

STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION  
PLANS FOR PROPOSED

PROJECT NH-P 0011(321)

US HWY 12  
SD HWY 20, 25, 45, 47

BROWN, DAY, EDMUNDS, FAULK,  
MCPHERSON, POTTER COUNTIES

Asphalt Surface Treatment

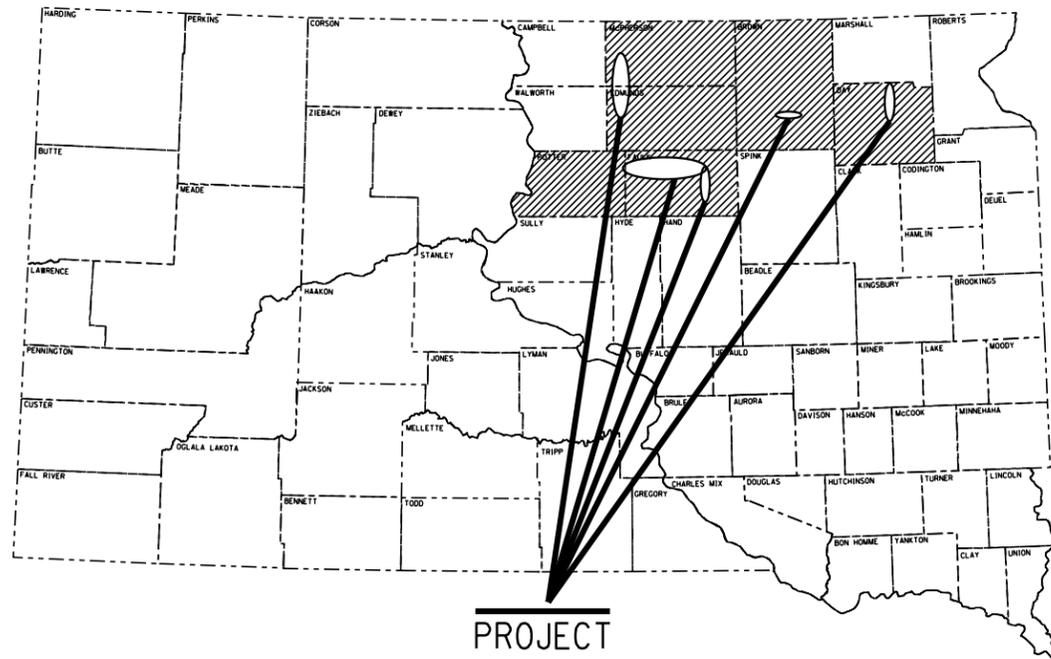
PCN 09WL

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(321)	1	28

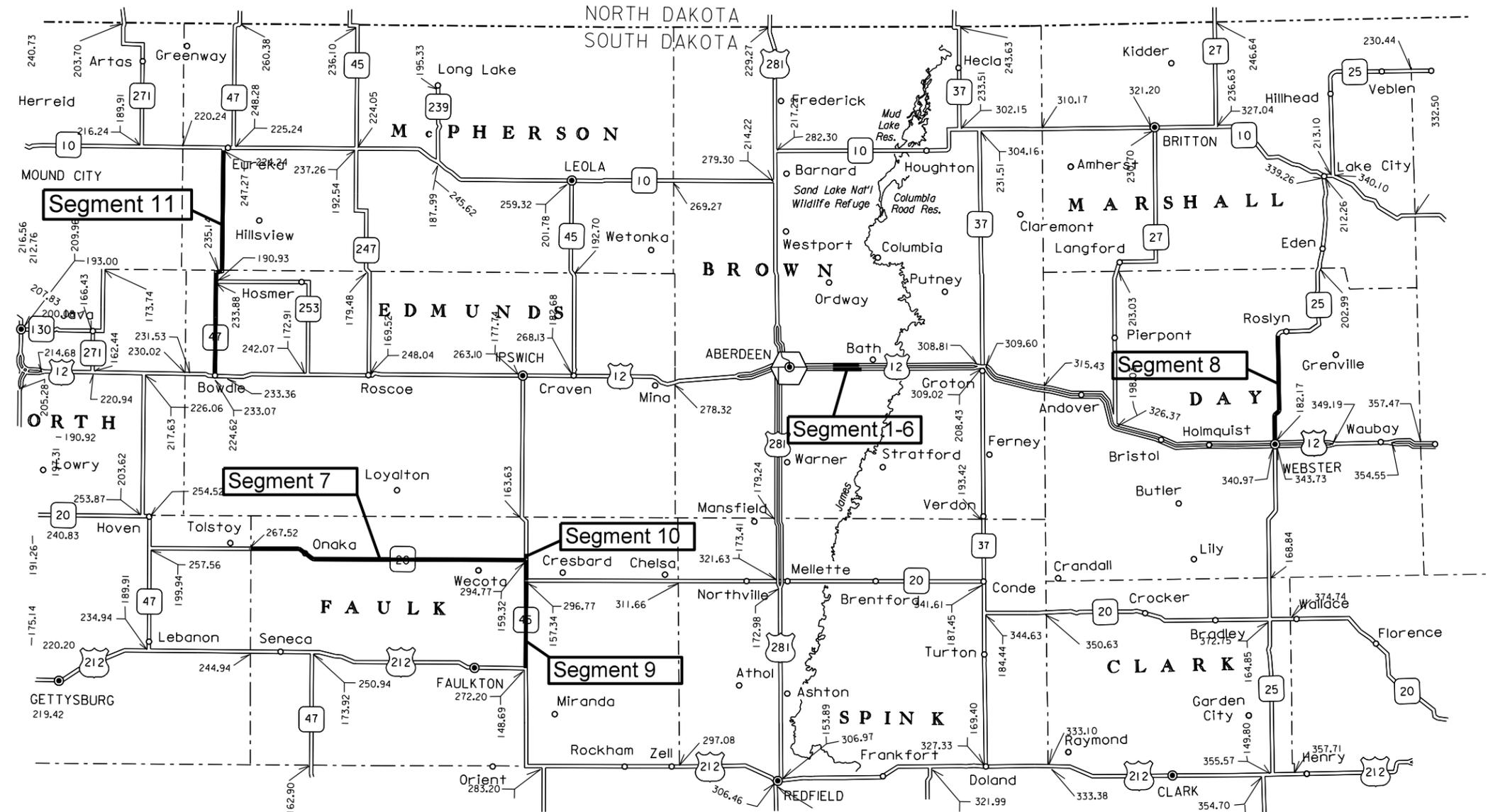
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PLOT SCALE - 1:66872.5



PROJECT



STORM WATER PERMIT  
(None Required)

11

April 15, 2026

PLOTTED FROM - TRAB10200

FILE - ... \BROWN09WL\09WL TITLE SHEET.DGN

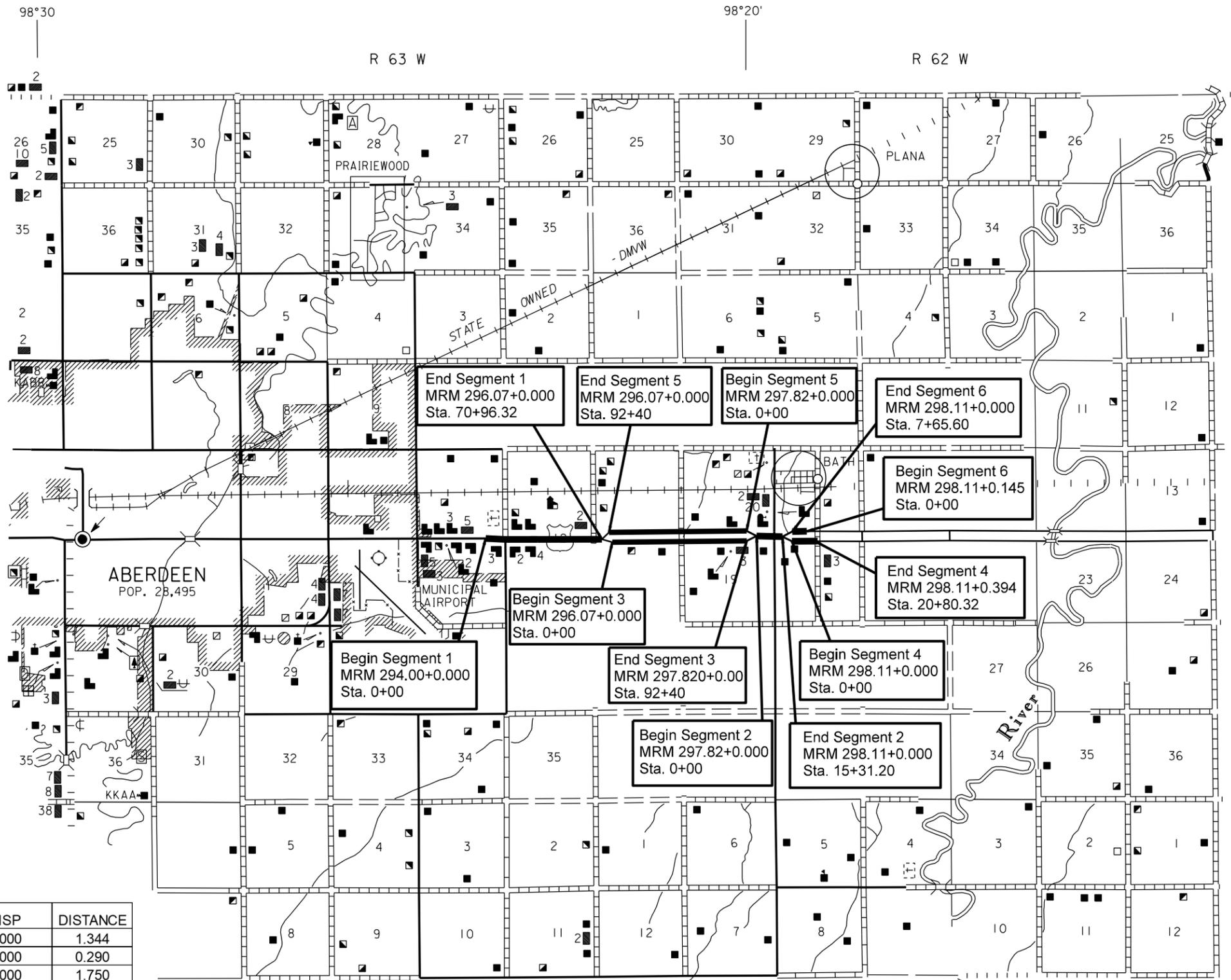
PLOT NAME - 1

# US HWY 12 EAST OF ABERDEEN SEGMENTS 1-6

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(321)	2	28

PLOT SCALE - 1:7066.7

PLOT NAME - 1



### Segment 1

**DESIGN DESIGNATION**

AAADT (2024)	9939
AAADT (2044)	13179
DHV	1462
D	50%
DHV T%	7.1%
AAADT T%	15.5%
V	55 M.P.H.

### Segment 2

**DESIGN DESIGNATION**

AAADT (2024)	5496
AAADT (2044)	7288
DHV	808
D	50%
DHV T%	7.9%
AAADT T%	17.3%
V	55 M.P.H.

### Segment 3

**DESIGN DESIGNATION**

AAADT (2024)	3308
AAADT (2044)	4386
DHV	486
D	50%
DHV T%	5.2%
AAADT T%	11.5%
V	55 M.P.H.

### Segment 4

**DESIGN DESIGNATION**

AAADT (2024)	2878
AAADT (2044)	3816
DHV	423
D	50%
DHV T%	7.9%
AAADT T%	17.3%
V	70 M.P.H.

### Segment 5

**DESIGN DESIGNATION**

AAADT (2024)	3308
AAADT (2044)	4386
DHV	486
D	50%
DHV T%	5.2%
AAADT T%	11.4%
V	55 M.P.H.

### Segment 6

**DESIGN DESIGNATION**

AAADT (2024)	2878
AAADT (2044)	3816
DHV	423
D	50%
DHV T%	7.9%
AAADT T%	17.3%
V	70 M.P.H.

SEGMENT	HWY	START MRM	DISP	END MRM	DISP	DISTANCE
1	12	294.00	0.726	296.07	0.000	1.344
2	12	297.82	0.000	298.11	0.000	0.290
3	12 E	296.07	0.000	297.82	0.000	1.750
4	12 E	298.11	0.000	298.11	0.394	0.394
5	12W	297.82	0.000	296.07	0.000	1.750
6	12W	298.11	0.145	298.11	0.000	0.145

PLOTTED FROM - TRAB10200

FILE - ... \09WL SEGMENTS 1-6.DGN

# SD HWY 20 EAST OF TOLSTOY WEST OF CRESBARD SEGMENT 7 SD 45 NORTH OF 45 & 212 JCT TO NORTH OF 45 & 20 JCT SEGMENTS 9 & 10

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(321)	3	28

SEGMENT	HWY	START MRM	DISP	END MRM	DISP	DISTANCE
7	20	267.00	0.323	296.77	0.000	29.447
9	45	148.69	0.155	157.34	0.000	8.495
10	45	159.32	0.000	159.32	0.182	0.182

### Segment 7

DESIGN DESIGNATION

AADT (2024)	255
AADT (2044)	362
DHV	47
D	51%
DHV T%	7.3%
AADT T%	16.0%
V	65 M.P.H.

