

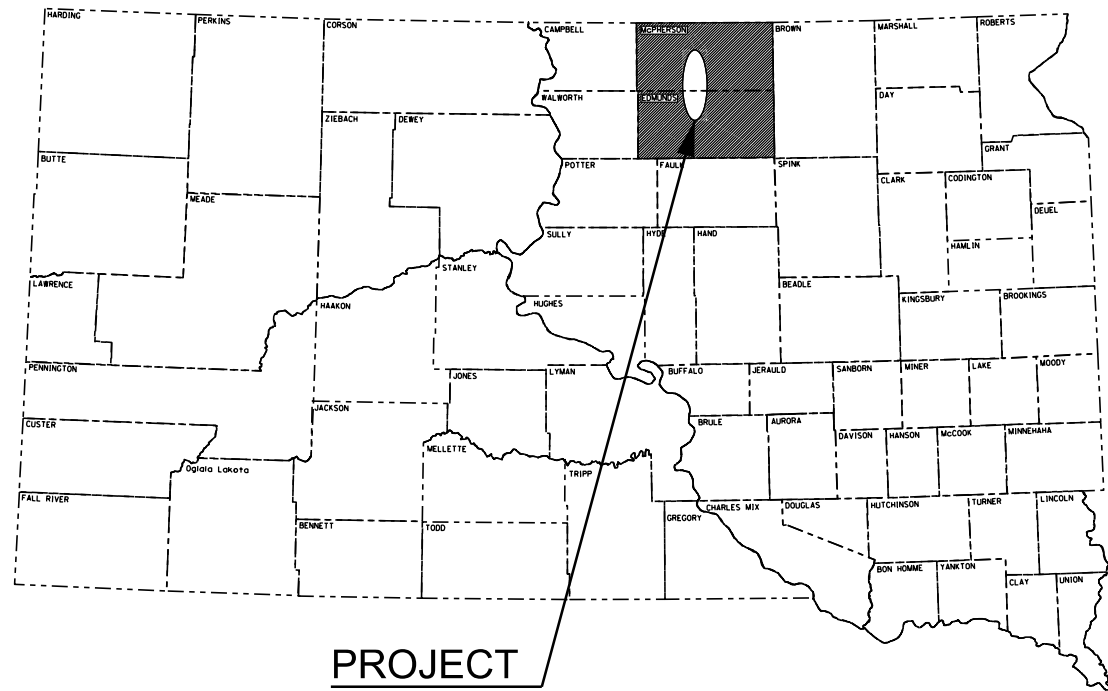
STATE OF SOUTH DAKOTA  
 DEPARTMENT OF TRANSPORTATION  
 PLANS FOR PROPOSED

**PROJECT P 0011(151)**  
**SD HIGHWAY 247**  
**EDMUNDS & MCPHERSON COUNTIES**  
 CRACK LEVELING  
 PCN 07KV

|                           |             |           |              |
|---------------------------|-------------|-----------|--------------|
| STATE OF SOUTH DAKOTA     | PROJECT     | SHEET NO. | TOTAL SHEETS |
|                           | P 0011(151) | 1         | 6            |
| Plotting Date: 01/06/2021 |             |           |              |

**Index of Sheets**

- Sheet: 1 Title Sheet & Layout Map
- Sheet: 2-3 Estimate of Quantities and Environmental Commitments
- Sheet: 4 Plan Notes
- Sheet: 5 Detail Drawings
- Sheet: 6 Traffic Control



