMENT
HUTCHINSON COUNTY
ASPHALT SURFACE TREATMENT
GROSS LENGTH: 2.714 MILES
BRIDGES LENGTH: 0.109 MILE
NET LENGTH: 2.605 MILES

US HIGHWAY 18 EAST SEGMENT
HUTCHINSON COUNTY
ASPHALT SURFACE TREATMENT
LENGTH: 12.322 MILES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	2	41

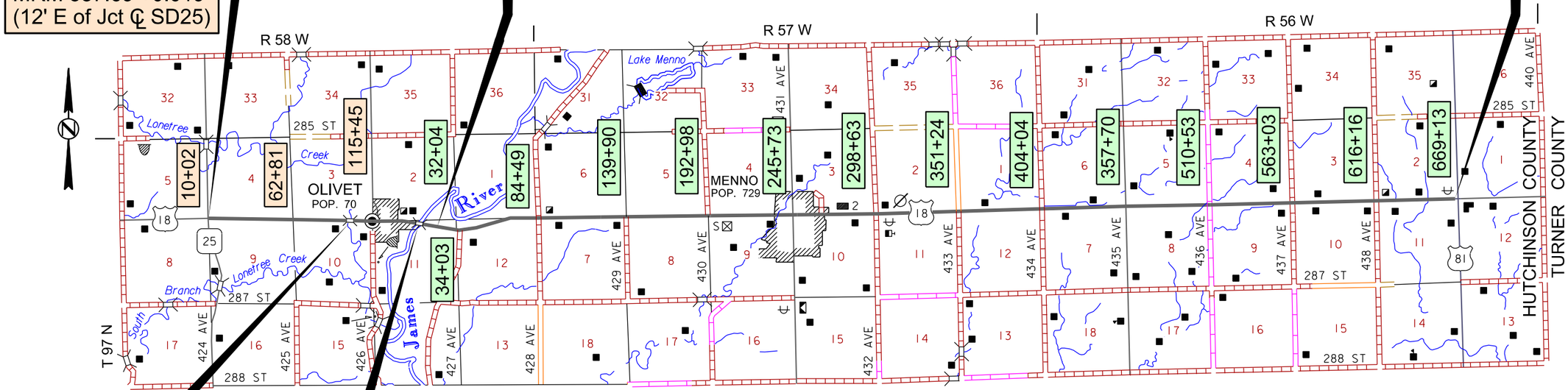
Plotting Date: 03/03/2025

BEGIN US18 WEST SEGMENT
STA. 10+14
MRM 387.69 +0.019
(12' E of Jct ℄ SD25)

END US18 WEST SEGMENT
STA. 153+42
MRM 390.27 +0.137
(At Surface Change 725'± E of Bridge)

BEGIN US18 EAST SEGMENT
STA. 17+00
MRM 390.27 +0.137
(At Surface Change 725'± E of Bridge)

END US18 EAST SEGMENT
STA. 667+60
MRM 402.00 +0.738
153' W of Jct ℄ US81



STR. NO. 34-217-180
98+04.28 to 99+66.78
Continous Concrete Bridge
162'-6" = 0.031 Mile MRM 389.39
Two Approach/Sleeper Slabs *
2@22'=44' = 0.008 Mile

STR. NO. 34-226-180
142+05.25 to 146+16.75
I Beam Bridge
411'-6" = 0.078 Mile
MRM 390.27

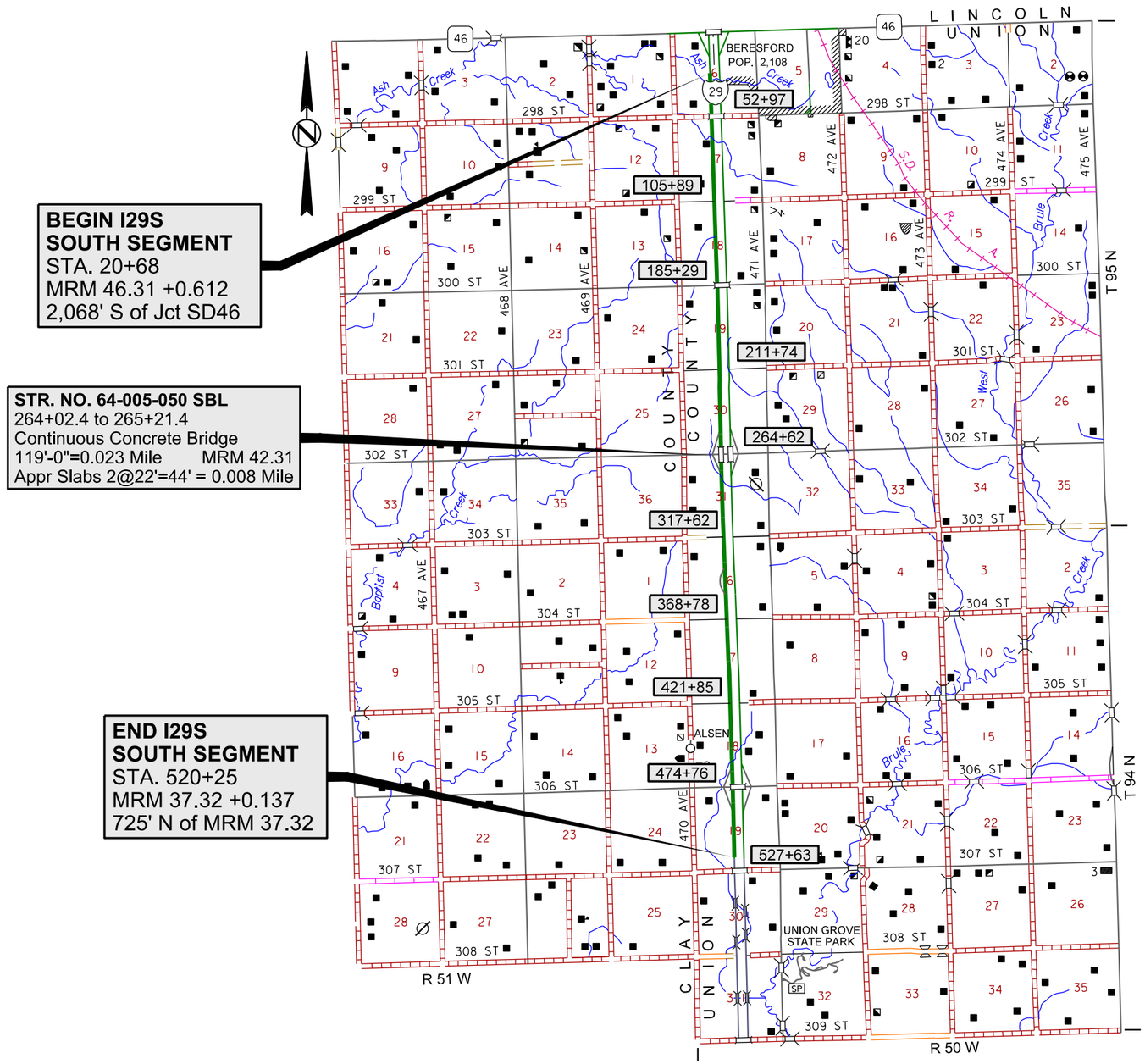
* Existing Approach/Sleeper Slabs to be sealed on this project.

US18 WEST SEGMENT ADT (2024) 668
US18 EAST SEGMENT ADT (2024) 1,009

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	3	41

Plotting Date: 03/03/2025

INTERSTATE 29S SOUTH SEGMENT
UNION COUNTY
ASPHALT SURFACE TREATMENT OF SHOULDERS
LENGTH: 9.462 MILES



ADT (2024) 9,100

PLOT SCALE - 1:7078.44

PLOTTED FROM - TRM1INT15

PLOT NAME - 3

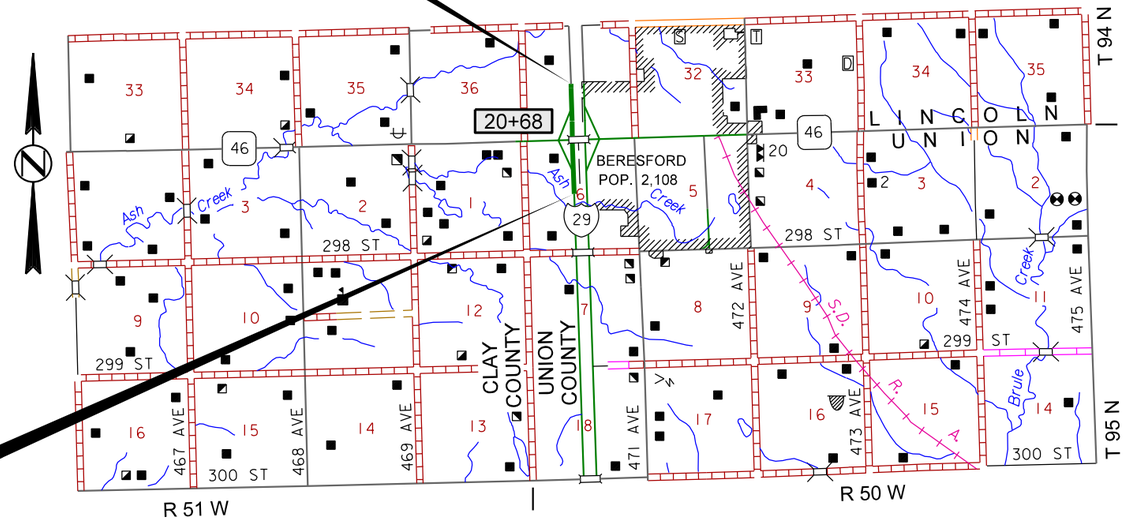
FILE - ...\2025 YAN AREA CHIP SEAL TITL09L8.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	4	41

Plotting Date: 03/03/2025

INTERSTATE 29S NORTH SEGMENT
UNION COUNTY
ASPHALT SURFACE TREATMENT OF SHOULDERS
LENGTH: 0.830 MILE

END I29S
NORTH SEGMENT
STA. 43+80
MRM 47.31 +0.436
2,312' N of Jct SD46



BEGIN I29S
NORTH SEGMENT
STA. 0+00
MRM 46.31 +0.612
2,068' S of Jct SD46

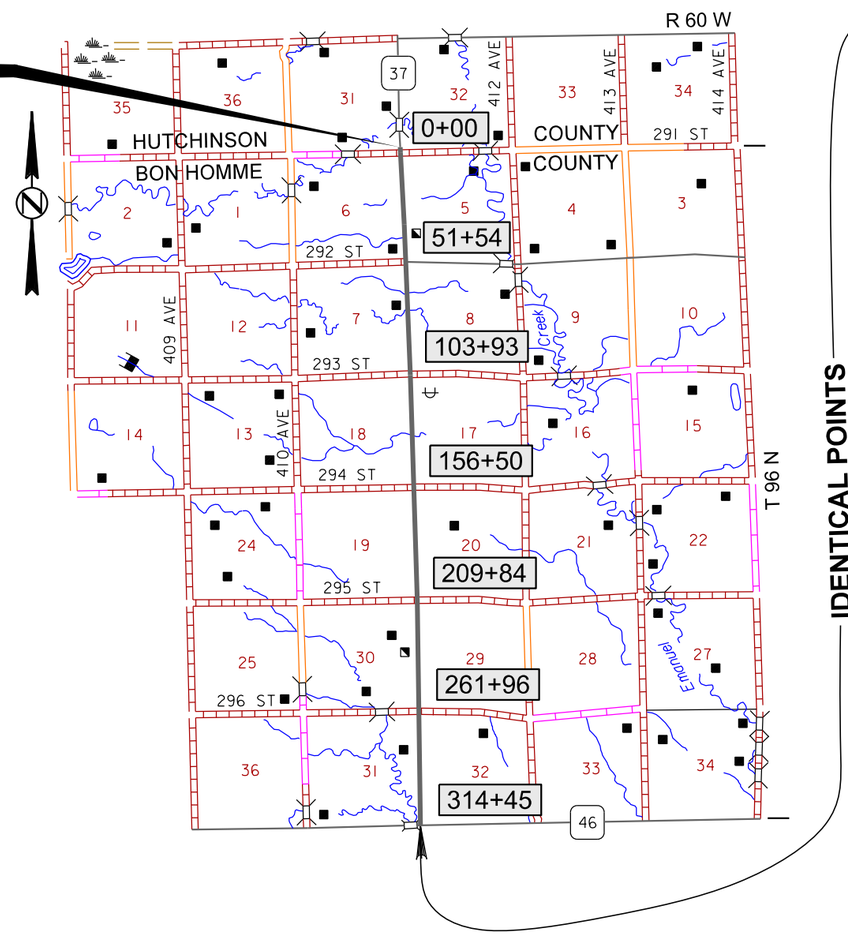
ADT (2024) 9,100

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	5	41

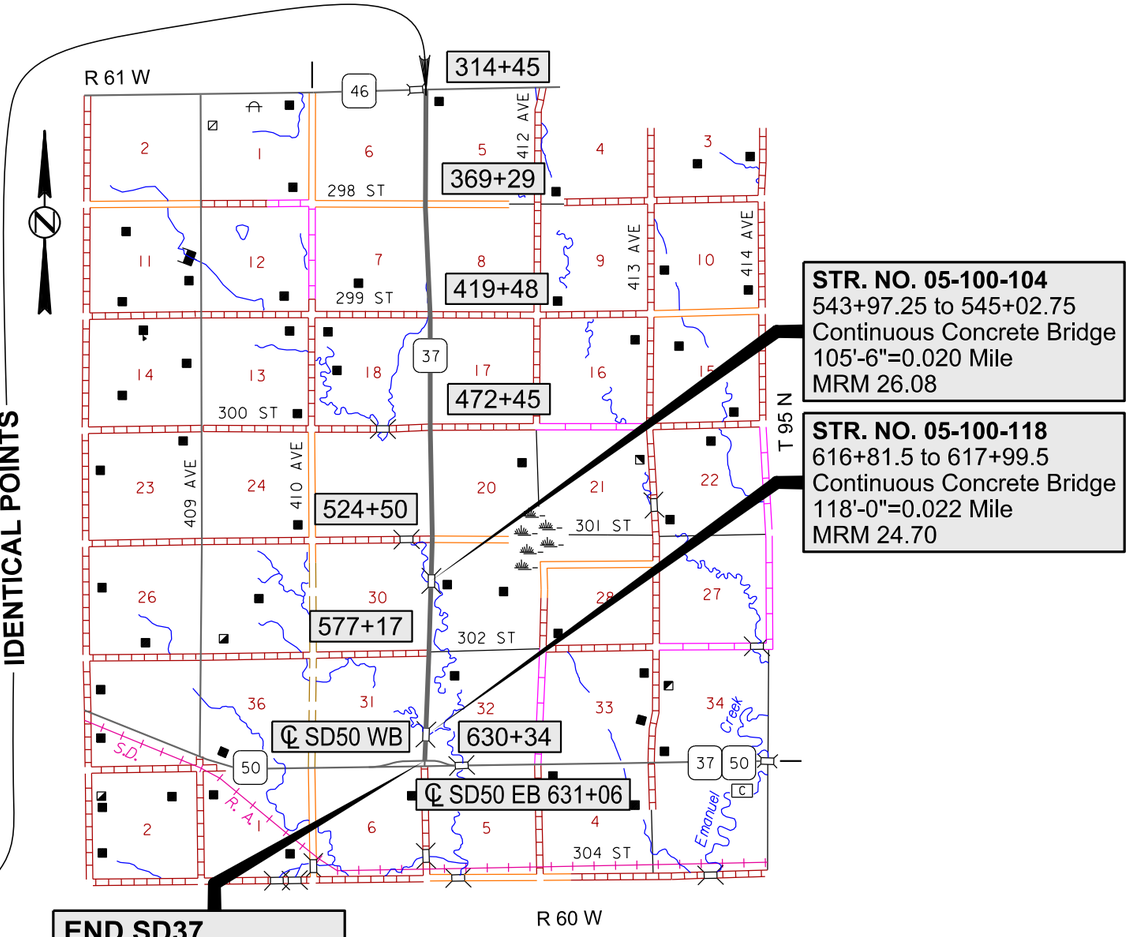
Plotting Date: 03/03/2025

SD HIGHWAY 37
BON HOMME COUNTY
ASPHALT SURFACE TREATMENT
GROSS LENGTH: 11.947 MILES
BRIDGES LENGTH: 0.042 MILE
NET LENGTH: 11.905 MILES

BEGIN SD37
STA. 0+00 - 60'
MRM 36.00 +0.406
(60' N of ℄ Jct 291 St)



IDENTICAL POINTS



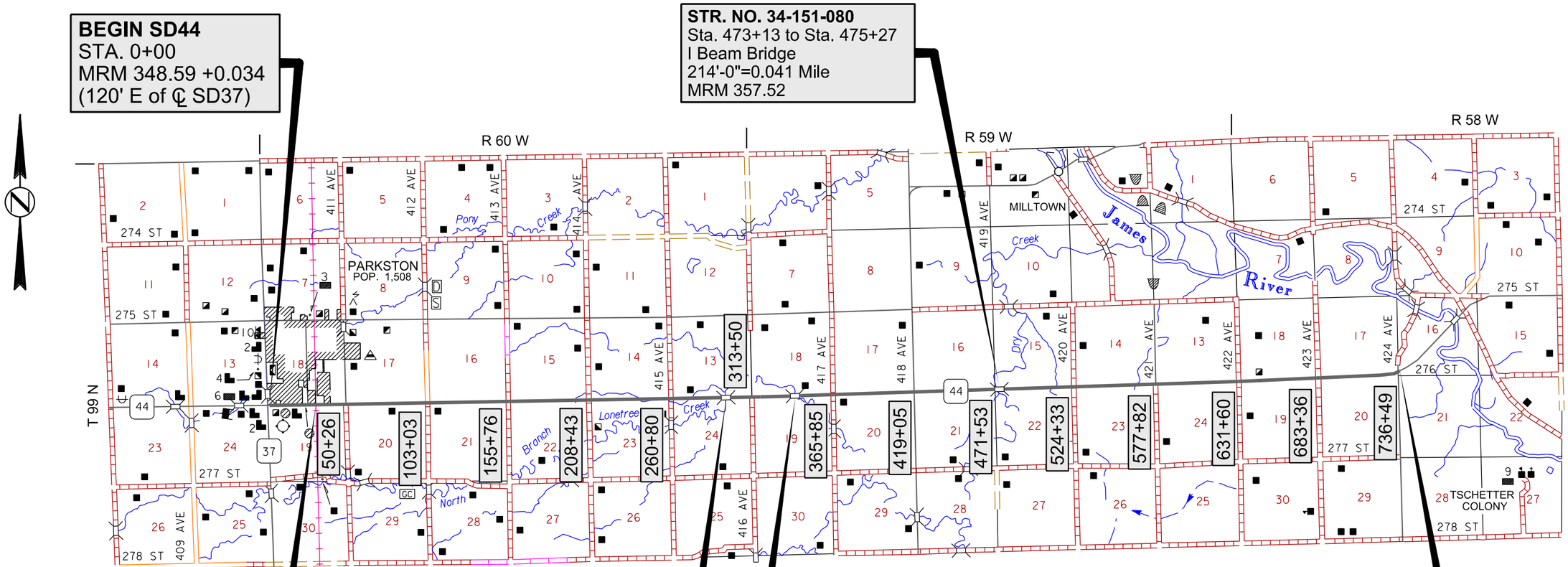
STR. NO. 05-100-104
543+97.25 to 545+02.75
Continuous Concrete Bridge
105'-6"=0.020 Mile
MRM 26.08

STR. NO. 05-100-118
616+81.5 to 617+99.5
Continuous Concrete Bridge
118'-0"=0.022 Mile
MRM 24.70

END SD37
STA. 630+22
110' S of MRM 24.48
(Edgeline of SD50W)

