

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168), 0009-191 & 0009-192	1	41

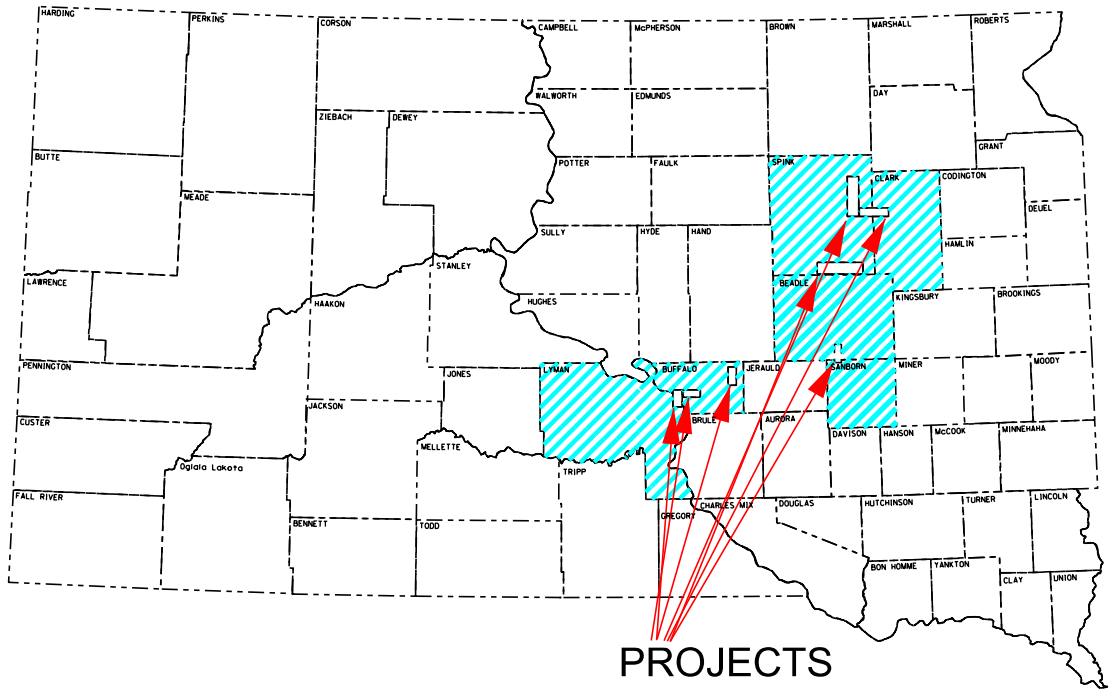
Plotting Date: 01/30/2024

PLANS FOR PROPOSED
PROJECT NH-P 0013(168),
0009-191 & 0009-192
SD HWYS 28, 34, 37, 45, 47, 249
& US HWY 14 & 212
BEADLE, BUFFALO, CLARK, LYMAN, SANBORN
& SPINK COUNTIES
Asphalt Surface Treatment
PCN 0970, I7DR & I7DT

Index of Sheets

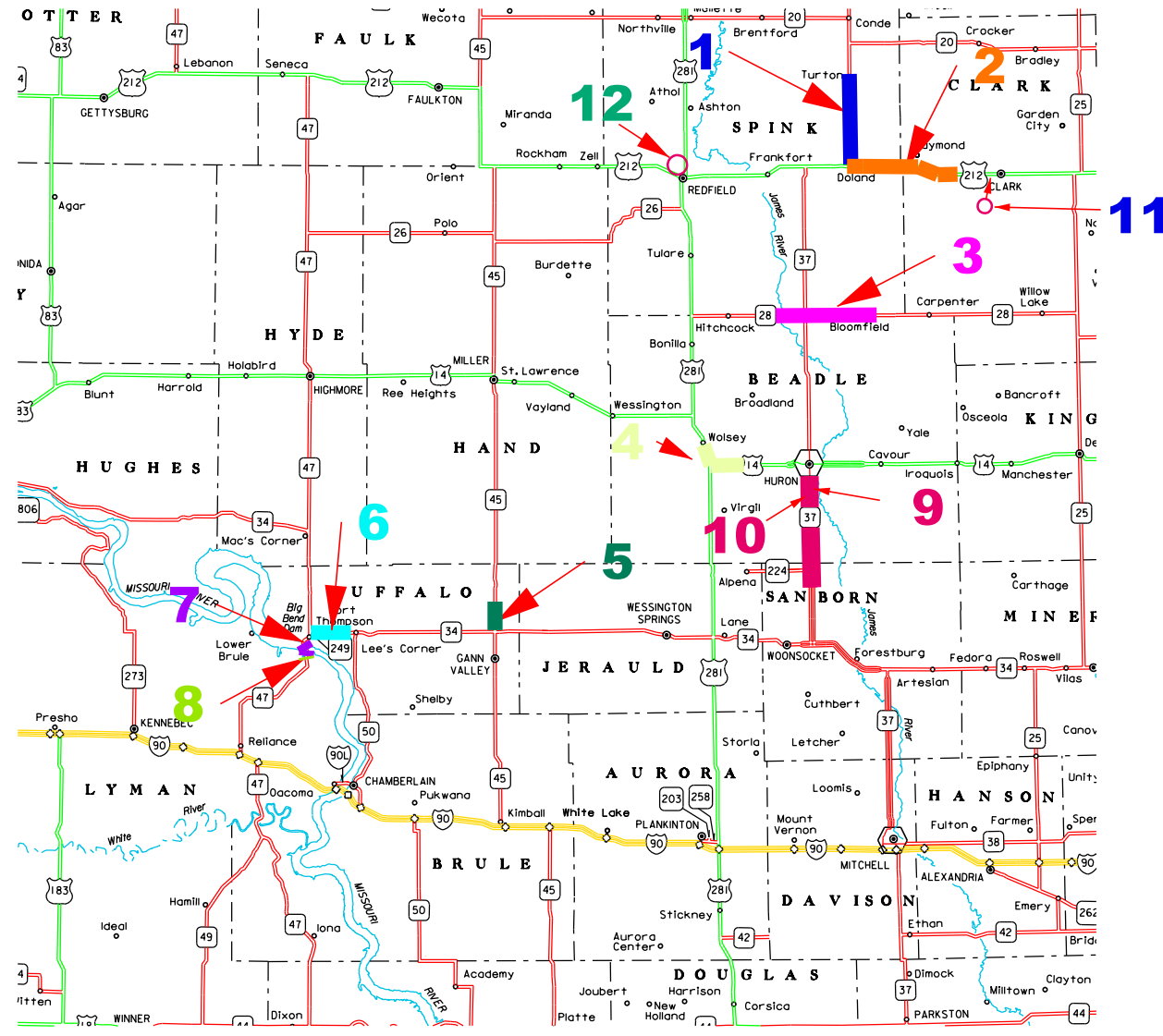
- Sheet: 1-12 Title Sheet & Layout Map
- Sheet: 13-14 Estimate of Quantities and Environmental Commitments
- Sheet: 15-22 Plan Notes
- Sheet: 23-29 Traffic Control
- Sheet: 30-35 Standard Plates
- Sheet: 36-39 Itemized List for Traffic Control
- Sheet: 40-41 Typical Pavement Markings

PLOT SCALE - 1"=1000'



PROJECTS

- SEGMENT 1 - SD 37 - MRM 169.40 + 0.00 TO MRM 180.43 + 0.000
- SEGMENT 2 - US 212 - MRM 327.00 + 0.256 TO MRM 338.00 + 0.044
- SEGMENT 3 - SD 28 - MRM 278.01 + 0.007 TO MRM 295.98 + 0.00
- SEGMENT 4 - US 14 - MRM 331.00 + 0.198 TO MRM 338.00 + 0.515
- SEGMENT 5 - SD 45 - MRM 81.10 + 0.00 TO MRM 88.12 + 0.008
- SEGMENT 6 - SD 34 - MRM 269.34 + 0.00 TO MRM 274.00 + 0.754
- SEGMENT 7 - SD 47 - MRM 87.62 + 0.00 TO MRM 89.30 + 0.000
- SEGMENT 8 - SD 47 - MRM 87.00 + 0.325 TO MRM 87.00 + 0.480
- SEGMENT 9 - SD 37 N - MRM 113.00 + 0.906 TO MRM 124.70 + 0.00
- SEGMENT 10 - SD 37 S - MRM 113.00 + 0.946 TO MRM 124.70 + 0.00
- SEGMENT 11 - CLARK DOT MAINTENANCE YARD: 8821 SQYD
- SEGMENT 12 - REDFIELD DOT MAINTENANCE YARD: 11545 SQYD



STORM WATER PERMIT
(None Required)

8

April 4, 2024

PLOTTED FROM - TRHJINT04

PLOT NAME - 1

FILE - ... \DESIGN PLANS\TITLE.DGN

SD 37 SEGMENT #1

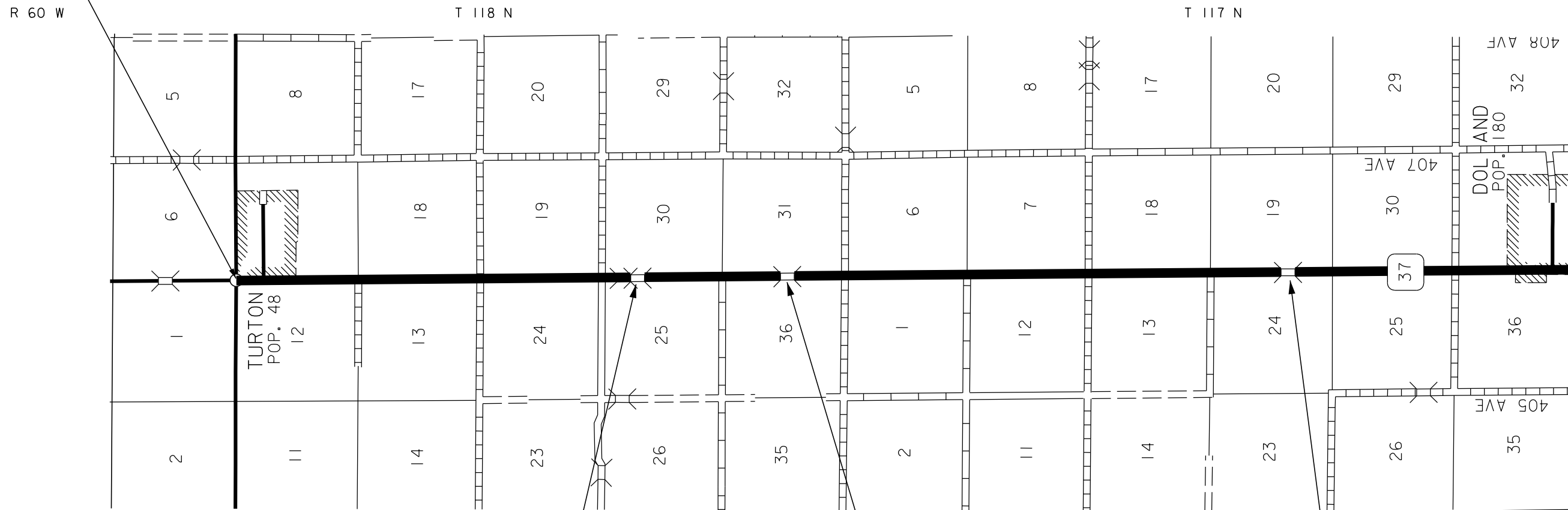
SPINK COUNTY

LENGTH: 11.041 MILES



**SEGMENT #1
BEGIN PROJECT
SD 37
MRM 180.43 +0.000
Sta. 0+00.00
Mileage 121.466**

**SEGMENT #1
END PROJECT
SD 37
MRM 169.40 +0.000
Sta. 582+96.48
Mileage 110.425**



Str. 58-300-163
Cont. Concrete Bridge
140' = 0.027 Mile
MRM 177.29

Str. 58-300-176
Cont. Concrete Bridge
67' = 0.013 Mile
MRM 175.86

Str. 58-300-217
Cont. Concrete Bridge
92' = 0.017 Mile
MRM 171.77

DESIGN DESIGNATION

AADT (2022)	485
AADT (2042)	660
DHV	73
D	50%
DHV T%	19.6%
AADT T%	43.1%
V	65 mph

STORM WATER PERMIT
(None Required)

GROSS LENGTH	58296.48 FEET	11.041 MILES
LENGTH OF EXCEPTIONS	299.0 FEET	0.057 MILES
NET LENGTH	57995.52 FEET	10.984 MILES

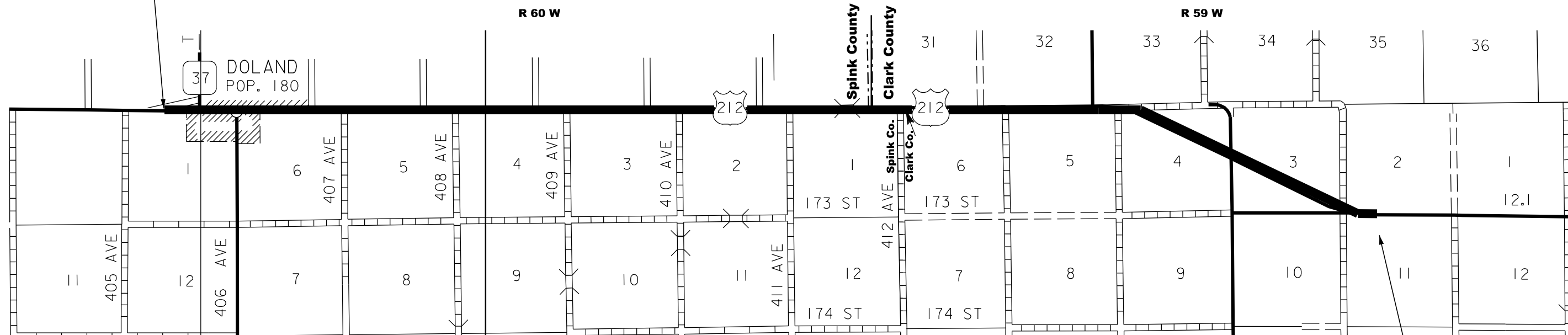
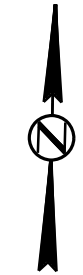
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168). 0009-191& 0009-192		
Plotting Date: 01/25/2024			

US 212 SEGMENT #2

CLARK & SPINK COUNTIES

LENGTH: 10.775 MILES

**SEGMENT #2
BEGIN PROJECT
US 212
MRM 327.00 +0.256
Sta. 0+00.00
Mileage 326.418**



**SEGMENT #2
END PROJECT
US 212
MRM 338.00 +0.044
Sta. 568+92.00
Mileage 337.193**

DESIGN DESIGNATION

AADT (2022)	1716
AADT (2042)	2388
DHV	265
D	50%
DHV T%	11.5%
AADT T%	25.2%
V	65 mph

	TOTAL LENGTH	
GROSS LENGTH	56892.0 FEET	10.775 MILES
LENGTH OF EXCEPTIONS	0.0 FEET	0.0 MILES
NET LENGTH	56892.0 FEET	10.775 MILES

STORM WATER PERMIT
(None Required)

PLOT SCALE - 1:1000

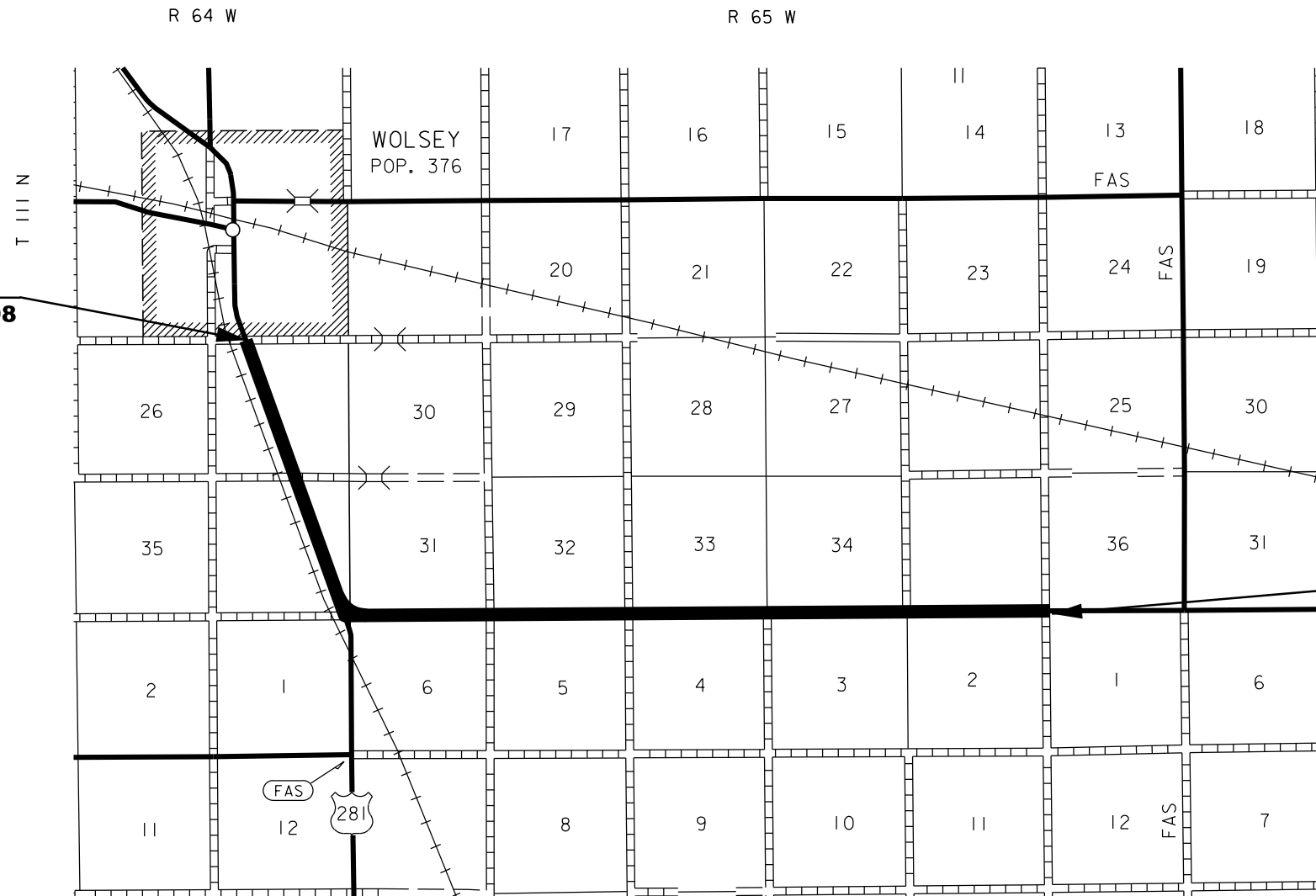
PLOTTED FROM - TRHJINT04

PLOT NAME - 1

FILE - ... \SECTION 2 US 212.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168). 0009-191 & 0009-192	5	41
Plotting Date: 01/25/2024			

US 14 SEGMENT #4 BEADLE COUNTY LENGTH 7.304 MILES



BEGIN PROJECT
MRM 331.00 +0.198
Sta. 0+00.00
Mileage 211.769

END PROJECT
MRM 338.00+0.515
Sta. 385+65.1
Mileage 219.073

DESIGN DESIGNATION

ADT (2022)	3052
ADT (2042)	4563
DHV	945
D	50%
T DHV	5.9%
T ADT	13.1%
V	65 mph

STORM WATER PERMIT
 (None Required)

