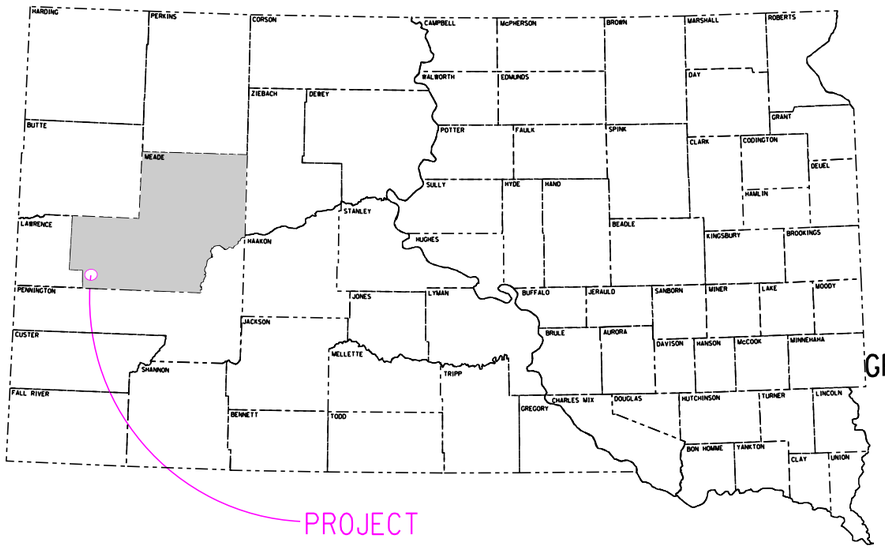
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0901(148)40	1	393

Plotting Date: 07/31/2014 Rev 7/31/14 RG

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT IM 0901(148)40
I90 SERVICE ROAD
MEADE COUNTY

GRADING, AC SURFACING, STRUCTURES & PERMANENT SIGNING
PCN 01KK



INDEX OF SECTIONS

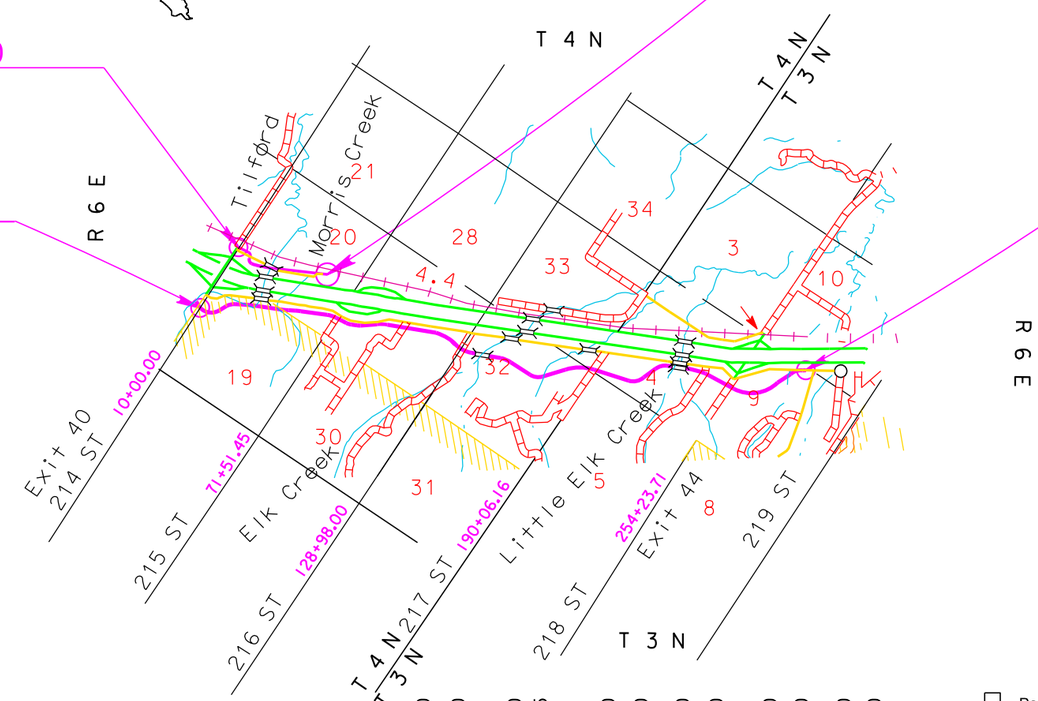
Section A: Estimate of Quantities and Enviromental Commitments
Section B: Grading Plans
Section C: Traffic Control Plans
Section D: Erosion And Sediment Control Plans
Section E: Structure Plans
Section F: Surfacing Plans
Section L: Signal and Lighting Plans
Section M: Pavement Marking Plans
Section S: Permanent Signing Plans
Section X: Cross Sections
Section Z: Pipe Sections

END IM 0901(148)40
Station 555+17 Clover Place = 272.35 feet East and 1138.17 feet South of the N1/16 corner of the NW1/4 of Section 20 - Township 4 North Range 6 East

BEGIN IM 0901(148)40
Station 510+00 Clover Place = 34.86 feet South and 894.84 feet East of the NW corner of Section 20 - Township 4 North Range 6 East

