STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0391(06)0 NH-PH 0018(177)104	1	717

Plotting Date: 12/14/2015 Revised 12/14/2015 - AR

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

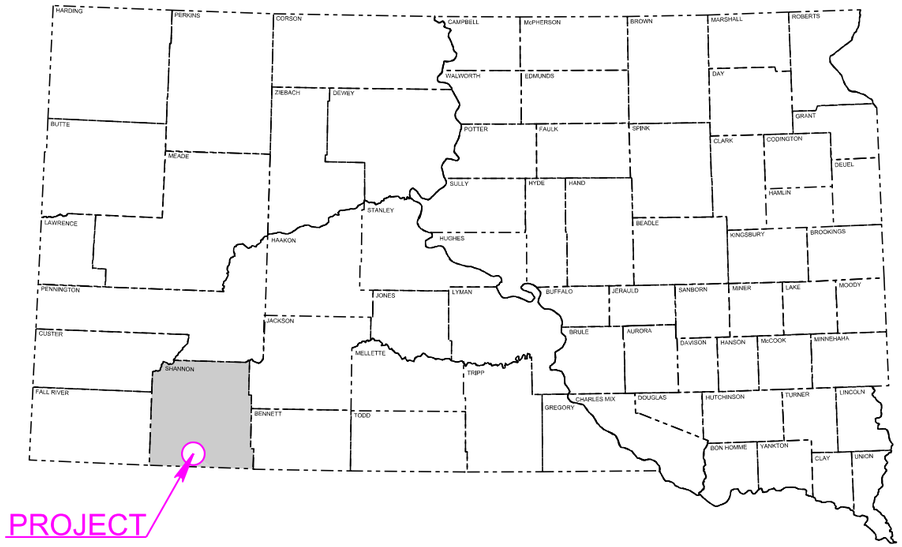
PROJECTS NH-PH 0018(177)104 & P 0391(06)0 U.S. HIGHWAY 18 & S.D. HIGHWAY 391 OGLALA LAKOTA COUNTY

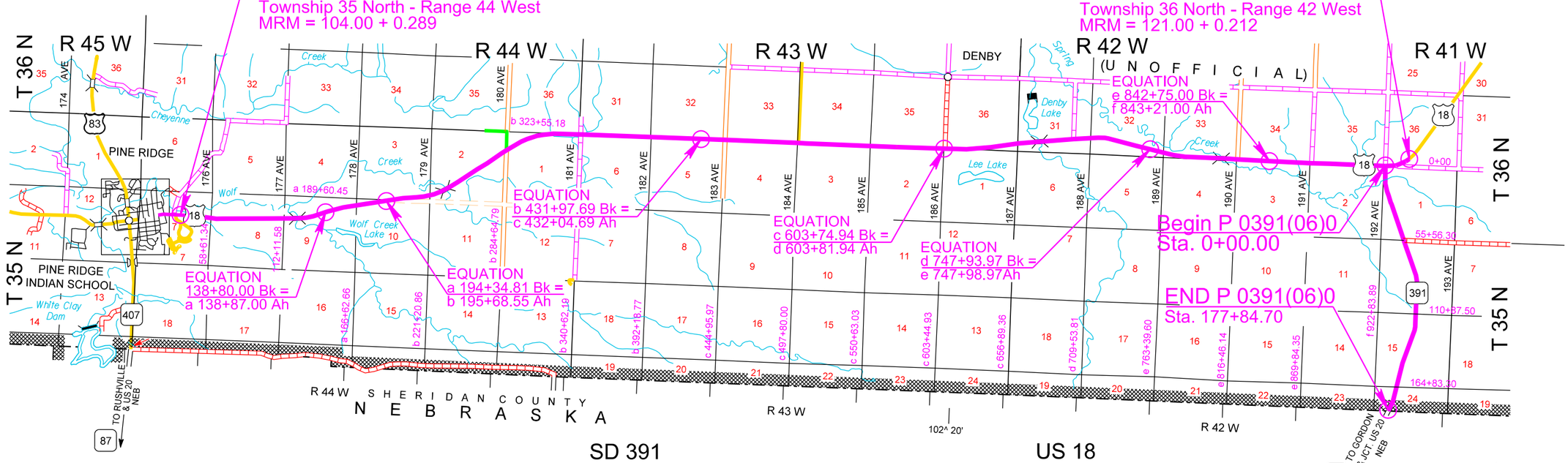
PCN 02QC
SHOULDER WIDENING, GRADING, STRUCTURES, COLD MILLING ASPHALT CONCRETE & ASPHALT CONCRETE SURFACING

PCN 02NH
COLD MILLING ASPHALT CONCRETE & ASPHALT CONCRETE SURFACING

INDEX OF SECTIONS

Section A: Estimate of Quantities
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 G: Wetland Mitigation Plans
Section M: Pavement Marking Plans
Section S: Permanent Signing Plans
Section X: Cross Sections
Section Z: Pipe Sections





US18
DESIGN DESIGNATION

ADT (2012)	2459
ADT (2032)	3017
DHV	362
D	52
T DHV	5.5%
T ADT	12.1%
V	45 / 65 MPH

SD391
DESIGN DESIGNATION

ADT (2012)	855
ADT (2032)	1049
DHV	126
D	52
T DHV	4.3%
T ADT	9.5%
V	65 MPH

STORM WATER PERMIT

Major Receiving
Body of Water: Wolf Creek
Area Disturbed: 339 Acres
Total Project Area: 848 Acres
Approx. Begin Lat/Long: 43.027308, - 102.543070

