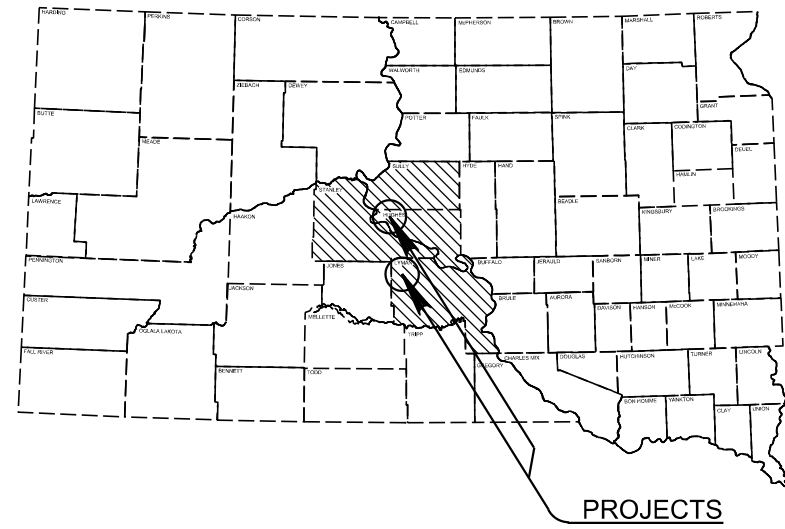


STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0031(50)	1	11

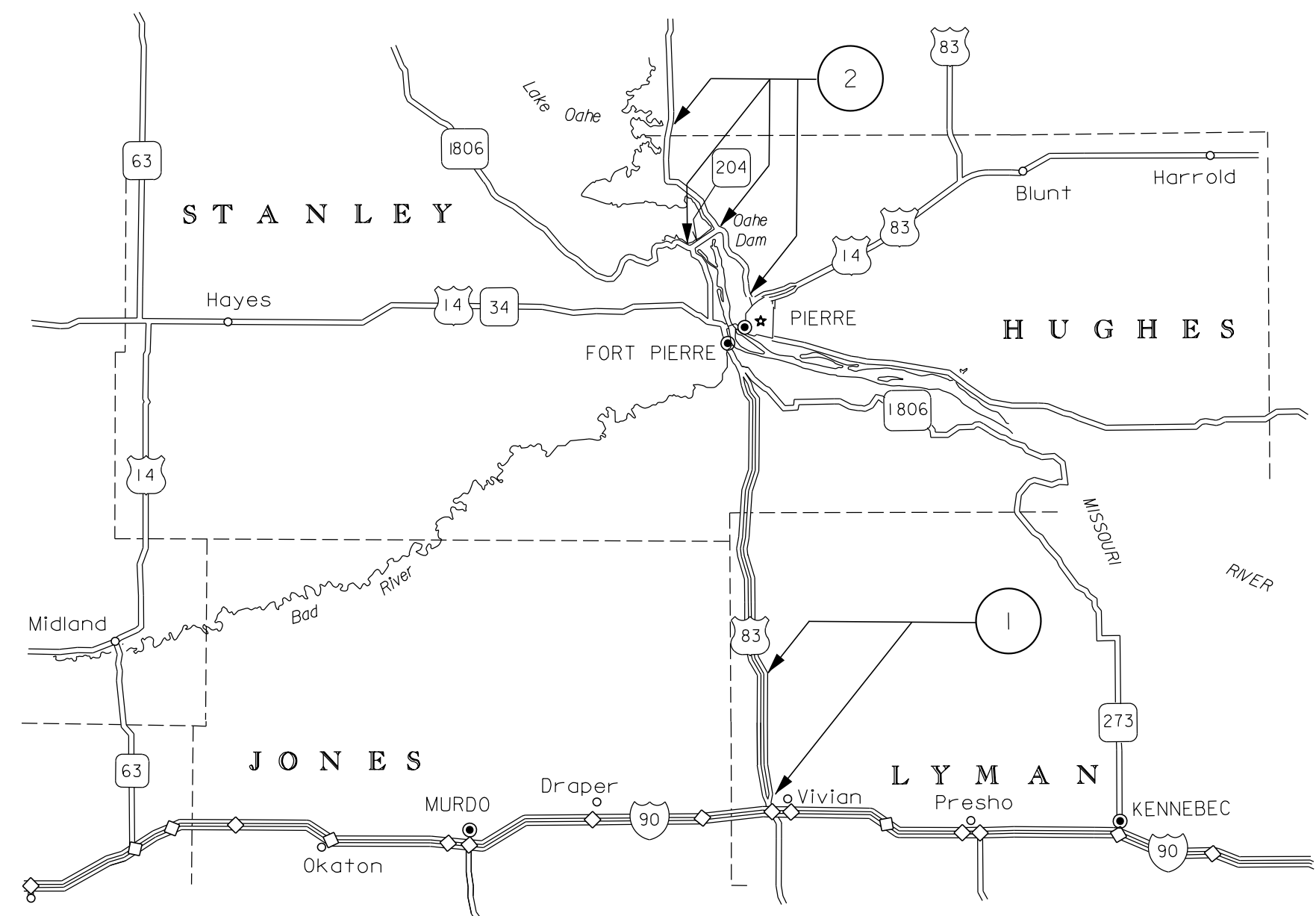
STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT NH-P 0031(50)
US HIGHWAY 83, SD 1804 & SD 204
LYMAN, HUGHES, STANLEY &
SULLY COUNTIES
ASPHALT CONCRETE CRACK SEALING
PCN 07KF

Revised: 01/07/2021 *EFF*



INDEX OF SHEETS

- Sheet 1 : Title Sheets
- Sheets 2-3 : Project Layout Maps
- Sheets 4-5 : Estimate of Quantities, Notes, Environmental Commitments & Sign Tabulation
- Sheets 6-7 : Fixed Location Signs
- Sheet 8 : Special Sign Details
- Sheets 9 : Typical Reservoir Section
- Sheets 10-11 : Standard Plates



1	US HWY 83 NBL - MRM 88.19 +0.050 to MRM 96.00 +0.248 SBL - MRM 88.19 +0.000 to MRM 96.00 +0.564
2	SD HWY 1804 MRM 250.63 +0.060 to MRM 265.00 +0.354 SD HWY 204 MRM 178.00 +0.000 to MRM 180.13 +0.000