ADT (2024) 1,375

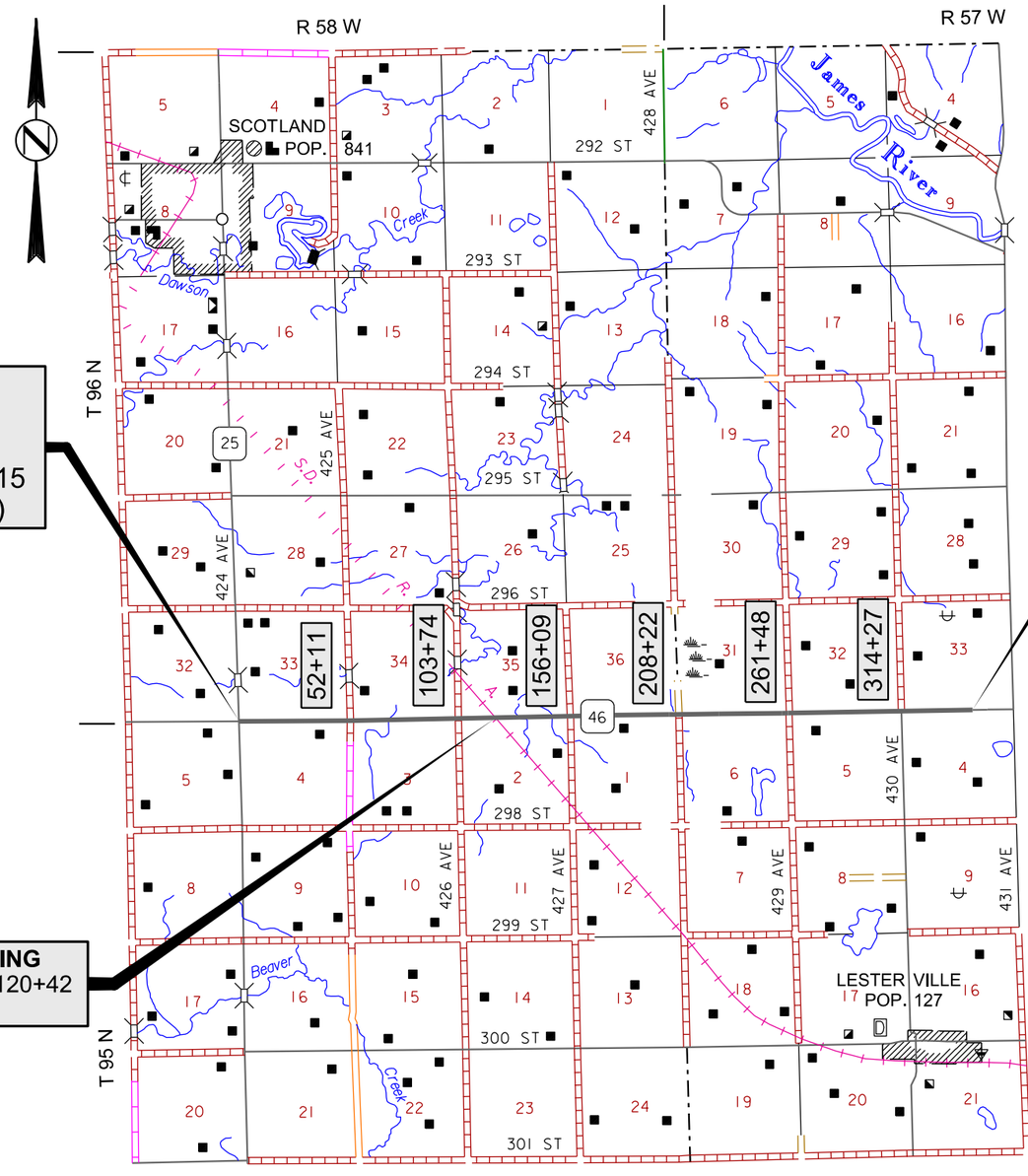
SD HIGHWAY 44
HUTCHINSON COUNTY
ASPHALT SURFACE TREATMENT
GROSS LENGTH: 13.980 MILES
BRIDGES LENGTH: 0.073 MILE
RAILROAD CROSSING LENGTH: 0.002 MILE
NET LENGTH: 13.905 MILES



ADT (2024) 1,651

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	7	41

SD HIGHWAY 46 WEST SEGMENT
BON HOMME & YANKTON COUNTIES
ASPHALT SURFACE TREATMENT
GROSS LENGTH: 6.592 MILES
RAILROAD CROSSING LENGTH: 0.002 MILE
NET LENGTH: 6.590 MILES



BEGIN SD46 WEST SEGMENT
STA. 0+00
MRM 318.48 +0.015
(16' E of Jct SD25)

END SD46 WEST SEGMENT
STA. 348+07
MRM 325.00 +0.070
(3380' E of Lesterville Corner)

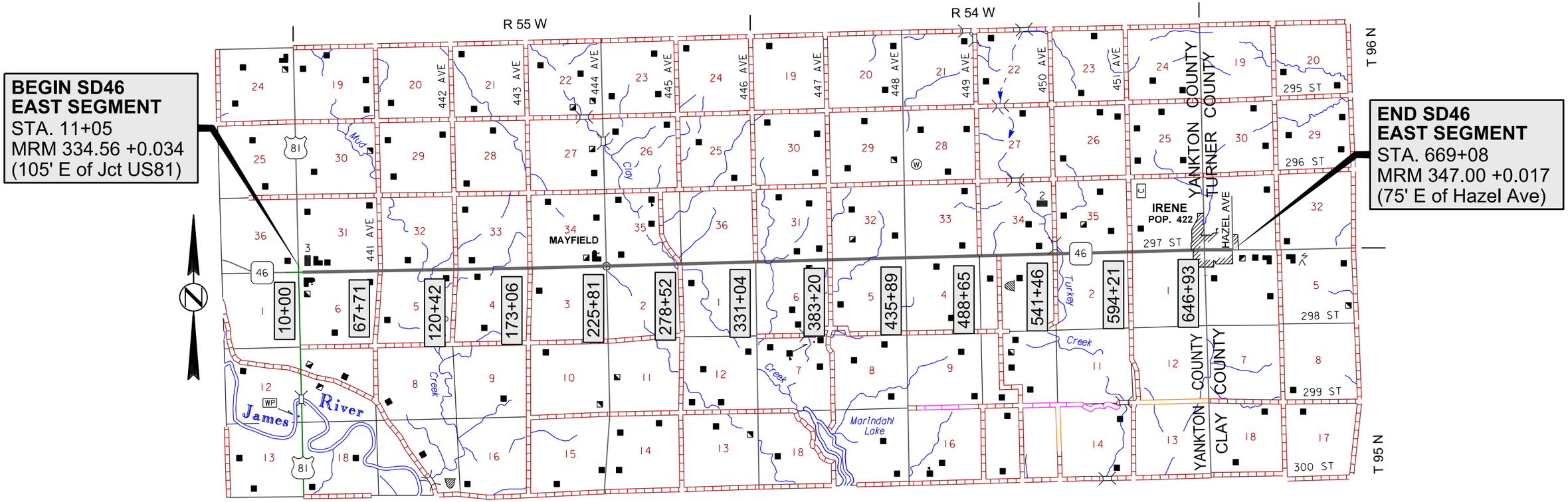
RAILROAD CROSSING
Sta. 120+30 to Sta. 120+42
MRM 320.82

ADT (2024) 677

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	8	41

Plotting Date: 03/03/2025

SD HIGHWAY 46 EAST SEGMENT
YANKTON, TURNER & CLAY COUNTIES
ASPHALT SURFACE TREATMENT
LENGTH: 12.463 MILES



PLOT SCALE - 1:7078.44

PLOT NAME - 8

FILE - ...\2025 YAN AREA CHIP SEAL TITL09L8.DGN

PLOTTED FROM - TRM!1NT15

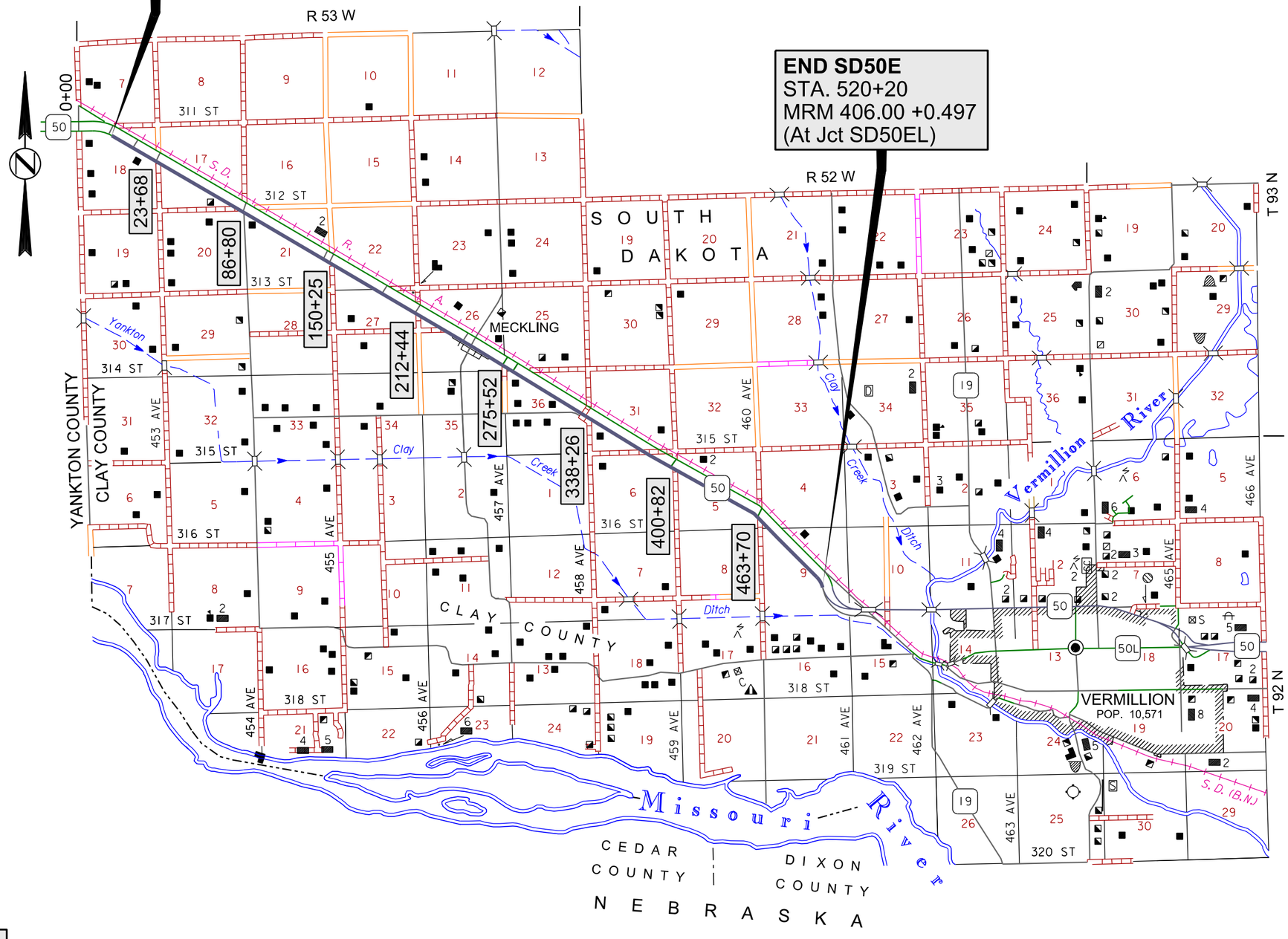
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	9	41

Plotting Date: 03/03/2025

SD HIGHWAY 50E
CLAY COUNTY
ASPHALT SURFACE TREATMENT
LENGTH: 9.852 MILES

BEGIN SD50E
STA. 0+00
MRM 396.00 +0.643
(At End Concrete)

END SD50E
STA. 520+20
MRM 406.00 +0.497
(At Jct SD50EL)



ADT (2023) 2,701

ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	10	41

Rev. 3/4/25 MR

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	481.5	Ton
330E3000	Sand for Fog Seal	167.0	Ton
360E0042	CRS-2P Asphalt for Surface Treatment	2,038.2	Ton
360E1040	Type 2B Cover Aggregate	459.6	Ton
360E1040	Type 2B Cover Aggregate	2,035.3	Ton
360E1040	Type 2B Cover Aggregate	668.3	Ton
360E1040	Type 2B Cover Aggregate	44.4	Ton
360E1040	Type 2B Cover Aggregate	1,954.3	Ton
360E1040	Type 2B Cover Aggregate	2,692.4	Ton
360E1040	Type 2B Cover Aggregate	1,494.8	Ton
360E1040	Type 2B Cover Aggregate	2,390.9	Ton
360E1040	Type 2B Cover Aggregate	2,404.9	Ton
633E1200	High Build Waterborne Pavement Marking Paint, White	3,173	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	1,433	Gal
633E6020	Pavement Marking Masking, 25"	427	Ft
633E6030	Pavement Marking Masking, Arrow	18	Each
633E6040	Pavement Marking Masking, Message	9	Word
633E6045	Pavement Marking Masking, Railroad Crossing	4	Each
634E0010	Flagging	824.0	Hour
634E0020	Pilot Car	157.0	Hour
634E0110	Traffic Control Signs	3,810.7	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Board	3	Each
634E0630	Temporary Pavement Marking	209.5	Mile
998E0100	Railroad Protective Insurance	Lump Sum	LS

SPECIFICATIONS

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

ESTIMATE OF QUANTITIES (FOR INFORMATION ONLY)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	11	41

Rev. 3/4/25 MR

BID ITEM NUMBER		US HWY 18 WEST SEGMENT	US HWY 18 EAST SEGMENT	US I29S SOUTH SEGMENT	US 29S NORTH SEGMENT	SD HWY 37	SD HWY 44	SD HWY 46 WEST SEGMENT	SD HWY 46 EAST SEGMENT	SD HWY 50E	TOTAL QUANTITY
009E0010	Mobilization	<----------Lump Sum---------->									Lump Sum
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	18.1	81.3	19.2	1.3	71.9	78.9	43.7	97.8	69.3	481.5 Ton
330E3000	Sand for Fog Seal	5.4	24.0	7.9	0.5	23.1	31.8	17.7	28.2	28.4	167.0 Ton
360E0042	CRS-2P Asphalt for Surface Treatment	64.2	284.4	103.7	6.9	273.0	397.0	220.4	334.0	354.6	2038.2 Ton
360E1040	Type 2B Cover Aggregate	459.6									459.6 Ton
360E1040	Type 2B Cover Aggregate		2035.3								2035.3 Ton
360E1040	Type 2B Cover Aggregate			668.3							668.3 Ton
360E1040	Type 2B Cover Aggregate				44.4						44.4 Ton
360E1040	Type 2B Cover Aggregate					1954.3					1954.3 Ton
360E1040	Type 2B Cover Aggregate						2692.4				2692.4 Ton
360E1040	Type 2B Cover Aggregate							1494.8			1494.8 Ton
360E1040	Type 2B Cover Aggregate								2390.9		2390.9 Ton
360E1040	Type 2B Cover Aggregate									2404.9	2404.9 Ton
633E1200	High Build Pavement Marking Paint, White	138	477	0	0	541	732	364	560	361	3173 Gal
633E1205	High Build Pavement Marking Paint, Yellow	51	129	263	23	204	160	75	266	262	1433 Gal
633E6020	Pavement Marking Masking, 25"	-	166	-	-	-	72	72	117	-	427 Ft
633E6030	Pavement Marking Masking, Arrow	-	-	-	-	-	-	-	18	-	18 Each
633E6040	Pavement Marking Masking, Message	-	3	-	-	-	3	3	-	-	9 Each
633E6045	Pavement Marking Masking, Railroad Crossing	-	-	-	-		2	2	-	-	4 Each
634E0010	Flagging	31	139	30	10	134	184	102	164	30	824 Hour
634E0020	Pilot Car	7	29	-	-	28	38	21	34	-	157 Hour
634E0110	Traffic Control Signs	211.5	420.9	505.8	395.9	523.8	523.8	346.4	532.8	349.8	3810.7 SqFt
634E0120	Traffic Control, Miscellaneous	<----------Lump Sum---------->									Lump Sum
634E0420	Type C Advance Warning Arrow Board	-	-	1	1	-	-	-	-	1	3 Each
634E0630	Temporary Pavement Marking	7.8	37.0	0.2	0.2	35.7	41.7	19.8	37.4	29.7	209.5 Mile
998E0100	Railroad Protective Insurance	-	-	-	-	-	Lump Sum	Lump Sum	-	-	Lump Sum

ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	12	41

ENVIRONMENTAL COMMITMENTS

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

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

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

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

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

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

Action Taken/Required:

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

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

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

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

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

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

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

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

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

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

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

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

COMMITMENT I: 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.

RATES OF MATERIALS AND TABLE OF ADDITIONAL QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	13	41

US18W RATES OF MATERIALS

Mainline	**10+14 to 98+04**	**1.665 miles**
	99+67 to 116+97	**0.328 miles**
	141+15 to 142+05	**0.017 miles**
	146+17 to 147+07	**0.017 miles**
		2.027 miles

CRS-2P Asphalt for Surface Treatment at the rate of 22.54 tons/mile applied 25 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 161.33 tons/mile applied 25 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 6.70 tons/mile applied 36 feet wide (Rate = 0.075 gallons per square yard).

Mainline	**116+97 to 118+55**	**0.030 miles**
		0.030 miles

CRS-2P Asphalt for Surface Treatment at the rate of 32.45 tons/mile applied 36 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 232.32 tons/mile applied 36 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 6.70 tons/mile applied 36 feet wide (Rate = 0.075 gallons per square yard).

Mainline	**118+55 to 128+38**	**0.186 miles**
		0.186 miles

CRS-2P Asphalt for Surface Treatment at the rate of 50.48 tons/mile applied 56 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 361.39 tons/mile applied 56 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 10.41 tons/mile applied 56 feet wide (Rate = 0.075 gallons per square yard).

Mainline	**128+38 to 134+41**	**0.114 miles**
		0.114 miles

CRS-2P Asphalt for Surface Treatment at the rate of 22.54 tons/mile applied 25 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 161.33 tons/mile applied 25 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 7.07 tons/mile applied 38 feet wide (Rate = 0.075 gallons per square yard).

US18W RATES OF MATERIALS CONT.

Mainline	**134+41 to 141+15**	**0.128 miles**
	147+07 to 153+42	**0.120 miles**
		0.248 miles

CRS-2P Asphalt for Surface Treatment at the rate of 22.54 tons/mile applied 25 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 161.33 tons/mile applied 25 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 6.32 tons/mile applied 34 feet wide (Rate = 0.075 gallons per square yard).

US18W TABLE OF ADDITIONAL QUANTITIES

LOCATION		CRS-2P ASPHALT SURFACE TREATMENT TON	TYPE 2B COVER AGGREGATE TON	CSS-1h ASPH. FOR FOG SEAL TON
US18W				
Sta. 134+41 to 135+41	22.2 SqYd	-	-	0.01
Shoulder Transition				
Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd				
US18W Total Additional Quantities		**0**	**0**	**0.01**

US18W SUMMARY OF MATERIALS QUANTITIES

	Miles	CRS-2P	Type 2B	CSS-1h
Mainline	2.027	45.69	327.02	13.58
Mainline	0.030	0.97	6.97	0.20
Mainline	0.186	9.39	67.22	1.94
Mainline	0.114	2.57	18.39	0.81
Mainline	0.248	5.59	40.01	1.57
Additional Quantities		0.00	0.00	0.01
US18W Total Tons		**64.21**	**459.61**	**18.11**

US18E RATES OF MATERIALS

Mainline	**17+00 to 40+22**	**0.440 miles**
	59+71 to 69+19	**0.180 miles**
	81+60 to 87+39	**0.110 miles**
	605+00 to 650+00	**0.852 miles**
		1.582 miles

CRS-2P Asphalt for Surface Treatment at the rate of 22.54 tons/mile applied 25 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 161.33 tons/mile applied 25 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 6.70 tons/mile applied 36 feet wide (Rate = 0.075 gallons per square yard).

Mainline	**40+22 to 59+71**	**0.369 miles**
	69+19 to 81+60	**0.235 miles**
	87+39 to 234+25	**2.781 miles**
	269+85 to 605+00	**6.348 miles**
	650+00 to 667+60	**0.333 miles**
		10.066 miles

CRS-2P Asphalt for Surface Treatment at the rate of 22.54 tons/mile applied 25 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 161.33 tons/mile applied 25 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 6.51 tons/mile applied 35 feet wide (Rate = 0.075 gallons per square yard).

Mainline	**234+25 to 237+65**	**0.064 miles**
	263+60 to 269+85	**0.118 miles**
		0.182 miles

CRS-2P Asphalt for Surface Treatment at the rate of 22.54 tons/mile applied 25 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 161.33 tons/mile applied 25 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 7.44 tons/mile applied 40 feet wide (Rate = 0.075 gallons per square yard).

Mainline	**237+65 to 263+60**	**0.491 miles**
		0.491 miles

CRS-2P Asphalt for Surface Treatment at the rate of 36.06 tons/mile applied 40 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 258.13 tons/mile applied 40 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 7.44 tons/mile applied 40 feet wide (Rate = 0.075 gallons per square yard).

RATES OF MATERIALS AND TABLE OF ADDITIONAL QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	14	41

US18E TABLE OF ADDITIONAL QUANTITIES

LOCATION		CRS-2P ASPHALT SURFACE TREATMENT TON	TYPE 2B COVER AGGREGATE TON	CSS-1h ASPH. FOR FOG SEAL TON
US18E				
Sta. 233+25 to 234+25 Shoulder Transition	27.8 SqYd	-	-	0.01
Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd				
Sta. 269+85 to 270+85 Shoulder Transition	27.8 SqYd	-	-	0.01
Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd				
Radii @ 435th Ave	600 SqYd	-	-	0.19
Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd				
US18E Total Additional Quantities		**0**	**0**	**0.21**

US18E SUMMARY OF MATERIALS QUANTITIES

	Miles	CRS-2P	Type 2B	CSS-1h
Mainline	1.582	35.66	255.22	10.60
Mainline	10.066	226.89	1623.95	65.53
Mainline	0.182	4.10	29.36	1.35
Mainline	0.491	17.71	126.74	3.65
Additional Quantities		0.00	0.00	0.21
US18E Total Tons		**284.36**	**2035.27**	**81.34**

I-29S SOUTH SEGMENT RATES OF MATERIALS

Inside Shoulders **20+68 to 520+25** **9.462 miles**
9.462 miles

CRS-2P Asphalt for Surface Treatment at the rate of 4.01 tons/mile applied 4 feet wide (Rate = 0.40 gallon per square yard).

