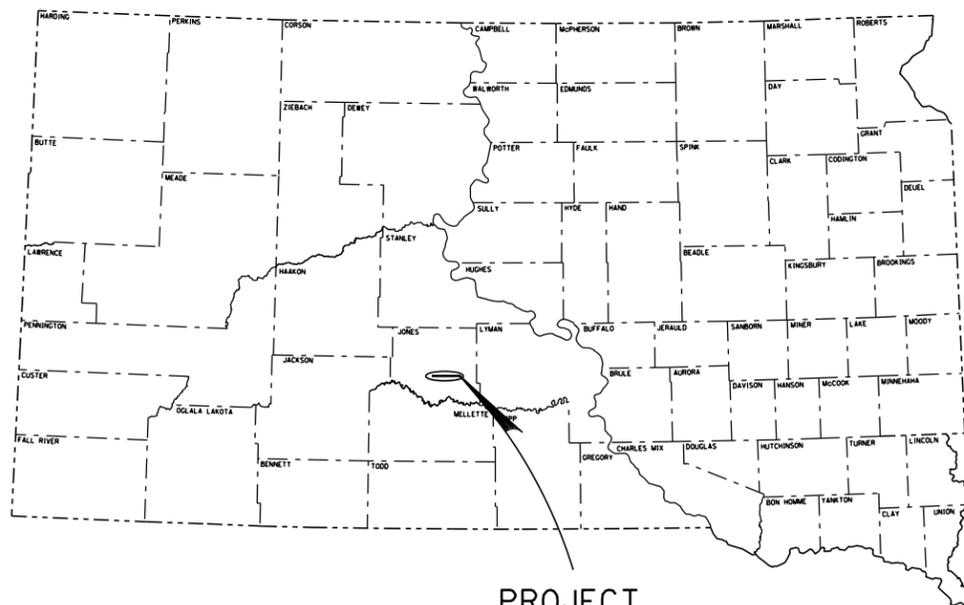


PLOT SCALE - 1:7920.02



STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

IM 0904(50)189  
INTERSTATE 90 EBL  
JONES COUNTY

PCC Overlay, PCC Surfacing, Cold Milling Asphalt Concrete,  
Asphalt Concrete Resurfacing, Pavement Marking, Culvert Ends  
Guardrail, and Edge Drains

PCN 00GL

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0904(50)189	1	187

Plotting Date: 08/24/2016  
Revised 08-24-2016 LLA

INDEX OF SECTIONS

Section A:	Estimate of Quantities
Section C:	Traffic Control Plans
Section D:	Erosion Control
Section F:	Surfacing Plans
Section L:	Lighting Plans
Section M:	Pavement Marking Plans
Section S:	Permanent Signing

PROJECT

Str. # 38-166-196  
MRM 191.15 (I-90E)

Sta. 0+00.00  
Median Crossover, In Place

BEGIN IM 0904(50)189  
Station 0+00.00  
MRM = 189.00 + 0.634

Equation: Sta. 38+18.00 =  
Sta. a 38+19.06

Str. # 38-180-198  
MRM 192.65 (I-90E)