GROSS LENGTH	38565.1 FEET	7.304 MILES
LENGTH OF EXCEPTIONS	0.0 FEET	0.0 MILES
NET LENGTH	38565.1 FEET	7.304 MILES

PLOT SCALE - 1:1000

PLOTTED FROM - TRHJINT04

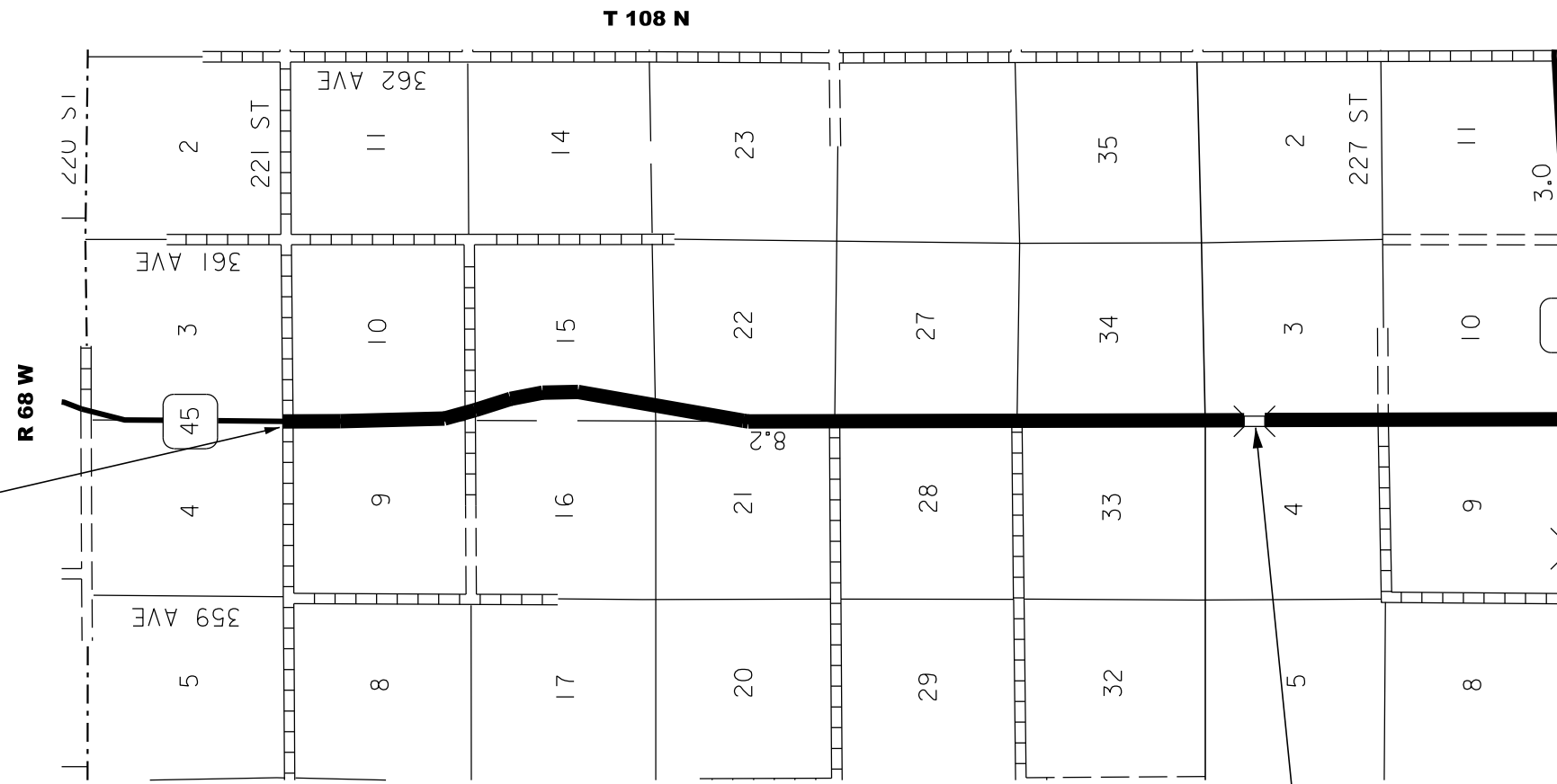
PLOT NAME - 1

FILE - ... \SECTION 4 US 14.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168), 0009-191 & 0009-192		
Plotting Date: 01/25/2024			

SD 45 SEGMENT #5 BUFFALO COUNTY

LENGTH: 7.148 MILES



**SEGMENT #5
END PROJECT
SD 45
MRM 88.12 +0.008
Sta. 377+41.44
Mileage 56.075**

**SEGMENT #5
BEGIN PROJECT
SD 45
MRM 81.10 +0.000
Sta. 0+00.00
Mileage 48.927**

**Str. 09-290-063
Cont. Concrete Bridge
54' = 0.010 Mile
MRM 82.77**

DESIGN DESIGNATION

AADT (2022)	502
AADT (2042)	770
DHV	89
D	51%
DHV T%	12.2%
AAADT T%	26.9%
V	65 mph

STORM WATER PERMIT

(None Required)

GROSS LENGTH	37741.44 FEET	7.148 MILES
LENGTH OF EXCEPTIONS	54.0 FEET	0.010 MILES
NET LENGTH	37687.44 FEET	7.138 MILES

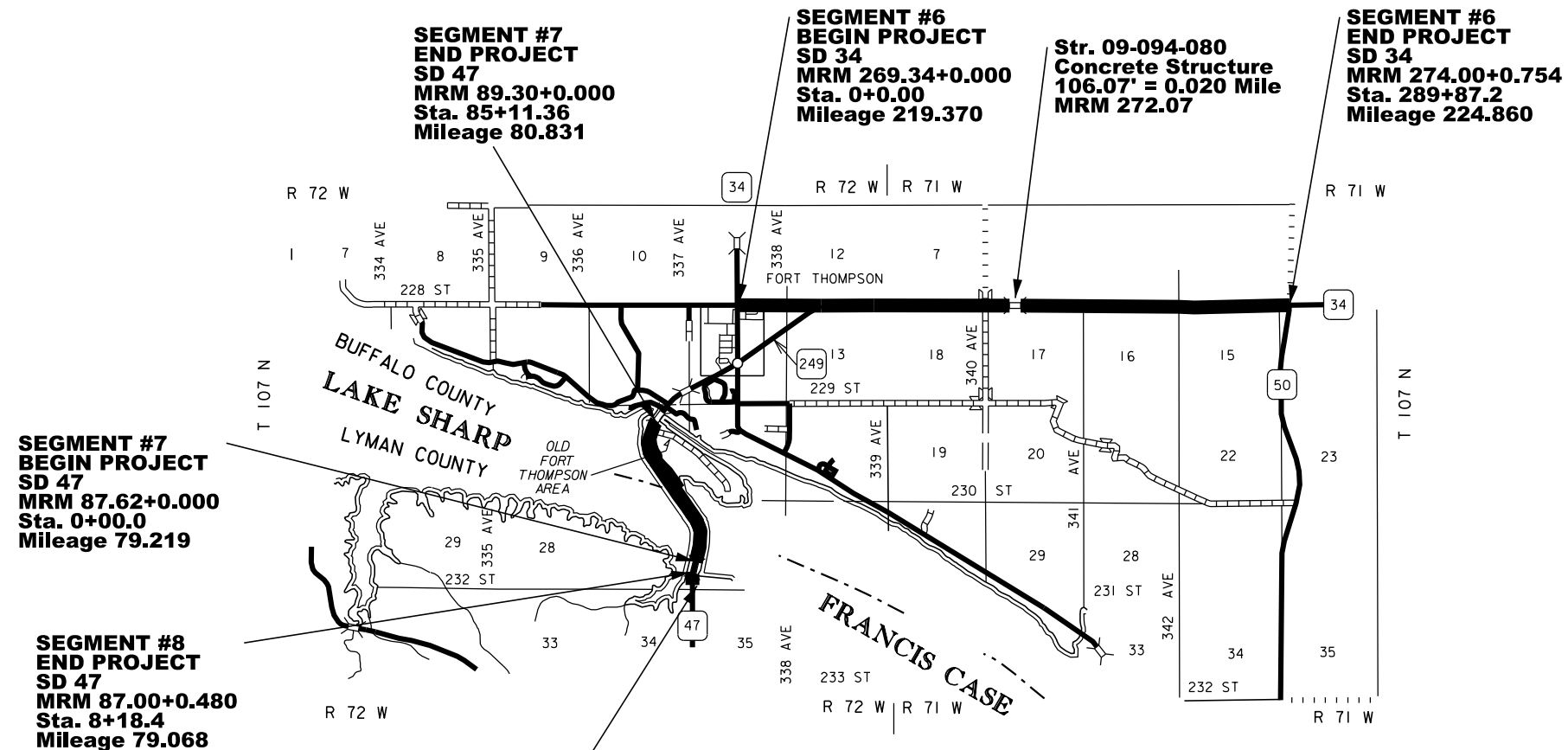
PLOT SCALE - 1:1000

PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

FILE - ... \SECTION 5 SD 45.DGN

SD 47 & SD 34 SEGMENT #6, #7 & #8 BUFFALO & LYMAN COUNTIES



**SEGMENT #7
BEGIN PROJECT
SD 47
MRM 87.62+0.000
Sta. 0+00.0
Mileage 79.219**

**SEGMENT #8
END PROJECT
SD 47
MRM 87.00+0.480
Sta. 8+18.4
Mileage 79.068**

**SEGMENT #7
END PROJECT
SD 47
MRM 89.30+0.000
Sta. 85+11.36
Mileage 80.831**

**SEGMENT #6
BEGIN PROJECT
SD 34
MRM 269.34+0.000
Sta. 0+0.00
Mileage 219.370**

**Str. 09-094-080
Concrete Structure
106.07' = 0.020 Mile
MRM 272.07**

**SEGMENT #6
END PROJECT
SD 34
MRM 274.00+0.754
Sta. 289+87.2
Mileage 224.860**

**SEGMENT #8
BEGIN PROJECT
SD 47
MRM 87.00+0.325
Sta. 0+0.00
Mileage 78.913**

Segment #6

DESIGN DESIGNATION	
AADT (2022)	593
AADT (2042)	911
DHV	118
D	50%
DHV T%	6.6%
AADT T%	14.4%
V	65 mph

STORM WATER PERMIT
(None Required)

Segment #7 & #8

DESIGN DESIGNATION	
AADT (2022)	629
AADT (2042)	905
DHV	151
D	50%
DHV T%	4.9%
AADT T%	10.7%
V	45 mph

STORM WATER PERMIT
(None Required)

TOTAL LENGTH (Segment #6)			
GROSS LENGTH	28987.2 FEET	5.490 MILES	
LENGTH OF EXCEPTIONS	106.07 FEET	0.020 MILES	
NET LENGTH	28881.13 FEET	5.470 MILES	
TOTAL LENGTH (Segment #7)		TOTAL LENGTH (Segment #8)	
GROSS LENGTH	8511.36 FEET	GROSS LENGTH	818.4 FEET
LENGTH OF EXCEPTIONS	0.0 FEET	LENGTH OF EXCEPTIONS	0.0 FEET
NET LENGTH	8511.36 FEET	NET LENGTH	818.4 FEET
	1.612 MILES		0.155 MILES
	0.000 MILES		0.000 MILES
	1.612 MILES		0.155 MILES

PLOT SCALE - 1:1000

PLOTTED FROM - TRHJINT04

PLOT NAME - 1

FILE - ... \SECTION 8 9 10 11.DGN

SD 37N & SD 37S SEGMENT #9 & #10 BEADLE & SANBORN COUNTIES



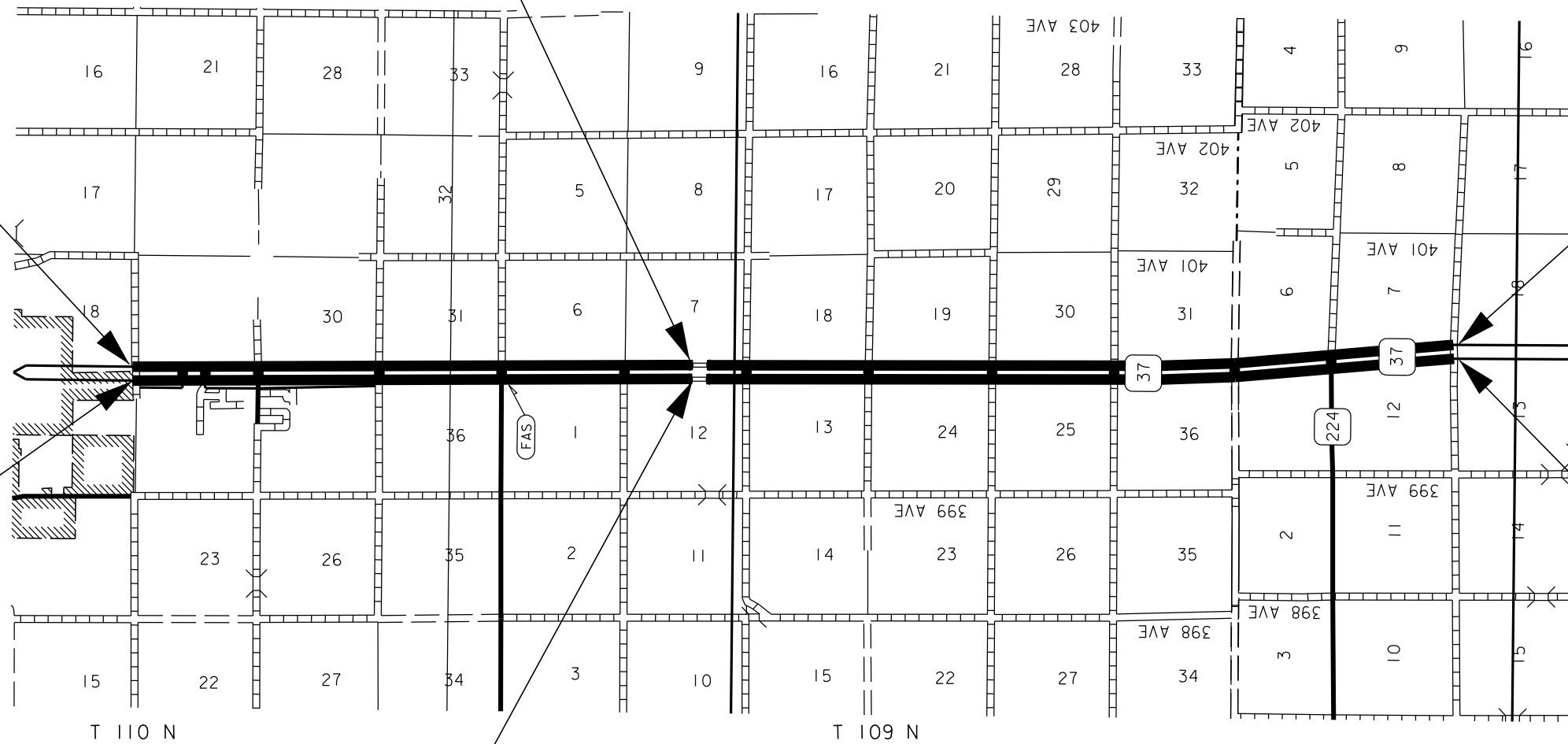
STR. No. 03-240-257
Prestressed Girder Bridge
171.31' = 0.032 Mile
MRM 120.06+0.000

SEGMENT #9 R 61 W
END PROJECT
SD 37N
MRM 124.70 +0.000
Sta. 566+80.8
Mileage 38.524

SEGMENT #9
BEGIN PROJECT
SD 37N
MRM 113.00+0.906
Sta. 0+00.00
Mileage 27.789

SEGMENT #10
END PROJECT
SD 37S
MRM 124.70 +0.000
Sta. 565+69.92
Mileage 38.559

SEGMENT #10
BEGIN PROJECT
SD 37S
MRM 113.00+0.946
Sta. 0+00.00
Mileage 27.845



STR. No. 03-239-257
Prestressed Girder Bridge
171.31' = 0.032 Mile
MRM 120.06+0.000

	SEGMENT # 9 (SD 37N) TOTAL LENGTH	
GROSS LENGTH	56680.80 FEET	10.735 MILES
LENGTH OF EXCEPTIONS	171.31 FEET	0.032 MILES
NET LENGTH	56509.49 FEET	10.703 MILES

	SEGMENT # 10 (SD 37S) TOTAL LENGTH	
GROSS LENGTH	56569.92 FEET	10.714 MILES
LENGTH OF EXCEPTIONS	171.31 FEET	0.032 MILES
NET LENGTH	56398.61 FEET	10.682 MILES

Segment #9 (SD 37N)	Segment #10 (SD 37S)
<u>DESIGN DESIGNATION</u>	<u>DESIGN DESIGNATION</u>
AADT (2022) 1600	AADT (2022) 1600
AADT (2042) 2328	AADT (2042) 2328
DHV 313	DHV 313
D 50%	D 50%
DHV T% 3.6%	DHV T% 3.6%
AADT T% 7.9%	AADT T% 7.9%
V 70 mph	V 70 mph
<u>STORM WATER PERMIT</u>	<u>STORM WATER PERMIT</u>
(None Required)	(None Required)

PLOT SCALE - 1:1000

PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

FILE - ... \SECTION 10 & 11 SD 37.DGN

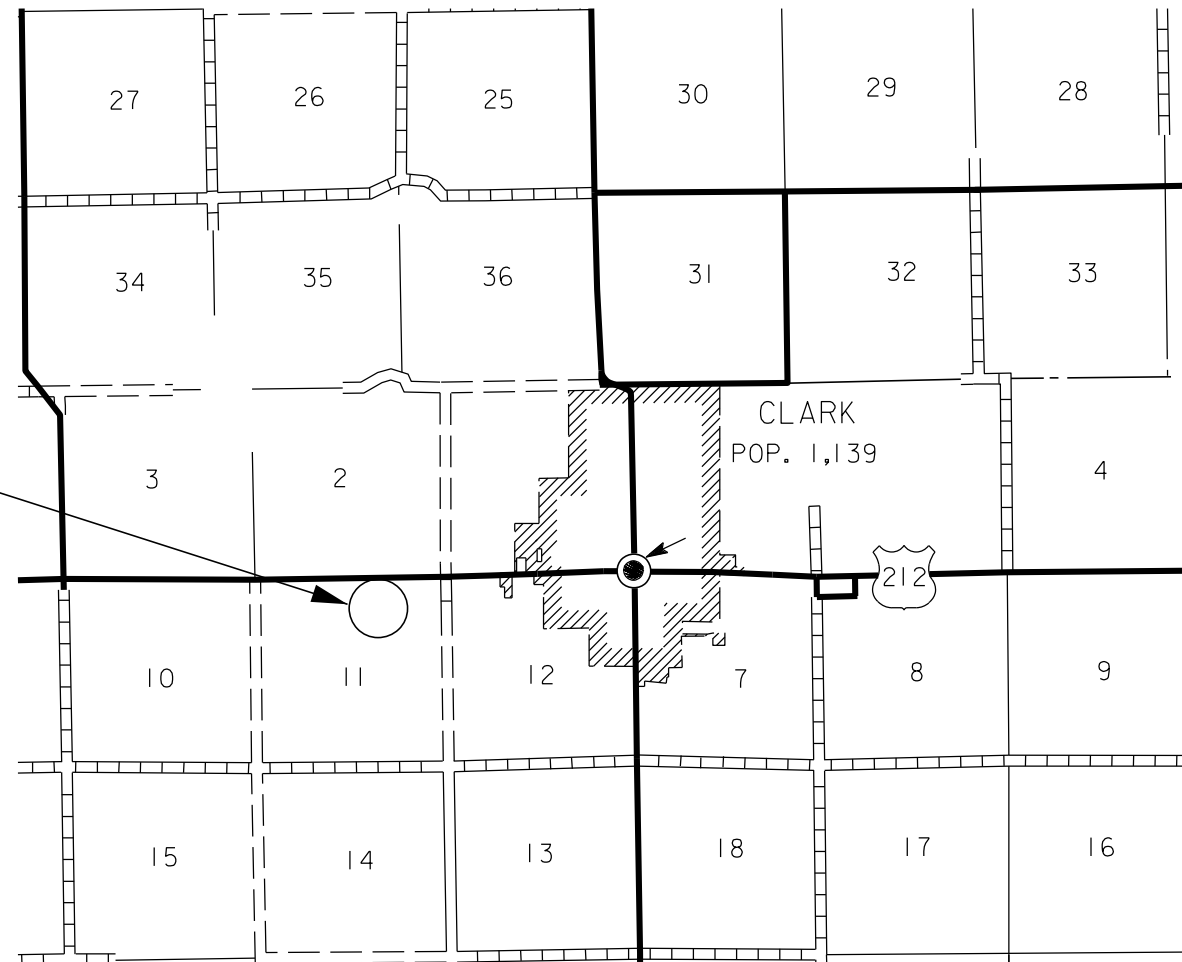
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168), 0009-191& 0009-192	9	41
Plotting Date: 01/09/2024			