Type 2B Cover Aggregate at the rate of 25.81 tons/mile applied 4 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 0.74 tons/mile applied 4 feet wide (Rate = 0.075 gallons per square yard).

Outside Shoulders	**20+68 to 246+95**	**4.285 miles**
	254+85 to 263+71	**0.168 miles**
	265+33 to 274+31	**0.170 miles**
	287+91 to 327+54	**0.751 miles**
	335+31 to 352+77	**0.331 miles**
	366+36 to 456+10	**1.700 miles**
	463+95 to 485+42	**0.407 miles**
	499+02 to 520+25	**0.402 miles**
		8.214 miles

CRS-2P Asphalt for Surface Treatment at the rate of 8.01 tons/mile applied 8 feet wide (Rate = 0.40 gallon per square yard).

Type 2B Cover Aggregate at the rate of 51.63 tons/mile applied 8 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 1.49 tons/mile applied 8 feet wide (Rate = 0.075 gallons per square yard).

I-29S SOUTH SEGMENT SUMMARY OF MATERIALS QUANTITIES

	Miles	CRS-2P	Type 2B	CSS-1h
Inside Shoulders	9.462	37.94	244.21	7.00
Outside Shoulders	8.214	65.79	424.09	12.24
I-29S South Total Tons		**103.73**	**668.30**	**19.24**

I-29S NORTH SEGMENT RATES OF MATERIALS

Inside Shoulders **0+00 to 43+80** **0.830 miles**
0.830 miles

CRS-2P Asphalt for Surface Treatment at the rate of 4.01 tons/mile applied 4 feet wide (Rate = 0.40 gallon per square yard).

Type 2B Cover Aggregate at the rate of 25.81 tons/mile applied 4 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 0.74 tons/mile applied 4 feet wide (Rate = 0.075 gallons per square yard).

Outside Shoulders	**12+69 to 29+37**	**0.316 miles**
	36+97 to 43+80	**0.129 miles**
		0.445 miles

CRS-2P Asphalt for Surface Treatment at the rate of 8.01 tons/mile applied 8 feet wide (Rate = 0.40 gallon per square yard).

Type 2B Cover Aggregate at the rate of 51.63 tons/mile applied 8 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 1.49 tons/mile applied 8 feet wide (Rate = 0.075 gallons per square yard).

I-29S NORTH SEGMENT SUMMARY OF MATERIALS QUANTITIES

	Miles	CRS-2P	Type 2B	CSS-1h
Inside Shoulders	0.830	3.33	21.42	0.61
Outside Shoulders	0.445	3.56	22.98	0.66
I-29S North Total Tons		**6.89**	**44.40**	**1.27**

RATES OF MATERIALS AND TABLE OF ADDITIONAL QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	15	41

SD HIGHWAY 37 RATES OF MATERIALS

Mainline	**0+00 – 60' to 543+97.25**	**10.314 miles**
	545+02.75 to 616+81.5	**1.360 miles**
	617+99.5 to 630+22	**0.232 miles**
		11.906 miles

CRS-2P Asphalt for Surface Treatment at the rate of 22.54 tons/mile applied 25 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 161.33 tons/mile applied 25 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 5.95 tons/mile applied 32 feet wide (Rate = 0.075 gallons per square yard).

SD37 TABLE OF ADDITIONAL QUANTITIES

LOCATION		CRS-2P ASPHALT SURFACE TREATMENT TON	TYPE 2B COVER AGGREGATE TON	CSS-1h ASPH. FOR FOG SEAL TON
SD37				
Sta. 314+45 Left Turn Lane at SD46 Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd	2742 SqYd	4.21	30.16	0.87
Sta. 630+22 Radii at SD50 Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd	300 SqYd	0..46	3.30	0.10
Intersecting Asphalt Roads Radii at County Roads Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd	3900 SqYd	-	-	0.13
SD37 Total Additional Quantities		**4.67**	**33.46**	**1.10**

SD HIGHWAY 37 SUMMARY OF MATERIALS QUANTITIES

	Miles	CRS-2P	Type 2B	CSS-1h
Mainline	11.906	268.36	1920.79	70.84
Additional Quantities		4.67	33.46	1.10
SD37 Total Tons		**273.03**	**1954.25**	**71.94**

SD HIGHWAY 44 RATES OF MATERIALS

Mainline	**0+00 to 296+37**	**5.613 miles**
	297+23.5 to 341+87	**0.845 miles**
	342+73.5 to 473+13	**2.470 miles**
	475+27 to 738+15	**4.979 miles**
		13.907 miles

CRS-2P Asphalt for Surface Treatment at the rate of 28.55 tons/mile applied 30 feet wide (Rate = 0.38 gallon per square yard).

Type 2B Cover Aggregate at the rate of 193.6 tons/mile applied 30 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 5.58 tons/mile applied 30 feet wide (Rate = 0.075 gallons per square yard).

SD44 TABLE OF ADDITIONAL QUANTITIES

LOCATION		CRS-2P ASPHALT SURFACE TREATMENT TON	TYPE 2B COVER AGGREGATE TON	CSS-1h ASPH. FOR FOG SEAL TON
SD44				
Entrances & Mailbox Turnouts Rates = 0.38 gal, 22 lb & 0.075 gal/SqYd	4200 SqYd	-	-	1.33
SD44 Total Additional Quantities		**0**	**0**	**1.33**

SD HIGHWAY 44 SUMMARY OF MATERIALS QUANTITIES

	Miles	CRS-2P	Type 2B	CSS-1h
Mainline	13.907	397.04	2692.40	77.60
Additional Quantities		0.00	0.00	1.33
SD44 Total Tons		**397.04**	**2692.40**	**78.93**

SD HIGHWAY 46 WEST SEGMENT RATES OF MATERIALS

Mainline	**0+00 to 120+30**	**2.278 miles**
	120+42 to 348+07	**4.312 miles**
		6.590 miles

CRS-2P Asphalt for Surface Treatment at the rate of 33.30 tons/mile applied 35 feet wide (Rate = 0.38 gallon per square yard).

Type 2B Cover Aggregate at the rate of 225.87 tons/mile applied 35 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 6.51 tons/mile applied 35 feet wide (Rate = 0.075 gallons per square yard).

SD46W TABLE OF ADDITIONAL QUANTITIES

LOCATION		CRS-2P ASPHALT SURFACE TREATMENT TON	TYPE 2B COVER AGGREGATE TON	CSS-1h ASPH. FOR FOG SEAL TON
SD46W				
Entrances & Mailbox Turnouts Rates = 0.38 gal, 22 lb & 0.075	1800 SqYd	-	-	0.57
Sta. 0+00 Radii at SD25 Rates = 0.38 gal, 22 lb & 0.075 gal/SqYd	570 SqYd	0.92	6.27	0.18
SD46W Total Additional Quantities		**0.92**	**6.27**	**0.75**

SD HIGHWAY 46 WEST SUMMARY OF MATERIALS QUANTITIES

	Miles	CRS-2P	Type 2B	CSS-1h
Mainline	6.590	219.45	1488.48	42.90
Additional Quantities		0.92	6.27	0.75
SD46W Total Tons		**220.37**	**1494.75**	**43.65**

RATES OF MATERIALS AND TABLE OF ADDITIONAL QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	16	41

SD HIGHWAY 46 EAST SEGMENT RATES OF MATERIALS

Mainline **11+05 to 644+22.77** **11.992 miles**
11.992 miles

CRS-2P Asphalt for Surface Treatment at the rate of 25.24 tons/mile applied 28 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 180.69 tons/mile applied 28 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 7.44 tons/mile applied 40 feet wide (Rate = 0.075 gallons per square yard).

Mainline **644+22.77 to 644+65.42** **0.008 miles**
0.008 miles

CRS-2P Asphalt for Surface Treatment at the rate of 22.54 tons/mile applied 25 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 161.33 tons/mile applied 25 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 5.95 tons/mile applied 32 feet wide (Rate = 0.075 gallons per square yard).

Mainline **644+65.42 to 654+15.42** **0.180 miles**
0.180 miles

CRS-2P Asphalt for Surface Treatment at the rate of 45.07 tons/mile applied 50 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 322.67 tons/mile applied 50 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 9.30 tons/mile applied 50 feet wide (Rate = 0.075 gallons per square yard).

Mainline **654+15.42 to 668+65.42** **0.275 miles**
0.275 miles

CRS-2P Asphalt for Surface Treatment at the rate of 36.06 tons/mile applied 40 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 258.13 tons/mile applied 40 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 7.44 tons/mile applied 40 feet wide (Rate = 0.075 gallons per square yard).

SD HIGHWAY 46 EAST SEGMENT CONT. RATES OF MATERIALS

Mainline **668+65.42 to 669+08** **0.008 miles**
0.008 miles

CRS-2P Asphalt for Surface Treatment at the rate of 23.44 tons/mile applied 26 feet wide (Rate = 0.36 gallon per square yard).

Type 2B Cover Aggregate at the rate of 167.79 tons/mile applied 26 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 4.84 tons/mile applied 26 feet wide (Rate = 0.075 gallons per square yard).

SD46E TABLE OF ADDITIONAL QUANTITIES

LOCATION		CRS-2P ASPHALT SURFACE TREATMENT TON	TYPE 2B COVER AGGREGATE TON	CSS-1h ASPH. FOR FOG SEAL TON
US46E				
Sta. 225+81 Turn Lane at 444th Ave Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd	2800 SqYd	4.30	30.8	0.89
Sta. 331+04 Turn Lane at 446th Ave Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd	2800 SqYd	4.30	30.8	0.89
Sta. 435+89 Turn Lane at 448th Ave Rates = 0.36 gal, 22 lb & 0.075 gal/SqYd	2800 SqYd	4.30	30.8	0.89
Entrances & Intersecting Roads Rate = 0.075 gal/SqYd	6600 SqYd	-	-	2.09
SD46E Total Additional Quantities		**12.9**	**92.4**	**4.76**

SD HIGHWAY 46 EAST SUMMARY OF MATERIALS QUANTITIES

	Miles	CRS-2P	Type 2B	CSS-1h
Mainline	11.992	302.68	2166.83	89.22
Mainline	0.008	0.18	1.29	0.05
Mainline	0.180	8.11	58.08	1.67
Mainline	0.275	9.92	70.99	2.05
Mainline	0.008	0.19	1.34	0.04
Additional Quantities		12.90	92.40	4.76
SD46E Total Tons		**333.98**	**2390.93**	**97.79**

SD HIGHWAY 50E RATES OF MATERIALS

Mainline **0+00 to 520+20** **9.852 miles**
9.852 miles

CRS-2P Asphalt for Surface Treatment at the rate of 33.30 tons/mile applied 35 feet wide (Rate = 0.38 gallon per square yard).

Type 2B Cover Aggregate at the rate of 225.87 tons/mile applied 35 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 6.51 tons/mile applied 35 feet wide (Rate = 0.075 gallons per square yard).

Meckling Service Road **241+92 to 263+20 Rt.** **0.403 miles**
0.403 miles

CRS-2P Asphalt for Surface Treatment at the rate of 24.74 tons/mile applied 26 feet wide (Rate = 0.38 gallon per square yard).

Type 2B Cover Aggregate at the rate of 167.79 tons/mile applied 26 feet wide (Rate = 22 pounds per square yard).

SS-1h or CSS-1h Asphalt for Fog Seal at the rate of 4.84 tons/mile applied 26 feet wide (Rate = 0.075 gallons per square yard).

SD50E TABLE OF ADDITIONAL QUANTITIES

LOCATION		CRS-2P ASPHALT SURFACE TREATMENT TON	TYPE 2B COVER AGGREGATE TON	CSS-1h ASPH. FOR FOG SEAL TON
SD50E				
Sta. 432+45 Portable Weigh Scale Pullout Rates = 0.38 gal, 22 lb & 0.075	1350 SqYd	2.19	14.85	0.43
19 Median Crossovers Rates = 0.38 gal, 22 lb & 0.075 gal/SqYd	8835 SqYd	14.33	97.19	2.80
SD50E Total Additional Quantities		**16.52**	**112.04**	**3.23**

SD HIGHWAY 50 EAST SUMMARY OF MATERIALS QUANTITIES

	Miles	CRS-2P	Type 2B	CSS-1h
Mainline	9.852	328.07	2225.27	64.14
Service Road	0.403	9.97	67.62	1.95
Additional Quantities		16.52	112.04	3.23
SD50E Total Tons		**354.56**	**2404.93**	**69.32**

RIDE ACROSS SOUTH DAKOTA BIKE TOUR

The Ride Across South Dakota bike tour may be on routes that are in this contract to have an asphalt surface treatment applied to them. The routes of the tour can be found at www.RASDAK.com. The Contractor will schedule work to complete the affected routes after the bike tour is completed.

SHOULDER WORK

Prior to construction, Department of Transportation Maintenance Forces will spray the shoulders to kill existing vegetation. It will be the Contractor's responsibility to notify the State a minimum of thirty days prior to starting work on the shoulders of the highway. The State assumes no responsibility for the effectiveness of the herbicide applied.

Vegetation and accumulated material on or adjacent to the existing roadway edge will be removed to the satisfaction of the Engineer prior to asphalt surface treatment.

Shoulder work will be incidental to other contract items. Separate measurement and payment will not be made.

BRIDGES, APPROACH SLABS, SLEEPER SLABS, STRIP SEALS, RAILROAD CROSSINGS, MANHOLES, WATER VALVES, MAINLINE RUMBLE STRIPS AND CONCRETE

Asphalt Surface Treatment will not be placed on any of the bridges, approach slabs, sleeper slabs, strip seals, railroad crossings, manholes, water valves or any type of concrete. It also will not be placed on the rumble strips in the mainline driving lane prior to a Stop sign.

Material used to cover and protect these areas will be removed and disposed of properly after the application of the asphalt surface treatment. When the material is removed, the asphalt surface treatment that does not stay adhered to the material will be removed from the road surface.

ESTIMATED QUANTITIES FOR ASPHALT SURFACE TREATMENT

The quantities of asphalt for surface treatment and cover aggregate are based on the rates shown in the Rates of Materials. This is only an estimate. The actual application rates of materials will be determined by mix design as stated in the Special Provision for Asphalt Surface Treatment Design. The mix design rates may vary from the estimated rates stated in the Rates of Materials depending on the aggregate source and the variation in gradation and flakiness index. The application rates may also be adjusted in the field due to results of gradation, flakiness index, sweep tests and differing surface conditions as encountered. Pay quantities will be based on the actual target rates the inspectors use even though they may vary significantly from plans estimates.

ASPHALT FOR SURFACE TREATMENT

The asphalt for surface treatment that is delivered for use on this contract will be used in the order it is received. Storage of asphalt for surface treatment will only be allowed at the end of the work day. The material that is placed in storage will be the first material used the following day.

COVER AGGREGATE

At least 50% of the aggregate will be stockpiled at each stockpile site, adjacent to or near the routes on this contract, at least one week prior to work beginning on the project. This is to allow the Area Office time to run tests on the material and enter the results into the mix design spreadsheets.

BROOMING

Material will be broomed off bridges and curb & gutter areas adjacent to the bridges. No material will be broomed under the guardrail, including the 3 cable guardrail or into the drop inlets. Material from the curb & gutter areas of the bridges, from guardrail areas of the bridges, and from drop inlets will be disposed of in a manner satisfactory to the Engineer.

No material will be broomed into the ditches or on the boulevards in residential and commercial areas where the adjacent landowner conducts the mowing of the right-of-way. This material will be disposed of in a manner satisfactory to the Engineer.

Material that is broomed onto the roadway inslopes will not be left in piles or windrows. The material will be evenly distributed at a height that will not hinder mowing operations or cause dispersion of the material into the traveled roadway when passed over with a mower.

Anticipated areas, other than the bridge areas stated above, that will require either removal of the chips with a pickup sweeper or additional dispersal of the chips with the rotary powered broom are:

ROUTE	LOCATION
US18W	Curb & gutter and residential areas in the City of Olivet
US18E	Curb & gutter and residential areas in the City of Menno
SD44	Curb & gutter and residential / business areas in the City of Parkston
SD46E	Curb & gutter and residential areas in the City of Irene
SD50E	Curb & gutter in the City of Meckling Service Road

This list may not be complete. Additional areas may need attention as directed by the Engineer.

FOG SEAL

Fog Seal will be placed on all the routes.

The fog seal will be placed following the completion of the asphalt surface treatment and prior to the placement of the permanent pavement marking.

Application of the fog seal will begin no earlier than the morning following application of the chip seal but no later than four days after the application of each day's chip seal.

Immediately prior to the applications of the fog seal the Contractor will be required to broom the entire width of the chip seal. An SS-1h or CSS-1h emulsion will be used for the fog seal application. An emulsion-to-water ratio of 3:1 should be used for the binder application.

Sand for Fog Seal will conform to Section 879.1 B of the specifications except for the following requirements:

> The shale content or other particles of low specific gravity (less than 1.95) passing the No. 4 sieve will not exceed 4.5%. Prior to hauling, sand will be screened to minimize segregation, eliminate oversize and effectively breakup or discard material bonded into chunks.

Sand for Fog Seal will be furnished by the Contractor. A rate of application for the sand will not be given. A small quantity of Sand for Fog Seal is set up for each respective route to be Fog Sealed, to be used as directed by the Engineer at locations of high traffic volumes, such as intersecting state or county highways, that traffic cannot be stopped from crossing. The Contractor will be required to keep traffic off other areas until the Fog Seal has cured sufficiently as to not stick to tires.

TRANSVERSE RUMBLE STRIPS

The Contractor will ensure transverse rumble strips are not damaged or otherwise modified to lose their functionality during the application of the surface treatment. The Contractor will only apply a fog seal to the rumble strips. The Contractor will repair any damage or loss of functionality of rumble strips to the satisfaction of the Engineer at no additional cost to the State.

PERMANENT VEHICLE CLASSIFICATION

The SDDOT Office of Inventory Management & Research has a permanent Automatic Traffic Recorder (ATR) located on SD 50 E & W, MRM 405.00 + 0.766.

The Contractor will not damage the existing loops, pull boxes, conduit, or electronics cabinet. Any pull boxes, conduit, cabinet, or loops damaged during the construction project will be replaced by the Contractor at the Contractors expense. The loops are visible on the roadway. If necessary, SDDOT Office of Inventory Management & Research will aide in locating loops. Contact 605-773-6644, or 605-773-3278 to notify the office and request assistance to locate the ATR.

TEMPORARY PAVEMENT MARKING

Paint will not be allowed for Temporary Pavement Marking.

The total length of no passing zones on this contract is estimated to be 35.7 miles.

For locations where the annual average daily traffic (ADT) is 2500 or less, it is estimated that 74 DO NOT PASS and 68 PASS WITH CARE signs will be required to mark the no passing zones, should the Contractor elect to use these signs.

For routes with centerline rumble strips, 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.

TABLES OF DO NOT PASS AND PASS WITH CARE SIGNS (ADT LESS THAN OR EQUAL TO 2500)

ROUTE	DO NOT PASS	PASS WITH CARE
US HWY 18W	5	4
US HWY 18E	9	8
US I-29S South Segment	0	0
US I-29S North Segment	0	0
SD HWY 37	31	30
SD HWY 44	7	6
SD HWY 46W	7	6
SD HWY 46E	15	14
SD HWY 50E	0	0
TOTAL	**74**	**68**

Prior to asphalt surface treatment the Contractor will mark, with appropriately colored temporary flexible vertical markers (tabs), the location of existing pavement marking, except edgelines. However, the Contractor will place temporary flexible vertical markers (tabs) on the edgeline of transition areas such as turn lanes and climbing lanes and on dashed edgelines. Prior to installation of the permanent pavement marking, the Engineer is to be notified. The Contractor will give the Engineer ample notification to verify and check the placement of the temporary flexible vertical markers (tabs) that are to be used for placement of the permanent pavement marking.

If the Contractor uses the DO NOT PASS and PASS WITH CARE signs, the beginning and ending of no passing zones will be marked with temporary flexible vertical markers (tabs).

The Contractor will remove and dispose of temporary flexible vertical markers (tabs) after Permanent Pavement Marking is applied. Removal will be accomplished within one week of completion of the Permanent Pavement Marking.

Tabs will be used in lieu of Temporary Pavement Marking Paint/Tape in transition and mainline areas throughout the lane closures on 1-29 and HWY50E. Enough quantity has been included in these plans to account for the 3 expected taper changes. Measurements will be made, and quantities will be paid for on the actual quantities used.

