

STATE OF SOUTH DAKOTA
 DEPARTMENT OF TRANSPORTATION
 PLANS FOR PROPOSED

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 2292(98)9 P 1200(04) IM 2292(112)6	1	1126
FILE: ...Section A\titleA.dgn	REV DATE: 10/5/2022		
PLOTTING DATE: 10-05-2022	INITIAL: JLK		

FOR BIDDING PURPOSES ONLY

PROJECTS IM 2292(98)9, P 1200(04), IM 2292(112)6

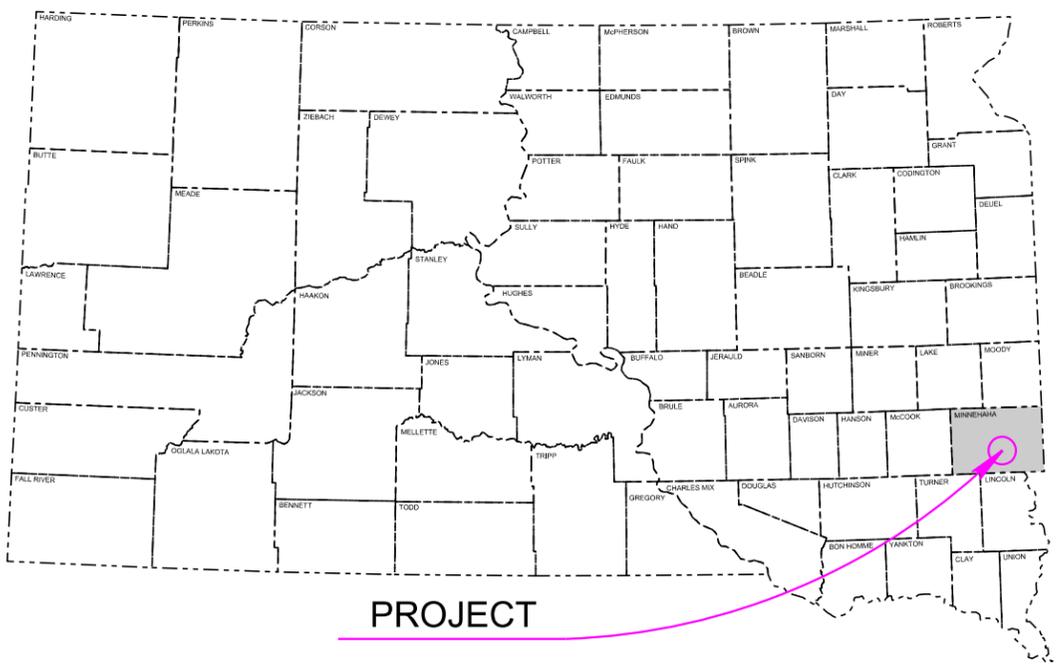
Benson Road, I-229 and 6th Street

MINNEHAHA COUNTY

STRUCTURE, GRADING, PCC PAVEMENT,
 CURB & GUTTER, STORM SEWER,
 ROADWAY LIGHTING, SIGNALS,
 PAVEMENT MARKING & PERMANENT SIGNING

INDEX OF SECTIONS

- Section A: Estimate of Quantities and Environmental Commitments
- Section B: Grading Plans
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- Section D: Erosion and Sediment Control Plans
- Section E: Structure Plans
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- Section L: Lighting and Signal Plans
- Section M: Pavement Marking Plans
- Section S: Permanent Signing Plans
- Section X: Cross Sections
- Section Z: Pipe Sections



PROJECT

END P 1200(04) (BENSON RD.)
 BEGIN IM 2292(98)9 (I-229)
 BENSON ROAD
 Station 27+75

BEGIN P 1200(04)

BENSON ROAD
 Station 6+77.17
 3285.66 feet West and 140.42 feet South
 of the Southeast Corner of Section 34 -
 Township 102N - Range 49W of the 5th P.M.

STORM WATER PERMIT

Major Stream: Big Sioux River
 Area Disturbed: 50 Acres
 Total Project Area: 55 Acres
 Approx. Begin Lat,Long: 43.5873, -96.7037

BEGIN IM 2292(98)9

Station 2002+00.00
 398.99 feet West and 2994.60 feet South
 of the Southeast Corner of Section 34 -
 Township 102N - Range 49W of the 5th P.M.

DESIGN DESIGNATION

	MAINLINE	I-229 NB OFF-RAMP	I-229 NB ON-RAMP	I-229 SB OFF-RAMP	I-229 SB ON-RAMP
AADT (2018)	31,400	7,500	1,500	1,000	7,800
AADT (2023)	34,900	8,600	1,900	1,300	9,000
AADT (2045)	48,500	11,400	2,300	2,000	11,900
DHV (2045)	5,400	1,300	300	200	1,500
D (2045)	50%	100%	100%	100%	100%
DHV T%	8.45%	10%	13%	17%	6%
AADT T%	8.45%	10%	13%	17%	6%
V	70	50	50	50	50

DESIGN DESIGNATION

	BENSON RD W OF I-229	BENSON RD E OF I-229	LEWIS AVE	HALL AVE N OF BENSON	HALL AVE S OF BENSON	6TH STREET
AADT (2018)	14,900	1,000	5,100	200	0	10,200
AADT (2023)	17,300	3,000	8,000	500	100	11,000
AADT (2045)	22,600	12,500	8,500	6,500	3,500	13,500
DHV (2045)	2,500	1,400	900	700	400	1,440
D (2045)	50%	55%	50%	50%	50%	50%
DHV T%	9.9%	9.1%	13.4	10%	10%	6.4%
AADT T%	9.9%	9.1%	13.4%	10%	10%	6.4%
V	45	45	40	40	40	40

PCN 04XK, 06MM, 08QM

END IM 2292(98)9

Station 2044+98.30
 13.77 feet West and 1279.65 feet North
 of the Southeast Corner of Section 34 -
 Township 102N - Range 49W of the 5th P.M.

END P 1200(04)

BENSON ROAD
 Station 81+30.00
 1114.93 feet West and 57.65 feet South
 of the Southeast Corner of Section 35 -
 Township 102N - Range 49W of the 5th P.M.

