

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	016EB-452, 016WB-452, & etc.	1	5

Plotting Date: 05/10/2016

PLANS FOR PROPOSED
**PROJECTS 016EB-452, 016WB-452,
090 E-452, 090 W-452, 090W-451,
079S-452, 079N-452, 018W-492 & 016-491**

INDEX OF SECTIONS

1-2	Maps & Index
3-5	Estimate With General Notes & Tables

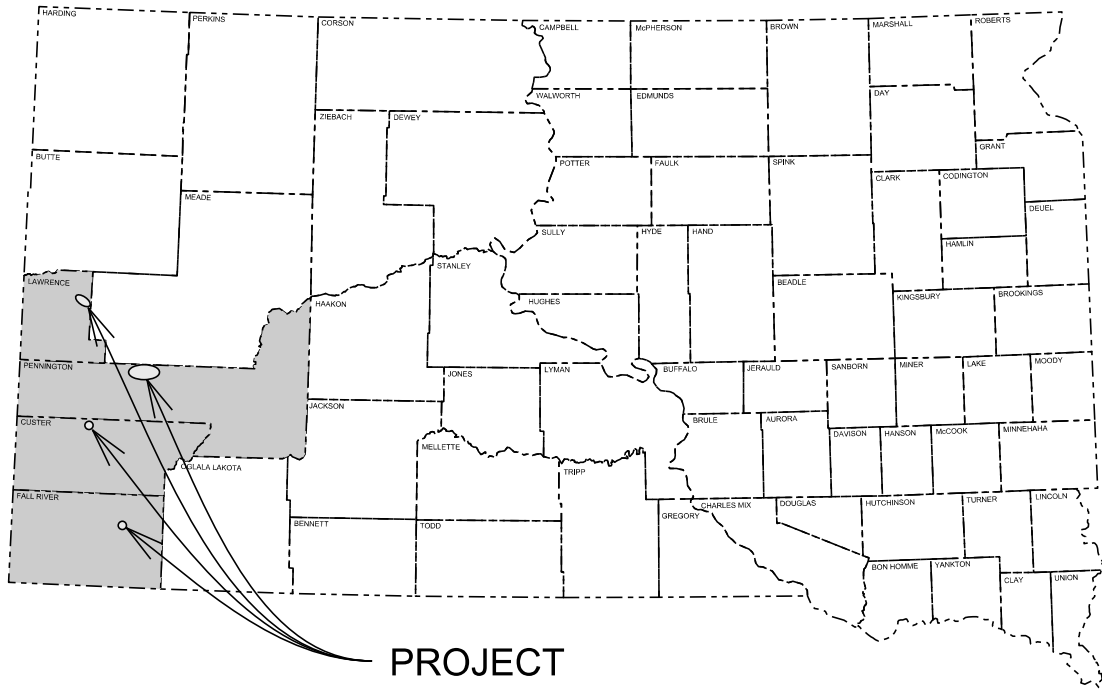
**INTERSTATE 90,
US HIGHWAYS 16B, 16, & 18
& SD HIGHWAY 79**