PROJECT

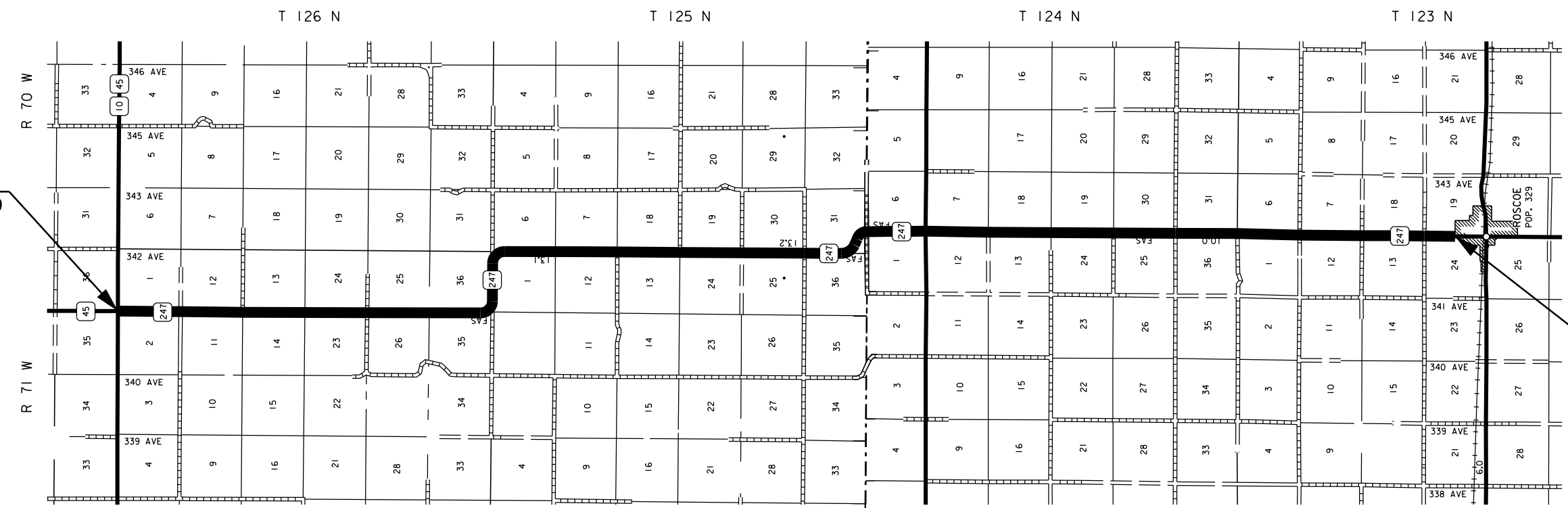
PLOT SCALE - 1"=1000'

PLOT NAME - 1

FILE - ... \EDMS07KV\AREA DESIGN\TITLE.DGN

**END PROJECT**  
 MRM 192.54+0.000  
 Sta. 1190+16.5  
 Mileage 23.029

**BEGIN PROJECT**  
 MRM 170.00 +0.001  
 Sta. 0+00.00  
 Mileage 0.488



DESIGN DESIGNATION

|            |        |
|------------|--------|
| ADT (2019) | 218    |
| ADT (2039) | 284    |
| DHV        | 38     |
| D          | 51%    |
| T DHV      | 17.1%  |
| T ADT      | 37.5%  |
| V          | 55 mph |

STORM WATER PERMIT  
 (None Required)

|                      |               |              |
|----------------------|---------------|--------------|
| GROSS LENGTH         | 119016.5 FEET | 22.541 MILES |
| LENGTH OF EXCEPTIONS | 0.0 FEET      | 0.0 MILES    |
| NET LENGTH           | 119016.5 FEET | 22.541 MILES |

**11**

March 17, 2021

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

|                       |                           |                |                   |
|-----------------------|---------------------------|----------------|-------------------|
| STATE OF SOUTH DAKOTA | PROJECT<br>P 0011 ( 151 ) | SHEET NO.<br>2 | TOTAL SHEETS<br>6 |
|-----------------------|---------------------------|----------------|-------------------|

Plotting Date: 01/12/2021

Revised: 01/12/2021 LLG

## ESTIMATE OF QUANTITIES

| BID ITEM NUMBER | ITEM                           | QUANTITY | UNIT |
|-----------------|--------------------------------|----------|------|
| 009E0010        | Mobilization                   | Lump Sum | LS   |
| 320E0402        | Asphalt Repair Mastic Type 2   | 425,302  | Lb   |
| 634E0010        | Flagging                       | 500.0    | Hour |
| 634E0020        | Pilot Car                      | 250.0    | Hour |
| 634E0110        | Traffic Control Signs          | 153.0    | SqFt |
| 634E0120        | Traffic Control, Miscellaneous | Lump Sum | LS   |
| 634E0275        | Type 3 Barricade               | 6        | Each |