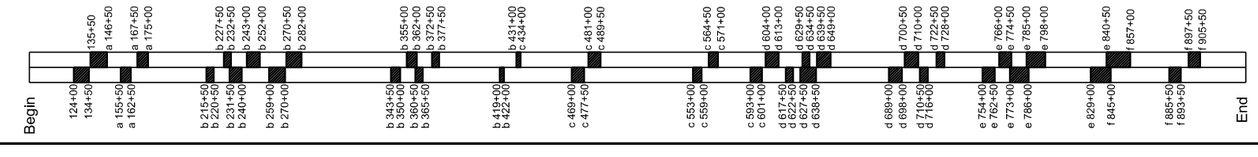
SCALES

		RURAL
PLAN		1"=200'
PROFILE,	HORIZONTAL:	1"=200'
	VERTICAL:	1"=20'
CROSS SECTIONS	HORIZONTAL:	1"=40'
	VERTICAL:	1"=20'

STRIPING DIAGRAM

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

Passing
No Passing



SD 391

GROSS LENGTH	17,784.70 FEET	3.368 MILES
LENGTH OF EXCEPTIONS	0 FEET	0 MILES
NET LENGTH	17,784.70 FEET	3.368 MILES

US 18

GROSS LENGTH	89,618.26 FEET	16.973 MILES
LENGTH OF EXCEPTIONS	0 FEET	0 MILES
NET LENGTH	89,618.26 FEET	16.973 MILES

1

Plot Scale - 1:200
Plot Name - 1
File - U:\drafting\sta02QC\title.dgn
Plotted From - TRSF12141

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0391(06)0 NH-PH 0018(177)104	A1	A9

Plotting Date: 01/28/2016 Revised 12/14/2015 - AR

Grading – Section B (PCN 02QC)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
004E0030	Maintenance of Traffic Diversion(s)	Lump Sum	LS
004E0050	Remove Traffic Diversion(s)	Lump Sum	LS
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	22.369	Mile
009E3245	Final Cross Section Survey	17.823	Mile
009E3250	Miscellaneous Staking	17.823	Mile
009E3280	Slope Staking	17.823	Mile
009E3290	Structure Staking	5	Each
009E3300	Three Man Survey Crew	40.0	Hour
009E4200	Construction Schedule, Category II	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0550	Remove Cattle Guard	3	Each
110E0600	Remove Fence	93,705	Ft
110E0605	Remove Chain Link Fence	100	Ft
110E0700	Remove 3 Cable Guardrail	1,573	Ft
110E1010	Remove Asphalt Concrete Pavement	43,838.7	SqYd
110E1140	Remove Concrete Sidewalk	285.0	SqYd
110E7040	Remove Gate for Reset	4	Each
120E0010	Unclassified Excavation	1,046,150	CuYd
120E0900	Contaminated Material Excavation	100	CuYd
120E1000	Muck Excavation	11,381	CuYd
120E2000	Undercutting	194,440	CuYd
120E6100	Water for Embankment	764.9	MGal
240E0010	Obliterate Old Road	12	Sta
250E0020	Incidental Work, Grading	Lump Sum	LS
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	4,018.7	Ton
420E0400	Structure Excavation, Miscellaneous	3	CuYd
421E0100	Pipe Culvert Undercut	2,759	CuYd
421E2060	6" Extruded Polystyrene Insulation Board	8	SqYd
450E0142	24" RCP Class 2, Furnish	2,906	Ft
450E0143	24" RCP Class 3, Furnish	30	Ft
450E0150	24" RCP, Install	2,936	Ft
450E0162	30" RCP Class 2, Furnish	732	Ft
450E0170	30" RCP, Install	732	Ft
450E0182	36" RCP Class 2, Furnish	296	Ft
450E0190	36" RCP, Install	296	Ft
450E0202	48" RCP Class 2, Furnish	102	Ft
450E0210	48" RCP, Install	102	Ft
450E0232	66" RCP Class 2, Furnish	476	Ft
450E0240	66" RCP, Install	476	Ft
450E0242	72" RCP Class 2, Furnish	148	Ft
450E0243	72" RCP Class 3, Furnish	40	Ft
450E0250	72" RCP, Install	188	Ft
450E0252	78" RCP Class 2, Furnish	168	Ft