**LAWRENCE, PENNINGTON, CUSTER
& FALL RIVER COUNTIES**

PAVEMENT FOAM JACKING

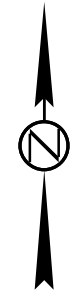
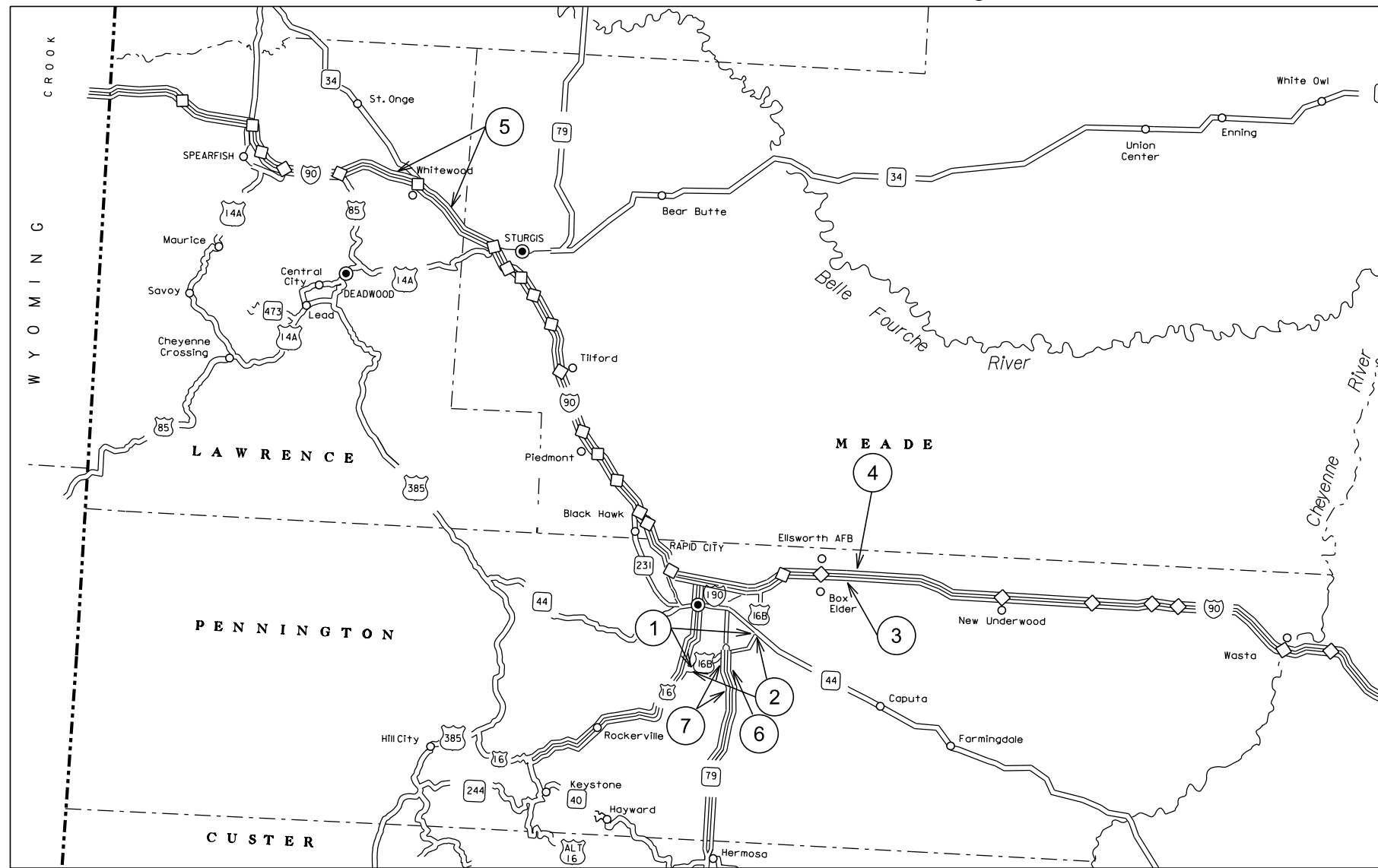
PCNs i4d8, i4d9, i4da, i4dc, i4dd, i4de, i4df, i4dg, & i4dh