TEMPORARY PAVEMENT MARKING (CONTINUED)

Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be required to replace any missing or non-reflective tabs after each installation as detailed below at no additional cost to the State.

Quantities of Temporary Pavement Markings consist of:

One pass prior to the chip seal
One pass after the chip seal
One pass after the fog seal

In the absence of a signed lane closure or pilot car operation, Flagger symbol signs (W20-7) 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 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), a Workers symbol sign (W21-1) or a BE PREPARED TO STOP (W3-4) warning sign will be mounted on the rear of the shadow vehicle. The method of traffic control used by the Contractor for this work will be approved by the Engineer.

PAVEMENT MARKING MASKING

Any existing pavement marking that is to be salvaged on this contract will be covered with an approved pavement marking masking immediately prior to sealing to preserve the various marking. The masking material will be sturdy enough to eliminate being punctured by the cover aggregate when traffic drives over it.

Pavement marking to be masked will be cleaned with a high pressure air blast device immediately prior to the application of the Pavement Marking Masking. The width of this masking will be one inch wider than the existing marking. The various items for Pavement Marking Masking will include material, labor and equipment to satisfactorily install the masking prior to sealing and remove and dispose of the masking after the completion of the work and will be incidental to the contract unit price for Pavement Marking Masking.

If the pavement marking is damaged due to improper masking, it will be replaced or repaired at the Contractor's expense.

PAVEMENT MARKING MASKING (CONTINUED)

When the masking is removed, the asphalt surface treatment that does not stay adhered to the masking will be removed from the road surface.

TABLE OF PAVEMENT MARKING MASKING

ROUTE	LOCATION	DESCRIPTION
*US18E	City of Menno	24” Stop Bar x 30’
*US18E	City of Menno	Pedestrian Crossing 24” x 136’
*US18E	US81 Intersection	Word Messages (3 Each)
*SD44	BNSF Crossing near Parkston	R x R Crossing (2 Each)
*SD44	BNSF Crossing near Parkston	24” Stop Bar x 72’
*SD44	SD37 Intersection near Parkston	Word Messages (3 Each)
*SD46W	BNSF Crossing near 426th Ave	R x R Crossing (2 Each)
*SD46W	BNSF Crossing near 426th Ave	24” Stop Bar x 72’
*SD46W	SD25 Intersection	Word Messages (3 Each)
*SD46E	444th Ave, 446th Ave, and 448th Ave	Left Arrows (18 Each)
*SD46E	City of Irene	Pedestrian Crossing 24” x 72’
*SD46E	City of Irene	24” Stop Bar x 45’

* Masking of the required areas on these routes may need to be done twice due to the required placement of the Fog Seal on these routes. Once prior to the placement of the chip seal and once prior to the fog seal application. Each masking application will be paid for separately. If the Contractor can achieve satisfactory results by leaving the masking in place for both the chip seal and the fog seal applications, this procedure will be allowed. In this case, the masking will be paid for once.

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 Gal/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.

PERMANENT PAVEMENT MARKING

The existing pavement marking on portions of I-29S South Segment and I-29S North Segment is epoxy pavement marking. The Contractor will take precautions so that this marking is not damaged. For the outside white Edgeline, any marking damaged due to the Contractor's work will be replaced in kind at the Contractor's expense.

For the inside yellow Edgeline, the Contractor will provide the Engineer a description of the processes that will be used to ensure this Edgeline is not damaged, for approval, prior to placing the Asphalt Surface Treatment on the inside shoulder. If the Engineer determines that the approved processes were followed and damage occurred to the yellow Edgeline, a quantity of yellow paint has been included in the estimate of quantities to repaint the damaged areas. Damage done to this Edgeline due to the Contractor's negligence, will be replaced in kind at the Contractors expense.

The application of permanent pavement marking may not begin until 7 calendar days following completion of the fog seal and will be completed within 14 calendar days following completion of the fog seal.

Marking eight inch edgelines and gore areas will require the use of two spray nozzles to achieve the required width. Marking twelve inch gore lines will require the use of three spray nozzles to achieve the required width.

The Contractor will be required to repaint existing pavement marking including centerline, edgeline, dashed edgelines, dashed lane lines, lane lines, turn lanes, gore areas, etc.

Stop lines are to be located a minimum of 10' and a maximum of 30' back from the edge of the intersecting roadway. The stop line is to be located to provide the best sight distance for a stopped motorist to view intersecting traffic. The Project Engineer is to be notified prior to the installation of the stop lines to verify their location. Adjustments of the location of the existing stop lines, if needed, will be made prior to the placement of the new stop lines.

Flush sealing will not be allowed as an option for correction of pavement marking not within tolerance due to the occurrence of shadow through.

PERMANENT PAVEMENT MARKING (CONTINUED)

The following table contains locations of existing pavement marking to be painted by hand.

TABLE OF HAND WORK FOR PAVEMENT MARKING

ROUTE	LOCATION
SD37	Stop Bar at SD50 (25')
SD37	24' Hatches for Turn Bays at SD46 (285')
SD37	Left Arrows (4 Ea)
SD46W	Stop Bar at SD25 (35')
SD46E	Word Messages at US81 (3 Ea)
SD46E	24" Hashes in Turn Bays at 444th Ave
SD46E	24" Hashes in Turn Bays at 446th Ave
SD46E	24" Hashes in Turn Bays at 448th Ave

PERMANENT PAVEMENT MARKING (CONTINUED)

TABLES OF PERMANENT PAVEMENT MARKING

US18 West Segment	White	Yellow
Yellow Centerline Dashes = 2.558 miles @ 7.6 Gal/Mile		19.4
4” Solid Yellow Edgeline = 1.121 miles @ 27.8 Gal/Mile		31.2
4” Solid White Edgeline = 4.969 miles @ 27.8 Gal/Mile	138.1	
TOTAL GALLONS	**138**	**51**

US18 East Segment	White	Yellow
Yellow Centerline Dashes = 7.521 miles @ 7.6 Gal/Mile		57.2
Solid Yellow Centerline = 2.597 miles @ 27.8 Gal/Mile		72.2
4” Solid White Edgeline = 17.155 miles @ 27.8 Gal/Mile	476.9	
TOTAL GALLONS	**477**	**129**

I-29S North Segment	White	Yellow
Solid Yellow Edgeline = 0.830 miles @ 27.8 Gal/Mile		23.1
TOTAL GALLONS		**23**

PERMANENT PAVEMENT MARKING (CONTINUED)

TABLES OF PERMANENT PAVEMENT MARKING

I-29S South Segment	White	Yellow
Solid Yellow Edgeline = 9.462 miles @ 27.8 Gal/Mile		263.0
TOTAL GALLONS		**263**

SD37	White	Yellow
Yellow Centerline Dashes = 4.803 miles @ 7.6 Gal/Mile		36.5
Solid Yellow Centerline = 5.421 miles @ 27.8 Gal/Mile		150.7
24” Yellow Hatches for Turn Bays= 0.054 miles @ 166.8 Gal/Mile		9.0
Double Yellow for Turn Bays = 2 (4” line) x 0.141 miles @ 27.8 Gal/Mile		7.8
4” Solid White Edgeline = 19.270 miles @ 27.8 Gal/Mile	535.7	
Solid White Lane Lines = 0.045 miles @ 27.8 Gal/Mile	1.3	
24” White Stop Line = 0.005 miles @ 166.8 Gal/Mile	0.8	
Arrows = 4 each @ 0.8 Gal/Each	3.2	
TOTAL GALLONS	**541**	**204**

SD44	White	Yellow
Yellow Centerline Dashes = 13.956 miles @ 7.6 Gal/Mile		106.1
Solid Yellow Centerline = 1.945 miles @ 27.8 Gal/Mile		54.1
4” Solid White Edgeline = 26.314 miles @ 27.8 Gal/Mile	731.5	
TOTAL GALLONS	**732**	**160**

PERMANENT PAVEMENT MARKING (CONTINUED)

TABLES OF PERMANENT PAVEMENT MARKING

SD46 West Segment	White	Yellow
Yellow Centerline Dashes = 6.444 miles @ 7.6 Gal/Mile		49.0
Solid Yellow Centerline = 0.923 miles @ 27.8 Gal/Mile		25.7
4” Solid White Edgeline = 13.036 miles @ 27.8 Gal/Mile	362.4	
24” White Stop Line = 0.007 miles @ 166.8 Gal/Mile	1.2	
TOTAL GALLONS	**364**	**75**

SD46 East Segment	White	Yellow
Yellow Centerline Dashes = 12.052 miles @ 7.6 Gal/Mile		91.6
Solid Yellow Centerline = 5.119 miles @ 27.8 Gal/Mile		142.3
Double Yellow for Turn Bays = 2 (4” line) x 0.091 miles @ 27.8 Gal/Mile		5.1
24” Yellow Hatches for Turn Bays= 0.162 miles @ 166.8 Gal/Mile		27.0
4” Solid White Edgeline = 20.054 miles @ 27.8 Gal/Mile	557.5	
Solid White Lane Lines = 0.091 miles @ 27.8 Gal/Mile	2.5	
TOTAL GALLONS	**560**	**266**

SD50E	White	Yellow
4” Solid Yellow Edgeline = 9.434 miles @ 27.8 Gal/Mile		262.3
8” Solid White Edgeline = 0.374 miles @ 55.6 Gal/Mile	20.8	
4” Solid White Edgeline = 9.557 miles @ 27.8 Gal/Mile	265.7	
White Centerline Dashes = 9.852 miles @ 7.6 Gal/Mile	74.9	
TOTAL GALLONS	**361**	**262**

FURNISHING AND APPLYING PAVEMENT MARKING PAINT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	21	41

Paint application rates will be as follows:

Two Lane and Undivided Roadway	
(Rate for one line)	
Dashed Yellow / White Centerline Rate = 7.6 Gal/Pass-Mile	
Solid Yellow Centerline Rate = 27.8 Gal/Pass-Mile	
Solid Yellow Edgeline – 8” Rate = 55.6 Gal/Pass-Mile	Solid White / Yellow Edgeline – 4” Rate – 27.8 Gal/Pass-Mile
Solid White Edgeline – 12” Rate = 83.4 Gal/Pass-Mile	

Typical pavement marking as shown on these sheets will be applied throughout the entire length of applicable sections of roadway.

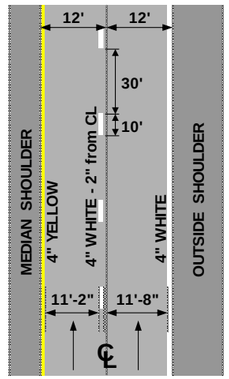
Traffic Control will be incidental to the cost of application. The striper and advance or trailing warning vehicle will be equipped with flashing amber lights and advance warning arrow board.

4” Yellow Skip Centerline (when not adjacent to a 4” Yellow No Passing Zone) will be placed consistently to the south or east of centerline.

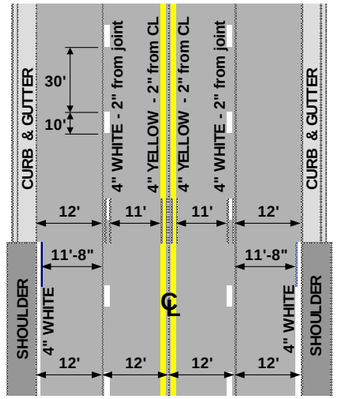
ESTIMATED QUANTITIES		
ROUTES		
	WHITE	YELLOW
US HWY 18W	138	51
US HWY 18E	477	129
US I-29S SOUTH SEGMENT	0	263
US I-29S NORTH SEGMENT	0	23
SD HWY 37	541	204
SD HWY 44	732	160
SD HWY 46W	364	75
SD HWY 46E	560	266
SD HWY 50E	361	262
TOTALS:	3173 GALLONS	1433 GALLONS

PAVEMENT MARKING

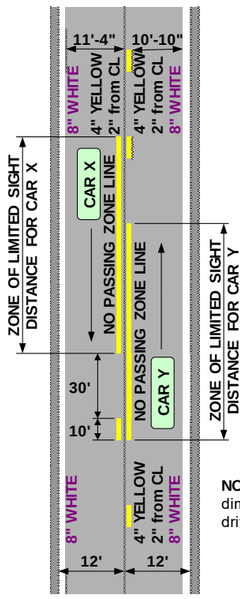
DIVIDED ROADWAY
(ONE DIRECTION SHOWN)



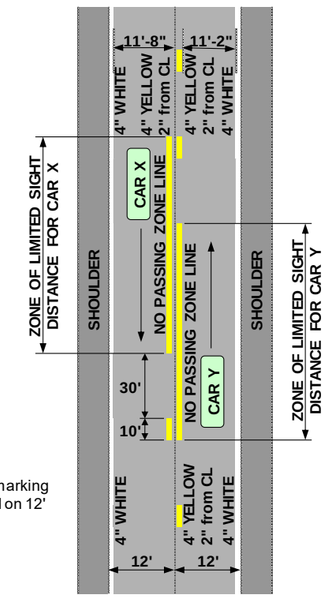
UNDIVIDED ROADWAY



UNDIVIDED ROADWAY

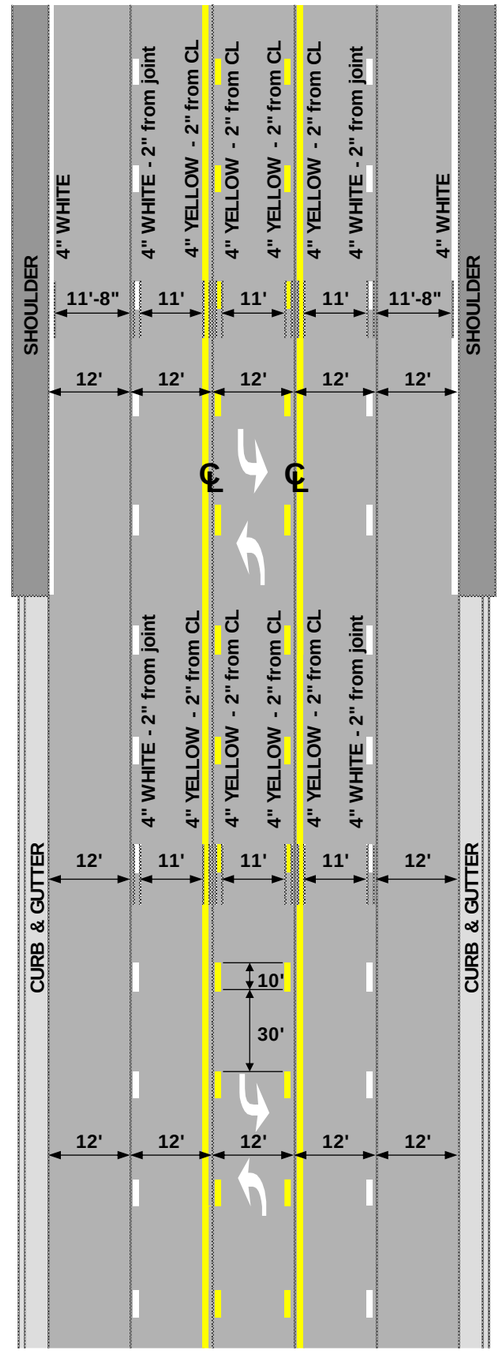


UNDIVIDED ROADWAY



NOTE: All pavement marking dimensions are based on 12' driving lanes.

FOUR LANE ROADWAY
WITH CENTER TURN LANE



SEQUENCE OF OPERATIONS

The below sequence is per route:

1. Install fixed location ground mounted traffic control devices.
2. Install and remove temporary traffic control devices as needed for each type of work.
3. Place temporary pavement marking not more than 24 hours prior to chip seal.
4. Place pavement marking masking immediately prior to chip seal. See Pavement Marking Masking note for alternate sequence.
5. Apply chip seal.

   The brooming operation will be immediately in front of the asphalt distributor.

   The Contractor will begin sealing operations at the farthest point from the stockpile site and work towards the stockpile site to eliminate unnecessary driving and turning on the fresh seal.

   Only one distributor will be allowed to apply the chip seal oil at a time for each chip seal crew. If the Contractor wants to propose to use more than one distributor at a time, then their process will need to be approved by the Engineer in writing two weeks prior to the start of chip seal operations.

   The application of the asphalt and aggregate will cease at least one hour prior to sunset each day.
6. Remove pavement marking masking immediately after chip seal.
7. Remove plastic covers from temporary flexible vertical markers (tabs) after application of the chip seal and prior to nightfall.
8. Broom chip sealed areas the next morning following the chip seal application.
9. Pick up cover aggregate in curb & gutter areas and other areas as stated in the plans and directed by the Engineer.
10. Place pavement marking masking immediately prior to fog seal. See Pavement Marking Masking note for alternate sequence.
11. Apply fog seal.

    Only one distributor will be allowed to apply the fog seal oil at a time for each fog seal crew.
12. Remove pavement marking masking immediately after fog seal.
13. Remove plastic covers from temporary flexible vertical markers (tabs).
14. Immediately prior to application of the permanent pavement marking, the areas to be painted will be broomed or blown off with high pressure compressed air. If a high pressure air device is used to clean the pavement surface, it will be capable of sustaining continuous high pressure for the duration of the pavement marking process.
15. Complete the permanent pavement marking.
16. Complete required hand painted pavement marking areas within the 14 day time period specified elsewhere in the plans.
17. Remove temporary flexible vertical markers (tabs) within the seven day time period specified elsewhere in the plans.
18. Remove traffic control devices.

SEQUENCE OF OPERATIONS (CONTINUED)

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.

TRAFFIC CONTROL SIGNS

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

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".

STOCKPILE SITE RELEASES

Upon completion of the contract, the Contractor will supply the Engineer a copy of the stockpile site releases to place in the Department's file.

COORDINATION BETWEEN CONTRACTORS

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

WORK ZONE SPEED REDUCTION

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

TRAFFIC CONTROL FOR ASPHALT SURFACE TREATMENT

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

The Contractor will furnish, install, and maintain LOOSE GRAVEL (W8-7) signs with 40 MPH (W13-1P) advisory speed plaques upon start of surface treatment operations at each end of the segment and on either side of intersecting asphalt roads and major intersections as determined by the Engineer. In addition, LOOSE GRAVEL signs with 40 MPH advisory speed plaques will be installed at no more than 4 mile intervals throughout each segment. The 40 MPH advisory speed plaque should not be installed with LOOSE GRAVEL signs in areas where the posted speed limit is less than 40 MPH. LOOSE GRAVEL signs and 40 MPH advisory speed plaques will be covered or removed from view when they are not applicable.

ROAD WORK NEXT XX MILES (G20-1), LOOSE GRAVEL (W8-7), and END ROAD WORK (G20-2) signs are the only signs that need to be mounted on fixed location breakaway sign supports, as shown on the plan layout. ROAD WORK AHEAD (W20-1), FLAGGER (W20-7), ONE LANE ROAD AHEAD (W20-4), and TRUCK CROSSING (W8-6) signs may be mounted on portable supports. Signs mounted on portable supports will be moved as necessary to keep current with the work activities.

Until the end of each day's chip seal operations, at the discretion of the Contractor, additional flaggers and FLAGGER (W20-7) symbol signs will be provided to alert the traveling public entering completed portions of the project to the potential of airborne chips.

The flaggers will provide each motorist with a printed notice on the Contractor's letterhead similar to the one shown below. Cost of the notice will be incidental to other contract items.

"CONTRACTOR'S LETTERHEAD"

THIS HIGHWAY IS BEING RESURFACED WITH A ROCK CHIP SEAL COAT.

THIS TYPE OF CONSTRUCTION HAS THE POTENTIAL OF CAUSING VEHICLE DAMAGE SUCH AS CHIPPED WINDSHIELDS AND BROKEN HEADLIGHTS DUE TO ROCKS BEING THROWN BY HIGH SPEED ONCOMING OR PASSING TRAFFIC.

YOU MAY WISH TO CONSIDER TAKING AN ALTERNATE ROUTE. IF YOU PROCEED, KEEP TO THE RIGHT AND DRIVE 40 MPH OR LESS. ANOTHER FLAGGER AND A PILOT CAR WILL BE ESCORTING YOU AROUND THE OIL SEAL COAT APPLICATION AREA.

THANK YOU.