BEGIN IM 0901(148)40
Station 10+00 = 1087.38 feet West of the NW corner of Section 20 - Township 4 North Range 6 East

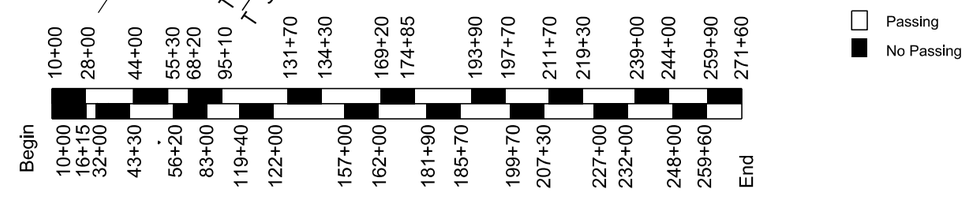
END IM 0901(148)40
Station 285+00 = 243.84 feet South East and 450.62 feet South of W1/16 corner in the SW corner of Section 10 - Township 3 North Range 6 East



DESIGN DESIGNATION

ADT (2009)	700
ADT (2029)	1045
DHV	155
D	50%
T DHV	3.9%
T ADT	8.6%
V	45 mph

This striping diagram is for informational purposes only. Actual striping for passing/no passing zones should be determined by field verified procedures.



STORM WATER PERMIT
Major Stream: Elk Creek & Little Elk Creek
Area Disturbed: 111 Acres
Project Area: 117.9 Acres
Lat. 42.45
Long.-96.3

South Service Road

GROSS LENGTH	27,500	FEET	5.208 MILES
LENGTH OF EXCEPTIONS	411.33	FEET	0.078 MILES
NET LENGTH	27,088.68	FEET	5.130 MILES

CLOVER PLACE

GROSS LENGTH	4,512	FEET	0.855 MILES
LENGTH OF EXCEPTIONS	0.00	FEET	0.000 MILES
NET LENGTH	4,512	FEET	0.855 MILES

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Plot Scale - 1:200
Plotted From - trpr13418
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ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0901(148)40	A1	A7

Plotting Date: 01/15/2015

Rev 1/15/15 RG

Grading – Section B

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	11.847	Mile
009E3245	Final Cross Section Survey	6.349	Mile
009E3250	Miscellaneous Staking	6.557	Mile
009E3280	Slope Staking	6.349	Mile
009E3290	Structure Staking	7	Each
009E3300	Three Man Survey Crew	100.0	Hour
100E0100	Clearing	Lump Sum	LS
110E0550	Remove Cattle Guard	2	Each
110E0600	Remove Fence	28,251	Ft
110E4000	Salvage Crash Cushion	1	Each
110E4300	Salvage Double Thrie Beam Guardrail	150.0	Ft
110E4330	Salvage W Beam Guardrail	1,550.0	Ft
110E4340	Salvage W Beam to Thrie Beam Guardrail Transition	12	Each
110E4370	Salvage W Beam Guardrail Flared End Terminal	12	Each
110E7040	Remove Gate for Reset	5	Each
110E7500	Remove Pipe for Reset	114	Ft
110E7510	Remove Pipe End Section for Reset	9	Each
110E7600	Remove Cattle Guard for Reset	2	Each
120E0010	Unclassified Excavation	236,884	CuYd
120E0300	Borrow Unclassified Excavation	16,147	CuYd
120E0500	Option Borrow Excavation	206,656	CuYd
120E0600	Contractor Furnished Borrow	37,718	CuYd
120E1000	Muck Excavation	4,065	CuYd
120E1100	Unclassified/Rock Excavation	4,320	CuYd
120E2000	Undercutting	46,483	CuYd
120E6100	Water for Embankment	4,171.0	MGal
240E0010	Obliterate Old Road	234	Sta
250E0020	Incidental Work, Grading	Lump Sum	LS
270E0042	Salvage Asphalt Mix and Granular Base Material	56,679.4	Ton
* 270E0210	Haul and Stockpile Granular Material	56,679.4	Ton
421E0100	Pipe Culvert Undercut	555	CuYd
450E0102	12" RCP Class 2, Furnish	64	Ft
450E0110	12" RCP, Install	64	Ft
450E0122	18" RCP Class 2, Furnish	100	Ft
450E0130	18" RCP, Install	100	Ft
450E0142	24" RCP Class 2, Furnish	680	Ft
450E0150	24" RCP, Install	680	Ft
450E0162	30" RCP Class 2, Furnish	284	Ft
450E0164	30" RCP Class 4, Furnish	132	Ft
450E0170	30" RCP, Install	416	Ft
450E0182	36" RCP Class 2, Furnish	444	Ft
450E0190	36" RCP, Install	444	Ft
450E0192	42" RCP Class 2, Furnish	306	Ft
450E0200	42" RCP, Install	306	Ft
450E0202	48" RCP Class 2, Furnish	122	Ft
450E0210	48" RCP, Install	122	Ft
450E0242	72" RCP Class 2, Furnish	62	Ft
450E0250	72" RCP, Install	62	Ft
450E0262	84" RCP Class 2, Furnish	142	Ft
450E0270	84" RCP, Install	142	Ft
450E0408	18" RCP Bend, Furnish	1	Each
450E0409	18" RCP Bend, Install	1	Each
450E0428	36" RCP Bend, Furnish	2	Each
450E0429	36" RCP Bend, Install	2	Each
450E0452	72" RCP Bend, Furnish	1	Each
450E0453	72" RCP Bend, Install	1	Each
450E2024	30" RCP Flared End, Furnish	2	Each
450E2025	30" RCP Flared End, Install	2	Each
450E2028	36" RCP Flared End, Furnish	10	Each
450E2029	36" RCP Flared End, Install	10	Each