Plot Scale - 1:200



PROJECT

- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------|------|------------|------|-----|------|---|------|-------|------|-------|-------|---|--------|--|------------|------|------------|-------|-----|------|---|------|-------|------|-------|-------|---|--------|
| <p>① 016 WB - 452, PCN i4d9
MRM 64.46 - MRM 68.28
DESIGN DESIGNATION</p> <table border="0"> <tr><td>ADT (2015)</td><td>4300</td></tr> <tr><td>ADT (2035)</td><td>7490</td></tr> <tr><td>DHV</td><td>914</td></tr> <tr><td>D</td><td>50 %</td></tr> <tr><td>T DHV</td><td>4.6%</td></tr> <tr><td>T ADT</td><td>10.1%</td></tr> <tr><td>V</td><td>65 MPH</td></tr> </table> | ADT (2015) | 4300 | ADT (2035) | 7490 | DHV | 914 | D | 50 % | T DHV | 4.6% | T ADT | 10.1% | V | 65 MPH | <p>② 016 EB - 452, PCN i4d8
MRM 64.4 to MRM 67.1
DESIGN DESIGNATION</p> <table border="0"> <tr><td>ADT (2014)</td><td>4185</td></tr> <tr><td>ADT (2034)</td><td>7291</td></tr> <tr><td>DHV</td><td>890</td></tr> <tr><td>D</td><td>50 %</td></tr> <tr><td>T DHV</td><td>4.2%</td></tr> <tr><td>T ADT</td><td>9.2%</td></tr> <tr><td>V</td><td>65 MPH</td></tr> </table> | ADT (2014) | 4185 | ADT (2034) | 7291 | DHV | 890 | D | 50 % | T DHV | 4.2% | T ADT | 9.2% | V | 65 MPH |
| ADT (2015) | 4300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2035) | 7490 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DHV | 914 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 50 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T DHV | 4.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T ADT | 10.1% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | 65 MPH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2014) | 4185 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2034) | 7291 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DHV | 890 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 50 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T DHV | 4.2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T ADT | 9.2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | 65 MPH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>③ 090E - 452, PCN i4da
MRM 67.1
DESIGN DESIGNATION</p> <table border="0"> <tr><td>ADT (2015)</td><td>6926</td></tr> <tr><td>ADT (2035)</td><td>8941</td></tr> <tr><td>DHV</td><td>1224</td></tr> <tr><td>D</td><td>51%</td></tr> <tr><td>T DHV</td><td>6.2%</td></tr> <tr><td>T ADT</td><td>13.6%</td></tr> <tr><td>V</td><td>75 MPH</td></tr> </table> | ADT (2015) | 6926 | ADT (2035) | 8941 | DHV | 1224 | D | 51% | T DHV | 6.2% | T ADT | 13.6% | V | 75 MPH | <p>④ 090W - 452, PCN i4dc
MRM 67.3
DESIGN DESIGNATION</p> <table border="0"> <tr><td>ADT (2015)</td><td>6927</td></tr> <tr><td>ADT (2035)</td><td>8943</td></tr> <tr><td>DHV</td><td>1224</td></tr> <tr><td>D</td><td>51%</td></tr> <tr><td>T DHV</td><td>6.2%</td></tr> <tr><td>T ADT</td><td>13.6%</td></tr> <tr><td>V</td><td>75 MPH</td></tr> </table> | ADT (2015) | 6927 | ADT (2035) | 8943 | DHV | 1224 | D | 51% | T DHV | 6.2% | T ADT | 13.6% | V | 75 MPH |