ITEMIZED LIST FOR TRAFFIC CONTROL

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	23	41

US HIGHWAY 18 WEST SEGMENT HUTCHINSON COUNTY

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	3	48" x 48"	16.0	48.0
W13-1P	ADVISORY SPEED (plaque)	3	30" x 30"	6.3	18.9
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	WAIT FOLLOW PILOT CAR	2	30" x 18"	3.8	7.6
G20-1	ROAD WORK NEXT 15 MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			211.5

US HIGHWAY 18 EAST SEGMENT HUTCHINSON COUNTY

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	7	48" x 48"	16.0	112.0
W13-1P	ADVISORY SPEED (plaque)	7	30" x 30"	6.3	44.1
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
SPECIAL	WAIT FOLLOW PILOT CAR	6	30" x 18"	3.8	22.8
G20-1	ROAD WORK NEXT 15 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 8 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 7 MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			420.9

INSTERSTATE 29S SOUTH SEGMENT UNION COUNTY

		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-2	YIELD	2	36"	3.9	7.8
R2-1	SPEED LIMIT 45	2	36" x 48"	12.0	24.0
R2-1	SPEED LIMIT 65	2	36" x 48"	12.0	24.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (65 MPH)	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	6	48" x 48"	16.0	96.0
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
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)	1	48" x 48"	16.0	16.0
SPECIAL	EXIT 42 (3 digits) (45° ARROW)	1	60" x 48"	20.0	20.0
G20-1	ROAD WORK NEXT 10 MILES	1	48" x 24"	8.0	8.0
G20-1	ROAD WORK NEXT 5 MILES	1	48" x 24"	8.0	8.0
G20-2	END ROAD WORK	1	48" x 24"	8.0	8.0
SPECIAL	ON SHOULDER	6	30" x 24"	5.0	30.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			505.8

INTERSTATE 29S NORTH SEGEMENT UNION COUNTY

		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-2	YIELD	1	36"	3.9	3.9
R2-1	SPEED LIMIT 45	2	36" x 48"	12.0	24.0
R2-1	SPEED LIMIT 65	2	36" x 48"	12.0	24.0
W3-5	SPEED REDUCTION AHEAD (45 MPH)	2	48" x 48"	16.0	32.0
W3-5	SPEED REDUCTION AHEAD (65 MPH)	2	48" x 48"	16.0	32.0
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	4	48" x 48"	16.0	64.0
W20-1	ROAD WORK AHEAD	3	48" x 48"	16.0	48.0
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)	1	48" x 48"	16.0	16.0
SPECIAL	EXIT 47 (3 digits) (45° ARROW)	1	60" x 48"	20.0	20.0
G20-1	ROAD WORK NEXT 1 MILES	1	48" x 24"	8.0	8.0
G20-2	END ROAD WORK	1	48" x 24"	8.0	8.0
SPECIAL	ON SHOULDER	4	30" x 24"	5.0	20.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			395.9

ITEMIZED LIST FOR TRAFFIC CONTROL

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM-NH-P 0023(71)	24	41

SD HIGHWAY 37 BON HOMME COUNTY

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-7	LOOSE GRAVEL	8	48" x 48"	16.0	128.0
W13-1P	ADVISORY SPEED (plaque)	8	30" x 30"	6.3	50.4
W20-1	ROAD WORK AHEAD	6	48" x 48"	16.0	96.0
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 12 MILES	2	36" x 18"	4.5	9.0
G20-1	ROAD WORK NEXT 6 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			523.8

SD HIGHWAY 44 HUTCHINSON COUNTY

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-7	LOOSE GRAVEL	8	48" x 48"	16.0	128.0
W13-1P	ADVISORY SPEED (plaque)	8	30" x 30"	6.3	50.4
W20-1	ROAD WORK AHEAD	6	48" x 48"	16.0	96.0
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 14 MILES	2	36" x 18"	4.5	9.0
G20-1	ROAD WORK NEXT 8 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 6 MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			523.8

SD HIGHWAY 46 WEST SEGMENT BON HOMME & YANKTON COUNTIES

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	4	48" x 48"	16.0	64.0
W13-1P	ADVISORY SPEED (plaque)	4	30" x 30"	6.3	25.2
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
SPECIAL	WAIT FOLLOW PILOT CAR	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 7 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			346.4

SD HIGHWAY 46 EAST SEGMENT YANKTON, TURNER & CLAY COUNTIES

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-7	LOOSE GRAVEL	8	48" x 48"	16.0	128.0
W13-1P	ADVISORY SPEED (plaque)	8	30" x 30"	6.3	50.4
W20-1	ROAD WORK AHEAD	6	48" x 48"	16.0	96.0
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-7	FLAGGER (symbol)	4	48" x 48"	16.0	64.0
SPECIAL	WAIT FOLLOW PILOT CAR	8	30" x 18"	3.8	30.4
G20-1	ROAD WORK NEXT 12 MILES	2	36" x 18"	4.5	9.0
G20-1	ROAD WORK NEXT 8 MILES	2	36" x 18"	4.5	9.0
G20-1	ROAD WORK NEXT 4 MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			532.8

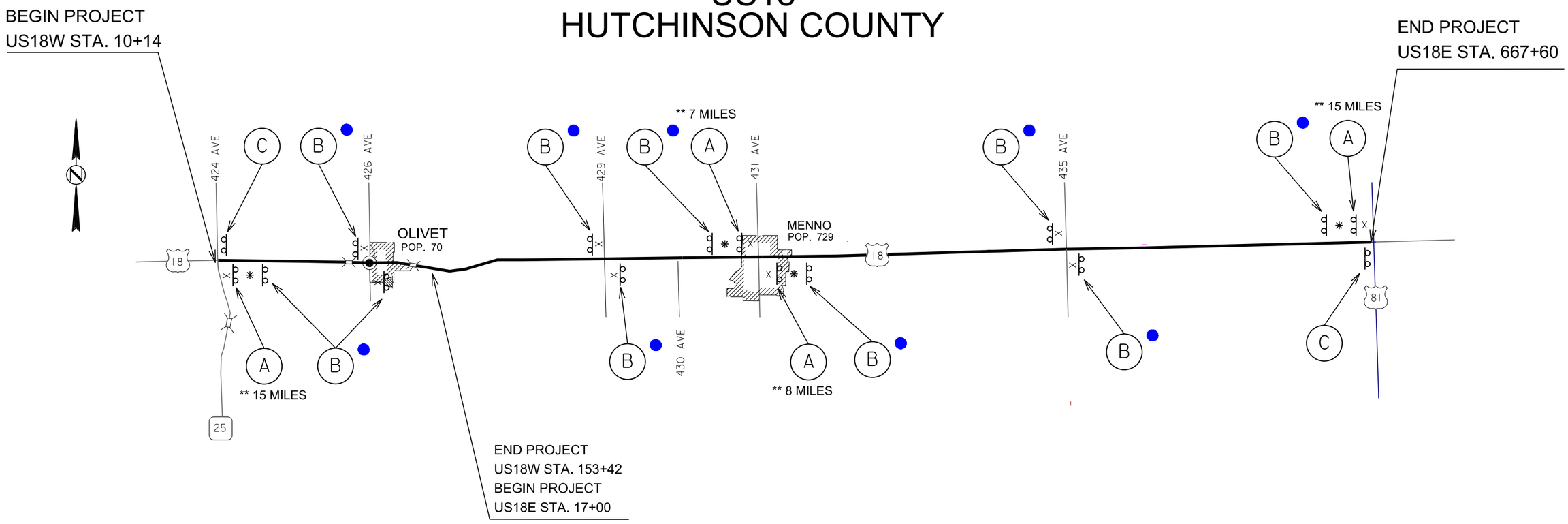
SD HIGHWAY 50E CLAY COUNTY

		EXPRESSWAY / INTERSTATE			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W4-2	LEFT or RIGHT LANE ENDS (symbol)	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	6	48" x 48"	16.0	96.0
W13-1P	ADVISORY SPEED (plaque)	6	30" x 30"	6.3	37.8
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
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)	2	48" x 48"	16.0	32.0
G20-1	ROAD WORK NEXT 10 MILES	1	48" x 24"	8.0	8.0
G20-1	ROAD WORK NEXT 5 MILES	1	48" x 24"	8.0	8.0
G20-2	END ROAD WORK	1	48" x 24"	8.0	8.0
		EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT			349.8

TRAFFIC CONTROL

FIXED LOCATION SIGNS
(GROUND MOUNTED SUPPORTS)

US18
HUTCHINSON COUNTY



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (*)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	2600

NOTES:

Road Work Next xx Miles and End Road Work signs will remain in place until pavement marking is complete.

X - Signs will be placed 150' to 200' from intersection. Exact location to be approved by the Engineer.

Construction signs will not obscure existing signs and must be installed a minimum of 100' from an existing sign.

● Loose Gravel signs with advisory speed plaques will be removed from view the same day that the fog seal is applied in the area they represent.

A

G20-1

B

W8-7

W13-1P

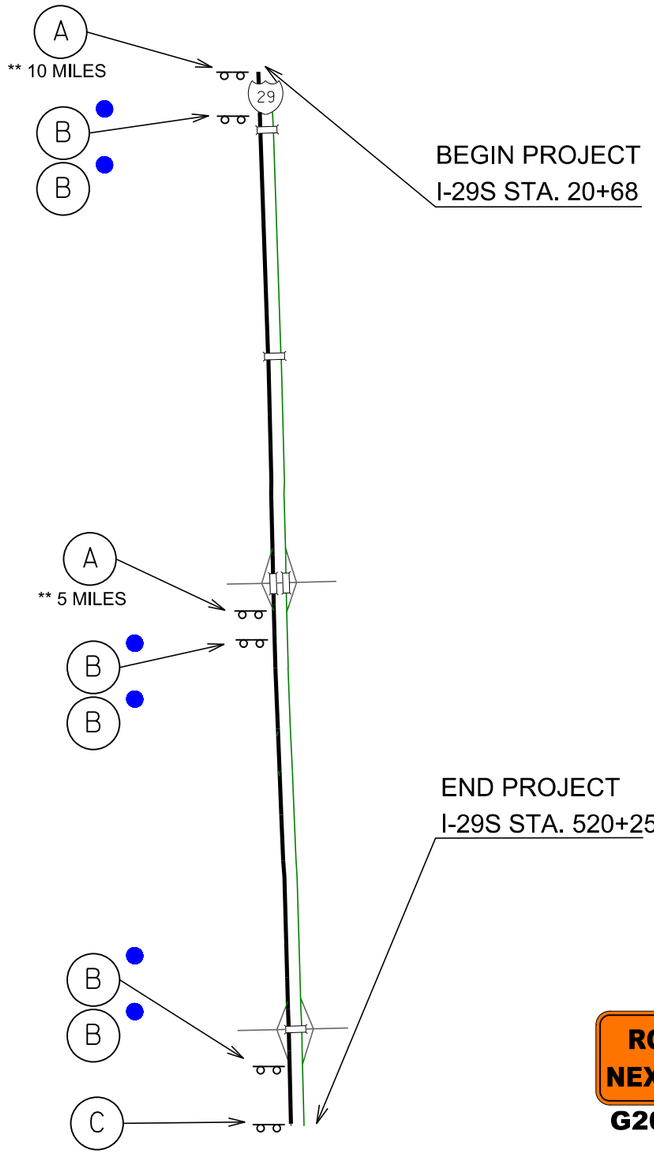
C

G20-2

TRAFFIC CONTROL

FIXED LOCATION SIGNS (GROUND MOUNTED SUPPORTS)

I29S SOUTH SEGMENT UNION COUNTY



Fixed location signs listed in this manner will be installed one sign on each side of the highway

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (*)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	2600

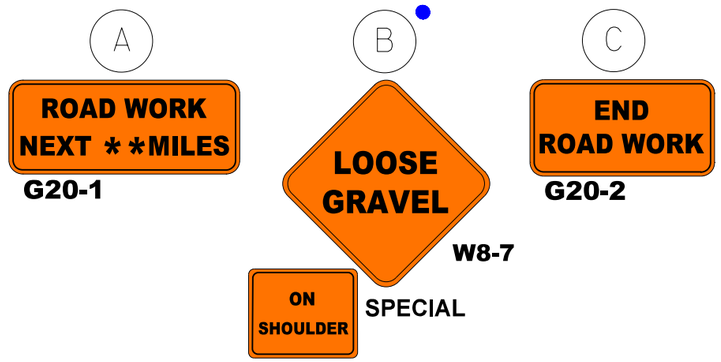
NOTES:

Road Work Next xx Miles and End Road Work signs will remain in place until pavement marking is complete.

X - Signs will be placed 150' to 200' from intersection. Exact location to be approved by the Engineer.

Construction signs will not obscure existing signs and must be installed a minimum of 100' from an existing sign.

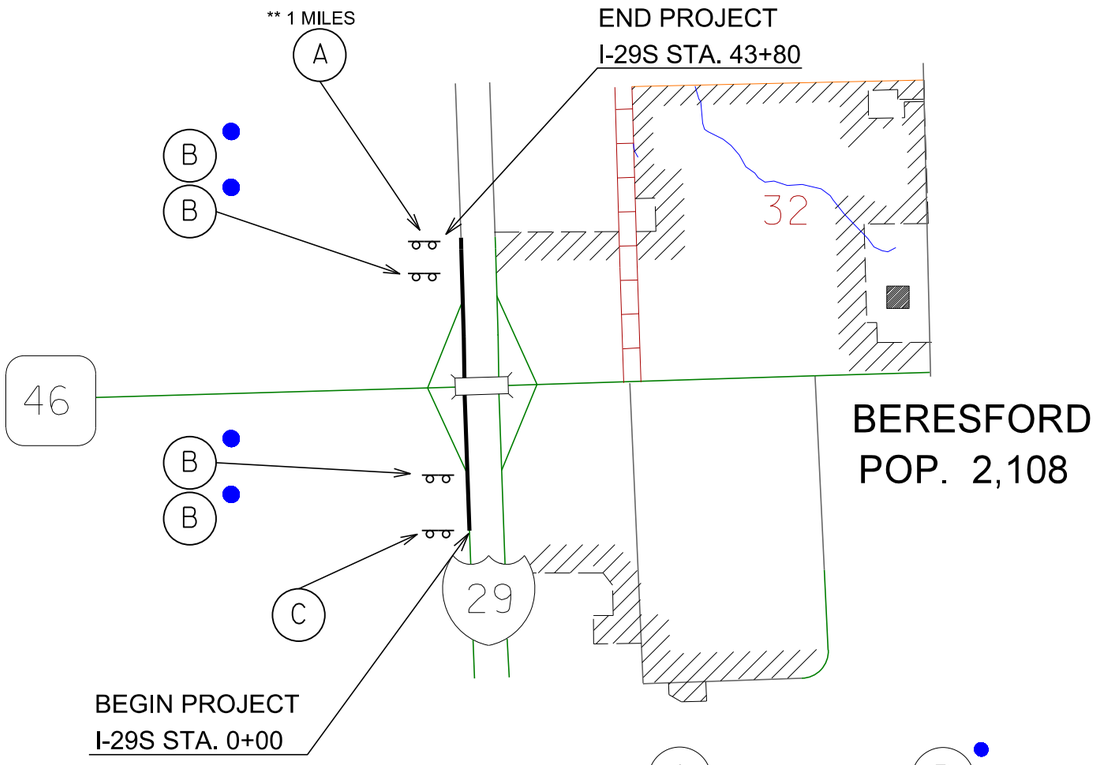
● Loose Gravel signs with advisory speed plaques will be removed from view the same day that the fog seal is applied in the area they represent.



TRAFFIC CONTROL

FIXED LOCATION SIGNS (GROUND MOUNTED SUPPORTS)

I29S NORTH SEGMENT UNION COUNTY



Fixed location signs listed in this manner will be installed one sign on each side of the highway

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (*)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	2600

NOTES:

Road Work Next xx Miles and End Road Work signs will remain in place until pavement marking is complete.

X - Signs will be placed 150' to 200' from intersection. Exact location to be approved by the Engineer.

Construction signs will not obscure existing signs and must be installed a minimum of 100' from an existing sign.

● Loose Gravel signs with advisory speed plaques will be removed from view the same day that the fog seal is applied in the area they represent.

A

G20-1

B

W8-7 SPECIAL

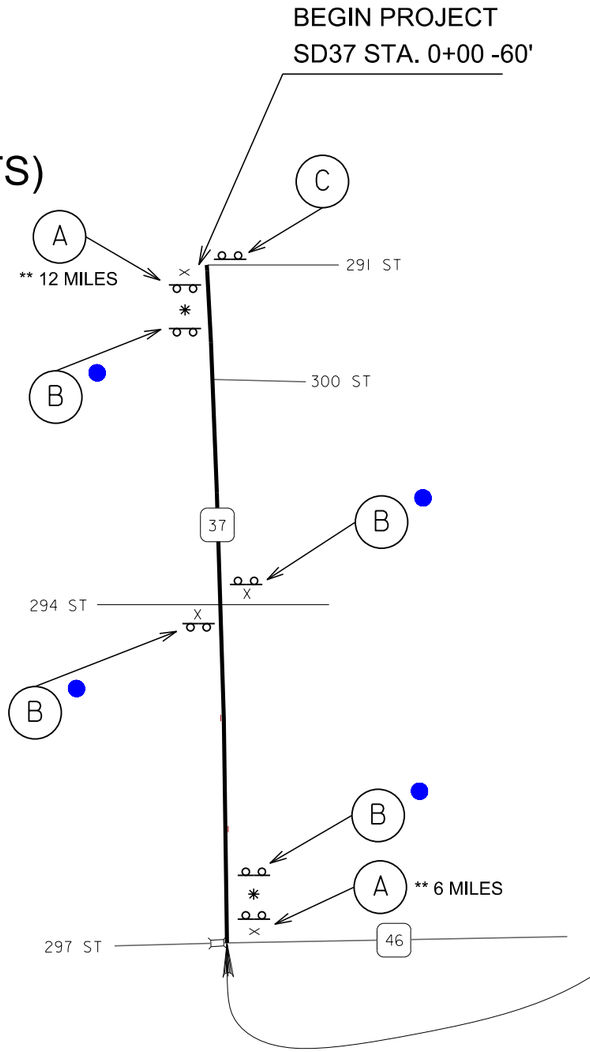
C

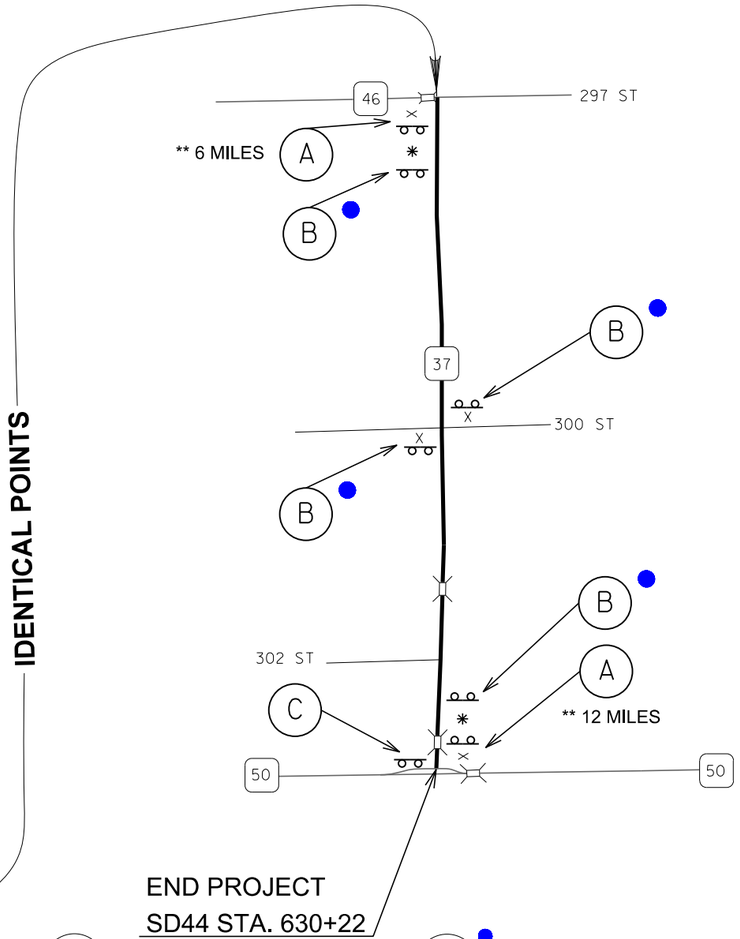
G20-2

TRAFFIC CONTROL

FIXED LOCATION SIGNS (GROUND MOUNTED SUPPORTS)

SD37
BON HOMME COUNTY





Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (*)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	2600

NOTES:

Road Work Next xx Miles and End Road Work signs will remain in place until pavement marking is complete.

X - Signs will be placed 150' to 200' from intersection. Exact location to be approved by the Engineer.

Construction signs will not obscure existing signs and must be installed a minimum of 100' from an existing sign.

● Loose Gravel signs with advisory speed plaques will be removed from view the same day that the fog seal is applied in the area they represent.