PCN i7DR
 CLARK DOT MAINTENANCE YARD
 1713 US-212
 CLARK, SD 57225
 CLARK COUNTY

PLOT SCALE - 1:1000

PLOT NAME - 1

Clark DOT Yard

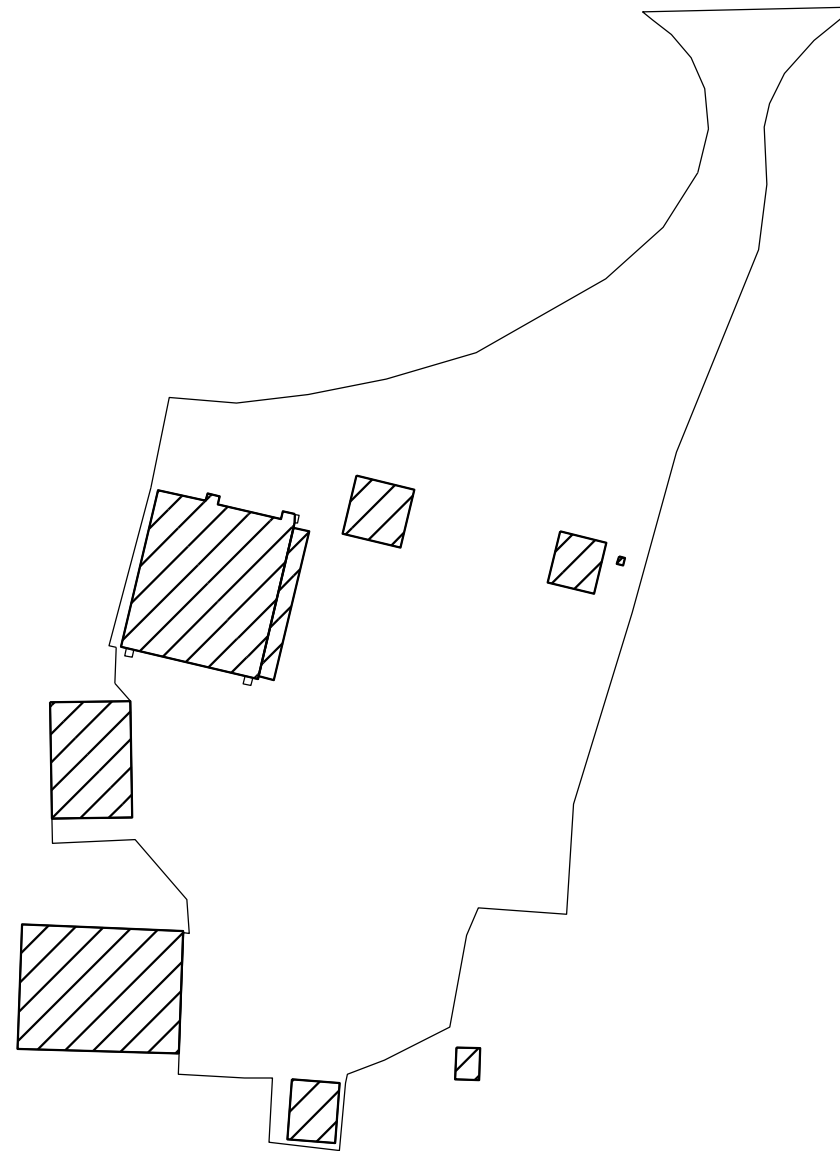


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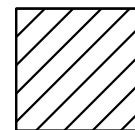
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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168). 0009-191& 0009-192	10	41
Plotting Date: 01/19/2024			

PCN i7DR
 CLARK DOT MAINTENANCE YARD
 1713 US-212
 CLARK, SD 57225
 CLARK COUNTY



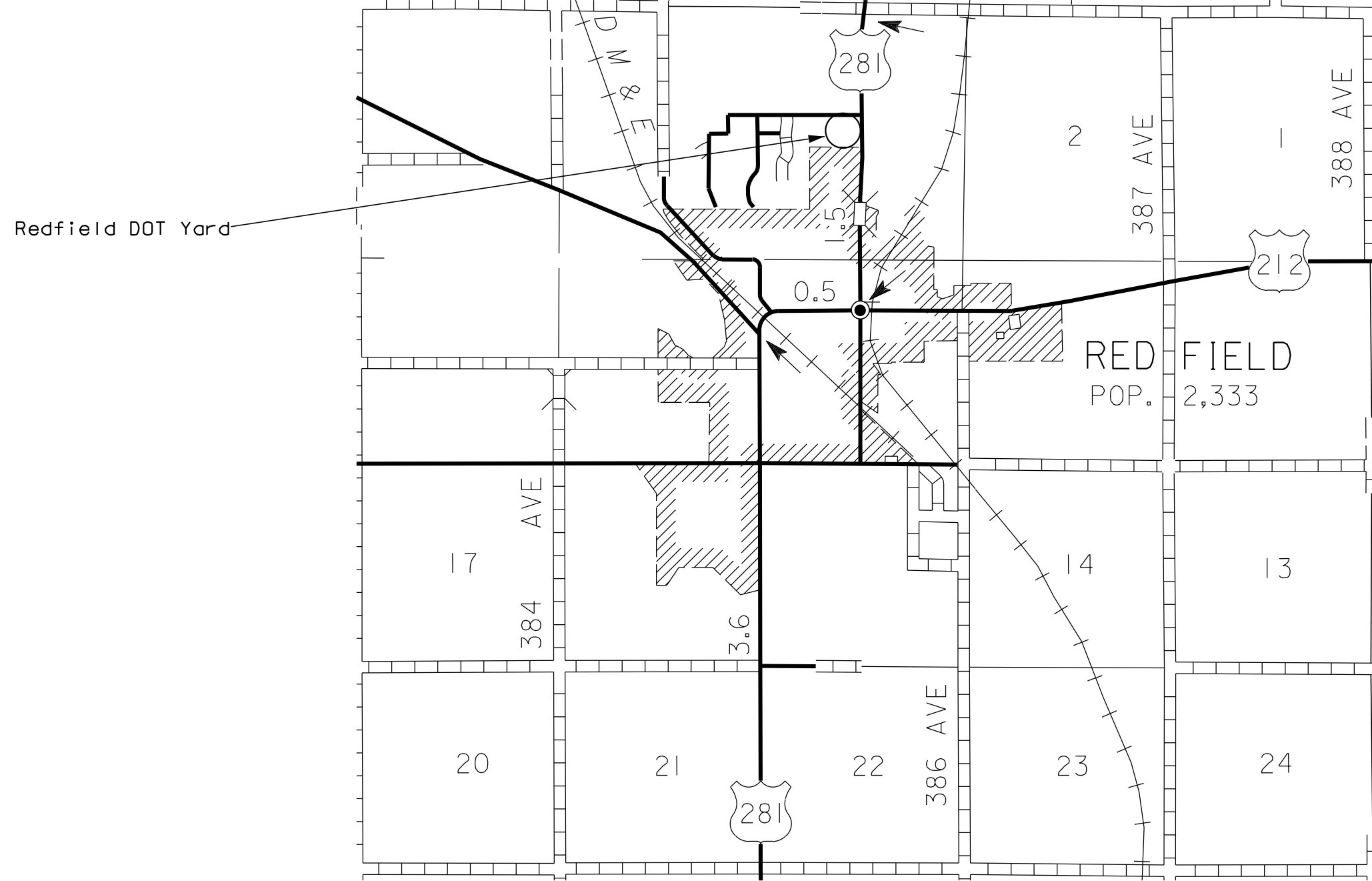
Total = 8.821 SqYds



Concrete/Buildings No Asphalt Surface Treatment

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168). 0009-191& 0009-192	11	41
Plotting Date: 01/09/2024			

PCN i7DT
 REDFIELD DOT MAINTENANCE YARD
 17239 US HWY 281
 REDFIELD, SD 57469
 SPINK COUNTY



PLOT SCALE - 1:1000

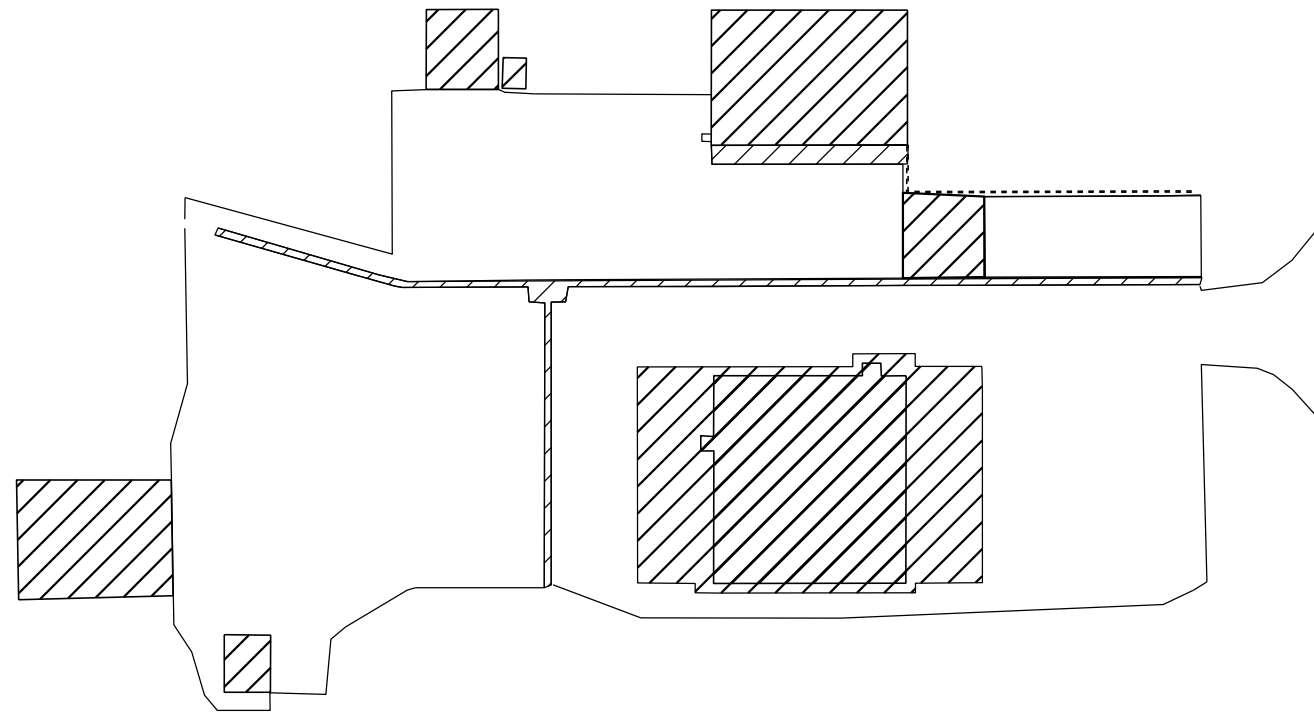
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PLOT NAME - 1

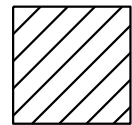
FILE - ... \SURVEY\REDFIELD LOCATION.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168). 0009-191& 0009-192	12	41
Plotting Date: 01/09/2024			

PCN i7DT
 REDFIELD DOT MAINTENANCE YARD
 17239 US HWY 281
 REDFIELD, SD 57469
 SPINK COUNTY



Total = 11,545 SqYds



Concrete/Buildings No Asphalt Surface Treatment

Revised 2-6-23 PAR

ESTIMATE OF QUANTITIES

Project: NH-P 0013(168), PCN 0970

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	270.9	Ton
330E3000	Sand for Fog Seal	100.0	Ton
360E0042	CRS-2P Asphalt for Surface Treatment	2,317.1	Ton
360E1010	Type 1A Cover Aggregate	805.3	Ton
360E1010	Type 1A Cover Aggregate	1,570.0	Ton
360E1010	Type 1A Cover Aggregate	804.0	Ton
360E1010	Type 1A Cover Aggregate	321.6	Ton
360E1010	Type 1A Cover Aggregate	1,369.2	Ton
360E1010	Type 1A Cover Aggregate	32.7	Ton
360E1010	Type 1A Cover Aggregate	2,073.8	Ton
360E1010	Type 1A Cover Aggregate	1,300.2	Ton
360E1010	Type 1A Cover Aggregate	1,021.0	Ton
360E1010	Type 1A Cover Aggregate	3,375.1	Ton
633E0030	Cold Applied Plastic Pavement Marking, 24"	524	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	16	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	4,042	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	1,250	Gal
633E5050	Surface Preparation for Pavement Marking	524	Ft
633E5052	Surface Preparation for Pavement Marking	16	Each
633E6020	Pavement Marking Masking, 25"	1,048	Ft
633E6030	Pavement Marking Masking, Arrow	32	Each
634E0010	Flagging	925.0	Hour
634E0020	Pilot Car	262.5	Hour
634E0110	Traffic Control Signs	3,343.5	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0630	Temporary Pavement Marking	123.8	Mile

Project: 0009-191, PCN i7DR

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
* 009E0010	Mobilization	Lump Sum	LS
* 330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	2.6	Ton
* 330E3000	Sand for Fog Seal	10.0	Ton
* 360E0042	CRS-2P Asphalt for Surface Treatment	14.3	Ton
* 360E1040	Type 2B Cover Aggregate	97.0	Ton

* - Denotes Non-Participating

Project: 0009-192, PCN i7DT

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
* 009E0010	Mobilization	Lump Sum	LS
* 330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	3.4	Ton
* 330E3000	Sand for Fog Seal	10.0	Ton
* 360E0042	CRS-2P Asphalt for Surface Treatment	18.6	Ton
* 360E1040	Type 2B Cover Aggregate	127.0	Ton

* - Denotes Non-Participating

SPECIFICATIONS

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

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168). 0009-191 & 0009-192	14	41
Plotting Date: 01/09/2024			

ENVIRONMENTAL COMMITMENTS

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

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

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

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

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

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

Action Taken/Required:

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

COMMITMENT B4: BALD EAGLE

Bald eagles are known to occur in this area

Action Taken/Required:

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

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

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

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

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

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

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

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

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

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

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

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified.

The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

TABLE OF QUANTITIES (FOR INFORMATION ONLY)

STATE OF SOUTH DAKOTA	PROJECT		SHEET NO.	TOTAL SHEETS
	NH-P 0013(168). 0009-191 & 0009-192		15	41
Plotting Date: 01/09/2024				

ITEM	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	SEGMENT 8	SEGMENT 9	SEGMENT 10	CLARK YARD	REDFIELD YARD	TOTAL	UNIT
	SD 37	US 212	SD 28	US 14	SD 45	SD 34	SD 47	SD 47	SD 37 N	SD37 S	DOT	DOT		
Mobilization	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	LS
SS-1H or CSS-1H Asphalt for Fog Seal	44.2	29.2	71.8	32.9	27.9	21.8	6.8	0.7	15.0	14.9	2.6	3.4	271.2	Ton
SS-1H or CSS-1H Asphalt for Fog Seal (Crossovers)	-	-	-	-	-	-	-	-	4.9		-	-	4.9	Ton
SS-1H or CSS-1H Asphalt for Fog Seal (Free Right/Right Turn Lanes)	-	-	0.2	0.6	-	-	-	-	-	-	-	-	0.8	Ton
Sand for Fog Seal	10	10	10	10	10	10	10	10	10	10	10	10	120	Ton
CRS-2P Asphalt for Surface Treatment	370.1	243.5	601.2	275.4	232.3	182.2	57.4	5.8	123.0	122.7	14.3	18.6	2246.5	Ton
CRS-2P Asphalt for Surface Treatment (Crossovers)	-	-	-	-	-	-	-	-	97.4		-	-	97.4	Ton
CRS-2P Asphalt for Surface Treatment (Free Right/Right Turn Lanes)	-	-	1.2	4.9	-	-	-	-	-	-	-	-	6.1	Ton
Type 1A Cover Aggregate	2073.8	-	-	-	-	-	-	-	-	-	-	-	2073.8	Ton
Type 1A Cover Aggregate	-	1369.2	-	-	-	-	-	-	-	-	-	-	1369.2	Ton
Type 1A Cover Aggregate	-	-	3368.5	-	-	-	-	-	-	-	-	-	3368.5	Ton
Type 1A Cover Aggregate	-	-	-	1542.6	-	-	-	-	-	-	-	-	1542.6	Ton
Type 1A Cover Aggregate	-	-	-	-	1300.2	-	-	-	-	-	-	-	1300.2	Ton
Type 1A Cover Aggregate	-	-	-	-	-	1021.0	-	-	-	-	-	-	1021.0	Ton
Type 1A Cover Aggregate	-	-	-	-	-	-	321.6	-	-	-	-	-	321.6	Ton
Type 1A Cover Aggregate	-	-	-	-	-	-	-	32.7	-	-	-	-	32.7	Ton
Type 1A Cover Aggregate	-	-	-	-	-	-	-	-	690.8	-	-	-	690.8	Ton
Type 1A Cover Aggregate	-	-	-	-	-	-	-	-	-	689.4	-	-	689.4	Ton
Type 1A Cover Aggregate (Crossovers)	-	-	-	-	-	-	-	-	229.1		-	-	229.1	Ton
Type 1A Cover Aggregate (Free Right/Right Turn Lanes)	-	-	6.6	27.4	-	-	-	-	-	-	-	-	34.0	Ton
Type 2B Cover Aggregate	-	-	-	-	-	-	-	-	-	-	97.0	-	97.0	Ton
Type 2B Cover Aggregate	-	-	-	-	-	-	-	-	-	-	-	127.0	127.0	Ton
Pavement Marking Paint, White	614	599	998	406	397	305	90	4	315	314	-	-	4042	Gal

PLOT SCALE - 1:1000

PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

FILE - ... \DESIGN PLANS\BORDER.DGN

TABLE OF QUANTITIES (FOR INFORMATION ONLY)

Revised 2-6-23 PAR

STATE OF SOUTH DAKOTA	PROJECT		SHEET NO.	TOTAL SHEETS
	NH-P 0013(168). 0009-191 & 0009-192		16	41
Plotting Date: 01/09/2024				

ITEM	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	SEGMENT 8	SEGMENT 9	SEGMENT 10	CLARK YARD	REDFIELD YARD	TOTAL	UNIT
	SD 37	US 212	SD 28	US 14	SD 45	SD 34	SD 47	SD 47	SD 37 N	SD37 S	DOT	DOT		
Pavement Marking Paint, Yellow	131	101	171	76	155	119	14		242	241	-	-	1250	Gal
Flagging	90.0	86.0	170.0	77.0	140.0	60.0	20.0	2.0	90.0	90.0	-	-	825.0	Hour
Additional Flagging Hours	100.0												100.0	Hours
Pilot Car	38.0	36.0	70.0	31.5	60.0	19.0	7.5	0.5	-	-	-	-	262.5	Hour
Traffic Control Signs	339.6	339.6	428.8	295.0	295.0	250.4	192.3		1202.8		-	-	3343.5	SqFt
Traffic Control Miscellaneous	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	Lump Sum	-	-	Lump Sum	LS
Temporary Pavement Markings	22.0	21.6	35.8	14.6	14.1	11.0	4.4	0.3	-	-	-	-	123.8	Mile
Type C Advance Warning Arrow Board	-	-	-	-	-	-	-	-	2		-	-	2	Each
Surface Preparation for Pavement Markings (Gore, Cross Walks and Stop Bars)	12	344	24	120	12	12	-	-	-	-	-	-	524	Ft
Surface Preparation for Pavement Markings (Arrows)	-	8	6	2	-	-	-	-	-	-	-	-	16	Each
Cold Applied Plastic Pavement Markings 24"	12	344	24	120	12	12	-	-	-	-	-	-	524	Ft
Cold Applied Plastic Pavement Arrow	-	8	6	2	-	-	-	-	-	-	-	-	16	Each
Pavement Marking Masking, Arrow	-	16	12	4	-	-	-	-	-	-	-	-	32	Each
Pavement Marking Masking, 25"	24	688	48	240	24	24	-	-	-	-	-	-	1048.0	Ft

PLOT SCALE - 1:1000

PLOT NAME - 1

FILE - ... \DESIGN PLANS\BORDER.DGN

PLOTTED FROM - TRHJINT04

RATES OF MATERIALS

The Estimate of Quantities is based on the following quantities of materials per mile.