| ADT (2015) | 6926 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2035) | 8941 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DHV | 1224 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 51% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T DHV | 6.2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T ADT | 13.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | 75 MPH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2015) | 6927 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2035) | 8943 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DHV | 1224 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 51% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T DHV | 6.2% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T ADT | 13.6% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | 75 MPH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>⑤ 090W - 451, PCN i4dd
MRM 21.5 to MRM 27.1
DESIGN DESIGNATION</p> <table border="0"> <tr><td>ADT (2015)</td><td>5149</td></tr> <tr><td>ADT (2035)</td><td>8614</td></tr> <tr><td>DHV</td><td>1180</td></tr> <tr><td>D</td><td>51%</td></tr> <tr><td>T DHV</td><td>9.7%</td></tr> <tr><td>T ADT</td><td>21.3%</td></tr> <tr><td>V</td><td>75 MPH</td></tr> </table> | ADT (2015) | 5149 | ADT (2035) | 8614 | DHV | 1180 | D | 51% | T DHV | 9.7% | T ADT | 21.3% | V | 75 MPH | <p>⑥ 079 N - 452, PCN i4de
MRM 68.9
DESIGN DESIGNATION</p> <table border="0"> <tr><td>ADT (2015)</td><td>7475</td></tr> <tr><td>ADT (2035)</td><td>10846</td></tr> <tr><td>DHV</td><td>1323</td></tr> <tr><td>D</td><td>50 %</td></tr> <tr><td>T DHV</td><td>6.7%</td></tr> <tr><td>T ADT</td><td>14.8%</td></tr> <tr><td>V</td><td>65 MPH</td></tr> </table> | ADT (2015) | 7475 | ADT (2035) | 10846 | DHV | 1323 | D | 50 % | T DHV | 6.7% | T ADT | 14.8% | V | 65 MPH |
| ADT (2015) | 5149 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2035) | 8614 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DHV | 1180 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 51% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T DHV | 9.7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T ADT | 21.3% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | 75 MPH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2015) | 7475 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2035) | 10846 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DHV | 1323 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 50 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T DHV | 6.7% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T ADT | 14.8% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | 65 MPH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>⑦ 079S - 452, PCN i4df
MRM 68.9 to MRM 70.5
DESIGN DESIGNATION</p> <table border="0"> <tr><td>ADT (2015)</td><td>4918</td></tr> <tr><td>ADT (2035)</td><td>7136</td></tr> <tr><td>DHV</td><td>871</td></tr> <tr><td>D</td><td>50%</td></tr> <tr><td>T DHV</td><td>6.3%</td></tr> <tr><td>T ADT</td><td>13.9%</td></tr> <tr><td>V</td><td>65 MPH</td></tr> </table> | ADT (2015) | 4918 | ADT (2035) | 7136 | DHV | 871 | D | 50% | T DHV | 6.3% | T ADT | 13.9% | V | 65 MPH | | | | | | | | | | | | | | | |
| ADT (2015) | 4918 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ADT (2035) | 7136 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DHV | 871 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 50% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T DHV | 6.3% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| T ADT | 13.9% | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V | 65 MPH | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

