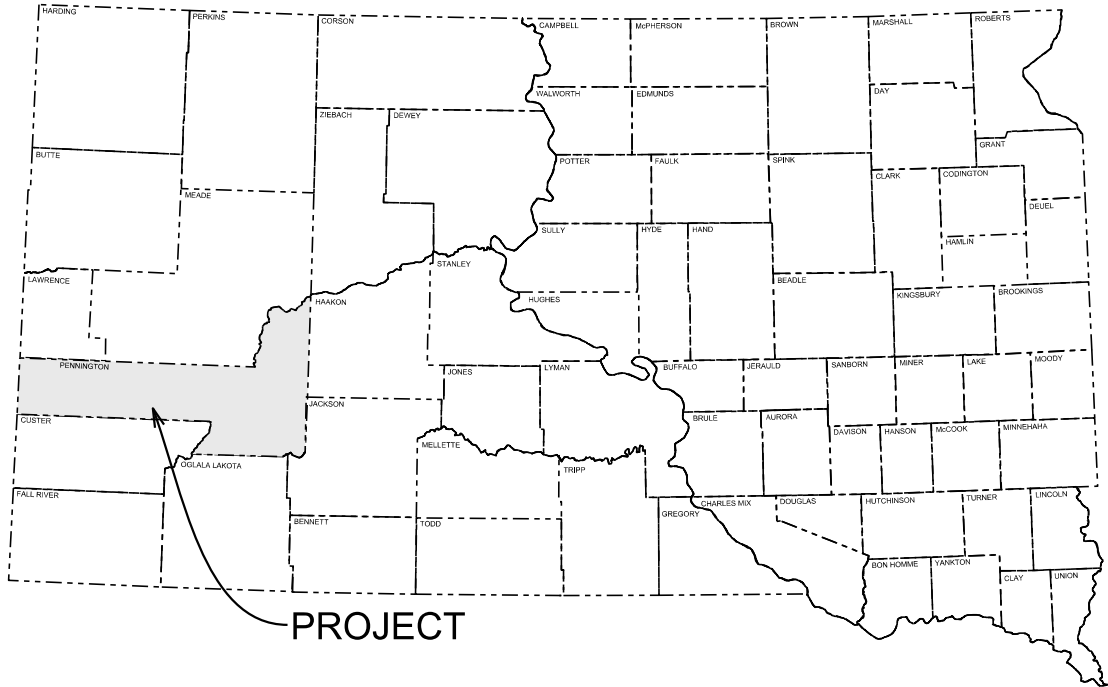


Plot Scale - 1:200

TRRC-1640

Plotted From -



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT 016W-452
US HIGHWAY 16
PENNINGTON COUNTY
ASPHALT CONCRETE REPAIR
PCN I71U

| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
|-----------------------------|----------|-------|-----------------|
| | 016W-452 | 1 | 6 |

Plotting Date: 03/15/2023

INDEX OF SHEETS

- 1 General Layout with Index
- 2 Estimate of Quantities and Plan Notes
- 3 MARLA Map
- 4 Detail Sheet
- 5 - 6 Standard Plates