Grading – Section B (PCN 02QC) (Continued)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E0260	78" RCP, Install	168	Ft
450E0416	24" RCP Bend, Furnish	1	Each
450E0417	24" RCP Bend, Install	1	Each
450E2028	36" RCP Flared End, Furnish	6	Each
450E2029	36" RCP Flared End, Install	6	Each
450E2036	48" RCP Flared End, Furnish	2	Each
450E2037	48" RCP Flared End, Install	2	Each
450E2048	66" RCP Flared End, Furnish	8	Each
450E2049	66" RCP Flared End, Install	8	Each
450E2052	72" RCP Flared End, Furnish	2	Each
450E2053	72" RCP Flared End, Install	2	Each
450E2056	78" RCP Flared End, Furnish	2	Each
450E2057	78" RCP Flared End, Install	2	Each
450E2200	24" RCP Sloped End, Furnish	60	Each
450E2201	24" RCP Sloped End, Install	60	Each
450E2204	30" RCP Sloped End, Furnish	16	Each
450E2205	30" RCP Sloped End, Install	16	Each
450E3004	18" RCP Arch Class 4, Furnish	92	Ft
450E3010	18" RCP Arch, Install	92	Ft
450E3012	24" RCP Arch Class 2, Furnish	234	Ft
450E3014	24" RCP Arch Class 4, Furnish	318	Ft
450E3020	24" RCP Arch, Install	552	Ft
450E3022	30" RCP Arch Class 2, Furnish	598	Ft
450E3030	30" RCP Arch, Install	598	Ft
450E3032	36" RCP Arch Class 2, Furnish	240	Ft
450E3040	36" RCP Arch, Install	240	Ft
450E3042	42" RCP Arch Class 2, Furnish	242	Ft
450E3050	42" RCP Arch, Install	242	Ft
450E3062	54" RCP Arch Class 2, Furnish	180	Ft
450E3070	54" RCP Arch, Install	180	Ft
450E4500	18" RCP Arch Flared End, Furnish	4	Each
450E4501	18" RCP Arch Flared End, Install	4	Each
450E4512	36" RCP Arch Flared End, Furnish	6	Each
450E4513	36" RCP Arch Flared End, Install	6	Each
450E4516	42" RCP Arch Flared End, Furnish	6	Each
450E4517	42" RCP Arch Flared End, Install	6	Each
450E4524	54" RCP Arch Flared End, Furnish	4	Each
450E4525	54" RCP Arch Flared End, Install	4	Each
450E4600	24" RCP Arch Sloped End, Furnish	6	Each
450E4601	24" RCP Arch Sloped End, Install	6	Each
450E4604	30" RCP Arch Sloped End, Furnish	16	Each
450E4605	30" RCP Arch Sloped End, Install	16	Each
450E4650	18" RCP Arch Safety End, Furnish	3	Each
450E4653	18" RCP Arch Safety End, Install	3	Each

INDEX OF SHEETS

A1 to A5 Estimate of Quantities for Sections B,C,D,E, F, G, M, and S

A6 to A9 Environmental Commitments

SPECIFICATIONS

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

Plot Scale - 1:200

Plotted From - TRSE12141

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0391(06)0 NH-PH 0018(177)104	A2	A9

Plotting Date: 01/28/2016 Revised 01/28/2016 - AR

Grading – Section B (PCN 02QC) (Continued)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E4759	18" CMP 16 Gauge, Furnish	2,354	Ft
450E4760	18" CMP, Install	2,354	Ft
450E4769	24" CMP 16 Gauge, Furnish	282	Ft
450E4770	24" CMP, Install	282	Ft
450E4799	42" CMP 16 Gauge, Furnish	88	Ft
450E4800	42" CMP, Install	88	Ft
450E5010	18" CMP Elbow, Furnish	1	Each
450E5011	18" CMP Elbow, Install	1	Each
450E5227	42" CMP Flared End, Furnish	4	Each
450E5228	42" CMP Flared End, Install	4	Each
450E5406	18" CMP Safety End, Furnish	73	Each
450E5407	18" CMP Safety End, Install	73	Each
450E5410	24" CMP Safety End, Furnish	10	Each
450E5411	24" CMP Safety End, Install	10	Each
450E5509	18" CMP Arch 16 Gauge, Furnish	252	Ft
450E5510	18" CMP Arch, Install	252	Ft
450E5519	24" CMP Arch 16 Gauge, Furnish	324	Ft
450E5520	24" CMP Arch, Install	324	Ft
450E5529	30" CMP Arch 16 Gauge, Furnish	54	Ft
450E5530	30" CMP Arch, Install	54	Ft
450E5802	18" CMP Arch Flared End, Furnish	2	Each
450E5803	18" CMP Arch Flared End, Install	2	Each
450E6006	18" CMP Arch Safety End, Furnish	8	Each
450E6007	18" CMP Arch Safety End, Install	8	Each
450E6010	24" CMP Arch Safety End, Furnish	14	Each
450E6011	24" CMP Arch Safety End, Install	14	Each
450E6015	30" CMP Arch Safety End with Bars, Furnish	2	Each
450E6017	30" CMP Arch Safety End, Install	2	Each
450E8013	24" CMP to RCP Transition, Furnish	1	Each
450E8014	24" RCP to CMP Transition, Furnish	1	Each
450E8015	24" Pipe Transition, Install	2	Each
* 450E8900	Cleanout Pipe Culvert	1	Each
462E0100	Class M6 Concrete	6.9	CuYd
464E0100	Controlled Density Fill	121.5	CuYd
480E0100	Reinforcing Steel	901	Lb
560E5003	5'x7' Reinforced Concrete Cattle Pass, Furnish	84.0	Ft
560E5004	5'x7' Reinforced Concrete Cattle Pass, Install	84.0	Ft
560E5053	5'x7' Reinforced Concrete Cattle Pass End Section, Furnish	2	Each
560E5054	5'x7' Reinforced Concrete Cattle Pass End Section, Install	2	Each
600E0300	Type III Field Laboratory	1	Each
610E0012	12' Cattle Guard	1	Each
610E0020	20' Cattle Guard	2	Each
620E0020	Type 2 Right-of-Way Fence	148,422	Ft
620E0030	Type 3 Right-of-Way Fence	3,098	Ft