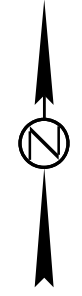


STORM WATER PERMIT
None Required

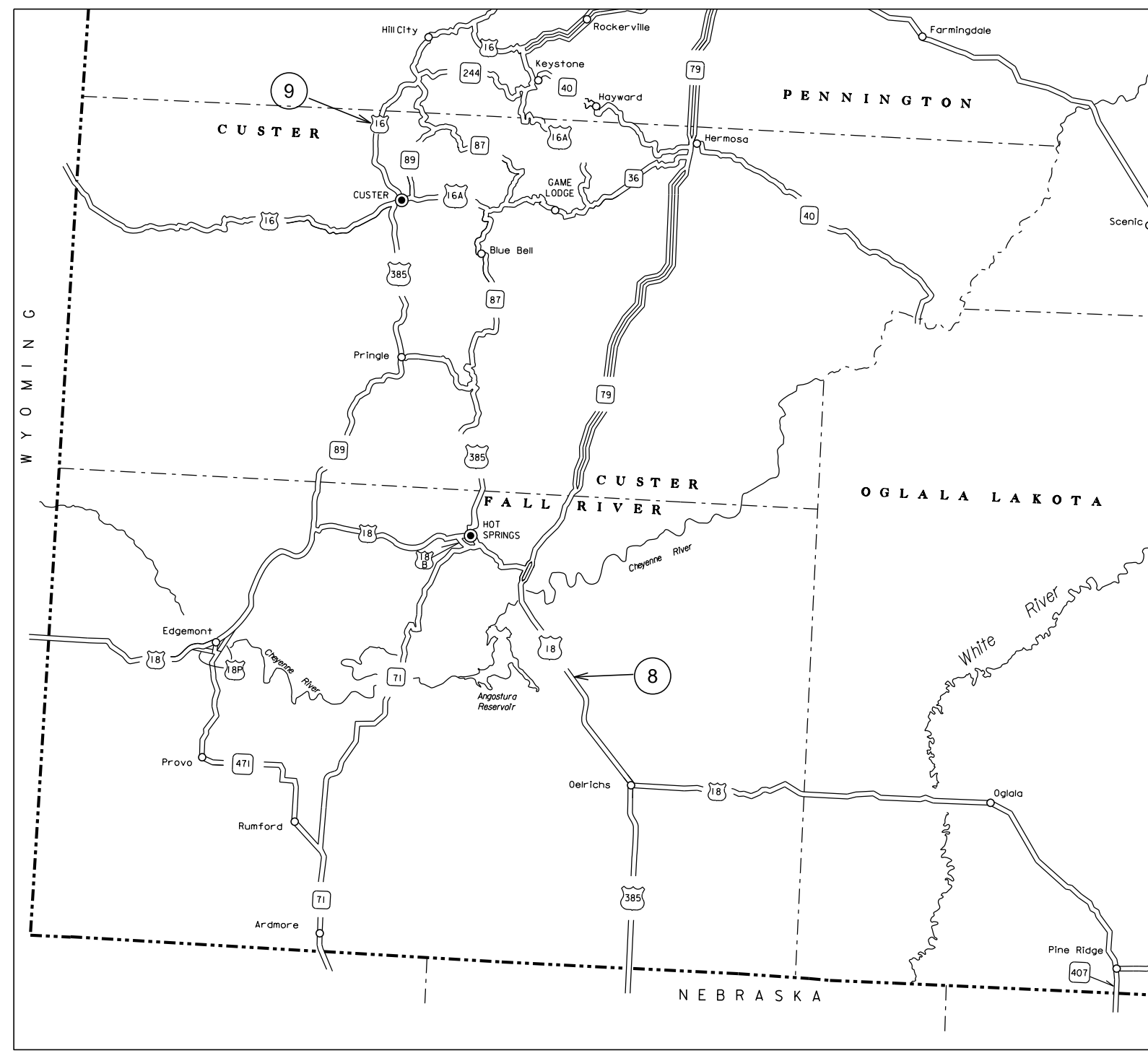
Plotted From - irrc11951

File - ...aplans\Foam Jacking\Title.dgn

Plotting Date: 05/10/2016



⑧ 018W - 492, PCN i4dg MRM 52.9 to MRM 53.4 <u>DESIGN DESIGNATION</u>	⑨ 016 - 491, PCN i4dh MRM 32.4 <u>DESIGN DESIGNATION</u>
ADT (2015) 1072	ADT (2015) 5580
ADT (2035) 1358	ADT (2035) 6780
DHV 166	DHV 1071
D 50%	D 51%
T DHV 10.8%	T DHV 3.6%
T ADT 23.8%	T ADT 8.0%
V 65 MPH	V 65 MPH



Plot Scale - 1:200

Plotted From - trcs11951

STORM WATER PERMIT
None Required

File - ...\plans\Foam Jacking\Title.dgn

ESTIMATE OF QUANTITIES (016 EB-452, PCN i4d8)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
392E0210	PCC Pavement Jacking Foam	1,764	Lb

ESTIMATE OF QUANTITIES (016 WB-452, PCN i4d9)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
392E0210	PCC Pavement Jacking Foam	1,882	Lb

ESTIMATE OF QUANTITIES (090 E-452, PCN i4da)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
392E0210	PCC Pavement Jacking Foam	1,890	Lb

ESTIMATE OF QUANTITIES (090 W-452, PCN i4dc)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
392E0210	PCC Pavement Jacking Foam	613	Lb

ESTIMATE OF QUANTITIES (090 W-451, PCN i4dd)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
392E0210	PCC Pavement Jacking Foam	3,822	Lb

ESTIMATE OF QUANTITIES (079N-452, PCN i4de)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
392E0210	PCC Pavement Jacking Foam	672	Lb

ESTIMATE OF QUANTITIES (079S-452, PCN i4df)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
392E0210	PCC Pavement Jacking Foam	2,352	Lb

ESTIMATE OF QUANTITIES (018 W-491, PCN i4dg)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
392E0210	PCC Pavement Jacking Foam	3,000	Lb

ESTIMATE OF QUANTITIES (016-491, PCN i4dh)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
392E0210	PCC Pavement Jacking Foam	1,000	Lb

SPECIFICATIONS

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

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall 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) shall 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) shall 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 Project Engineer.

