



Department of Transportation

Office of Project Development

700 E Broadway Avenue

Pierre, South Dakota 57501-2586 605/773-3268

FAX: 605/773-6608

August 29, 2014

ADDENDUM NO. 1

RE: Item #1, September 3, 2014 Letting - NH-PH 0085(20)26, PCN 0555, Lawrence County - Grading, Storm Sewer, Asphalt Surfacing, Curb & Gutter, Lighting, and Signals

TO WHOM IT MAY CONCERN:

The following addenda to the plans shall be inserted and made a part of your proposal for the referenced project.

SPECIAL PROVISIONS: NO CHANGE

BID ITEM FILE: *Bidders must log in to retrieve the addendum bid item file that must be loaded into the SDEBS to incorporate the revisions listed here.*

Bid Items were added:

Bid Item 380E3525 "6" Reinforced PCC Approach Pavement"

Bid Item 900E5149 "Landscape Rock"

Bid Item 900E5152 "Weed Barrier Fabric"

Quantities for Bid Items were changed:

Bid Item 380E3520 "6" PCC Approach Pavement" changed from 2,684.2 to 2,606.3 SqYd

Bid Item 651E0040 "4" Concrete Sidewalk" changed from 51,634 to 50,802 SqYd

Bid Item 651E0160 "6" Reinforced Concrete Sidewalk" changed from 332 to 1,164 SqFt

PLANS: Please destroy sheets A1, A2, B2, B12, B16-B18, B55, B70, B71, B74, C3, C4, C6, C15, C16, and D2 and replace with the enclosed sheets, dated 8/26/14, 8/27/14 and 8/28/14.

Sheets A1 & A2: **Bid Items were added:**

Bid Item 380E3525 "6" Reinforced PCC Approach Pavement"

Bid Item 900E5149 "Landscape Rock"

Bid Item 900E5152 "Weed Barrier Fabric"

Quantities for Bid Items were changed:

Bid Item 380E3520 "6" PCC Approach Pavement" changed from 2,684.2 to 2,606.3 SqYd

Bid Item 651E0040 "4" Concrete Sidewalk" changed from 51,634 to 50,802 SqYd

Bid Item 651E0160 "6" Reinforced Concrete Sidewalk" changed from 332 to 1,164 SqFt

Sheet B2: Bid Items were added:

Bid Item 380E3525 "6" Reinforced PCC Approach Pavement"

Quantities for Bid Items were changed:

Bid Item 380E3520 "6" PCC Approach Pavement" changed from 2,684.2 to 2,606.3 SqYd

Bid Item 651E0040 "4" Concrete Sidewalk" changed from 51,634 to 50,802 SqYd

Bid Item 651E0160 "6" Reinforced Concrete Sidewalk" changed from 332 to 1,164 SqFt

CONSTRUCTION STAGING AREA note was added.

Sheet B12: 6" REINFORCED PCC APPROACH PAVEMENT AND SIDEWALK FROM 67+83 TO 69+08-R AND 69+37.46 TO 70+33.80-L note was added.

Sheet B16 – B18: TABLE OF PAVEMENT, CG, & SIDEWALK was revised.

Sheet B55: DO NOT DISTURB HISTORICAL WALLS AT THE FOLLOWING LOCATIONS: 88+04 TO 88+29 R AND 88+30 R note was removed.

Sheet B70 & B71: The locations of 6" Reinforced Concrete Sidewalk and 6" Reinforced PCC Approach Pavement were added.

Sheet B74: Limits of proposed landscaping rock were added.

Sheet C3: PHASE 1 note was revised.

Sheet C4: TEMPORARY PEDESTRIAN FACILITY(S) FOR TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) note was revised.

Sheet C6: PORTABLE TEMPORARY TRAFFIC SIGNAL SYSTEM note was revised.

Sheet C15 & C 16: TEMPORARY MOVEABLE CONCRETE BARRIER LAYOUT was revised.

Sheet D2: Bid Items were added:

Bid Item 900E5149 "Landscape Rock"

Bid Item 900E5152 "Weed Barrier Fabric"

WEED BARRIER FABRIC/LANDSCAPE FABRIC and LANDSCAPING ROCK notes were added.

Sincerely,

Sam Weisgram
Engineering Supervisor

SW/cj

CC: Todd Seaman, Rapid City Region Engineer
Gary Engel, Rapid City Area Engineer

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT NH-PH 0085(20)26	SHEET A1	TOTAL SHEETS A5
Plotting Date: 08/28/2014		Revised 8-26-14 BLG	

Grading – Section B

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	4,129	Mile
009E3250	Miscellaneous Staking	1,607	Mile
009E3280	Slope Staking	1,406	Mile
009E3290	Structure Staking	7	Each
009E3300	Three Man Survey Crew	40.0	Hour
100E0100	Clearing	Lump Sum	LS
110E0300	Remove Concrete Curb and Gutter	4,908	Ft
110E0400	Remove Drop Inlet	18	Each
110E0460	Remove Manhole	3	Each
110E0600	Remove Fence	140	Ft
110E0605	Remove Chain Link Fence	64	Ft
110E0730	Remove Beam Guardrail	407.0	Ft
110E1010	Remove Asphalt Concrete Pavement	7,317.3	SqYd
110E1100	Remove Concrete Pavement	13,170.6	SqYd
110E1140	Remove Concrete Sidewalk	2,617.9	SqYd
110E1200	Remove Paving Brick	160.0	SqYd
110E1300	Remove Concrete Retaining Wall	125.3	Ft
110E1305	Remove Timber Retaining Wall	20.0	Ft
110E5720	Salvage Drop Inlet Frame and Grate Assembly	20	Each
110E6210	Remove Thrie Beam Guardrail for Reset	26.0	Ft
110E7065	Remove Channel Rock Wall	16	Ft
110E7700	Remove Drop Inlet Frame and Grate Assembly for Reset	1	Each
110E7802	Remove Fence for Reset	24	Ft
120E1100	Unclassified/Rock Excavation	49,513	CuYd
120E2000	Undercutting	10,974	CuYd
120E6100	Water for Embankment	191.0	MGal
240E0010	Obliterate Old Road	2	Sta
250E0020	Incidental Work, Grading	Lump Sum	LS
270E0020	Salvage and Stockpile Asphalt Mix Material	2,533.6	Ton
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	6,774.1	Ton
380E3520	6" PCC Approach Pavement	2,606.3	SqYd
380E3525	6" Reinforced PCC Approach Pavement	77.9	SqYd
380E3540	8" PCC Approach Pavement	527.6	SqYd
380E4050	8" PCC Fillet Section	447.0	SqYd
450E0122	18" RCP Class 2, Furnish	4,700	Ft
450E0130	18" RCP, Install	4,700	Ft
450E0142	24" RCP Class 2, Furnish	650	Ft
450E0150	24" RCP, Install	650	Ft
450E0162	30" RCP Class 2, Furnish	158	Ft
450E0170	30" RCP, Install	158	Ft
450E0182	36" RCP Class 2, Furnish	590	Ft
450E0190	36" RCP, Install	590	Ft
450E0202	48" RCP Class 2, Furnish	54	Ft
450E0210	48" RCP, Install	54	Ft
450E0212	54" RCP Class 2, Furnish	134	Ft
450E0220	54" RCP, Install	134	Ft
450E0408	18" RCP Bend, Furnish	15	Each
450E0409	18" RCP Bend, Install	15	Each
450E0424	30" RCP Bend, Furnish	2	Each
450E0425	30" RCP Bend, Install	2	Each
450E0428	36" RCP Bend, Furnish	1	Each
450E0429	36" RCP Bend, Install	1	Each
450E0700	RCP Tee, Furnish	5	Each
450E0701	RCP Tee, Install	5	Each
450E2008	18" RCP Flared End, Furnish	1	Each
450E2009	18" RCP Flared End, Install	1	Each
450E3052	48" RCP Arch Class 2, Furnish	40	Ft
450E3060	48" RCP Arch, Install	40	Ft
450E3072	60" RCP Arch Class 2, Furnish	240	Ft
450E3080	60" RCP Arch, Install	240	Ft

Grading – Section B, Continued

Bid Item Number	Item	Quantity	Unit
450E8013	24" CMP to RCP Transition, Furnish	1	Each
450E8015	24" Pipe Transition, Install	1	Each
450E8023	36" CMP to RCP Transition, Furnish	1	Each
450E8025	36" Pipe Transition, Install	1	Each
462E0100	Class M6 Concrete	202.4	CuYd
462E0200	Controlled Density Fill	27.3	CuYd
470E0020	Pipe Handrail	12.4	Ft
480E0100	Reinforcing Steel	29,569	Lb
480E0200	Epoxy Coated Reinforcing Steel	114	Lb
600E0200	Type II Field Laboratory	1	Each
620E0300	Special Right-of-Way Fence	344	Ft
620E4100	Reset Fence	24	Ft
621E0040	4' Chain Link Fence with Top Rail	45	Ft
630E5100	Reset Thrie Beam Guardrail with Wood Posts	26.0	Ft
650E0060	Type B66 Concrete Curb and Gutter	118	Ft
650E0080	Type B68 Concrete Curb and Gutter	11,478	Ft
650E0360	Type BL66 Concrete Curb and Gutter	39	Ft
650E0380	Type BL68 Concrete Curb and Gutter	104	Ft
650E1080	Type F68 Concrete Curb and Gutter	85	Ft
650E2100	Special Concrete Curb and Gutter	55	Ft
650E4060	Type C6 Concrete Gutter	302	Ft
650E4680	Type P8 Concrete Gutter	2,066	Ft
650E6280	8" Concrete Valley Gutter	151.2	SqYd
651E0040	4" Concrete Sidewalk	50,802	SqFt
651E0060	6" Concrete Sidewalk	2,395	SqFt
651E0140	4" Reinforced Concrete Sidewalk	542	SqFt
651E0160	6" Reinforced Concrete Sidewalk	1,164	SqFt
651E5000	Sidewalk Drain	77.6	Ft
651E7000	Type 1 Detectable Warnings	680	SqFt
670E1200	Type B Frame and Grate Assembly	66	Each
670E2200	Type C Frame and Grate	11	Each
670E4122	Type L Frame and Grate Assembly	5	Each
670E5200	Special Frame and Grate Assembly	9	Each
670E5340	4' x 11' Precast Concrete Type S Drop Inlet Lid	15	Each
670E5400	Precast Drop Inlet Collar	3	Each
670E7000	Reset Drop Inlet Frame and Grate Assembly	1	Each
671E6007	Type A7 Manhole Frame and Lid	1	Each
720E1015	Bank and Channel Protection Gabion	15.0	CuYd
900E0010	Refurbish Single Mailbox	1	Each
900E0012	Refurbish Double Mailbox	5	Each

INDEX OF SHEETS

A1 to A3	Estimate of Quantities for Sections B,C,D,E, F, L, M, and S
A4 and A5	Environmental Commitments