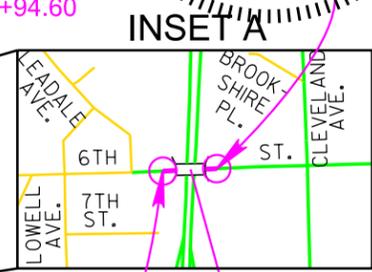
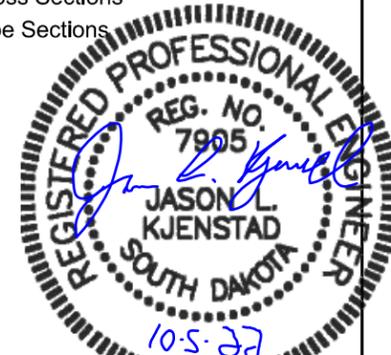
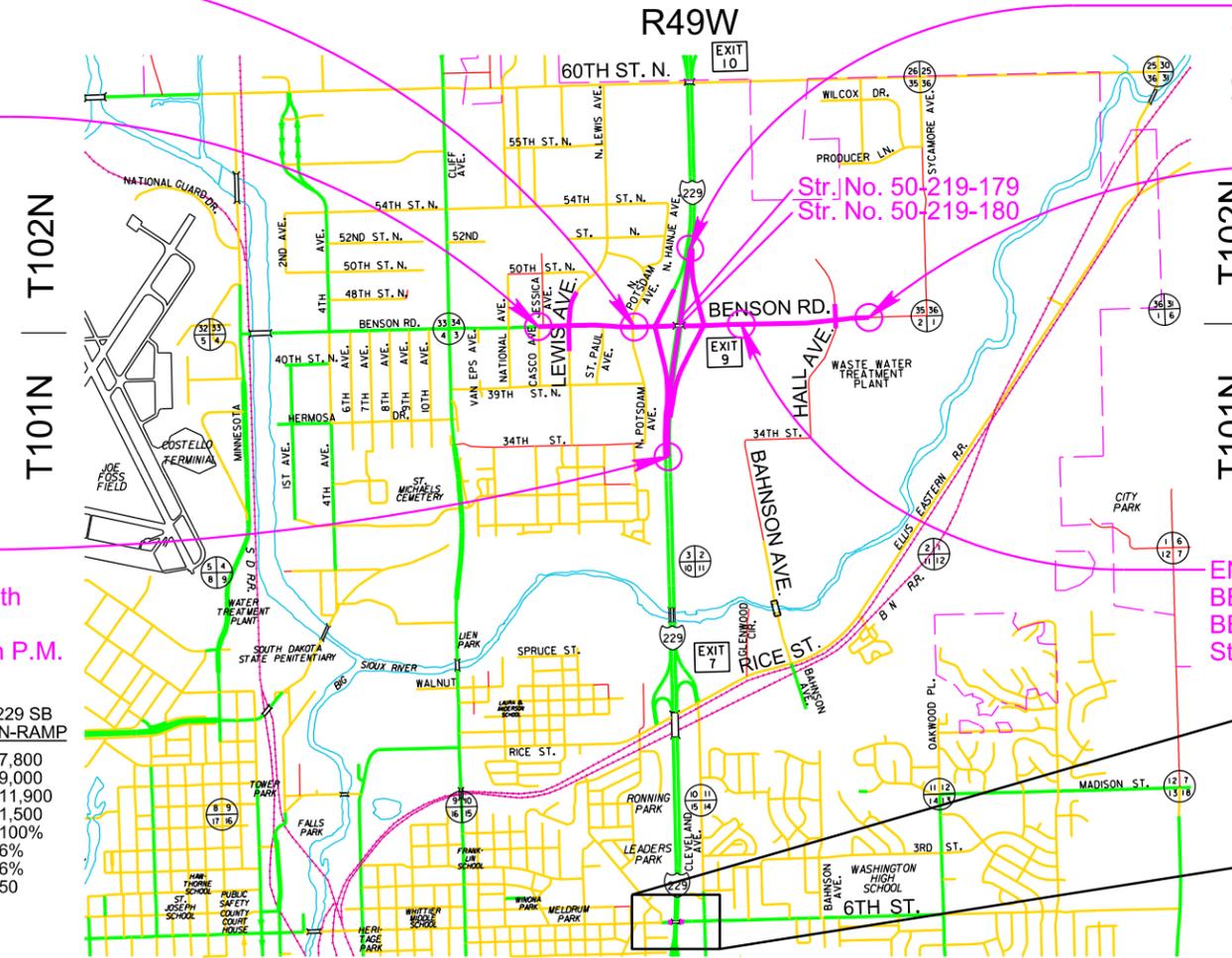
END IM 2292(112)6

6th Street
 Station 8+94.60

END IM 2292(98)9 (I-229)
 BEGIN P 1200(04) (BENSON RD.)
 BENSON ROAD
 Station 51+39

BEGIN IM 2292(112)6

6th Street
 Station 4+96.80



Str. No. 50-219-205

1

December 7, 2022



Plot Scale - 1:2000

ASATTILER

File: ...Section A\titleA.dgn

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

FOR BIDDING PURPOSES ONLY

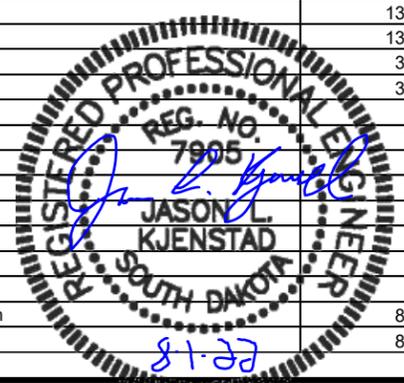
STATE OF SOUTH DAKOTA	PROJECT IM 2292(98)9 P 1200(04) IM 2292(112)6	SHEET A1	TOTAL SHEETS A9
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Plotting Date: 8/1/2022

Section B – Grading

INDEX OF SHEETS	
A1 to A5	Estimate of Quantities for Sections B, C, D, E, F, L, M, and S
A6 to A9	Environmental Commitments

Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
009E0010	Mobilization	Lump Sum	Lump Sum	Lump Sum	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	60	30	-	90	Each
009E3225	Reestablish Public Land Survey System Corner	10	5	-	15	Each
009E3230	Grade Staking	6.247	6.491	0.123	12.862	Mile
009E3250	Miscellaneous Staking	1.165	2.111	0.031	3.306	Mile
009E3280	Slope Staking	1.165	2.111	0.031	3.306	Mile
009E3290	Structure Staking	3	2	1	6	Each
009E3301	Engineer Directed Surveying/Staking	100.0	80.0	20.0	200.0	Hour
009E4300	Construction Schedule, Category III	Lump Sum	Lump Sum	Lump Sum	Lump Sum	LS
009E4330	Project Management, Category III	Lump Sum	Lump Sum	Lump Sum	Lump Sum	LS
100E0020	Clear and Grub Tree	56	11	-	67	Each
100E0100	Clearing	Lump Sum	Lump Sum	-	Lump Sum	LS
110E0100	Remove Concrete Footing(s)	Lump Sum	-	-	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	1,192	-	-	1,192	Ft
110E0400	Remove Drop Inlet	9	6	-	15	Each
110E0600	Remove Fence	5,287	1,093	-	6,380	Ft
110E0700	Remove 3 Cable Guardrail	-	288	-	288	Ft
110E0730	Remove Beam Guardrail	-	528.0	-	528.0	Ft
110E0740	Remove 3 Cable Guardrail Anchor Assembly	-	2	-	2	Each
110E1010	Remove Asphalt Concrete Pavement	12,425.8	1,248.1	-	13,673.8	SqYd
110E1100	Remove Concrete Pavement	16,588.9	35,437.1	986.7	53,012.7	SqYd
110E1120	Remove Concrete Median Pavement	37.7	-	-	37.7	SqYd
110E1130	Remove Concrete Driveway Pavement	1,075.1	-	-	1,075.1	SqYd
110E1140	Remove Concrete Sidewalk	2,125.0	-	216.6	2,341.6	SqYd
110E1610	Remove Riprap	60	-	-	60	CuYd
110E5451	Salvage Riprap	490.8	-	-	490.8	Ton
110E6000	Remove 3 Cable Guardrail for Reset	-	60	-	60	Ft
110E6010	Remove 3 Cable Guardrail Anchor Assembly for Reset	-	1	-	1	Each
110E7040	Remove Gate for Reset	1	-	-	1	Each
110E7560	Remove Precast Concrete Box Culvert End Section for Reset	1	-	-	1	Each
110E7800	Remove Chain Link Fence for Reset	-	73	-	73	Ft
120E0010	Unclassified Excavation	54,660	130,447	-	185,107	CuYd
120E0420	Contractor Furnished Select Subgrade Topping	41,086	62,364	-	103,450	CuYd
120E0500	Option Borrow Excavation	62,580	87,815	-	150,395	CuYd
120E0910	Contaminated Material Excavation	1,000	-	-	1,000	Ton
120E1000	Muck Excavation	2,182	-	-	2,182	CuYd
120E6100	Water for Embankment	1,242.0	2,465.0	-	3,707.0	MGal
120E7000	Select Granular Backfill	5,000.0	3,000.0	-	8,000.0	Ton
250E0020	Incidental Work, Grading	Lump Sum	Lump Sum	-	Lump Sum	LS
380E3540	8" PCC Approach Pavement	253.0	-	-	253.0	SqYd
380E4080	9.5" PCC Fillet Section	817.0	70.2	-	887.2	SqYd
450E0123	18" RCP Class 3, Furnish	2,810	3,120	-	5,930	Ft
450E0130	18" RCP, Install	2,810	3,120	-	5,930	Ft
450E0143	24" RCP Class 3, Furnish	1,926	410	-	2,336	Ft
450E0150	24" RCP, Install	1,926	410	-	2,336	Ft
450E0163	30" RCP Class 3, Furnish	732	-	-	732	Ft
450E0170	30" RCP, Install	732	-	-	732	Ft
450E0183	36" RCP Class 3, Furnish	132	-	-	132	Ft
450E0190	36" RCP, Install	132	-	-	132	Ft
450E0223	60" RCP Class 3, Furnish	36	-	-	36	Ft
450E0230	60" RCP, Install	36	-	-	36	Ft
450E2008	18" RCP Flared End, Furnish	2	-	-	2	Each
450E2009	18" RCP Flared End, Install	2	-	-	2	Each
450E2016	24" RCP Flared End, Furnish	2	2	-	4	Each
450E2017	24" RCP Flared End, Install	2	2	-	4	Each
450E2024	30" RCP Flared End, Furnish	3	-	-	3	Each
450E2025	30" RCP Flared End, Install	3	-	-	3	Each
450E2028	36" RCP Flared End, Furnish	1	-	-	1	Each
450E2029	36" RCP Flared End, Install	1	-	-	1	Each
450E3033	36" RCP Arch Class 3, Furnish	82	-	-	82	Ft
450E3040	36" RCP Arch, Install	82	-	-	82	Ft



Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
450E4512	36" RCP Arch Flared End, Furnish	2	-	-	2	Each
450E4513	36" RCP Arch Flared End, Install	2	-	-	2	Each
450E4758	18" CMP 14 Gauge, Furnish	128	312	-	440	Ft
450E4760	18" CMP, Install	128	312	-	440	Ft
450E4768	24" CMP 14 Gauge, Furnish	-	66	-	66	Ft
450E4770	24" CMP, Install	-	66	-	66	Ft
450E4778	30" CMP 14 Gauge, Furnish	98	-	-	98	Ft
450E4780	30" CMP, Install	98	-	-	98	Ft
450E5010	18" CMP Elbow, Furnish	2	8	-	10	Each
450E5011	18" CMP Elbow, Install	2	8	-	10	Each
450E5015	24" CMP Elbow, Furnish	-	2	-	2	Each
450E5016	24" CMP Elbow, Install	-	2	-	2	Each
450E5020	30" CMP Elbow, Furnish	2	-	-	2	Each
450E5021	30" CMP Elbow, Install	2	-	-	2	Each
450E5211	18" CMP Flared End, Furnish	1	4	-	5	Each
450E5212	18" CMP Flared End, Install	1	4	-	5	Each
450E5215	24" CMP Flared End, Furnish	-	1	-	1	Each
450E5216	24" CMP Flared End, Install	-	1	-	1	Each
450E5219	30" CMP Flared End, Furnish	1	-	-	1	Each
450E5220	30" CMP Flared End, Install	1	-	-	1	Each
451E7520	Exploratory Excavation	100.0	60.0	-	160.0	Hour
462E0100	Class M6 Concrete	171.1	89.0	-	260.1	CuYd
464E0100	Controlled Density Fill	200.0	100.0	-	300.0	CuYd
480E0100	Reinforcing Steel	29,401	14,921	-	44,322	Lb
530E0300	Type C Concrete Retaining Wall	1,063	-	-	1,063	SqFt
560E5111	Reset Precast Concrete Box Culvert End Section	1	-	-	1	Each
600E0300	Type III Field Laboratory	-	1	-	1	Each
620E0020	Type 2 Right-of-Way Fence	4,108	-	-	4,108	Ft
620E0060	Type 6 Right-of-Way Fence	-	1,080	-	1,080	Ft
620E0510	Type 1 Temporary Fence	1,410	310	-	1,720	Ft
620E1020	2 Post Panel	44	6	-	50	Each
620E1030	3 Post Panel	1	1	-	2	Each
620E2100	Reset Gate	1	-	-	1	Each
621E0520	Reset Chain Link Fence	-	73	-	73	Ft
628E1500	Concrete Barrier End Protection	-	2	-	2	Each
628E1510	Concrete Barrier End Protection Module Set or Repair Kit	-	2	-	2	Each
629E0110	High Tension 4 Cable Guardrail	-	1,946	-	1,946	Ft
629E0200	Reset 3 Cable Guardrail	-	60	-	60	Ft
629E0290	High Tension Cable Guardrail Anchor Assembly	-	12	-	12	Each
629E0410	Reset 3 Cable Guardrail Anchor Assembly	-	1	-	1	Each
650E0080	Type B68 Concrete Curb and Gutter	-	-	328	328	Ft
650E0095	Type B69.5 Concrete Curb and Gutter	10,944	2,988	-	13,932	Ft
650E0105	Type B610.5 Concrete Curb and Gutter	-	1,633	-	1,633	Ft
650E0395	Type BL69.5 Concrete Curb and Gutter	6,059	2,686	-	8,745	Ft
650E0405	Type BL610.5 Concrete Curb and Gutter	-	1,700	-	1,700	Ft
650E4695	Type P9.5 Concrete Gutter	324	-	-	324	Ft
651E0040	4" Concrete Sidewalk	31,455	13,414	-	44,869	SqFt
651E0060	6" Concrete Sidewalk	15,609	7,703	1,949	25,261	SqFt
651E7000	Type 1 Detectable Warnings	382	180	-	562	SqFt
670E1200	Type B Frame and Grate	20	18	-	38	Each
670E2200	Type C Frame and Grate	-	14	-	14	Each
670E5340	4' x 11' Precast Concrete Type S Drop Inlet Lid	21	9	-	30	Each
670E5400	Precast Drop Inlet Collar	20	32	-	52	Each
671E6009	Type A9 Manhole Frame and Lid	8	1	-	9	Each
700E2010	Place Riprap	490.8	-	-	490.8	Ton
720E1010	PVC Coated Bank and Channel Protection Gabion	10.5	31.5	-	42.0	CuYd
831E0110	Type B Drainage Fabric	4,892	105	-	4,997	SqYd
900E0010	Refurbish Single Mailbox	2	-	-	2	Each



ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT IM 2292(98)9 P 1200(04) IM 2292(112)6	SHEET A2	TOTAL SHEETS A9
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Plotting Date: 8/1/2022

