

PROJECT

DESIGN DESIGNATION I29

| | |
|------------|--------|
| ADT (2024) | 25,295 |
| ADT (2044) | 38,786 |
| DHV | 4,390 |
| D | 50% |
| T DHV | 6.6% |
| T ADT | 14.6% |
| V | 65 MPH |

DESIGN DESIGNATION I90

| | |
|------------|--------|
| ADT (2024) | 20,153 |
| ADT (2044) | 30,968 |
| DHV | 3,995 |
| D | 50% |
| T DHV | 8.1% |
| T ADT | 17.8% |
| V | 65 MPH |

DESIGN DESIGNATION I229

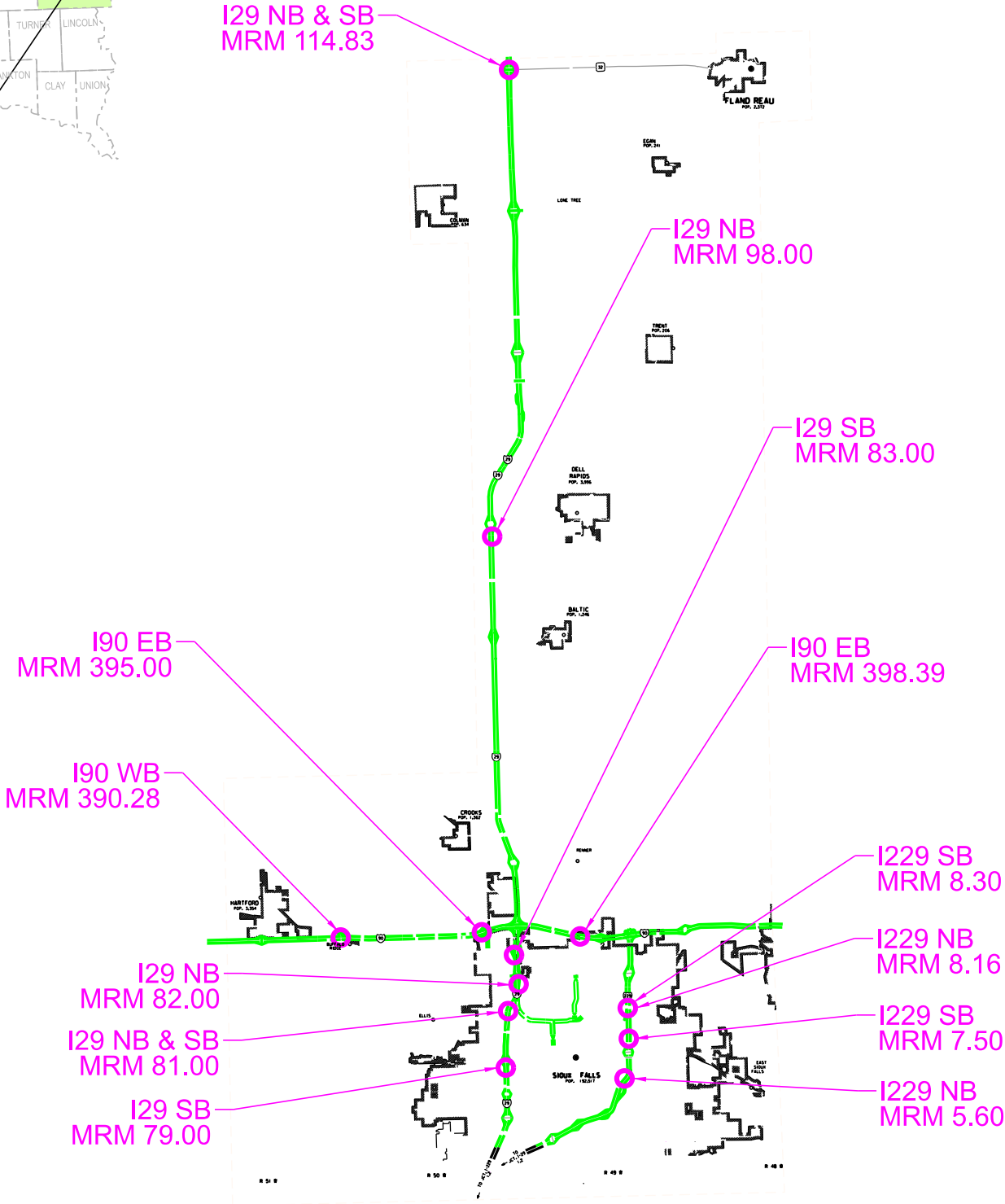
| | |
|------------|--------|
| ADT (2024) | 32,364 |
| ADT (2044) | 51,005 |
| DHV | 5,601 |
| D | 53% |
| T DHV | 4.3% |
| T ADT | 9.5% |
| V | 65 MPH |