* - Denotes Non-Participating

Grading – Section B, Continued

Bid Item Number	Item	Quantity	Unit
450E2032	42" RCP Flared End, Furnish	8	Each
450E2033	42" RCP Flared End, Install	8	Each
450E2036	48" RCP Flared End, Furnish	2	Each
450E2037	48" RCP Flared End, Install	2	Each
450E2060	84" RCP Flared End, Furnish	2	Each
450E2061	84" RCP Flared End, Install	2	Each
450E2200	24" RCP Sloped End, Furnish	12	Each
450E2201	24" RCP Sloped End, Install	12	Each
450E2204	30" RCP Sloped End, Furnish	4	Each
450E2205	30" RCP Sloped End, Install	4	Each
450E2304	18" RCP Safety End, Furnish	2	Each
450E2307	18" RCP Safety End, Install	2	Each
450E2308	24" RCP Safety End, Furnish	2	Each
450E2311	24" RCP Safety End, Install	2	Each
450E3002	18" RCP Arch Class 2, Furnish	68	Ft
450E3010	18" RCP Arch, Install	68	Ft
450E3012	24" RCP Arch Class 2, Furnish	132	Ft
450E3020	24" RCP Arch, Install	132	Ft
450E3022	30" RCP Arch Class 2, Furnish	74	Ft
450E3030	30" RCP Arch, Install	74	Ft
450E3032	36" RCP Arch Class 2, Furnish	74	Ft
450E3040	36" RCP Arch, Install	74	Ft
450E3052	48" RCP Arch Class 2, Furnish	102	Ft
450E3060	48" RCP Arch, Install	102	Ft
450E3062	54" RCP Arch Class 2, Furnish	98	Ft
450E3070	54" RCP Arch, Install	98	Ft
450E3092	84" RCP Arch Class 2, Furnish	138	Ft
450E3093	84" RCP Arch Class 3, Furnish	116	Ft
450E3100	84" RCP Arch, Install	254	Ft
450E4508	30" RCP Arch Flared End, Furnish	2	Each
450E4509	30" RCP Arch Flared End, Install	2	Each
450E4512	36" RCP Arch Flared End, Furnish	2	Each
450E4513	36" RCP Arch Flared End, Install	2	Each
450E4520	48" RCP Arch Flared End, Furnish	4	Each
450E4521	48" RCP Arch Flared End, Install	4	Each
450E4524	54" RCP Arch Flared End, Furnish	2	Each
450E4525	54" RCP Arch Flared End, Install	2	Each
450E4536	84" RCP Arch Flared End, Furnish	2	Each
450E4537	84" RCP Arch Flared End, Install	2	Each
450E4600	24" RCP Arch Sloped End, Furnish	4	Each
450E4601	24" RCP Arch Sloped End, Install	4	Each
450E4650	18" RCP Arch Safety End, Furnish	2	Each
450E4653	18" RCP Arch Safety End, Install	2	Each
450E4739	12" CMP 16 Gauge, Furnish	156	Ft
450E4740	12" CMP, Install	156	Ft
450E4749	15" CMP 16 Gauge, Furnish	518	Ft
450E4750	15" CMP, Install	518	Ft
450E4759	18" CMP 16 Gauge, Furnish	966	Ft
450E4760	18" CMP, Install	966	Ft
450E4769	24" CMP 16 Gauge, Furnish	116	Ft
450E4770	24" CMP, Install	116	Ft
450E4779	30" CMP 16 Gauge, Furnish	60	Ft
450E4780	30" CMP, Install	60	Ft
450E4789	36" CMP 16 Gauge, Furnish	68	Ft
450E4790	36" CMP, Install	68	Ft
450E4809	48" CMP 16 Gauge, Furnish	54	Ft
450E4810	48" CMP, Install	54	Ft
450E5005	15" CMP Elbow, Furnish	6	Each
450E5006	15" CMP Elbow, Install	6	Each
450E5100	CMP Tee, Furnish	2	Each
450E5101	CMP Tee, Install	2	Each
450E5203	12" CMP Flared End, Furnish	8	Each
450E5204	12" CMP Flared End, Install	8	Each