### Segment 9

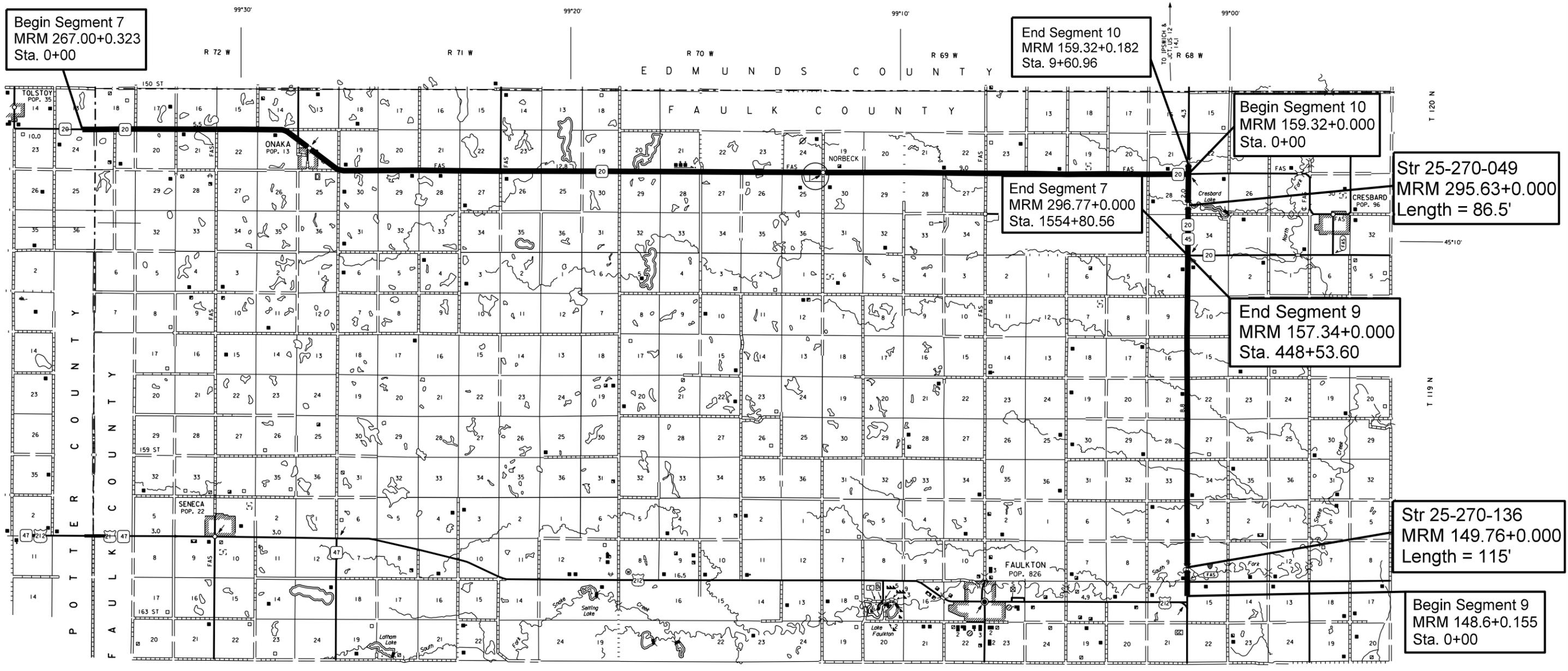
DESIGN DESIGNATION

AADT (2024)	855
AADT (2044)	1235
DHV	137
D	51%
DHV T%	11.8%
AADT T%	25.9%
V	65 M.P.H.

### Segment 10

DESIGN DESIGNATION

AADT (2024)	660
AADT (2044)	953
DHV	106
D	51%
DHV T%	18.4%
AADT T%	40.4%
V	65 M.P.H.



PLOT SCALE - 1:12966.2

PLOT NAME - 1

FILE - ... \09WL SEGMENTS 7\_9\_10.DGN

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# SD HWY 25 NORTH OF WEBSTER TO 1 MILE WEST OF ROSLYN SEGMENT 8

STATE OF SOUTH DAKOTA	PROJECT NH-P 0011(321)	SHEET NO. 4	TOTAL SHEETS 28
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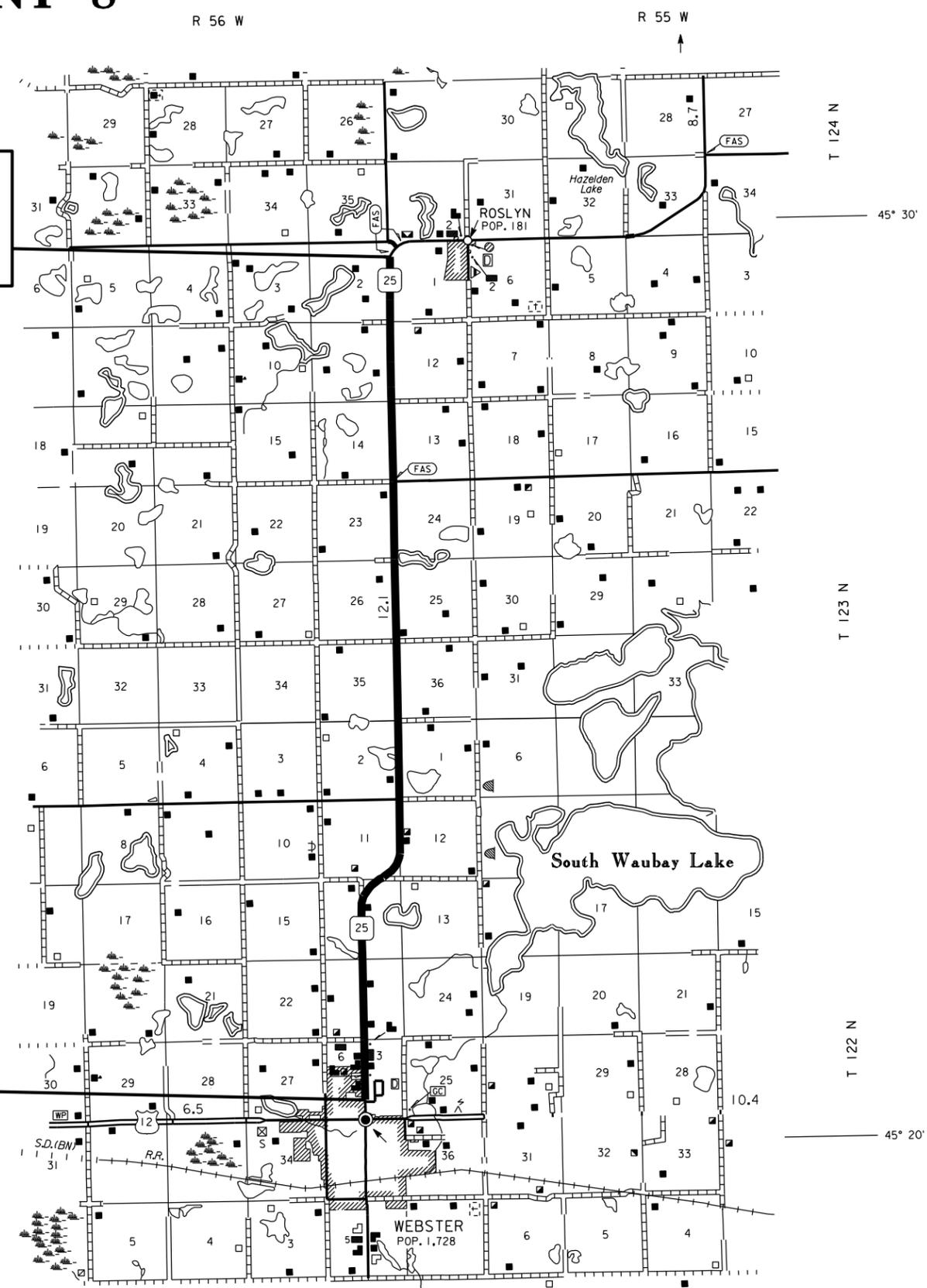
PLOT SCALE - 1:9408.67

PLOT NAME - 1

FILE - ... \09WL SEGMENT 8.DGN

End Segment 8  
MRM 193.00+0.034  
Sta. 571+66.56

Begin Segment 8  
MRM 182.17+0.037  
Sta. 0+00



## Segment 8

### DESIGN DESIGNATION

AADT (2024)	755
AADT (2044)	1169
DHV	130
D	50%
DHV T%	10.7%
AADT T%	23.5%
V	65 M.P.H.

SEGMENT	HWY	START MRM	DISP	END MRM	DISP	DISTANCE
8	25	182.17	0.037	193.00	0.034	10.827

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(321)	5	28

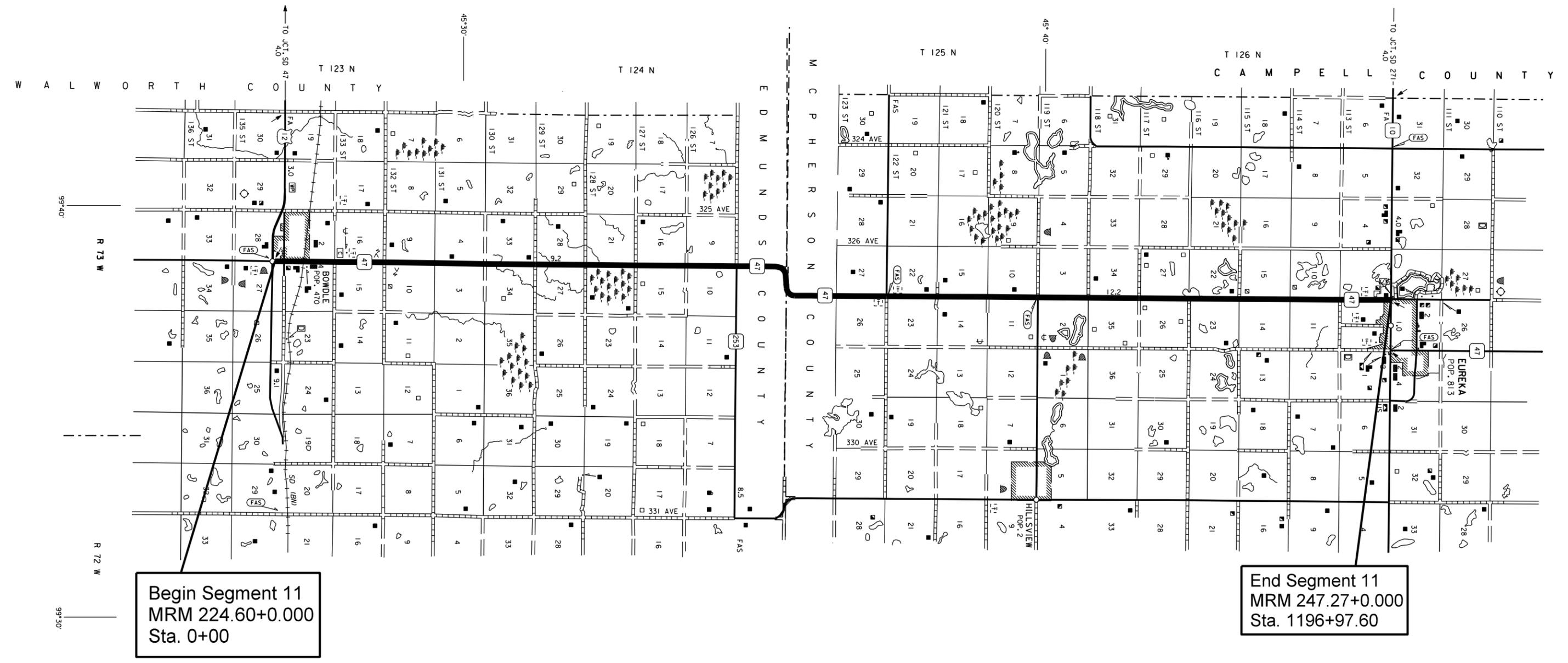
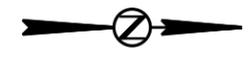
# SD HWY 47 NORTH OF BOWDLE TO EUREKA SEGMENT 11

Segment 11

DESIGN DESIGNATION

AA DT (2024)	337
AA DT (2044)	450
DHV	60
D	51%
DHV T%	9.8%
AA DT T%	21.6%
V	65 M.P.H.

SEGMENT	HWY	START MRM	DISP	END MRM	DISP	DISTANCE
11	47	224.60	0.000	247.27	0.000	22.670



PLOT SCALE - 1:10511

PLOT NAME

FILE ... \09ML SEGMENT 11.DGN

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# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-P 0011(321)	6	28

## GENERAL QUANTITIES – 09WL

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	400.6	Ton
330E2000	Sand for Flush Seal	235.5	Ton
330E3000	Sand for Fog Seal	10.0	Ton
360E0042	CRS-2P Asphalt for Surface Treatment	2,212.0	Ton
360E1010	Type 1A Cover Aggregate	5,938.8	Ton
360E1010	Type 1A Cover Aggregate	2,235.8	Ton
360E1010	Type 1A Cover Aggregate	1,913.8	Ton
360E1010	Type 1A Cover Aggregate	41.1	Ton
360E1010	Type 1A Cover Aggregate	4,681.5	Ton
633E0030	Cold Applied Plastic Pavement Marking, 24"	48	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	11	Each
633E0055	Cold Applied Plastic Pavement Marking, Railroad Crossing	2	Each
633E1200	High Build Waterborne Pavement Marking Paint, White	3,627	Gal
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	1,119	Gal
633E6030	Pavement Marking Masking, Arrow	11	Each
633E6045	Pavement Marking Masking, Railroad Crossing	2	Each
634E0010	Flagging	640.0	Hour
634E0020	Pilot Car	160.0	Hour
634E0110	Traffic Control Signs	2,005.7	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Board	2	Each
634E0630	Temporary Pavement Marking	214.8	Mile
998E0100	Railroad Protective Insurance	Lump Sum	LS

## 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/doing-business/environmental/about-environmental/>

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 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 AND GOLDEN EAGLE**

Bald and/or Golden eagles are known to occur in this area.

**Action Taken/Required:**

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

**COMMITMENT E: STORM WATER**

Construction activities constitute less than 1 acre of disturbance.

**Action Taken/Required:**

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

**COMMITMENT H: WASTE DISPOSAL SITE**

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

**Action Taken/Required:**

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

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

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

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

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

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

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

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

**COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES**

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

**Action Taken/Required:**

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

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

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

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

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 150 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.

## SCOPE OF WORK

Work on this project involves asphalt surface treatments and permanent pavement markings on multiple segments on US and SD highways.

## 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.

The Contractor will perform the work as follows Segments 7-11:

1. Install temporary traffic control
2. Install cold applied plastic pavement marking.
3. Place temporary pavement marking and pavement marking masking not more than 24 hours prior to chip seal.
4. Apply chip seal
  - a. The brooming operation will be immediately in front of the asphalt distributor.
  - b. 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.
  - c. The application of the asphalt and aggregate will cease at least one hour prior to sunset each day.
  - d. Remove cover from tabs and remove masking.
5. Broom chip sealed areas each morning following chip seal application.
6. Install Masking.
7. Apply fog seal.
  - a. Remove cover from tabs and remove masking.
8. Complete pavement markings. 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.)
9. Remove temporary pavement marking within the seven-day time period specified elsewhere in the plans.
10. Remove traffic control devices

The below sequence is for Segments 1-6 (Shoulder Flush Seal):

1. Install temporary traffic control
2. Apply flush seal
  - a. The brooming operation will be immediately in front of the asphalt distributor.
  - b. The application of the asphalt will cease at least one hour prior to sunset each day.
3. Remove traffic control devices.

The method of flush seal placement for Segments 1-6 will be discussed and approved at the preconstruction meeting by the Area Engineer.

## GENERAL TRAFFIC CONTROL

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

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

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

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

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

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

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

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

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

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

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

A mobile work operation will be allowed provided the rumble strip or rumble stripe grooving, flush sealing, and pavement marking can be completed satisfactorily by a continuously moving work operation. A mobile work operation will require approval by the Engineer.

## 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. 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.

**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".

**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.

**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. Contact Aberdeen Area Engineer, Lane Goldsmith 605-626-7898.

Vegetation and accumulated material on or adjacent to the existing roadway will be removed by the Contractor to the satisfaction of the Engineer prior to asphalt flush seal.

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

**BRIDGES, APPROACH SLABS, SLEEPER SLABS, STRIP SEALS, MANHOLES, WATER VALVES AND CONCRETE**

Asphalt Surface Treatment will not be placed on any of the bridges, approach slabs, sleeper slabs, strip seals, manholes, water valves or any type of concrete on these projects.