US HWY 83 EXPRESSWAY

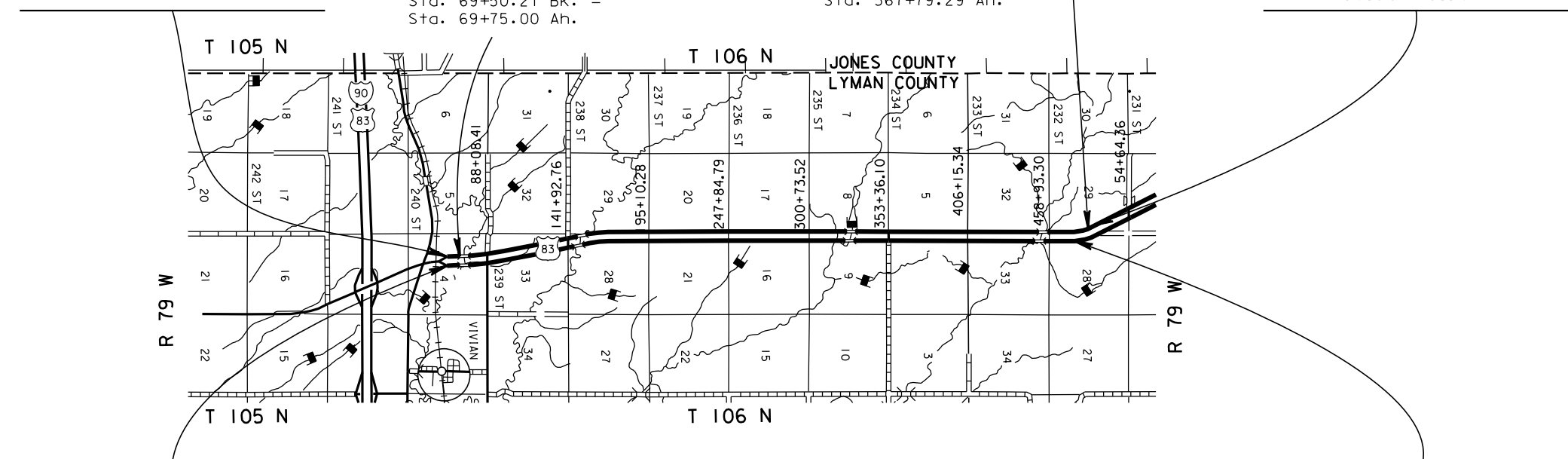
LYMAN COUNTY

BEGIN NH-P 0031(50)
 Southbound Lanes
 Station 46+89.10
 MRM = 88.19 +0.000

EQUATION:
 Southbound Lanes
 Sta. 69+50.21 Bk. =
 Sta. 69+75.00 Ah.

EQUATION:
 Southbound Lanes
 Sta. 495+01.11 Bk. =
 Sta. 567+79.29 Ah.

END NH-P 0031(50)
 Southbound Lanes
 Station 566+18.30
 MRM = 96.00 +0.564



END NH-P 0031(50)
 Northbound Lanes
 Station 404+99.33
 MRM = 88.19 +0.050

BEGIN NH-P 0031(50)
 Northbound Lanes
 Station 580+43.81
 MRM = 96.00 +0.248

DESIGN DESIGNATION

NORTHBOUND & SOUTHBOUND LANES

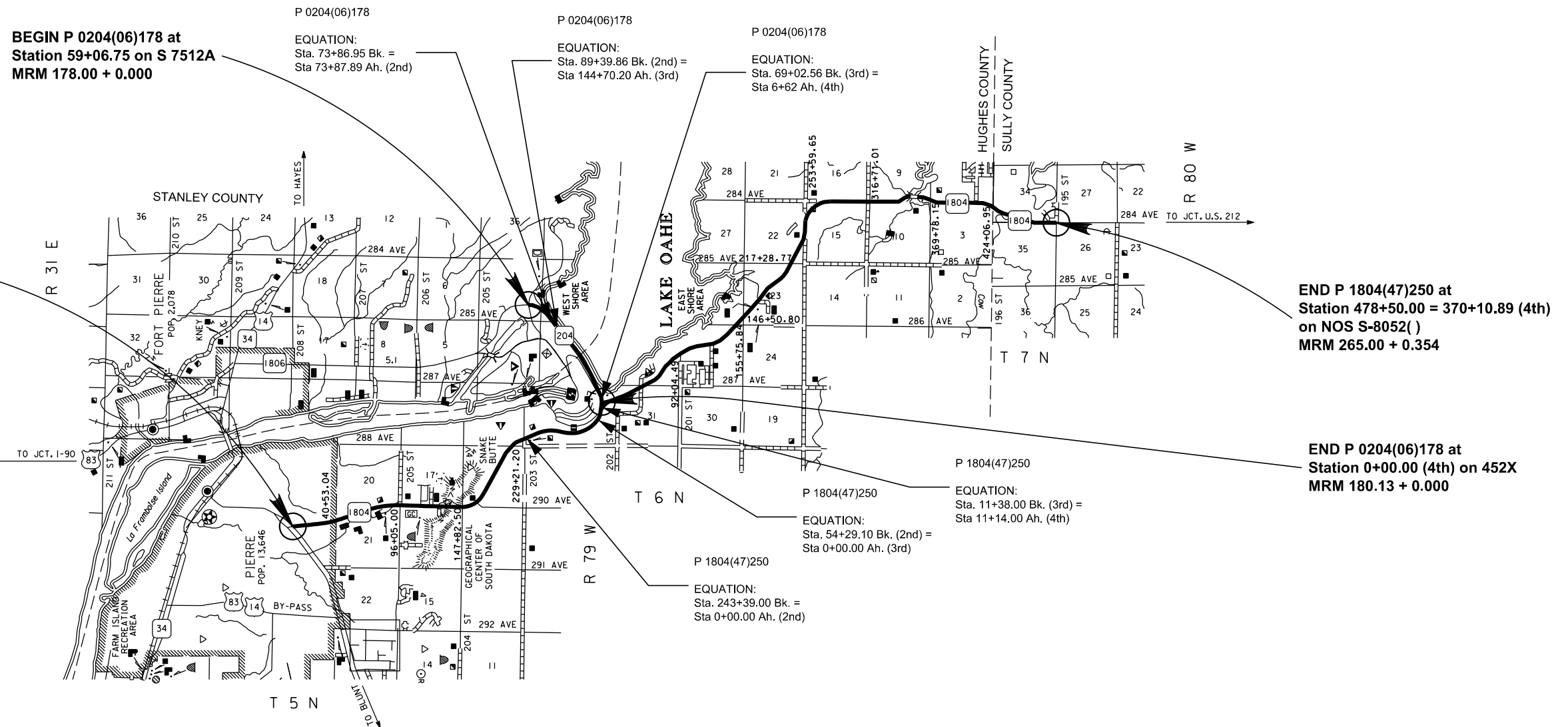
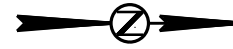
ADT (2020)	1169
ADT (2040)	1949
DHV	310
D	50%
T DHV	8.2%
T ADT	18.0%
V	70 MPH