A

G20-1

B

W8-7

W13-1P

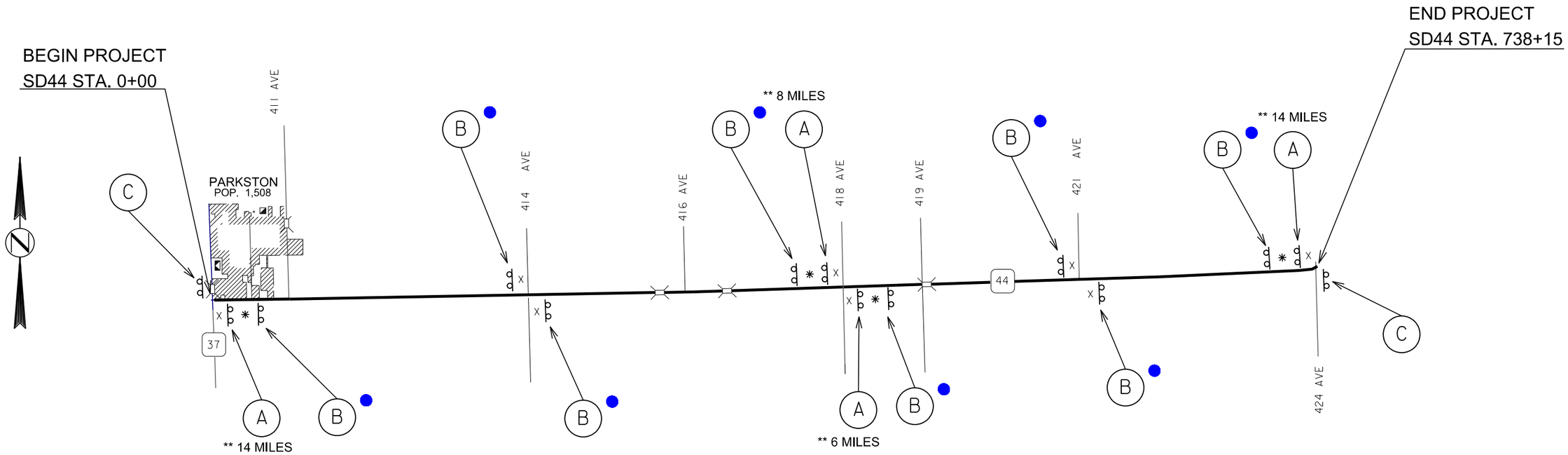
C

G20-2

TRAFFIC CONTROL

FIXED LOCATION SIGNS
(GROUND MOUNTED SUPPORTS)

SD44
HUTCHINSON COUNTY



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (*)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	2600

NOTES:

Road Work Next xx Miles and End Road Work signs will remain in place until pavement marking is complete.

X - Signs will be placed 150' to 200' from intersection. Exact location to be approved by the Engineer.

Construction signs will not obscure existing signs and must be installed a minimum of 100' from an existing sign.

● Loose Gravel signs with advisory speed plaques will be removed from view the same day that the fog seal is applied in the area they represent.

A

G20-1

B

W8-7

W13-1P

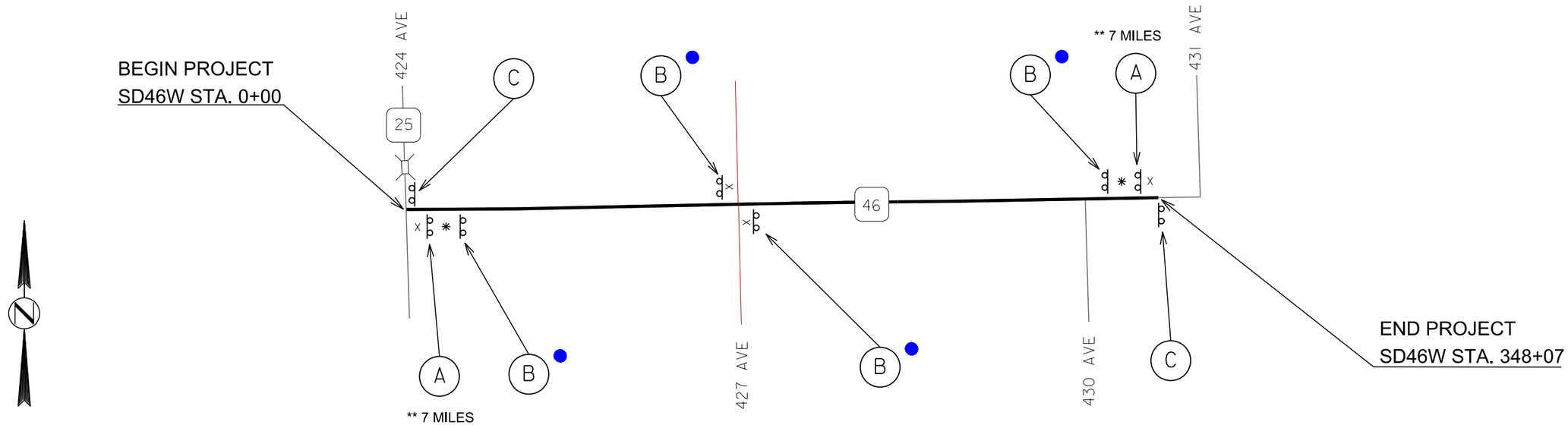
C

G20-2

TRAFFIC CONTROL

FIXED LOCATION SIGNS
(GROUND MOUNTED SUPPORTS)

SD46 WEST SEGMENT
BON HOMME & YANKTON COUNTY



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (*)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	2600

NOTES:

Road Work Next xx Miles and End Road Work signs will remain in place until pavement marking is complete.

X - Signs will be placed 150' to 200' from intersection. Exact location to be approved by the Engineer.

Construction signs will not obscure existing signs and must be installed a minimum of 100' from an existing sign.

● Loose Gravel signs with advisory speed plaques will be removed from view the same day that the fog seal is applied in the area they represent.

A

G20-1

B

W8-7

W13-1P

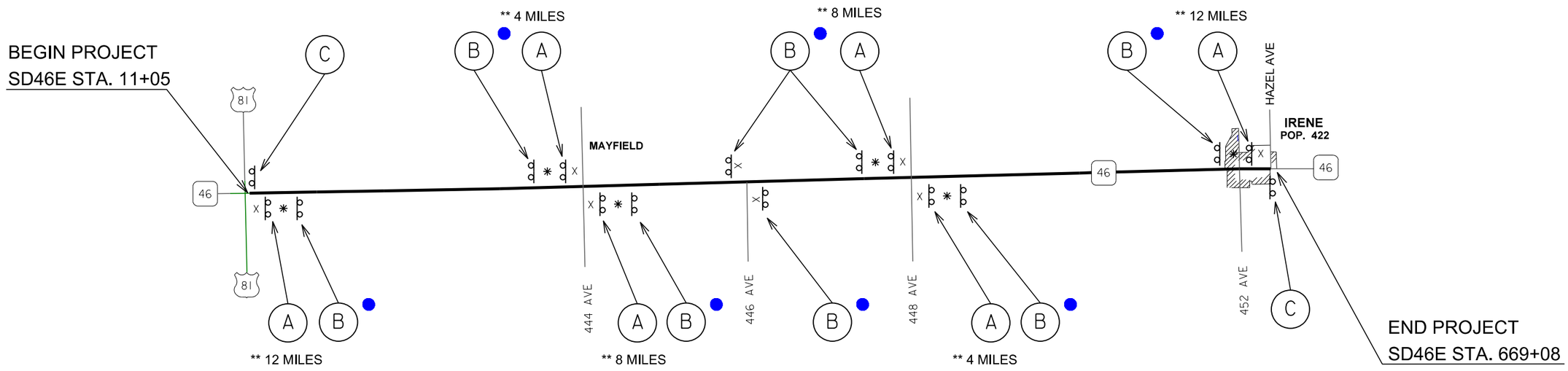
C

G20-2

TRAFFIC CONTROL

FIXED LOCATION SIGNS
(GROUND MOUNTED SUPPORTS)

SD46 EAST SEGMENT
YANKTON, TUNRER, & CLAY COUNTY



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (*)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	2600

NOTES:

Road Work Next xx Miles and End Road Work signs will remain in place until pavement marking is complete.

X - Signs will be placed 150' to 200' from intersection. Exact location to be approved by the Engineer.

Construction signs will not obscure existing signs and must be installed a minimum of 100' from an existing sign.

● Loose Gravel signs with advisory speed plaques will be removed from view the same day that the fog seal is applied in the area they represent.

A

G20-1

B

W8-7

W13-1P

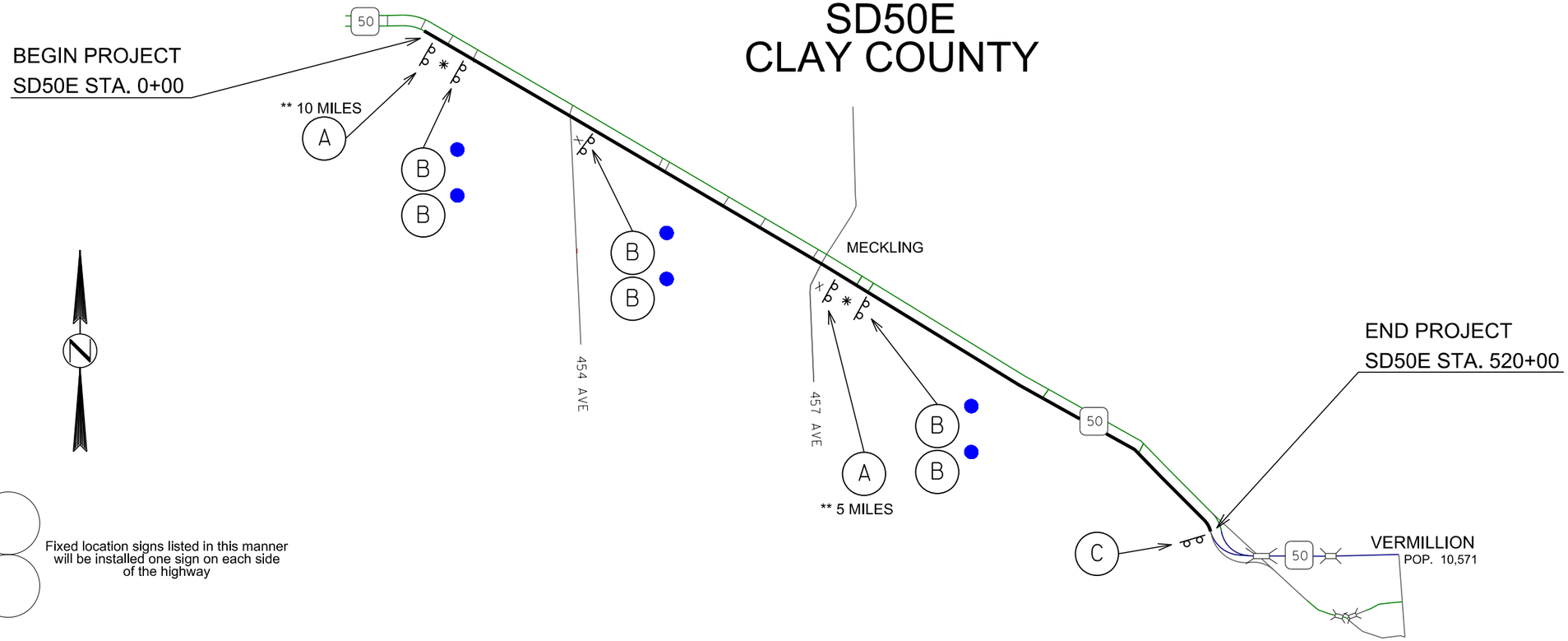
C

G20-2

TRAFFIC CONTROL

FIXED LOCATION SIGNS
(GROUND MOUNTED SUPPORTS)

SD50E
CLAY COUNTY



Fixed location signs listed in this manner will be installed one sign on each side of the highway

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (*)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	2600

NOTES:

Road Work Next xx Miles and End Road Work signs will remain in place until pavement marking is complete.

X - Signs will be placed 150' to 200' from intersection. Exact location to be approved by the Engineer.

Construction signs will not obscure existing signs and must be installed a minimum of 100' from an existing sign.

● Loose Gravel signs with advisory speed plaques will be removed from view the same day that the fog seal is applied in the area they represent.

A

G20-1

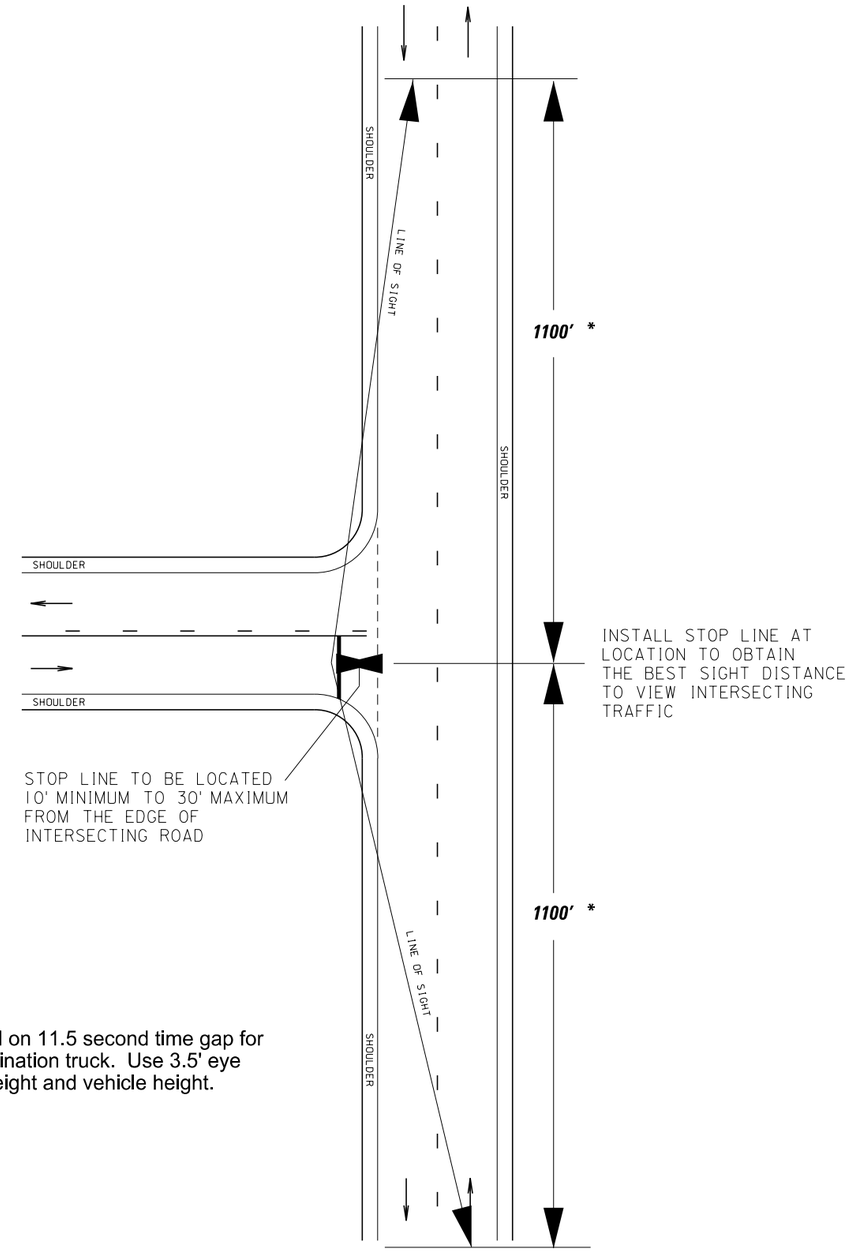
B

W8-7

W13-1P

C

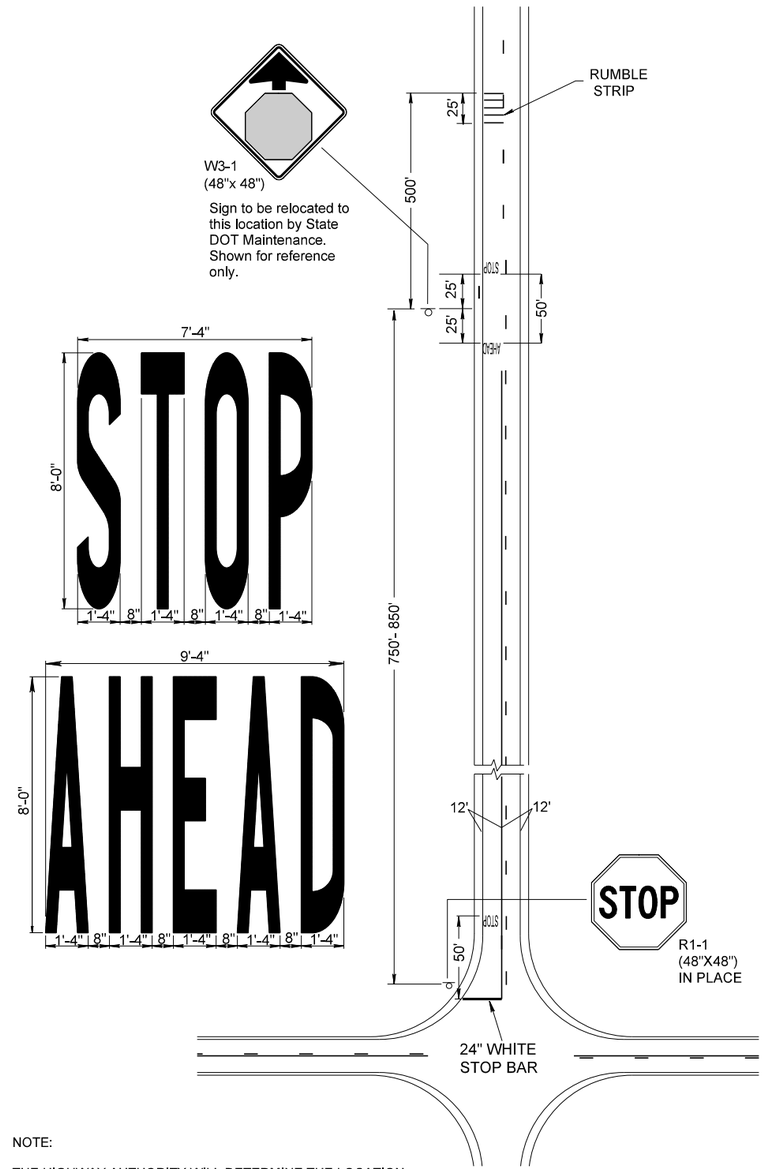
G20-2



* - Based on 11.5 second time gap for combination truck. Use 3.5' eye height and vehicle height.

STOP LINE PAVEMENT MARKING INSTALLATION

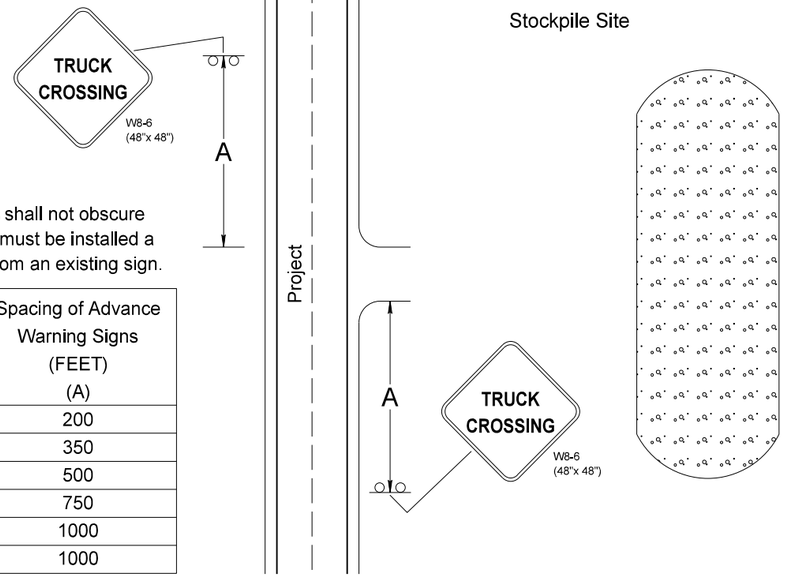
INTERSECTION APPROACH PAVEMENT MARKING (Typical)



NOTE:

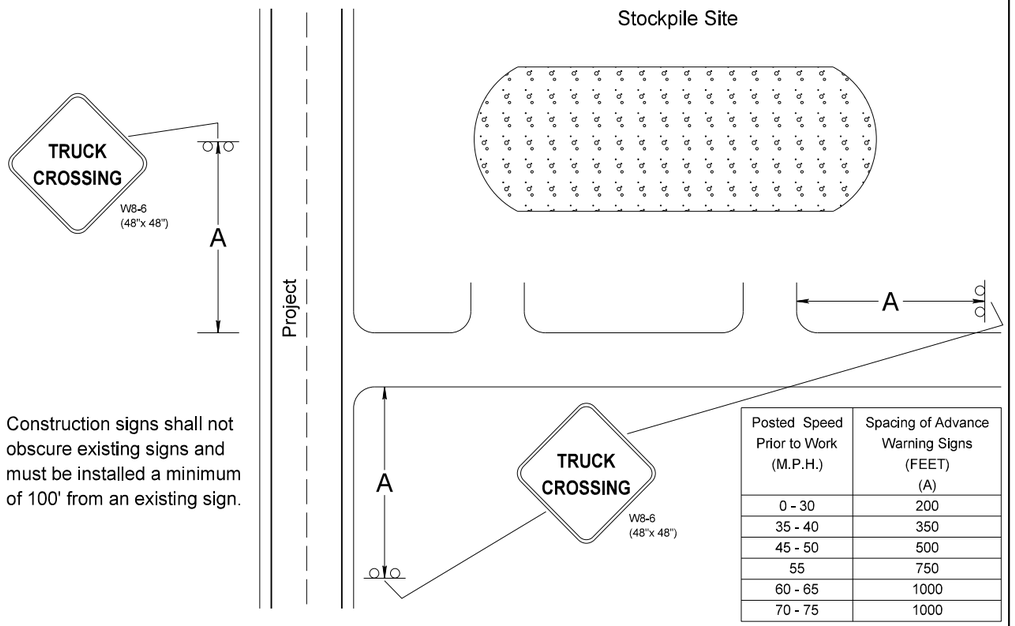
THE HIGHWAY AUTHORITY WILL DETERMINE THE LOCATION OF THE STOP LINE.