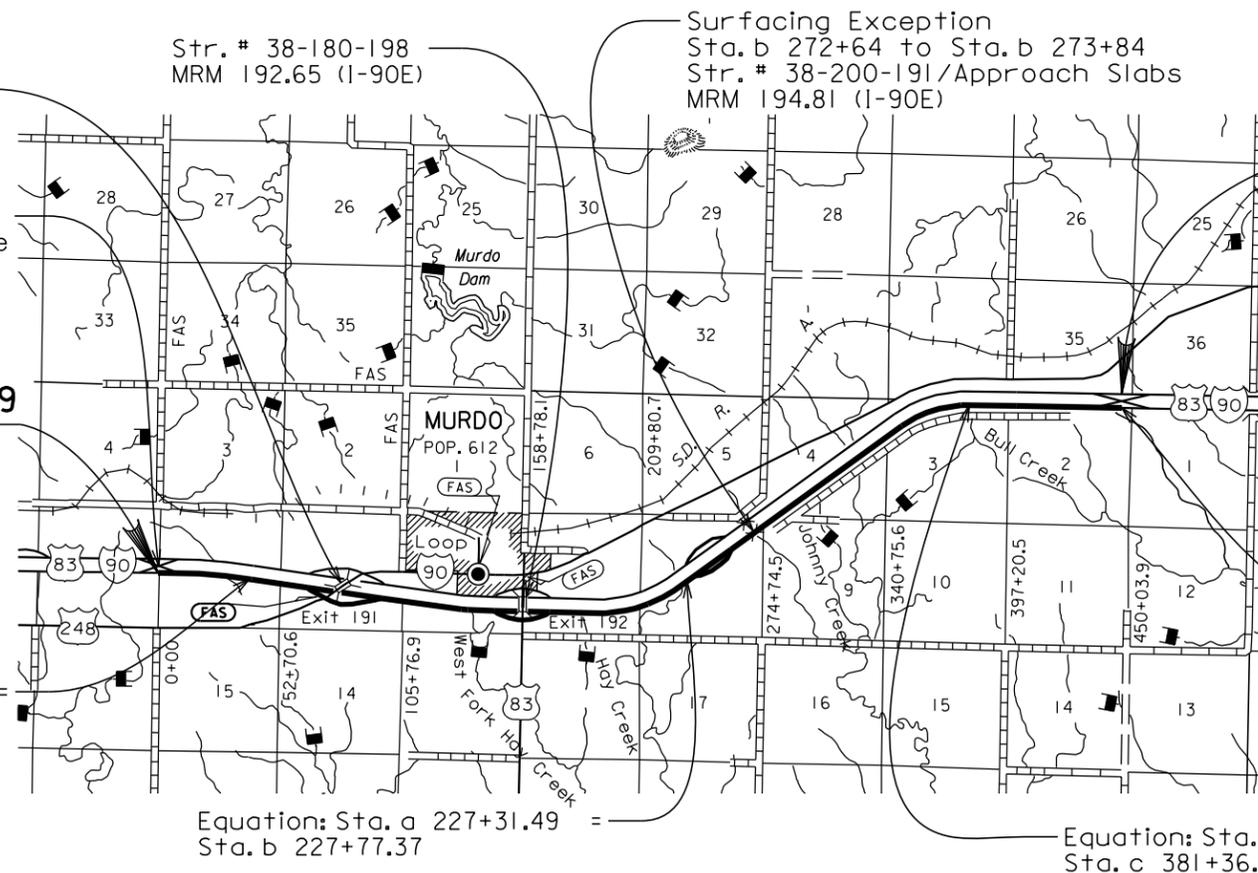
Surfacing Exception  
Sta. b 272+64 to Sta. b 273+84  
Str. # 38-200-191/Approach Slabs  
MRM 194.81 (I-90E)

Station c 445+70.00  
Median Crossover, In Place

END IM 0904(50)189  
Station c 445+70.00  
M.R.M.= 198.00 + 0.049

Equation: Sta. a 227+31.49 =  
Sta. b 227+77.37

Equation: Sta. b 380+91.82 =  
Sta. c 381+36.61



1-90 EBL  
DESIGN DESIGNATION

ADT (2015)	2849
ADT (2035)	3336
DHV	581
D	100%
T DHV	12.8%
T ADT	28.1%
V	80 MPH

1-90 EBL  
STORM WATER PERMIT  
Major Receiving  
Body of Water: West Fork Hay Creek  
Hay Creek  
Johnny Creek  
Bull Creek  
Area Disturbed: 32.9 Ac  
Total Project Area: 308.8 Ac  
Approx. Begin Lat/Long: 43.8868, -100.7657

	1-90 EBL	
GROSS LENGTH	44,478.27 FEET	8.424 MILES
LENGTH OF EXCEPTIONS	120.00 FEET	0.023 MILES
NET LENGTH	44,358.27 FEET	8.401 MILES

2

PLOTTED FROM - TRPR18387

PLOT NAME - 1

FILE - U:\MS\PR\1\JONS00GL\TITLEA.DGN

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0904(50)189	A1	A4

## SECTION F Surfacing Plans

### INDEX OF SHEETS

A1 to A2	Estimate of Quantities for Sections C, D, F, and M
A3 to A4	Environmental Commitments