STORM WATER PERMIT
 None Required

NB LANES GROSS LENGTH	41693.72 FEET	7.896 MILES
LENGTH OF EXCEPTIONS	0.0 FEET	0.0 MILES
NB LANES NET LENGTH	41693.72 FEET	7.896 MILES
SB LANES GROSS LENGTH	44948.21 FEET	8.513 MILES
LENGTH OF EXCEPTIONS	0.0 FEET	0.0 MILES
SB LANES NET LENGTH	44948.21 FEET	8.513 MILES

SD 1804 & SD 204

HUGHES, STANLEY & SULLY COUNTIES



DESIGN DESIGNATION (SD1804)

ADT(2020)	1576
ADT(2040)	2097
DHV	271
D	50%
T DHV	2.1%
T ADT	4.6%
V	35, 45, 55, & 65 MPH

DESIGN DESIGNATION (SD204)

ADT(2020)	871
ADT(2040)	1319
DHV	170
D	50%
T DHV	3.8%
T ADT	8.3%
V	55 MPH

	<u>SD 1804</u>			<u>SD 204</u>	
GROSS LENGTH	76,834.56 FEET	14.552 MILES	GROSS LENGTH	11,251.68 FEET	2.131 MILES
LENGTH OF STRUCTURE	0.00 FEET	0.000 MILES	LENGTH OF STRUCTURE	0.00 FEET	0.000 MILES
NET LENGTH	76,834.56 FEET	14.552 MILES	NET LENGTH	11,251.68 FEET	2.131 MILES

STORM WATER PERMIT
None Required

Revised: 01/07/2021 ~~8777~~

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
350E0010	Asphalt Concrete Crack Sealing	21,707	Lb
634E0010	Flagging	400.0	Hour
634E0020	Pilot Car	200.0	Hour
634E0110	Traffic Control Signs	828.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Board	2	Each

SPECIFICATIONS

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

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. 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>

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 pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

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

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

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 Environment 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 completely 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 of time 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 review of cultural resources impacts. 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 cultural resource survey and/or records search. 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; 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 on 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 records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). 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.

If evidence for cultural resources is uncovered during project construction activities, then such activities will cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order 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 provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting.

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 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.

Traffic Control Signs, as shown in the Estimate of Quantities, are estimates. Contractor's operation may require adjustments in quantities, either more or less. Payment will be for those signs actually ordered by the Engineer and used.

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

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

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

TRAFFIC CONTROL SIGNS

Sufficient traffic control signs have been included in these plans to sign one workspace on each route. If the Contractor elects to work on additional locations simultaneously, the cost for additional traffic control signs will be incidental to the contract unit price per square foot for "Traffic Control Signs".

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 6 ONE LANE ROAD WAIT FOR PILOT CAR signs for use on intersecting roads. These

signs will be mounted on a Type 3 Barricade and placed at the stop sign. This assembly 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".

BLOCKING MEDIUM MATERIAL

All costs for furnishing and placing the blocking material medium will be incidental to the contract unit price per pound for Asphalt Concrete Crack Sealing.

BLOTTING MATERIAL

Blotting material will be placed over the sealant material immediately following placement of sealant on all cracks.

ESTIMATED CRACK SEALING BY ROUTE

All work will meet the construction requirements of Section 350, unless otherwise stated in plan notes.

The actual quantity used in the field will be the basis for payment, with no adjustment in contract unit price allowed. (See table for Crack Sealant Lbs. & Ft. to be Routed per route).

No routing will occur when within 1 foot of the top of slough.

The routes will be routed as per "Typical Reservoir Section". There will be no over banding on US 83 N&S route. For information only and for estimate purposes it has been determined that each section will have the following amount of crack sealant (lbs.) and distance (ft.) to be routed prior to placement of the crack sealant.

Route	MRM to MRM	(Approx.) Crack Sealant Lbs.	(Approx.) Feet to be Routed
US 83 SB	202.00 +0.775 to 220.358	1868.5	3167.0
US 83 NB	220.390 to 226.83 +0.003	4484.0	7600.0
SD 1804	250.63+0.060 to 265.00 +0.354	13908.7	23574.0
SD 204	178.000+0.000 to 180.13+0.000	1445.5	2450.0
		21706.7	36791.0

Revised: 01/07/2021 *EFFM*

US83 N&S

EXPRESSWAY / INTERSTATE					
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W4-2	LEFT or RIGHT LANE ENDS (symbol)	4	48" x 48"	16.0	64.0
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
SPECIAL	STOP FOLLOW PILOT CAR WHEN GOING YOUR WAY	6	48" x 36"	12.0	72.0
G20-1	ROAD WORK NEXT _9_ MILES	4	48" x 24"	8.0	32.0
G20-2	END ROAD WORK	4	48" x 24"	8.0	32.0
EXPRESSWAY / INTERSTATE TRAFFIC CONTROL SIGNS SQFT					328.0

SD 1804

CONVENTIONAL ROAD					
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	10	48" x 48"	16.0	160.0
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	STOP FOLLOW PILOT CAR WHEN GOING YOUR WAY	6	48" x 36"	12.0	72.0
G20-1	ROAD WORK NEXT _15_ MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	3	36" x 18"	4.5	13.5
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					318.5