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

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the Public ROW through the use of 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) shall 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 shall 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 shall 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 shall 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 shall cease and the Project Engineer shall 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 shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

SCOPE OF WORK

Work on this project involves correcting the pavement profile with Pavement Jacking Foam.

PAVEMENT JACKING FOAM QUANTITIES

Due to the dollar amount budgeted for this work; the locations of pavement jacking shall be done in the order of the priority number provided in the tables, starting with #1. The Engineer reserves the right to eliminate locations once the budgeted dollar amount is exceeded.

TABLE OF PCC PAVEMENT JACKING FOAM (US16B E, PCN i4d8)

Highway	MRM	PCC Pavement Jacking Foam (Lb)	Priority #
US16 EB	64.47	504	1
US16 EB	64.48	504	1
US16 EB	67.08	756	1
Total		1,764	

TABLE OF PCC PAVEMENT JACKING FOAM (US16B W, PCN i4d9)

Highway	MRM	PCC Pavement Jacking Foam (Lb)	Priority #
US16WB	64.46	1,210	1
US16WB	68.28	672	1
Total		1,882	

TABLE OF PCC PAVEMENT JACKING FOAM (I-90 W, PCN i4dd)

Highway	MRM	PCC Pavement Jacking Foam (Lb)	Priority #
I-90 W	27.05	2,184	2
I-90W	25.05	546	2
I-90 W	21.52	1,092	2
Total		3,822	

TABLE OF PCC PAVEMENT JACKING FOAM (SD79 N, PCN i4de)

Highway	MRM	PCC Pavement Jacking Foam (Lb)	Priority #
79 NB	68.90	672	3
Total		672	

TABLE OF PCC PAVEMENT JACKING FOAM (SD 79 S, PCN i4df)

Highway	MRM	PCC Pavement Jacking Foam (Lb)	Priority #
79 SB	68.90	1008	3
79 SB	70.50	1344	3
Total		2,352	

TABLE OF PCC PAVEMENT JACKING FOAM (I-90 W & E, PCN i4da & i4dc)

Hwy	MRM	PCC Pavement Jacking Foam (Lb)	Priority #
Exit 67 EB Off Ramp(1st Ramp)	67.10	1890	3
Exit 67 WB Off Ramp	67.34	613	3

TABLE OF PCC PAVEMENT JACKING FOAM (US 18 W, PCN i4dg)

Highway	MRM	PCC Pavement Jacking Foam (Lb)	Priority #
US18 NB	52.97	1500	3
US18 NB	53.38	1500	3
Total		3,000	

TABLE OF PCC PAVEMENT JACKING FOAM (US 16, PCN i4dh)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	016EB-452, 016WB-452, & etc.	5	5

Highway	MRM	PCC Pavement Jacking Foam (Lb)	Priority #
US16	32.41	1000	3
Total		1,000	

TRAFFIC CONTROL

All work activities shall be completed from the hours of 9:00 am to 4:00 pm on Interstate 90 between MRM's 52.0 to and 64.0. Traffic control shall be removed and all lanes shall be open and traffic unimpeded at the end of each day.

Traffic control will be accomplished by DOT personnel. The Contractor shall coordinate with DOT personnel at least one week prior to the start of construction. The Maintenance Supervisor for unit 451 is Greg Boness, 605-347-1978. The Maintenance Supervisor for unit 452 is Bob Smith, 605-381-7174. The Maintenance Supervisor for unit 491 is Ray McLaughlin 605-673-1304. The Maintenance Supervisor for unit 492 is Clarence Bowman 605-673-1306.

Unless otherwise stated in these plans, no work will be allowed during hours of darkness.

Non-applicable traffic control devices shall be completely covered or removed during periods of inactivity. Periods of inactivity shall be defined as no work taking place for a period of more than 48 hours.

All materials and equipment shall be stored a minimum distance of 30' from the traveled way during nonworking hours.

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

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