INDEX OF SHEETS

A1 and A3 — Estimate of Quantities for Sections B,C,D,E, F, L, M, and S

A4 to A7 — Environmental Commitments

Grading – Section B, Continued

Bid Item Number	Item	Quantity	Unit
450E5211	18" CMP Flared End, Furnish	2	Each
450E5212	18" CMP Flared End, Install	2	Each
450E5231	48" CMP Flared End, Furnish	2	Each
450E5232	48" CMP Flared End, Install	2	Each
450E5402	15" CMP Safety End, Furnish	4	Each
450E5403	15" CMP Safety End, Install	4	Each
450E5406	18" CMP Safety End, Furnish	36	Each
450E5407	18" CMP Safety End, Install	36	Each
450E5410	24" CMP Safety End, Furnish	4	Each
450E5411	24" CMP Safety End, Install	4	Each
450E5414	30" CMP Safety End, Furnish	2	Each
450E5417	30" CMP Safety End, Install	2	Each
450E5420	36" CMP Safety End, Furnish	2	Each
450E5423	36" CMP Safety End, Install	2	Each
450E5529	30" CMP Arch 16 Gauge, Furnish	60	Ft
450E5530	30" CMP Arch, Install	60	Ft
450E6014	30" CMP Arch Safety End, Furnish	2	Each
450E6017	30" CMP Arch Safety End, Install	2	Each
450E6119	15" Slotted CMP 16 Gauge, Furnish	220	Ft
450E6120	15" Slotted CMP, Install	220	Ft
450E8600	Flap Gate	2	Each
450E9000	Reset Pipe	114	Ft
450E9001	Reset Pipe End Section	9	Each
462E0100	Class M6 Concrete	5.4	CuYd
480E0100	Reinforcing Steel	528	Lb
600E0300	Type III Field Laboratory	1	Each
610E0120	20' Cattle Guard with Wings	1	Each
610E0130	30' Cattle Guard with Wings	1	Each
610E0410	10' Precast Concrete Cattle Guard Foundation	1	Each
610E0414	14' Precast Concrete Cattle Guard Foundation	1	Each
610E1000	Reset Cattle Guard	1	Each
610E1010	Reset Cattle Guard with Wings	1	Each
620E0020	Type 2 Right-of-Way Fence	24,458	Ft
620E0030	Type 3 Right-of-Way Fence	6,093	Ft
620E0040	Type 4 Right-of-Way Fence	1,712	Ft
620E0060	Type 6 Right-of-Way Fence	8,476	Ft
620E0300	Special Right-of-Way Fence	121	Ft
620E0510	Type 1 Temporary Fence	5,330	Ft
620E0515	Type 1A Temporary Fence	16,413	Ft
620E0530	Type 3 Temporary Fence	2,080	Ft
620E1020	2 Post Panel	173	Each
620E1030	3 Post Panel	63	Each
620E2014	14' Tubular Gate	1	Each
620E2016	16' Tubular Gate	1	Each
620E2100	Reset Gate	5	Each

SPECIFICATIONS

Standard Specifications for Roads & Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

Plot Scale - 1:200

Plotted From - trpr13418

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ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0901(148)40	A2	A7

Plotting Date: 08/08/2014

Rev 8/08/14 RG

Grading – Section B, Continued

Bid Item Number	Item	Quantity	Unit
630E0110	Straight Double Class A Thrie Beam Guardrail with Wood Posts	100.0	Ft
630E1010	Straight Class A W Beam Guardrail with Wood Posts	250.0	Ft
630E2000	W Beam to Thrie Beam Guardrail Transition	8	Each
630E2015	W Beam Guardrail Flared End Terminal	6	Each
630E2020	W Beam Guardrail Tangent End Terminal	2	Each
650E0060	Type B66 Concrete Curb and Gutter	195	Ft
670E3200	Type D Frame and Grate	4	Each
670E4205	Type M Frame and Grate Assembly	1	Each
670E5400	Precast Drop Inlet Collar	4	Each
720E1015	Bank and Channel Protection Gabion	174.0	CuYd
900E0010	Refurbish Single Mailbox	14	Each
900E0012	Refurbish Double Mailbox	36	Each
900E1080	Orange Plastic Safety Fence	2,000	Ft

Traffic Control – Section C

Bid Item Number	Item	Quantity	Unit
004E0010	Blading	100	Hour
628E1110	Movable F Shape Concrete Barrier, End Section	4	Each
634E0010	Flagging	750	Hour
634E0020	Pilot Car	350	Hour
634E0100	Traffic Control	4,547	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0320	Temporary Road Markers	0.700	Mile
634E0420	Type C Advance Warning Arrow Panel	2	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	30	Each
634E0630	Temporary Pavement Marking	1.4	Mile
634E0700	Traffic Control Movable Concrete Barrier	30	Each
634E0750	Temporary Concrete Barrier End Protection	2	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	2	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	1	Each
634E0920	Hazard Identification Beacon	1	Site
634E1215	Contractor Furnished Portable Changeable Message Sign	2	Each

Erosion and Sediment Control – Section D

Bid Item Number	Item	Quantity	Unit
110E1690	Remove Sediment	35.0	CuYd
110E1693	Remove Erosion Control Wattle	3,670	Ft
110E1700	Remove Silt Fence	625	Ft
230E0010	Placing Topsoil	48,065	CuYd
730E0100	Cover Crop Seeding	28.0	Bu
730E0210	Type F Permanent Seed Mixture	2,886	Lb
731E0200	Fertilizing	111.00	Ton
732E0100	Mulching	222.0	Ton
734E0044	Soil Stabilizer	25.0	Acre
734E0102	Type 2 Erosion Control Blanket	7,935	SqYd
734E0131	Type 1 Turf Reinforcement Mat	5,165.0	SqYd
734E0154	12" Diameter Erosion Control Wattle	14,675	Ft
734E0165	Remove and Reset Erosion Control Wattle	3,670	Ft
734E0170	Temporary Sediment Barrier	4,055	Ft
734E0325	Surface Roughening	23.5	Acre
734E0510	Shaping for Erosion Control Blanket	12,325	Ft
734E0604	High Flow Silt Fence	2,500	Ft
734E0610	Mucking Silt Fence	175	CuYd
734E0620	Repair Silt Fence	625	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	4	Each
900E1320	Construction Entrance	1	Each
900E5147	Articulated Concrete Mattress	507.0	SqYd