Loose aggregate will not be swept onto bridge decks or into drop inlets. Aggregate will be removed from neoprene joints located on approach slabs or bridge decks.

**TYPE 1A COVER AGGREGATE**

Failure on the #200 sieve will shut down operations until the Engineer determines if changes or corrections are required.

**EXISTING PAVEMENT CONDITIONS & TRAFFIC VOLUMES**

The existing pavement conditions have been checked for each project and factored into the rates of materials. All segments are slightly pocked, porous, and oxidized. Actual rates will be adjusted in the field during construction by the Engineer.

The descriptions used were from the McLeod procedure for seal coat design.

The traffic volumes are shown on the title sheets.

**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 workday. The material that is placed in storage will be the first material used the following day.

**FOG SEAL**

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

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

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

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

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

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

Sand for Fog Seal will conform to Section 879.1 B.

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

**FLUSH SEAL**

The Contractor will maintain traffic control on the flush sealing area until flush seal is cured enough to prevent pickup on vehicles. Sand application following application of the CRS-2p for shoulder flush seal on US 12 (Segments 1-6) will be as per Section 330.3 F.

The Contractor will take care not to get asphalt on the existing pavement markings. The distributors used during the flush seal will be equipped with guards to prevent the emulsified asphalt from coming in contact with the existing pavement markings. The existing pavement markings on the concrete are approximately two inches from the asphalt shoulder on the median side of the US 12 segments 3, 4, 5, & 6.

The Contractor will use guides (wheels, cameras, etc.) installed on the distributors to follow the alignment of the concrete during sealing operations. The tracking of asphalt materials onto existing markings will not be acceptable.

Any damage to the existing pavement markings on the shoulders will be replaced with waterborne paint at the Contractor's expense with no additional cost to the State.

**TEMPORARY PAVEMENT MARKING**

The total length of no passing zone on this project is shown in the table below:

SEGMENT	ROUTE	Length of No Passing Zone
7	SD 20	4.8
8	SD 25	9.4
9	SD 45	.1
10	SD 45	.1
11	SD 47	9.9

The estimated number of DO NOT PASS (R4-1) and PASS WITH CARE (R4-2) signs will be required to mark the no passing zones, should the Contractor elect to use these signs are shown in the table below:

SEGMENT	ROUTE	DO NOT PASS	PASS WITH CARE
7	SD 20	37	36
8	SD 25	38	37
9	SD 45	3	2
10	SD 45	1	0
11	SD 47	38	37

Temporary flexible vertical markers (tabs) may be used as detailed in the specifications.

Temporary pavement marking paint will not be allowed on the final lift of asphalt surfacing. Temporary pavement marking paint will not be allowed on the chip seal, fog seal, or flush seal. Temporary flexible vertical markers (tabs) must be used on the final lift of asphalt surfacing. The Contractor may use tabs with covers, uncovering them for the chip seal, fog seal, or flush seal. As an alternative, the Contractor may install new tabs for the fog seal or flush seal.

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.

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 Seal Coat
- One pass after the Seal Coat
- One pass after the Fog Seal

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.

**PAVEMENT MARKING PAINT**

The Contractor will advise the Engineer a minimum of 3 weeks prior to the application of the permanent pavement marking to allow the State to check and mark the location of no passing zones.

Cold weather waterborne paint will not be required after October 15<sup>th</sup> per Section 633.3 B.

The application of permanent pavement marking will begin no sooner than 7 calendar days following completion of the fog or flush seal. Application of permanent pavement marking will be completed within 14 calendar days following completion of the final surfacing.

**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 Section 980.1 B.

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

**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.

**REMOVE EXISTING PAVEMENT MARKING**

The existing pavement markings consist of cold applied plastic pavement marking and paint.

Existing cold applied plastic pavement marking being replaced will be removed in their entirety. 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.

Removal of the existing markings will be accomplished without causing damage to the pavement, pavement joints, or joint sealant. The Contractor will repair any damage to the pavement, pavement joints, or joint sealant for no additional payment and at no cost to the State.

Payment for removal of the existing lines and other miscellaneous pavement markings as necessary will be included in the contract unit price for the various contract items.

**COLD APPLIED PLASTIC PAVEMENT MARKING**

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

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

Cold Applied Plastic Pavement Markings will be placed prior to asphalt surface treatment as noted in the plans and as directed by the Engineer.

Cold Applied Plastic Pavement Markings will be placed in the same location as existing markings, unless otherwise directed by the Engineer.

**PAVEMENT MARKING MASKING**

Immediately prior to placement of asphalt surface treatment, and prior to the fog seal, durable markings will be covered with an approved pavement marking masking. All cost for furnishing, installing, removing, and disposing of masking will be incidental to the various contract unit prices for Pavement Marking Masking.

If new markings are damaged due to masking failure they will be replaced at the Contractor's expense.

**RATE OF MATERIALS**

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

**FLUSH SEAL:**

SEGMENT	ROUTE	STATION	to	STATION
1	US 12	0+00		70+96.32
2	US 12	0+00		15+31.20

**Outside Shoulders (per shoulder)**

CRS-2P Asphalt for Surface Treatment at the rate of 2.2 tons applied 6 feet wide.  
(Rate = 0.15 Gal./S.Y.)

Sand for Flush Seal at the rate of 14.1 tons applied 6 feet wide.  
(Rate = 8 Lbs./S.Y.)

SEGMENT	ROUTE	STATION	to	STATION
3	US 12 E	0+00		92+40.00
4	US 12 E	0+00		20+80.32
5	US 12 W	0+00		92+40.00
6	US 12 W	0+00		7+65.00

**Median Shoulders**

CRS-2P Asphalt for Surface Treatment at the rate of 1.5 tons applied 4 feet wide.  
(Rate = 0.15 Gal./S.Y.)

Sand for Flush Seal at the rate of 9.4 tons applied 4 feet wide.  
(Rate = 8 Lbs./S.Y.)

**Outside Shoulders**

CRS-2P Asphalt for Surface Treatment at the rate of 2.2 tons applied 6 feet wide.  
(Rate = 0.15 Gal./S.Y.)

Sand for Flush Seal at the rate of 14.1 tons applied 6 feet wide.  
(Rate = 8 Lbs./S.Y.)

SEGMENT	ROUTE	STATION	to	STATION
7	SD 20	8+30		351+40.60

CRS-2P Asphalt for Surface Treatment at the rate of 27.5 tons applied 29 feet wide.  
(Rate = 0.38 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 187.1 tons applied 29 feet wide.  
(Rate = 22 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 5.1 tons applied 29 feet wide.  
(Rate = 0.07 Gal./S.Y.)

SEGMENT	ROUTE	STATION	to	STATION
7	SD 20	351+40.60		1447+84.60

CRS-2P Asphalt for Surface Treatment at the rate of 29.4 tons applied 31 feet wide.  
(Rate = 0.38 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 200.1 tons applied 31 feet wide.  
(Rate = 22 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 5.4 tons applied 31 feet wide.  
(Rate = 0.07 Gal./S.Y.)

SEGMENT	ROUTE	STATION	to	STATION
7	SD 20	0+00		8+30
8	SD 25	0+00		571+66.56
11	SD 47	0+00		1196+97.60

CRS-2P Asphalt for Surface Treatment at the rate of 30.3 tons applied 32 feet wide.  
(Rate = 0.38 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 206.5 tons applied 32 feet wide.  
(Rate = 22 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 5.6 tons applied 32 feet wide.  
(Rate = 0.07 Gal./S.Y.)

SEGMENT	ROUTE	STATION	to	STATION
7	SD 20	1447+84.60		1554+80.56
9	SD 45	0+00		448+53.60
10	SD 45	0+00		9+60.96

CRS-2P Asphalt for Surface Treatment at the rate of 33.2 tons applied 35 feet wide.  
(Rate = 0.38 Gal./S.Y.)

Type 1A Cover Aggregate at the rate of 225.9 tons applied 35 feet wide.  
(Rate = 22 Lbs./S.Y.)

CSS-1H or SS-1H for Fog Seal at the rate of 6.1 tons applied 35 feet wide.  
(Rate = 0.07 Gal./S.Y.)

## TABLE OF PROJECT STATIONING

SEGMENT	STATION	TO	STATION	LENGTH	EXCEPTION SEGMENT LENGTH	EXCEPTION SEGMENT LENGTH	NET SEGMENT LENGTH	NET SEGMENT LENGTH
				(Ft)	(Ft)	(Miles)	(Ft)	(Miles)
1	+0.00	to	70+96.32	7096.32	0.00	0.000	7096.32	1.344
2	+0.00	to	15+31.20	1531.20	0.00	0.000	1531.20	0.290
3	+0.00	to	92+40.00	9240.00	0.00	0.000	9240.00	1.750
4	+0.00	to	20+80.32	2080.32	0.00	0.000	2080.32	0.394
5	+0.00	to	92+40.00	9240.00	0.00	0.000	9240.00	1.750
6	+0.00	to	7+65.60	765.60	0.00	0.000	765.60	0.145
7	+0.00	to	1554+80.56	155480.56	86.50	0.016	155394.06	29.431
8	+0.00	to	571+66.56	57166.56	0.00	0.000	57166.56	10.827
9	+0.00	to	448+53.60	44853.60	115.00	0.022	44738.60	8.473
10	+0.00	to	9+60.96	960.96	0.00	0.000	960.96	0.182
11	+0.00	to	1196+97.60	119697.60	0.00	0.000	119697.60	22.670
TOTAL:					201.50	0.038	407911.22	77.256

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(321)	13	28
Plotting Date: 02/12/2026			

### TABLE OF QUANTITIES NH-P 0011(321) - PCN 09WL

ITEM	SEGMENT 1	SEGMENT 2	SEGMENT 3	SEGMENT 4	SEGMENT 5	SEGMENT 6	SEGMENT 7	SEGMENT 7 - SD 20	SEGMENT 8	SEGMENT 9	SEGMENT 10	SEGMENT 11	UNIT
	- US 12	-US 12	- US 12 E	- US 12 E	- US 12 W	- US 12 W	- SD 20	ADDITIONAL QUANTITIES	- SD 25	- SD 45	- SD 45	- SD 47	
Mobilization	Lump Sum		Lump Sum	Lump Sum	Lump Sum	Lump Sum	LS						
CRS-2P Asphalt For Surface Treatment	6.0	1.3	13.1	2.9	13.1	1.1	860.4	11.5	328.3	281.0	6.0	687.3	Ton
SS-1H or CSS-1H Asphalt For Fog Seal							158.5	2.1	60.5	51.8	1.1	126.6	Ton
Sand For Flush Seal	37.8	8.2	82.1	18.5	82.1	6.8							Ton
Type 1A Cover Aggregate							5860.4	78.4					Ton
Type 1A Cover Aggregate									2235.8				Ton
Type 1A Cover Aggregate										1913.8			Ton
Type 1A Cover Aggregate											41.1		Ton
Type 1A Cover Aggregate												4681.5	Ton
Cold Applied Plastic Pavement Marking, 24"							24.0					24.0	Ft
Cold Applied Plastic Pavement Marking, Arrow								11.0					Each
Cold Applied Plastic Pavement Marking, Railroad Crossing												2.0	Each
High Build Waterborne Pavement Marking Paint, White							1638.0		486.0	472.0	13.0	1018.0	Gal
High Build Waterborne Pavement Marking Paint, Yellow							318.0		221.0	77.0	9.0	494.0	Gal
Pavement Marking Masking, Arrow								11.0					Each
Pavement Marking Masking, Railroad Crossing												2.0	Each
Flagging							256		100	80	12	192	Hour
Pilot Car							64.0		25.0	20.0	3.0	48.0	Hour
Traffic Control Signs	331.2						With 9&10		369.4	747.6		557.5	SqFt
Traffic Control, Miscellaneous	Lump Sum		Lump Sum	Lump Sum	Lump Sum	Lump Sum	LS						
Type C Advance Warning Arrow Board	2.0												Each
Temporary Pavement Marking							29.4		10.8	8.5	0.2	22.7	Mile
Railroad Protective Insurance												Lump Sum	LS

TABLE FOR INFORMATION ONLY

PLOT SCALE - 1:200

PLOTTED FROM - TRAB10200

PLOT NAME - 2

FILE - ... \REGION DESIGN\TABLES\_09WL.DGN

**TABLE OF ADDITIONAL QUANTITIES**

	CRS-2P ASPHALT FOR SURFACE TREATMENT	SS-1H OR CSS-1H ASPHALT FOR FOG SEAL	TYPE 1A COVER AGGREGATE	COLD APPLIED PLASTIC PAVEMENT MARKING, ARROW	PAVEMENT MARKING, MASKING, ARROW
LOCATIONS:	Ton	Ton	Ton	Each	Each
<b>Right Turn Lane SD 20 &amp; SD 45 Intersection (Segment 7)</b>	0.8	0.1	5.3	3	3
<b>Acceleration/Deceleration Lanes North Intersection SD 20 &amp; SD 45 South Bound(Segment 7)</b>	3.1	0.6	21.3	2	2
<b>Acceleration/Deceleration Lanes North Intersection SD 20 &amp; SD 45 North Bound (Segment 7)</b>	3.4	0.6	23.1	2	2
<b>Acceleration/Deceleration Lanes South Intersection SD 20 &amp; SD 45 South Bound(Segment 7)</b>	2.1	0.4	14.5	2	2
<b>Acceleration/Deceleration Lanes South Intersection SD 20 &amp; SD 45 North Bound (Segment 7)</b>	2.1	0.4	14.2	2	2
<b>Totals</b>	11.5	2.1	78.4	11.0	11.0

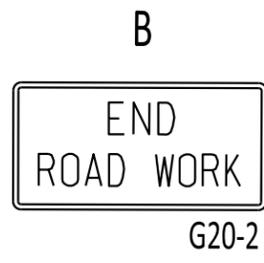
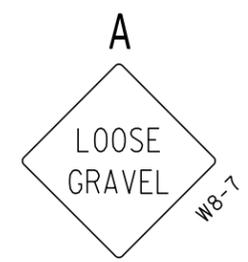
# FIXED SIGN LOCATIONS SEGMENTS 1-6