Traffic Control – Section C

Bid Item Number	Item	Quantity	Unit
009E3010	Public Information	Lump Sum	LS
110E1400	Remove Pavement Marking, 4" or Equivalent	2,144	Ft
621E0160	6' Chain Link Fence with Tension Wired Top	700	Ft
628E1110	Movable F Shape Concrete Barrier, End Section	6	Each
634E0010	Flagging	5,000	Hour
634E0020	Pilot Car	2,500	Hour
634E0100	Traffic Control	3,761	Unit
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0420	Type C Advance Warning Arrow Panel	1	Each
634E0525	Linear Delineation System Panel, Barrier Mounted	24	Each
634E0640	Temporary Pavement Marking	26,594	Ft
634E0700	Traffic Control Movable Concrete Barrier	80	Each
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	77	Each
634E0896	Portable Temporary Traffic Signal System	2	Each
634E1002	Detour Signing	1,079.0	SqFt
634E1215	Contractor Furnished Portable Changeable Message Sign	3	Each
634E2000	Longitudinal Pedestrian Barricade	350	Ft
634E2010	Temporary Pedestrian Facility(s)	Lump Sum	LS

Plot Scale - 1:200

Plotted From - tpr13670

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ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT NH-PH 0085(20)26	SHEET A2	TOTAL SHEETS A5
Plotting Date: 08/28/2014		Revised 8-26-14 BLG	

Erosion and Sediment Control – Section D

Bid Item Number	Item	Quantity	Unit
110E1690	Remove Sediment	30.0	CuYd
110E1695	Remove Sediment Filter Bag	2,880	Ft
110E1700	Remove Silt Fence	2,256	Ft
120E6300	Water for Vegetation	15.4	MGal
230E0010	Placing Topsoil	1,675	CuYd
230E0020	Placing Contractor Furnished Topsoil	800	CuYd
230E0050	Soil Amendment	7,875	Lb
730E0206	Type D Permanent Seed Mixture	378	Lb
730E0251	Special Permanent Seed Mixture 1	12	Lb
730E0252	Special Permanent Seed Mixture 2	2	Lb
731E0100	Fertilizing	3,395	Lb
733E0100	Sodding	855	SqYd
734E0042	Soil Stabilizer	11,000.0	SqYd
734E0103	Type 3 Erosion Control Blanket	4,500	SqYd
734E0131	Type 1 Turf Reinforcement Mat	2,705.0	SqYd
734E0170	Temporary Sediment Barrier	2,000	Ft
734E0180	Sediment Filter Bag	2,880	Ft
734E0604	High Flow Silt Fence	2,500	Ft
734E0610	Mucking Silt Fence	170	CuYd
734E0620	Repair Silt Fence	625	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	109	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	195	Ft
734E3000	Water Pollution Control	Lump Sum	LS
734E5000	Dewatering	144	Hour
900E5149	Landscaping Rock	5.5	CuYd
900E5152	Weed Barrier Fabric	70	SqYd

Structure – Section E

Bid Item Number	Item	Quantity	Unit
110E1650	Remove Bank and Channel Protection Gabion	17	Each
120E7000	Select Granular Backfill	165.7	Ton
250E0010	Incidental Work	Lump Sum	LS
420E0300	Structure Excavation, Retaining Wall	615	CuYd
421E1000	Footing Undercut	277	CuYd
460E0100	Class A45 Concrete, Miscellaneous	80.5	CuYd
460E0300	Breakout Structural Concrete	0.8	CuYd
462E0100	Class M6 Concrete	0.5	CuYd
470E0040	Steel Pedestrian Railing	687.2	Ft
480E0100	Reinforcing Steel	4,979	Lb
480E0200	Epoxy Coated Reinforcing Steel	3,855	Lb
480E0504	No. 4 Rebar Splice	10	Each
530E0310	Special Type C Concrete Retaining Wall	14	SqFt
530E0470	Gravity Large Concrete Block Wall	3,385	SqFt
530E0718	Granular Backfill for Gravity Large Concrete Block Wall	556.1	CuYd
680E0040	4" Underdrain Pipe	652	Ft
720E1010	PVC Coated Bank and Channel Protection Gabion	102.0	CuYd
900E0100	Stone Facing	134	SqFt

Str. No. 41-156-169

Bid Item Number	Item	Quantity	Unit
410E0030	Structural Steel, Miscellaneous	Lump Sum	LS
621E0300	Chain Link Fence for Bridge Sidewalk	118	Ft

Str. No. 41-158-166

Bid Item Number	Item	Quantity	Unit
250E0010	Incidental Work	Lump Sum	LS
410E0030	Structural Steel, Miscellaneous	Lump Sum	LS
421E1000	Footing Undercut	12	CuYd
621E0300	Chain Link Fence for Bridge Sidewalk	104	Ft
720E1010	PVC Coated Bank and Channel Protection Gabion	114.9	CuYd

Str. No. 41-159-165

Bid Item Number	Item	Quantity	Unit
410E0030	Structural Steel, Miscellaneous	Lump Sum	LS
621E0300	Chain Link Fence for Bridge Sidewalk	128	Ft

Surfacing – Section F

Bid Item Number	Item	Quantity	Unit
009E3320	Checker	Lump Sum	LS
120E0100	Unclassified Excavation, Digouts	50	CuYd
120E6000	Water for Dust Control	100.0	MGal
120E6200	Water for Granular Material	358.2	MGal
260E1010	Base Course	20,130.2	Ton
260E1030	Base Course, Salvaged	6,774.1	Ton
260E1050	Base Course, Salvaged Asphalt Mix	2,790.3	Ton
320E1200	Asphalt Concrete Composite	100.0	Ton
320E3000	Compaction Sample	3	Each
330E0010	MC-70 Asphalt for Prime	2.9	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	14.6	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	7.3	Ton
330E2000	Sand for Flush Seal	126.0	Ton
332E0010	Cold Milling Asphalt Concrete	4,149	SqYd
380E0130	12" Nonreinforced PCC Pavement	46.1	SqYd
380E3020	6" PCC Driveway Pavement	125.8	SqYd
380E6110	Insert Steel Bar in PCC Pavement	58	Each
680E2502	Crushed Rock	224.7	Ton

Alternate A

Bid Item Number	Item	Quantity	Unit
320E0007	PG 64-28 Asphalt Binder	608.3	Ton
320E1050	Class E Asphalt Concrete	10,479.6	Ton

Alternate B

Bid Item Number	Item	Quantity	Unit
320E0007	PG 64-28 Asphalt Binder	537.6	Ton
320E1050	Class E Asphalt Concrete	10,759.5	Ton

Plot Scale - 1:200

Plotted From - tpr13670

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SECTION B ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	4.129	Mile
009E3250	Miscellaneous Staking	1.607	Mile
009E3280	Slope Staking	1.406	Mile
009E3290	Structure Staking	7	Each
009E3300	Three Man Survey Crew	40.0	Hour
100E0100	Clearing	Lump Sum	LS
110E0300	Remove Concrete Curb and Gutter	4,908	Ft
110E0400	Remove Drop Inlet	18	Each
110E0460	Remove Manhole	3	Each
110E0600	Remove Fence	140	Ft
110E0605	Remove Chain Link Fence	64	Ft
110E0730	Remove Beam Guardrail	407.0	Ft
110E1010	Remove Asphalt Concrete Pavement	7,317.3	SqYd
110E1100	Remove Concrete Pavement	13,170.6	SqYd
110E1140	Remove Concrete Sidewalk	2,617.9	SqYd
110E1200	Remove Paving Brick	160.0	SqYd
110E1300	Remove Concrete Retaining Wall	125.3	Ft
110E1305	Remove Timber Retaining Wall	20.0	Ft
110E5720	Salvage Drop Inlet Frame and Grate Assembly	20	Each
110E6210	Remove Thrie Beam Guardrail for Reset	26.0	Ft
110E7065	Remove Channel Rock Wall	16	Ft
110E7700	Remove Drop Inlet Frame and Grate Assembly for Reset	1	Each
110E7802	Remove Fence for Reset	24	Ft
120E1100	Unclassified/Rock Excavation	49,513	CuYd
120E2000	Undercutting	10,974	CuYd
120E6100	Water for Embankment	191.0	MGal
240E0010	Obliterate Old Road	2	Sta
250E0020	Incidental Work, Grading	Lump Sum	LS
270E0020	Salvage and Stockpile Asphalt Mix Material	2,533.6	Ton
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	6,774.1	Ton
380E3520	6" PCC Approach Pavement	2,606.3	SqYd
380E3525	6" Reinforced PCC Approach Pavement	77.9	SqYd
380E3540	8" PCC Approach Pavement	527.6	SqYd
380E4050	8" PCC Fillet Section	447.0	SqYd
450E0122	18" RCP Class 2, Furnish	4,700	Ft
450E0130	18" RCP, Install	4,700	Ft
450E0142	24" RCP Class 2, Furnish	650	Ft
450E0150	24" RCP, Install	650	Ft
450E0162	30" RCP Class 2, Furnish	158	Ft
450E0170	30" RCP, Install	158	Ft
450E0182	36" RCP Class 2, Furnish	590	Ft
450E0190	36" RCP, Install	590	Ft
450E0202	48" RCP Class 2, Furnish	54	Ft
450E0210	48" RCP, Install	54	Ft
450E0212	54" RCP Class 2, Furnish	134	Ft
450E0220	54" RCP, Install	134	Ft
450E0408	18" RCP Bend, Furnish	15	Each
450E0409	18" RCP Bend, Install	15	Each
450E0424	30" RCP Bend, Furnish	2	Each
450E0425	30" RCP Bend, Install	2	Each
450E0428	36" RCP Bend, Furnish	1	Each
450E0429	36" RCP Bend, Install	1	Each
450E0700	RCP Tee, Furnish	5	Each
450E0701	RCP Tee, Install	5	Each
450E2008	18" RCP Flared End, Furnish	1	Each
450E2009	18" RCP Flared End, Install	1	Each
450E3052	48" RCP Arch Class 2, Furnish	40	Ft
450E3060	48" RCP Arch, Install	40	Ft
450E3072	60" RCP Arch Class 2, Furnish	240	Ft
450E3080	60" RCP Arch, Install	240	Ft

Bid Item Number	Item	Quantity	Unit
450E8013	24" CMP to RCP Transition, Furnish	1	Each
450E8015	24" Pipe Transition, Install	1	Each
450E8023	36" CMP to RCP Transition, Furnish	1	Each
450E8025	36" Pipe Transition, Install	1	Each
462E0100	Class M6 Concrete	202.4	CuYd
462E0200	Controlled Density Fill	27.3	CuYd
470E0020	Pipe Handrail	12.4	Ft
480E0100	Reinforcing Steel	29,569	Lb
480E0200	Epoxy Coated Reinforcing Steel	114	Lb
600E0200	Type II Field Laboratory	1	Each
620E0300	Special Right-of-Way Fence	344	Ft
620E4100	Reset Fence	24	Ft
621E0040	4' Chain Link Fence with Top Rail	45	Ft
630E5100	Reset Thrie Beam Guardrail with Wood Posts	26.0	Ft
650E0060	Type B66 Concrete Curb and Gutter	118	Ft
650E0080	Type B68 Concrete Curb and Gutter	11,478	Ft
650E0360	Type BL66 Concrete Curb and Gutter	39	Ft
650E0380	Type BL68 Concrete Curb and Gutter	104	Ft
650E1080	Type F68 Concrete Curb and Gutter	85	Ft
650E2100	Special Concrete Curb and Gutter	55	Ft
650E4060	Type C6 Concrete Gutter	302	Ft
650E4680	Type P8 Concrete Gutter	2,066	Ft
650E6280	8" Concrete Valley Gutter	151.2	SqYd
651E0040	4" Concrete Sidewalk	50,802	SqFt
651E0060	6" Concrete Sidewalk	2,395	SqFt
651E0140	4" Reinforced Concrete Sidewalk	542	SqFt
651E0160	6" Reinforced Concrete Sidewalk	1,164	SqFt
651E5000	Sidewalk Drain	77.6	Ft
651E7000	Type 1 Detectable Warnings	680	SqFt
670E1200	Type B Frame and Grate Assembly	66	Each
670E2200	Type C Frame and Grate	11	Each
670E4122	Type L Frame and Grate Assembly	5	Each
670E5200	Special Frame and Grate Assembly	9	Each
670E5340	4' x 11' Precast Concrete Type S Drop Inlet Lid	15	Each
670E5400	Precast Drop Inlet Collar	3	Each
670E7000	Reset Drop Inlet Frame and Grate Assembly	1	Each
671E6007	Type A7 Manhole Frame and Lid	1	Each
720E1015	Bank and Channel Protection Gabion	15.0	CuYd
900E0010	Refurbish Single Mailbox	1	Each
900E0012	Refurbish Double Mailbox	5	Each

CLEARING

Before removal items are staked and clearing activities begin, the Contractor shall contact the Engineer to determine the limits of clearing for the project. If the trees or shrubs that are supposed to remain within the limits of work are damaged or destroyed by the Contractor, the Contractor shall replace them with the same size and type at the Contractor's expense.