STORM WATER PERMIT

None required

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECTS 029-272, 029-271, 090-271 & 229-271
INTERSTATE HIGHWAY 29, 90 & 229
MINNEHAHA & MOODY COUNTIES
SCOUR REPAIRS
PCNs I7X6, I7X7, I7X8 & I7X9



| PROJECT | SHEET | TOTAL SHEETS |
|--------------------------------------|-------|--------------|
| 029-272, 029-271 090-271, 229-271 | 1 | 7 |

Plotting Date: 5/16/2025



ESTIMATE OF QUANTITIES

| I-90 (PCN I7X8) | | | |
|-----------------|--|----------|------|
| BID ITEM NUMBER | ITEM | QUANTITY | UNIT |
| 009E0010 | Mobilization | Lump Sum | LS |
| 120E0600 | Contractor Furnished Borrow Excavation | 101 | CuYd |
| 210E1010 | Site Preparation | Lump Sum | LS |
| 230E0020 | Contractor Furnished Topsoil | 34 | CuYd |
| 634E0120 | Traffic Control, Miscellaneous | Lump Sum | LS |
| 734E0010 | Erosion Control | Lump Sum | LS |
| 734E0102 | Type 2 Erosion Control Blanket | 71 | SqYd |

| I-229 (PCN I7X9) | | | |
|------------------|--|----------|------|
| BID ITEM NUMBER | ITEM | QUANTITY | UNIT |
| 009E0010 | Mobilization | Lump Sum | LS |
| 120E0600 | Contractor Furnished Borrow Excavation | 168 | CuYd |
| 210E1010 | Site Preparation | Lump Sum | LS |
| 230E0020 | Contractor Furnished Topsoil | 13 | CuYd |
| 634E0120 | Traffic Control, Miscellaneous | Lump Sum | LS |
| 734E0010 | Erosion Control | Lump Sum | LS |
| 734E0102 | Type 2 Erosion Control Blanket | 36 | SqYd |

| I-29 (PCN I7X7) | | | |
|-----------------|--|----------|------|
| BID ITEM NUMBER | ITEM | QUANTITY | UNIT |
| 009E0010 | Mobilization | Lump Sum | LS |
| 120E0600 | Contractor Furnished Borrow Excavation | 240 | CuYd |
| 210E1010 | Site Preparation | Lump Sum | LS |
| 230E0020 | Contractor Furnished Topsoil | 20 | CuYd |
| 634E0120 | Traffic Control, Miscellaneous | Lump Sum | LS |
| 734E0010 | Erosion Control | Lump Sum | LS |
| 734E0102 | Type 2 Erosion Control Blanket | 55 | SqYd |

| I-29 (PCN I7X6) | | | |
|-----------------|--|----------|------|
| BID ITEM NUMBER | ITEM | QUANTITY | UNIT |
| 009E0010 | Mobilization | Lump Sum | LS |
| 120E0600 | Contractor Furnished Borrow Excavation | 100 | CuYd |
| 210E1010 | Site Preparation | Lump Sum | LS |
| 230E0020 | Contractor Furnished Topsoil | 14 | CuYd |
| 634E0120 | Traffic Control, Miscellaneous | Lump Sum | LS |
| 734E0010 | Erosion Control | Lump Sum | LS |
| 734E0102 | Type 2 Erosion Control Blanket | 38 | SqYd |

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. 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/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 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 C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Agriculture and Natural Resources (DANR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at: < <https://sdleastwanted.sd.gov/maps/default.aspx>>

< [South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species: https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04](https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04) >

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:

- 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”.
- 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

State Historic Preservation Office (SHPO or THPO) concurrence has not been obtained for this project.