Section E

Structure – 47-080-539

Bid Item Number	Item	Quantity	Unit
250E0030	Incidental Work, Structure	Lump Sum	LS

Structure – 47-068-510

Bid Item Number	Item	Quantity	Unit
420E0200	Structure Excavation, Box Culvert	164	CuYd
421E0200	Box Culvert Undercut	263	CuYd
460E0120	Class A45 Concrete, Box Culvert	408.1	CuYd
480E0100	Reinforcing Steel	72,846	Lb
700E0210	Class B Riprap	101.9	Ton
720E1010	PVC Coated Bank and Channel Protection Gabion	97.5	CuYd
831E0110	Type B Drainage Fabric	372	SqYd

Structure – 47-072-516

Bid Item Number	Item	Quantity	Unit
420E0200	Structure Excavation, Box Culvert	31	CuYd
421E0200	Box Culvert Undercut	52	CuYd
460E0120	Class A45 Concrete, Box Culvert	74.4	CuYd
460E0300	Breakout Structural Concrete	10.9	CuYd
460E0380	Install Dowel in Concrete	6	Each
480E0100	Reinforcing Steel	13,836	Lb
700E0210	Class B Riprap	24.9	Ton
831E0110	Type B Drainage Fabric	41	SqYd

Structure – 47-073-518

Bid Item Number	Item	Quantity	Unit
420E0200	Structure Excavation, Box Culvert	33	CuYd
421E0200	Box Culvert Undercut	68	CuYd
460E0120	Class A45 Concrete, Box Culvert	89.3	CuYd
460E0300	Breakout Structural Concrete	7.1	CuYd
460E0380	Install Dowel in Concrete	5	Each
480E0100	Reinforcing Steel	15,181	Lb

Structure – 47-078-533

Bid Item Number	Item	Quantity	Unit
009E3310	Bridge Elevation Survey	Lump Sum	LS
009E5000	Concrete Penetrating Sealer	1,048.0	SqYd
120E3100	Bridge End Embankment	896	CuYd
250E0030	Incidental Work, Structure	Lump Sum	LS
410E2600	Membrane Sealant Expansion Joint	71.8	Ft
420E0100	Structure Excavation, Bridge	1,079	CuYd
430E0300	Granular Bridge End Backfill	88.9	CuYd
430E0510	Approach Slab Underdrain Excavation	2.5	CuYd
460E0030	Class A45 Concrete, Bridge Deck	621.9	CuYd
460E0050	Class A45 Concrete, Bridge	390.8	CuYd
460E0150	Concrete Approach Slab for Bridge	267.9	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	35.9	SqYd
460E0502	Deck Drain, Slab Bridge	4	Each
462E0200	Controlled Density Fill	12.4	CuYd
480E0100	Reinforcing Steel	62,326	Lb
480E0200	Epoxy Coated Reinforcing Steel	221,885	Lb
480E0507	No. 7 Rebar Splice	90	Each
510E1500	Micropile Verification Load Test	1	Each
510E1510	Micropile Proof Load Test	6	Each
510E1520	Micropile	78	Each
680E0040	4" Underdrain Pipe	296	Ft
680E2010	Precast Concrete Headwall for Drain	4	Each
680E2500	Porous Backfill	31.0	Ton
700E0410	Class D Riprap	2,202.1	Ton
831E0110	Type B Drainage Fabric	1,792	SqYd

Structure – 47-082-542

Bid Item Number	Item	Quantity	Unit
420E0200	Structure Excavation, Box Culvert	91	CuYd
421E0200	Box Culvert Undercut	119	CuYd
460E0120	Class A45 Concrete, Box Culvert	212.4	CuYd
480E0100	Reinforcing Steel	30,008	Lb
700E0210	Class B Riprap	113.1	Ton
831E0110	Type B Drainage Fabric	169	SqYd

Plot Scale - 1:200
Plotted From - tnpr13418
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ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0901(148)40	A3	A7