The Contractor shall cut, limb and deck the merchantable timber within the parcel 5 property from 21+55 to 24+25-R. The merchantable timber shall be stacked at 22+00-R for the property owner. Contact the property owner, Randy Havlik, at 605-641-0740 prior to construction work beginning. All costs for this work to salvage the timber for the property owner shall be incidental to the contract lump sum price for "Clearing".

UTILITIES

See Section U of the plans for information concerning utilities along the project.

GRADING OPERATIONS

Water for Embankment is estimated at the rate of 10 gallons of water per cubic yard of Embankment minus Waste.

The estimated cubic yards of excavation and/or embankment required to construct outlet ditches, ditch blocks, and approaches are included in the earthwork balance notes on the profile sheets.

Special ditch grades and other sections of the roadway different than the typical section(s) shall be constructed to the limits shown on the cross sections. If significant changes to the cross sections are necessary during construction, the Engineer shall contact the Designer for the proposed change.

Any excavation required for pioneering outside of the proposed work limits shall be shaped to fit the surrounding finished and/or natural slopes as directed by the Engineer.

TYPE II FIELD LABORATORY

The lab shall be equipped with an internet connection such as DSL, cable modem, or other approved service. The internet connection shall be provided with a multi-port wireless router. The internet connection shall be a minimum speed of 512 Kb unless limited by job location and approved by the DOT. Prior to installing the wireless router the Contractor shall submit the wireless router's technical data to the Area Office to check for compatibility with the state's computer equipment. The internet connection is intended for state personnel usage only. The Contractor's personnel are prohibited from using the internet connection unless pre-approved by the Project Engineer.

The Contractor shall submit a copy of each monthly bill for calls charged to this phone at the end of each month. The Project Engineer will then audit the bills to ensure all calls are legitimate and then initiate a Construction Change Order (CCO) to reimburse the Contractor for the actual phone calls made, including local and long distance calls. Reimbursement will not be made for fees associated with the purchase, installation, disconnection, monthly line charges, and incidentals involved in the installation, maintenance, and disconnection of the phone (including attachments). These items shall be incidental to the contract unit price per each for "Type II Field Laboratory".

CONSTRUCTION STAGING AREA

The City of Deadwood will allow the Contractor to have a construction staging area in a portion of the city parking lot from 84+00 to 92+50-L. Contact the City of Deadwood Public Works Director, Ron Green, at 605-578-3082 for the allowable location, dates and other restrictions for the use of this parking lot.

TYPE 1 DETECTABLE WARNINGS

Detectable warnings shall be in compliance with the Americans with Disability Act regulations.

The detectable warnings shall be installed according to the manufacturer's installation instructions.

A concrete thickness equal to the adjacent concrete sidewalk thickness and 2 inches of granular cushion material shall be placed below the Type 1 Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness shall be transitioned at the rate of 1" per foot to match the adjacent concrete sidewalk thickness.

The detectable warnings shall be a brick red color for application in concrete curb ramps. Cast iron plates may be a natural patina (weathered steel).

When Type 1 Detectable Warnings are specified, the Contractor shall furnish and install only one of the products listed in the Type 1 Detectable Warnings table.

Type 1 Detectable Warnings

Product	Manufacturer
Detectable Warning Plate Cast Iron Plate	Neenah Foundry Company Neenah, WI 800-558-5075 http://www.neenahfoundry.com/
Detectable Warning Plate Cast Iron Plate	Deeter Foundry Lincoln, NE 800-234-7466 http://www.deeter.com/
Detectable Warning Plate Cast Iron Plate (No Coating)	East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 http://www.ejiw.com
CAST-DWD Cast Iron Plate	Key 3 Casting (Northern Foundry) 555 West 25 th Street Hibbing, MN 55746 218-263-8871 http://key3casting.com

6" REINFORCED PCC APPROACH PAVEMENT AND SIDEWALK FROM 67+83 TO 69+08-R AND 69+37.46 TO 70+33.80-L

The proposed PCC Approach Pavement and Sidewalk from 67+83 to 69+08-R and 69+37.46 to 70+33.80-L shall be 6" thick and reinforced with No. 4 steel rebar. The reinforcing steel shall be spaced at 12" in both directions and shall follow the requirements in standard plate 651.70, including similar rebar spacing and clearance.

SIDEWALK CURB

Sidewalk curb shall be constructed according to Detail D and general notes of standard plate 651.03. Provide sidewalk curb along the outside edge of proposed sidewalk at locations specified in the plans in addition to the Type 3 curb ramps. The locations and limits may need to be adjusted during construction to best fit the existing ground surface. The use of sidewalk curb at additional locations shall be approved by the Engineer. The height will vary to match the existing ground surface and the maximum height shall be 12".

STEEPENED SIDEWALK

Steepened sidewalk has a cross slope greater than 2%. Steepened sidewalk is provided between the back of curb and the minimum 5 ft wide pedestrian access route sidewalk raised to meet existing building doorways, sidewalks or other features. See the SIDEWALK ADJACENT TO BUILDING DETAIL. Provide steepened sidewalk at the locations specified in the plans and others as needed. The locations and limits may need to be adjusted during construction. All costs associated with steepened sidewalk shall be incidental to the contract unit price per square foot for the corresponding concrete sidewalk bid item.

CONCRETE SIDEWALK ADJACENT TO BUILDINGS

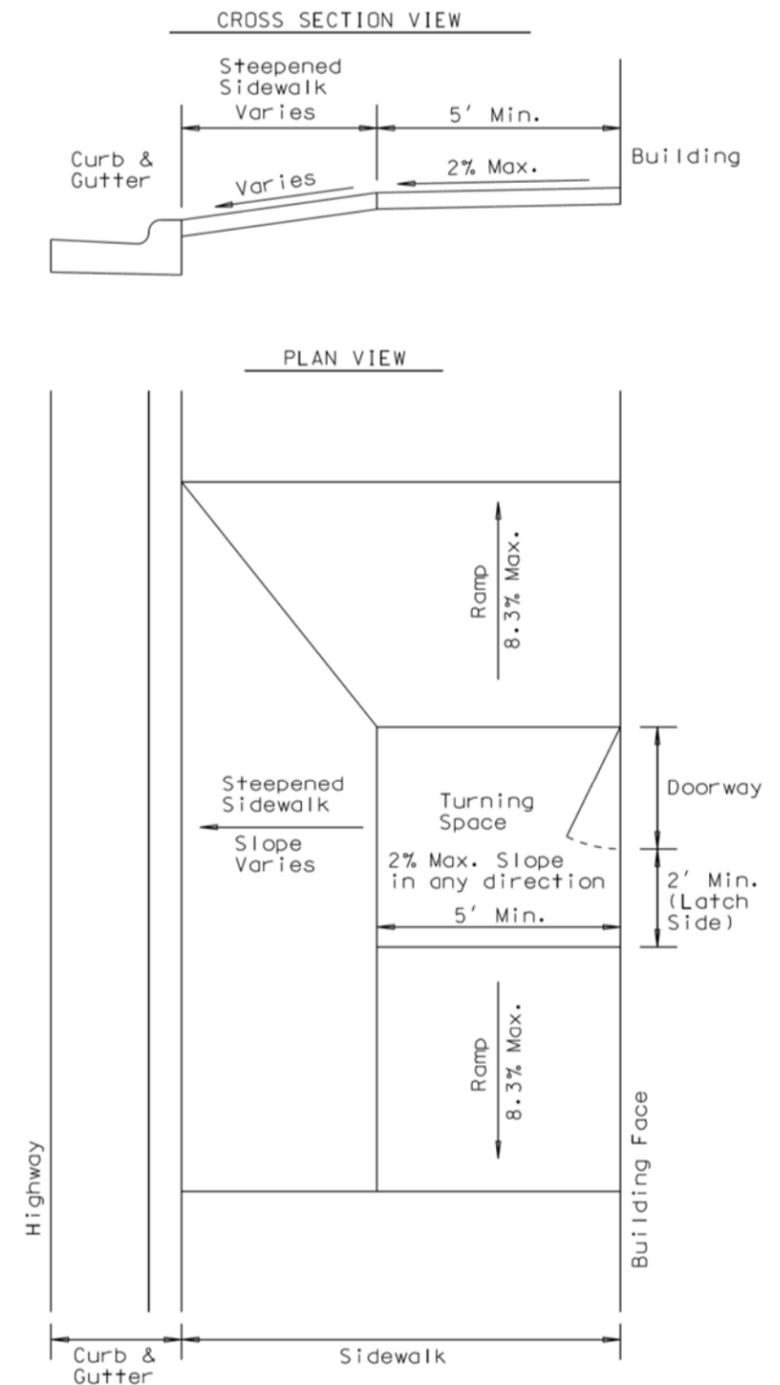
When placing sidewalk adjacent to buildings, the elevation of the new sidewalk may be either higher or lower than the existing sidewalk. This may require that modifications be made to building exteriors, such as removal of siding, installation of flashing, etc. Building modifications shall be approved by the Engineer. All costs associated with modifying buildings for sidewalk placement shall be incidental to the contract unit price per square foot for the corresponding concrete sidewalk bid item.

Sidewalk placed adjacent to building doorways should nearly match the doorway threshold and shall have a maximum 1/4" vertical rise at the doorway threshold. A sidewalk turning space shall be provided at building doorways according to the SIDEWALK ADJACENT TO BUILDING DETAIL. Sidewalk should ramp down from the turning space to the typical sidewalk with an 8.3% maximum ramp slope where needed. The locations where these ramps are needed are specified in the plans. Additional ramp locations may be required. The locations without ramps assume that a slope less than 5% can be used. The limits of the ramp and steepened sidewalk shown in the plans may need to be adjusted to the actual doorway location and to meet sidewalk slope requirements.

Sidewalk for the doorway at 92+19-L cannot meet all these requirements due to the close proximity of the adjacent doorway. Meet the requirements that can be.

Sidewalk and step for the doorway at 92+80-L shall be constructed according to the detail on the curb ramp detail sheet. The proposed step at this location shall have a vertical face and shall have a slip resistant coating provided according to the notes for SLIP RESISTANT COATING FOR CONCRETE STAIRWAY.