Section C - Traffic Control

Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
260E6010	Granular Material	1,500.0	4,000.0	-	5,500.0	Ton
320E6000	Temporary Asphalt	1,500.0	4,000.0	-	5,500.0	Ton
628E1110	Movable F Shape Concrete Barrier, End Section	-	6	-	6	Each
634E0010	Flagging	140.0	20.0	-	160.0	Hour
634E0110	Traffic Control Signs	981.0	678.8	254.3	1,914.1	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	Lump Sum	Lump Sum	Lump Sum	LS
634E0135	Traffic Control Supervisor	Lump Sum	Lump Sum	Lump Sum	Lump Sum	LS
634E0275	Type 3 Barricade	30	25	-	55	Each
634E0380	Tubular Marker	120	50	6	176	Each
634E0390	Replace Tubular Marker	20	10	-	30	Each
634E0420	Type C Advance Warning Arrow Board	3	4	1	8	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	-	550	-	550	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	25,000	13,000	4,200	42,200	Ft
634E0565	Remove Pavement Marking, Arrow	45	25	3	73	Each
634E0640	Temporary Pavement Marking	72,000	70,500	5,700	148,200	Ft
634E0702	Contractor Supplied Traffic Control Movable Concrete Barrier	-	550	-	550	Each
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	-	20	-	20	Each
634E0750	Temporary Concrete Barrier End Protection	-	4	-	4	Each
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	-	2	-	2	Each
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	-	2	-	2	Each
634E0900	Portable Temporary Traffic Control Signal	2	2	-	4	Unit
634E0915	Short Term Temporary Traffic Control Signal	1	3	-	4	Site
634E1002	Detour and Restriction Signing	1,084.1	4,147.7	118.5	5,350.3	SqFt
634E1020	Temporary Business Signing	1,407.5	-	-	1,407.5	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	5	9	-	14	Each
634E1235	Queue Detection System	-	18.0	-	18.0	Mth
634E1245	Maintenance of Queue Detection System	-	300	-	300	Hour
634E2000	Longitudinal Pedestrian Barricade	35	-	20	55	Ft
634E2020	Temporary Curb Ramp	2	-	-	2	Each
634E2025	Longitudinal Pedestrian Barrier	1,500	-	-	1,500	Ft
634E2050	Temporary Sidewalk	9,000	-	-	9,000	SqFt
635E7600	Maintenance of Traffic Signal(s)	180	300	-	480	Hour
900E1350	Temporary Surfacing	500.0	1,500.0	-	2,000.0	SqFt

Section D - Erosion Control

Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
110E1690	Remove Sediment	6.9	4.4	-	11.3	CuYd
110E1693	Remove Erosion Control Wattle	450	790	-	1,240	Ft
110E1695	Remove Sediment Filter Bag	2,796	1,635	-	4,431	Ft
110E1700	Remove Silt Fence	3,390	3,118	-	6,508	Ft
120E6300	Water for Vegetation	4,538.0	14,152.0	-	18,690.0	MGal
230E0010	Placing Topsoil	8,733	17,154	-	25,887	CuYd
730E0100	Cover Crop Seeding	-	10.0	-	10.0	Bu
730E0206	Type D Permanent Seed Mixture	4,688	658	-	5,346	Lb
730E0212	Type G Permanent Seed Mixture	-	1,210	-	1,210	Lb
731E0100	Fertilizing	5,157	38,918	-	44,075	Lb
732E0200	Fiber Mulching	15.6	48.7	-	64.3	Ton
732E0300	Bonded Fiber Matrix	30.5	95.0	-	125.5	Ton
734E0044	Soil Stabilizer	2.0	4.0	-	6.0	Acre
734E0102	Type 2 Erosion Control Blanket	28,260	99,980	-	128,240	SqYd
734E0154	12" Diameter Erosion Control Wattle	1,800	3,160	-	4,960	Ft
734E0165	Remove and Reset Erosion Control Wattle	450	790	-	1,240	Ft
734E0180	Sediment Filter Bag	2,796	1,635	-	4,431	Ft
734E0325	Surface Roughening	5.4	24.0	-	29.4	Acre
734E0602	Low Flow Silt Fence	3,390	3,118	-	6,508	Ft
734E0610	Mucking Silt Fence	235	216	-	451	CuYd
734E0620	Repair Silt Fence	848	780	-	1,627	Ft
734E0680	Flocculent Housing Unit	1	1	-	2	Each
734E0683	500K Gallon Treatment Flocculent Bag	1	1	-	2	Each
734E0845	Sediment Control at Inlet with Frame and Grate	15	32	-	47	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	429	143	-	572	Ft
734E5010	Sweeping	60	40	-	100	Hour
900E1310	Concrete Washout Facility	1	1	-	2	Each
900E1320	Construction Entrance	4	3	-	7	Each
900E2030	Miscellaneous Work	1	-	-	1	Site



ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 2292(98)9 P 1200(04) IM 2292(112)6	A3	A9

Plotting Date: 11/8/2022

REV DATE: 11/08/2022 INITIAL: LRM

Section E – Structures

Structure No. 50-219-179						
Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
009E3310	Bridge Elevation Survey	-	Lump Sum	-	Lump Sum	LS
009E5000	Concrete Penetrating Sealer	-	1,295.9	-	1,295.9	SqYd
120E7000	Select Granular Backfill	-	11.8	-	11.8	Ton
410E0030	Structural Steel, Miscellaneous	-	Lump Sum	-	Lump Sum	LS
410E2600	Membrane Sealant Expansion Joint	-	116.8	-	116.8	Ft
420E0100	Structure Excavation, Bridge	-	146	-	146	CuYd
430E0200	Bridge End Embankment	-	2,099	-	2,099	CuYd
430E0300	Granular Bridge End Backfill	-	135.6	-	135.6	CuYd
430E0510	Approach Slab Underdrain Excavation	-	4.3	-	4.3	CuYd
430E0700	Precast Concrete Headwall for Drain	-	2	-	2	Each
460E0028	Class A45 Low Shrinkage Concrete, Bridge Deck	-	414.9	-	414.9	CuYd
460E0050	Class A45 Concrete, Bridge	-	269.6	-	269.6	CuYd
460E0150	Concrete Approach Slab for Bridge	-	152.5	-	152.5	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	-	59.1	-	59.1	SqYd
460E0380	Install Dowel in Concrete	-	381	-	381	Each
470E0120	Steel Pedestrian Railing on Sidewalk	-	263.6	-	263.6	Ft
470E0220	Steel Pedestrian Railing on Concrete Barrier	-	243.3	-	243.3	Ft
480E0100	Reinforcing Steel	-	45,667	-	45,667	Lb
480E0200	Epoxy Coated Reinforcing Steel	-	2,110	-	2,110	Lb
480E0300	Stainless Reinforcing Steel	-	90,137	-	90,137	Lb
510E0300	Preboring Pile	-	220	-	220	Ft
510E3421	HP 12x74 Steel Test Pile, Furnish and Drive	-	220	-	220	Ft
510E3425	HP 12x74 Steel Bearing Pile, Furnish and Drive	-	3,350	-	3,350	Ft
560E8072	72" Minnesota Shape Prestressed Concrete Beam	-	1,455	-	1,455	Ft
621E0300	Chain Link Fence for Bridge Sidewalk	-	264	-	264	Ft
635E8020	2" Rigid Galvanized Steel Conduit	-	12	-	12	Ft
651E0160	6" Reinforced Concrete Sidewalk	-	348	-	348	SqFt
680E0040	4" Underdrain Pipe	-	150	-	150	Ft
680E2500	Porous Backfill	-	8.1	-	8.1	Ton
734E2020	Bridge Berm Slope Protection, Coated Crushed Aggregate	-	517.1	-	517.1	SqYd
831E1030	Perforated Geocell	-	345	-	345	SqFt