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 100 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.

The Contractor is responsible 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.

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modifications that will be necessary to avoid utility impacts.

SITE PREPARATION

The Contractor will prepare the sites to allow for borrow to be placed to the satisfaction of the Engineer. All site preparation will be incidental to the contract lump sum price for “Site Preparation”.

CONTRACTOR FURNISHED BORROW EXCAVATION

The Contractor will provide a suitable site for Contractor furnished borrow excavation material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site. The borrow material will be approved by the Engineer. The plans quantity for “Contractor Furnished Borrow Excavation” as shown in the Estimate of Quantities will be the basis of payment for this item.

Restoration of the Contractor furnished borrow excavation site will be the responsibility of the Contractor.

CONTRACTOR FURNISHED TOPSOIL

The Contractor will be required to furnish and place 4 inches of topsoil on areas where borrow is placed and areas as determined by the Engineer during construction.

Contractor furnished topsoil will be free from stones, coarse gravel, or similar objects larger than 3/4 inch in diameter. Brush, stumps, roots, wood, objectionable weeds, liter, or any other material which may be harmful to plant growth will not be allowed. Organic material will be decomposed.

All costs to furnish and place the Contractor furnished topsoil will be incidental to the contract unit price per cubic yard for “Contractor Furnished Topsoil”. The plans quantity for “Contractor Furnished Topsoil” as shown in the Estimate of Quantities will be the basis of payment for this item.

EROSION CONTROL

The estimated area requiring erosion control is 6550 square feet. All costs for the erosion control work for furnishing, placing, and maintaining erosion control including equipment, labor, seeding, and mulching will be incidental to the contract lump sum price for “Erosion Control”.

The limits of erosion control work will be determined by the Engineer during construction.

Permanent Seeding

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways and temporary easements under cultivation.

Type G Permanent Seed Mixture will consist of the following:

| Grass Species | Variety | Pure Live Seed (PLS) (Pounds/Acre) |
|--|---|------------------------------------|
| Western Wheatgrass | Arriba, Flintlock, Rodan, Rosana, Walsh | 7 |
| Switchgrass | Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer | 3 |
| Indiangrass | Holt, Tomahawk, Chief, Nebraska 54 | 3 |
| Big Bluestem | Bison, Bonilla, Champ, Sunnyview, Rountree, Bonanza | 3 |
| Oats or Spring Wheat: April through May; Winter Wheat: August through November | | 10 |
| Total: | | 26 |

Mycorrhizal Inoculum

Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include a minimum 25% the fungal species *Rhizophagus intraradices*. The remaining 75% may include other endomycorrhizal fungal species.

All seed will be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. All costs of inoculating the seed will be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

The Mycorrhizal Inoculum provided will be from the approved product list. The approved product list may be viewed at the following internet site:

https://apps.sd.gov/HC60ApprovedProducts/main.aspx

Mulching (Grass Hay or Straw) for Temporary Stabilization

Grass Hay or Straw Mulch for temporary stabilization is to be used on this project at locations noted in the table and at locations determined by the Engineer during construction. Two applications of Grass Hay or Straw Mulch on areas that receive temporary Grass Hay or Straw Mulch will not be required if the Engineer determines that there is sufficient Mulch remaining at the time permanent seeding takes place.