The radiuses to intersecting State Highways will be chipped to top of the sluff.

Segment	ROUTE	Station		Station
1	SD 37	0+00	to	556+48.2
1	SD 37	558+01.1	to	582+96.48

ASPHALT SURFACE TREATMENT:

CRS-2P Asphalt for Surface Treatment at the rate of 33.5 tons applied 32 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 187.7 tons applied 32 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 4.0 tons applied 32 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station		Station
1	SD 37	556+48.2	to	558+01.1

CRS-2P Asphalt for Surface Treatment at the rate of 41.9 tons applied 40 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 234.5 tons applied 40 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 5.0 tons applied 40 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station		Station
2	US 212	0+00	to	10+85

Note: Average Width through transition including turn lane.

CRS-2P Asphalt for Surface Treatment at the rate of 41.9 tons applied 40 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 234.5 tons applied 40 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 5.0 tons applied 40 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station		Station
2	US 212	10+85	to	22+25

CRS-2P Asphalt for Surface Treatment at the rate of 46.1 tons applied 44 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 258.1 tons applied 44 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 5.5 tons applied 44 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station		Station
2	US 212	22+25	to	28+59

CRS-2P Asphalt for Surface Treatment at the rate of 36.7 tons applied 35 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 205.3 tons applied 35 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 4.4 tons applied 35 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station		Station
2	US 212	28+59	to	427+30

CRS-2P Asphalt for Surface Treatment at the rate of 29.2 tons applied 28 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 164.3 tons applied 28 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 3.5 tons applied 28 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station		Station
2	US 212	427+30	to	568+92

CRS-2P Asphalt for Surface Treatment at the rate of 33.5 tons applied 32 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 187.7 tons applied 32 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 4.0 tons applied 32 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station		Station
3	SD 28	0+00	to	947+54.9

CRS-2P Asphalt for Surface Treatment at the rate of 33.5 tons applied 32 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 187.7 tons applied 32 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 4.0 tons applied 32 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station		Station
4	US 14	0+00	to	385+65.1

CRS-2P Asphalt for Surface Treatment at the rate of 37.7 tons applied 36 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 211.2 tons applied 36 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 4.5 tons applied 36 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station	to	Station
4	US 14	111+32.73	to	123+32.73

CRS-2P Asphalt for Surface Treatment at the rate of 21.5 tons applied 20.5 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 120.3 tons applied 20.5 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 2.6 tons applied 20.5 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station	to	Station
5	SD 45	0+00	to	377+41.44

CRS-2P Asphalt for Surface Treatment at the rate of 32.5 tons applied 31 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 181.9 tons applied 31 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 3.9 tons applied 31 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station	to	Station
6	SD 34	0+00	to	50+27.2

CRS-2P Asphalt for Surface Treatment at the rate of 32.5 tons applied 31 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 181.9 tons applied 31 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 3.9 tons applied 31 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station	to	Station
6	SD 34	50+27.2	to	148+68
6	SD 34	149+74	to	289+87.2

CRS-2P Asphalt for Surface Treatment at the rate of 33.5 tons applied 32 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 187.7 tons applied 32 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 4.0 tons applied 32 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station	to	Station
7	SD 47	0+00	to	85+11.36

CRS-2P Asphalt for Surface Treatment at the rate of 35.6 tons applied 34 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 199.5 tons applied 34 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 4.2 tons applied 34 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station	to	Station
8	SD 47	0+00	to	8+18.4

CRS-2P Asphalt for Surface Treatment at the rate of 37.7 tons applied 36 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 211.2 tons applied 36 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 4.5 tons applied 36 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station	to	Station
9	SD 37N East Shoulder	0+00	to	566+80.8

CRS-2P Asphalt for Surface Treatment at the rate of 8.4 tons applied 8 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 47.0 tons applied 8 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 1.0 tons applied 8 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station	to	Station
9	SD 37N West Shoulder	0+00	to	566+80.8

CRS-2P Asphalt for Surface Treatment at the rate of 3.1 tons applied 3 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 17.6 tons applied 3 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 0.4 tons applied 3 feet wide.
(Rate = 0.05 Gal./S.Y.)

Segment	ROUTE	Station	to	Station
11	SD 37S West Shoulder	0+00	to	565+69.92

CRS-2P Asphalt for Surface Treatment at the rate of 8.4 tons applied 8 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 47.0 tons applied 8 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 1.0 tons applied 8 feet wide.
(Rate = 0.05 Gal./S.Y.)

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Segment	ROUTE	Station	to	Station
11	SD 37S East Shoulder	0+00		565+69.92

CRS-2P Asphalt for Surface Treatment at the rate of 3.1 tons applied 3 feet wide.
(Rate = 0.42 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 17.6 tons applied 3 feet wide.
(Rate= 20 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 0.4 tons applied 3 feet wide.
(Rate = 0.05 Gal./S.Y.)

Project: 0009-191, PCN: i7DR
Clark DOT Maintenance Yard

Estimated Area = 8,821 S.Y.
CRS-2P Asphalt for Surface Treatment (Rate = 0.38 Gal./S.Y.) = **14.3 Tons**
Type 2B Cover Aggregate (Rate= 22 Lbs./S.Y.) = **97.0 Tons**
CSS-1H or SS-1H for Fog Seal (Rate= 0.07 Gal./S.Y.) = **2.6 Tons**

Project: 0009-192, PCN: i7DT
Redfield DOT Maintenance Yard

Estimated Area = 11,545 S.Y.
CRS-2P Asphalt for Surface Treatment (Rate = 0.38 Gal./S.Y.) = **18.6 Tons**
Type 2B Cover Aggregate (Rate= 22 Lbs./S.Y.) = **127.0 Tons**
CSS-1H or SS-1H for Fog Seal (Rate= 0.07 Gal./S.Y.) = **3.4 Tons**

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0013(168), 0009-191 & 0009-192	20	41
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SEQUENCE OF OPERATIONS

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.

1. Install Construction Signing
2. Install Temporary Pavement Markings
3. Apply Asphalt Surface Treatment
4. Apply Fog Seal
5. Apply Permanent Pavement Marking Paint
6. Project Cleanup and Removal of Construction Signing

Note: The Department will require a **5**-day notice before Applying Asphalt Surface Treatment to the Clark and Redfield Maintenance Yards.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All temporary speed limit signs will have a minimum mounting height of 5 feet in rural locations, even when mounted on portable supports.

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

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

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

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

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract bid items.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

Lane closures will be limited to 3 miles in length. The distance between the closest points of any two-lane closures will be at least 3 miles, excluding tapers.

TRAFFIC CONTROL FOR ASPHALT SURFACE TREATMENT

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. 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 and ROAD AHEAD (W20-4) 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, 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 bid items. The Contractor must have enough printed notices on hand to allow one for every vehicle (Current ADT).

All construction vehicles, including trucks, will be restricted to a maximum 40 mph within any area that has been sealed regardless of which lane they are driving on.

"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.

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 **100** 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.



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FLAGGING CONT.

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".

COVER AGGREGATE

Cover Aggregate will conform to the requirements of the specifications for Type 1A Cover Aggregate.

Quality tests on the Cover Aggregate for abrasion and soundness are required by specification. The Contractor will notify the Area office prior to sampling and a representative from the Area office will witness all sampling of aggregates to be submitted to the Central Testing Laboratory for quality testing. Satisfactory test results for the Cover Aggregate will be obtained prior to its use on the Project. Application of the Cover Aggregate must be maintained within 1000 feet or have a time limit of 5 minutes between the application of the CRS-2P for Asphalt Surface Treatment and the

application of the cover aggregate, whichever amounts to the shorter period of time.

The Contractor will continue chip spreader progress, forward, thru the asphalt application at any end where work will be temporarily shut down for a time greater than 5 minutes, to allow for satisfactory uniform rolling of the placed aggregate. The Contractor will not allow the chip spreader, trucks, or other equipment to lie dormant on the aggregate while transitioning between asphalt distributor loads and or any other temporary shutdown of production, before uniform rolling is complete. A cover aggregate gradation failure on the #200 sieve will cause all operations to cease immediately and the Engineer will determine correction action(s), if necessary, prior to restarting the operations.

PROJECT BROOMING

All material will be broomed off of 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. This material from the curb & gutter areas of the bridges, the guardrail areas of the bridges and the drop inlets will be disposed of in a manner satisfactory to the Engineer.

Material that is broomed onto the roadway in slopes 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.

As per Section 360.3 of the Specifications, loose material at the following locations in the table below shall be removed by the Contractor by means of pickup broom having integral mounted self-contained storage using water to control dust and shall be removed during the cool period of the early morning of the day following application or as directed by the Engineer.

Removed material shall be disposed of at sites provided by the Contractor and approved by the Engineer.

Segment	ROUTE	Description
1	SD 37	Doland City Limits
2	US 212	Doland City Limits
11	Clark	Maintenance Yard
12	Redfield	Maintenance Yard

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

At no time before, during, or after placement of Asphalt Surface Treatment will a broom without working integral mounted self-contained storage using water (in working condition) be used.

Brooming will be incidental to the various contract items for the Asphalt Surface Treatment.

FOG SEAL

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

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

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

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

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

Bill of Ladings showing both the CSS-1h or SS-1h and water will be required.

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

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

Passing a 3/8 Inch Sieve	100%
Passing a No. 4 Sieve	85-100%
Passing a No. 8 Sieve	60-95%

Passing a No. 40 Sieve 5-45%
Passing a No. 200 Sieve 0-10.0%

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

HAUL ROAD

The Contractor will be responsible for any haul roads used to transport material to the project site. The State will not participate in the cost of restoration of any haul roads used by the Contractor.

TEMPORARY PAVEMENT MARKINGS

Temporary flexible vertical markers (tabs) will be used to mark dashed centerline, No Passing Zones, and applicable lane lines. Paint will not be allowed for temporary pavement marking.

Covers on the tabs will be sufficiently secured to prevent traffic from dislodging the cover and when removed, the covers will be properly disposed of. The Contractor will remove and properly dispose of the tabs after permanent pavement marking is applied. Method of removal will be nondestructive to the road surface and will be accomplished within one week of completion of the permanent pavement marking.

Any temporary flexible vertical markers (tabs) with covers removed before the flush seal will be replaced prior to application of the flush seal. Full reflectivity of all temporary flexible vertical markers (tabs) is required at all times. The Contractor will be to replace any missing or non-reflective tabs at no additional cost to the State.

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

Prior to nightfall, tabs will be required to mark centerline on segments of roadway where existing centerline markings have been removed and new markings have not been installed.

TEMPORARY PAVEMENT MARKINGS CONT.

The Contractor is allowed to use DO NOT PASS and PASS WITH CARE signs for a period of 2 weeks to mark no passing zones on roads with an average daily traffic of 2500 vehicles or less.

Quantities of Temporary Pavement Markings consist of:
 One pass on top of the Seal Coat.
 One pass on top of the Fog Seal.

TABLE OF TEMPORARY PAVEMENT MARKING ITEMS

SEGMENT	(N.A.B.I) DO NOT PASS Signs (Each)	(N.A.B.I.) PASS WITH CARE Signs (Each)	Total Length of No Passing Zones (Miles)
Segment 1 (SD 37)	9	9	1.71
Segment 2 (US 212)	3	3	0.70
Segment 3 (SD 28)	8	8	1.24
Segment 4 (US 14)	0	0	0.72
Segment 5 (SD 45)	23	23	3.63
Segment 6 (SD 34)	10	10	2.78
Segment 7 & 8 (SD 47)	2	0	0.58

PERMANENT PAVEMENT MARKINGS

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

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

The Contractor will advise the Engineer a minimum of 2 weeks prior to the application of the permanent pavement marking to allow the State to check and mark the location of no passing zones. All materials will be applied as per manufacturer's recommendations.

The Contractor will be required to repaint all pavement markings including centerline, edge line, lane lines, and stop bar (1). This list is approximate. The Contractor will be required to inventory and mark, with appropriate colored tabs, the extent and location of the existing word messages, turn arrows, stop bars, railroad crossings, pedestrians crossings, etc. before marking the markings are obliterated. The Engineer will be provided a copy of the pavement marking inventory. Additional quantities are included in the estimates of quantities to paint additional pavement marking. The cost of tabs will be incidental to contract unit prices for various items.

The application of permanent pavement marking paint will not begin until 7 calendar days following completion of final surfacing and will be completed within 14 calendar days following completion of final surfacing when DO NOT PASS and PASS WITH CARE signs are used to mark No Passing Zones.

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 MARKINGS PAINT

Solid 4" line = 27.8 Gals/Mile.
 Dashed 4" line = 7.6 Gal/Mile.
 Glass Beads = 8 Lbs/Gal.

SD 37 N & S 37 S

Solid 4" line = 22.5 Gals/Mile.
 Dashed 4" line = 6.2 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.

COLD APPLIED PLASTIC PAVEMENT MARKINGS

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

Cold Applied Plastic Pavement Marking will be placed in the same location as existing markings, unless otherwise directed by the Engineer. Existing pavement markings must be completely removed without damaging the pavement prior to installing the new Cold Applied Plastic Pavement Marking.

It will be the Contractor's responsibility to visit the project site to determine what type of material(s) are present and the extent of the work required to remove the existing pavement markings. Cost for removing existing pavement marking will be included in Surface Preparation for Pavement Marking.

ITEM	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6
	SD37	US 212	SD 28	US 14	SD 45	SD34
Gore Area	-	288 FT	-	108 FT	-	-
Turn Arrows	-	8 Each	6 Each	2 Each	-	-
Stop Bars	12 FT	-	24 FT	12 FT	12 FT	12 FT
Cross Walk	-	56 FT	-	-	-	-

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 damages or loss of functionality of rumble strips to the satisfaction of the Engineer at no additional cost to the Department.

The note is intended for the junction of SD 28/SD 37 and SD 45 right before the stop signs.

PAVEMENT MARKING MASKING

Just prior to beginning the asphalt surface treatment and the fog sealing operation, all pavement marking tape will be covered with an approved pavement marking masking material to protect the pavement marking from oil and aggregates. Tabs will be placed at the beginning of each masking line to provide a guide for locating the masking material after the seal has been applied.

Masking of stop bar and gore areas 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. Unsatisfactory results will be repaired by the Contractor with no additional cost to the State.

The Contractor will remove and dispose of the masking after completion of the work. All costs associated with the pavement marking masking will be incidental to the contract unit price for Pavement Marking Masking.

ITEM	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6
	SD37	US 212	SD 28	US 14	SD 45	SD34
Gore Area	-	576 FT	-	216 FT	-	-
Turn Arrows	-	16	12	4	-	-
Stop Bars	24 FT	-	48 FT	24 FT	24FT	24FT
Cross Walk	-	112FT	-	-	-	-

SD 37 SEGMENT #1

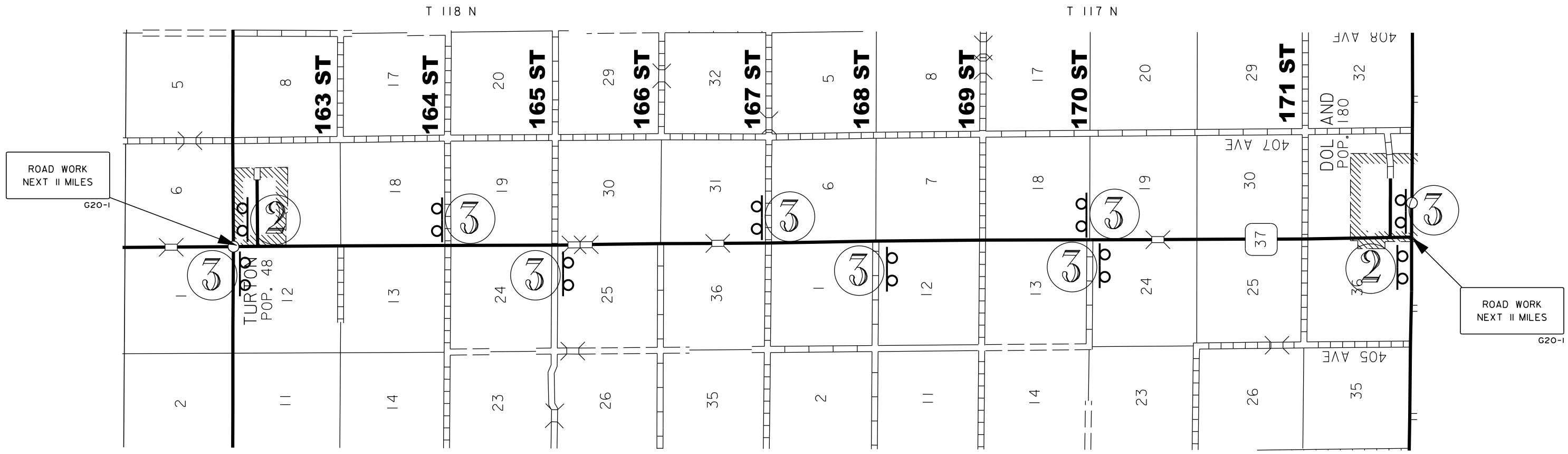
SPINK COUNTY

LENGTH: 11.041 MILES

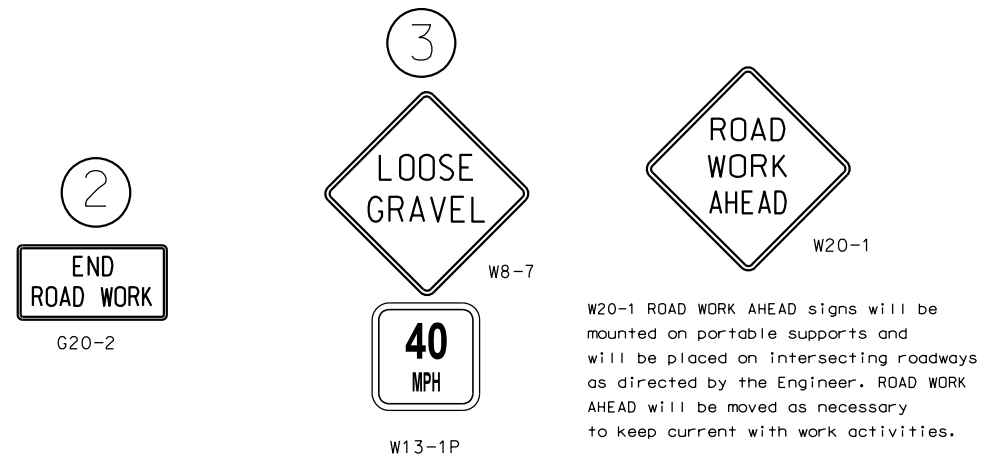


PLOT SCALE - 1:1000

PLOT NAME - 1



Fixed Location Sign Type	Quantity
Road Work Next 11 Miles	2
End Road Work	2
Loose Gravel	8
40 MPH Sign Plaque	8