SD 204

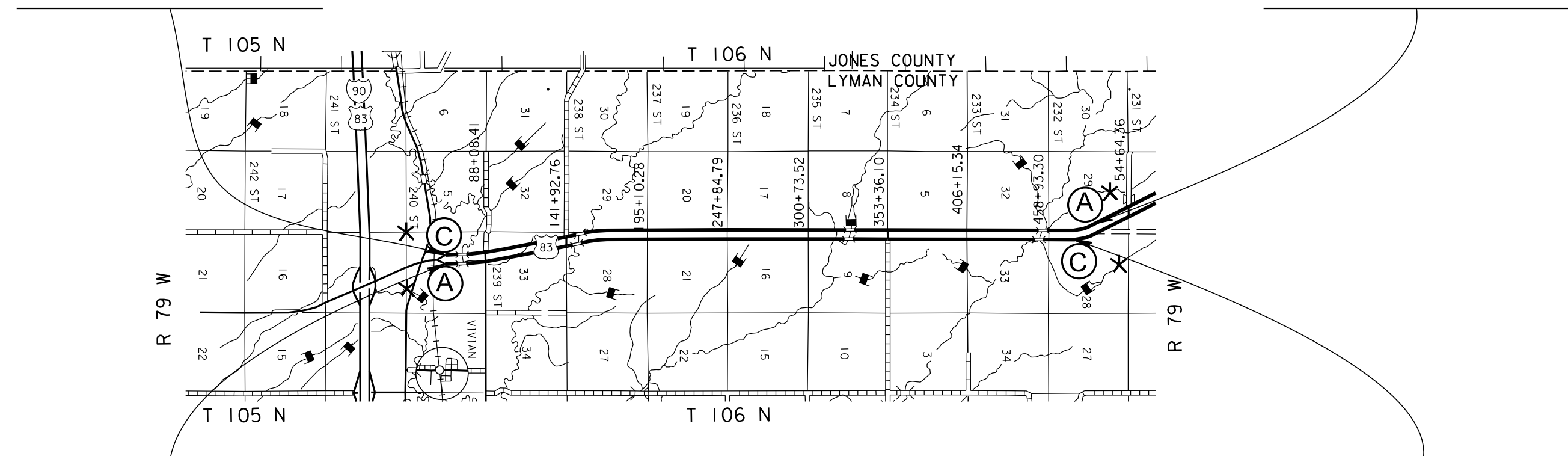
CONVENTIONAL ROAD					
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
SPECIAL	STOP FOLLOW PILOT CAR WHEN GOING YOUR WAY	6	48" x 36"	12.0	72.0
G20-1	ROAD WORK NEXT _2_ MILES	2	36" x 18"	4.5	9.0
G20-2	END ROAD WORK	1	36" x 18"	4.5	4.5
CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT					181.5

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0031(50)	6	11

FIXED LOCATION BREAKAWAY SUPPORT SIGNS US HIGHWAY 83 LYMAN COUNTY

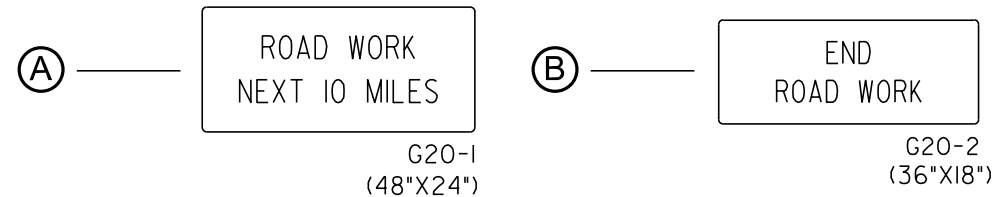
BEGIN NH-P 0031(50)
Southbound Lanes
Station 46+89.10
MRM = 88.19 +0.000

END NH-P 0031(50)
Southbound Lanes
Station 566+18.30
MRM = 96.00 +0.564



END NH-P 0031(50)
Northbound Lanes
Station 404+99.33
MRM = 88.19 +0.050

BEGIN NH-P 0031(50)
Northbound Lanes
Station 580+43.81
MRM = 96.00 +0.248

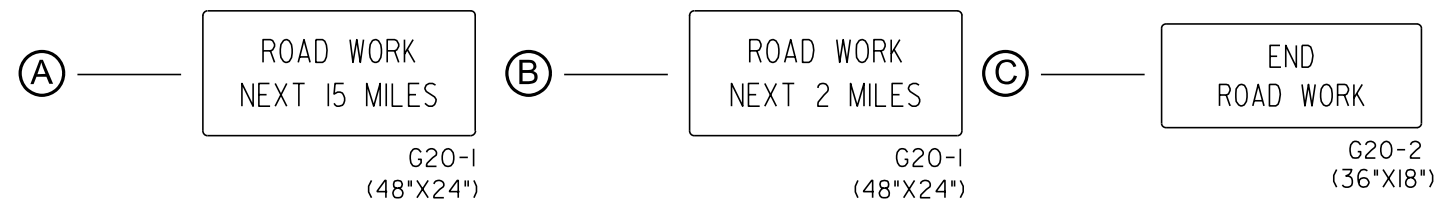
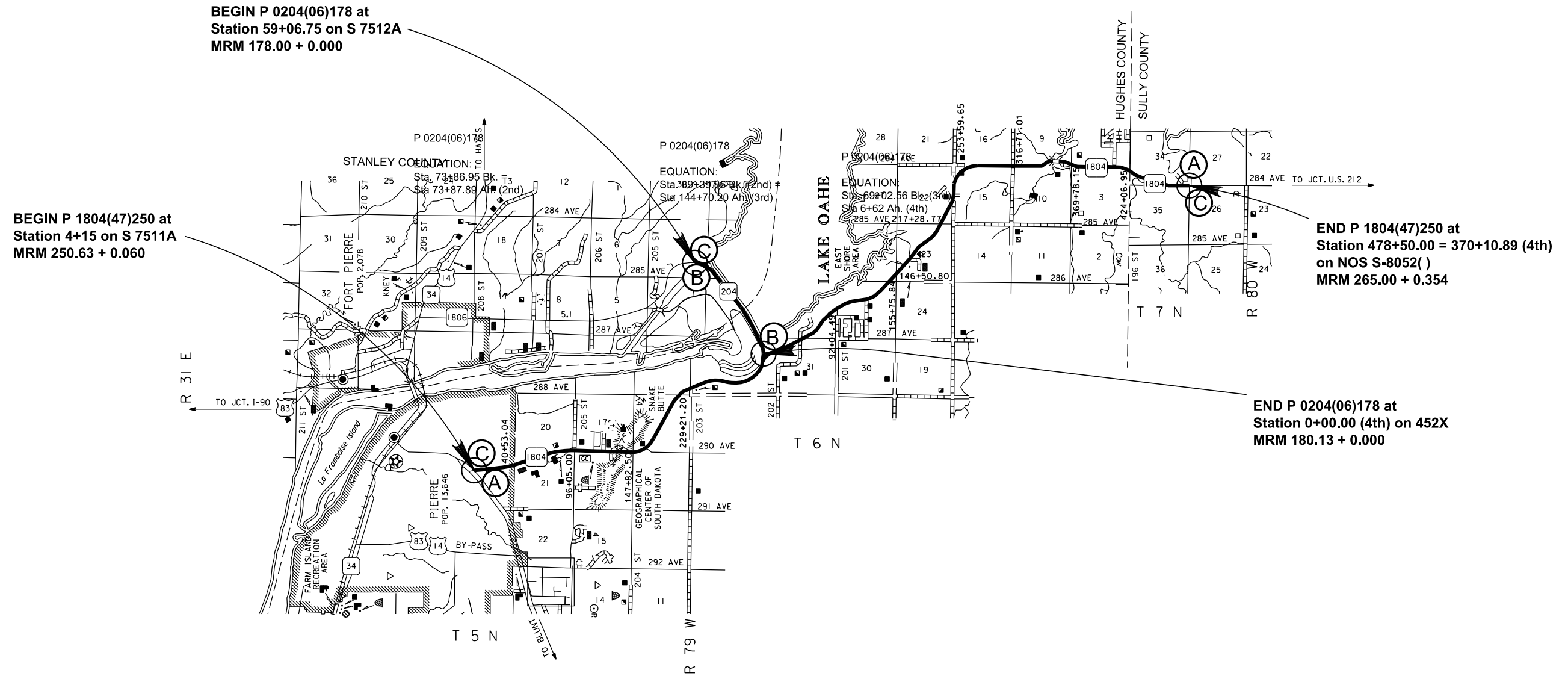