If the Contractor uses a no-till drill, mulch may be applied prior to seeding and the mulch can then be punched into the soil by the no-till drill. If the Contractor uses this process, the no-till drill seeding will be completed immediately following the mulch application and the mulch will be punched into the soil at a 3-inch depth.

| | | | |
|-----------------------------|--------------------------------------|-------|-----------------|
| STATE OF SOUTH DAKOTA | PROJECT | SHEET | TOTAL SHEETS |
| | 029-272, 029-271 090-271, 229-271 | 4 | 7 |

EROSION CONTROL BLANKET

Erosion control blanket will be installed 16 feet wide at locations determined by the Engineer during construction. A quantity of 200 square yards has been included.

The erosion control blanket provided will be from the approved product list. The approved product list for erosion control blanket may be viewed at the following internet site:

<https://apps.sd.gov/HC60ApprovedProducts/main.aspx>

MAINTENANCE OF TRAFFIC

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

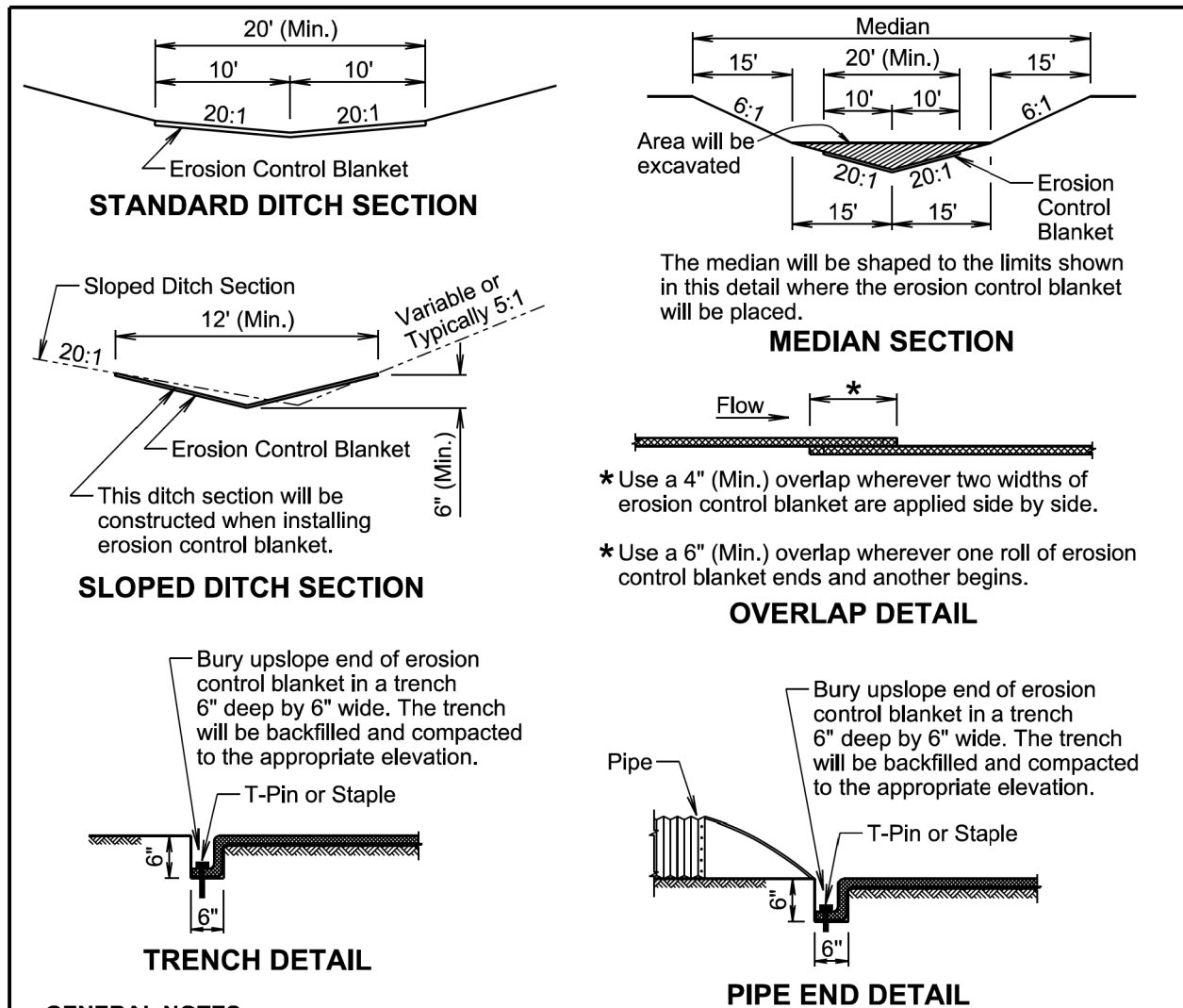
Shoulder closures will exist only when required for manned workspaces or haul of materials into the work areas. The shoulders will be opened when manned workspaces or haul of materials is not in progress. Any damage to the shoulder due to Contractor’s equipment will be repaired at no additional cost to the State.