Grading – Section B (PCN 02QC) (Continued)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
620E0220	Modified Type 2 Right-of-Way Fence	12,254	Ft
620E0510	Type 1 Temporary Fence	26,362	Ft
620E1020	2 Post Panel	347	Each
620E1030	3 Post Panel	294	Each
620E2012	12' Tubular Gate	2	Each
620E2100	Reset Gate	4	Each
621E0180	8' Chain Link Fence with Tension Wired Top	90	Ft
621E0185	10' Chain Link Fence with Tension Wired Top	834	Ft
632E2540	Flexible Object Marker Post	11	Each
635E7500	Remove and Reset Luminaire Pole	1	Each
651E0040	4" Concrete Sidewalk	1,876	SqFt
651E0060	6" Concrete Sidewalk	689	SqFt
671E6020	Type C Manhole Frame and Lid	2	Each
671E7010	Adjust Manhole	1	Each
671E8000	Reconstruct Manhole	4	Each
700E0210	Class B Riprap	308.0	Ton
700E0310	Class C Riprap	209.0	Ton
720E1015	Bank and Channel Protection Gabion	298.5	CuYd
831E0110	Type B Drainage Fabric	136	SqYd
831E0210	Non-woven Separator Fabric	6,115	SqYd
900E0010	Refurbish Single Mailbox	3	Each
900E0012	Refurbish Double Mailbox	1	Each
900E1080	Orange Plastic Safety Fence	50	Ft
900E1980	Storage Unit	1	Each

*** - Denotes Non-Participating**

Traffic Control – Section C (PCN 02QC)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
632E3526	Install State Furnished Sign	10	Each
634E0010	Flagging	6,000.0	Hour
634E0020	Pilot Car	2,000.0	Hour
634E0110	Traffic Control Signs	1,472	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0280	Type 3 Barricade, 8' Single Sided	20	Each
634E0630	Temporary Pavement Marking	68.0	Mile

Traffic Control – Section C (PCN 02NH)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
632E3526	Install State Furnished Sign	10	Each
634E0010	Flagging	1,000.0	Hour
634E0020	Pilot Car	500.0	Hour
634E0110	Traffic Control Signs	294	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0630	Temporary Pavement Marking	14.0	Mile

Erosion and Sediment Control – Section D (PCN 02QC)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1690	Remove Sediment	37.0	CuYd
110E1700	Remove Silt Fence	2,195	Ft
230E0010	Placing Topsoil	162,587	CuYd
730E0100	Cover Crop Seeding	58.0	Bu
730E0251	Special Permanent Seed Mixture 1	7,623	Lb
730E0252	Special Permanent Seed Mixture 2	19	Lb
731E0200	Fertilizing	173.00	Ton
732E0100	Mulching	462.0	Ton
734E0102	Type 2 Erosion Control Blanket	32,530	SqYd
734E0103	Type 3 Erosion Control Blanket	15,484	SqYd
734E0133	Type 3 Turf Reinforcement Mat	1,697.0	SqYd
734E0154	12" Diameter Erosion Control Wattle	12,640	Ft
734E0160	20" Diameter Erosion Control Wattle	3,270	Ft
734E0165	Remove and Reset Erosion Control Wattle	3,978	Ft
734E0325	Surface Roughening	13.0	Acre
734E0510	Shaping for Erosion Control Blanket	21,966	Ft
734E0602	Low Flow Silt Fence	6,575	Ft
734E0604	High Flow Silt Fence	2,205	Ft
734E0610	Mucking Silt Fence	609	CuYd
734E0620	Repair Silt Fence	2,195	Ft
900E1320	Construction Entrance	4	Each

Plot Scale - 1:200
Plotted From - TRSF12141
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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0391(06)0 NH-PH 0018(177)104	A3	A9

Plotting Date: 12/14/2015 Revised 12/14/2015 - AR

Structure – Section E (PCN 02QC)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
250E0030	Incidental Work, Structure	Lump Sum	LS

Structure – Section E (PCN 02QC)
Site 1 – Alternate A
Str. No. 57-252-473

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	211	CuYd
421E0200	Box Culvert Undercut	568	CuYd
460E0120	Class A45 Concrete, Box Culvert	554.7	CuYd
480E0100	Reinforcing Steel	72,875	Lb
700E0210	Class B Riprap	226.0	Ton
831E0110	Type B Drainage Fabric	283	SqYd
831E0210	Non-woven Geotextile Separator	957	SqYd