PLOT SCALE - 1:7521.05

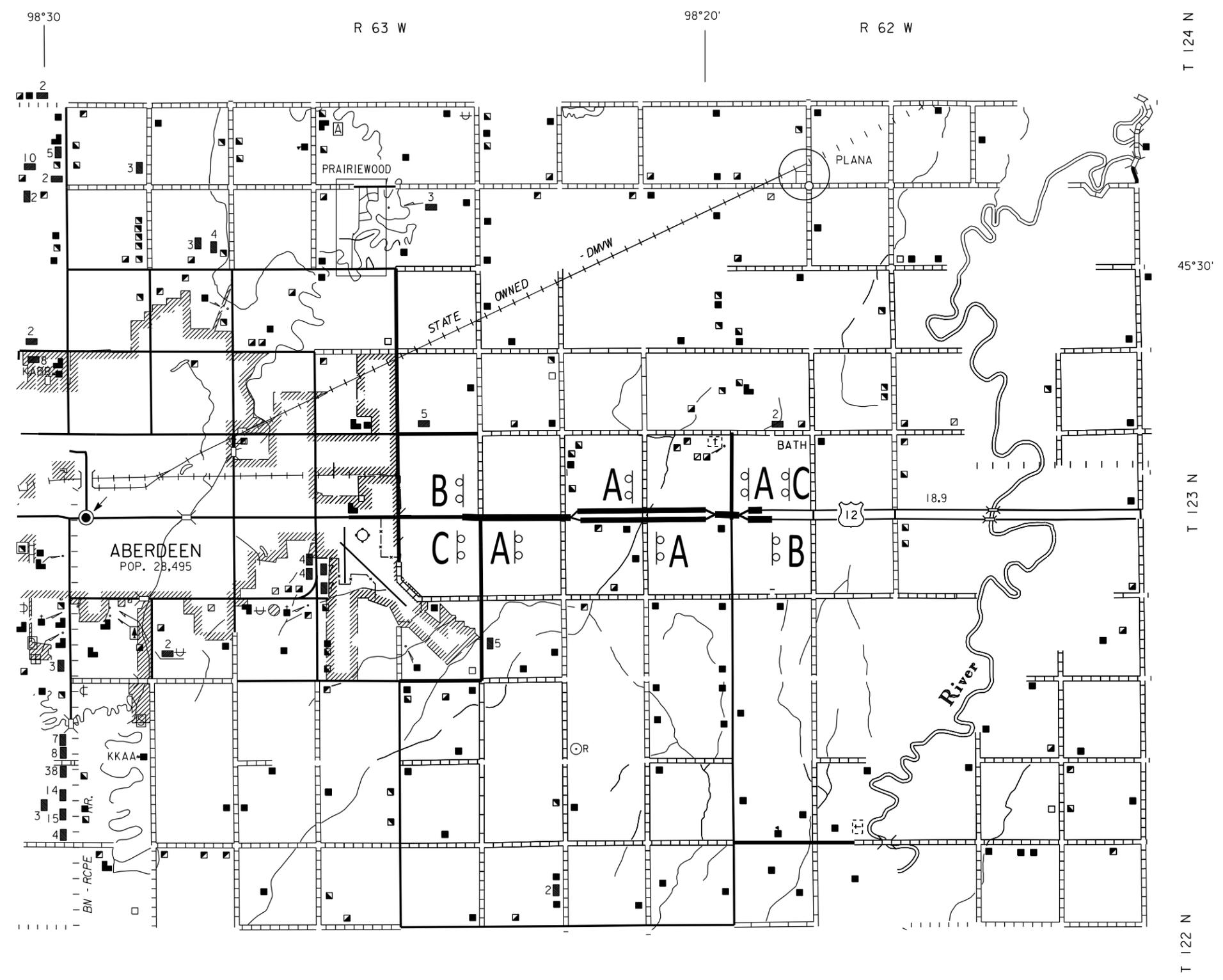
PLOTTED FROM - TRAB10200

PLOT NAME - 1

FILE - ... \09WL SEGMENTS 1-6 FIXED SIGNS\_PRINT\_EDIT.DGN

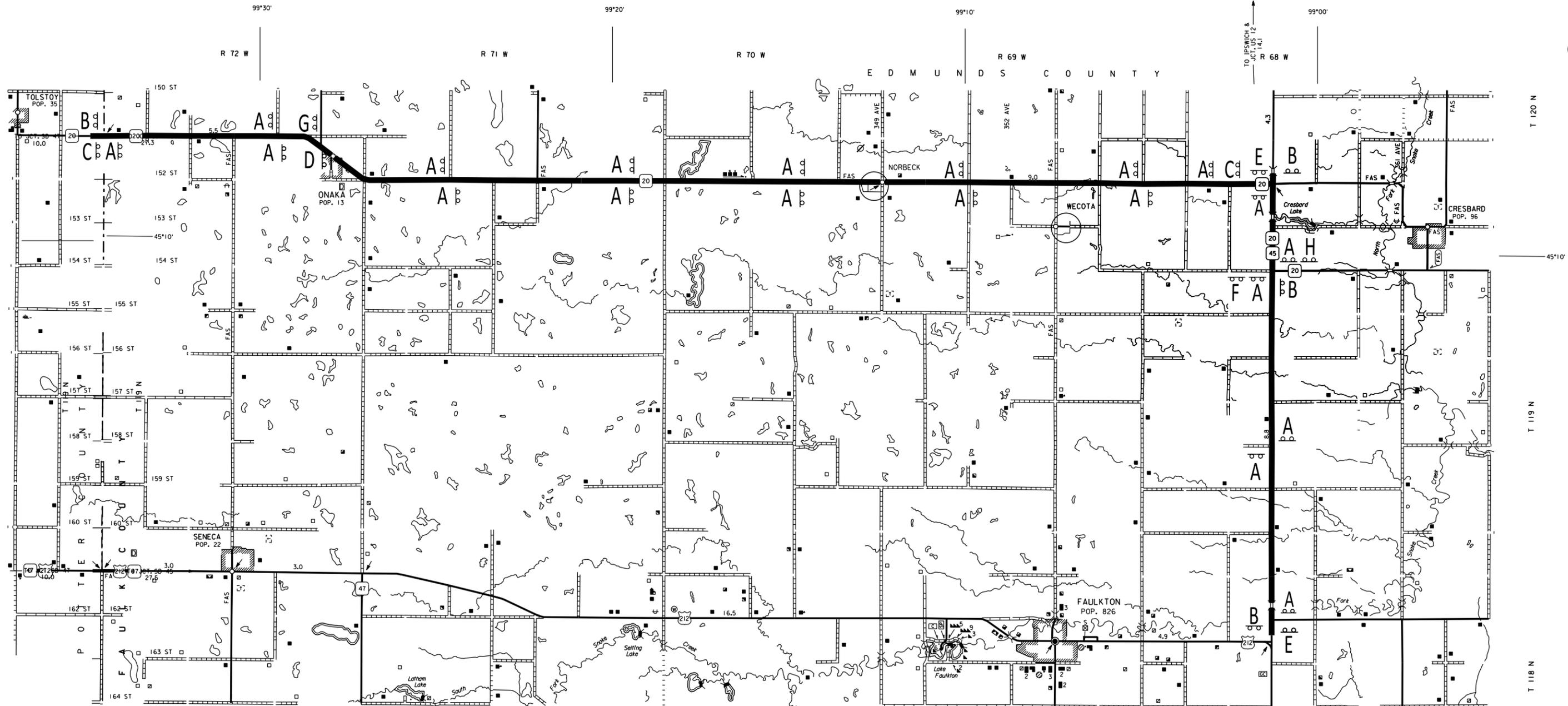


W20-1 ROAD WORK AHEAD signs will be mounted on portable supports, and will be placed on intersecting roadways as directed by the Engineer. ROAD WORK AHEAD signs will be moved as necessary to keep current with the work activities. W20-1 signs are also to be used per the applicable standard plate(s).



# FIXED SIGN LOCATIONS SEGMENTS 7, 9, & 10

PLOT SCALE - 1:12355



- C

ROAD WORK  
NEXT 27 MILES

G20-1
- D

ROAD WORK  
NEXT 22 MILES

G20-1
- E

ROAD WORK  
NEXT 10 MILES

G20-1
- F

ROAD WORK  
NEXT 8 MILES

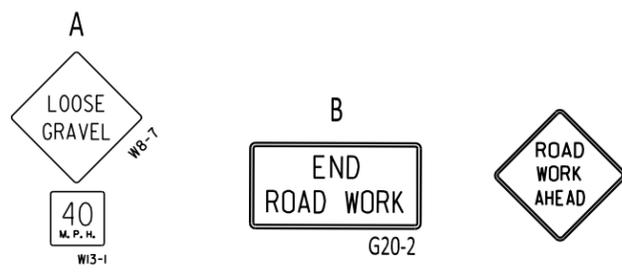
G20-1
- G

ROAD WORK  
NEXT 5 MILES

G20-1
- H

ROAD WORK  
NEXT 2 MILES

G20-1



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 signs will be moved as necessary to keep current with the work activities. W20-1 signs are also to be used per the applicable standard platetsl.

PLOTTED FROM - TRAB10200

FILE - ... \09WL SEGMENTS 1-6 FIXED SIGNS\_PRINT\_EDIT.DGN

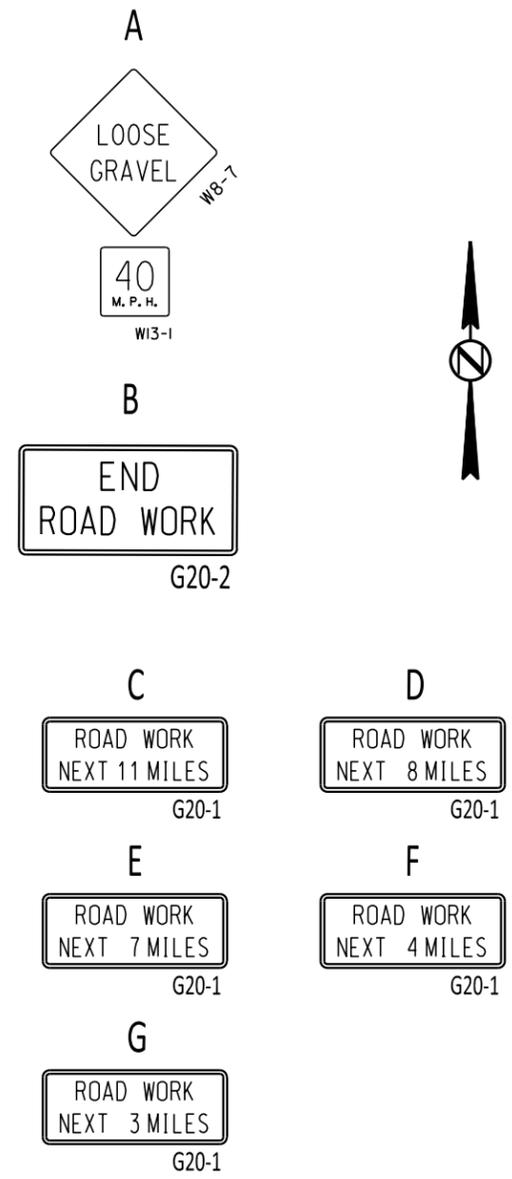
PLOT NAME - 2

# FIXED SIGN LOCATIONS SEGMENT 8

PLOT SCALE - 1:9288.53

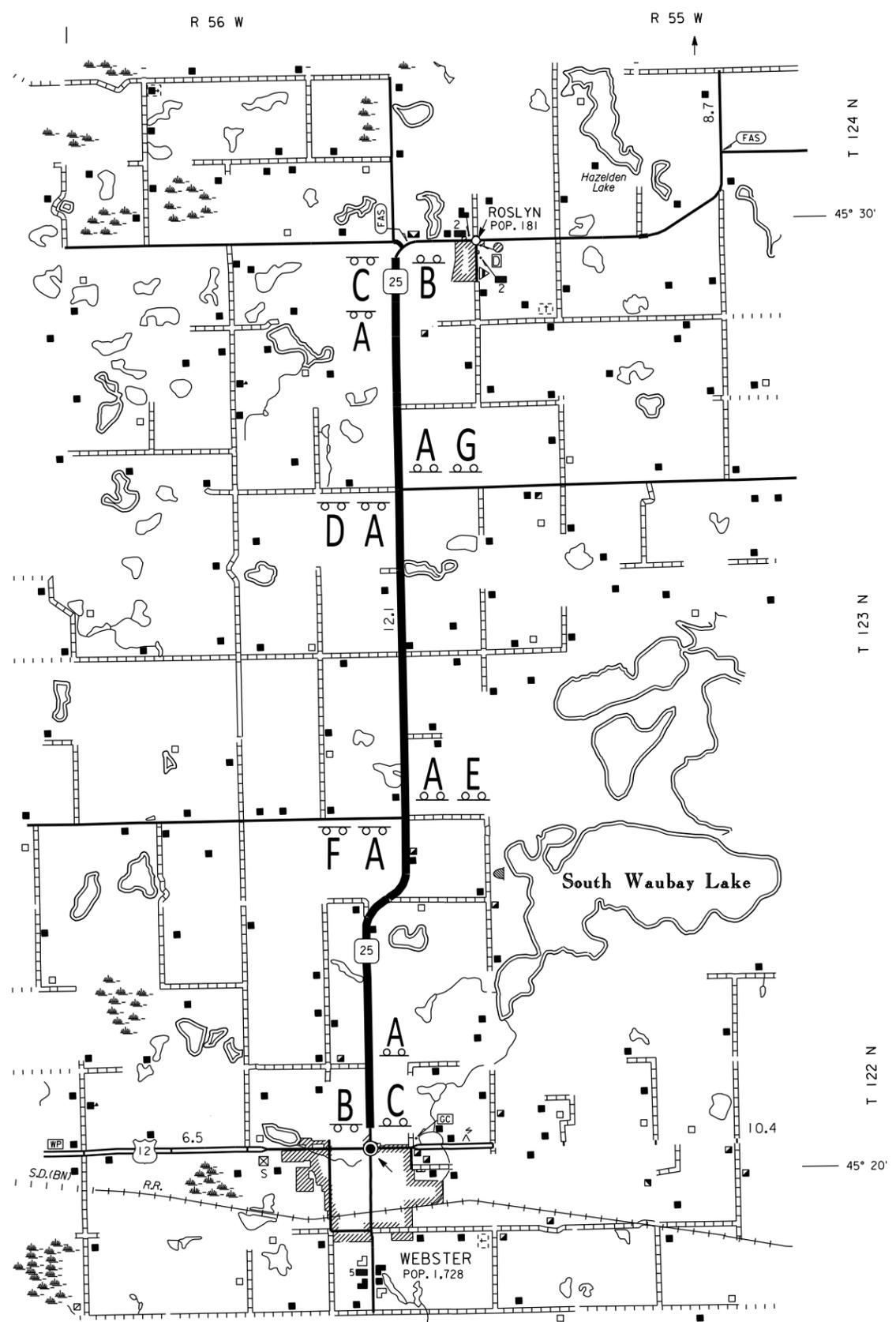
PLOT NAME - 4

FILE - ... \09WL SEGMENTS 1-6 FIXED SIGNS\_PRINT\_EDIT.DGN



**ROAD WORK AHEAD**

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 signs will be moved as necessary to keep current with the work activities. W20-1 signs are also to be used per the applicable standard plate(s).