SIDEWALK ADJACENT TO BUILDING DETAIL



88+20-8'L to 88+22-20'R
Take Out 18"-26' RCP
(Incidental Work, Grading)

89+91-18'R to 89+91-8'L
Take Out 18"-26' RCP
(Incidental Work, Grading)

92+34-19'L to 92+52-19'L
Take Out 24"-18' RCP
(Incidental Work, Grading)

92+57-160'L to 92+69-43'R
Take Out 42"-210' RCP
with Bend
(Incidental Work, Grading)

92+69-48'R to 92+69-136'R
Retain 36" RCP

Remove Drop Inlets
with Frame & Grate
at the following locations:
88+22-20'R
89+91-18'R
89+96-20'L
92+34-19'L
92+37-19'R
92+69-43'R
93+81-19'R

STATE OF SOUTH DAKOTA	PROJECT NH-PH 0085(20)26	SHEET B55	TOTAL SHEETS B125
Plotting Date: 08/27/2014		Rev 08/27/14 SB	

Install 2' x 3' Type B Drop Inlet with Type B Frame & Grate at the following locations:
89+23-19.17' L
89+43.17-38.5'L
89+80.48-38.5'L
90+00-19.17' L
92+13.5-19.17' L
92+41.23-48.1'R
93+81.09-26.97'R (with 6" concrete collar)

92+69.09-48.1'R
Install 5.5'x3' Type B Drop Inlet with Type B Frame & Grate

Install 4'x3' Type B Drop Inlet with Type B Frame & Grate at the following locations:
88+38-19.60' R
90+00-19.17' R
92+13.5-26.08' R

State of South Dakota,
Department of Transportation
(Helen M. Callan & City of Deadwood)
Parcel 1

87+40 to 89+42 L
Do Not Disturb Trees, Shrubs, Rocks, Landscaping, and 2 Handrails outside of Worklimits.

ORIGINAL TOWN OF DEADWOOD

89+80-40'L
Elim Ent.

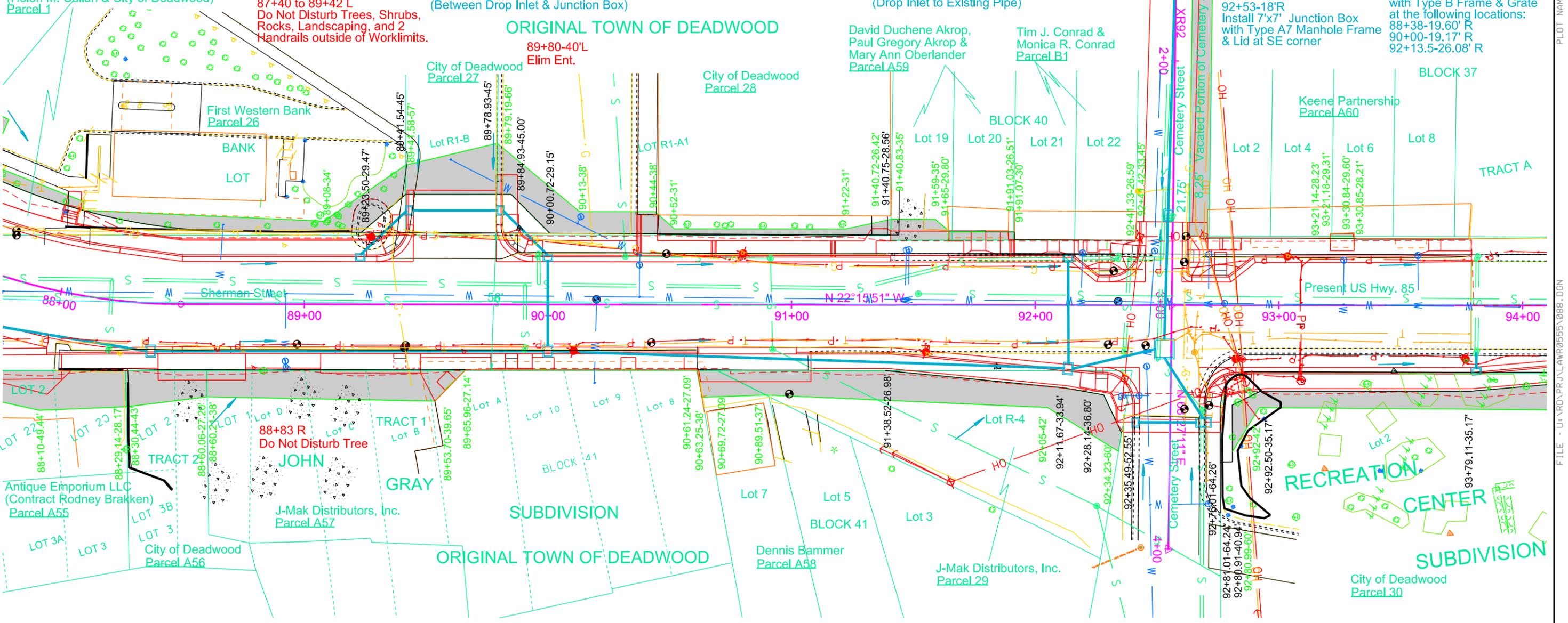
David Duchene Akrop,
Paul Gregory Akrop &
Mary Ann Oberlander
Parcel A59

Tim J. Conrad &
Monica R. Conrad
Parcel B1

3+00 XR92
=92+56 Mainline

92+53-18'R
Install 7'x7' Junction Box with Type A7 Manhole Frame & Lid at SE corner

Install 4'x3' Type B Drop Inlet with Type B Frame & Grate at the following locations:
88+38-19.60' R
90+00-19.17' R
92+13.5-26.08' R



Antique Emporium LLC
(Contract Rodney Brakken)
Parcel A55

88+83 R
Do Not Disturb Tree

J-Mak Distributors, Inc.
Parcel A57

Dennis Bammer
Parcel A58

J-Mak Distributors, Inc.
Parcel 29

City of Deadwood
Parcel 30

Parcel A56
88+29.14 to 88+60.21 R
Temporary easement for
Fill, sidewalk & drive containing
427 sq ft, more or less

Parcel 28
89+78.93 to 91+40.83 L
Temporary easement for
Entrance, sidewalk,
& pipe containing
1120 sq ft, more or less

Parcel A57
88+60.06 to 89+65.96 R
Temporary easement for
Fill, sidewalk & drives containing
1167 sq ft, more or less

Parcel A58
90+61.24 to 90+89.51 R
Temporary easement for
Sidewalk & drive containing
186 sq ft, more or less

Parcel A59
91+40.75 to 91+91.07 L
Temporary easement for
Sidewalk & drive containing
281 sq ft, more or less

Parcel B1
91+91.03 to 92+41.42 L
Temporary easement for
Building Modification
for Sidewalk

Parcel A60
93+21.14 to 93+30.85 L
Temporary easement for
Sidewalk containing
12 sq ft, more or less

Parcel 29
90+69.72 to 92+35.49 R
Temporary easement for
Sidewalk & drive containing
1759 sq ft, more or less

Parcel 30
92+80.91 to 94+70 R
Temporary easement for
Cut, fill, & sidewalk containing
1667 sq ft, more or less

92+53-18'R to 92+60.6-248.7'L
Install 60"-240' RCP Arch (48', 114', 48', & 30')
& 3-24" on 60" Arch x 8' RCP Tees with the risers
placed below the proposed Type C Drop Inlets
(Junction Box to Outlet)

92+80 to 94+69 R
Do Not Disturb Trees, Bushes,
Landscaping, Picnic Tables, and
Concrete Pads outside of Worklimits

PLOT SCALE - 1"=40'

PLOTTED FROM - TRPB15896

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CURB & GUTTER LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-PH 0085(20)26	B70	B125

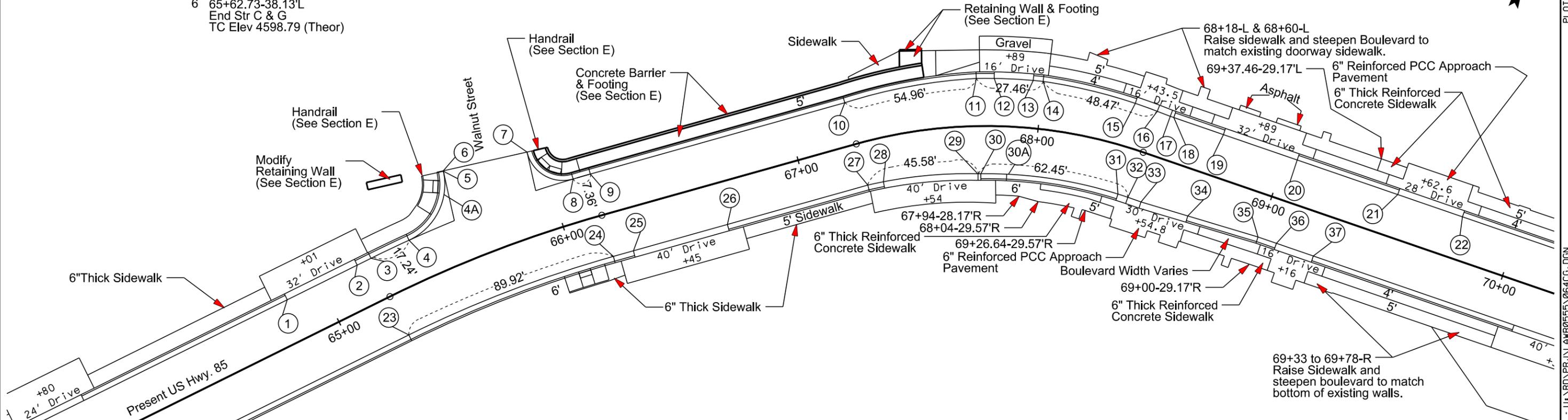
Plotting Date: 08/28/2014 Rev 08/27/14 SB

NOTE: All Curb & Gutter shown on this sheet is Type B68 and all P gutter is Type P8 except as noted. All curbside sidewalk is 6' wide and all boulevard sidewalk is 5' wide except as noted