Plotting Date: 08/11/2014

Rev 8/11/14 RG

Structure – 47-084-546

Bid Item Number	Item	Quantity	Unit
009E3310	Bridge Elevation Survey	Lump Sum	LS
009E5000	Concrete Penetrating Sealer	497.0	SqYd
120E3100	Bridge End Embankment	650	CuYd
250E0030	Incidental Work, Structure	Lump Sum	LS
410E2600	Membrane Sealant Expansion Joint	71.8	Ft
420E0100	Structure Excavation, Bridge	381	CuYd
430E0300	Granular Bridge End Backfill	55.7	CuYd
430E0510	Approach Slab Underdrain Excavation	4.7	CuYd
460E0030	Class A45 Concrete, Bridge Deck	235.3	CuYd
460E0050	Class A45 Concrete, Bridge	164.4	CuYd
460E0150	Concrete Approach Slab for Bridge	163.4	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	35.9	SqYd
462E0200	Controlled Density Fill	6.2	CuYd
480E0100	Reinforcing Steel	44,080	Lb
480E0200	Epoxy Coated Reinforcing Steel	70,292	Lb
480E0507	No. 7 Rebar Splice	90	Each
510E1500	Micropile Verification Load Test	1	Each
510E1510	Micropile Proof Load Test	5	Each
510E1520	Micropile	58	Each
680E0040	4" Underdrain Pipe	259	Ft
680E2010	Precast Concrete Headwall for Drain	4	Each
680E2500	Porous Backfill	28.6	Ton
700E0310	Class C Riprap	572.8	Ton
831E0110	Type B Drainage Fabric	646	SqYd

Structure – 47-091-533

Bid Item Number	Item	Quantity	Unit
420E0200	Structure Excavation, Box Culvert	11	CuYd
421E0200	Box Culvert Undercut	23	CuYd
460E0120	Class A45 Concrete, Box Culvert	25.3	CuYd
460E0300	Breakout Structural Concrete	5.0	CuYd
460E0380	Install Dowel in Concrete	5	Each
480E0100	Reinforcing Steel	3,623	Lb

Surfacing – Section F

Bid Item Number	Item	Quantity	Unit
009E3320	Checker	Lump Sum	LS
120E6200	Water for Granular Material	1,191.5	MGal
120E9000	Pit Run Material	4,188.8	Ton
260E1010	Base Course	41,297.5	Ton
260E1030	Base Course, Salvaged	25,807.6	Ton
260E1080	Base Course, Salvaged, State Furnished	28,102.0	Ton
260E6000	Granular Material, Furnish	12,903.8	Ton
270E0220	Blend and Stockpile Granular Material	25,807.6	Ton
320E3000	Compaction Sample	3	Each
330E0010	MC-70 Asphalt for Prime	9.7	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	28.5	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	23.2	Ton
330E1000	Blotting Sand for Prime	19.0	Ton
330E2000	Sand for Flush Seal	291.3	Ton
462E0100	Class M6 Concrete	20.6	CuYd
462E0200	Controlled Density Fill	8.6	CuYd
629E9010	Interim Crossover Closure	448	Ft
831E0210	Non-woven Geotextile Separator	5,176	SqYd
900E1980	Storage Unit	1	Each

Surfacing – Section F Alternate A

Bid Item Number	Item	Quantity	Unit
320E0005	PG 58-34 Asphalt Binder	1,133.0	Ton
320E0007	PG 64-28 Asphalt Binder	93.6	Ton
320E1050	Class E Asphalt Concrete	1,591.0	Ton
320E1202	Class Q2R Hot Mixed Asphalt Concrete	25,435.0	Ton
320E4000	Hydrated Lime	251.4	Ton

Surfacing – Section F Alternate B

Bid Item Number	Item	Quantity	Unit
320E0005	PG 58-34 Asphalt Binder	1,035.2	Ton
320E0007	PG 64-28 Asphalt Binder	84.0	Ton
320E1050	Class E Asphalt Concrete	1,638.0	Ton
320E1202	Class Q2R Hot Mixed Asphalt Concrete	26,115.0	Ton
320E4000	Hydrated Lime	261.4	Ton

Lighting – Section L

Bid Item Number	Item	Quantity	Unit
110E1540	Remove Luminaire Pole Footing	1	Each
635E5020	2' Diameter Footing	7.0	Ft
635E5302	Type 2 Electrical Junction Box	1	Each
635E5400	Electrical Service Cabinet	1	Each
635E7500	Remove and Reset Luminaire Pole	1	Each
635E8120	2" Rigid Conduit, Schedule 40	300	Ft
635E9014	1/C #4 AWG Copper Wire	1,240	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	50	Ft

Pavement Markings – Section M

Bid Item Number	Item	Quantity	Unit
633E0010	Cold Applied Plastic Pavement Marking, 4"	2,280	Ft
633E0030	Cold Applied Plastic Pavement Marking, 24"	78	Ft
633E0040	Cold Applied Plastic Pavement Marking, Arrow	2	Each
633E1300	Pavement Marking Paint, White	176.8	Gal
633E1305	Pavement Marking Paint, Yellow	71.4	Gal
633E5000	Grooving for Cold Applied Plastic Pavement Marking, 4"	2,280	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	78	Ft
633E5125	Grooving for Durable Pavement Marking, Arrow	2	Each

Permanent Signing – Section S

Bid Item Number	Item	Quantity	Unit
110E0100	Remove Concrete Footing(s)	Lump Sum	LS
110E5010	Salvage Delineator	86	Each
110E5020	Salvage Traffic Sign	101	Each
632E1320	2.0"x2.0" Perforated Tube Post	616.0	Ft
632E1650	No Passing Zone Reference Post	10	Each
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	265	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	9	Each
632E2220	Guardrail Delineator	32	Each
632E2510	Type 2 Object Marker Back to Back	80	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	125.7	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	157.3	SqFt
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	58	Each

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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 A: WETLANDS

Approximately 1.17 acres of wetlands will be impacted by the project. Refer to Section B – Grading Plans for location and boundaries of the impacted wetlands. These unavoidable impacts to wetlands shall be mitigated on-site, at the time of construction.