### SPECIFICATIONS

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

### Section C – Traffic Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
634E0010	Flagging	480.0	Hour
634E0110	Traffic Control Signs	2,980.6	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0285	Type 3 Barricade, 8' Double Sided	31	Each
634E0340	Temporary Raised Pavement Markers	19.0	Mile
634E0380	Tubular Marker	879	Each
634E0420	Type C Advance Warning Arrow Board	4	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	5,000	Ft
634E0620	Temporary Pavement Marking, Continuous 4" Edge Line	89,760	Ft
634E0630	Temporary Pavement Marking	7.8	Mile
634E1002	Detour Signing	1,335.4	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	4	Each

### Section D – Erosion and Sediment Control

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1700	Remove Silt Fence	825	Ft
230E0100	Remove and Replace Topsoil	Lump Sum	LS
730E0210	Type F Permanent Seed Mixture	1,040	Lb
731E0200	Fertilizing	30.00	Ton
732E0100	Mulching	80.0	Ton
734E0154	12" Diameter Erosion Control Wattle	1,000	Ft
734E0602	Low Flow Silt Fence	500	Ft
734E0604	High Flow Silt Fence	3,500	Ft
734E0610	Mucking Silt Fence	229	CuYd
734E0620	Repair Silt Fence	825	Ft

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
004E0050	Remove Traffic Diversion(s)	Lump Sum	LS
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	11,081	Mile
009E3240	Graded Centerline Staking	8,977	Mile
009E3250	Miscellaneous Staking	10,898	Mile
009E3280	Slope Staking	2,498	Mile
009E3300	Three Man Survey Crew	40.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
009E4220	Project Management, Category II	Lump Sum	LS
110E0415	Remove Edge Drains	Lump Sum	LS
110E0500	Remove Pipe Culvert	64	Ft
110E0510	Remove Pipe End Section	8	Each
110E0700	Remove 3 Cable Guardrail	1,572	Ft
110E0730	Remove Beam Guardrail	425.0	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	8	Each
110E0745	Remove 3 Cable Guardrail Slip Base Anchor Assembly	2	Each
110E0760	Remove Beam Guardrail Trailing End Terminal	1	Each
110E0770	Remove W Beam Guardrail Breakaway Cable Terminal	4	Each
110E0800	Remove W Beam Guardrail End Terminal	1	Each
110E1100	Remove Concrete Pavement	15,685.8	SqYd
110E7020	Remove Interim Crossover Closure for Reset	399	Ft
110E7500	Remove Pipe for Reset	40	Ft
110E7510	Remove Pipe End Section for Reset	28	Each
120E0010	Unclassified Excavation	35,881	CuYd
120E0100	Unclassified Excavation, Digouts	210	CuYd
120E0400	Select Subgrade Topping	20,071	CuYd
120E0600	Contractor Furnished Borrow Excavation	48,449	CuYd
120E4100	Reprofiling Ditch	10.0	Sta
120E6100	Water for Embankment	627.0	MGal
120E6200	Water for Granular Material	837.3	MGal
210E2000	Shoulder Shaping	7,480	Mile
250E0010	Incidental Work	Lump Sum	LS
260E1010	Base Course	42,487.5	Ton
260E2010	Gravel Cushion	1,000.0	Ton
260E2030	Gravel Cushion, Salvaged	8,793.8	Ton
260E6000	Granular Material, Furnish	664.9	Ton
* 270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	21,500.0	Ton
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	4,122.0	Ton
270E0110	Salvage and Stockpile Granular Material	3,617.5	Ton
270E0200	Blend, Haul, and Stockpile Granular Material	8,793.8	Ton
280E0020	Full Depth Reclamation, Shoulder	83,373	SqYd
320E0004	PG 58-28 Asphalt Binder	588.5	Ton
320E1070	Class HR Asphalt Concrete	14,114.0	Ton
320E1200	Asphalt Concrete Composite	3,500.0	Ton
320E3000	Compaction Sample	3	Each
320E5010	Saw and Seal Shoulder Joint	85,037	Ft