PLOTTED FROM - TRHJUNT04

FILE - ... \SECTION 1 SD 37 TRAFFIC.DGN

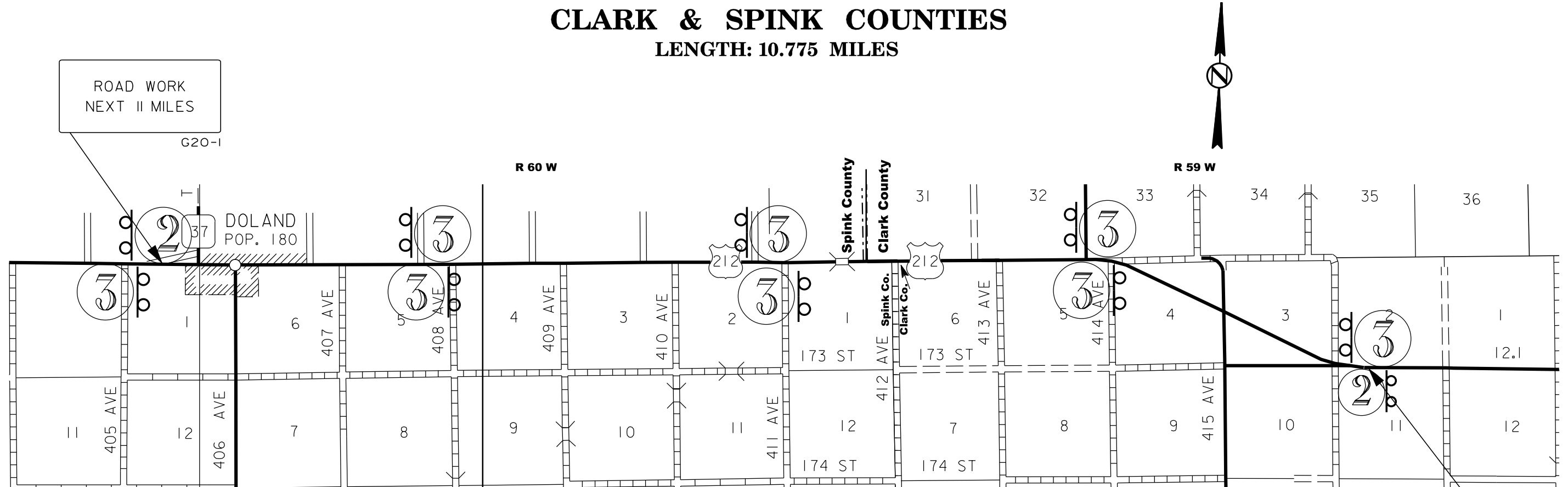
US 212 SEGMENT #2

CLARK & SPINK COUNTIES

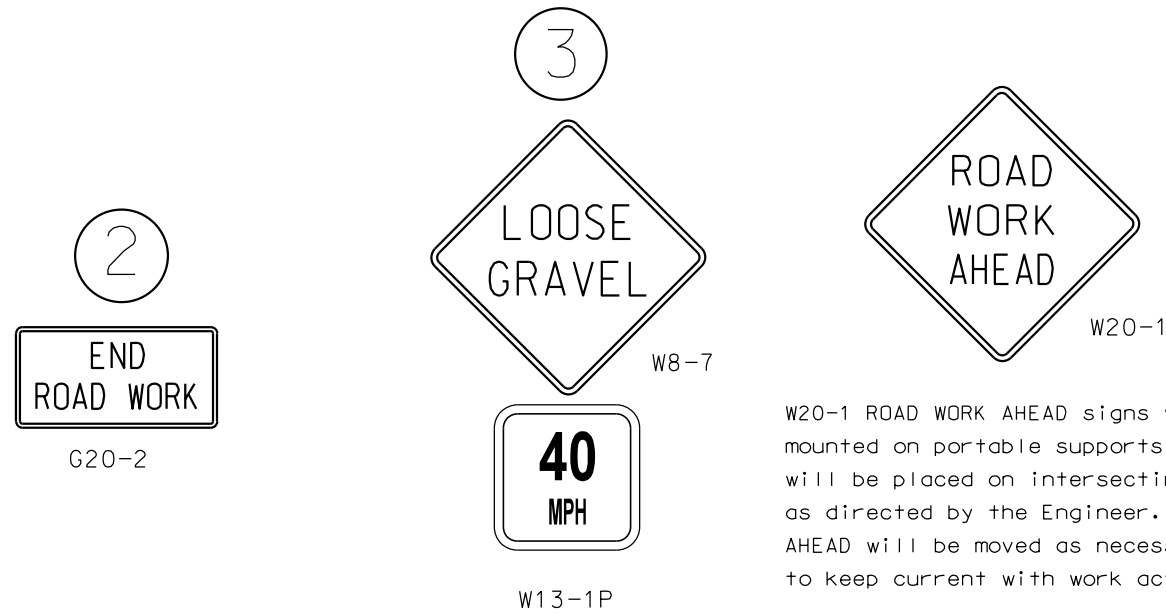
LENGTH: 10.775 MILES

PLOT SCALE - 1:1000

PLOT NAME - 1



Fixed Location Sign Type	Quantity
Road Work Next 11 Miles	2
End Road Work	2
Loose Gravel	8
40 MPH Sign Plaque	8



ROAD WORK
NEXT 11 MILES

G20-1

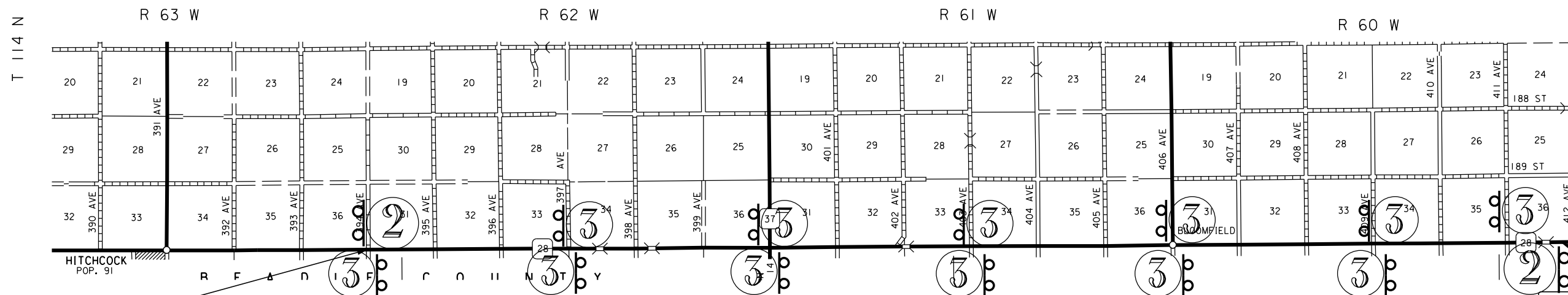
PLOTTED FROM - TRHJUNT04

FILE - ... \SECTION 2 US 212 TRAFFIC.DGN

SD 28 SEGMENT #3

SPINK COUNTY

LENGTH: 17.946 MILES



ROAD WORK
NEXT 18 MILES

G20-1

ROAD WORK
NEXT 18 MILES

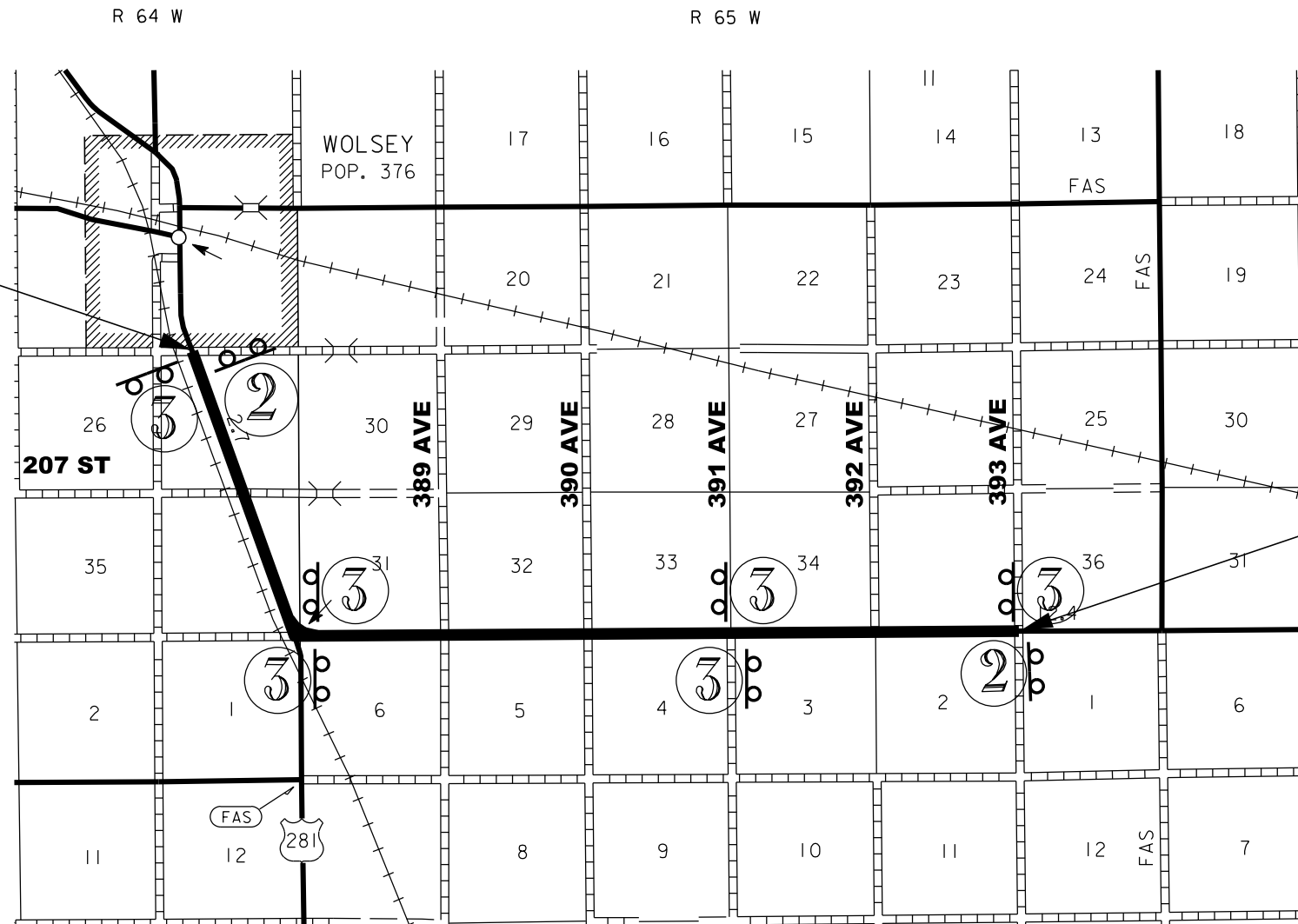
G20-1

Fixed Location Sign Type	Quantity
Road Work Next 18 Miles	2
End Road Work	2
Loose Gravel	12
40 MPH Sign Plaque	12



W20-1 ROAD WORK AHEAD signs will be mounted on portable supports and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD will be moved as necessary to keep current with work activities.

US 14 SEGMENT #4 BEADLE COUNTY LENGTH 7.324 MILES



ROAD WORK
NEXT 7 MILES
G20-1

ROAD WORK
NEXT 7 MILES
G20-1

Fixed Location Sign Type	Quantity
Road Work Next 7 Miles	2
End Road Work	2
Loose Gravel	6
40 MPH Sign Plaque	6



W20-1 ROAD WORK AHEAD signs will be mounted on portable supports and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD will be moved as necessary to keep current with work activities.

PLOT SCALE - 1:1000

PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

FILE - ... \SECTION 4 US 14 TRAFFIC.DGN

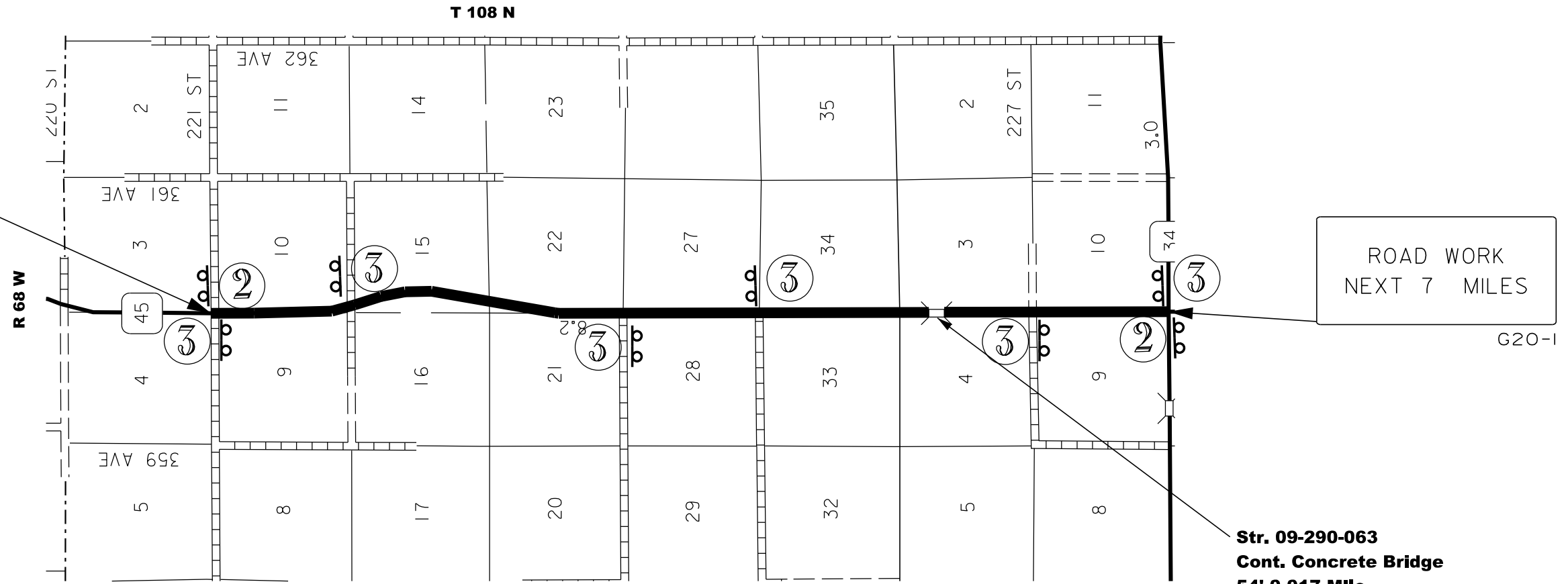
SD 45 SEGMENT #5 BUFFALO COUNTY

LENGTH: 7.148 MILES

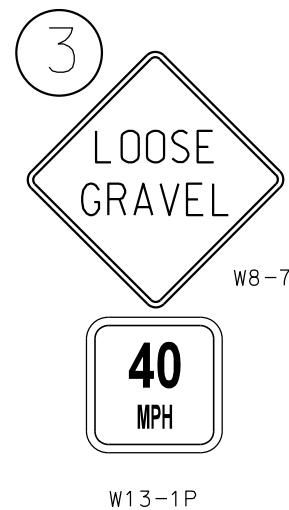


PLOT SCALE - 1:1000

PLOT NAME - 1



Fixed Location Sign Type	Quantity
Road Work Next 7 Miles	2
End Road Work	2
Loose Gravel	6
40 MPH Sign Plaque	6

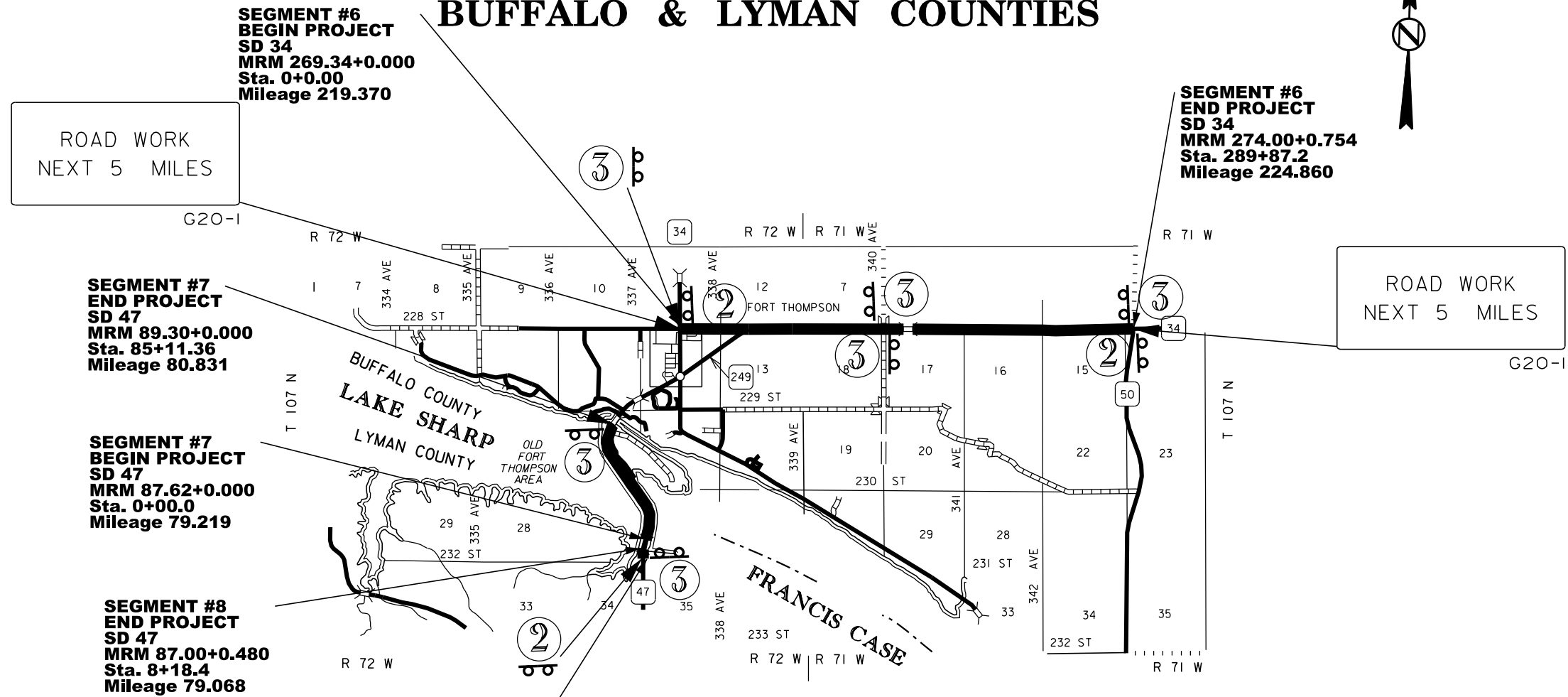


W20-1 ROAD WORK AHEAD signs will be mounted on portable supports and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD will be moved as necessary to keep current with work activities.