Table of Impacted Wetlands

Wetland No.	Type	Station	Impact Left (Acres)	Impact Right (Acres)	Temporary Impact (Acres)	Total Impact (Acres)
1	PEMC	60+00	0.515	0.515	-	1.03
2	PEMA	106+00	0.006	0.004	-	0.01
3	PEMA	117+00	0.065	0.065	-	0.13
						1.17

Action Taken/Required:

A total of **5.88** acres of compensatory wetlands will be created off-site through expansion of Wetland #8 located on Project IM 0901(108)40 – PCN 3465 to account for impacts to existing wetlands from Projects IM 0901(108)40 – PCN 3465, IM 0901(148)40 – PCN 01KK, and IM 0901(38)40 – PCN 5580.

A mitigation plan has been provided by the SDDOT Environmental Office. A monitoring plan has been included and responsibilities are accounted for. The contact person is the Environmental Project Scientist of the SDDOT Environmental Office at 605-773-3268.

Wetland Topsoil

Wetland topsoil shall be stripped from all wetland areas which will be impacted by the project. The wetland topsoil shall be stripped to a depth that sufficiently allows 6 inches of the wetland topsoil to be re-utilized as the upper stratum of inslopes of impacted areas or placed in other locations as approved by the Project Engineer.

The wetland topsoil shall be stockpiled separately from other topsoil in a location approved by the Project Engineer. Locate wetland stockpile a minimum of 50 feet away from concentrated flows of storm water, drainage courses, and inlets.

Wetland Topsoil (continued)

Refer to Section D – Erosion and Sediment Control Plans for Placing Topsoil quantities. All costs to remove and stockpile the wetland topsoil shall be paid for at the contract unit price per cubic yard for "Unclassified Excavation". The cost to place the wetland topsoil shall be paid for at the unit price per cubic yard for "Placing Topsoil".

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 B4: BALD EAGLE

Bald eagles are known to occur in this area.

Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

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 D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

This segment of Morris Creek is classified as a cold water marginal fishery with a total suspended solids standard of 90 milligrams/liter.

This segment of Little Elk Creek is classified as a cold water marginal fishery with a total suspended solids standard of 90 milligrams/liter.

This segment of Elk Creek is classified as a cold water permanent fishery with a total suspended solids standard of 30 milligrams/liter.

The associated tributaries 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 these water bodies are not impacted.

Action Taken/Required:

The Contractor is advised the South Dakota Surface Water Quality Standards, administered by the Department of Environment and Natural Resources (DENR), apply to this project. Special construction measures shall be taken to ensure the above standard(s) of the surface waters are maintained and protected.

COMMITMENT D2: SURFACE WATER DISCHARGE

This segment of Morris Creek is classified as a cold water marginal fishery with a total suspended solids standard of 90 milligrams/liter total suspended solids.

This segment of Little Elk Creek is classified as a cold water marginal fishery with a total suspended solids standard of 90 milligrams/liter total suspended solids.

This segment of Elk Creek is classified as a cold water permanent fishery with a total suspended solids standard of 30 milligrams/liter total suspended solids.

The associated tributaries 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 these water bodies are 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.

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ENVIRONMENTAL COMMITMENTS

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of 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://sddot.com/transportation/highways/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

Contractor Certification Form:

The "Department of Environmental 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 F: SEASONAL WORK RESTRICTION

The State of South Dakota has designated a cold water fisheries associated with this project.

Action Taken/Required:

Construction or demolition activities should not take place during the Seasonal Work Restriction listed in the below table to avoid conflicts with spawning fish. If flows during this time are nonexistent or extremely low, the seasonal use restriction may not be applicable. The Contractor shall not conduct in-stream work during the Seasonal Work Restriction without prior approval from the SDDOT Environmental Office.

Stream Name	Stream Classification	Seasonal Work Restriction
Elk Creek	Cold Water	October 1 to April 1
Little Elk	Cold Water	October 1 to April 1

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 State ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway 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 State 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 State 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.

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ENVIRONMENTAL COMMITMENTS

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 designated option borrow 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: staging areas, borrow sites, waste disposal sites, and all material processing sites.

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 staging areas, borrow sites, waste disposal sites, or material processing sites 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.

COMMITMENT J: CONSTRUCTION PRACTICES FOR TEMPORARY WORKS IN WATERWAYS OF THE U.S.

The Contractor is advised that special construction measures have to be taken to ensure that the waterways of the U.S. are not impacted.

Action Taken/Required:

No excavation shall be made below the ordinary high water elevation in waterways outside of caissons, cribs, cofferdams, steel piling, or sheeting; and the natural streambed shall not be disturbed unless specified by the plans and under the observation of the Project Engineer. Refer to the Table of U.S. Waterways to Protect for ordinary high water elevations.

All dredged or excavated materials shall be placed at a site above the ordinary high water elevation in a confined area (not classified as a wetland) that is a minimum of 50 feet away from concentrated flows of storm water, drainage courses, and inlets to prevent return of such material to the waterway.