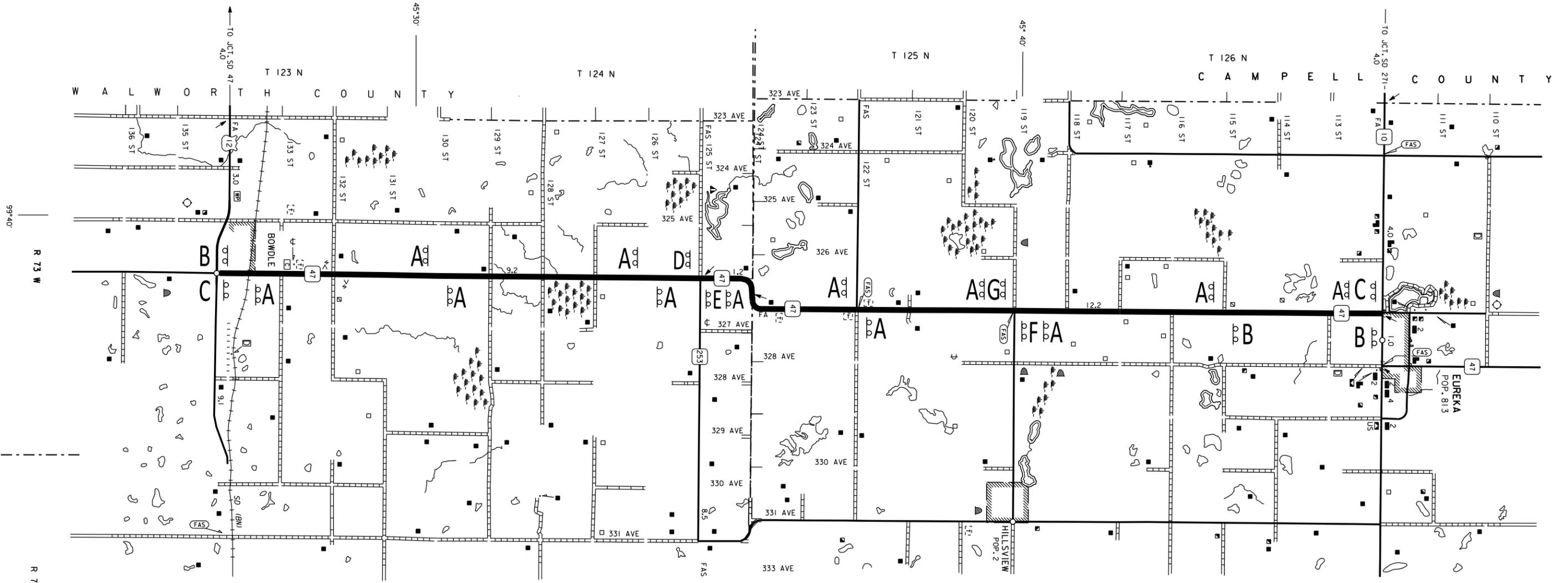


PLOTTED FROM - TRAB10200

Revised  
02/26/2026 8:30:53 AM

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-P 0011(321)	18	28

# FIXED SIGN LOCATIONS SD HWY 47 NORTH OF BOWDLE TO EUREKA SEGMENT 11



C  
ROAD WORK  
NEXT 22 MILES  
G20-1

D  
ROAD WORK  
NEXT 9 MILES  
G20-1

E  
ROAD WORK  
NEXT 13 MILES  
G20-1

F  
ROAD WORK  
NEXT 7 MILES  
G20-1

G  
ROAD WORK  
NEXT 15 MILES  
G20-1

A  
LOOSE  
GRAVEL  
WB-1  
40  
M. P. H.  
WI3-1

B  
END  
ROAD WORK  
G20-2

ROAD  
WORK  
AHEAD

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 signs will be moved as necessary to keep current with the work activities. W20-1 signs are also to be used per the applicable standard plate(s).

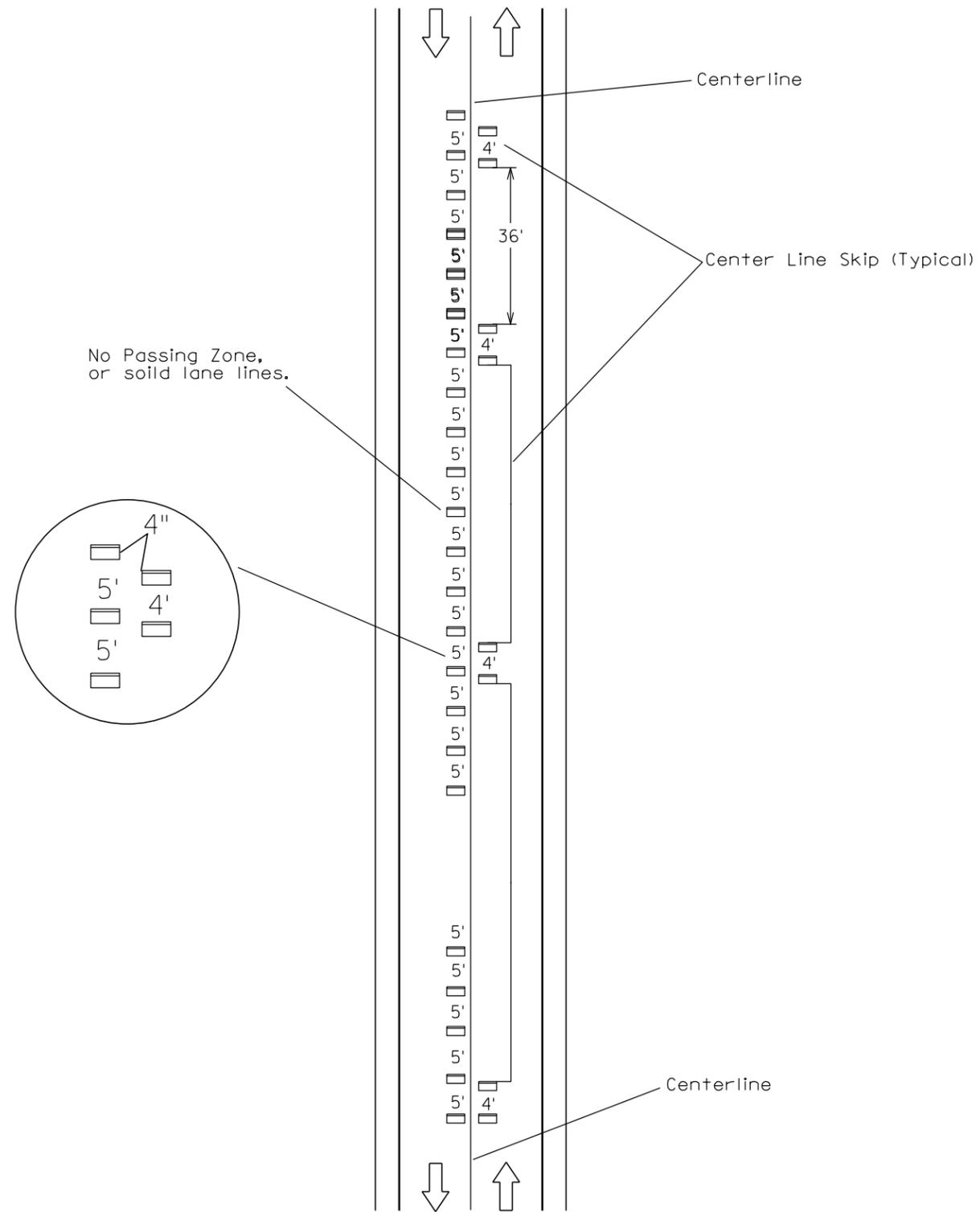
PLOT SCALE - 1:10191.2

PLOTTED FROM - TRAB10200

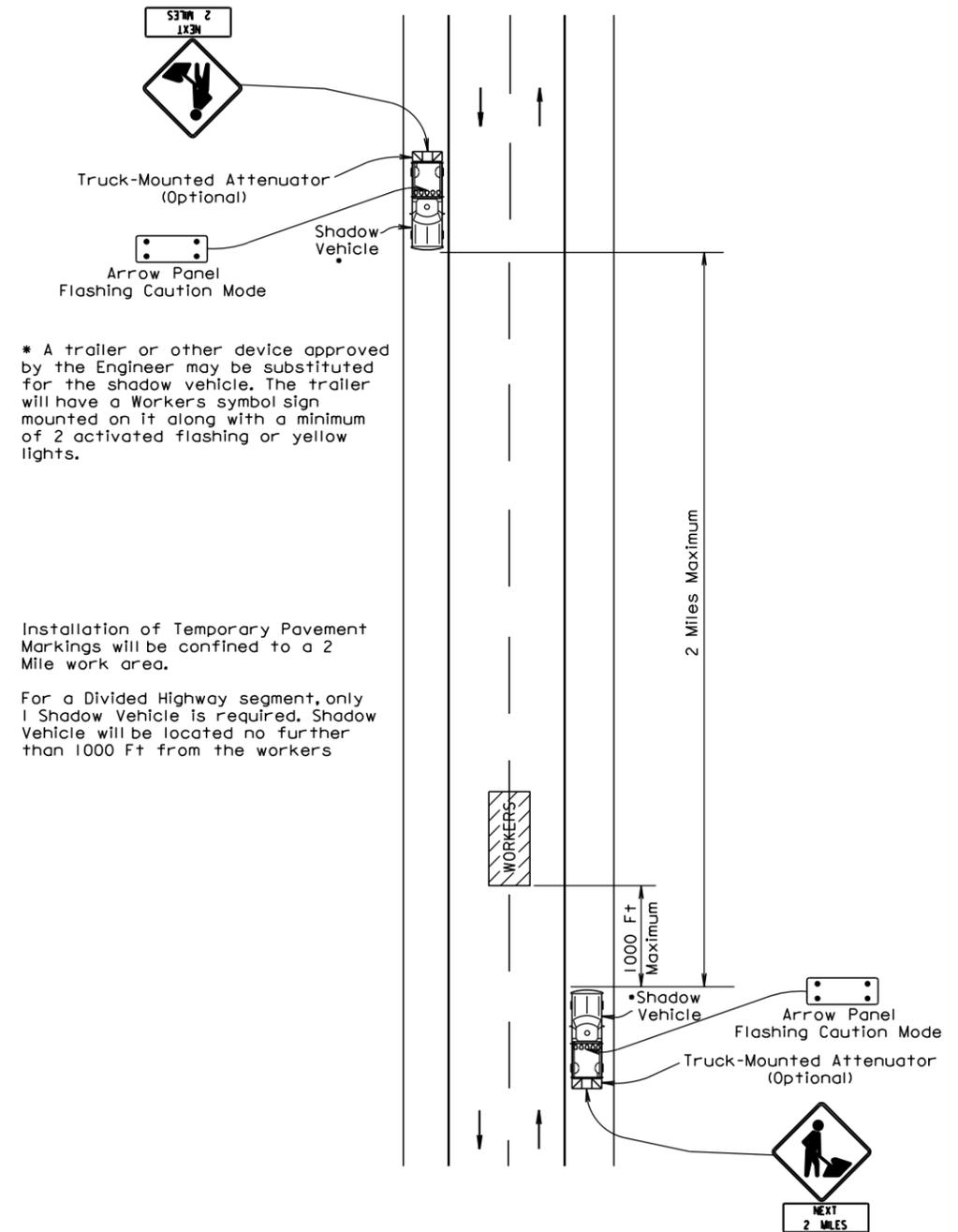
PLOT NAME - 3

FILE - ... \09WL SEGMENTS 1-6 FIXED SIGNS\_PRINT\_EDIT.DGN

### GUIDES FOR TRAFFIC CONTROL DEVICES TEMPORARY ROAD MARKER INSTALLATION



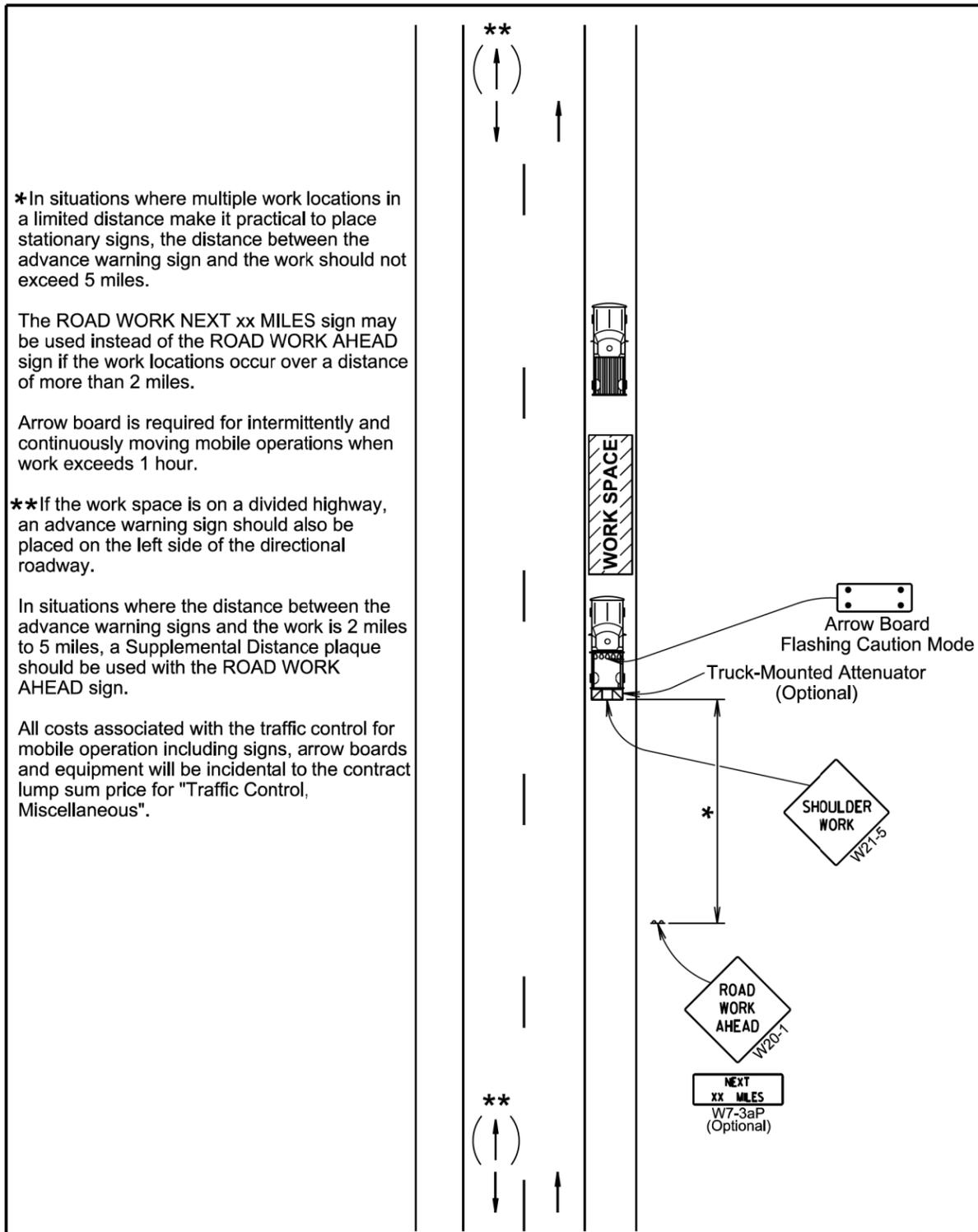
### GUIDES FOR TRAFFIC CONTROL DEVICES APPLICATION OF TEMPORARY PAVEMENT MARKING TABS



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

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

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



\* In situations where multiple work locations in a limited distance make it practical to place stationary signs, the distance between the advance warning sign and the work should not exceed 5 miles.