- | | | | | | | |
|--|--|---|--|--|---|--|
| 1 64+85-17.50'L
End Str C & G
Begin Type P Gutter
TC Elev 4601.73 (Theor) | 4 65+39.95-17.50'L
End 517.5' Rad C & G
Begin 25' Rad Fillet
TC Elev 4599.68 | 7 65+95.33-33.64'L
Begin 15' Rad Fillet
TC Elev 4598.65 (Theor) | 10 67+24.78-17.50'L
End Str C & G
Begin 216.90' Rad C & G
TC Elev 4595.95 | 13 67+96.30-19.50'L
End 217.5' Rad Type P Gutter
Begin 217.5' Rad C & G
TC Elev 4594.95 (Theor) | 16 68+44.27-17.73'L
End 216.5' Rad Type P Gutter
Begin Type P Gutter
TC Elev 4594.17 (Theor) | 19 68+73-17.50'L
End Str C & G
Begin Type P Gutter
TC Elev 4593.81 (Theor) |
| 2 65+17-17.50'L
End Type P Gutter
Begin Str C & G
TC Elev 4600.53 (Theor) | 4A 65+59.78-29.33'L
Grade Break
TC Elev 4598.71 (Theor) | 8 66+09.36-17.50'L
End 15' Rad Fillet
Begin 517.5' Rad C & G
TC Elev 4597.67 (Theor) | 11 67+75-19.50'L
End 216.9' Rad C & G
Begin 217.5' Rad C & G
TC Elev 4595.24 | 14 68+00-19.50'L
End 217.5' Rad Str C & G
Begin 216.5' Rad C & G
TC Elev 4594.90 (Theor) | 17 68+50.00-17.50'L
End Type P Gutter
Begin Type P Gutter
TC Elev 4594.09 (Theor) | 20 69+05-17.50'L
End Type P Gutter
Begin Str C & G
TC Elev 4593.45 (Theor) |
| 3 65+23.29-17.50'L
End Str C & G
Begin 517.5' Rad C & G
TC Elev 4600.29 | 5 65+62.70-37.94'L
End 25' Rad Fillet
Begin Str C & G
TC Elev 4598.79 (Theor) | 9 66+16.48-17.50'L
End 517.5' Rad C & G
Begin Str C & G
TC Elev 4597.53 | 12 67+81.70-19.50'L
End 217.5' Rad C & G
Begin 217.5' Rad Type P Gutter
TC Elev 4595.15 (Theor) | 15 68+35.50-18.08'L
End 216.5' Rad C & G
Begin 216.5' Rad Type P Gutter
TC Elev 4594.31 (Theor) | 18 68+51.50-17.50'L
End Type P Gutter
Begin Str C & G
TC Elev 4594.07 (Theor) | 21 69+48.60-17.50'L
End Str C & G
Begin Type P Gutter
TC Elev 4593.00 (Theor) |
| | 6 65+62.73-38.13'L
End Str C & G
TC Elev 4598.79 (Theor) | | | | | 22 69+76.60-17.50'L
End Type P Gutter
Begin Str C & G
TC Elev 4592.72 (Theor) |

PLOT SCALE - 1"=40'

PLOT NAME - 70



- | | | | | |
|--|---|---|--|---|
| 23 65+23.29-17.50'R
End Str C & G
Begin 482.5' Rad C & G
TC Elev 4600.51 | 25 66+25.00-17.50'R
End Str Type F68 C & G
Begin Type P Gutter
TC Elev 4597.38 (Theor) | 28 67+31.98-17.78'R
End 178.8' Rad Type F68 C & G
Begin 178.8' Rad Type P Gutter
TC Elev 4595.64 (Theor) | 31 68+39.53-19.50'R
End 178.5' Rad C & G
Begin 178.5' Rad Type P Gutter
TC Elev 4594.36 (Theor) | 34 68+70-18.70'R
End Type P Gutter
Begin Str C & G
TC Elev 4594.05 (Theor) |
| 24 66+16.48-17.50'R
End 482.5' Rad C & G
Begin Str Type F68 C & G
TC Elev 4597.62 | 26 66+65.00-17.50'R
End Type P Gutter
Begin Str Type F68 C & G
TC Elev 4596.55 (Theor) | 29 67+75.00-19.50'R
End 178.8' Rad Type P Gutter
Begin 178.5' Rad Type P Gutter
TC Elev 4595.02 (Theor) | 32 68+44.27-19.50'R
End 178.5' Rad Type P Gutter
Begin Type P Gutter
TC Elev 4594.32 (Theor) | 35 69+00-17.50'R
End Str C & G
Begin Str C & G
TC Elev 4593.73 |
| | 27 67+24.78-17.50'R
End Str Type F68 C & G
Begin 178.8' Rad C & G
TC Elev 4595.73 | 30 67+76.23-19.50'R
End 178.5' Rad Type P Gutter
Begin 178.5' Rad Type F68 C & G
TC Elev 4595.01 (Theor) | 33 68+50-19.50'R
End Type P Gutter
Begin Type P Gutter
TC Elev 4594.27 (Theor) | 36 69+08-17.50'R
End Str C & G
Begin Type P Gutter
TC Elev 4593.64 (Theor) |
| | | 30A 67+88-19.50'R
End 178.5' Rad Type F69 C & G
Begin 178.5' Rad Type B68 C & G
TC Elev 4594.85 | | 37 69+24-17.50'R
End Type P Gutter
Begin Str C & G
TC Elev 4593.47 (Theor) |

PLOTTED FROM - TRPR15896

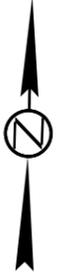
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CURB & GUTTER LAYOUT

STATE OF SOUTH DAKOTA	PROJECT NH-PH 0085(20)26	SHEET B71	TOTAL SHEETS B125
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Plotting Date: 08/27/2014 Rev 08/27/14 SB

NOTE: All Curb & Gutter shown on this sheet is Type B68 and all P gutter is Type P8 except as noted. All curbside sidewalk is 6' wide and all boulevard sidewalk is 5' wide except as noted



PLOT SCALE - 1"=40'

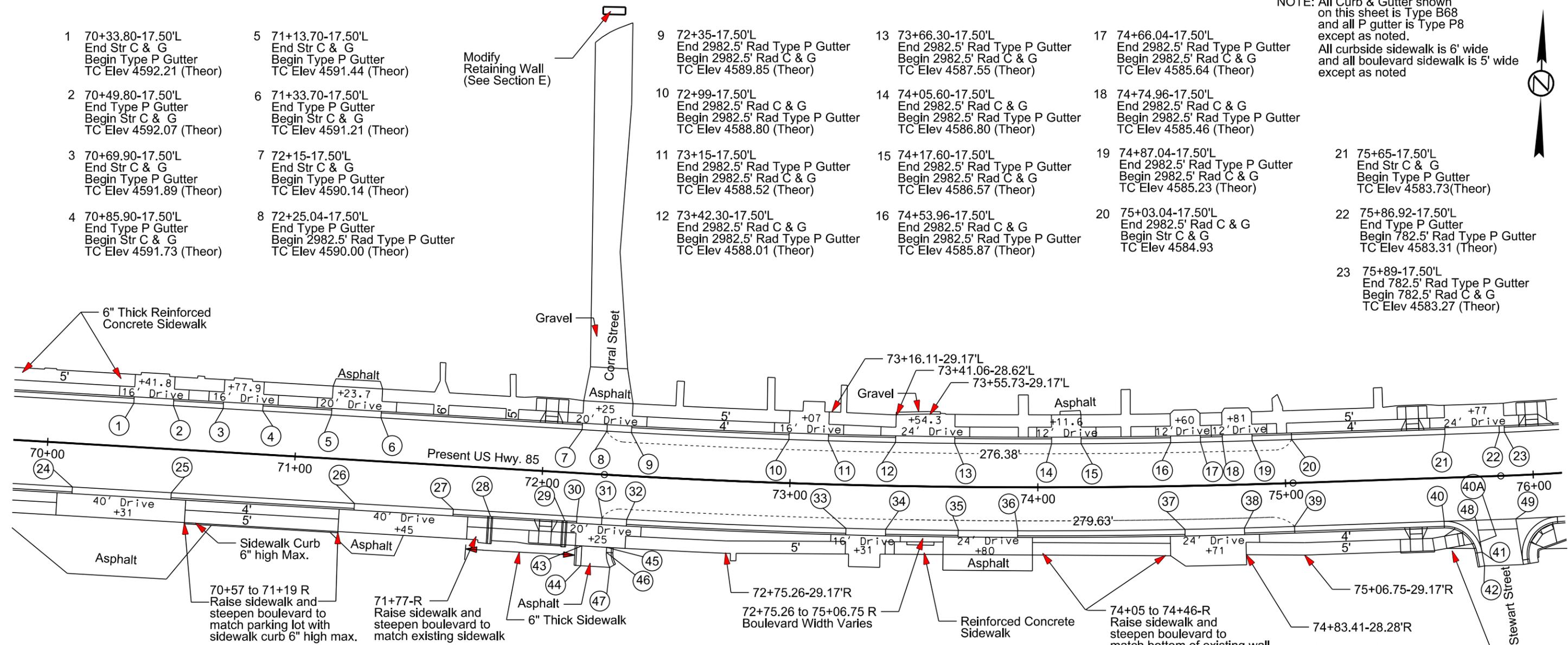
PLOT NAME - 71

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PLOTTED FROM - TRPR15896

- | | | | | |
|---|---|--|--|--|
| 1 70+33.80-17.50'L
End Str C & G
Begin Type P Gutter
TC Elev 4592.21 (Theor) | 5 71+13.70-17.50'L
End Str C & G
Begin Type P Gutter
TC Elev 4591.44 (Theor) | 9 72+35-17.50'L
End 2982.5' Rad Type P Gutter
Begin 2982.5' Rad C & G
TC Elev 4589.85 (Theor) | 13 73+66.30-17.50'L
End 2982.5' Rad Type P Gutter
Begin 2982.5' Rad C & G
TC Elev 4587.55 (Theor) | 17 74+66.04-17.50'L
End 2982.5' Rad Type P Gutter
Begin 2982.5' Rad C & G
TC Elev 4585.64 (Theor) |
| 2 70+49.80-17.50'L
End Type P Gutter
Begin Str C & G
TC Elev 4592.07 (Theor) | 6 71+33.70-17.50'L
End Type P Gutter
Begin Str C & G
TC Elev 4591.21 (Theor) | 10 72+99-17.50'L
End 2982.5' Rad C & G
Begin 2982.5' Rad Type P Gutter
TC Elev 4588.80 (Theor) | 14 74+05.60-17.50'L
End 2982.5' Rad C & G
Begin 2982.5' Rad Type P Gutter
TC Elev 4586.80 (Theor) | 18 74+74.96-17.50'L
End 2982.5' Rad C & G
Begin 2982.5' Rad Type P Gutter
TC Elev 4585.46 (Theor) |
| 3 70+69.90-17.50'L
End Str C & G
Begin Type P Gutter
TC Elev 4591.89 (Theor) | 7 72+15-17.50'L
End Str C & G
Begin Type P Gutter
TC Elev 4590.14 (Theor) | 11 73+15-17.50'L
End 2982.5' Rad Type P Gutter
Begin 2982.5' Rad C & G
TC Elev 4588.52 (Theor) | 15 74+17.60-17.50'L
End 2982.5' Rad Type P Gutter
Begin 2982.5' Rad C & G
TC Elev 4586.57 (Theor) | 19 74+87.04-17.50'L
End 2982.5' Rad Type P Gutter
Begin 2982.5' Rad C & G
TC Elev 4585.23 (Theor) |
| 4 70+85.90-17.50'L
End Type P Gutter
Begin Str C & G
TC Elev 4591.73 (Theor) | 8 72+25.04-17.50'L
End Type P Gutter
Begin 2982.5' Rad Type P Gutter
TC Elev 4590.00 (Theor) | 12 73+42.30-17.50'L
End 2982.5' Rad C & G
Begin 2982.5' Rad Type P Gutter
TC Elev 4588.01 (Theor) | 16 74+53.96-17.50'L
End 2982.5' Rad C & G
Begin 2982.5' Rad Type P Gutter
TC Elev 4585.87 (Theor) | 20 75+03.04-17.50'L
End 2982.5' Rad C & G
Begin Str C & G
TC Elev 4584.93 |
| | | | | 21 75+65-17.50'L
End Str C & G
Begin Type P Gutter
TC Elev 4583.73(Theor) |
| | | | | 22 75+86.92-17.50'L
End Type P Gutter
Begin 782.5' Rad Type P Gutter
TC Elev 4583.31 (Theor) |
| | | | | 23 75+89-17.50'L
End 782.5' Rad Type P Gutter
Begin 782.5' Rad C & G
TC Elev 4583.27 (Theor) |