Structure – Section E (PCN 02QC)
Site 1 – Alternate B
Str. No. 57-252-473

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	170	CuYd
421E0200	Box Culvert Undercut	596	CuYd
464E0100	Controlled Density Fill	52.6	CuYd
560E0166	11'x10' Precast Concrete Box Culvert, Furnish	140.0	Ft
560E0167	11'x10' Precast Concrete Box Culvert, Install	140.0	Ft
560E1166	11'x10' Precast Concrete Box Culvert End Section, Furnish	2	Each
560E1167	11'x10' Precast Concrete Box Culvert End Section, Install	2	Each
560E2148	2-11'x10' Precast Concrete Box Culvert, Furnish	140.0	Ft
560E2149	2-11'x10' Precast Concrete Box Culvert, Install	140.0	Ft
560E3148	2-11'x10' Precast Concrete Box Culvert End Section, Furnish	2	Each
560E3149	2-11'x10' Precast Concrete Box Culvert End Section, Install	2	Each
700E0210	Class B Riprap	65.0	Ton
831E0110	Type B Drainage Fabric	86	SqYd
831E0210	Non-woven Geotextile Separator	982	SqYd

Structure – Section E (PCN 02QC)
Site 2 – Alternate A
Str. No. 57-321-460

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	50	CuYd
421E0200	Box Culvert Undercut	179	CuYd
460E0120	Class A45 Concrete, Box Culvert	122.6	CuYd
480E0100	Reinforcing Steel	14,494	Lb
700E0210	Class B Riprap	49.3	Ton
831E0110	Type B Drainage Fabric	82	SqYd
831E0210	Non-woven Geotextile Separator	357	SqYd

Structure – Section E (PCN 02QC)
Site 2 – Alternate B
Str. No. 57-321-460

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	43	CuYd
421E0200	Box Culvert Undercut	174	CuYd
560E2070	2-8'x4' Precast Concrete Box Culvert, Furnish	80.0	Ft
560E2071	2-8'x4' Precast Concrete Box Culvert, Install	80.0	Ft
560E3070	2-8'x4' Precast Concrete Box Culvert End Section, Furnish	2	Each
560E3071	2-8'x4' Precast Concrete Box Culvert End Section, Install	2	Each
700E0210	Class B Riprap	29.9	Ton
831E0110	Type B Drainage Fabric	48	SqYd
831E0210	Non-woven Geotextile Separator	347	SqYd

Structure – Section E (PCN 02QC)
Site 3 – Alternate A
Str. No. 57-353-458

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
260E1010	Base Course	154.8	Ton
420E0200	Structure Excavation, Box Culvert	90	CuYd
421E0200	Box Culvert Undercut	269	CuYd
460E0120	Class A45 Concrete, Box Culvert	242.0	CuYd
480E0100	Reinforcing Steel	33,606	Lb
700E0310	Class C Riprap	262.8	Ton
831E0110	Type B Drainage Fabric	271	SqYd
831E0210	Non-woven Geotextile Separator	557	SqYd

Structure – Section E (PCN 02QC)
Site 3 – Alternate B
Str. No. 57-353-458

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
260E1010	Base Course	165.8	Ton
420E0200	Structure Excavation, Box Culvert	97	CuYd
421E0200	Box Culvert Undercut	301	CuYd
560E2174	2-12'x10' Precast Concrete Box Culvert, Furnish	86.0	Ft
560E2175	2-12'x10' Precast Concrete Box Culvert, Install	86.0	Ft
560E3174	2-12'x10' Precast Concrete Box Culvert End Section, Furnish	2	Each
560E3175	2-12'x10' Precast Concrete Box Culvert End Section, Install	2	Each
700E0310	Class C Riprap	106.1	Ton
831E0110	Type B Drainage Fabric	111	SqYd
831E0210	Non-woven Geotextile Separator	591	SqYd

Plot Scale - 1:200
Plotted From - TRSF12141
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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0391(06)0 NH-PH 0018(177)104	A4	A9

Plotting Date: 12/14/2015 Revised 12/14/2015 - AR

Structure – Section E (PCN 02QC)
Str. No. 57-378-460

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	61	CuYd
421E0200	Box Culvert Undercut	212	CuYd
460E0120	Class A45 Concrete, Box Culvert	161.9	CuYd
480E0100	Reinforcing Steel	22,254	Lb
700E0210	Class B Riprap	126.7	Ton
831E0110	Type B Drainage Fabric	185	SqYd
831E0210	Non-woven Geotextile Separator	444	SqYd

Structure – Section E (PCN 02QC)
Site 4 – Alternate A
Str. No. 57-398-460

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	36	CuYd
421E0200	Box Culvert Undercut	157	CuYd
460E0120	Class A45 Concrete, Box Culvert	93.5	CuYd
480E0100	Reinforcing Steel	11,903	Lb
700E0210	Class B Riprap	50.2	Ton
831E0110	Type B Drainage Fabric	78	SqYd
831E0210	Non-woven Geotextile Separator	342	SqYd

Structure – Section E (PCN 02QC)
Site 4 – Alternate B
Str. No. 57-398-460

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
420E0200	Structure Excavation, Box Culvert	28	CuYd
421E0200	Box Culvert Undercut	134	CuYd
560E0112	9'x6' Precast Concrete Box Culvert, Furnish	80.0	Ft
560E0113	9'x6' Precast Concrete Box Culvert, Install	80.0	Ft
560E1112	9'x6' Precast Concrete Box Culvert End Section, Furnish	2	Each
560E1113	9'x6' Precast Concrete Box Culvert End Section, Install	2	Each
700E0210	Class B Riprap	23.3	Ton
831E0110	Type B Drainage Fabric	35	SqYd
831E0210	Non-woven Geotextile Separator	281	SqYd