Structure No. 50-219-180						
Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
009E3310	Bridge Elevation Survey	-	Lump Sum	-	Lump Sum	LS
110E0010	Remove Concrete Bridge Approach Slab	-	406.2	-	406.2	SqYd
110E0020	Remove Bridge Railing	-	1,008	-	1,008	Ft
110E0040	Remove Concrete Bridge Slab	-	311.7	-	311.7	SqYd
120E0600	Contractor Furnished Borrow Excavation	-	31	-	31	CuYd
260E1010	Base Course	-	79.0	-	79.0	Ton
410E2600	Membrane Sealant Expansion Joint	-	155.4	-	155.4	Ft
460E0070	Class A45 Concrete, Bridge Repair	-	44.1	-	44.1	CuYd
460E0150	Concrete Approach Slab for Bridge	-	314.3	-	314.3	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	-	107.4	-	107.4	SqYd
460E0200	Special Surface Finish	-	3,978	-	3,978	SqFt
460E0300	Breakout Structural Concrete	-	44.0	-	44.0	CuYd
460E0380	Install Dowel in Concrete	-	86	-	86	Each
460E0650	Roadway Canopy	-	Lump Sum	-	Lump Sum	LS
480E0200	Epoxy Coated Reinforcing Steel	-	7,467	-	7,467	Lb
480E5000	Galvanic Anode	-	246	-	246	Each
550E0010	Low Slump Dense Concrete Bridge Deck Overlay	-	124	-	124	CuYd
550E0100	Concrete Removal Type 1A	-	1,738.9	-	1,738.9	SqYd
550E0110	Concrete Removal Type 1B	-	347.8	-	347.8	SqYd
550E0120	Concrete Removal Type 1C	-	347.8	-	347.8	SqYd
550E0130	Concrete Removal Type 1D	-	347.8	-	347.8	SqYd
550E0140	Concrete Removal Type B	-	20.0	-	20.0	Ft
550E0200	Class A45 Concrete Fill	-	74.9	-	74.9	CuYd
550E0500	Finishing and Curing	-	1,738.9	-	1,738.9	SqYd
680E0040	4" Underdrain Pipe	-	36	-	36	Ft
734E2020	Bridge Berm Slope Protection, Coated Crushed Aggregate	-	214.2	-	214.2	SqYd

Barriers						
Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
650E2000	Concrete Barrier Curb and Gutter	-	2,330	-	2,330	Ft
650E2001	Concrete Barrier Curb and Gutter End Section	-	80	-	80	Ft

Structure No. 50-219-205						
Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
009E3310	Bridge Elevation Survey	-	-	Lump Sum	Lump Sum	LS
110E0010	Remove Concrete Bridge Approach Slab	-	-	395.0	395.0	SqYd
110E0020	Remove Bridge Railing	-	-	756	756	Ft
120E0600	Contractor Furnished Borrow Excavation	-	-	20	20	CuYd
260E1010	Base Course	-	-	40.0	40.0	Ton
410E0030	Structural Steel, Miscellaneous	-	-	Lump Sum	Lump Sum	LS
410E2600	Membrane Sealant Expansion Joint	-	-	132.8	132.8	Ft
460E0010	Class A45 Concrete, Bridge Barrier	-	-	3.0	3.0	CuYd
460E0150	Concrete Approach Slab for Bridge	-	-	271.6	271.6	SqYd
460E0160	Concrete Approach Sleeper Slab for Bridge	-	-	86.0	86.0	SqYd
460E0200	Special Surface Finish	-	-	2,320	2,320	SqFt
460E0300	Breakout Structural Concrete	-	-	0.6	0.6	CuYd
460E0380	Install Dowel in Concrete	-	-	244	244	Each
470E0120	Steel Pedestrian Railing on Sidewalk	-	-	379.0	379.0	Ft
470E0220	Steel Pedestrian Railing on Concrete Barrier	-	-	375.4	375.4	Ft
480E0200	Epoxy Coated Reinforcing Steel	-	-	1,112	1,112	Lb
480E0504	No. 4 Rebar Splice	-	-	30	30	Each
480E0505	No. 5 Rebar Splice	-	-	48	48	Each
480E0506	No. 6 Rebar Splice	-	-	50	50	Each
491E0005	Two Coat Bridge Deck Polymer Chip Seal	-	-	1,089.2	1,089.2	SqYd
491E0110	Abrasive Blasting of Bridge Deck	-	-	1,089.2	1,089.2	SqYd
491E0120	Bridge Deck Grinding	-	-	1,089.2	1,089.2	SqYd
491E0130	Concrete Removal, Class A	-	-	4.0	4.0	SqYd
491E0140	Concrete Removal, Class B	-	-	4.0	4.0	SqYd
491E0172	Concrete Patching Material, Bridge Deck	-	-	24.0	24.0	CuFt
621E0300	Chain Link Fence for Bridge Sidewalk	-	-	380	380	Ft
651E0160	6" Reinforced Concrete Sidewalk	-	-	558	558	SqFt
680E0040	4" Underdrain Pipe	-	-	48	48	Ft
734E2023	Bridge Berm Slope Protection Rehabilitation, Coated	-	-	210.0	210.0	SqYd
900E8900	Anchor Bolt Coring	-	-	15.0	15.0	Ft



ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 2292(98)9 P 1200(04) IM 2292(112)6	A4	A9
Plotting Date: 10/26/2022		REV DATE: 10/28/2022 INITIAL: LRM	

Section F – Surfacing

Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
009E3320	Checker	Lump Sum	Lump Sum	-	Lump Sum	LS
120E6200	Water for Granular Material	350.9	375.8	3.3	730.0	MGal
210E1005	Surface Preparation	-	-	0.030	0.030	Mile
260E1010	Base Course	3,114.0	-	-	3,114.0	Ton
260E2010	Gravel Cushion	26,151.3	31,305.1	45.5	57,501.9	Ton
320E1200	Asphalt Concrete Composite	2,229.2	-	-	2,229.2	Ton
380E0050	8" Nonreinforced PCC Pavement	-	-	867.6	867.6	SqYd
380E0080	9.5" Nonreinforced PCC Pavement	35,653.5	16,335.0	-	51,988.5	SqYd
380E0100	10.5" Nonreinforced PCC Pavement	-	33,781.0	-	33,781.0	SqYd
380E2228	9.5" Nonmetallic Fiber Reinforced PCC Pavement	-	998.3	-	998.3	SqYd
380E2564	4" Barrier Type Colored Median PCC Pavement	3,151.1	10,299.0	-	13,450.1	SqYd
380E3020	6" PCC Driveway Pavement	273.1	-	-	273.1	SqYd
380E5010	Fast Track Concrete	1,731.0	-	-	1,731.0	SqYd
380E6000	Dowel Bar	22,551	32,691	488	55,730	Each
380E6110	Insert Steel Bar in PCC Pavement	176	1,068	99	1,343	Each
410E2600	Membrane Sealant Expansion Joint	-	206.8	106.6	313.4	Ft