Revised 11-19-09, SJ



Construction signs shall not obscure existing signs and must be installed a minimum of 100' from an existing sign.

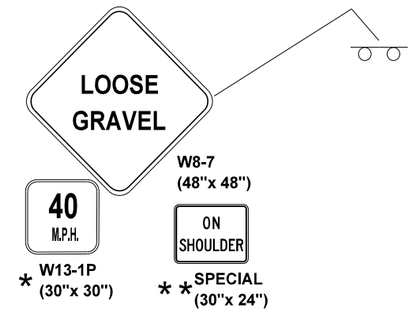
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (FEET) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
75	1000

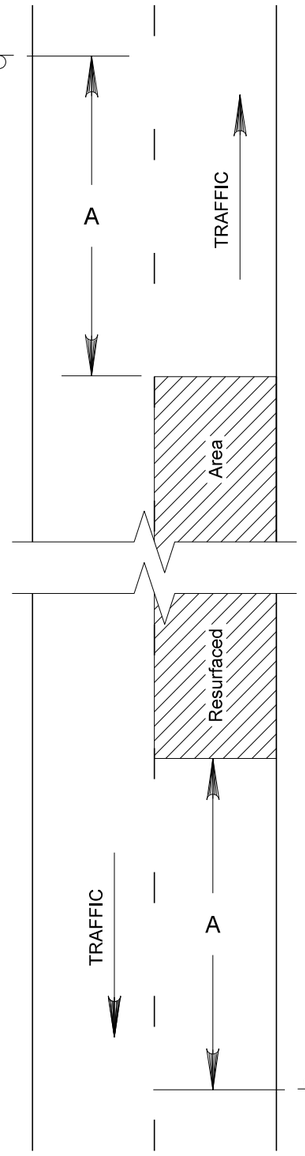


Construction signs shall not obscure existing signs and must be installed a minimum of 100' from an existing sign.

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (FEET) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 65	1000
70 - 75	1000

GUIDES FOR TRAFFIC CONTROL DEVICES TRUCK CROSSING SIGN INSTALLATION





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

* The W13-1P plaque shall be used when the asphalt surface treatment is applied to the mainline.

** The special plaque shall be used when the asphalt surface treatment is applied only to the shoulders.

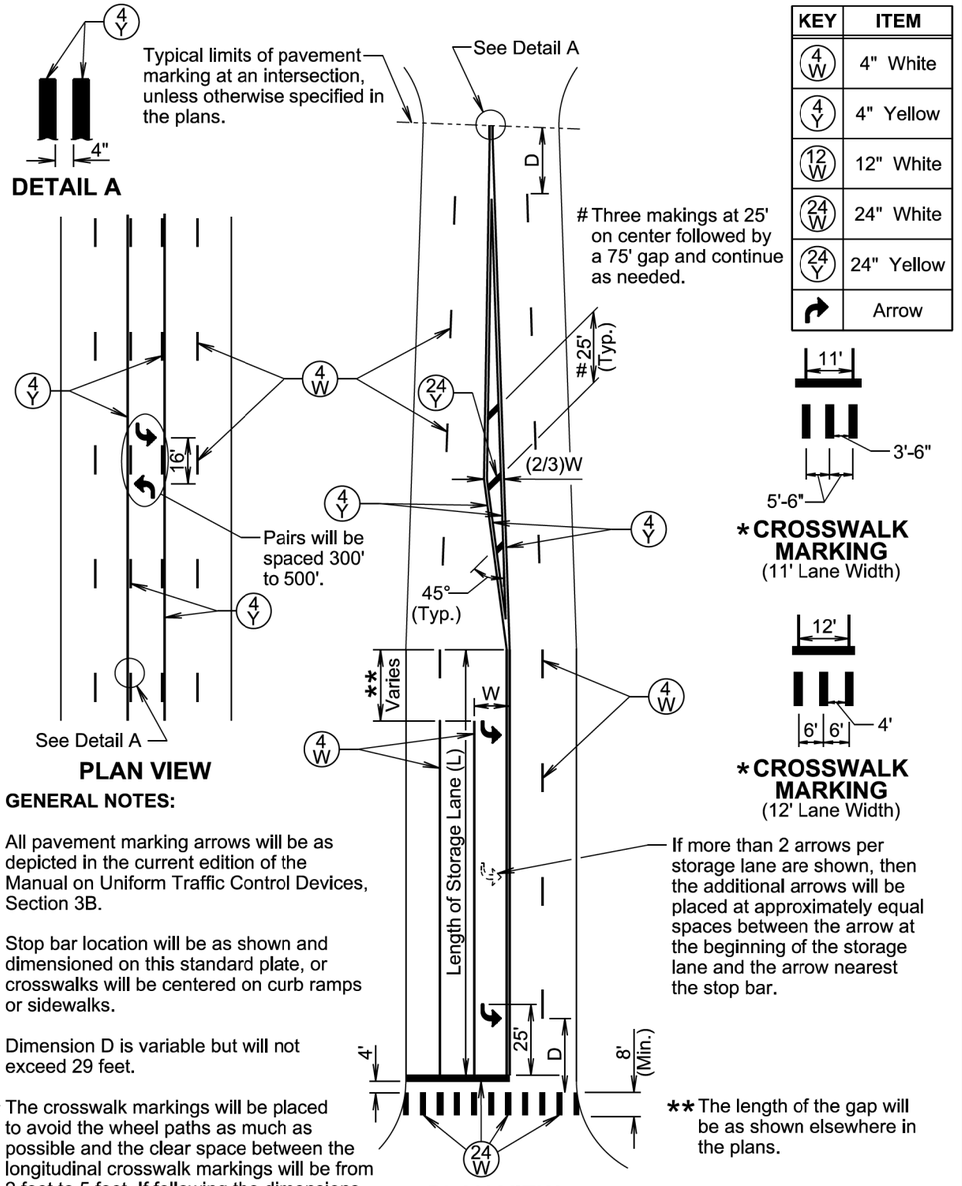
NOTES:

The Contractor shall provide an additional Flagger at each urban intersection to control side-street traffic whenever the work activities create a hazard or whenever traffic must be restricted from the work area (fresh seal).

Install additional W8-7, LOOSE GRAVEL, signs at 4 mile intervals throughout the entire length of the loose aggregate area and at affected major intersections, edge of towns, etc.

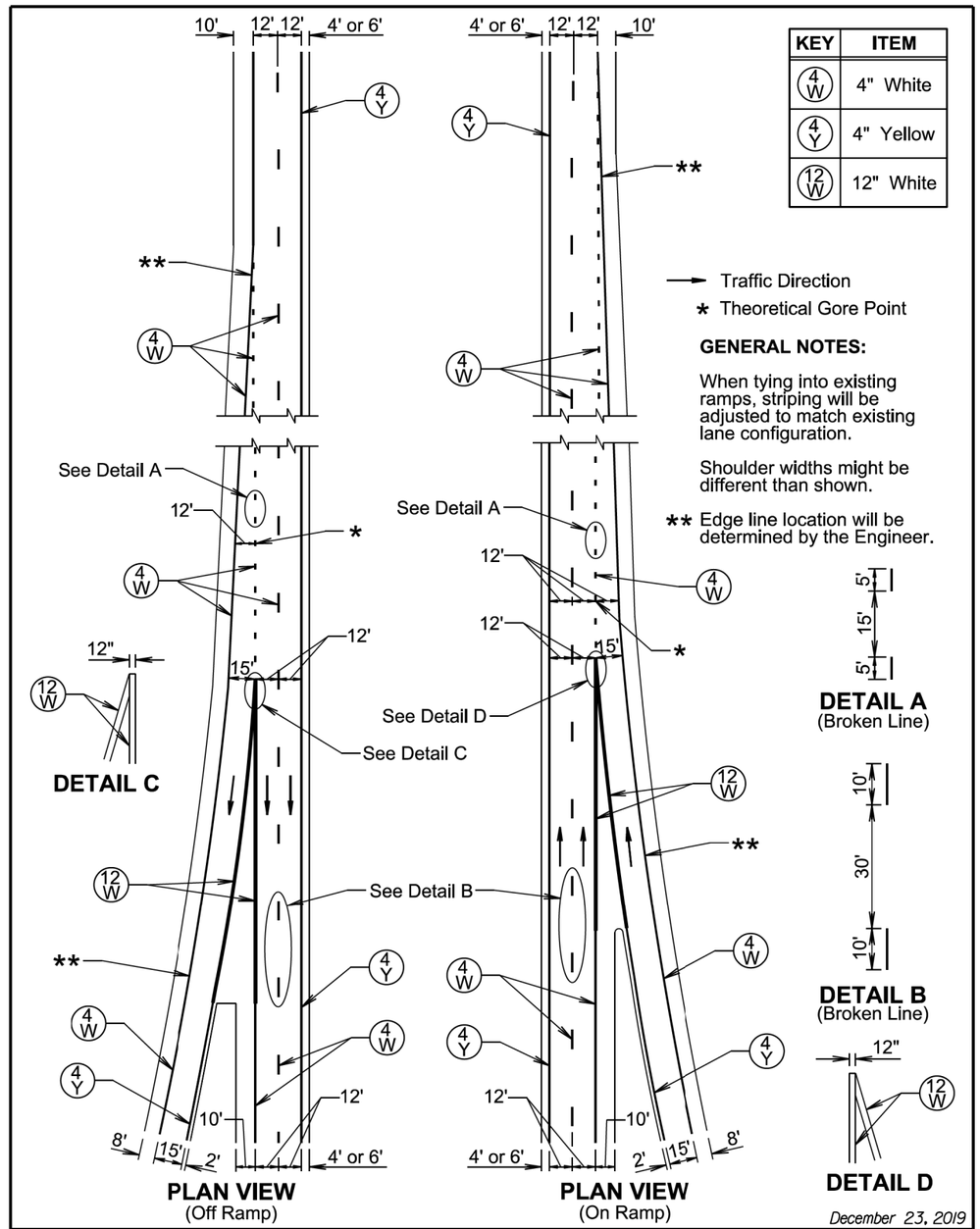
GUIDES FOR TRAFFIC CONTROL DEVICES

Typical Application - Traffic Control Devices to be used on an undivided highway, Asphalt Surface Treatment, when operations have created a driving surface of loose aggregate.



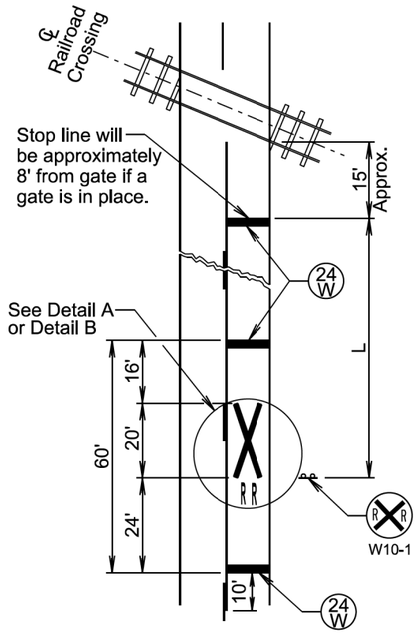
March 31, 2024

Published Date: 2025	SDDOT	PAVEMENT MARKINGS FOR ADJACENT INTERSECTIONS AND CENTER TURN LANE	PLATE NUMBER 633.01
			Sheet 1 of 1



December 23, 2019

Published Date: 2025	SDDOT	PAVEMENT MARKING LAYOUT FOR TAPERED INTERSTATE RAMPS	PLATE NUMBER 633.05
			Sheet 1 of 1



PLAN VIEW

KEY	ITEM
24 W	24" White
R R	White

Posted Speed Limit (M.P.H.)	L (Ft.)
≤ 30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550

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.

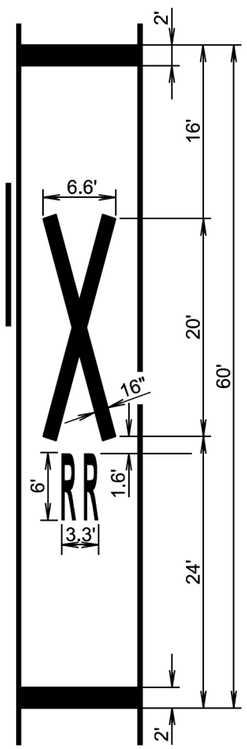
On multi-lane roads the transverse bands will extend across all approach lanes and individual RXR symbols will be placed in each approach lane.

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

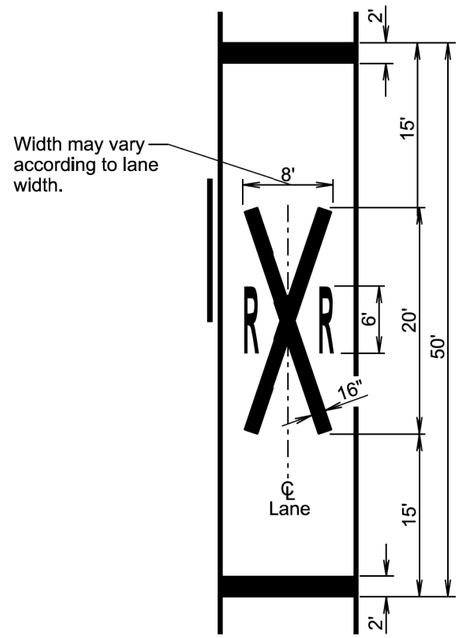
All costs for furnishing and installing the markings, materials, labor, and necessary equipment for the railroad crossing makings will be paid for at the contract unit price per gallon or per each for the type of marking material specified in the plans.

November 19, 2020

Published Date: 2025	SDDOT	PAVEMENT MARKINGS AT RAILROAD CROSSING	PLATE NUMBER 633.10
			Sheet 1 of 2



DETAIL A



DETAIL B

November 19, 2020

Published Date: 2025	SDDOT	PAVEMENT MARKINGS AT RAILROAD CROSSING	PLATE NUMBER 633.10
			Sheet 2 of 2

* 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.

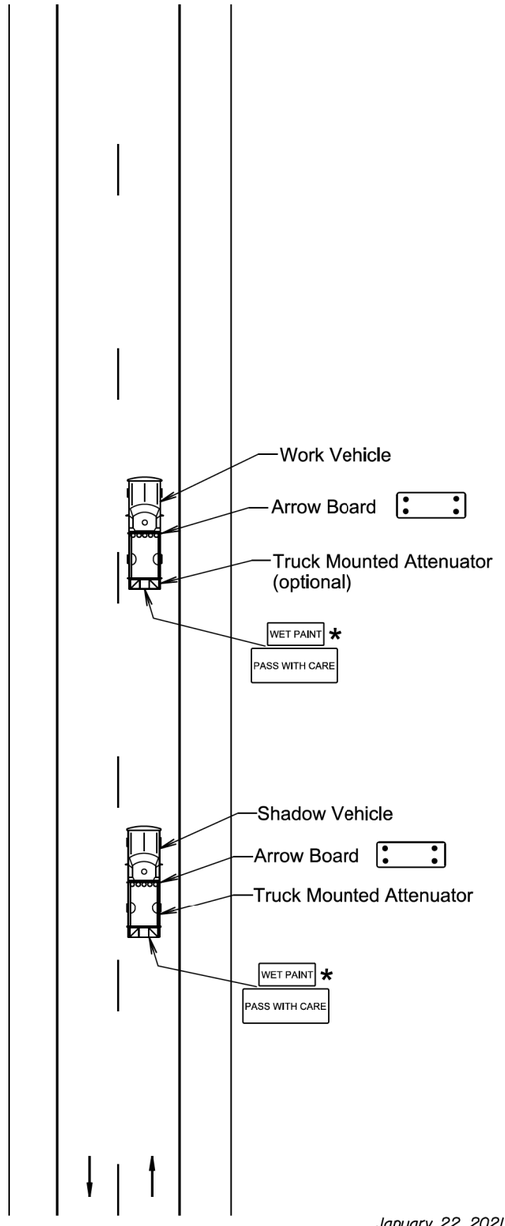
Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, flags, signs, or arrow boards.

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: 2025

SDDOT

MOBILE OPERATIONS ON 2-LANE ROAD

PLATE NUMBER 634.06

Sheet 1 of 1

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

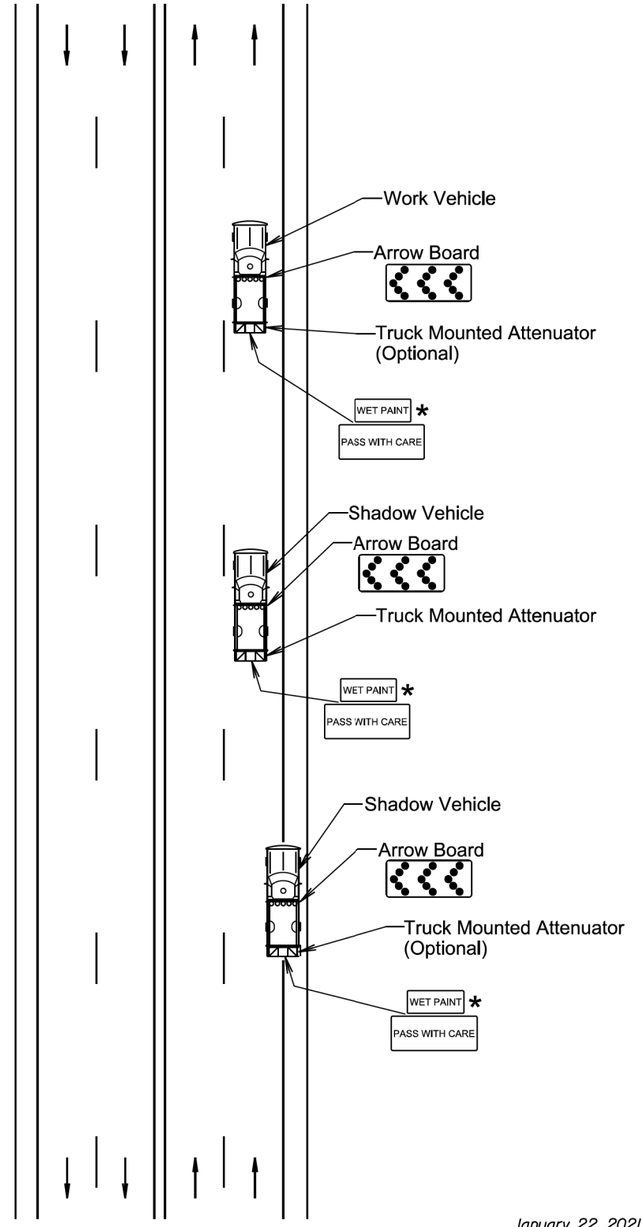
Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

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

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

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

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



January 22, 2021

Published Date: 2025

SDDOT

MOBILE OPERATIONS ON MULTI-LANE HIGHWAYS

PLATE NUMBER 634.08

Sheet 1 of 1

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

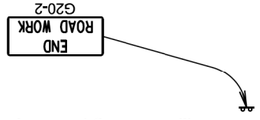
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

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.

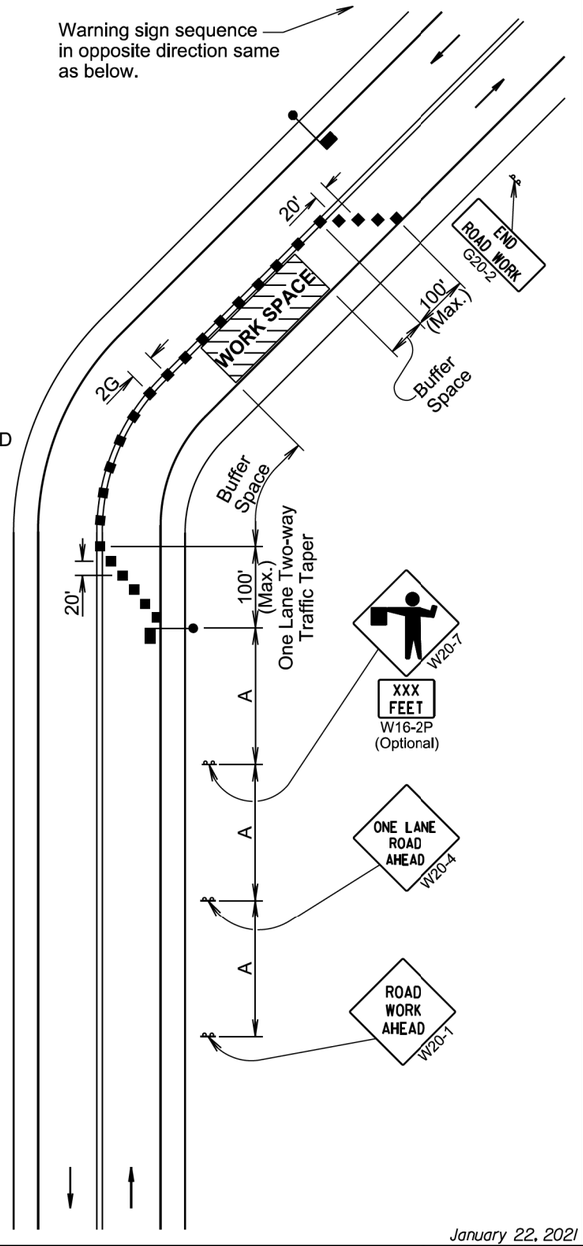
Channelizing devices are not required along the centerline adjacent to work area when pilot cars are utilized for escorting traffic through the work area.