## SECTION F Surfacing Plans (Continued)

Revised 10-13-2016 LLA

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	14.9	Mile
330E0010	MC-70 Asphalt for Prime	102.8	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	30.0	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	19.7	Ton
330E2000	Sand for Flush Seal	33.0	Ton
332E0010	Cold Milling Asphalt Concrete	7,345	SqYd
380E0060	8.5" Nonreinforced PCC Pavement	1,733.3	SqYd
380E0110	11" Nonreinforced PCC Pavement	13,835.4	SqYd
380E0800	PCC Shoulder Pavement	740.0	SqYd
380E1500	PCC Overlay, Furnish	28,248.0	CuYd
380E1585	8.5" PCC Overlay, Placement	121,556.8	SqYd
380E5030	Nonreinforced PCC Pavement Repair	200.0	SqYd
380E6000	Dowel Bar	79,686	Each
380E6110	Insert Steel Bar in PCC Pavement	75	Each
410E2600	Membrane Sealant Expansion Joint	80.0	Ft
430E0700	Precast Concrete Headwall for Drain	20	Each
450E4767	24" CMP 12 Gauge, Furnish	56	Ft
450E4770	24" CMP, Install	56	Ft
450E5215	24" CMP Flared End, Furnish	8	Each
450E5216	24" CMP Flared End, Install	8	Each
* 450E8900	Cleanout Pipe Culvert	45	Each
450E9000	Reset Pipe	40	Ft
450E9001	Reset Pipe End Section	28	Each
600E0300	Type III Field Laboratory	1	Each
629E0100	3 Cable Guardrail	798	Ft
629E0110	NCHRP 350 Test Level 3 High Tension Cable Guardrail	644	Ft
629E0290	NCHRP 350 Test Level 3 High Tension Cable Guardrail Anchor Assembly	4	Each
629E0300	3 Cable Guardrail Slip Base Anchor Assembly	2	Each
629E0400	3 Cable Guardrail Anchor Assembly	2	Each
* 629E1109	Furnish High Tension Cable Guardrail Post and Sleeve	50	Each
629E9080	Reset Interim Crossover Closure	399	Ft
630E0110	Straight Double Class A Thrie Beam Guardrail with Wood Posts	75.0	Ft
630E1010	Straight Class A W Beam Guardrail with Wood Posts	162.5	Ft
630E2000	W Beam to Thrie Beam Guardrail Transition	1	Each
630E2015	W Beam Guardrail Flared End Terminal	1	Each
630E2030	W Beam Guardrail Breakaway Cable Terminal	2	Each
630E2050	Beam Guardrail Trailing End Terminal	1	Each
680E0010	Edge Drain	8,246	Ft
680E0015	Edge Drain Outlet	20	Each
680E0025	Adjust Edge Drain Outlet	170	Each
720E1015	Bank and Channel Protection Gabion	16.5	CuYd
831E1500	Geotextile Bond Breaker Fabric	218,094	SqYd

\* - Denotes Non-Participating

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0904(50)189	A2	A4

## Section L – Lighting Plans

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1540	Remove Luminaire Pole Footing	8	Each
635E5020	2' Diameter Footing	56.0	Ft
635E5301	Type 1 Electrical Junction Box	2	Each
635E7500	Remove and Reset Luminaire Pole	8	Each
635E8015	1.5" Rigid Galvanized Steel Conduit	15	Ft
635E8120	2" Rigid Conduit, Schedule 40	1,510	Ft
635E9016	1/C #6 AWG Copper Wire	4,680	Ft
635E9020	1/C #10 AWG Copper Wire	50	Ft