## SPECIFICATIONS

Standard Specifications for Roads and 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>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Office at 605-773-3098 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

## COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

### COMMITMENT B2: WHOOPING CRANE

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

#### Action Taken/Required:

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

### COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

#### Action Taken/Required:

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

## COMMITMENT H: WASTE DISPOSAL SITE

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

#### Action Taken/Required:

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

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

PLOT SCALE - 1:1000

PLOTTED FROM - TRAB18004

PLOT NAME - 1

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# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

| STATE OF | PROJECT        | SHEET | TOTAL  |
|----------|----------------|-------|--------|
| SOUTH    | P 0011 ( 151 ) | NO.   | SHEETS |
| DAKOTA   |                | 3     | 6      |

Plotting Date: 01/06/2021

## 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 of 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 will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office 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.

PLOT SCALE - 1:1000

PLOTTED FROM - TRAB18004

PLOT NAME - 1

FILE - ... \AREA DESIGN\BORDER.DGN

|                             |                |              |                 |
|-----------------------------|----------------|--------------|-----------------|
| STATE OF<br>SOUTH<br>DAKOTA | PROJECT        | SHEET<br>NO. | TOTAL<br>SHEETS |
|                             | P 0011 ( 151 ) | 4            | 6               |

Plotting Date: 01/12/2021

Revised: 01/12/2021 LLG

### GENERAL TRAFFIC CONTROL

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.

### 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 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".

### ASPHALT REPAIR MASTIC TYPE 2

Transverse joints will only be filled in the driving lanes, white line to white line.

The width of repair locations varies throughout the project. The Engineer may specify the width of the squeegee used to improve ride or control quantities. The use of a 3' squeegee may be required to ensure the entire depression is filled.

The contract unit price per pound for ASPHALT REPAIR MASTIC TYPE 2 will be nonnegotiable regardless of changes in plan contract quantity.