Modify Retaining Wall (See Section E)



- | | | | | | | | |
|---|---|---|--|--|--|---|---|
| 24 70+11-17.50'R
End Str C & G
Begin Type P Gutter
TC Elev 4592.64 (Theor) | 27 71+65-17.50'R
End Type P Gutter
Begin Str C & G
TC Elev 4591.05 (Theor) | 30 72+15-17.50'R
End Str C & G
Begin Type P Gutter
TC Elev 4590.36 (Theor) | 33 73+23.05-17.50'R
End 3017.5' Rad C & G
Begin 3017.5' Rad Type P Gutter
TC Elev 4588.59 (Theor) | 36 73+91.93-17.50'R
End 3017.5' Rad Type P Gutter
Begin 3017.5' Rad C & G
TC Elev 4587.28 (Theor) | 39 75+03.04-17.50'R
End 3017.5' Rad C & G
Begin Str C & G
TC Elev 4585.14 | 42 75+79.15-36'R
End Str C & G
TC Elev 4584.27 (Match Existing) | 46 72+27.60-31.19'R
End Str Type B66 C & G
Begin 11' Rad C & G
TC Elev 4590.65 (Theor) |
| 25 70+51-17.50'R
End Type P Gutter
Begin Str C & G
TC Elev 4592.28 (Theor) | 28 71+80.05-19.50'R
Sidewalk Drain | 31 72+25.04-17.50'R
End Type P Gutter
Begin 3017.5' Rad Type P Gutter
TC Elev 4590.22 (Theor) | 34 73+38.95-17.50'R
End 3017.5' Rad Type P Gutter
Begin 3017.5' Rad C & G
TC Elev 4588.29 (Theor) | 37 74+59.07-17.50'R
End 3017.5' Rad C & G
Begin 3017.5' Rad Type P Gutter
TC Elev 4585.99 (Theor) | 40 75+63.41-17.50'R
End Str C & G
Begin 15' Rad Fillet
TC Elev 4583.98 | 43 72+17.63-29.17'R
Begin Str Type B66 C & G
TC Elev 4590.80 (Theor) | 47 72+29.35-37.17'R
End 11' Rad Type B66 C & G
TC Elev 4590.60 (Match Existing) |
| 26 71+25-17.50'R
End Str C & G
Begin Type P Gutter
TC Elev 4591.53 (Theor) | 29 72+10.10-19.50'R
Sidewalk Drain | 32 72+35-17.50'R
End 3017.5' Rad Type P Gutter
Begin 3017.5' Rad C & G
TC Elev 4590.06 (Theor) | 35 73+68.07-17.50'R
End 3017.5' Rad C & G
Begin 3017.5' Rad Type P Gutter
TC Elev 4587.74 (Theor) | 38 74+82.93-17.50'R
End 3017.5' Rad Type P Gutter
Begin 3017.5' Rad C & G
TC Elev 4585.53 (Theor) | 40A 75+77.21-26.52'R
Grade Break
TC Elev 4583.82 (Theor) | 44 72+17.63-37.17'R
End Str Type B66 C & G
TC Elev 4591.10 (Match Existing) | 48 75+76.37-17.50'R
Begin Valley Gutter |
| | | | | | 41 75+78.31-30.39'R
End 15' Rad Fillet
Begin Str C & G
TC Elev 4584.05 | 45 72+27.60-29.17'R
Begin Str Type B66 C & G
TC Elev 4590.66 (Theor) | 49 75+92.28-17.50'R
End Valley Gutter |

See Notes for Trolley Stop Turnout at 75+50-R to verify work needed at this location:

70+57 to 71+19 R Raise sidewalk and steepen boulevard to match parking lot with sidewalk curb 6" high max.

71+77-R Raise sidewalk and steepen boulevard to match existing sidewalk

72+75.26 to 75+06.75 R Boulevard Width Varies

74+05 to 74+46-R Raise sidewalk and steepen boulevard to match bottom of existing wall

CURB & GUTTER LAYOUT

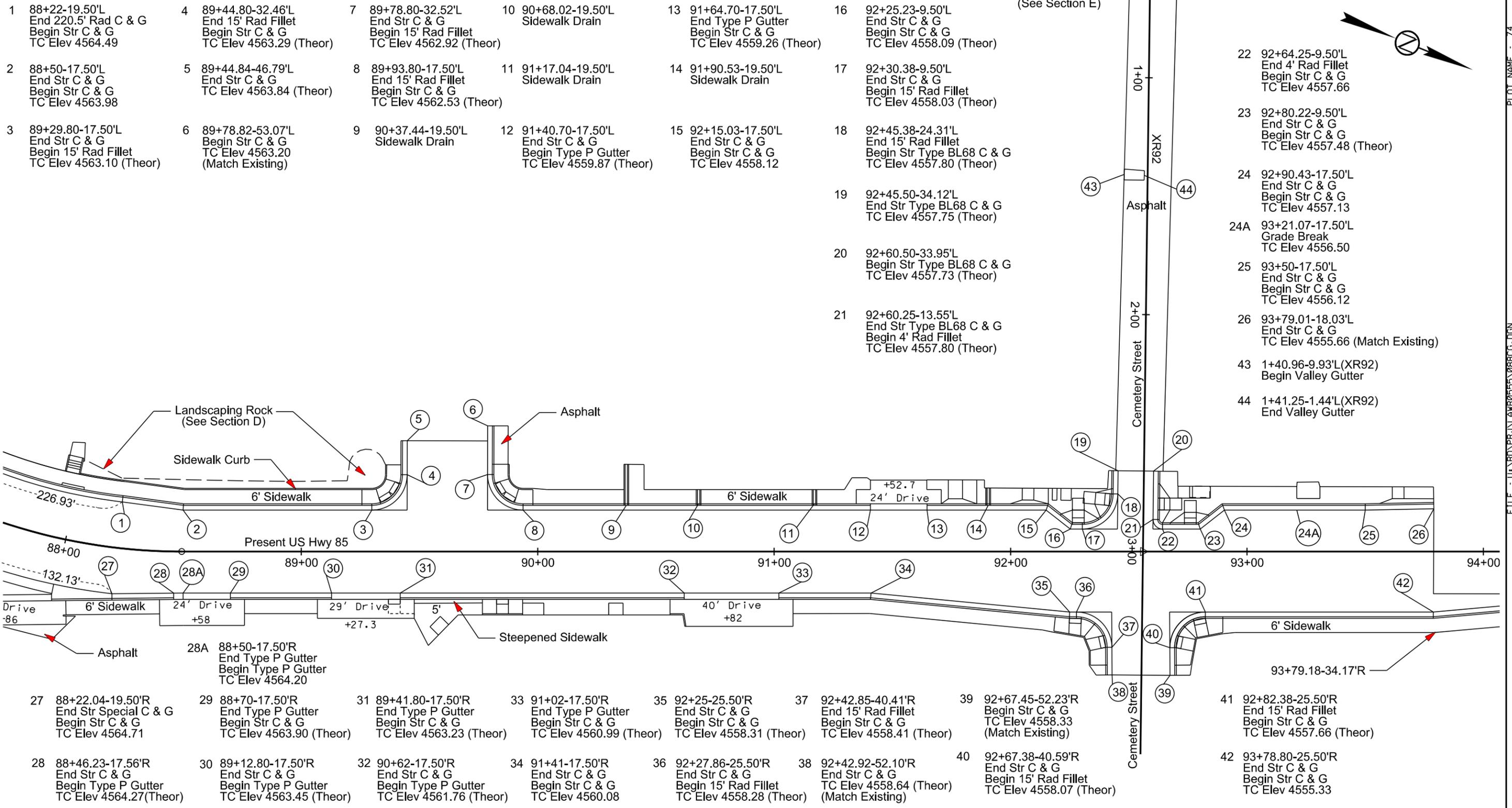
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-PH 0085(20)26	B74	B125

Plotting Date: 08/27/2014 Rev 08/27/14 SB

NOTE: All Curb & Gutter shown on this sheet is Type B68 and all P gutter is Type P8 except as noted. All curbside sidewalk is 6' wide and all boulevard sidewalk is 5' wide except as noted

PLOT SCALE - 1"=40'

PLOT NAME - 74



1 88+22-19.50'L
End 220.5' Rad C & G
Begin Str C & G
TC Elev 4564.49

2 88+50-17.50'L
End Str C & G
Begin Str C & G
TC Elev 4563.98

3 89+29.80-17.50'L
End Str C & G
Begin 15' Rad Fillet
TC Elev 4563.10 (Theor)

4 89+44.80-32.46'L
End 15' Rad Fillet
Begin Str C & G
TC Elev 4563.29 (Theor)

5 89+44.84-46.79'L
End Str C & G
TC Elev 4563.84 (Theor)

6 89+78.82-53.07'L
Begin Str C & G
TC Elev 4563.20
(Match Existing)

7 89+78.80-32.52'L
End Str C & G
Begin 15' Rad Fillet
TC Elev 4562.92 (Theor)

8 89+93.80-17.50'L
End 15' Rad Fillet
Begin Str C & G
TC Elev 4562.53 (Theor)

9 90+37.44-19.50'L
Sidewalk Drain

10 90+68.02-19.50'L
Sidewalk Drain

11 91+17.04-19.50'L
Sidewalk Drain

12 91+40.70-17.50'L
End Str C & G
Begin Type P Gutter
TC Elev 4559.87 (Theor)

13 91+64.70-17.50'L
End Type P Gutter
Begin Str C & G
TC Elev 4559.26 (Theor)

14 91+90.53-19.50'L
Sidewalk Drain

15 92+15.03-17.50'L
End Str C & G
Begin Str C & G
TC Elev 4558.12

16 92+25.23-9.50'L
End Str C & G
Begin Str C & G
TC Elev 4558.09 (Theor)

17 92+30.38-9.50'L
End Str C & G
Begin 15' Rad Fillet
TC Elev 4558.03 (Theor)

18 92+45.38-24.31'L
End 15' Rad Fillet
Begin Str Type BL68 C & G
TC Elev 4557.80 (Theor)

19 92+45.50-34.12'L
End Str Type BL68 C & G
TC Elev 4557.75 (Theor)

20 92+60.50-33.95'L
Begin Str Type BL68 C & G
TC Elev 4557.73 (Theor)

21 92+60.25-13.55'L
End Str Type BL68 C & G
Begin 4' Rad Fillet
TC Elev 4557.80 (Theor)

22 92+64.25-9.50'L
End 4' Rad Fillet
Begin Str C & G
TC Elev 4557.66

23 92+80.22-9.50'L
End Str C & G
Begin Str C & G
TC Elev 4557.48 (Theor)

24 92+90.43-17.50'L
End Str C & G
Begin Str C & G
TC Elev 4557.13

24A 93+21.07-17.50'L
Grade Break
TC Elev 4556.50

25 93+50-17.50'L
End Str C & G
Begin Str C & G
TC Elev 4556.12

26 93+79.01-18.03'L
End Str C & G
TC Elev 4555.66 (Match Existing)