The ROAD WORK NEXT xx MILES sign may be used instead of the ROAD WORK AHEAD sign if the work locations occur over a distance of more than 2 miles.

Arrow board is required for intermittently and continuously moving mobile operations when work exceeds 1 hour.

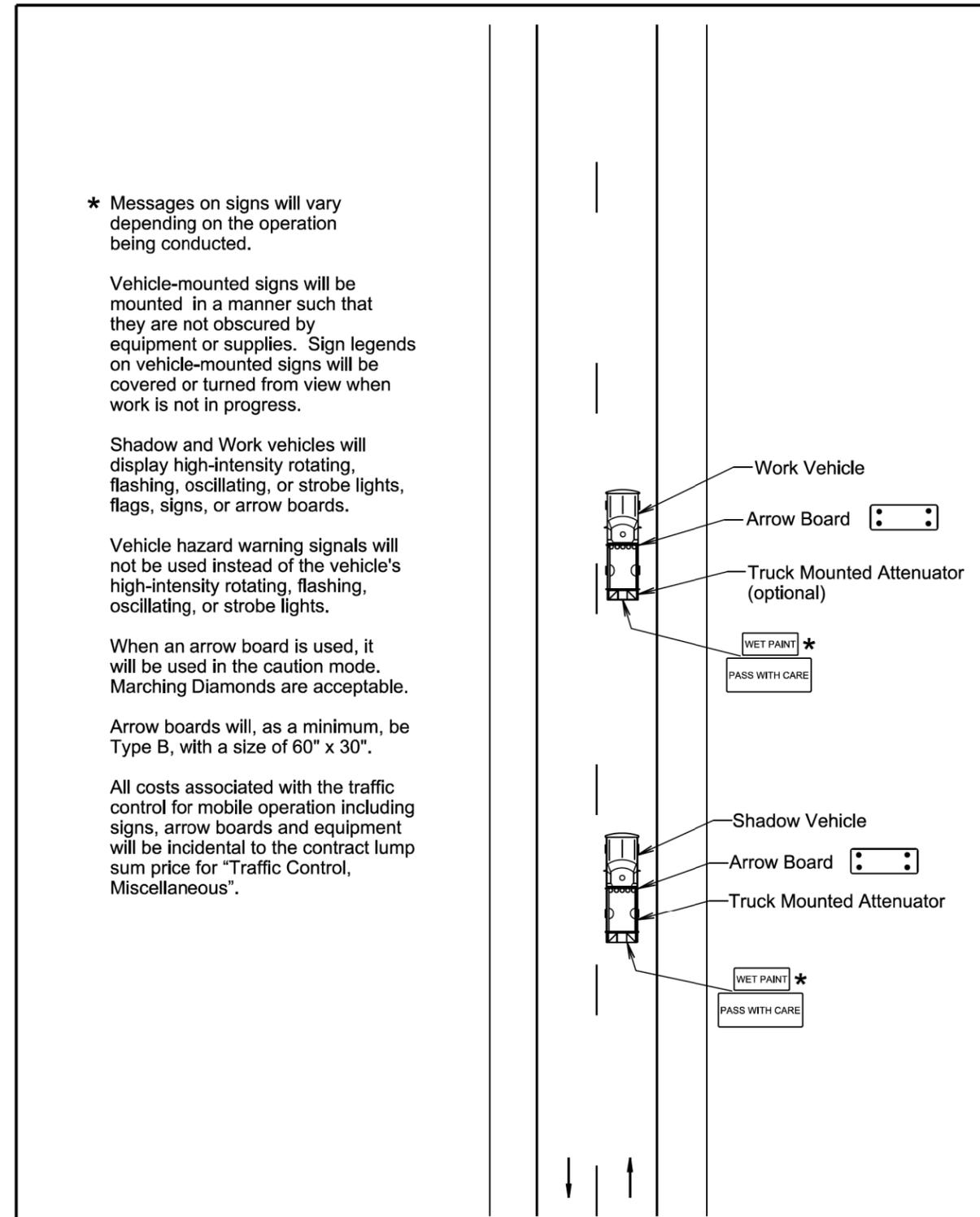
\*\* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

In situations where the distance between the advance warning signs and the work is 2 miles to 5 miles, a Supplemental Distance plaque should be used with the ROAD WORK AHEAD sign.

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

January 22, 2021

Published Date: 2026	S D D O T	MOBILE OPERATIONS ON SHOULDERS	PLATE NUMBER 634.04
			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: 2026	S D D O T	MOBILE OPERATIONS ON 2-LANE ROAD	PLATE NUMBER 634.06
			Sheet 1 of 1

PLOT SCALE - 1:200

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.

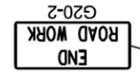
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

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.

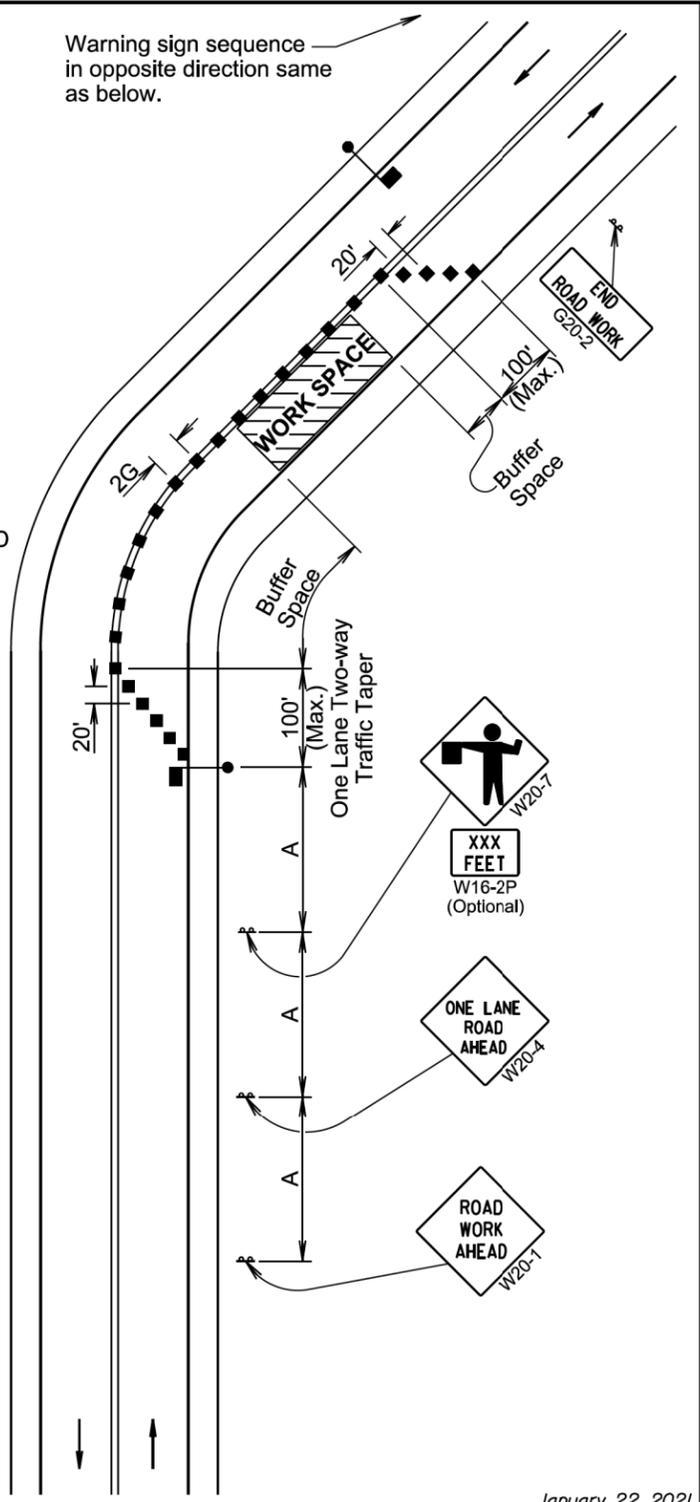


Channelizing devices and flaggers will be used at intersecting roads to control intersecting road traffic as required.

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.



January 22, 2021

<b>S D D O T</b>	<b>LANE CLOSURE WITH FLAGGER PROVIDED</b>	PLATE NUMBER <b>634.23</b>
	Published Date: 2026	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.

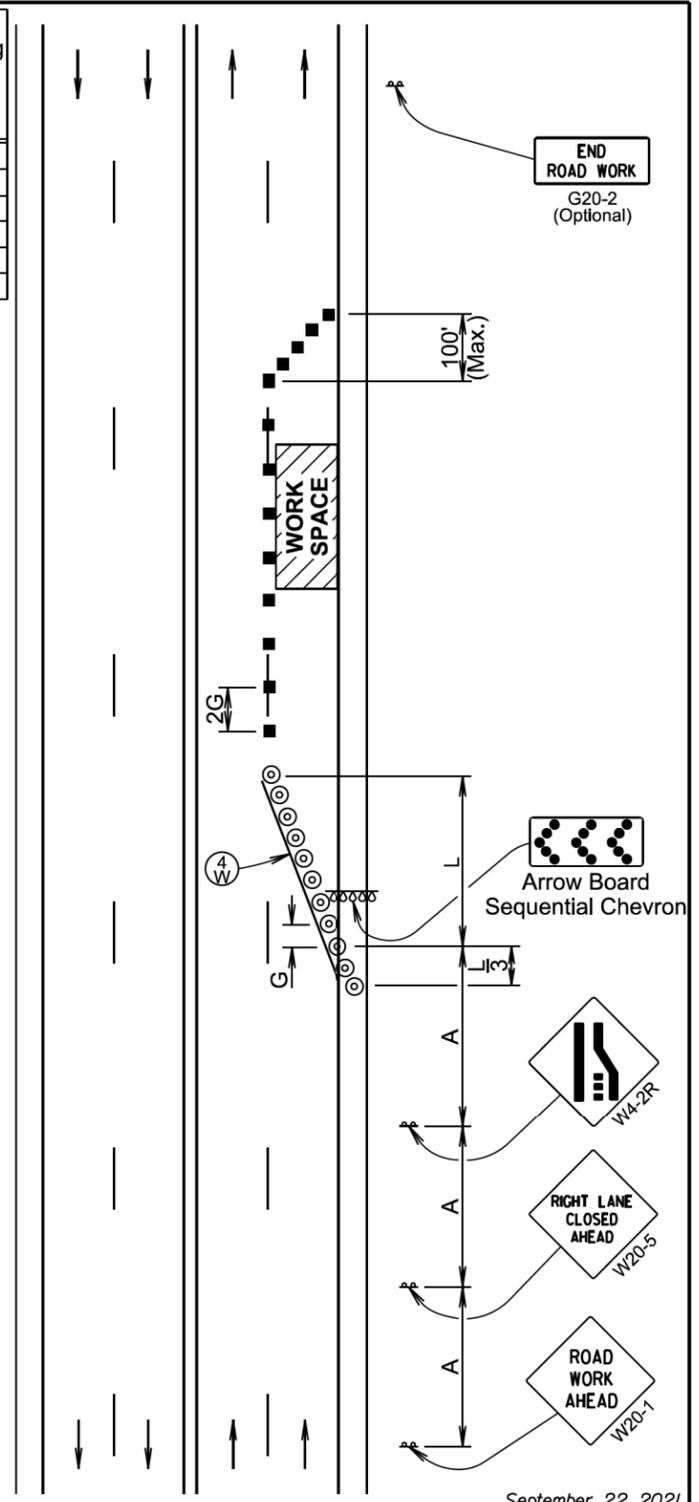
- ⊙ ReflectORIZED Drum
- Channelizing Device
- Ⓞ 4" White Temporary Pavement Marking

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.

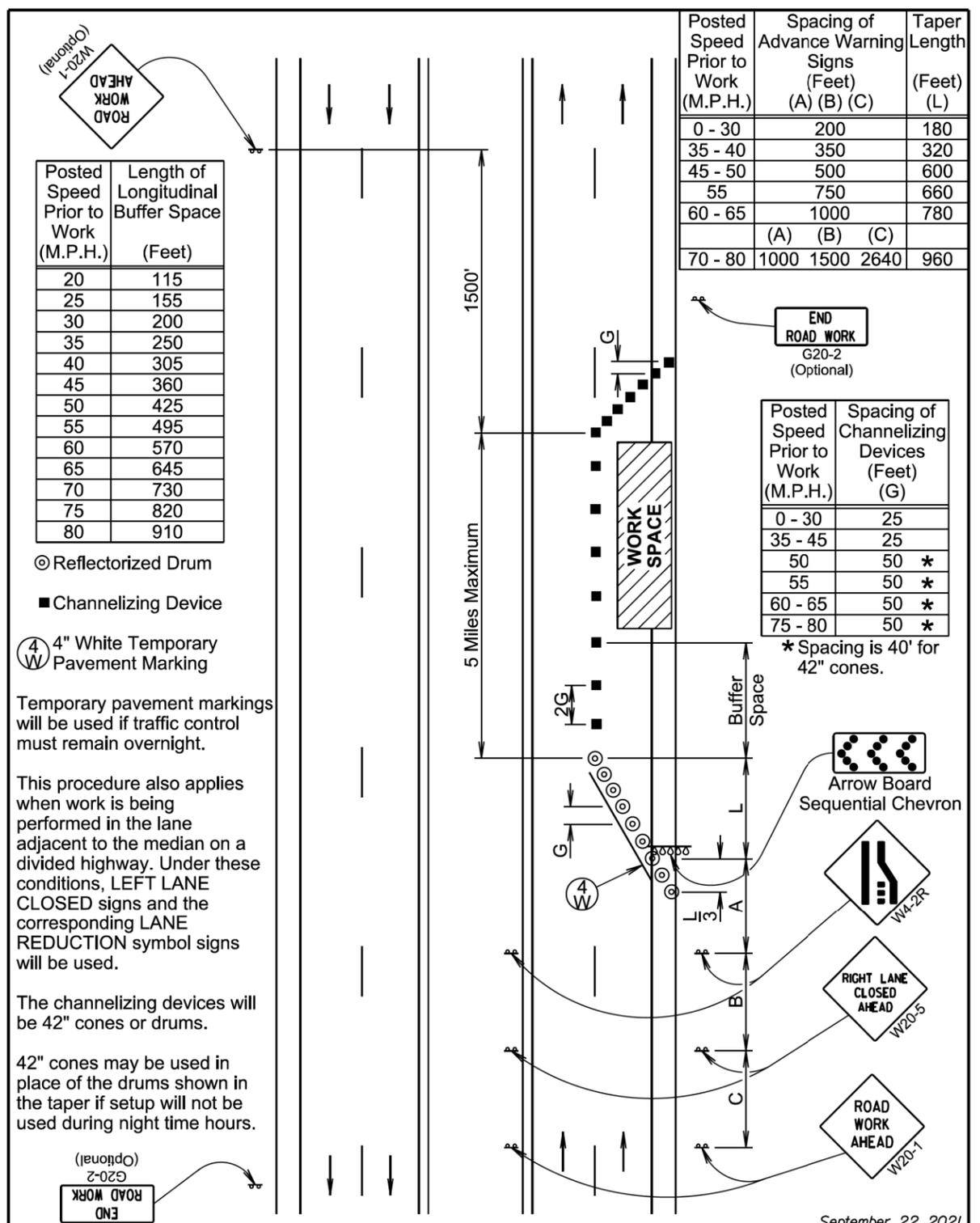


September 22, 2021

<b>S D D O T</b>	<b>4-LANE UNDIVIDED, RIGHT LANE CLOSED</b>	PLATE NUMBER <b>634.47</b>
	Published Date: 2026	Sheet 1 of 1