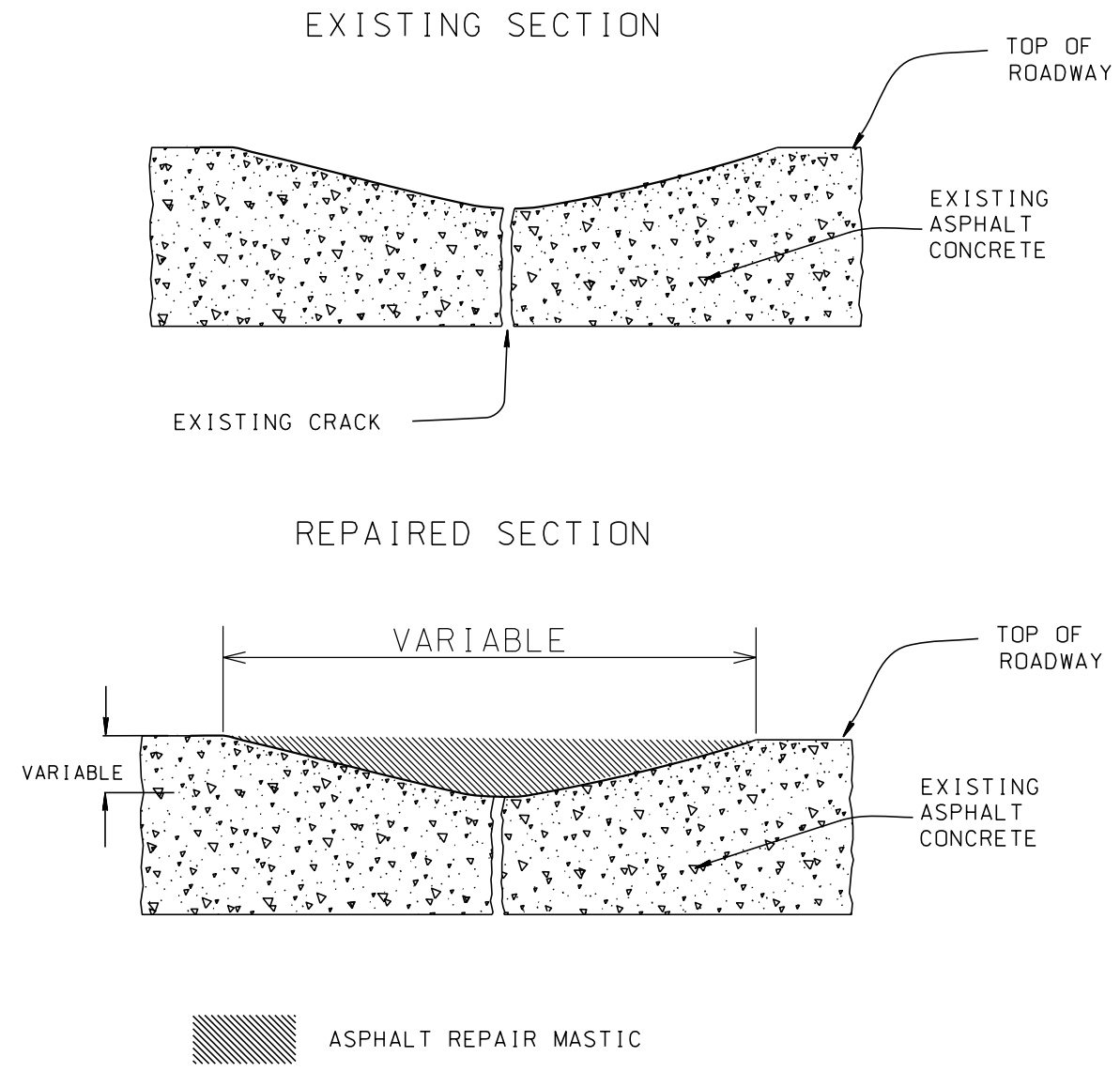
3.0" Radius, 1.0" Border, White on, Orange;  
 "ONE LANE ROAD" Black, C 2K;  
 "WAIT FOR" Black, C 2K;  
 "PILOT CAR" Black, C 2K;

|                             |             |              |                 |
|-----------------------------|-------------|--------------|-----------------|
| STATE OF<br>SOUTH<br>DAKOTA | PROJECT     | SHEET<br>NO. | TOTAL<br>SHEETS |
|                             | P 0011(151) | 5            | 6               |
| Plotting Date: 12/10/2020   |             |              |                 |