PLOTTED FROM - TRHJUNT04

FILE - ... \SECTION 5 SD 45 TRAFFIC.DGN

SD 47 & SD 34 SEGMENT #6, #7 & #8 BUFFALO & LYMAN COUNTIES



ROAD WORK
NEXT 5 MILES

ROAD WORK
NEXT 5 MILES

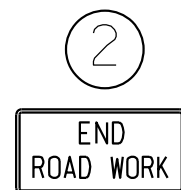
**SEGMENT #7
END PROJECT
SD 47**
MRM 89.30+0.000
Sta. 85+11.36
Mileage 80.831

**SEGMENT #7
BEGIN PROJECT
SD 47**
MRM 87.62+0.000
Sta. 0+00.0
Mileage 79.219

**SEGMENT #8
END PROJECT
SD 47**
MRM 87.00+0.480
Sta. 8+18.4
Mileage 79.068

**SEGMENT #8
BEGIN PROJECT
SD 47**
MRM 87.00+0.325
Sta. 0+0.00
Mileage 78.913

Fixed Location Sign Type	Quantity
Road Work Next 5 Miles	2
End Road Work	3
Loose Gravel	6
40 MPH Sign Plaque	6



G20-2



W8-7



W13-1P



W20-1

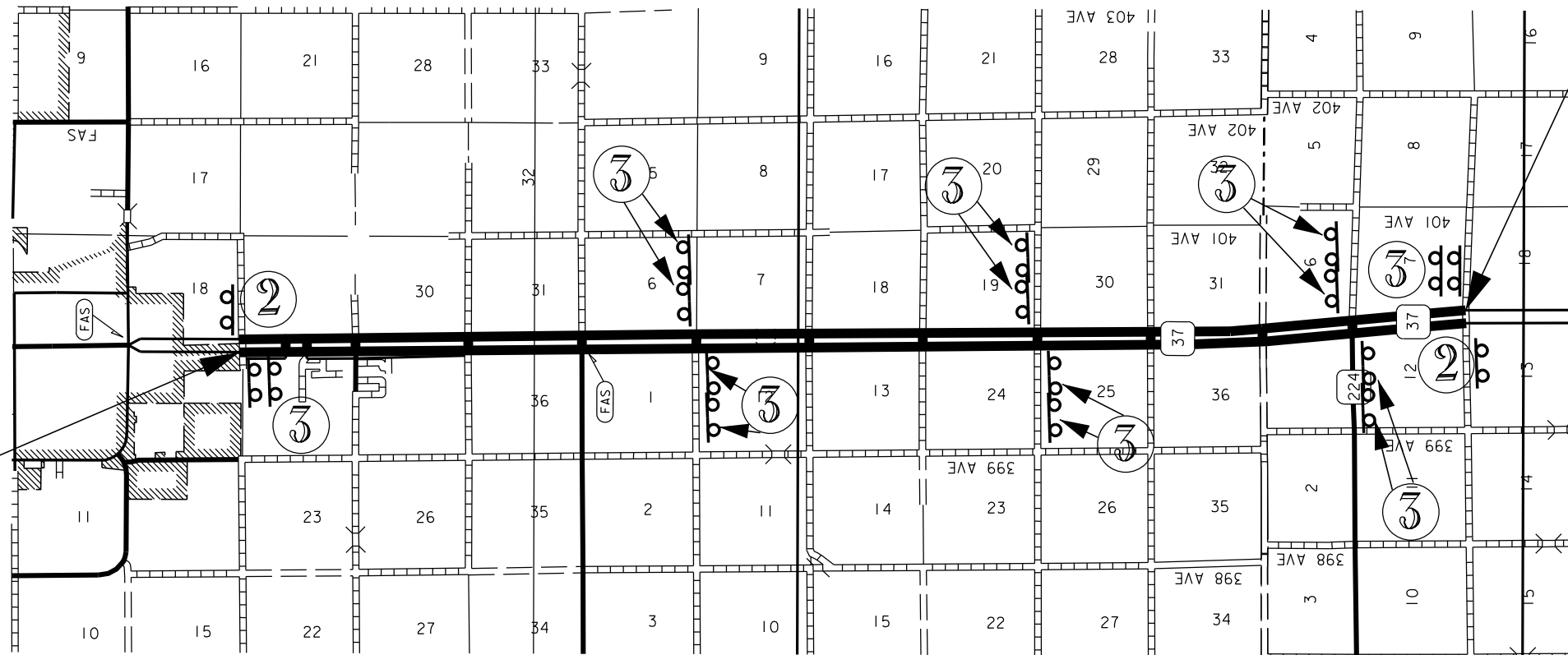
W20-1 ROAD WORK AHEAD signs will be mounted on portable supports and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD will be moved as necessary to keep current with work activities.

SD 37N & SD 37S SEGMENT #9 & #10 BEADLE & SANBORN COUNTIES



ROAD WORK
NEXT 11 MILES

G20-1



ROAD WORK
NEXT 11 MILES

G20-1

Fixed Location Sign Type	Quantity
Road Work Next 11 Miles	4
End Road Work	4
Loose Gravel	28
40 MPH Sign Plaque	28



G20-2



W8-7



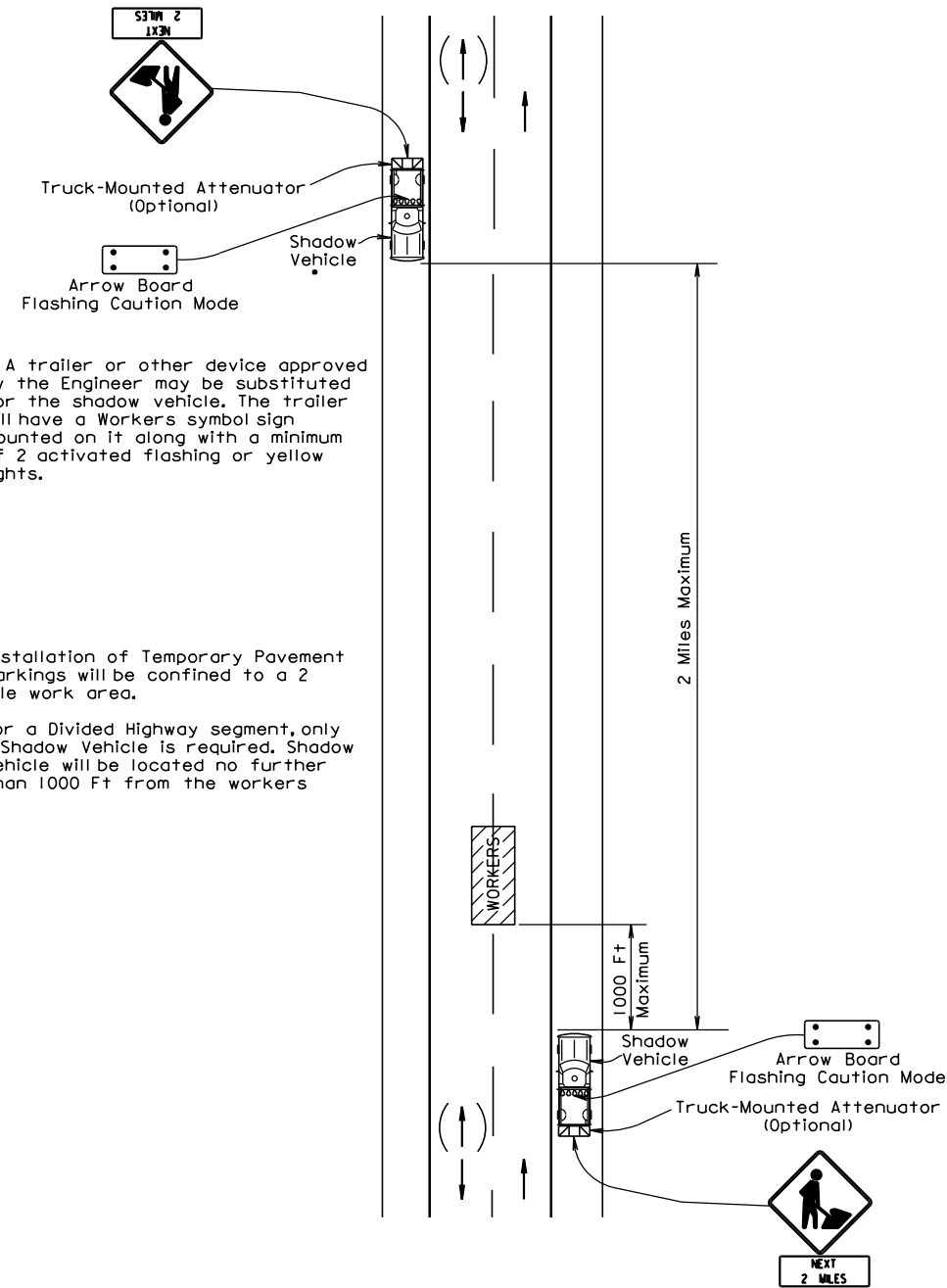
W13-1P



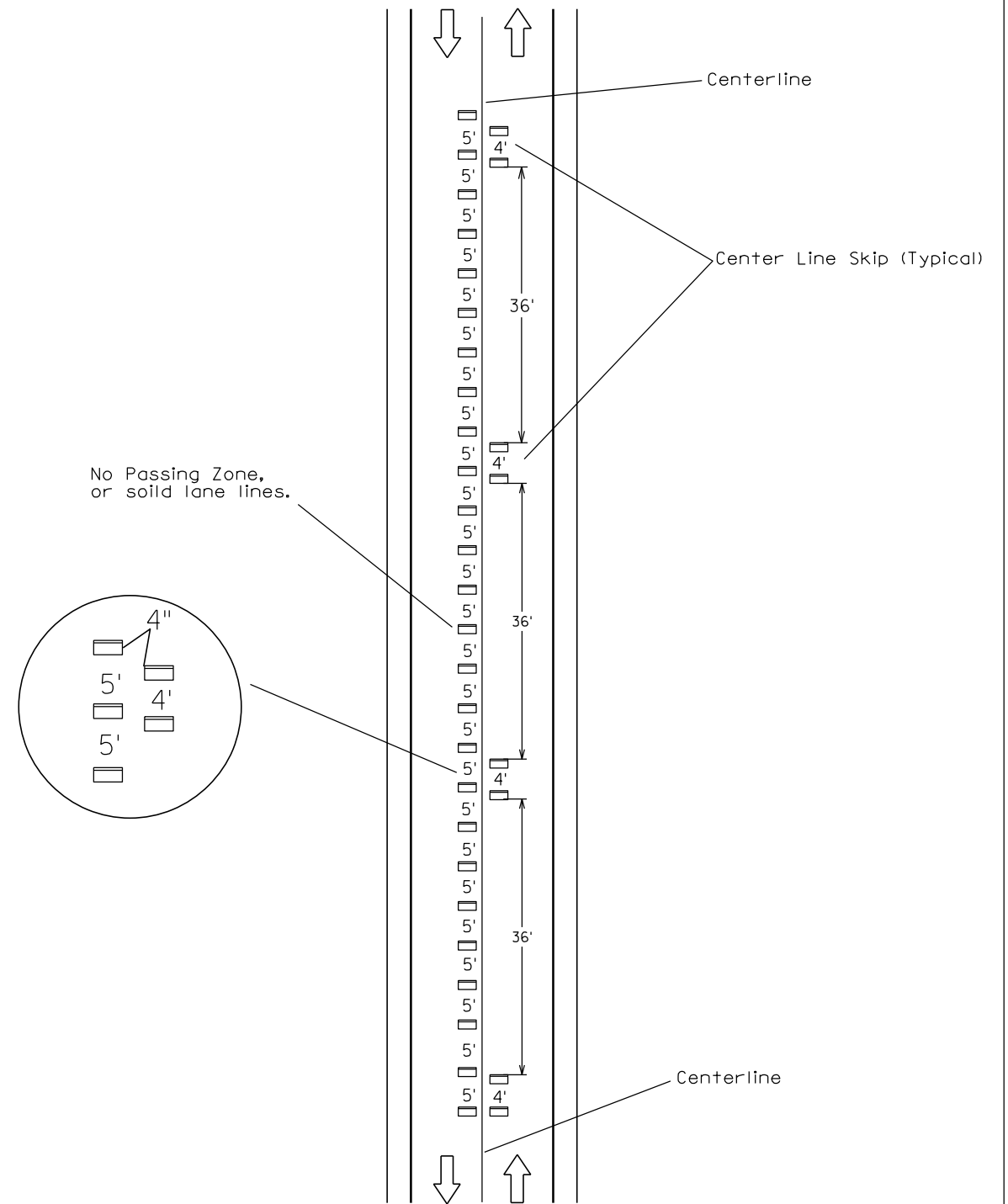
W20-1

W20-1 ROAD WORK AHEAD signs will be mounted on portable supports and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD will be moved as necessary to keep current with work activities.

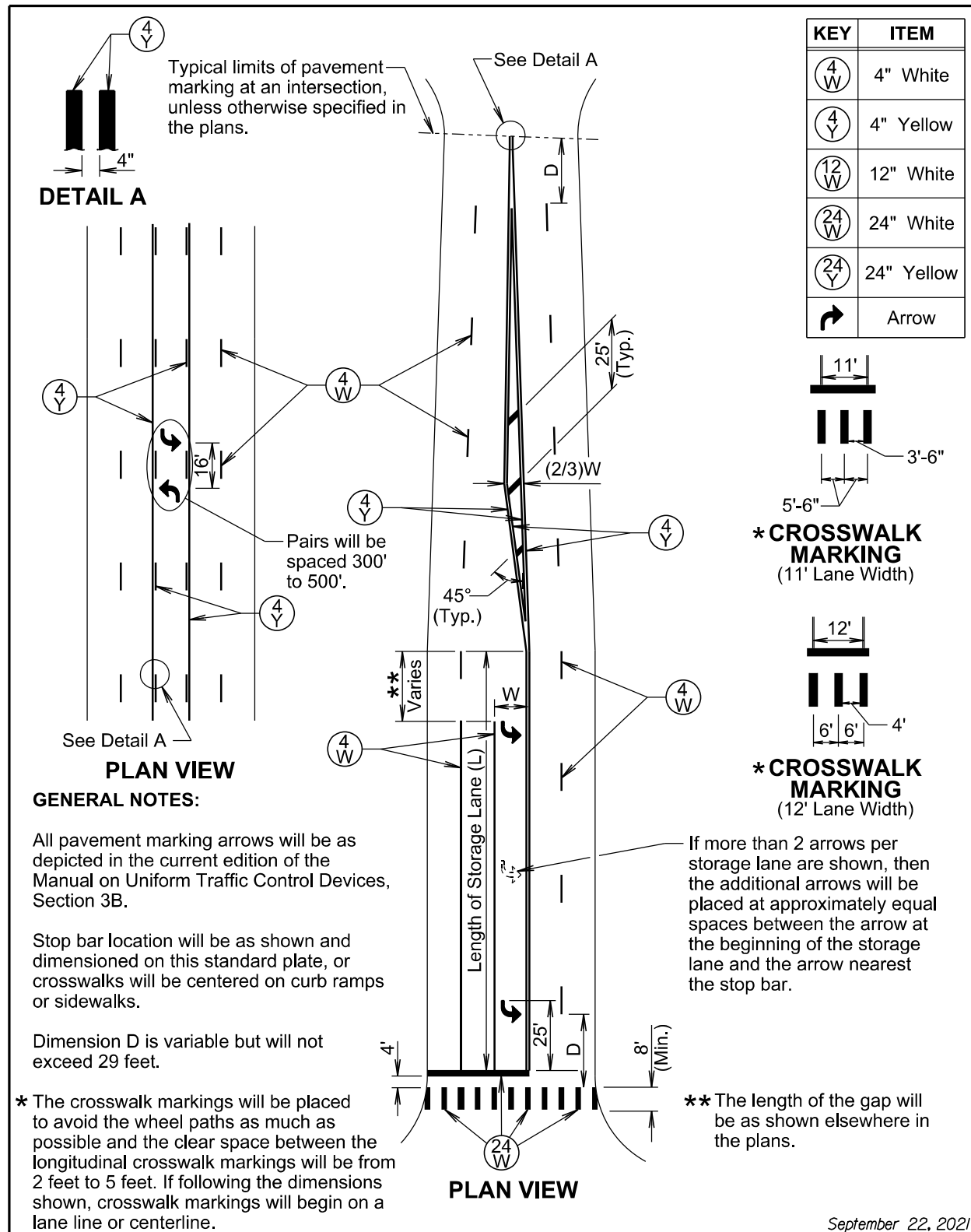
**GUIDES FOR TRAFFIC CONTROL DEVICES
APPLICATION OF TEMPORARY FLEXIBLE VERTICAL MARKERS**



**DETAILS FOR TRAFFIC CONTROL DEVICES
TEMPORARY ROAD MARKER INSTALLATION**



PLOT SCALE - 1:1000



GENERAL NOTES:

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

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

Dimension D is variable but will not exceed 29 feet.

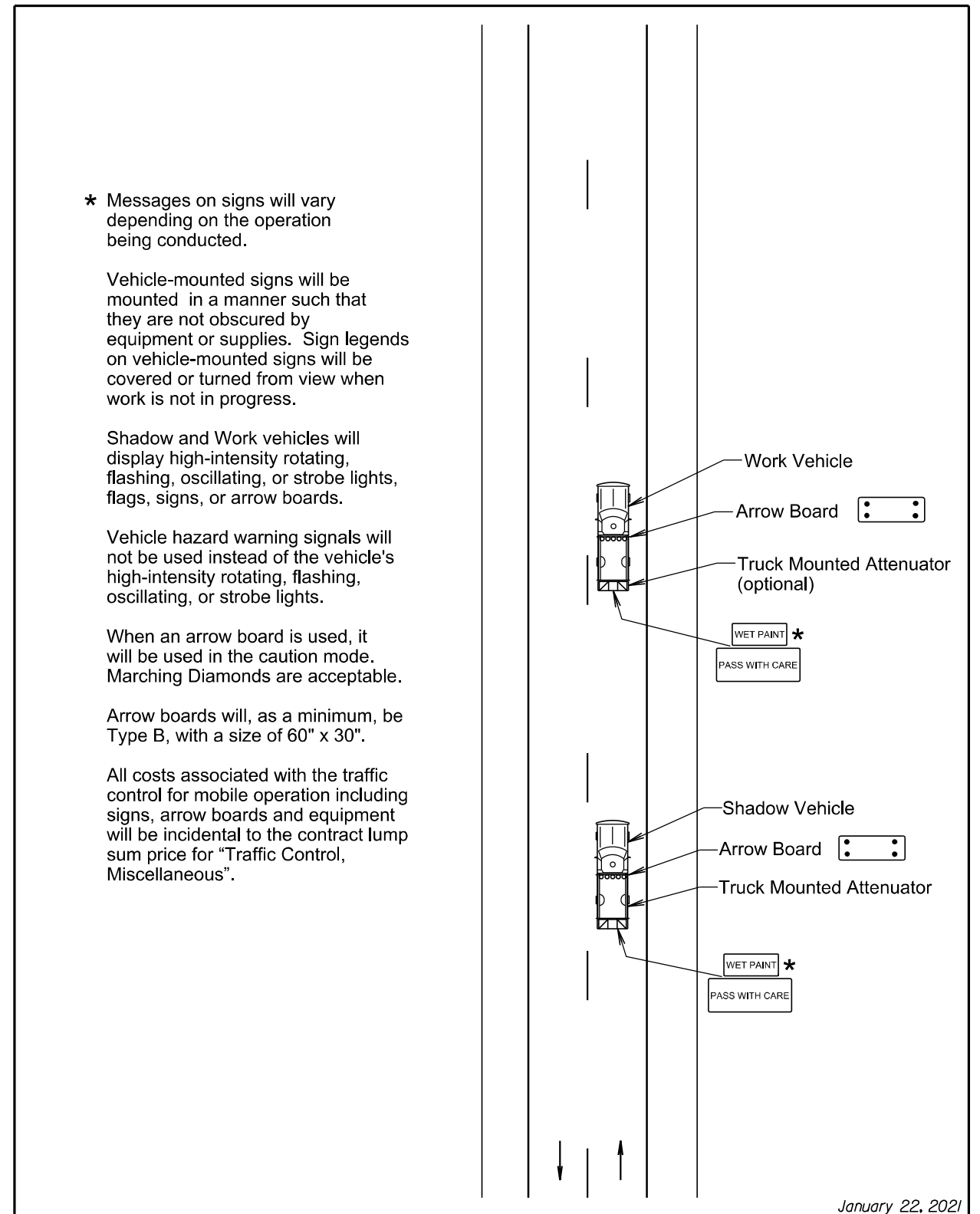
* The crosswalk markings will be placed to avoid the wheel paths as much as possible and the clear space between the longitudinal crosswalk markings will be from 2 feet to 5 feet. If following the dimensions shown, crosswalk markings will begin on a lane line or centerline.