43 1+40.96-9.93'L(XR92)
Begin Valley Gutter

44 1+41.25-1.44'L(XR92)
End Valley Gutter

28A 88+50-17.50'R
End Type P Gutter
Begin Type P Gutter
TC Elev 4564.20

29 88+70-17.50'R
End Type P Gutter
Begin Str C & G
TC Elev 4563.90 (Theor)

30 89+12.80-17.50'R
End Str C & G
Begin Type P Gutter
TC Elev 4563.45 (Theor)

31 89+41.80-17.50'R
End Type P Gutter
Begin Str C & G
TC Elev 4563.23 (Theor)

32 90+62-17.50'R
End Str C & G
Begin Type P Gutter
TC Elev 4561.76 (Theor)

33 91+02-17.50'R
End Type P Gutter
Begin Str C & G
TC Elev 4560.99 (Theor)

34 91+41-17.50'R
End Str C & G
Begin Str C & G
TC Elev 4560.08

35 92+25-25.50'R
End Str C & G
Begin Str C & G
TC Elev 4558.31 (Theor)

36 92+27.86-25.50'R
End Str C & G
Begin 15' Rad Fillet
TC Elev 4558.28 (Theor)

37 92+42.85-40.41'R
End 15' Rad Fillet
Begin Str C & G
TC Elev 4558.41 (Theor)

38 92+42.92-52.10'R
End Str C & G
TC Elev 4558.64 (Theor)
(Match Existing)

39 92+67.45-52.23'R
Begin Str C & G
TC Elev 4558.33
(Match Existing)

40 92+67.38-40.59'R
End Str C & G
Begin 15' Rad Fillet
TC Elev 4558.07 (Theor)

41 92+82.38-25.50'R
End 15' Rad Fillet
Begin Str C & G
TC Elev 4557.66 (Theor)

42 93+78.80-25.50'R
End Str C & G
Begin Str C & G
TC Elev 4555.33

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GENERAL NOTES - (CONT'D)

- It may be necessary to temporarily omit curb and gutter and provide temporary gravel ramps to maintain streets and approaches. All costs to perform 1/2 width construction on approaches and streets shall be included in the various associated contract bid items.
- All earthwork and pipe installation shall be completed in such a manner that drainage is maintained throughout the project. This work may involve installation of temporary tie-ins, dikes, pumping of water, plugging inlets, and temporary diversion of water utilizing pipes.

The Contractor shall coordinate embankment operations and pipe installations so that drainage is continuous, but does not damage new or existing grading sections. If necessary, temporary pipe, temporary connections, plugs, and channels may be used to avoid damage to new or existing grade or partial omission of permanent drainage features may be required. In addition, permanent drainage features may need to be installed in phases to match sequencing. The cost to install, maintain, and remove temporary items and any incidentals necessary for partial installations of permanent drainage features shall be incidental to the various pipe bid items.

PHASE 1:

Install storm sewer outlets on Cemetery St. Construct the Mickelson Trail retaining wall from Station 21+25 to 24+40 Lt. Perform rock excavation from Sta. 60+50 to 63+00 Rt. and Sta. 22+00 to 25+50 Rt. The work includes constructing a retaining wall, trail grading, concrete barrier installation, rock excavation, and storm sewer outlet installation. Phases 1A, 1B, and 1C can be constructed simultaneously.

- Phase 1A** - Close a portion of Cemetery St. and install storm sewer outlet from Sta. 92+53-34' Lt to 92+60-248.7' Lt. Install 7'x7' Junction Box at Sta. 92+53-18' Rt. and tie in storm sewer. Maintain two lanes of traffic during the Junction Box construction. Place temporary gravel surface to carry traffic thru the winter months if storm sewer work is completed after the seasonal limitations for asphalt.
- Phase 1B** - Construct Mickelson Trail retaining wall section from Sta. 21+25 to 24+40 Lt. Install 38 moveable concrete barriers and 2 sloped ends 1 ft. off of edge line to protect the Mickelson Trail temporary detour. The contractor must maintain a 5 ft. pedestrian path thru the work area at all time during construction. Portable water filled barriers shall be installed to channelize and protect the pedestrians during the retaining wall construction. The temporary path shall be a uniform gravel surface. All costs for supplying and installing the water filled barriers, placing gravel, maintaining and removing the temporary path shall be incidental to the contract lump sum bid item for Temporary Pedestrian Facility(s).
- Phase 1C** - Install 35 moveable concrete barriers and 2 sloped ends 2 ft. off of centerline to allow for wide loads and close the NB lane to perform rock excavation from Sta. 60+50 to 63+00 Rt. Flaggers shall be used during daytime work operations and temporary traffic signals shall be used to maintain traffic thru the work area overnight. The Contractor will be allowed 10 working days to stop traffic for no more than 30 minutes from 9 A.M. to 3 P.M to allow for cleanup of rock debris. See Temporary Moveable Concrete Barrier Layouts and standard plates 634.23 and 634.26 for installation of concrete barriers and temporary traffic signals.

- Phase 1D** - Remove the 38 moveable concrete barriers and 2 sloped ends at the Mickelson Trail retaining wall construction, place 4" of granular material, and pave the asphalt surface to carry two 10 ft. lanes of traffic during the rock excavation. Reset the 38 moveable concrete barriers and 2 sloped ends at the edge of the new asphalt shoulder. Install an additional 44 moveable concrete barriers and 2 sloped ends 2 ft. off of centerline to allow for 2 – 10 ft. lanes thru the rock excavation area from Sta. 22+00 to 25+50 Rt. Flaggers shall be used during daytime work operations and temporary traffic signals shall be used to maintain traffic thru the work area overnight. The Contractor will be allowed 10 working days to stop traffic for no more than 30 minutes from 9 A.M. to 3 P.M to allow for cleanup of rock debris. See Temporary Moveable Concrete Barrier Layouts and standard plates 634.23 and 634.26 for installation of concrete barriers and temporary traffic signals.

PHASE 2:

Construct project from Station 54+45 to 93+79 half width at a time using flaggers and pilot cars. The work includes asphalt removal, utility work, drop inlets, storm sewer, mainline grading, curb & gutter, approaches, asphalt paving, sidewalk, removal of existing traffic signal equipment, new traffic signal conduit, wiring, junction boxes, detector loops, controller cabinet and footings, new roadway lighting, erosion control, temporary and permanent pavement markings.

- Install traffic control devices to close the southbound lane from Station 84+00 to 90+00. Remove concrete curb and gutter, and landscaping at Station 85+50 Lt to 88+00 Lt. Close the approach to the City of Deadwood Railroad Property. Perform grading and place 4" of granular material to carry two lanes of traffic during construction.
- Switch traffic control to close the NB lane from Station 54+45 to 93+79. Salvage asphalt surfacing from the NB lane from Station 54+45 to 93+79. Remove luminaire poles and footings adjacent to the NB lane.
- Relocate and remove power poles at Cemetery St. and remove traffic signals. Install a 4-way stop condition at Cemetery St.
- Perform utility work - water, gas, sewer, power, and communications. Install storm sewer and drop inlets.
- Install traffic signal conduit, electrical cabinet, signal conduit, traffic signal poles with mast arms, and new traffic signals. Install luminaire conduit, luminaire poles, junction boxes, and electrical cabinets from Station 54+45 to 93+79.
- Complete grading, install curb and gutter, concrete approaches, sidewalk and ADA ramps.
- Pave asphalt surface for the NB lane, install temporary paint and temporary pavement markings during paving.
- Switch the traffic to close the SB lane and use pilot car and flaggers during daytime operations. Perform utility work - water, gas, sewer, power, and communications. Install storm sewer, drop inlets, and remove existing luminaire poles for the SB lane.

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- Undercut, construct new grade for SB lane. Install retaining walls at Sta. 54+44 to 56+00 Lt and Sta. 60+30 to 60+70 Lt. Install curb and gutter, concrete approaches, sidewalk and ADA ramps.
- Pave asphalt surface, install temporary paint and temporary pavement markings during paving. Install permanent pavement markings upon completing the top lift of asphalt surfacing from Station 54+45 to 93+79.

PHASE 3:

Construct project from Station 12+48 to 42+31 half width at a time using flaggers and pilot cars. Mill and overlay existing asphalt from Station 42+31 to 54+45. Asphalt removal, utility work, drop inlets, storm sewer, excavation, mainline grading, curb & gutter, approaches, asphalt paving, sidewalk, new roadway lighting, erosion control, temporary and permanent pavement markings.

- Install traffic control to close NB lane and use a pilot car and flaggers to carry traffic in one lane from Station 12+48 to 42+31.
- Cold mill and salvage asphalt surfacing for NB lane from Station 12+48 to 42+31 and place travel gravel to carry traffic on the SB lane. Mill 2" off surface from Station 42+31 to 54+45 to be overlaid during the final lift of paving.
- Perform utility work - water, gas, sewer, power, and communications. Install storm sewer, drop inlets, and remove existing luminaire poles from Station 12+48 to 42+31.
- Undercut the subgrade, construct new grade, curb and gutter, sidewalks, and approaches from Station 12+48 to 25+00 and Station 34+00 to 42+31. Construct new grade, storm sewer, curb and gutter, and approaches in the new alignment area from Station 25+00 to 34+00.
- Switch traffic control to close the SB lane. Cold mill and salvage asphalt surfacing for the SB lane from Station 12+48 to 42+31 and place travel gravel to carry traffic on the NB lane. Mill 2" off surface from Station 42+31 to 54+45 to be overlaid during the final lift of paving.
- Pave first 2 lifts of asphalt surface, and install temporary pavement markings during paving from Station 12+48 to 42+31. Pave the final lift from Station 12+48 to 54+45.
- Install luminaire conduit, junction boxes, electrical cabinets, and luminaire poles.
- Install permanent pavement markings upon completing the top lift of asphalt surfacing.

COORDINATION BETWEEN PROJECTS

Coordination with SDDOT project P 0085 (72) 23, PCN 028L will be required for work and traffic control on this project. The Lead Main Street project is currently under construction. The Contractor shall coordinate with the Lead project traffic control to ensure traffic moves smoothly through the two projects and to eliminate conflicting detour routes.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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CITY OF DEADWOOD EVENTS

The Contractor should prepare for events scheduled for the City of Deadwood during construction. The Contractor is not required to stop construction operations during these events, but should be aware of the increased volumes in traffic and pedestrians. The Contractor shall coordinate with the City of Deadwood for official dates for events. The following is a list of events for 2015, and a similar timeframe for 2016:

April 9-11: Forks, Corks & Kegs – Food & Wine Festival
 May 2: Cinco de Mayo
 June 19 & 20: Wild Bill Days
 July 4: Independence Day parade
 July 21 – 25: Days of '76
 August 3 – Legend's Ride
 August 20 – 23: Kool Deadwood Nites
 August TBD – Badland's Circuit Finals Steer Roping
 September 18 – 19: Deadwood Jam
 October 2 – 3: Oktoberfest
 October 8 -10: Wild West Songwriter's Festival
 October 31: Deadweird

CONTRACTOR FURNISHED PROGRESS SCHEDULES

The Contractor shall furnish the Engineer two copies of a bar chart method progress schedule at the preconstruction meeting. The schedule shall consist of a construction schedule and brief written narrative. The schedule shall contain the following information:

1. A time scale to graphically show percentage of work scheduled for completion within the contract completion requirements.
2. Definition and relation of work activities to contract pay items.
3. Work activities (prime contractor and all subcontractor activities) in the order the work will be performed including submittals, approvals, deliveries, temporary traffic control, and permanent signing/stripping.
4. All major work activities that are controlling factors in the completion of the work.
5. The time required for each activity and its relationship in time to other activities.
6. The total expected time to complete all work.
7. The expected work shifts in days per week and hours per day and the days when work is not expected to be performed.
8. Expected adverse weather delays.