File -

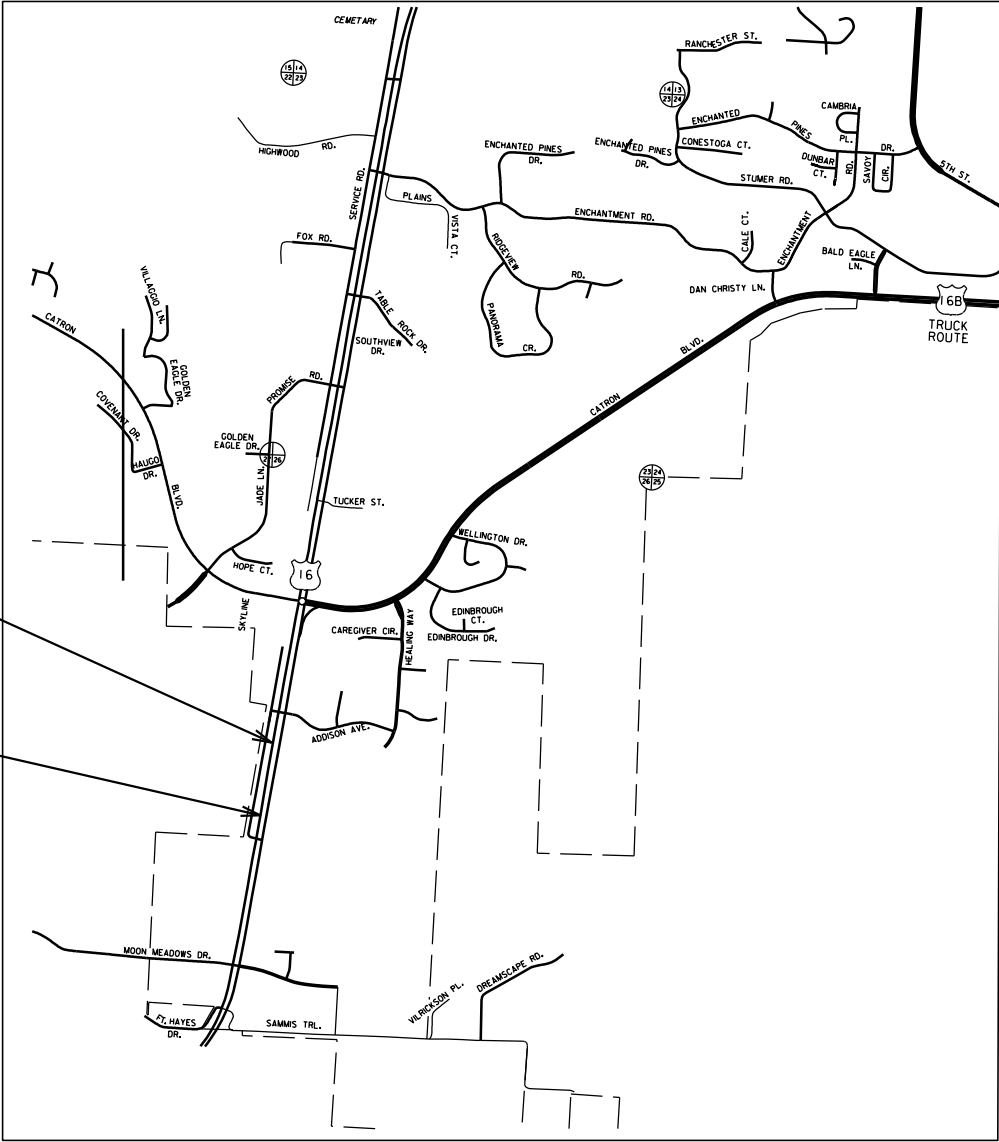
DESIGN DESIGNATION (016 W)

| | |
|------------|--------|
| ADT (2022) | 8045 |
| ADT (2042) | 12687 |
| DHV | 2078 |
| D | 51 % |
| T DHV | 1.5% |
| T ADT | 3.4% |
| V | 60 MPH |

STORM WATER PERMIT
No Permit Required

US16
End Segment
MRM 63.789

US16
BEGIN Segment
MRM 63.633



ESTIMATE OF QUANTITIES

| BID ITEM NUMBER | ITEM | QUANTITY | UNIT |
|-----------------|---|----------|------|
| 009E0010 | Mobilization | Lump Sum | LS |
| 320E1200 | Asphalt Concrete Composite | 320.9 | Ton |
| 332E0010 | Cold Milling Asphalt Concrete | 1,878 | SqYd |
| 633E1220 | High Build Waterborne Pavement Marking Paint, 4" White | 850 | Ft |
| 633E1222 | High Build Waterborne Pavement Marking Paint, 4" Yellow | 690 | Ft |
| 634E0010 | Flagging | 40.0 | Hour |
| 634E0110 | Traffic Control Signs | 144.0 | SqFt |
| 634E0120 | Traffic Control, Miscellaneous | Lump Sum | LS |
| 634E0310 | Temporary Flexible Vertical Markers (Tabs) | 2,370 | Ft |
| 634E0420 | Type C Advance Warning Arrow Board | 1 | Each |

SPECIFICATIONS

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

SURFACING THICKNESS DIMENSIONS

The plans shown spread rates will be applied even though the thickness may vary from that shown on the plans.

At those locations where material must be placed to achieve a required elevation, the depth/quantity may be varied to achieve the required elevation.

COLD MILLING ASPHALT CONCRETE

Cold milling asphalt will be done according to the plans. The milled asphalt concrete material will become the property of the Contractor.

ASPHALT CONCRETE COMPOSITE

Mineral aggregate will be produced from a ledge rock source.

Mineral aggregate for the Asphalt Concrete Composite will conform to the requirements for Class E, Type 1.

Asphalt for Prime and Flush Seal will not be required.

The asphalt repairs will be in the southbound 12’ driving lane and the southbound 12’ passing lane plus 1’ for each lane for a total of 26’ in width. Since the elevation is being raised 1”, a 1’ sluff will also be used along the edge of each lane.

All other requirements in the Standard Specifications for Asphalt Concrete Composite will apply.

TABLE OF ASPHALT REPAIRS

| MRM START | MRM END | LONGITUDE | LATITUDE | LENGTH | WIDTH | Cold Milling Asphalt Concrete | Asphalt Concrete Composite |
|-----------|---------|--------------|-------------|--------|-------|-------------------------------|----------------------------|
| | | | | Ft | Ft | SqYd | Ton |
| 63.789 | 63.694 | -103.2512172 | 44.01301752 | 500 | 26 | 1444 | 246.9 |
| 63.633 | 63.605 | -103.2515841 | 44.01077538 | 150 | 26 | 433 | 74.1 |
| | | | | | | | |
| | TOTAL | | | 650 | | 1878 | 320.9 |

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the 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.