If more than 2 arrows per storage lane are shown, then the additional arrows will be placed at approximately equal spaces between the arrow at the beginning of the storage lane and the arrow nearest the stop bar.

** The length of the gap will be as shown elsewhere in the plans.

September 22, 2021

Published Date: 2024	S D D O T	PLATE NUMBER
		633.01
		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.

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: 2024	S D D O T	PLATE NUMBER
		634.06
		Sheet 1 of 1

PLOTTED FROM - TRHJUNT04

PLOT NAME - 1

FILE - ... \DESIGN PLANS\BORDER.DGN

PLOT SCALE - 1:1000

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

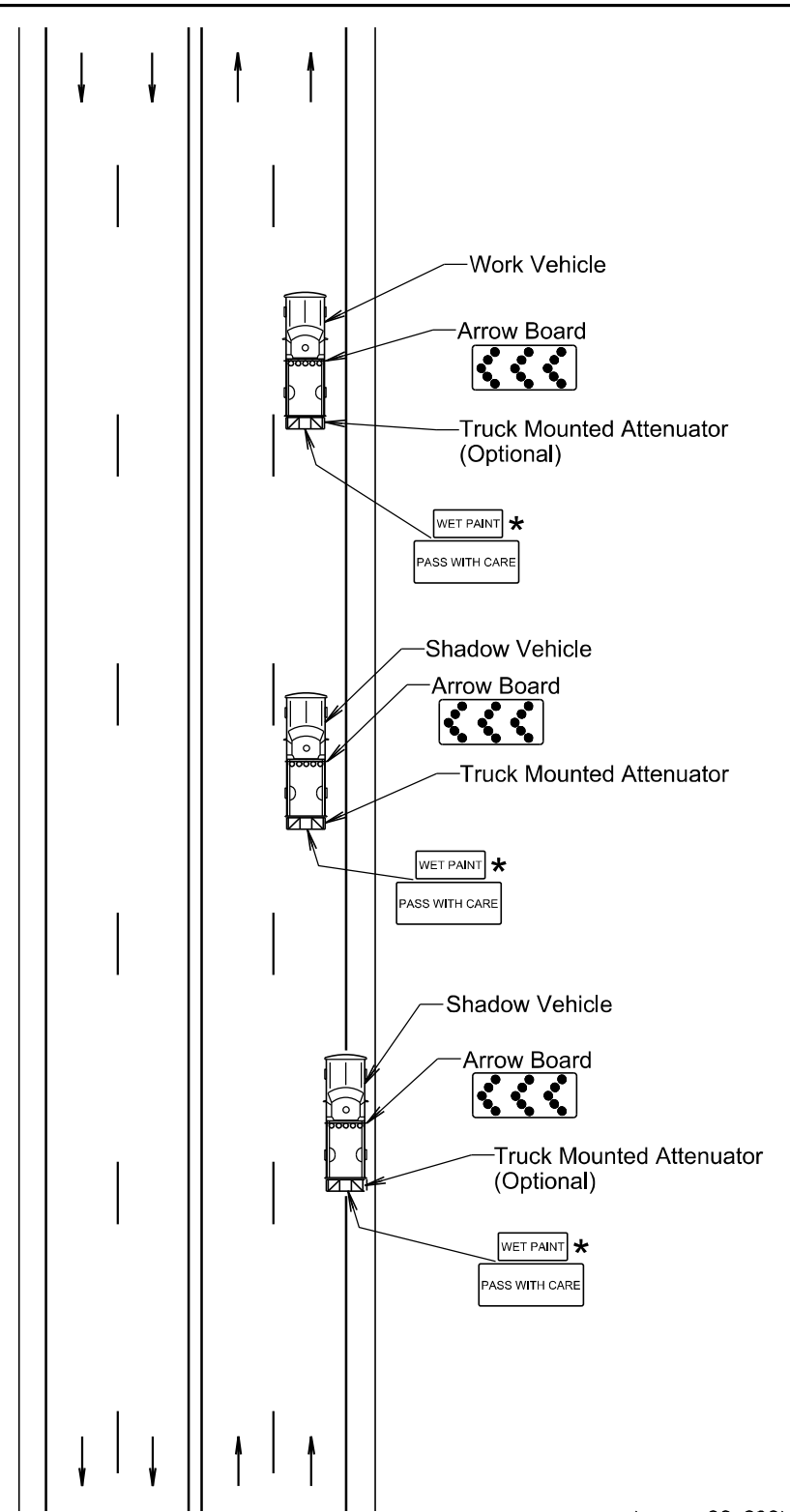
Vehicle-mounted signs will be mounted in a manner such that they are not obscured by equipment or supplies. Sign legends on vehicle-mounted signs will be covered or turned from view when work is not in progress.

Shadow and Work vehicles will display high-intensity rotating, flashing, oscillating, or strobe lights, 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

SDDOT	MOBILE OPERATIONS ON MULTI-LANE HIGHWAYS	PLATE NUMBER 634.08
	Published Date: 2024	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.

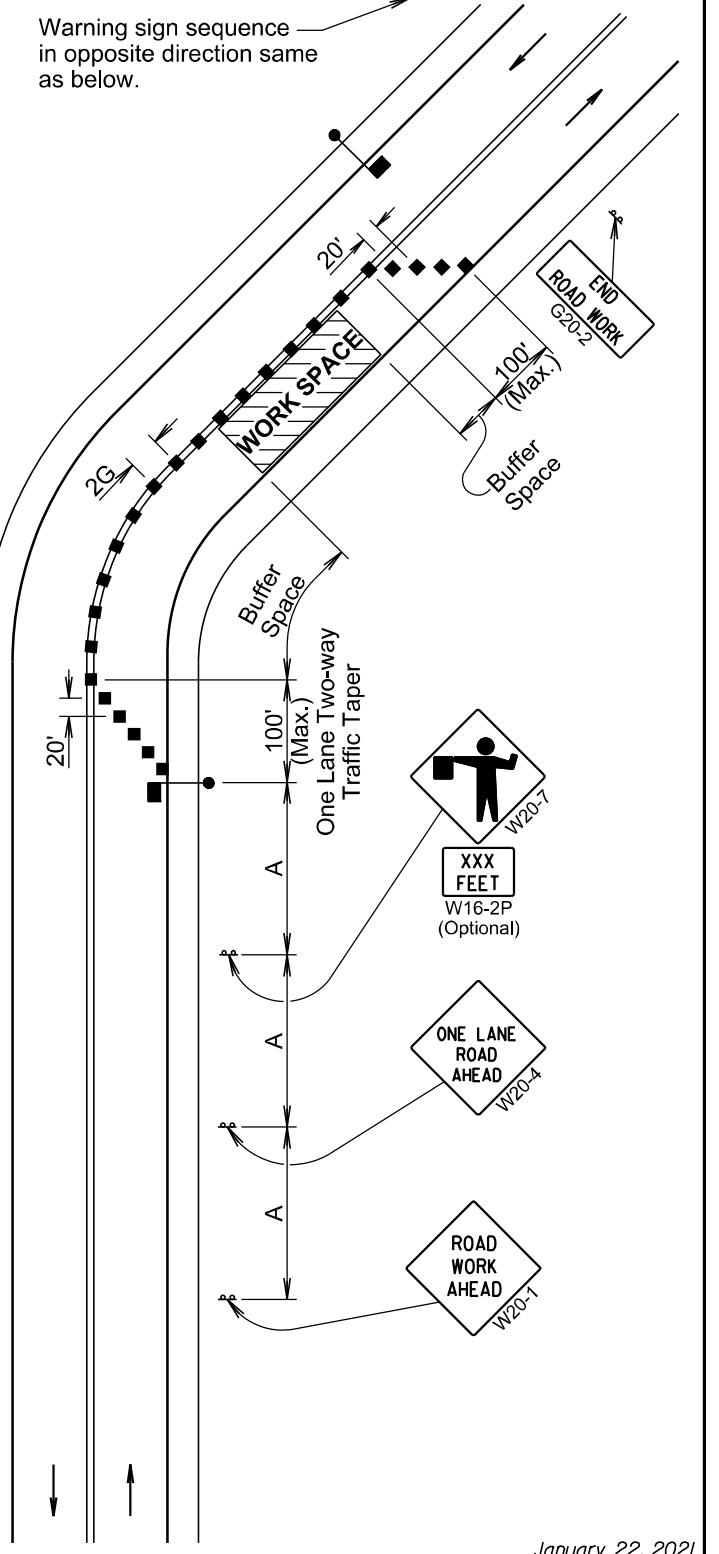
The channelizing devices will be drums or 42" cones.

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.



Warning sign sequence in opposite direction same as below.

SDDOT	LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
	Published Date: 2024	Sheet 1 of 1

PLOTTED FROM - TRHJINT04

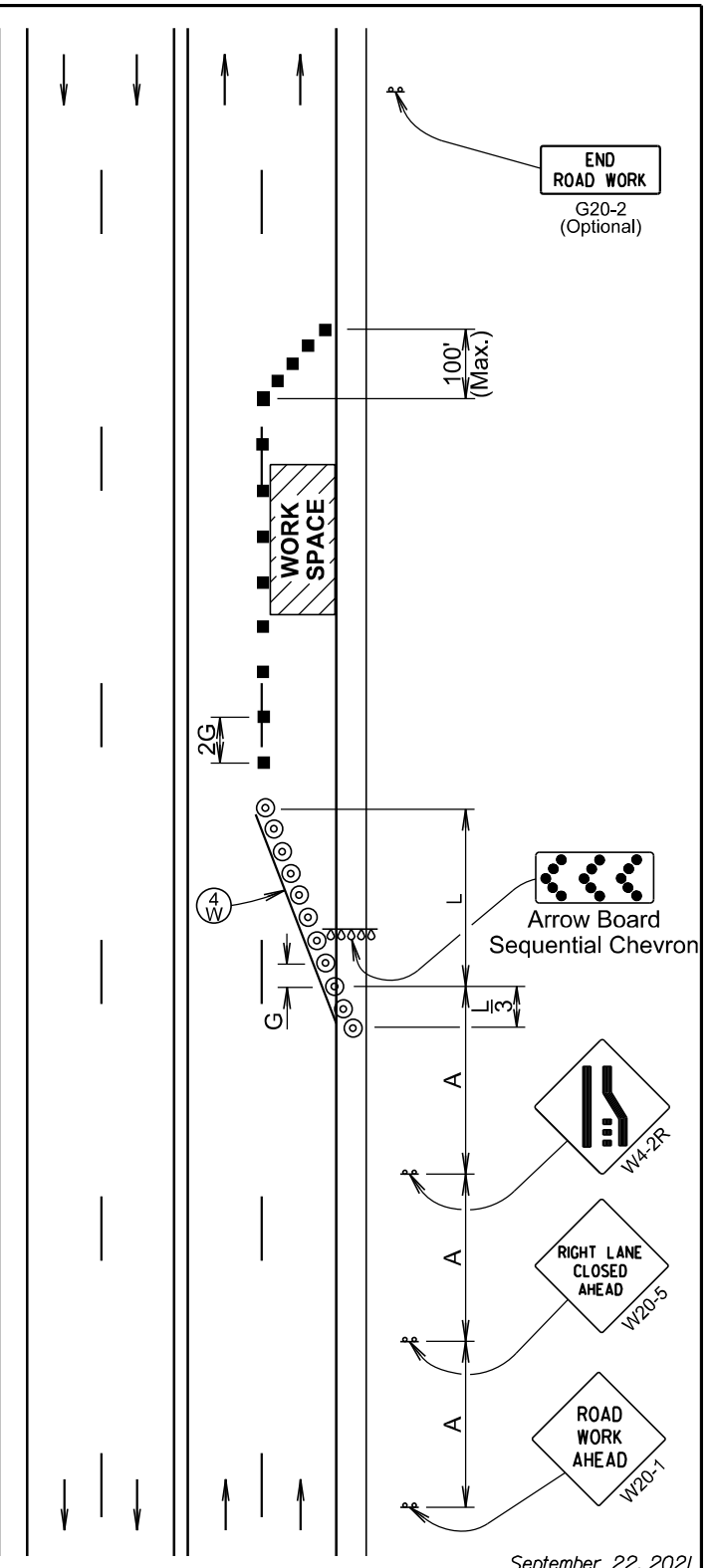
PLOT NAME - 1

FILE - ... \DESIGN PLANS\BORDER.DGN

PLOT SCALE - 1" = 100'

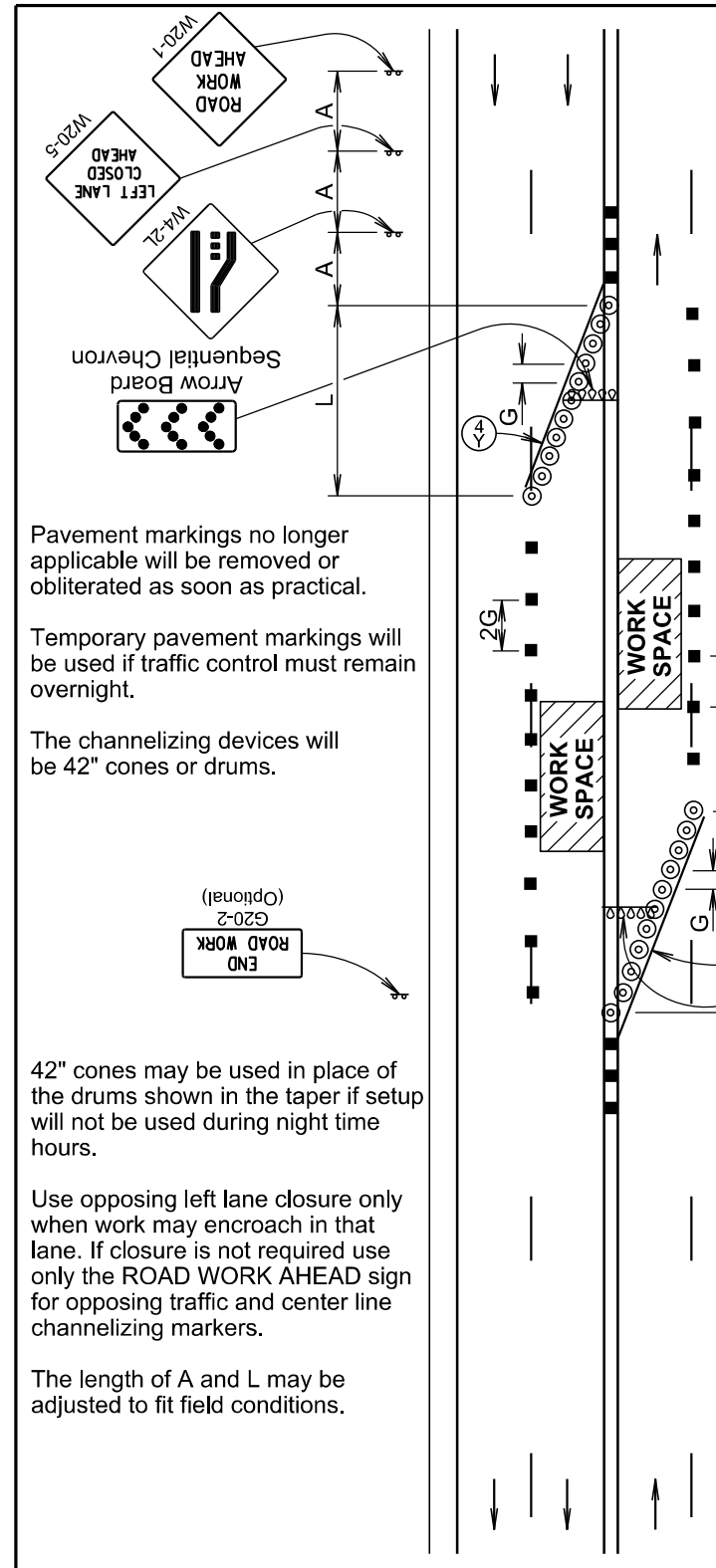
Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

- * Spacing is 40' for 42" cones.
 - ⊙ Reflectorized Drum
 - Channelizing Device
 - ④ 4" White Temporary Pavement Marking
- The channelizing devices will be 42" cones or drums.
- 42" cones may be used in place of the drums shown in the taper if setup will not be used during night time hours.
- Temporary pavement markings will be used if traffic control must remain overnight.
- The length of A and L may be adjusted to fit field conditions.



September 22, 2021

Published Date: 2024	S D D O T	4-LANE UNDIVIDED, RIGHT LANE CLOSED	PLATE NUMBER 634.47
			Sheet 1 of 1



August 31, 2022

Published Date: 2024	S D D O T	4-LANE UNDIVIDED, LEFT LANE CLOSED	PLATE NUMBER 634.48
			Sheet 1 of 1

Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50 *
55	750	660	50 *
60 - 65	1000	780	50 *

- * Spacing is 40' for 42" cones.
- ⊙ Reflectorized Drum
- Channelizing Device
- ④ 4" Yellow Temporary Pavement Marking

Pavement markings no longer applicable will be removed or obliterated as soon as practical.

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

The channelizing devices will be 42" cones or drums.

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

Use opposing left lane closure only when work may encroach in that lane. If closure is not required use only the ROAD WORK AHEAD sign for opposing traffic and center line channelizing markers.

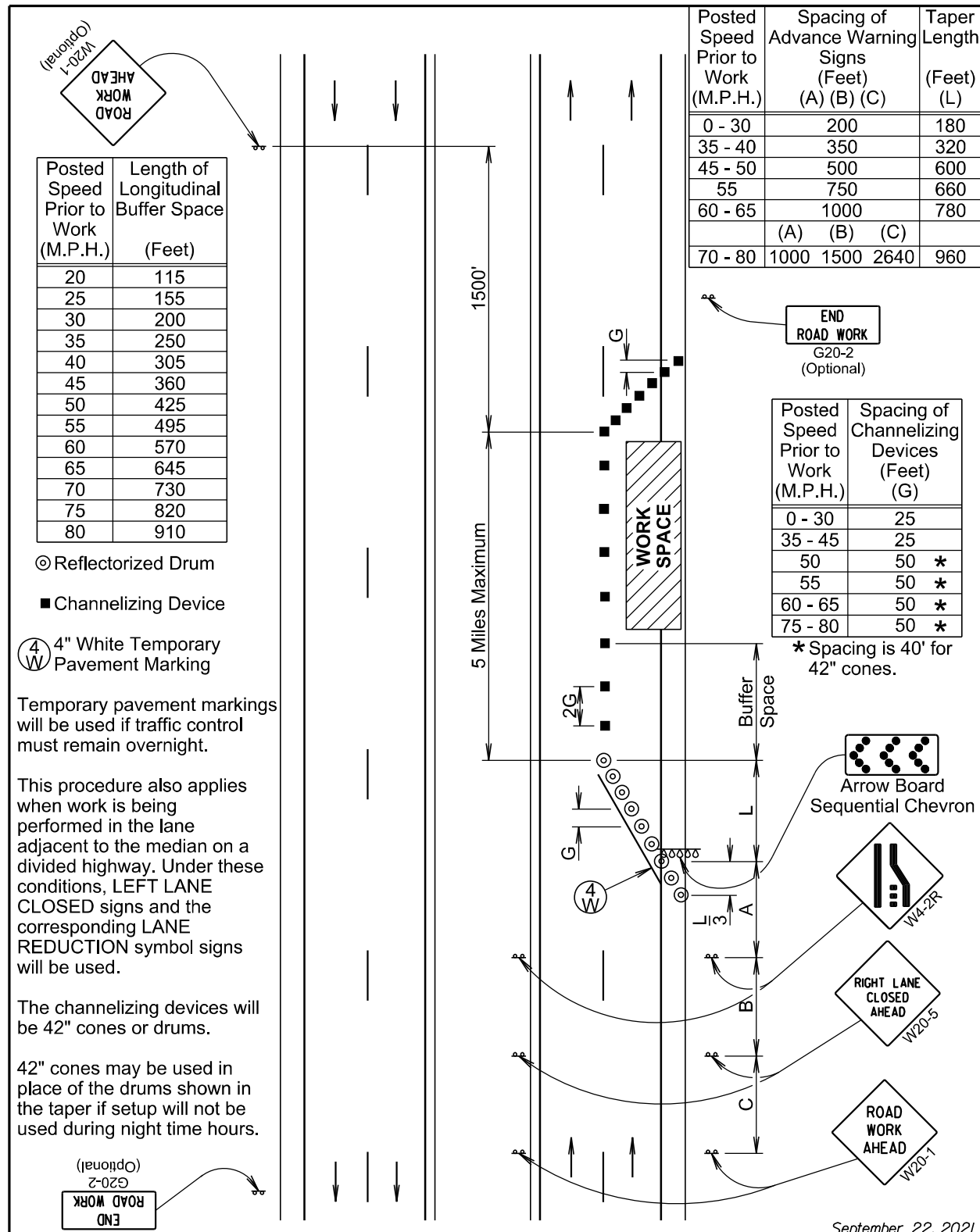
The length of A and L may be adjusted to fit field conditions.