Surfacing – Section F (PCN 02QC)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E3320	Checker	Lump Sum	LS
120E0100	Unclassified Excavation, Digouts	849	CuYd
120E6200	Water for Granular Material	2,460.2	MGal
260E1010	Base Course	200,240.0	Ton
260E1030	Base Course, Salvaged	4,601.2	Ton
320E1800	Asphalt Concrete Blade Laid	2,546.0	Ton
320E5020	Saw Joint in Asphalt Concrete	176,431	Ft
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	33.9	Mile
330E0100	SS-1h or CSS-1h Asphalt for Tack	107.9	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	99.6	Ton
330E2000	Sand for Flush Seal	951.5	Ton
332E0010	Cold Milling Asphalt Concrete	241,780	SqYd

Surfacing – Section F (PCN 02QC)
Alternate A

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	4,220.9	Ton
320E1203	Class Q3R Hot Mixed Asphalt Concrete	90,635.8	Ton
320E4000	Hydrated Lime	914.9	Ton

Surfacing – Section F (PCN 02QC)
Alternate B

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	3,874.9	Ton
320E1203	Class Q3R Hot Mixed Asphalt Concrete	93,085.9	Ton
320E4000	Hydrated Lime	962.3	Ton

Surfacing – Section F (PCN 02NH)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3320	Checker	Lump Sum	LS
110E0510	Remove Pipe End Section	10	Each
120E0100	Unclassified Excavation, Digouts	168	CuYd
120E0600	Contractor Furnished Borrow Excavation	172	CuYd
120E6100	Water for Embankment	1.7	MGal
120E6200	Water for Granular Material	11.6	MGal
260E1010	Base Course	927.9	Ton
260E1030	Base Course, Salvaged	21.3	Ton
320E1800	Asphalt Concrete Blade Laid	505.2	Ton
320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	6.7	Mile
330E0100	SS-1h or CSS-1h Asphalt for Tack	13.8	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	13.1	Ton
330E2000	Sand for Flush Seal	176.0	Ton
332E0010	Cold Milling Asphalt Concrete	48,019	SqYd
450E5211	18" CMP Flared End, Furnish	6	Each
450E5212	18" CMP Flared End, Install	6	Each
450E5317	36" CMP Sloped End with Bars, Furnish	2	Each
450E5319	36" CMP Sloped End, Install	2	Each
450E5321	42" CMP Sloped End with Bars, Furnish	2	Each
450E5323	42" CMP Sloped End, Install	2	Each
* 450E8900	Cleanout Pipe Culvert	5	Each
900E0010	Refurbish Single Mailbox	2	Each
900E0012	Refurbish Double Mailbox	3	Each

*** - Denotes Non-Participating**

Surfacing – Section F (PCN 02NH)
Alternate A

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	396.6	Ton
320E1203	Class Q3R Hot Mixed Asphalt Concrete	8,088.0	Ton
320E4000	Hydrated Lime	86.7	Ton

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0391(06)0 NH-PH 0018(177)104	A5	A9

Plotting Date: 01/28/2016 Revised 12/14/2015 - AR

Surfacing – Section F (PCN 02NH)
Alternate B

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
320E0005	PG 58-34 Asphalt Binder	367.7	Ton
320E1203	Class Q3R Hot Mixed Asphalt Concrete	8,305.2	Ton
320E4000	Hydrated Lime	90.1	Ton

Wetland Mitigation – Section G (PCN 02QC)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0600	Remove Fence	872	Ft
110E1700	Remove Silt Fence	865	Ft
120E0010	Unclassified Excavation	35,932	CuYd
230E0010	Placing Topsoil	7,383	CuYd
620E0030	Type 3 Right-of-Way Fence	2,820	Ft
620E1020	2 Post Panel	3	Each
620E1030	3 Post Panel	8	Each
730E0251	Special Permanent Seed Mixture 1	68	Lb
730E0252	Special Permanent Seed Mixture 2	56	Lb
732E0100	Mulching	9.1	Ton
734E0154	12" Diameter Erosion Control Wattle	2,420	Ft
734E0602	Low Flow Silt Fence	865	Ft
734E0610	Mucking Silt Fence	60	CuYd
734E0620	Repair Silt Fence	216	Ft
735E2040	4' to 6' Tree, Furnish and Plant	8	Each

Pavement Marking – Section M (PCN 02QC)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0040	Cold Applied Plastic Pavement Marking, Arrow	65	Each
633E1200	Waterborne Pavement Marking Paint with High Grade Polymer, White	963	Gal
633E1205	Waterborne Pavement Marking Paint with High Grade Polymer,Yellow	631	Gal
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	65	Each

Pavement Marking – Section M (PCN 02NH)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0030	Cold Applied Plastic Pavement Marking, 24"	12	Ft
633E1200	Waterborne Pavement Marking Paint with High Grade Polymer, White	188	Gal
633E1205	Waterborne Pavement Marking Paint with High Grade Polymer,Yellow	60	Gal
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	12	Ft

Permanent Signing – Section S (PCN 02QC)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E5010	Salvage Delineator	424	Each
110E5020	Salvage Traffic Sign	25	Each
632E1320	2.0"x2.0" Perforated Tube Post	64.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	304.0	Ft
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	463	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	20	Each
632E2510	Type 2 Object Marker Back to Back	252	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	110.1	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	205.2	SqFt
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	128	Each