* Double Signs on Divided 4 Lane

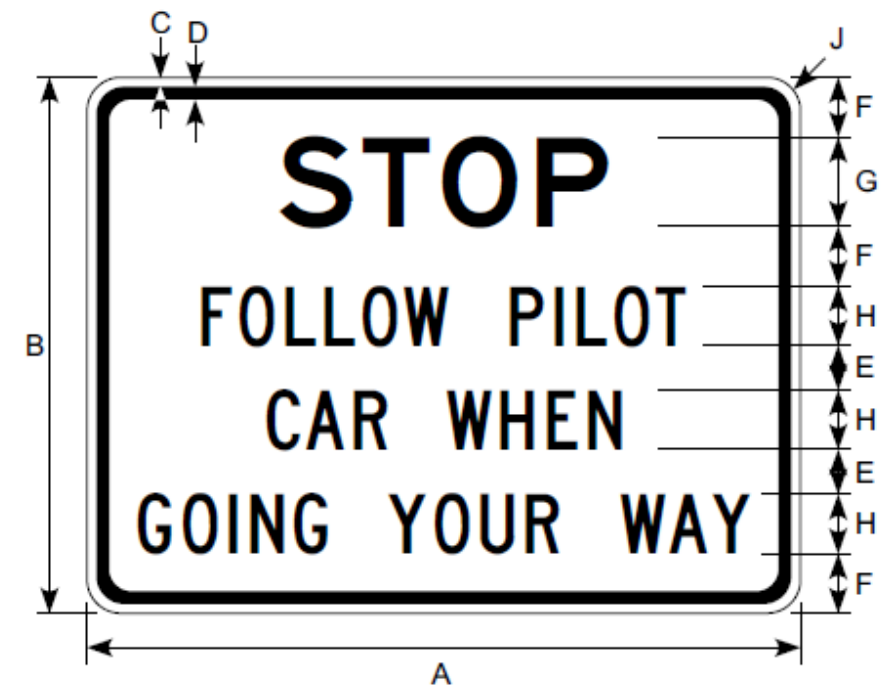
STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	NH-P 0031(50)	7	11

FIXED LOCATION BREAKAWAY SUPPORT SIGNS SD HIGHWAYS 1804 & 204 HUGHES, STANLEY & SULLY COUNTIES

Revised: 01/07/2021 *87799*



SPECIAL SIGN DETAIL

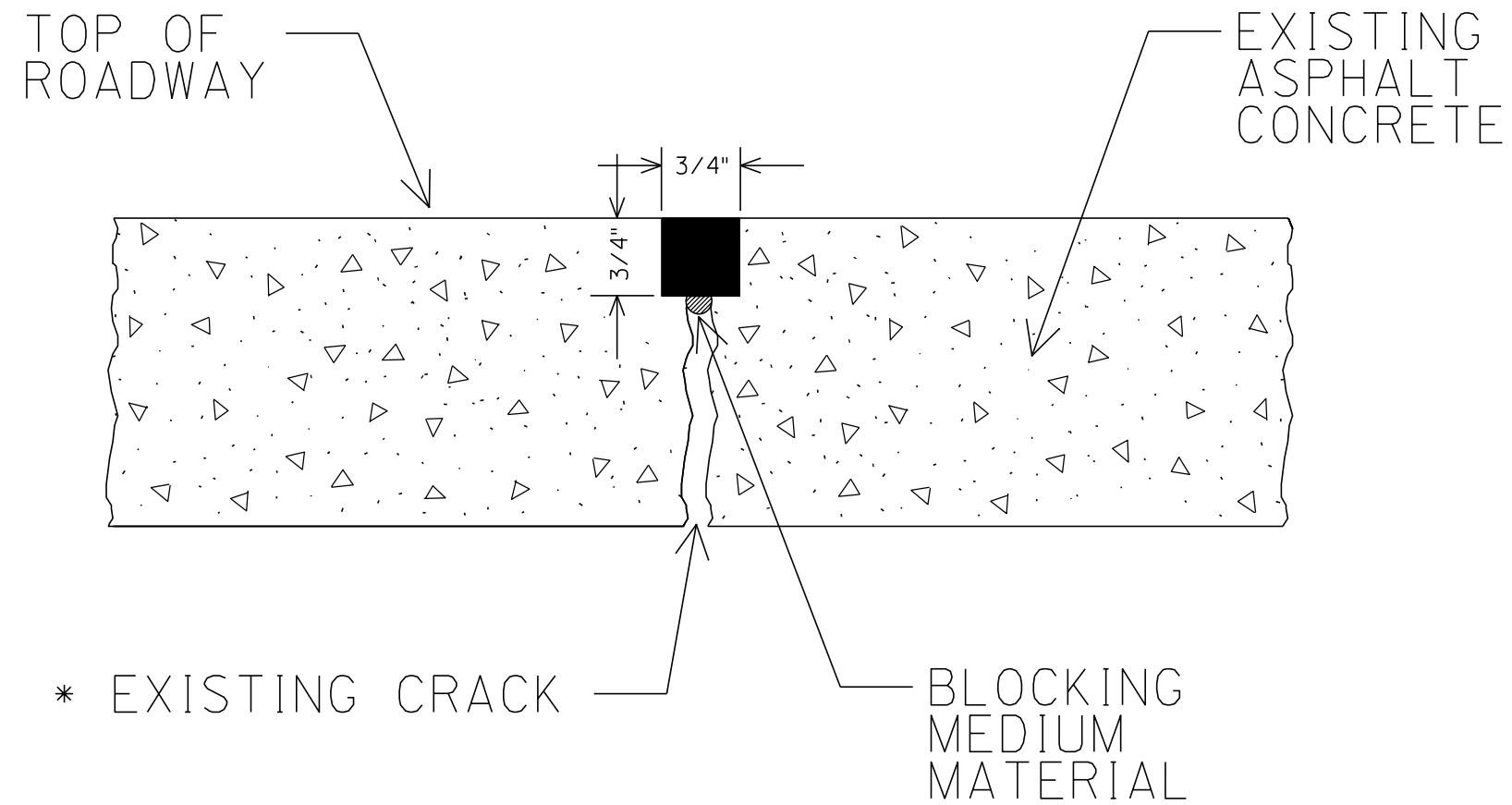


Revised: 01/072021 *87711*

Border and Legend: Black
Background: Orange

Road Class	Dimensions (inches)								
	A	B	C	D	E	F	G	H	J
All	48	36	0.63	0.88	3	4	6E	4C	2.25