During construction all vehicles, equipment, and materials being used must be located within the workspace.
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 CONTROL, MISCELLANEOUS

All costs for traffic control, including signs, will be incidental to the contract lump sum price for “Traffic Control, Miscellaneous”.

| | Contractor Furnished Borrow Excavation (CY) | Contractor Furnished Topsoil (CY) | N.A.B.I. Mulching (Lb) | N.A.B.I. Type G Permanent Seed Mixture (Lb) |
|--|---|---|------------------------------|--|
| <u>I-90 (PCN I7X8)</u> | | | | |
| MRM 395 EB Marion Road on ramp | 32 | 4 | 13.8 | 0.18 |
| MRM 390.28 WB under bridge | 34 | 2 | 7.3 | 0.10 |
| MRM 398.39 WB 30' x 75' total disturbed area | 35 | 28 | 103.3 | 1.34 |
| PCN I7X8 Total: | 101 | 34 | 124.4 | 1.62 |
| <u>I-229 (PCN I7X9)</u> | | | | |
| MRM 5.6 NB down steep slope | 24 | 3 | 10.3 | 0.13 |
| MRM 7.5 SB | 52 | 3 | 11.5 | 0.15 |
| MRM 8.16 NB undermining shoulder | 17 | 1 | 5.0 | 0.06 |
| MRM 8.3 SB | 75 | 6 | 22.0 | 0.29 |
| PCN I7X9 Total: | 168 | 13 | 48.8 | 0.63 |
| <u>I-29 (PCN I7X7)</u> | | | | |
| MRM 83 SB 60th Street off ramp | 10 | 2 | 8.3 | 0.11 |
| MRM 81 SB on ramp | 17 | 1 | 3.7 | 0.05 |
| MRM 79 SB on ramp | 32 | 2 | 9.2 | 0.12 |
| MRM 81 NB (2 locations) clover on ramp | 104 | 6 | 23.0 | 0.30 |
| MRM 82 NB (6 locations) just before off ramp | 63 | 7 | 27.5 | 0.36 |
| MRM 98 NB just before off ramp | 14 | 1 | 4.1 | 0.05 |
| PCN I7X7 Total: | 240 | 20 | 75.8 | 0.98 |
| <u>I-29 (PCN I7X6)</u> | | | | |
| MRM 114.83 NB & SB all four corners of bridge | 100 | 14 | 51.9 | 0.68 |
| PCN I7X6 Total: | 100 | 14 | 51.9 | 0.68 |
| Grand Totals: | 609 | 81 | 300.9 | 3.91 |



GENERAL NOTES:

Prior to placement of the erosion control blanket, the areas will be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket will be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket will be buried in a trench 6" wide by 6" deep. There will be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

The erosion control blanket will be pinned to the ground according to the manufacturer's installation recommendations.

After the placement of the erosion control blanket, the Contractor will fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

All ditch sections will be shaped when installing the erosion control blanket. All costs for shaping the ditches will be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

February 14, 2020

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|-----------------------------|-------------------|--------------------------------|------------------------|
| <i>Published Date: 2026</i> | SD DOT | EROSION CONTROL BLANKET | PLATE NUMBER 734.01 |
| | | | Sheet 1 of 1 |