Permanent Signing – Section S (PCN 02NH)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E5010	Salvage Delineator	90	Each
110E5020	Salvage Traffic Sign	1	Each
632E1320	2.0"x2.0" Perforated Tube Post	28.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	122.0	Ft
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	116	Each
632E2510	Type 2 Object Marker Back to Back	15	Each
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	87.0	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	118.3	SqFt
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	28	Each

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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 9.14 acres of wetlands will be impacted by the project. Of this, 6.43 acres of wetland impact will be temporary and 2.64 acres of wetland impact will be permanent. Refer to Section B – Grading Plans for location and boundaries of the impacted wetlands.

A wetland mitigation plan has been prepared by the SDDOT Environmental Office. The contact person is the Environmental Project Scientist of the SDDOT Environmental Office at 605-773-3268.

Table of Impacted Wetlands

Wetland No.	Type	Station	Impact Left (Acres)	Impact Right (Acres)	Temporary Impact (Acres)	Total Impact (Acres)
01	PEMA	48+80 to 50+50	-	0.12	0.01	0.13
02a	PSSA	122+00 to 122+50	0.03	-	0.03	0.06
02b	PSSA	121+80 to 122+40	< 0.01	-	0.02	0.03
02c	PSSA	121+90 to 122+30	-	0.02	<0.01	0.03
03	PFOA	122+80 to 124+50	-	-	0.11	0.11
05	PEMA	390+20 to 391+60	-	-	0.07	0.07
06b	PEMA	391+80 to 395+50	-	-	0.10	0.10
06c	PEMA	392+40 to 396+50	-	0.04	0.30	0.34
06d	PEMA	398+00 to 399+00	-	-	0.01	0.01
07	PEMA	389+00 to 391+50	-	0.04	0.14	0.18
08	PEMA	393+00 to 394+00	-	-	0.06	0.06
09	PEMA	396+50 to 400+00	-	-	0.06	0.06
10	PEMA	400+50 to 404+50	-	0.03	0.14	0.17

Table of Impacted Wetlands (Continued)

Wetland No.	Type	Station	Impact Left (Acres)	Impact Right (Acres)	Temporary Impact (Acres)	Total Impact (Acres)
11	PEMA	434+50 to 439+00	-	-	0.16	0.16
12	PEMA	438+00 to 439+50	-	0.02	0.07	0.09
13a	PEMC	445+00 to 446+50		-	0.08	0.08
13b	PEMC	448+50 to 452+00	0.02	-	0.24	0.26
13c	PEMC	445+20 to 455+00	-	0.22	0.76	1.01
14c	PEMC	490+00 to 502+50	-	0.27	0.49	0.76
14d	PEMC	501+50 to 502+50	< 0.01	-	0.05	0.06
14e	PEMA	520+00 to 522+00	-	0.04	0.03	0.07
15a	PEMA	664+70 to 665+00	0.02	-	0.02	0.04
15b	PEMA	664+80 to 665+20	-	< 0.01		< 0.01
15c	PEMF	670+00 to 674+00	0.19	-	0.41	0.60
15d	PEMF	670+50 to 675+00	-	0.29	0.16	0.45
16	PEMA	755+00 to 756+00	-	-	<0.01	< 0.01
17a	PEMC	769+00 to 773+00	0.12	-	0.23	0.35
17b	PSSA	772+00 to 774+00	0.10	-	0.26	0.36
17c	PEMC	774+00 to 775+00	0.05	-	0.08	0.13
17d	PFOA	770+00 to 772+00	-	0.03	0.10	0.13
17e	PEMA	773+00 to 777+00	-	0.06	0.16	0.22
18a	PEMF	795+00 to 797+00	0.17	-	0.25	0.42
18b	PSSC	799+00 to 805+50	0.21	-	0.45	0.66
18c	PEMA	805+50 to 807+00	0.05	-	0.31	0.36
18d	PEMA	812+00 to 814+00	-	-	0.07	0.07
18e	PEMF	795+00 to 796+00	-	0.03	0.07	0.10
18f	PEMF	802+00 to 816+00	-	0.26	0.51	0.77
19a	PEMC	859+00 to 859+50	0.01	-	0.01	0.02

Table of Impacted Wetlands (Continued)

Wetland No.	Type	Station	Impact Left (Acres)	Impact Right (Acres)	Temporary Impact (Acres)	Total Impact (Acres)
19b	PFOC	859+50 to 860+50	-	0.09	0.05	0.14
20a	PEMC	912+50 to 913+00	0.02	-		0.02
20b	PEMC	911+00 to 913+50	-	0.06	0.23	0.29
21a	PEMC	N/A	-	-	0.07	0.07
21b	PEMC	N/A	-	-	0.04	0.04
22c	PEMC	N/A	-	-	0.02	0.02
22b	PEMC	N/A	-	-	0.02	0.02

Action Taken/Required:

Table of Wetland Mitigation Site

A total of approximately 5.00 acres of compensatory wetlands will be created on-site to account for unavoidable permanent impacts to existing wetlands. The location and boundaries of the mitigation site is shown in Section B - Grading Plans and Section G – Wetland Mitigation Plans.