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.

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.

TEMPORARY PAVEMENT MARKING

Temporary Flexible Vertical Markers (Tabs) will be used on the top lift of asphalt surfacing for all pavement marking lines and as directed by the Engineer. Tabs will be spaced at 5’ the entire length of the repairs. Tabs will also be used in the lane closure tapers. Tabs will be required before nightfall.

PERMANENT PAVEMENT MARKING

The Contractor will be required to repaint all disturbed pavement markings. The Contractor will be required to document and be able to relocate for replacement of the existing markings before the markings are obliterated. Application of permanent pavement marking will be completed within 14 calendar days following completion of the final surfacing. The cost to duplicate the existing marking locations will be incidental to the contract unit prices for the various contract items.

| | | | |
|-----------------------|----------|-------|--------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | 016W-452 | 2 | 6 |

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All materials will be applied as per manufacturer’s recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media will consist of glass beads.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4” line = 22.5 Gals/Mile
Dashed 4” line = 6.2 Gal/Mile
Glass Beads = 8 Lbs/Gal.

All cost for materials, labor and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

TRAFFIC CONTROL SIGNS

| SIGN CODE | SIGN DESCRIPTION | CONVENTIONAL ROAD | | | |
|-----------|----------------------------------|--|-----------|---------------|------|
| | | NUMBER | SIGN SIZE | SQFT PER SIGN | SQFT |
| W4-2 | LEFT or RIGHT LANE ENDS (symbol) | 2 | 48" x 48" | 16.0 | 32.0 |
| W20-1 | ROAD WORK AHEAD | 4 | 48" x 48" | 16.0 | 64.0 |
| W20-5 | LEFT or RIGHT LANE CLOSED AHEAD | 2 | 48" x 48" | 16.0 | 32.0 |
| W20-7 | FLAGGER (symbol) | 1 | 48" x 48" | 16.0 | 16.0 |
| | | CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT | | | |
| | | 144.0 | | | |

Plot Scale - 1:40

Plotted From - TRRC1640

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| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | 016W-452 | 3 | 6 |

Plotting Date: 02/13/2023

Maintenance Repair Location Application (MARLA)



2/8/2023, 12:41:58 PM

Mileage Reference Markers
Maintenance Locations

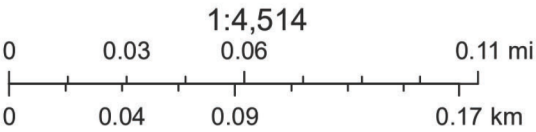
Asphalt

Asphalt Crack Seal
CRC
Curb & Gutter Repair/Replace

Erosion
Miscellaneous
PCC Foam Jacking

PCCP Repair
Route & Seal PCCP Cracks
Spall

Tree Removal
Drop Inlet Repair



Esri Community Maps Contributors, South Dakota Game Fish and Parks, ©
OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph,
South Dakota Department of Transportation
SDDOT-TIM

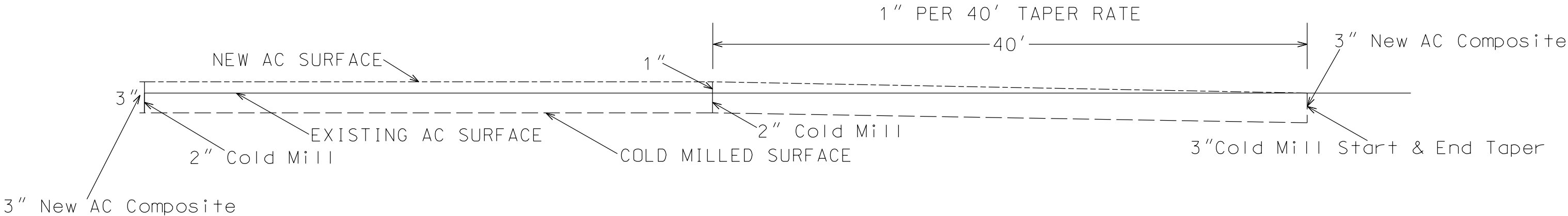
PLOT SCALE - 1:200

PLOTTED FROM - TRRC11640

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|-----------------------------|----------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | 016W-452 | 4 | 6 |

Plotting Date: 02/10/2023

ASPHALT CONCRETE PROFILE AT BEGIN AND END OF ASPHALT PATCH



PLOT NAME - 1

FILE - ... \AC TAPERS AT ENDS.DGN

| | | | |
|-----------------------------|----------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | 016W-452 | 6 | 6 |

Plotting Date: 02/08/2023