PLOT NAME - 2  
FILE - ... \STDPLATEPAGESEED\_09WL.DGN

PLOT SCALE - 1:200



◎ Reflectorized Drum  
 ■ Channelizing Device  
 ④ 4" White Temporary Pavement Marking

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

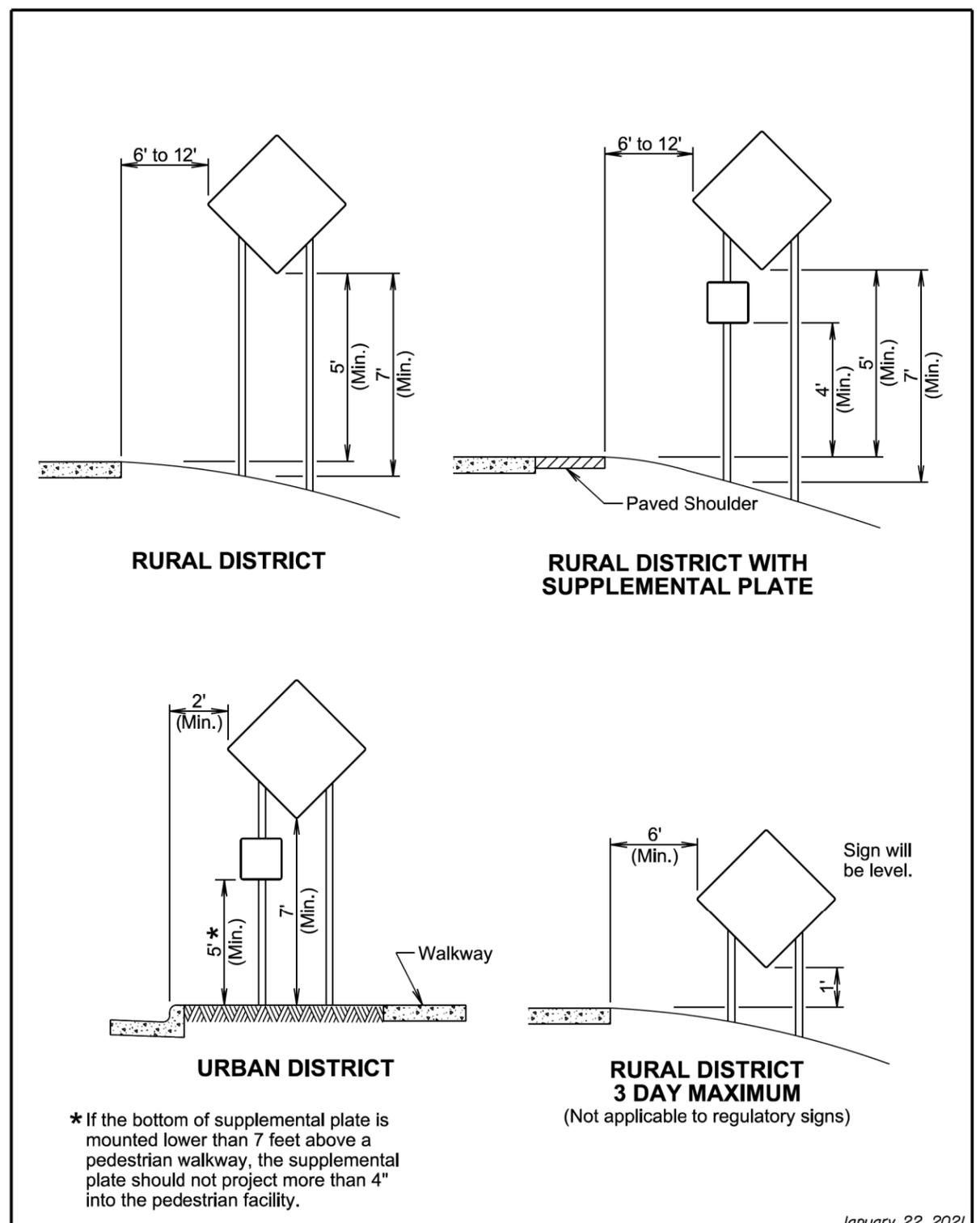
This procedure also applies when work is being performed in the lane adjacent to the median on a divided highway. Under these conditions, LEFT LANE CLOSED signs and the corresponding LANE REDUCTION symbol signs will be used.

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

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



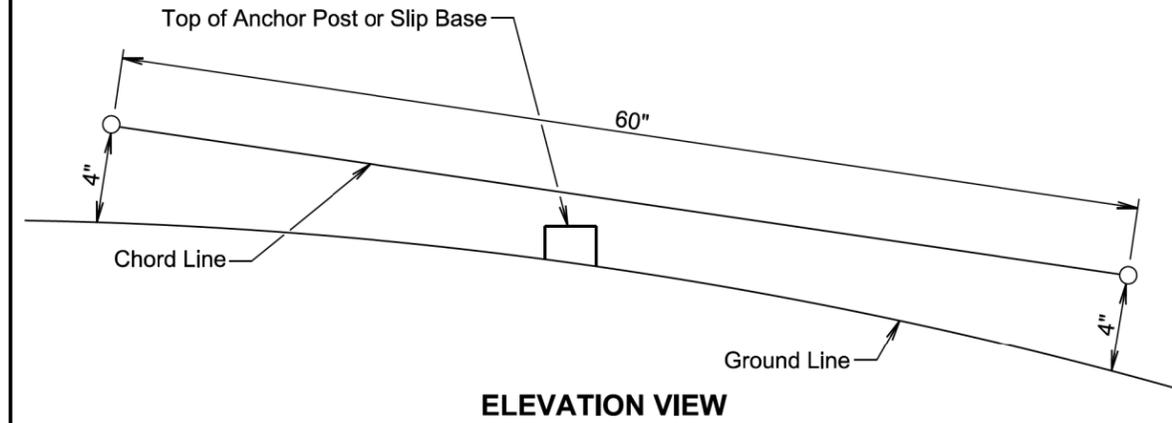
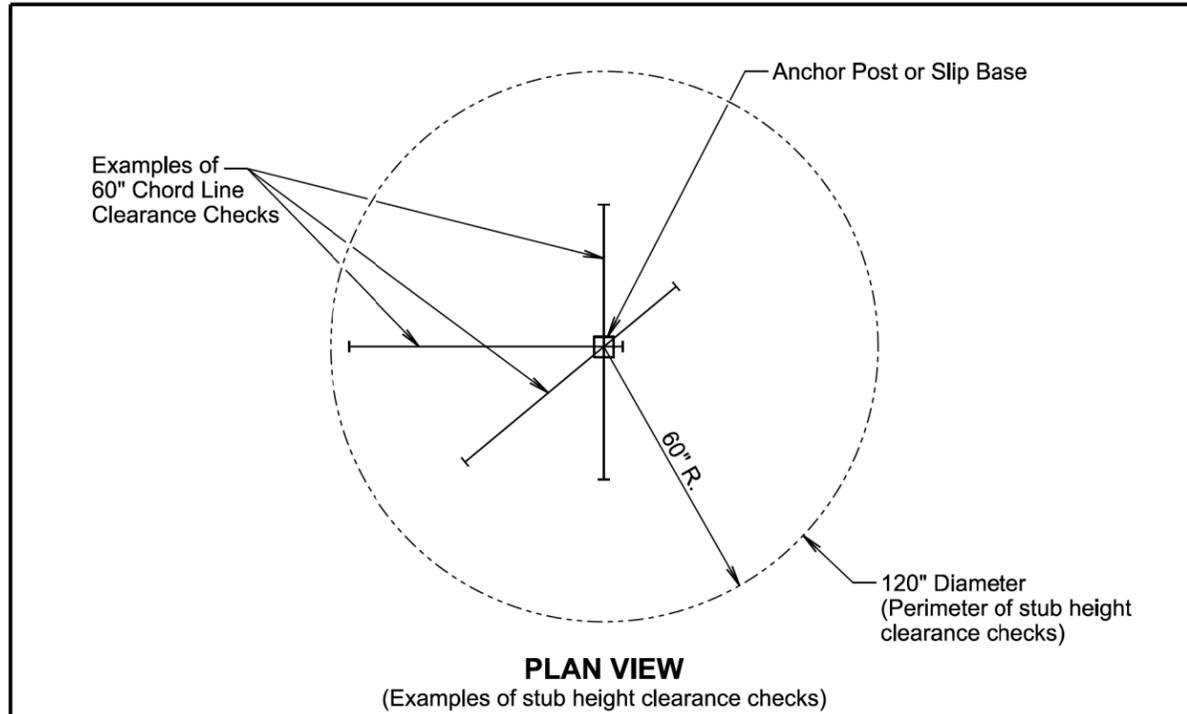
January 22, 2021

<b>S D D O T</b>	<b>CRASHWORTHY SIGN SUPPORTS</b> <i>(Typical Construction Signing)</i>	PLATE NUMBER <b>634.85</b>
	Published Date: 2026	Sheet 1 of 1

PLOTTED FROM - TRAB10200

PLOT NAME - 3

FILE - ... \STD\PLATEPAGESEED\_09ML.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: 2026</i>	<b>S D D O T</b>	<b>BREAKAWAY SUPPORT STUB CLEARANCE</b>	PLATE NUMBER 634.99
			Sheet 1 of 1

### ITEMIZED LIST FOR SEGEMENTS 1-6 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
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
W20-5	LEFT or RIGHT LANE CLOSED AHEAD	4	48" x 48"	16.0	64.0
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
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>331.2</b>

### ITEMIZED LIST FOR SEGEMENTS 7, 9, & 10 TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	4	48" x 48"	16.0	64.0
W8-7	LOOSE GRAVEL	20	48" x 48"	16.0	320.0
W13-1P	ADVISORY SPEED (plaque)	20	30" x 30"	6.3	126.0
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)	3	48" x 48"	16.0	48.0
W21-2	FRESH OIL	4	48" x 48"	16.0	64.0
SPECIAL	WAIT FOLLOW PILOT CAR	2	30" x 18"	3.8	7.6
G20-1	ROAD WORK NEXT 27 MILES	2	36" x 18"	4.5	9.0
G20-1	ROAD WORK NEXT 22 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 10 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 5 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 2 MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>747.6</b>

### ITEMIZED LIST FOR SEGEMENT 8 TRAFFIC CONTROL SIGNS

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	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
W21-2	FRESH OIL	4	48" x 48"	16.0	64.0
SPECIAL	WAIT FOLLOW PILOT CAR	2	30" x 18"	3.8	7.6
G20-1	ROAD WORK NEXT 11 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 7 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 4 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 3 MILES	1	36" x 18"	4.5	4.5
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>369.4</b>

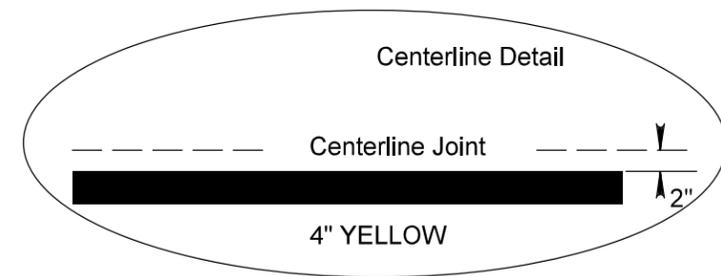
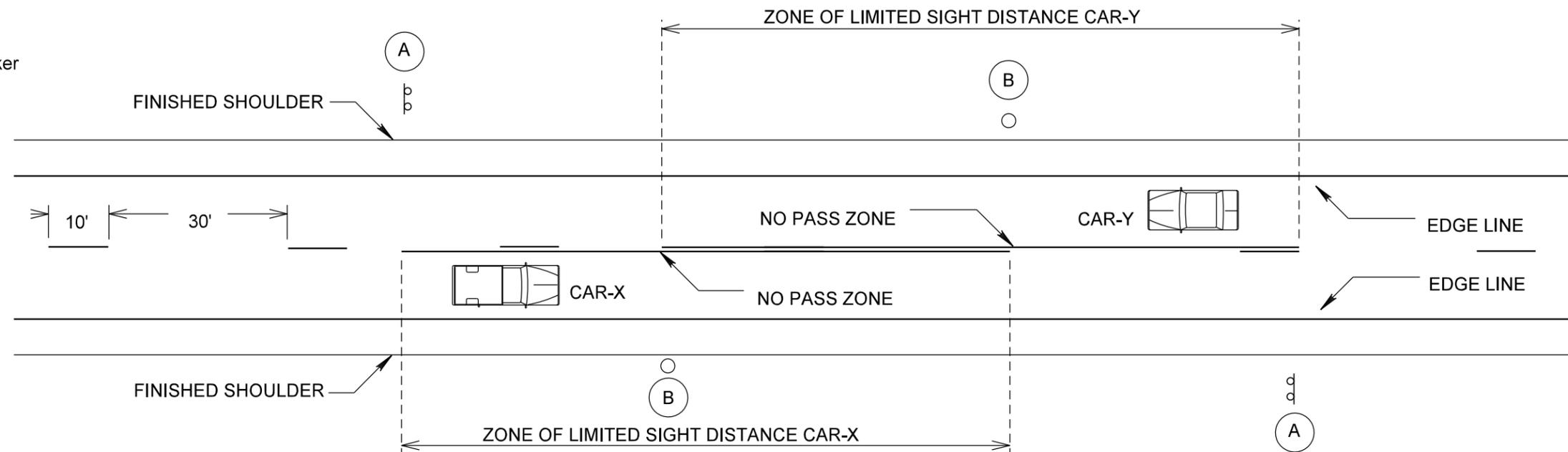
### ITEMIZED LIST FOR SEGEMENT 11 TRAFFIC CONTROL SIGNS

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	13	48" x 48"	16.0	208.0
W13-1P	ADVISORY SPEED (plaque)	13	30" x 30"	6.3	81.9
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)	4	48" x 48"	16.0	64.0
W21-2	FRESH OIL	4	48" x 48"	16.0	64.0
SPECIAL	WAIT FOLLOW PILOT CAR	2	30" x 18"	3.8	7.6
G20-1	ROAD WORK NEXT 22 MILES	2	36" x 18"	4.5	9.0
G20-1	ROAD WORK NEXT 15 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 13 MILES	1	36" x 18"	4.5	4.5
G20-1	ROAD WORK NEXT 9 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	2	36" x 18"	4.5	9.0
<b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b>					<b>557.5</b>