Section L – Lighting

LIGHTING						
BID ITEM NUMBER	ITEM	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
110E0100	Remove Concrete Footing(s)	-	Lump Sum	-	Lump Sum	LS
110E1540	Remove Luminaire Pole Footing	15	1	-	16	Each
110E1550	Remove Light Tower	-	6	-	6	Each
110E5100	Salvage Luminaire Pole	15	1	-	16	Each
635E0040	Breakaway Base Luminaire Pole with Arm, 40' Mounting Height	12	49	-	61	Each
635E0140	Breakaway Base Luminaire Pole with Twin Arms, 40' Mounting Height	23	17	-	40	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	58	94	-	152	Each
635E5020	2' Diameter Footing	268.0	471.0	-	739.0	Ft
635E5310	Special Electrical Junction Box	32	23	-	55	Each
635E5360	Surface Mounted Junction Box	-	6	-	6	Each
635E5400	Electrical Service Cabinet	5	7	-	12	Each
635E6200	Miscellaneous, Electrical	Lump Sum	Lump Sum	-	Lump Sum	LS
635E8020	2" Rigid Galvanized Steel Conduit	-	120	-	120	Ft
635E8040	4" Rigid Galvanized Steel Conduit	-	2,755	-	2,755	Ft
635E8120	2" Rigid Conduit, Schedule 40	6,590	12,475	-	19,065	Ft
635E8220	2" Rigid Conduit, Schedule 80	3,620	3,070	-	6,690	Ft
635E8830	2/2/2/4 Aluminum Wire	9,835	15,440	-	25,275	Ft
635E8900	3/C #0000 AWG Aluminum Wire	1,340	1,440	-	2,780	Ft
635E9011	1/C #1 AWG Copper Wire	-	600	-	600	Ft
635E9014	1/C #4 AWG Copper Wire	1,280	2,130	-	3,410	Ft
635E9024	1/C #14 AWG Copper Wire	80	2,395	-	2,475	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	3,355	5,170	-	8,525	Ft



Section L – Signals

TRAFFIC SIGNALS						
BID ITEM NUMBER	ITEM	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
110E1530	Remove Signal Pole Footing	4	3	-	7	Each
110E5110	Salvage Signal Equipment	Lump Sum	Lump Sum	-	Lump Sum	LS
635E2000	Pedestal Signal Pole	-	6	-	6	Each
635E2060	Signal Pole with 60' Mast Arm	1	-	-	1	Each
635E2070	Signal Pole with 70' Mast Arm	2	-	-	2	Each
635E2140	Signal Pole with 40' Mast Arm and Luminaire Arm	-	1	-	1	Each
635E2155	Signal Pole with 55' Mast Arm and Luminaire Arm	1	-	-	1	Each
635E2235	Signal Pole with 35' Mast Arm and Twin Luminaire Arms	-	1	-	1	Each
635E2240	Signal Pole with 40' Mast Arm and Twin Luminaire Arms	-	1	-	1	Each
635E2250	Signal Pole with 50' Mast Arm and Twin Luminaire Arms	-	2	-	2	Each
635E2275	Signal Pole with 75' Mast Arm and Twin Luminaire Arms	-	1	-	1	Each
635E4030	3 Section Vehicle Signal Head	10	-	-	10	Each
635E4040	4 Section Vehicle Signal Head	9	-	-	9	Each
635E4050	5 Section Vehicle Signal Head	2	-	-	2	Each
635E4080	3 Section Directional Vehicle Signal Head	-	28	-	28	Each
635E5020	2' Diameter Footing	-	36.0	-	36.0	Ft
635E5030	3' Diameter Footing	50.0	77.0	-	127.0	Ft
635E5310	Special Electrical Junction Box	54	45	-	99	Each
635E5430	Traffic Signal Controller	1	2	-	3	Each
635E5450	Side Mounted Cabinet	2	4	-	6	Each
635E5515	Battery Backup System for Traffic Signal	1	2	-	3	Each
635E5520	Video Detection System	1	2	-	3	Each
635E5560	Emergency Vehicle Preemption Unit	1	2	-	3	Each
635E5570	Optical Detector	4	6	-	10	Each
635E5600	Surveillance Camera	2	2	-	4	Each
635E5880	Accessible Pedestrian Signal	8	10	-	18	Each
635E5910	Pedestrian Push Button Pole	8	10	-	18	Each
635E5922	Pedestrian Signal Head with Countdown Timer	8	10	-	18	Each
635E5930	Pedestrian Crossing Sign	8	10	-	18	Each
635E7015	* Furnish Signal Pole with Luminaire	-	1	-	1	Each
635E8040	4" Rigid Galvanized Steel Conduit	-	850	-	850	Ft
635E8110	1" Rigid Conduit, Schedule 40	455	295	-	750	Ft
635E8120	2" Rigid Conduit, Schedule 40	425	735	-	1,160	Ft
635E8130	3" Rigid Conduit, Schedule 40	-	435	-	435	Ft
635E8140	4" Rigid Conduit, Schedule 40	80	100	-	180	Ft
635E8230	3" Rigid Conduit, Schedule 80	2,795	2,770	-	5,565	Ft
635E8240	4" Rigid Conduit, Schedule 80	-	305	-	305	Ft
635E8415	1" Innerduct, SDR 13.5	14,615	15,505	-	30,120	Ft
635E8420	1.5" Innerduct, SDR 13.5	80	100	-	180	Ft
635E9016	1/C #6 AWG Copper Wire	90	180	-	270	Ft
635E9022	1/C #12 AWG Copper Wire	14,770	17,025	-	31,795	Ft
635E9302	2/C #14 AWG IMSA Copper Cable, K1	315	320	-	635	Ft
635E9303	3/C #14 AWG IMSA Copper Cable, K1	120	150	-	270	Ft
635E9305	5/C #14 AWG IMSA Copper Cable, K1	515	1,205	-	1,720	Ft
635E9307	7/C #14 AWG IMSA Copper Cable, K1	515	-	-	515	Ft
635E9312	12/C #14 AWG IMSA Copper Cable, K1	-	1,900	-	1,900	Ft
635E9325	25/C #14 AWG IMSA Copper Cable, K1	900	1,500	-	2,400	Ft
635E9800	Preemption Cable	2,450	3,800	-	6,250	Ft
635E9924	24 Strand Fiber Optic Cable	2,000	2,200	-	4,200	Ft
635E9950	Install Fiber Optic Cable	1,010	-	-	1,010	Ft

* - Denotes Non-Participating

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 2292(98)9 P 1200(04) IM 2292(112)6	A5	A9

Plotting Date: 8/1/2022

Section M - Pavement Marking

Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
633E0019	Cold Applied Plastic Pavement Marking, 4" with Contrast Border	12,915	14,745	2,420	30,080	Ft
633E0021	Cold Applied Plastic Pavement Marking, 8" with Contrast Border	2,495	865	270	3,630	Ft
633E0025	Cold Applied Plastic Pavement Marking, 12"	-	2,005	-	2,005	Ft
633E0030	Cold Applied Plastic Pavement Marking, 24"	225	95	100	420	Ft
633E0035	Cold Applied Plastic Pavement Marking, Area	165	-	-	165	SqFt
633E0040	Cold Applied Plastic Pavement Marking, Arrow	54	11	4	69	Each
633E0046	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	2	6	-	8	Each
633E0211	Preformed Thermoplastic Pavement Marking, 4" with Contrast Border	25	10,850	540	11,415	Ft
633E0216	Preformed Thermoplastic Pavement Marking, 8" with Contrast Border	-	335	75	410	Ft
633E0220	Preformed Thermoplastic Pavement Marking, 12"	-	360	-	360	Ft
633E0225	Preformed Thermoplastic Pavement Marking, 24"	1,775	705	-	2,480	Ft
633E0230	Preformed Thermoplastic Pavement Marking, Area	-	63	-	63	SqFt
633E0235	Preformed Thermoplastic Pavement Marking, Arrow	-	57	1	58	Each
633E0240	Preformed Thermoplastic Pavement Marking, Combination Arrow	-	5	-	5	Each
633E5004	Grooving for Cold Applied Plastic Pavement Marking, 4" with Contrast Border	12,940	24,225	2,960	40,125	Ft
633E5008	Grooving for Cold Applied Plastic Pavement Marking, 8" with Contrast Border	2,495	1,130	345	3,970	Ft
633E5010	Grooving for Cold Applied Plastic Pavement Marking, 12"	-	2,365	-	2,365	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	2,000	800	100	2,900	Ft
633E5020	Grooving for Cold Applied Plastic Pavement Marking, Area	165	63	-	228	SqFt
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	54	68	5	127	Each
633E5030	Grooving for Cold Applied Plastic Pavement Marking, Combination Arrow	-	5	-	5	Each
633E5031	Grooving for Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	2	6	-	8	Each
634E0560	Remove Pavement Marking, 4" or Equivalent	3,315	3,785	3,760	10,860	Ft
634E0565	Remove Pavement Marking, Arrow	7	-	5	12	Each
634E0570	Remove Pavement Marking, Message	5	-	-	5	Word