TYPICAL RESERVOIR SECTION



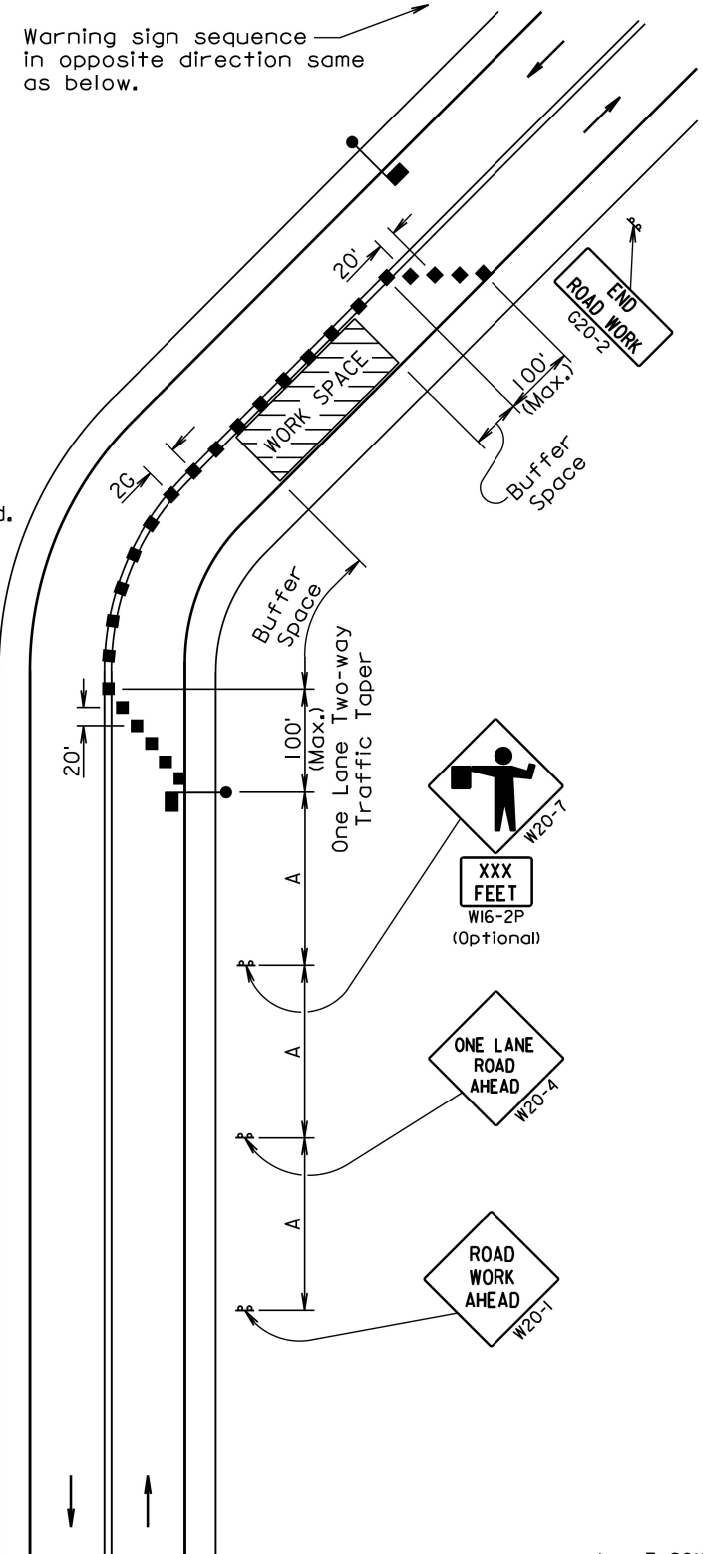
* The blocking medium material shall be used in cracks that are 3/8" or more in width.

Plotting Date: 12/28/2020

PLOT SCALE - 1:199,785

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

Warning sign sequence in opposite direction same as below.



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) shall 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 shall 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 shall be used at intersecting roads to control intersecting road traffic as required.

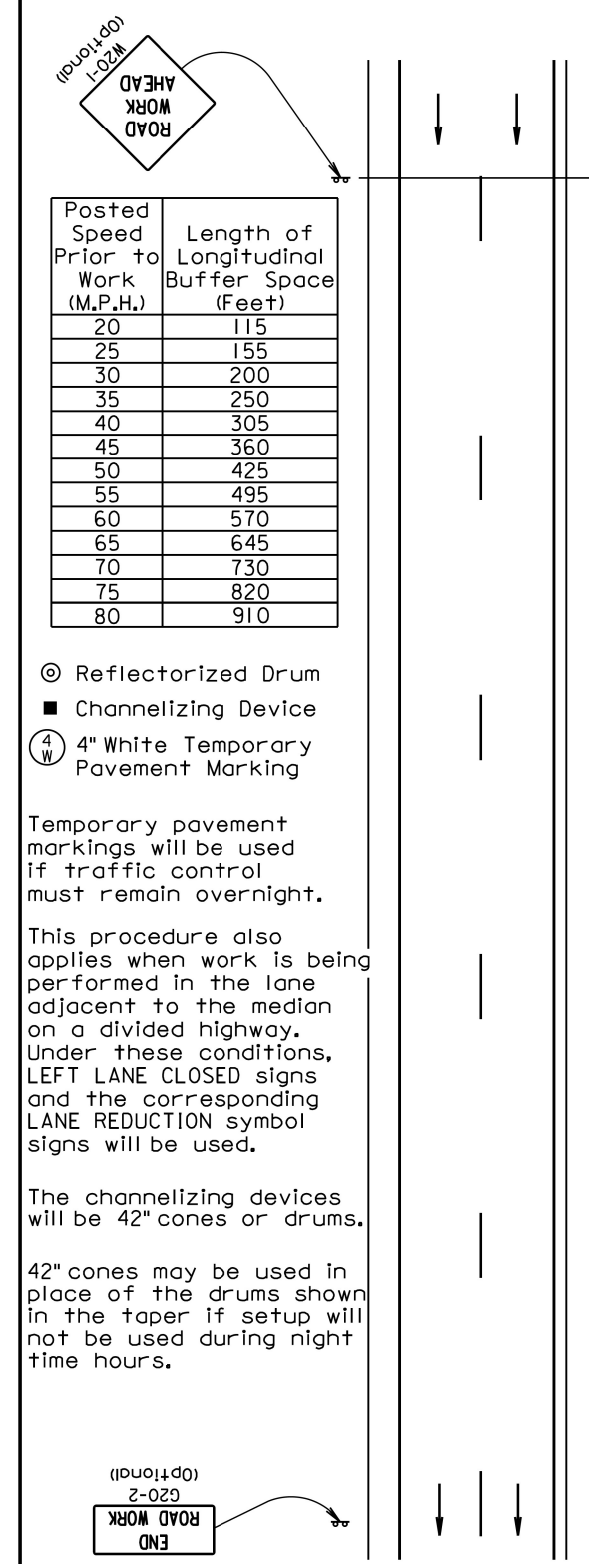
The buffer space should be extended so that the two-way traffic taper is placed before a horizontal or vertical curve to provide adequate sight distance for the flagger and queue of stopped vehicles.