Wetland Mitigation Site No.	Legal Description	Station	Mitigation (Acres)
1	Sec. 4, T35N, R43W	c489+65 to c497+47 Rt	5.00

Temporary impacts, except those listed in the Table of Wetland Restoration Sites, will not be mitigated as the finished ditch grade will enable wetland conditions to re-establish after construction.

Table of Wetland Restoration Sites

Temporary wetland impacts at traffic diversion locations shall be mitigated by restoring these areas to pre-construction conditions.

Traffic Diversion Location (Station).	Wetland	Restored Area (Acres)
122+16	02a	0.03
122+16	02b	0.02
122+16	03	0.11
c502+00	14c	0.49
d673+27	15c	0.41
e805+43	18f	0.51

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

Table of Preamble Wetlands

Impacts to Preamble (artificial upland) wetlands are exempt from mitigation requirements.

Wetland No.	Location (Station)	Permanent Impact (Acres)	Temporary Impact (Acres)	Total Impact (Acres)
06b	391+80 to 395+t0	-	0.10	0j.10
06c	392+40 to 396+50	0.04	0.30	0.34
09	396+50 to 400+00	-	0.06	0.06

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 wetland mitigation site(s).

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. All wetland topsoil that is stripped shall be spread in the mitigation site(s) so that it is evenly distributed to a minimum depth of 6 inches. Surplus wetland topsoil shall be used to flatten embankment slopes or placed in other locations as approved by the Project Engineer.

Refer to Wetland Mitigation Site Plan in Section B – Grading Plans.

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". All costs to place the wetland topsoil shall be incidental to the contract 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 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

Wolf Creek, Fast Horse Creek Tributary, Wounded Knee Creek, Spring Creek and 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 this water body is 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

Wolf Creek, Fast Horse Creek Tributary, Wounded Knee Creek, Spring Creek and 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 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 Discharge to Waters of the United States within Indian Reservations".

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

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has met the requirements of Section 106 per 36 CFR 800.4(d)(1)(i) for all work included within the project limits and all designated option 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: 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.

Table of U.S. Waterways to Protect

Station	Waterway	Ordinary High Water Elevation
122+16	Wolf Creek	3271.2
502+00	Fast Horse Creek Trib	3410.8
673+27	Wounded Knee Creek	3366.4
795+43	Spring Creek Tributary	3393.4
805+43	Spring Creek	3390.0
912+72	Spring Creek Tributary	3429.4

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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.

COMMITMENT O: TRIBAL MONITORING AND TRADITIONAL CULTURAL

The following environmentally sensitive sites have been identified that require tribal monitoring or avoidance of construction activities:

Table of Environmental Sites

Station	Offset (Ft.)	L/R	Site	Action
53+62	107	L	O1	Do Not Disturb
114+19	148	L	O2	Tribal Monitoring
129+86	98	R	O3	Tribal Monitoring
240+15	199	R	O4	Do Not Disturb
727+65	71	R	O5	Tribal Monitoring
736-22	170	L	O6	Do Not Disturb
881+00	280	L	O7	Do Not Disturb
890+00	83	L	O8	Tribal Monitoring and Site Fencing
925+57	124	L	O9	Tribal Monitoring

The locations and boundaries of the site(s) for monitoring and avoidance are shown in Section B - Grading plans.

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 site: **O8**, as listed in the Table of Environmental Sites. The exact location of the safety fence shall be determined in the field by the SARC representative and the Oglala Sioux Tribe (OST) tribal monitor. Work within the vicinity of Site **O8** 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.

COMMITMENT N: SECTION 404 PERMIT (CONTINUED)

The Contractor shall notify the SARC and the OST THPO three weeks prior to any earth disturbing activities near the archaeological sites listed in the Table of Tribal Monitoring, Table of Historic/Archaeological Site Fencing, and the Table of Additional Historic/Archaeological Sites so that an archaeologist and tribal monitor are present to monitor the removal of topsoil, ensure avoidance of the fenced sites, and identify any cultural resources that may be uncovered during earth disturbing activities.

If a Sacred Site or TCP of religious or cultural significance is identified by the tribal monitor during project construction activities, then the tribal monitor will notify the Project Engineer and such activities shall be immediately halted. The Project Engineer, in consultation with the State Archaeological

Research Center (SARC), the Oglala Sioux Tribe (OST THPO) and/or tribal monitor, will determine the appropriate course of action.

All artifacts, features, or other items of archaeological or paleontological interest uncovered by project construction activities shall not be displaced unless the OST THPO consents to it.

All costs associated with furnishing and installing the orange safety fence at Site **O8** 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 Q: TREE REPLACEMENT

There are 4 trees within the wetland areas associated with the Wolf Creek crossing (Sta. 122+10) to the north of US 18 that will be impacted by construction activities.

Action Taken/Required:

Trees will be replaced the vicinity of the project at a 2:1 acre ratio. Sandbar Willows shall be replaced adjacent to Wolf Creek and Peachleaf Willows shall be replaced in the oxbow wetland immediately east of Wolf Creek. Refer to Section G – Wetland Mitigation Plans for location and boundaries of the tree replacement.

Plot Scale - 1:200
Plotted From - TRSF12141
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