PLOT SCALE - 1:8000

PLOT NAME - 1

### TYPICAL RESERVOIR SECTION WITHOUT MILLING



PLOTTED FROM - TRAB18004

FILE - ... ASPHALT CONCRETE CRACK LEVELING.DGN

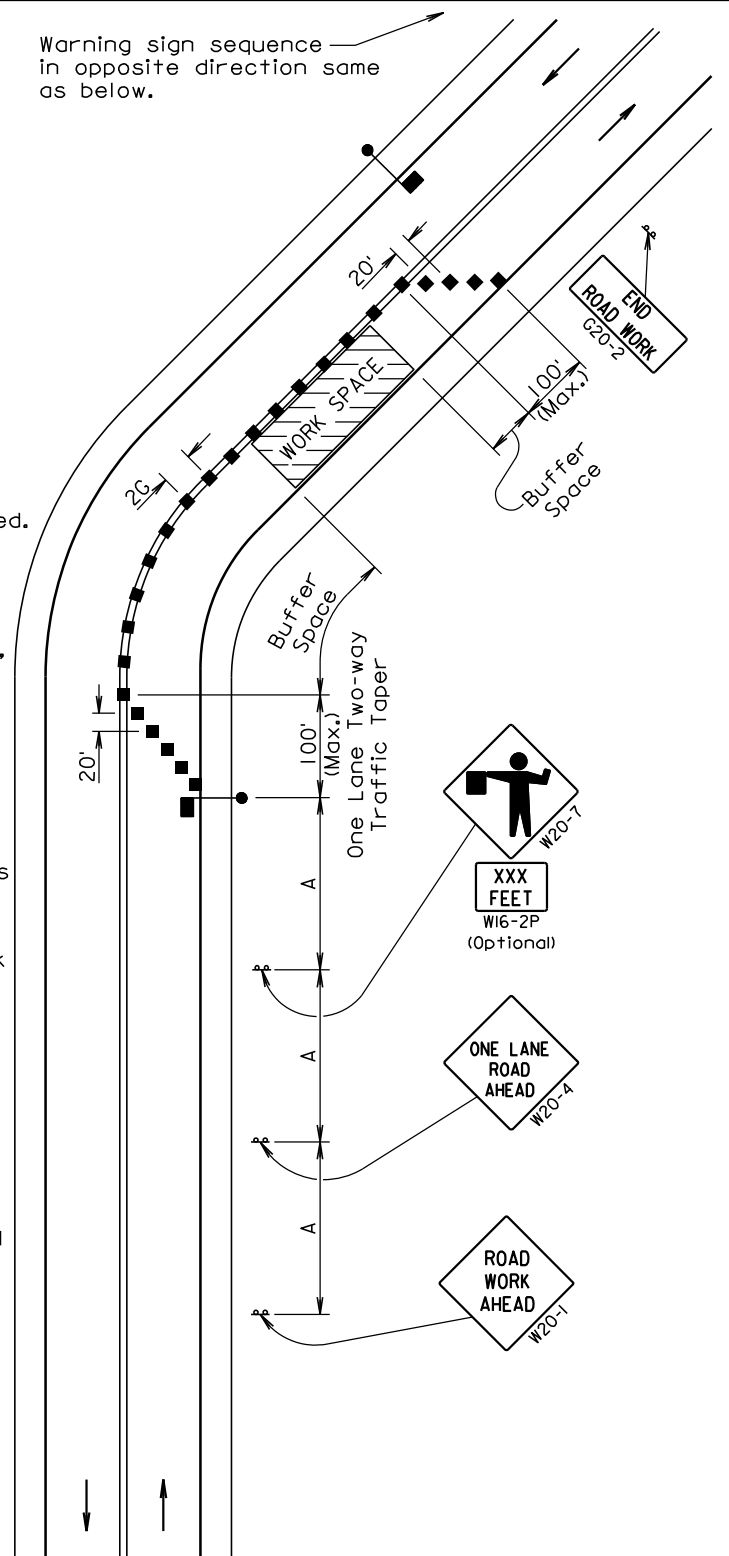
SHEET OF SHEETS

PLOT SCALE - 1:1000

PLOT NAME - 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   |

Warning sign sequence in opposite direction same as below.



- 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.

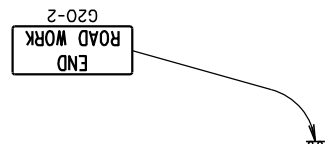
The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short duration operations (1 hour or less).

For tack and/or flush seal operations, when flaggers are not being used, the FRESH OIL sign (W21-2) 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.

June 3, 2016

### ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

| SIGN CODE   | SIGN DESCRIPTION                 | CONVENTIONAL ROAD |           |               |              |
|---|----------------------------------|-------------------|-----------|---------------|--------------|
|   |                                  | 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         |
| G20-2   | END ROAD WORK                    | 2                 | 36" x 18" | 4.5           | 9.0          |
| SPECIAL   | ONE LANE ROAD WAIT FOR PILOT CAR | 6                 | 48" x 24" | 8.0           | 48.0         |
| <b>CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT</b> |                                  |                   |           |               | <b>153.0</b> |

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PLOTTED FROM - TRAB18004

|  |  |                               |
|--|--|-------------------------------|
| <b>SDOT</b><br>Published Date: 4th Qtr. 2020 | <b>GUIDES FOR TRAFFIC CONTROL DEVICES<br/>LANE CLOSURE WITH FLAGGER PROVIDED</b> | PLATE NUMBER<br><b>634.23</b> |
|  | Sheet 1 of 1   |                               |