PLOT NAME - 1

FILE ... \DESIGN PLANS\BORDER.DGN

PLOTTED FROM - TRHJUNT04

PLOT SCALE - 1:1000



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

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

- ⊙ Reflectorized Drum
- Channelizing Device

④ 4" White Temporary Pavement Marking

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

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

The channelizing devices will be 42" cones or drums.

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

September 22, 2021

Published Date: 2024

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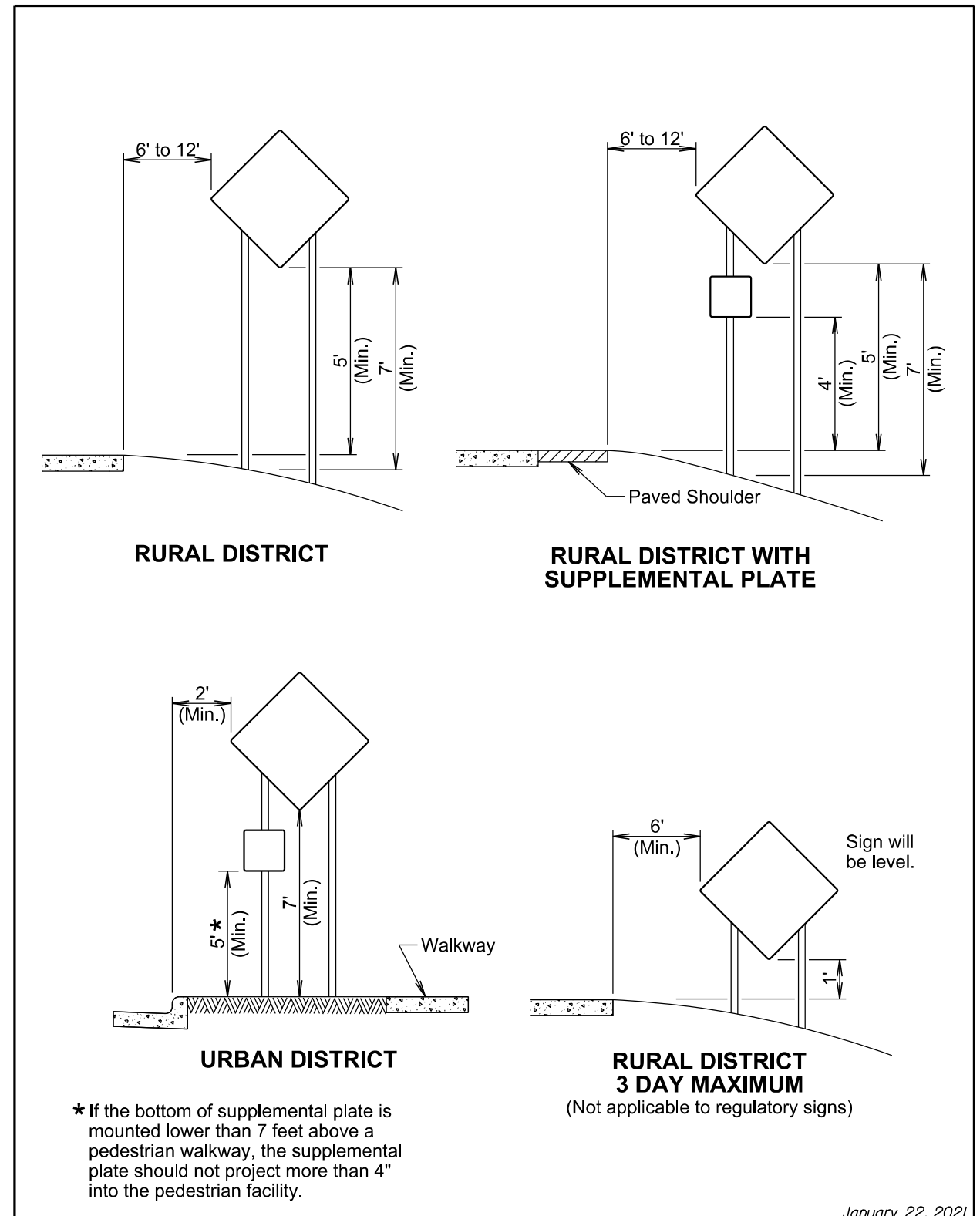
LANE CLOSURE WITHOUT BARRIER

PLATE NUMBER
634.64

Sheet 1 of 1

PLOT NAME - 1

FILE - ... \DESIGN PLANS\BORDER.DGN



* 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: 2024

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**CRASHWORTHY SIGN SUPPORTS
(Typical Construction Signing)**

PLATE NUMBER
634.85

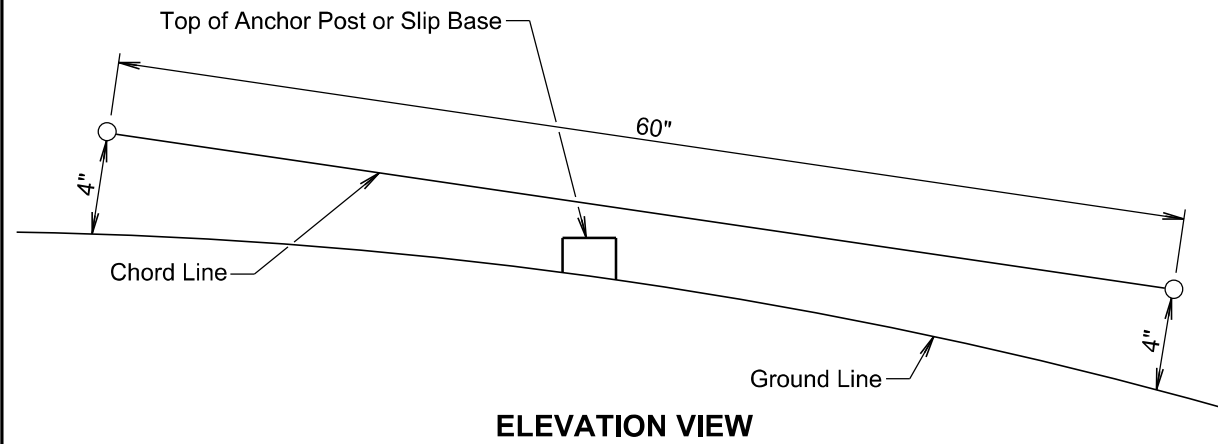
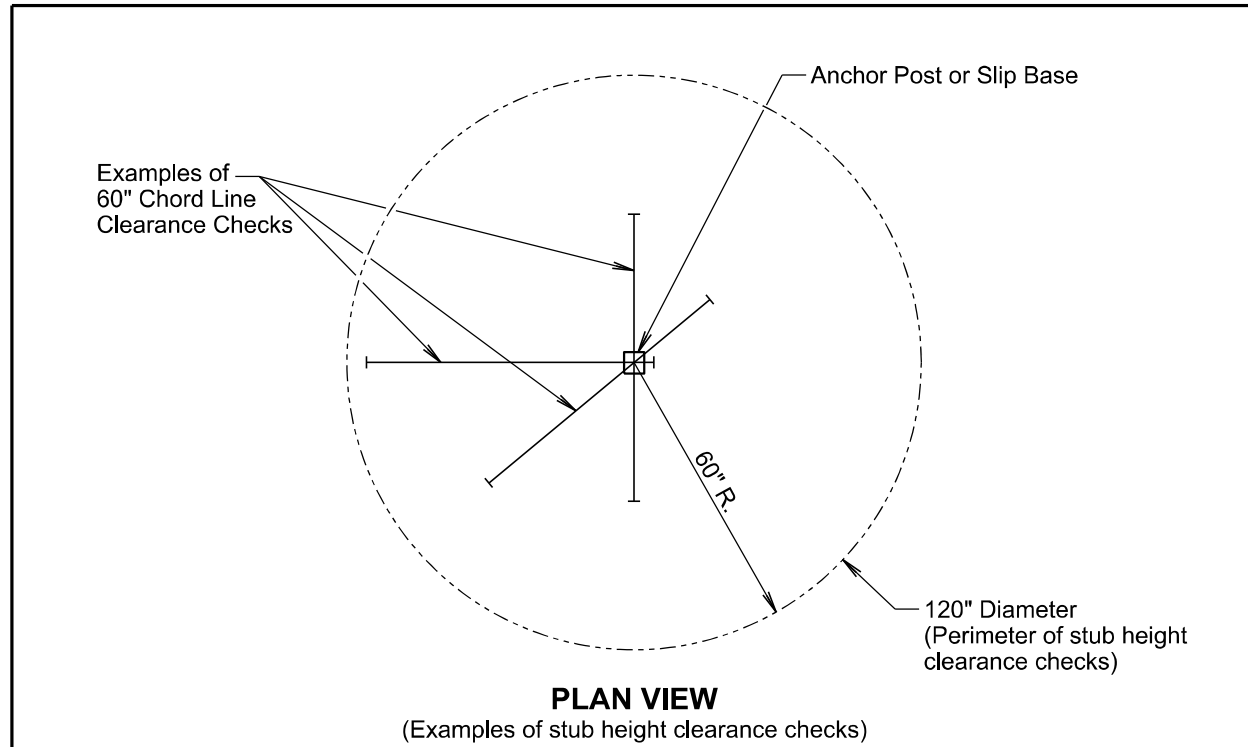
Sheet 1 of 1

PLOTTED FROM - TRHJUNT04

PLOT SCALE - 1:1000

PLOT NAME - 1

FILE - ... \DESIGN PLANS\BORDER.DGN



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

<i>Published Date: 2024</i>	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

Itemized list for Traffic Control

Segment #1 (SD 37)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	8	48" x 48"	16.0	128.0
W13-1P	40 MPH ADVISORY SPEED (plaque)	8	30" x 30"	6.3	50.4
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	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 11 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					339.6

Segment #2 (US 212)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	8	48" x 48"	16.0	128.0
W13-1P	40 MPH ADVISORY SPEED (plaque)	8	30" x 30"	6.3	50.4
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	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 11 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					339.6

Segment #3 (SD 28)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	12	48" x 48"	16.0	192.0
W13-1P	40 MPH ADVISORY SPEED (plaque)	12	30" x 30"	6.3	75.6
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	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 18 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					428.8

Segment #4 (US 14)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	6	48" x 48"	16.0	96.0
W13-1P	40 MPH ADVISORY SPEED (plaque)	6	30" x 30"	6.3	37.8
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	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					295.0

Segment #5 (SD 45)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	6	48" x 48"	16.0	96.0
W13-1P	40 MPH ADVISORY SPEED (plaque)	6	30" x 30"	6.3	37.8
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	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					295.0

Segment #6 (SD 34)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		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	40 MPH ADVISORY SPEED (plaque)	4	30" x 30"	6.3	25.2
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	4	30" x 18"	3.8	15.2
G20-1	ROAD WORK NEXT 5 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					250.4

Segment #7, & #8 (SD 47)

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
W8-7	LOOSE GRAVEL	2	48" x 48"	16.0	32.0
W13-1P	40 MPH ADVISORY SPEED (plaque)	2	30" x 30"	6.3	12.6
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	4	30" x 18"	3.8	15.2
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					192.3

Segment #9 & #10 (SD 37 N & SD 37 S)

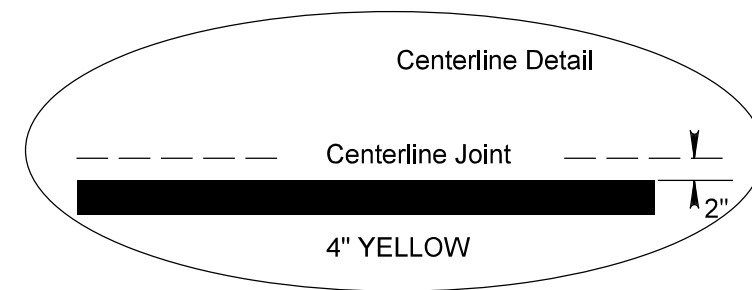
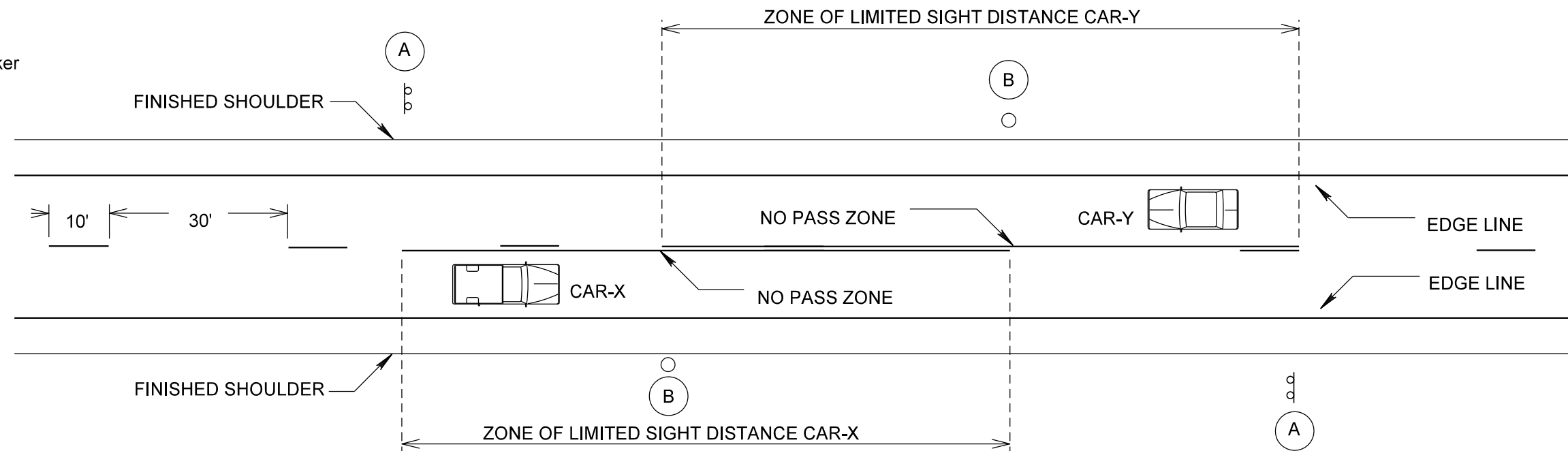
SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W4-2	LEFT or RIGHT LANE ENDS (symbol)	8	48" x 48"	16.0	128.0
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-7	LOOSE GRAVEL	28	48" x 48"	16.0	448.0
W13-1P	40 MPH ADVISORY SPEED (plaque)	28	30" x 30"	6.3	176.4
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W20-4	ONE LANE ROAD AHEAD	4	48" x 48"	16.0	64.0
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	8	48" x 48"	16.0	128.0
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 11 MILES	4	36" x 18"	4.5	18.0
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					1202.8

ITEM DESCRIPTION	QUANTITY
Type C Advance Warning Arrow Board	2 Each

PAVEMENT MARKING LAYOUT

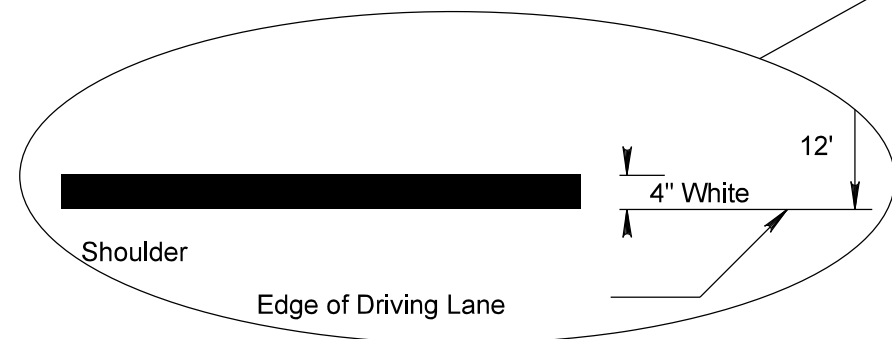
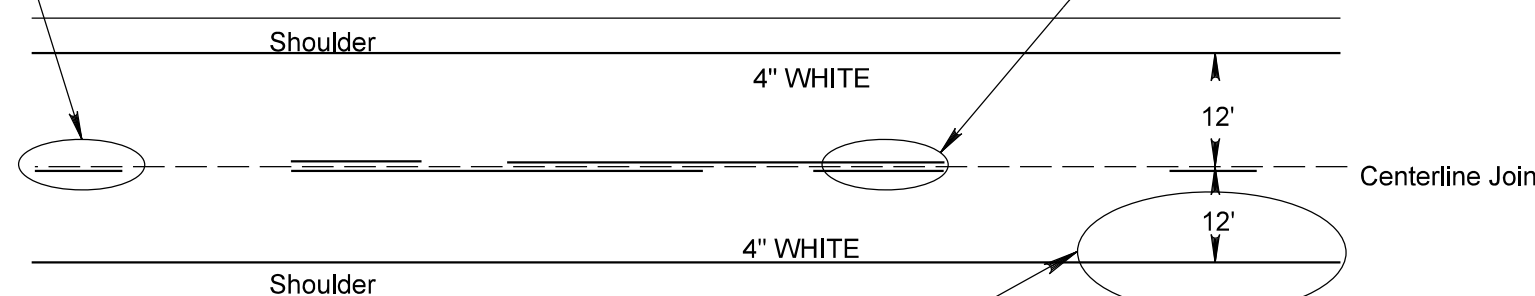
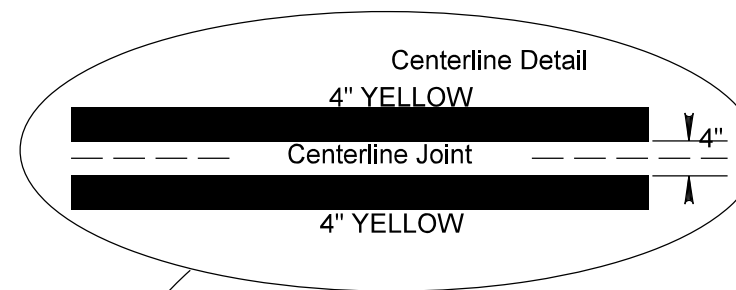


B End of Zone Marker



NOTE: A TWO "GUN" SYSTEM WILL BE USED TO OBTAIN THIS PATTERN.

WHEN A SINGLE SKIP LINE EXISTS, THE SKIP WILL BE PLACED TO THE SOUTH OR EAST OF THE CENTERLINE JOINT.



FURNISHING AND APPLYING HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

1. The approximate paint application rates will be as follows:

- Undivided Roadway
- Dashed 4" Line
7.6 Gallons/Pass-Mile
- Solid 4" Line
27.8 Gallons/Pass-Mile

2. The typical pavement markings as shown on this sheet will be applied throughout the entire length of the project.

3. Exact location of the NO PASSING ZONE lines will be determined in the field by the Engineer. A dash of white paint will mark the beginning and end of all no passing zones. NO PASSING ZONE signs and the ending post in fence lines, if present, will not be used as the beginning and ending NO PASSING ZONE lines.

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