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

SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES LANE CLOSURE WITH FLAGGER PROVIDED	PLATE NUMBER 634.23
		Sheet 1 of 1

Published Date: 4th Qtr. 2020

June 3, 2016



Posted Speed Prior to Work (M.P.H.)	Length of Longitudinal Buffer Space (Feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820
80	910

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

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

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

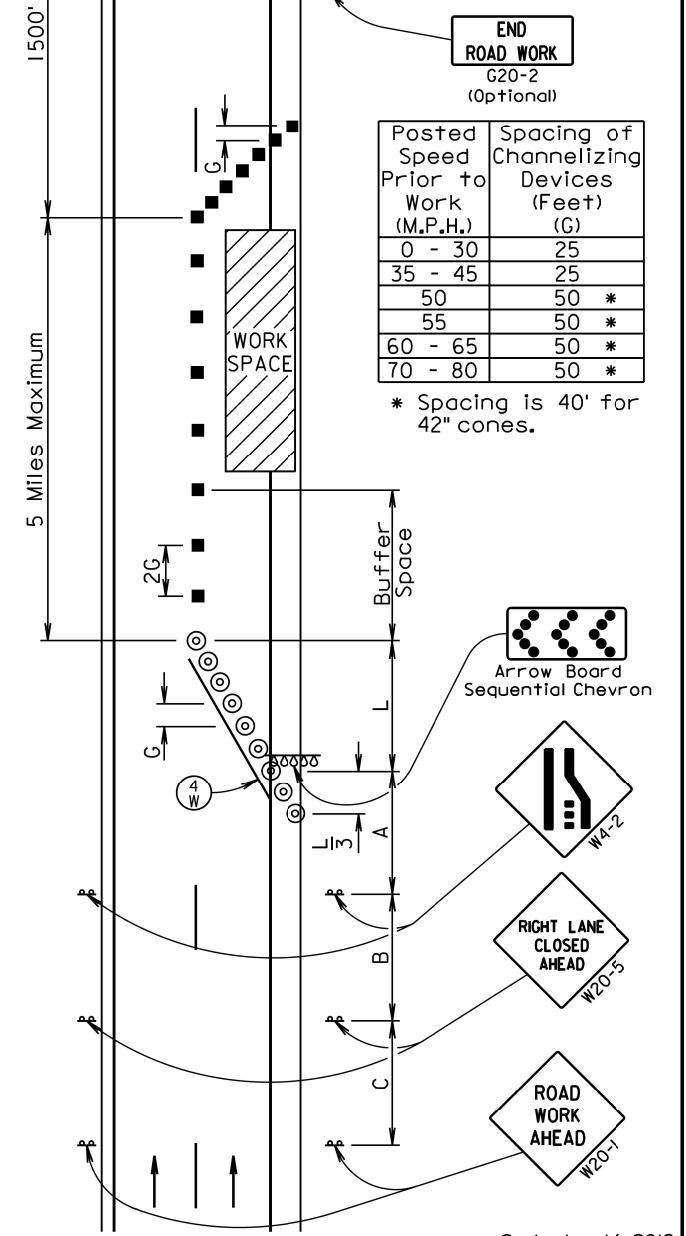
The channelizing devices will be 42" cones or drums.

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

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

Posted Speed Prior to Work (M.P.H.)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	25
35 - 45	25
50	50 *
55	50 *
60 - 65	50 *
70 - 80	50 *

* Spacing is 40' for 42" cones.



SDDOT	GUIDES FOR TRAFFIC CONTROL DEVICES LANE CLOSURE WITHOUT BARRIER	PLATE NUMBER 634.64
		Sheet 1 of 1

Published Date: 4th Qtr. 2020

September 14, 2018

PLOTTED FROM - TRPR22411

PLOT NAME - 1

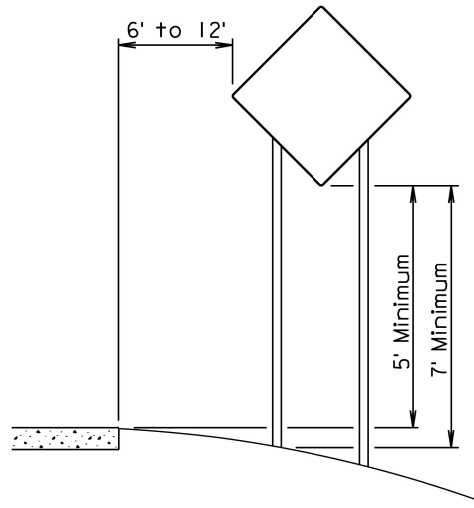
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Plotting Date: 11/30/2020