Section S - Permanent Signing

Bid Item Number	Item	Quantity				Unit
		PCN 06MM Benson Rd	PCN 04XK I-229	PCN 08QM 6th Street	Total	
110E0100	Remove Concrete Footing(s)	-	Lump Sum	-	Lump Sum	LS
110E0120	Remove Sign Bridge	-	1	-	1	Each
110E0130	Remove Traffic Sign	-	25	-	25	Each
110E0135	Remove Delineator	29	78	-	107	Each
110E0140	Remove Extruded Panel Sign	-	3	-	3	Each
110E5020	* Salvage Traffic Sign	17	-	-	17	Each
110E7150	Remove Sign for Reset	16	5	-	21	Each
632E0014	1.75' Diameter Breakaway Support Concrete Footing	-	28.0	-	28.0	Ft
632E0064	3' Diameter Fixed Support Concrete Footing	-	25.0	-	25.0	Ft
632E0072	4' Diameter Fixed Support Concrete Footing	-	105.0	-	105.0	Ft
632E1235	W6x20 Steel Post	-	65.9	-	65.9	Ft
632E1320	2.0"x2.0" Perforated Tube Post	666.4	897.8	-	1,564.2	Ft
632E2000	4"x4" Amber Delineator with 1.12 Lb/Ft Post	-	8	-	8	Each
632E2008	4" Tubular Amber Delineator with 1.12 Lb/Ft Post	-	20	-	20	Each
632E2024	4"x8" White Delineator with 1.12 Lb/Ft Post	-	70	-	70	Each
632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	-	18	-	18	Each
632E2220	Guardrail Delineator	-	38	-	38	Each
632E2510	Type 2 Object Marker Back to Back	10	17	-	27	Each
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	-	783.8	-	783.8	SqFt
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	311.3	342.0	-	653.3	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	201.1	647.0	-	848.1	SqFt
632E3500	Reset Sign	16	5	-	21	Each
632E5010	Double Beam Sign Bridge	-	3	-	3	Each
632E5020	Overhead Cantilever Sign Support	-	1	-	1	Each
632E5055	Mast Arm Sign Support	-	2	-	2	Each

* Denotes Non-Participating

SPECIFICATIONS

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

The most current edition of the City of Sioux Falls General Conditions for Public Improvements and Supplemental Standard Specifications, City Standard Plates and required provisions, supplemental specifications, and/or special provisions as included in the Special Provisions.

The City of Sioux Falls Engineer's Office will provide a copy of the City of Sioux Falls General Conditions for Public Improvements and the City of Sioux Falls Supplemental Standard Specifications free of charge to all prospective bidders upon request. The Supplemental Standard Specifications can also be downloaded from the City of Sioux Falls website at address <http://www.sioxfalls.org/publicworks> under Engineering Documents.

If conflicts arise, the Standard Specifications for Roads & Bridges, 2015 Edition and Required Provisions, Supplemental Specifications and Special Provisions as included in the Proposal overrule the City of Sioux Falls General Conditions for Public Improvements and Supplemental Standard Specifications, City Standard Plates and required provisions, supplemental specifications, and/or special provisions as included in the Special Provisions.



ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 2292(98)9 P 1200(04) IM 2292(112)6	A6	A9

Plotting Date: 8/1/2022

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT's Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <https://dot.sd.gov/media/documents/EnvironmentalProceduresManual.pdf>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Engineer at 605-773-3180 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

Once construction is complete, the Project Engineer will review all environmental commitments for the project and document their completion.

COMMITMENT A: WETLANDS

All efforts to avoid and minimize wetland impacts from the project have resulted in approximately 0.47 acres of wetlands (includes temporary and permanent) becoming impacted. Refer to Section B – Grading plans for location and boundaries of the impacted wetlands.

Table of Impacted Wetlands

Wetland No.	Station	Perm. Impact Left (Acres)	Perm. Impact Right (Acres)	Temp. Impact Left (Acres)	Temp. Impact Right (Acres)	Total Impact (Acres)
1B	62+40 to 65+60	0.30	0.00	0.17	0.00	0.47

Action Taken/Required:

Wetland 1B has 0.30 acres of permanent impact and 0.17 acres of temporary impact. Although the project impacts are greater than 0.1 acres to the wetlands, per communication with USACE, compensatory mitigation is not required.

Temporary impacts identified in the Table of Impacted Wetlands will not be mitigated as original contours and elevations will be re-established as designated in Section B – Grading Plans/plan sheets. Prior to initiating temporary work in wetlands, the Contractor will submit a plan to the Project Engineer in accordance with Section 7.21 D of the SDDOT Standard Specifications for Roads and Bridges.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B5: NORTHERN LONG-EARED BAT

This project is within the range of suitable habitat for the Northern Long-Eared Bat (NLEB) and project work will avoid conflicts with NLEB roosting habitat.

Action Taken/Required:

Project activities that include tree removal, structure work, and/or work within one-quarter mile of a known hibernacula or 150 feet of a known maternity roost tree should not occur within the location(s) listed below during the NLEB seasonal work restriction timeframe without approval from the SDDOT Environmental Office.

Station	NLEB Seasonal Work Restriction
8+30 to 79+60 L, 79+60 to 8+30 R	April 1 to October 31

Tree removal will occur between November 1st and March 31st.

COMMITMENT C: WATER SOURCE

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

Action Taken/Required:

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

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:

< <http://sdleastwanted.com/maps/default.aspx> >

< [South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species](http://SouthDakotaAdministrativeRule41:10:04AquaticInvasiveSpecies): <https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04>

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

The Big Sioux River is classified as a warm water semi-permanent fishery with a total suspended solids standard of less than 90 mg/L 30-day average, less than 158 mg/L daily maximum.

Action Taken/Required:

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

COMMITMENT D2: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to Section 4.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in Section 3.4 of the permit.

Refer to Commitment D1: Surface Water Quality for stream classification.

Action Taken/Required:

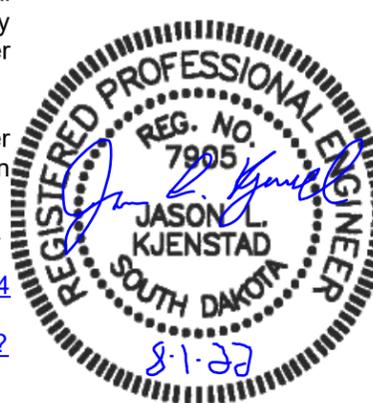
If construction dewatering is required, the Contractor will obtain the General Permit for Temporary Discharge Activities from the DANR Surface Water Program, 605-773-3351.

<http://denr.sd.gov/des/sw/swqformsandpermits.aspx>

The Contractor will provide a copy of the approved permit or the submitted dewatering information to the Project Engineer prior to proceeding with any dewatering activities. The approved permit or submitted dewatering information must be kept on-site and as part of the project records.