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: 2025	SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
			Sheet 1 of 1

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

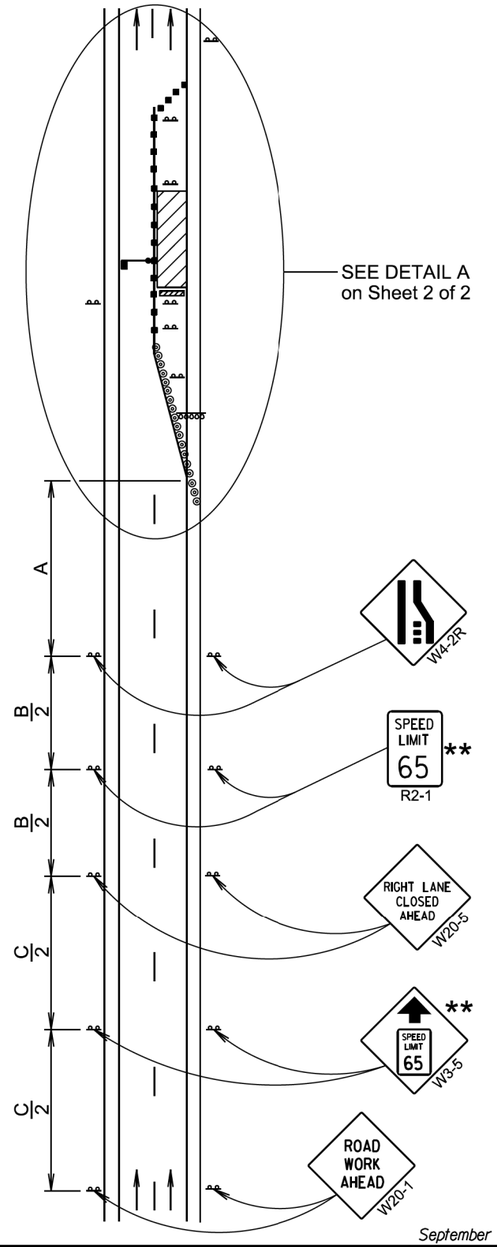
** Speed appropriate for location.

◉ Reflectorized Drum

■ Channelizing Device

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

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



September 22, 2021

Published Date: 2025	SDDOT	WORK ZONE SPEED REDUCTION FOR INTERSTATE AND HIGH SPEED MULTI-LANE HIGHWAYS	PLATE NUMBER 634.63
			Sheet 1 of 2

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

* Spacing is 40' for 42" cones.

** Speed appropriate for location.

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

Flagger (As Necessary)

◎ Reflectorized Drum

■ Channelizing Device

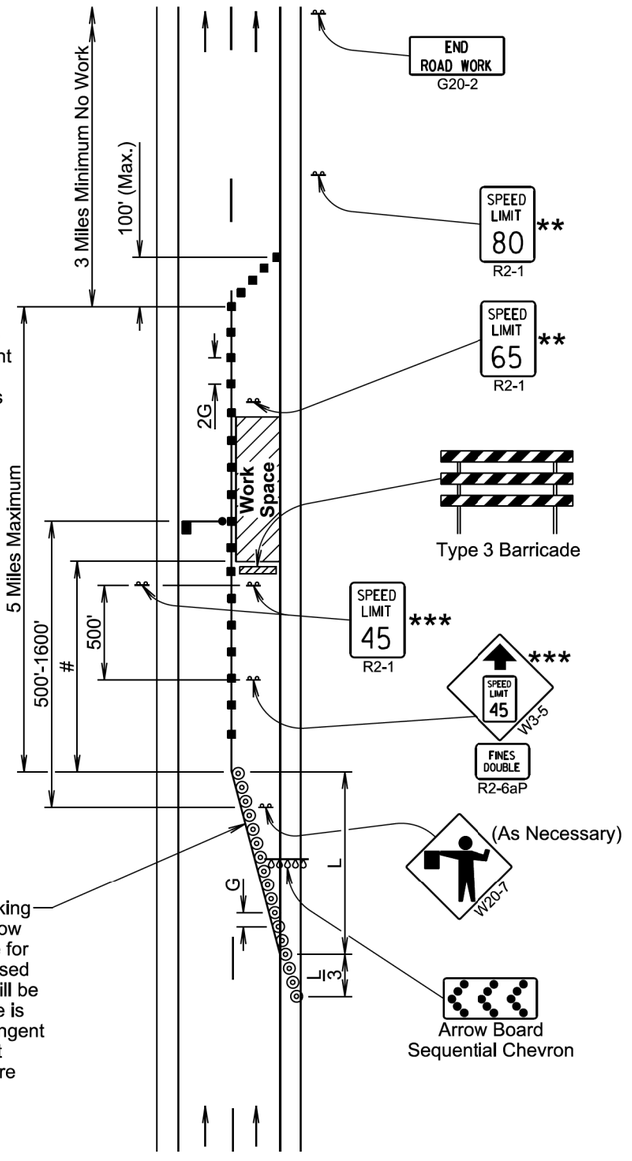
The Work Space will be a minimum of 500' from the end of the taper.

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

The channelizing devices will be 42" cones or drums.

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

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



DETAIL A

September 22, 2021

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

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

4W 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.

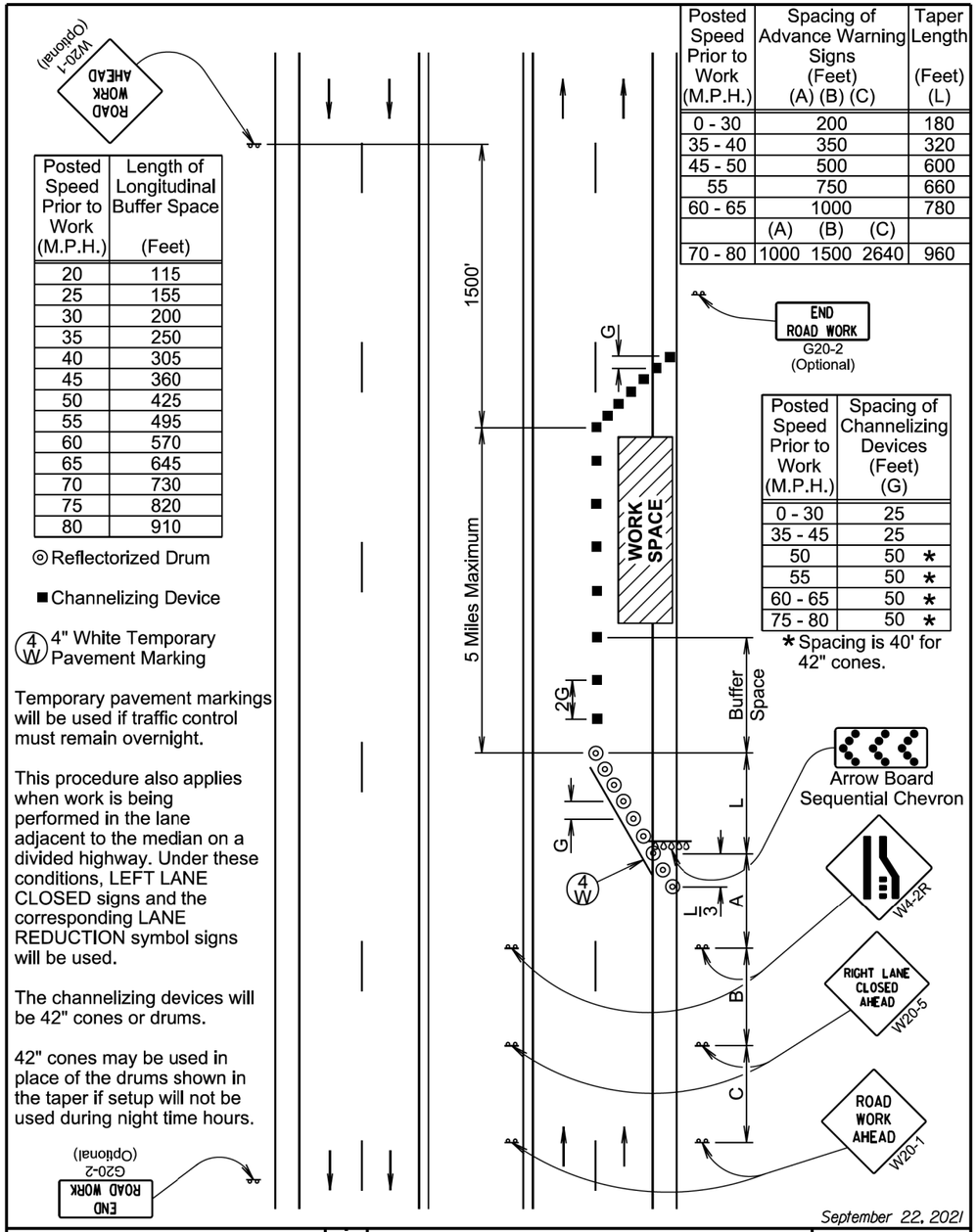
The channelizing devices will be 42" cones or drums.

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

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

Published Date: 2025	SDDOT	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) (A) (B) (C)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780
	(A) (B) (C)	
70 - 80	1000 1500 2640	1125

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 - 80	50 *

* Spacing is 40' for 42" cones.

◎ Reflectorized Drum

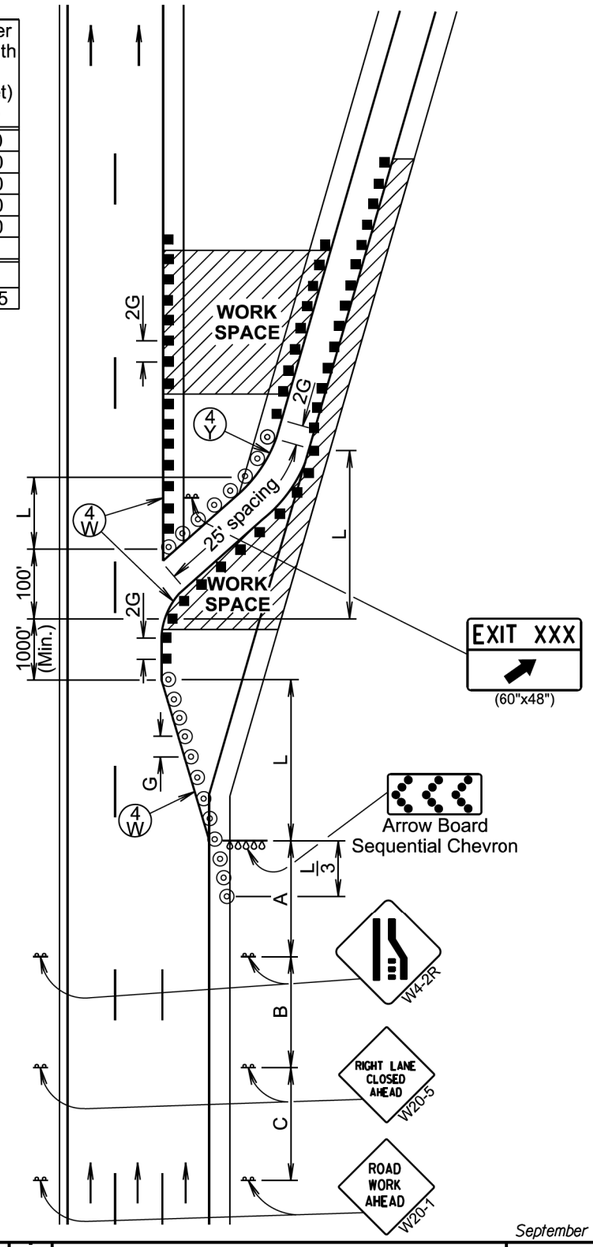
■ Channelizing Device

(4W) 4" White Temporary Pavement Marking

(4Y) 4" Yellow Temporary Pavement Marking

The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

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



September 22, 2021

Published Date: 2025	SDDOT	WORK IN VICINITY OF EXIT RAMP	PLATE NUMBER 634.68 Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A) (B) (C)	Taper Length (Feet) (L)
0 - 30	200	180
35 - 40	350	320
45 - 50	500	600
55	750	660
60 - 65	1000	780
	(A) (B) (C)	
70 - 80	1000 1500 2640	1125

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 - 80	50 *

* Spacing is 40' for 42" cones.

◎ Reflectorized Drum

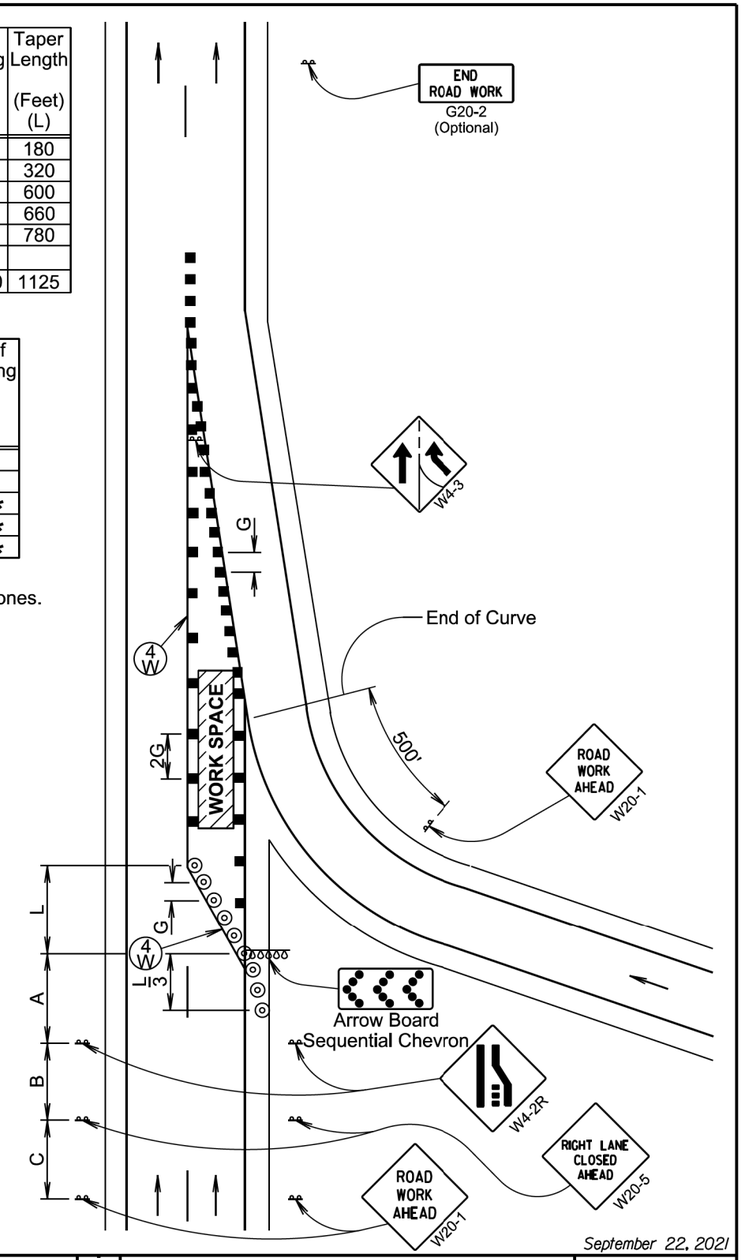
■ Channelizing Device

(4W) 4" White Temporary Pavement Marking

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

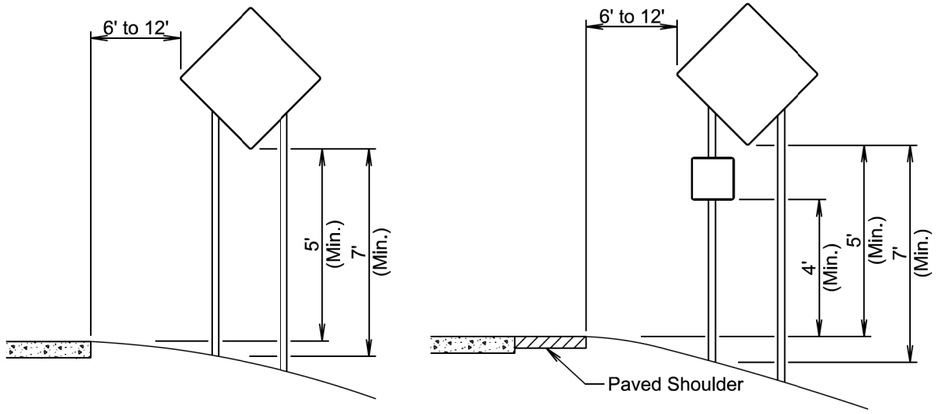
The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

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



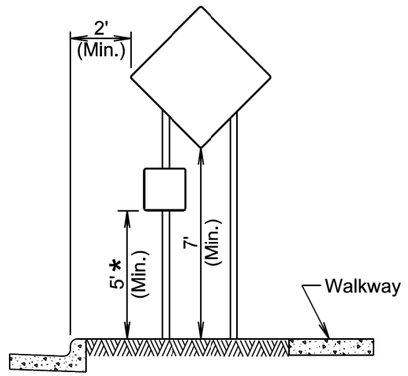
September 22, 2021

Published Date: 2025	SDDOT	WORK IN VICINITY OF ENTRANCE RAMP	PLATE NUMBER 634.70 Sheet 1 of 1

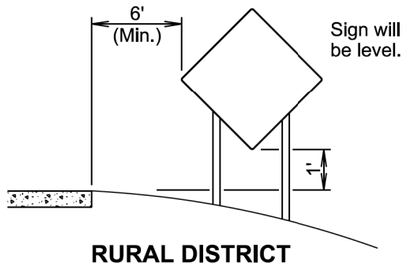


RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

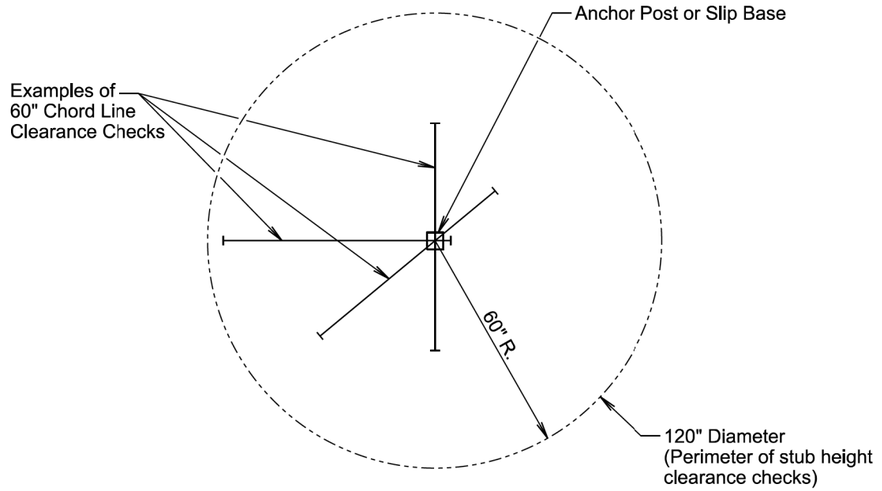


RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

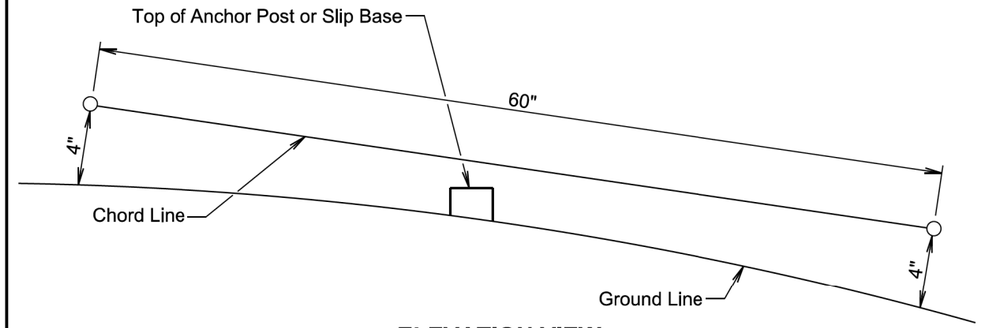
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2025	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

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

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

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

January 22, 2021

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