# TYPICAL PAVEMENT MARKING LAYOUT

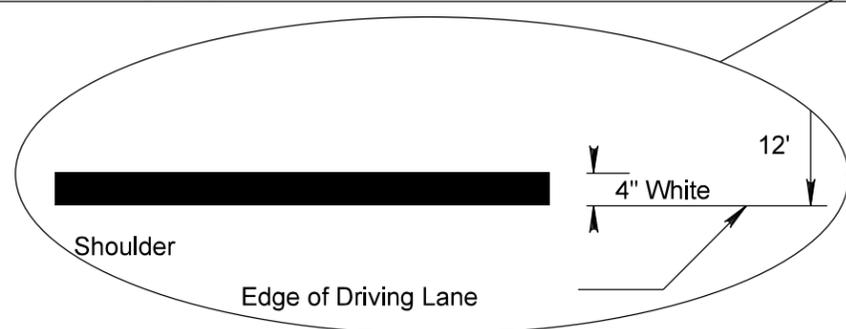
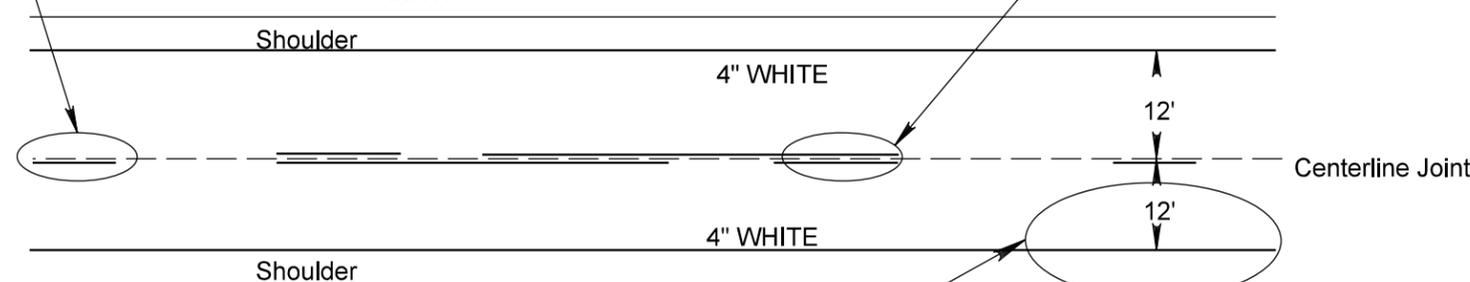
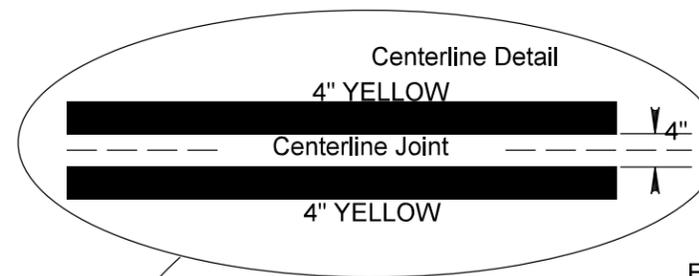


(A) NO PASSING ZONE  
(B) End of Zone Marker



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

- The approximate paint application rates will be as follows:  
  - Undivided Roadway
  - Dashed 4" Line  
7.6 Gal/Mile
  - Solid 4" Line  
27.8 Gal/Mile
- The typical pavement markings as shown on this sheet will be applied throughout the entire length of the project.
- 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.
- Traffic Control will be incidental to the cost of application. The striping and advance or trailing warning vehicle will be equipped with flashing amber lights or advance warning arrow panel.

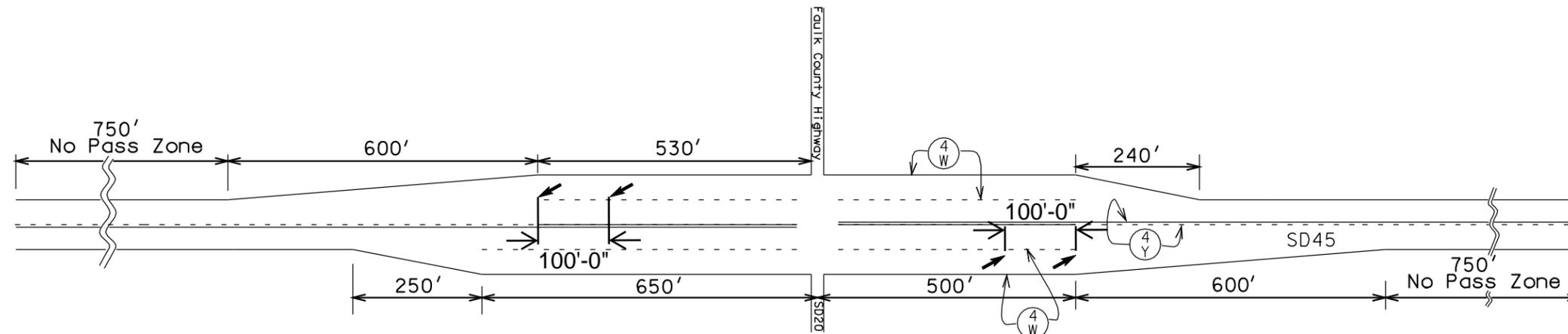
# Original Pavement Marking Plans for SD 45

## PAVEMENT MARKING LAYOUT

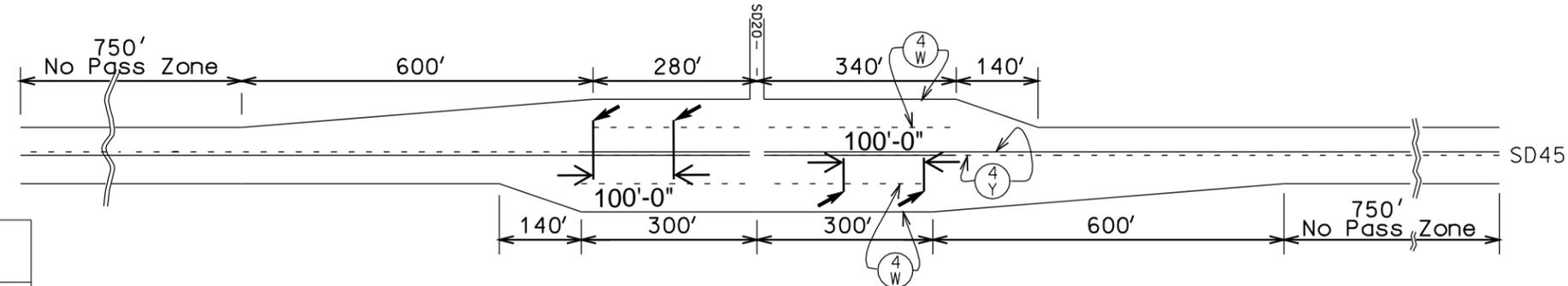


### North Jct SD45 & SD20

\*Note: Paint edge lines, center lines, and lane lines.



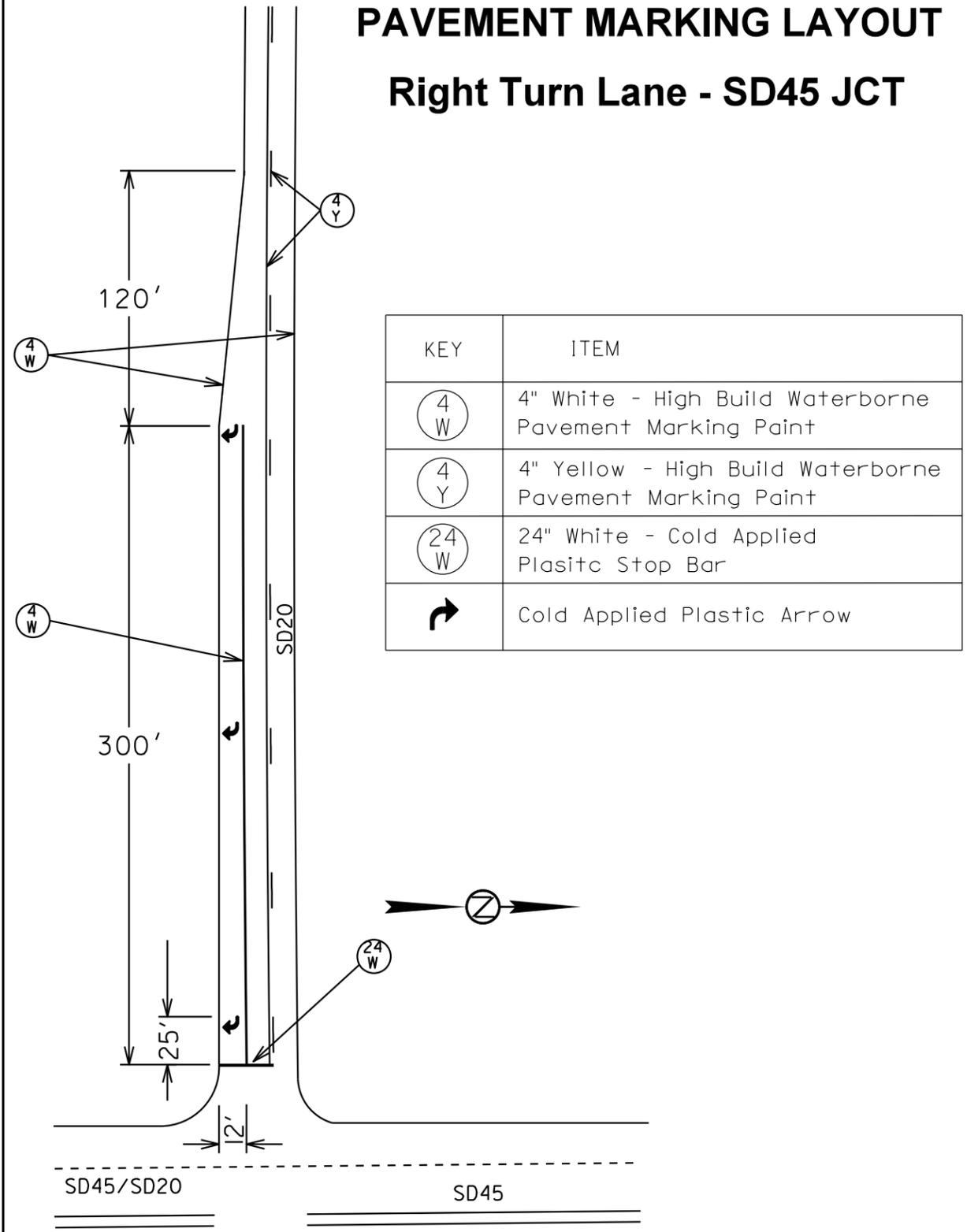
### South Jct SD45 & SD20



KEY	ITEM
(4 W)	4" White - High Build Waterborne Pavement Marking Paint
(4 Y)	4" Yellow - High Build Waterborne Pavement Marking Paint
(24 W)	24" White - Cold Applied Plastic Stop Bar
➔	Cold Applied Plastic Arrow

## PAVEMENT MARKING LAYOUT

### Right Turn Lane - SD45 JCT



PLOT SCALE - 1:40

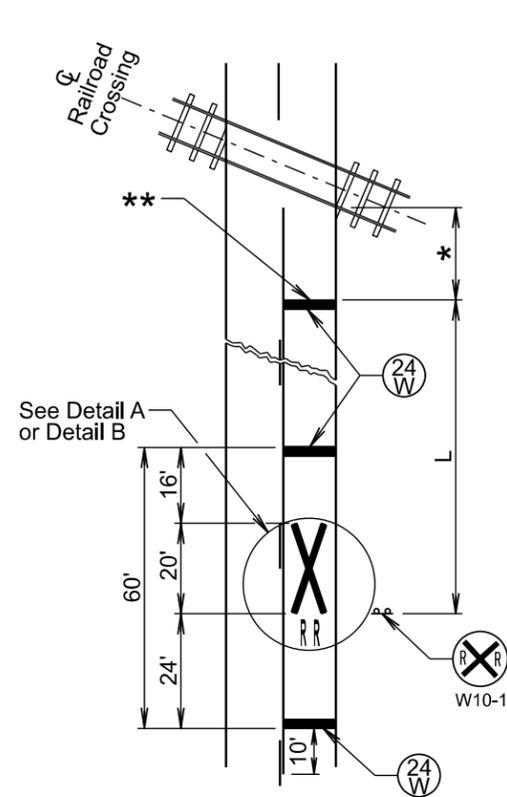
PLOTTED FROM - TRAB11017

PLOT NAME - 1

FILE - ... \AREA\060D\_RIGHT\_TURN\_LANE.DGN

### PAVEMENT MARKINGS AT RAILROAD CROSSING

Sheet 1 of 2



KEY	ITEM
(24 W)	24" White
X	White

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

PLAN VIEW

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

**GENERAL NOTES:**

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

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

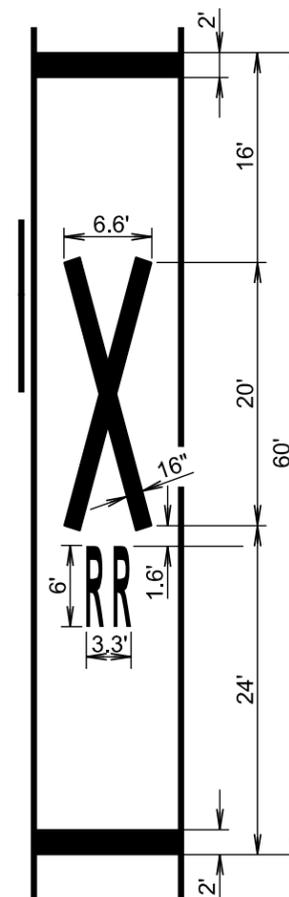
On multi-lane roads the transverse bands will extend across all approach lanes and individual RXR symbols will be placed in each approach lane.

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

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

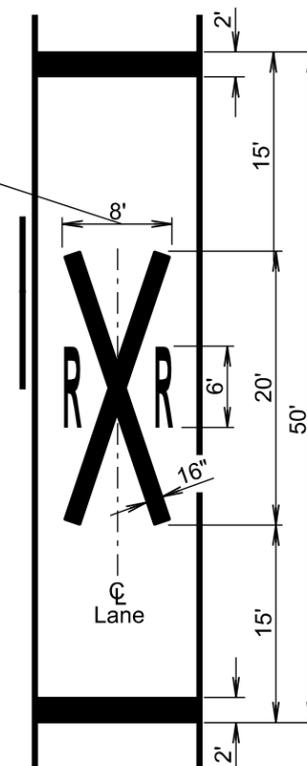
### PAVEMENT MARKINGS AT RAILROAD CROSSING

Sheet 2 of 2



DETAIL A

Width may vary according to lane width.



DETAIL B