The construction of temporary work platforms, crossings, or berms below the ordinary high water elevation will be allowed provided that all material placed below the ordinary high water elevation consists of Class B or larger riprap.

All temporary caissons, cribs, cofferdams, steel piling, sheeting, work platforms, crossings, and berms shall be removed with minimal disturbance to the streambed. Proper construction practices shall be used to minimize increases in suspended solids and turbidity in the waterway.

Bridge berms, wing dams, traffic diversions, channel reconstruction, grading, etc. shall be constructed in close conformity with the plans to ensure that the hydraulic capacity of the waterway is not changed.

Temporary waterway crossings required for the Contractors construction operations shall be constructed with an adequate drainage structure size and minimum fill height to reduce the potential for upstream flooding. The Contractor will be responsible for sizing the temporary drainage structure for these crossings.

Any stream crossing must be preapproved by the Engineer.

Table of U.S. Waterways to Protect

Station	Waterway	Ordinary High Water Elevation
9+02.9	Trib. to Morris Creek	3644.10
47+78	Trib. to Morris Creek	3603.08
59+78	Morris Creek	3563.00
100+61	Trib. to Elk Creek	3586.51
117+13	Trib. to Elk Creek	3573.46
143+42	Elk Creek	3563.50
148+50 Lt	Trib. to Elk Creek	3557.61
151+73	Trib. to Elk Creek	3562.70
166+89	Trib. to Elk Creek	3556.90
199+55	Trib. to Elk Creek	3516.10
227+91	Little Elk Creek	3514.90
280+00	Trib. to Priest Canyon	3485.74
282+72	Trib. to Priest Canyon	3482.10
546+78 FR10	Trib. to Morris Creek	3586.00

COMMITMENT L: CONTAMINATED MATERIAL

Contaminated soil and/or known gas stations, undergrounds storage tanks, etc. are located within the project limits. Petroleum contaminated soil may be located at the following sites:

Description	Location
Frerichs Williams Operation	SW quadrant of Exit 44 and Chimney Canyon Road.

Action Taken/Required:

The Contractor shall be responsible for having the existing underground utilities located in the construction area. Underground utilities damaged by the Contractor due to negligence shall be repaired at the Contractor's expense.

The Contractor shall give notice to the Engineer when contaminated soil is encountered on the project. The Engineer will contact the SDDOT Environmental Engineer, at 605-773-3180, so that contact with the Department of Environment and Natural Resources (DENR) and consultant to inspect and monitor removal of any contaminated soil can be initiated.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the US Army Corps of Engineers for the permanent actions associated with this project.

Action Taken/Required:

The Contractor shall comply with all requirements contained in the Section 404 permit.

The Contractor shall also be responsible for obtaining a Section 404 permit for any dredge, excavation, or fill activities associated with staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands or waters of the United States.

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

COMMITMENT P: COORDINATION WITH STATE ARCHAEOLOGICAL RESEARCH CENTER

The following archaeologically sensitive sites have been identified that require avoidance of construction activities including staging areas for heavy equipment storage and materials storage:

Site	Details
MD-012-00002	NRHP eligible
39MD724, 39MD725, 39MD728	Unevaluated sites

SDCL 1-20-21.2 requires the location of archaeological sites be confidential to protect the integrity of the sites.

Action Taken/Required:

Prior to construction, the Contractor shall contact Jim Donohue, State Archaeological Research Center (SARC) at 605-394-1936 to coordinate the installation of orange plastic safety fence around the perimeter of the sites identified in the table and to schedule for an archeologist to be on site at all times during excavation activities for Site 39MD724. The exact location of the safety fence shall be determined in the field by the SARC representative. Work within the vicinity of both sites shall not begin until the safety fence is installed. Work, equipment, or material storage will not be allowed within the confines of the safety fence. All costs associated with furnishing and installing the orange safety fence shall be incidental to the contract unit price per foot for “Orange Plastic Safety Fence”. The estimated quantity of Orange Plastic Safety Fence is provided in Section B – Grading plans.

COMMITMENT R: FIRE PREVENTION IN THE BLACK HILLS AREA

This project is located within the confines of the Black Hills Forest Fire Protection Boundary.

Action Taken/Required:

The Contractor shall adhere to the “Special Provision for Fire Plan”.

COMMITMENT S: MIGRATORY BIRDS WORK RESTRICTION

Migratory birds are known to use the project area for nesting, which primarily occurs from April 1st to July 15th.

Action Taken/Required:

Pre-construction surveys for migratory birds will occur in suitable areas that have not been mowed or cleared prior to April 1st to determine if there are current nests and to determine offsetting measures to compensate for impacts to migratory birds. Surveys would be conducted within the same year, but prior to construction start in order to capture current conditions. Construction activities should not occur in the locations listed in the below table during the migratory bird work restriction without prior approval from the SDDOT Environmental Office to avoid conflicts with nesting migratory birds.

Location	Migratory Bird Restriction
South Service Road	April 1 to July 15

Prior to scheduling the preconstruction meeting, contact the SDDOT Environmental Office at 605-773-3268 to schedule an appropriate time for conducting a survey prior to construction activities occurring within the locations listed in the table and will not have been cleared prior to April 1.

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