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at:

< <http://denr.sd.gov/des/sw/WhatisaDMR.aspx> >



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COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance and/or work in a waterway.

Action Taken/Required:

The DANR General Permit for Stormwater Discharges Associated with Construction Activities is required for construction activity disturbing one or more acres of earth and work in a waterway. The SDDOT is the owner of this permit and will submit the NOI to DANR 15 days prior to project start in order to obtain coverage under the General Permit. Work can begin once the DANR letter of approval is received.

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

The Contractor will complete the DANR Contractor Certification Form prior to the pre-construction meeting. The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the permit for this project. Work may not begin on this project until this form is signed and submitted to DANR.

The form can be found at:

< <https://denr.sd.gov/des/sw/eforms/CGPAppendixCCA2018Fillable.pdf> >

The Contractor is advised that permit coverage may also be required for off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

COMMITMENT G: DEWATERING AND SEDIMENT COLLECTION

The purpose of a dewatering and sediment collection system is to collect turbid storm water on the project, treat it with flocculants as needed, and capture the sediment that falls out of suspension before the water is discharged into "Waters of the US" or "Waters of the State". Refer to Commitment D1: Surface Water Quality for stream classification.

Action Taken/Required:

The Contractor will meet the terms of the Temporary Discharge Permit and the Storm Water Permit for Construction Activities.

The Contractor will create a Pollution Prevention Plan (PPP) for dewatering and sediment collection if the Contractor chooses to discharge the water into "Waters of the US" or "Waters of the State". Refer to the detail sheet OPTIONS FOR DEWATERING AND SEDIMENT COLLECTION in the plans. The PPP must be kept on-site and updated as site conditions change.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

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

- Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating, "No Dumping Allowed".

- Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period not to exceed the duration of the project. Prior to project completion, the waste will be removed from view of the ROW or buried, and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items



COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic 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.

There are four stone features which will be identified as avoidance areas and included in the design plans.

Action Taken/Required:

There will be temporary construction fencing installed and do not disturb notes added to the design plans to ensure that project activities are confined to the Area of Potential Effects.

All earth disturbing activities not designated within the plans require a cultural resource review prior to scheduling the pre-construction meeting. This work includes but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities within 100 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will contact the appropriate SHPO/THPO within 48 hours of the discovery to determine an appropriate course of action.

SHPO 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 will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

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

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

Action Taken/Required:

Excavation will not occur below the ordinary high-water elevation in waterways outside of caissons, cribs, cofferdams, steel piling, or sheeting. The natural streambed will 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. Any structure work over or within the waterway will be constructed according to Section 7.21 C of the Specifications.

All dredged or excavated materials will 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 if 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 will be removed with minimal disturbance to the streambed. Proper construction practices will be used to minimize increases in suspended solids and turbidity in the waterway.

Bridge berms, wing dams, traffic diversions, channel reconstruction, stream diversions, grading, etc. will 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 Contractor's construction operations will 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.

All temporary works in waterways of the US are required to be covered in the Corp of Engineers 404 Permit. At the time of the preconstruction meeting, the Contractor will submit documentation for all temporary works for the purpose of complying with the 404 Permit requirements in accordance with Section 423.3 A of the SDDOT Standard Specifications for Roads and Bridges.

Table of U.S. Waterways to Protect

Station	Waterway	Ordinary High Water Elevation
61+25 to 64+00	Unnamed tributary to the Big Sioux River	1365'

Stream channel excavation within "Waters of the US" is subject to USACE regulatory jurisdiction. Stream channel excavation cannot exceed the permitted quantities and/or surface area. The 404 Permit is included in the Special Provisions.

The Contractor will take all precautions necessary to prevent any incidental discharges associated with the excavation and hauling of material from the stream channel. This pertains to any excavation operations such as, foundation, pier, or abutment excavation, channel cleanout, excavation for riprap protection, and removal of any temporary fill associated with construction activities.

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	Station	L / R
Pump 'N Pak Gas Station	28+76.41	R
Custom Truck Equipment	9+20.21	L

Action Taken/Required:

The Contractor will give notice to the Engineer when contaminated soil is encountered on the project. The Engineer will contact the Environmental Office so that contact with the DANR and consultant to inspect and monitor removal of any contaminated soil can be initiated.

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

Petroleum contaminated soil may be disposed of at the Sioux Falls Regional Sanitary Landfill 605-367-8162). Measurement of "Contaminated Material Excavation" will be in accordance with Section 120.4 of the Specifications. All costs for excavating and transporting the contaminated materials to the disposal site and all fees charged per cubic yard by the disposal site will be incidental to the contract unit price per cubic yard for "Contaminated Material Excavation".

The estimated quantity of "Contaminated Material Excavation" is unknown. The quantity of "Contaminated Material Excavation" may vary from the plans. No adjustment will be made to the contract unit price for variations in the quantity of "Contaminated Material Excavation". The estimated quantity of "Contaminated Material Excavation" is provided in Section B – Grading plans/the plans.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the USACE for the permanent actions associated with this project.

Action Taken/Required:

The Contractor will comply with all requirements contained in the Section 404 Permit.

The Contractor will also be responsible for obtaining a Section 404 Permit for any dredge, excavation, or fill activities associated with material sources, storage areas, waste sites, and Contractor work sites outside the plan work limits that affect wetlands, floodplains, or waters of the United States.



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COMMITMENT Q: ARCHAEOLOGICAL COORDINATION

As a result of a Cultural Resources Survey, archaeologically sensitive areas have been identified within and/or adjacent to the project rights-of-way.

The following archaeologically sensitive sites have been identified that require avoidance of construction activities:

Table of Historic/Archaeological Sites

Station	Offset (Ft.)	L/R	Environmental Sensitive Site	Action
69+89.17 to 71+01.56	81' to 137'	R	ESS-1	Do Not Disturb / Temporary Fencing
Adjacent to State Option Borrow	Bahnson Ave @ Rice Street	west of Bahnson Ave (see diagram below)	ESS-2	Do Not Disturb / Temporary Fencing

The locations and boundaries of the site(s) for avoidance are shown in Section D – Erosion Control plans, and in the diagram shown below.

Action Taken/Required:

If evidence for cultural resources is uncovered during project construction activities, then such activities within 150 feet of the inadvertent discovery will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office, who will consult with the Archaeological Research Center (ARC), the applicable tribe THPO, SHPO if needed, and FHWA, to determine the appropriate course of action.

All artifacts, features, or other items of interest uncovered by project construction activities will not be displaced unless the landowner and the SHPO consent to it.

Prior to the pre-construction meeting, the Contractor will contact the ARC (Phone: 605-394-1936) to coordinate the installation schedule of orange plastic safety fence around the perimeter of the sensitive site(s) listed in the Table of Historic/Archeological Sites to ensure proper location, quality, and visibility of the orange safety fence. The exact location of the safety fence will be determined later in the field by the ARC representative.

The Contractor will give written notice to the Engineer seven (7) days prior to the commencement of earth disturbing activities near listed sites identified in the Table of Historic/Archaeological Site so the Engineer may notify ARC of the day work will start and schedule the installation of orange safety fence. ARC is to be present during earth disturbing activities to monitor the removal of topsoil, ensure avoidance of the fenced sites, and identify any culturally sensitive sites that may be uncovered.

Work within the vicinity of the site(s) will not begin until the silt fence is installed. See Section D – Erosion Control plans for payment of the silt fence. These identified sites cannot be used for material sources, storage areas, waste sites, and/or any other project related activities outside the plan work limits.