## Section M – Pavement Marking

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0010	Cold Applied Plastic Pavement Marking, 4"	2,120	Ft
633E0025	Cold Applied Plastic Pavement Marking, 12"	3,550	Ft
633E1200	Waterborne Pavement Marking Paint with High Grade Polymer, White	646	Gal
633E1205	Waterborne Pavement Marking Paint with High Grade Polymer, Yellow	529	Gal
633E1300	Pavement Marking Paint, White	40	Gal
633E1305	Pavement Marking Paint, Yellow	100	Gal
633E5000	Grooving for Cold Applied Plastic Pavement Marking, 4"	2,120	Ft
633E5010	Grooving for Cold Applied Plastic Pavement Marking, 12"	3,550	Ft
633E5100	Grooving for Durable Pavement Marking, 4"	222,951	Ft

## Section S – Permanent Signing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0100	Remove Concrete Footing(s)	Lump Sum	LS
110E5020	Salvage Traffic Sign	13	Each
632E0014	1.75' Diameter Breakaway Support Concrete Footing	18.0	Ft
632E2000	4"x4" Amber Delineator with 1.12 Lb/Ft Post	16	Each
632E2004	4"x8" Amber Delineator with 1.12 Lb/Ft Post	18	Each
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	118	Each
632E2024	4"x8" White Delineator with 1.12 Lb/Ft Post	52	Each
632E2520	Type 2 Object Marker	2	Each
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	1	Each

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0904(50)189	A3	A4

## ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived 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. The environmental commitments associated with this project are as follows:

### 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 C: WATER SOURCE

The Contractor shall not withdraw water with equipment previously used outside the State of South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment before entering South Dakota to reduce the risk of invasive species introduction into the project vicinity.

#### Action Taken/Required:

The Contractor shall obtain the necessary permits from the regulatory agencies such as the Department of Environment and Natural Resources (DENR) and the United States Army Corps of Engineers (COE) prior to executing water extraction activities.

### COMMITMENT D2: SURFACE WATER DISCHARGE

West Fork Hay Creek, Hay Creek, Johnny Creek, & Bull Creek are classified as fish and wildlife propagation, recreation, irrigation and stock watering waters. Because of these beneficial uses, special construction measures may have to be taken to ensure that this water body is not impacted.

#### Action Taken/Required:

If construction dewatering is required, the Contractor shall obtain a Temporary Discharge Permit from the DENR and provide a copy to the Project Engineer. Contact the DENR Surface Water Program at 605-773-3351 to apply for a permit.

### COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance.

#### Action Taken/Required:

The DENR and the US Environmental Protection Agency (EPA) have issued separate general permits for the discharge of storm water runoff. The DENR permit applies to discharges on state land and the EPA permit applies to discharges on federal or reservation land. The Contractor is advised this project is regulated under the Phase II Storm Water Regulations and must receive coverage under the General Permit for Construction Activities. A Notice of Intent (NOI) will be submitted to DENR a minimum of 15 days prior to project start by the DOT Environmental Office. A letter must be received from DENR that acknowledges project coverage under this general permit before project start. The Contractor is advised that permit coverage may also be required by off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

The Contractor shall adhere to the "Special Provision Regarding Storm Water Discharges to Waters of the State".

A major component of the storm water construction permits is development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is a joint effort and responsibility of the SDDOT and the Contractor. Erosion control measures and best management practices will be implemented in accordance with the SWPPP. The SWPPP is a dynamic document and is to be available on-site at all times.

Information on storm water permits and SWPPPs are available on the following websites:

SDDOT:

<http://www.sddot.com/business/environmental/stormwater/Default.aspx>

DENR: <http://www.denr.sd.gov/des/sw/stormwater.aspx>

EPA: [http://cfpub.epa.gov/npdes/home.cfm?program\\_id=6](http://cfpub.epa.gov/npdes/home.cfm?program_id=6)

#### Contractor Certification Form:

The "Department of Environment and Natural Resources – Contractor Certification Form" (SD EForm – 2110LDV1-ContractorCertification.pdf) shall be completed by the Contractor or their certified Erosion Control Supervisor after the award of the contract. Work may not begin on the project until this form is signed.

The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the Surface Water Discharge General Permit for Storm Water Discharges Associated with Construction Activities for the Project.

The online form can be found at:

<http://denr.sd.gov/des/sw/eforms/E2110LDV1-ContractorCertification.pdf>

### 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 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.

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0904(50)189	A4	A4

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.