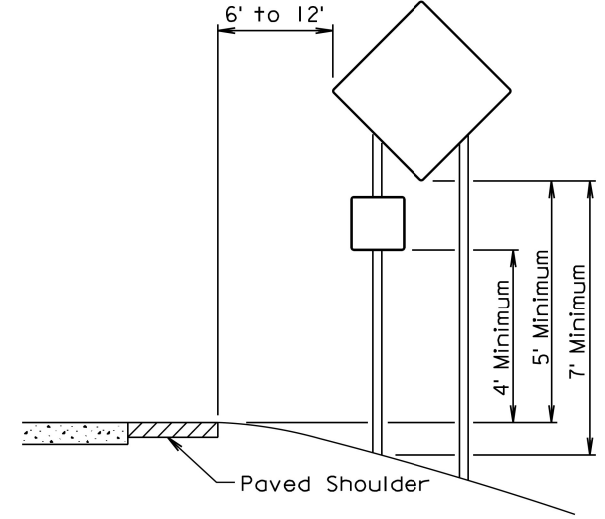
PLOT SCALE - 1:200.881

PLOT NAME - 1

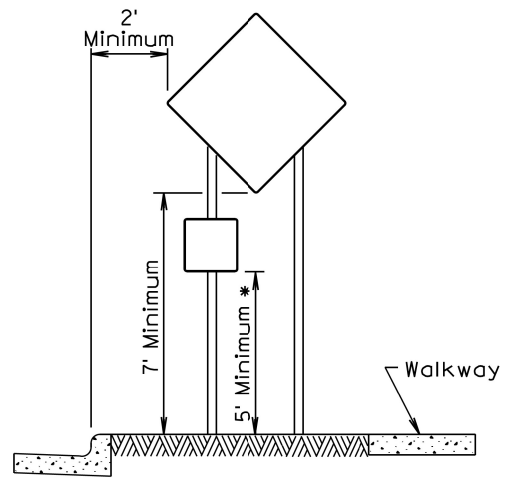
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RURAL DISTRICT

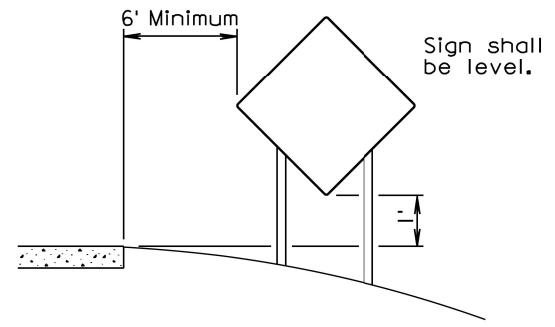


RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

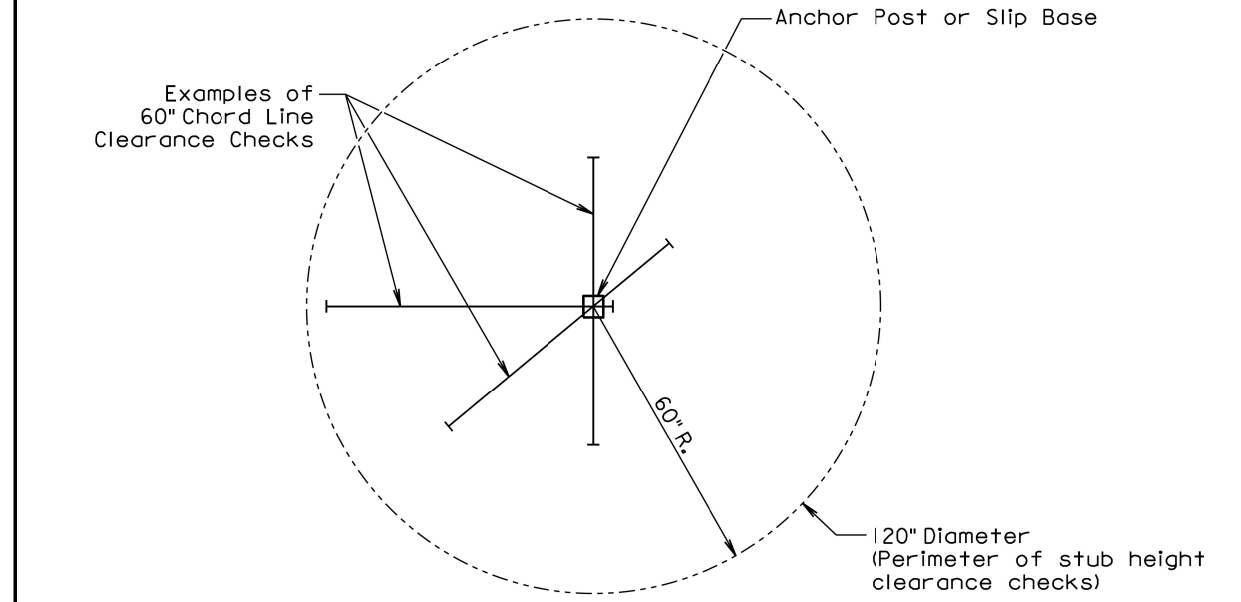
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.



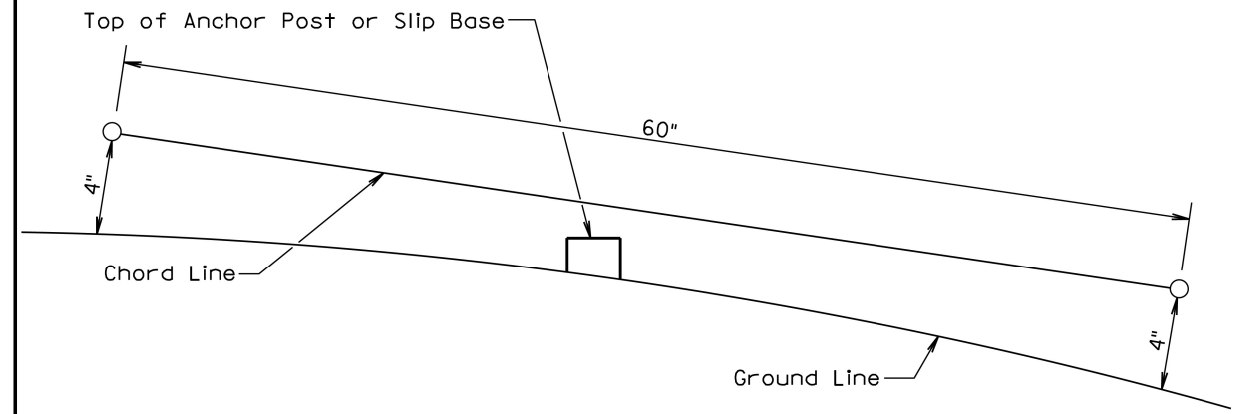
RURAL DISTRICT 3 DAY MAXIMUM
(Not applicable to regulatory signs)

September 22, 2014

Published Date: 4th Qtr. 2020	S D D O T	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

- The top of anchor posts and slip bases SHALL 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 shall 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.

July 1, 2005

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