The schedule shall be updated, revised and resubmitted on a bi-weekly interval until the project is substantially complete. There will be no direct payment for the contractor furnished schedule. All costs associated with the schedule shall be incidental to the related items. Failure to properly submit the required construction schedules will result in the withholding of progress payments until an approved schedule is received.

4-WAY STOP CONDITION AT CEMETERY STREET

The Contractor shall install a 4-way stop condition at Cemetery St. prior to the removal of the existing traffic signals. Stop Ahead signs (W3-1) shall be installed in advance of the 4-way stop condition. The 4-way stop condition shall be in place until the new traffic signals are installed and functioning properly.

MICKELSON TRAIL RETAINING WALL INSTALLATION

The Contractor shall at all times maintain a 5 ft. access for pedestrians and the traveling public during the construction of the retaining wall system at Station 21+25 to 24+40 Lt. Wall installation and grading operations shall be adjusted accordingly to accommodate the traveling public. The Contractor shall maintain a safe and visible path through the work zone at the retaining wall location. The Contractor shall utilize Longitudinal Pedestrian Barricades to protect the pedestrians from the retaining wall work zone. The pedestrian path shall use the temporary water filled barriers to protect and channelize the pedestrians thru the work zone, have a gravel surface that is uniform with no irregularities and be constructed to the satisfaction of the Engineer. All costs, labor and materials for this work shall be incidental to the contract lump sum price for "Temporary Pedestrian Facility(s)".

LONGITUDINAL PEDESTRIAN BARRICADE

There is an estimated 350 ft. of Longitudinal Pedestrian Barricades that shall be utilized at the Mickelson Trail retaining wall to protect pedestrians from the retaining wall construction. All costs associated with installing, stabilize, and removing the Longitudinal Pedestrian Barricades shall be incidental to the contract unit price per foot for "Longitudinal Pedestrian Barricades".

Longitudinal pedestrian barricades shall be ADA compliant and FHWA approved. If used to provide positive protection to pedestrians from traffic, they shall meet crashworthy requirements appropriate for the application.

Longitudinal pedestrian barricades shall be made of high density polyethylene and constructed such that they may be filled with water or sand for stability. High contrast colors shall be utilized.

Longitudinal pedestrian barricades shall not block water drainage from the walkway. A gap height or opening from the walkway surface up to 2 inches maximum height is allowed for drainage purposes. Longitudinal pedestrian barricades shall be 32 inches high or greater. They should interlock such that gaps do not allow pedestrians to stray from the channelized path.

Some possible suppliers of Longitudinal Pedestrian Barricade products are listed below. The list is not all inclusive. The devices must meet the requirements stated above.

2001M-BM
 The Yodock Wall Company INC.
 900 Patterson Drive
 Bloomsburg, PA 17815
 Freephone: 1-88-4-YODOCK
 Phone: 1-570-380-2856
 FAX: 570-380-2859
 Email: contact@yodock.com
 Internet Site: <http://www.yodock.com>

TrafFix Water-Wall
 TrafFix Devices Inc.
 160 Avenida La Pata
 San Clement, CA 92673
 Phone: 949-361-5663
 FAX: 949-361-9205
 Email: ycervantes@traffixdevices.com
 Internet Site: <http://www.traffixdevices.com>

PROTECTION OF PEDESTRIANS

The Contractor shall install orange plastic safety fence around all unattended excavation areas where pedestrians may exist. Pedestrian traffic shall be protected from open excavations and other hazards in and around the construction site to comply with the Americans with Disabilities Act.

The Contractor shall maintain and make repairs to the fence until directed to remove it by the Engineer.

Holes and drop-offs which present hazards to pedestrians, bicyclists, and others who would not typically use the roadway shall be protected by safety fence. Cost for the safety fence, in these situations shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

TEMPORARY PEDESTRIAN FACILITY(S) FOR TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR)

The Contractor shall develop and provide for a continuous Temporary Pedestrian Access Route (TPAR) for this Project. The TPAR shall clearly address all non-motorized users in the construction zone. The Contractor shall submit this plan to the Engineer prior to the scheduling of the pre-construction meeting. The pre-construction meeting will not be allowed to be scheduled until this document is submitted.

The TPAR must have a minimum width of 60 inches (5 feet) and guide pedestrians through and/or around the Project by using devices such as signage, barricades, and temporary curb ramps or blended transitions. The TPAR shall provide unimpeded access along the full length of the project on one side of the street or the other, with a minimum of 1 crossing per block. The Contractor shall provide flagging to assist pedestrians to cross the work zone during periods of construction traffic at the pedestrian crossing locations. All flagging for pedestrian crossings shall be incidental to the contract lump sum price for "Temporary Pedestrian Facility(s)". The Mickelson Trail can be used as a pedestrian path where it is adjacent to the roadway.

Where the TPAR is exposed to adjacent construction, excavation drop-offs, traffic, or other hazards, it shall be protected with a pedestrian barricade or channelizing device. All TPARs must have a smooth, level, firm, stable, slip resistant surface and shall meet the applicable requirements of the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way. This work may include but is not limited to sawing existing sidewalk to leave half in place, staging sidewalk removal and construction to maintain access, installing safety fence around work areas, and construction and removal of temporary boardwalk. The Contractor shall determine the actual location of temporary access during construction and shall be approved by the Engineer. All costs, labor and materials for this work shall be incidental to the contract lump sum price for "Temporary Pedestrian Facility(s)".

The Contractor shall provide and update a weatherproof map of the unrestricted paths and crossing locations to be posted at each intersection quadrant and business. All costs, labor and materials for this work shall be incidental to the contract lump sum price for "Temporary Pedestrian Facility(s)". All information regarding the TPAR shall be communicated through the Public Information Specialist.

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MOVABLE F SHAPE CONCRETE BARRIER, END SECTIONS

The Contractor shall furnish 6 Movable F Shape Concrete Barrier End Sections to be placed at both ends of each run of interior sections of barriers.

The Department shall retain possession of the end sections. At the completion of the project the Contractor shall remove and deliver the Concrete Barrier, End Sections to SDDOT South Maintenance Yard adjacent to Hwy 79 south of Rapid City.

The Contractor shall contact Bob Smith (605-394-1646) at the Rapid City Area Office to arrange for the return of the Concrete Barrier, End Sections.

All costs associated with furnishing, transporting, setting, connecting, and hauling the end sections back to DOT Maintenance Yard shall be incidental to the contract unit price per each for "Movable F Shape Concrete Barrier, End Section".

If the concrete barrier end sections need to be moved and reset on the project, all costs for removing, transporting, and resetting the end sections shall be incidental to the contract unit price per each for "Remove and Reset Traffic Control Movable Concrete Barrier".

TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS

The Contractor shall place and maintain Type F movable concrete barriers. Type F movable concrete barriers shall be placed at the rock excavation areas at Sta. 60+50 to 63+00-Rt., the Mickelson Trail retaining wall location from approx. Sta. 21+00 to 25+00 Lt., and the rock excavation at Sta. 22+00 to 25+50-Rt. The barriers shall be installed as per Standard Plate #634.65 and the special detail for each installation or as directed by the Engineer.

The South Dakota Department of Transportation shall furnish the movable concrete barriers for this project. The Contractor shall pick up the concrete barriers from DOT Property located adjacent to Interstate 90 at Exit 52 or the South Maintenance Yard adjacent to Hwy 79 south of Rapid City. At the completion of the project the Contractor shall remove and deliver the Concrete Barriers back to Exit 52. All costs associated with picking up from Exit 52, transporting, setting, connecting, and hauling back to Exit 52 shall be incidental to the contract unit price per each for "Traffic Control Movable Concrete Barrier".

The Contractor shall contact Bob Smith (605-394-1646) at the Rapid City Area Office to arrange for pick up and return of the barrier.

Barriers to be adjusted or moved shall be disconnected from adjacent barriers to minimize damage to connecting pins. Pins damaged by the Contractor shall be replaced at no cost to the Department.

All costs associated with removing concrete barriers from the initial placement and resetting/bolting, etc. in a new location will be paid for at the contract unit price per each for "Remove and Reset Traffic Control Movable Concrete Barrier". No additional payment will be made for minor adjustments.

Concrete barrier sections shall be placed as depicted in the plans to comply with clear zone requirements and as required by the Engineer. The barriers shall be pinned and bolted together as per Standard Plate #628.01 or as directed by the Engineer. Concrete barriers shall, at all times, be set on a flat surface with a minimum of 4' flat behind the barrier.

DELINEATION OF MOVEABLE CONCRETE BARRIERS

A linear delineation system panel shall be attached to the traffic side of the barrier section. The panel shall be white.

The linear delineation system shall be 4" long and 6" in height and be constructed of aluminum formed into a shape to provide retroreflective properties across a wide range of angles. It shall be sheeted with super high or very high intensity sheeting. The Contractor shall furnish, install, and maintain one panel along traffic side of the barrier.

The panels remain the property of SDDOT and remain attached to the barriers at the end of the project.

The panels shall be installed at the center of the barrier when measured along the length, with the top of the panel 4" below the top of the barrier. Installation shall be as per the manufacturer's recommendation using stainless steel inserts and bolts. This will allow for easy removal for replacement of damaged panels or to replace with an alternate color.

Replacement of damaged linear delineation system panels shall be furnished and replaced by the Contractor.

All costs associated with furnishing, installing, maintaining, removing for reattachment, and reattaching the linear delineation system shall be included in the contract unit price per each for Linear Delineation System Panel, Barrier Mounted. Payment shall be for the most installed at any one time.

CHAIN LINK FENCE FOR ROCK EXCAVATION

Six-foot Chain Link Fence with Tension Wired Top shall be installed inside of the concrete barriers to provide additional protection to the traveling public at the rock excavation locations as directed by the Engineer. The posts for the chain link fence shall be installed through the in-place asphalt concrete surfacing.

Any asphalt disturbed by the installation of the posts shall be repaired after removal of the fence.

All costs associated with installation, repair and removal of the fence shall be paid for at the contract unit price per foot for "6' Chain Link Fence with Tension Wired Top."

All costs associated with repair of the existing asphalt at locations where posts have been installed shall be incidental to the contract unit price per foot for "6' Chain Link Fence with Tension Wired Top."

PORTABLE TEMPORARY TRAFFIC SIGNAL SYSTEM

Portable Temporary Traffic Signal Systems shall be used to maintain traffic overnight during the Rock Excavation at Sta. 22+00 to 25+50 Rt. and Sta. 60+50 to 63+00 Rt. Flaggers shall be used during daytime work operations to stop traffic during rock excavation and cleanup. Portable Traffic Signal System will be paid for at the contract unit price per each. Each is defined as a site. One site will be considered to be two portable signal units (master and slave unit).

ADJACENT PROPERTY REQUIREMENTS FROM 38+41 to 42+00-L

The Contractor shall not store construction equipment at any time on the temporary easement. The Contractor shall ensure access to this property by constructing either of the entrances at 40+11-L or 41+47-L one at a time and will not construct both at the same time. The Contractor shall contact the adjacent property owner prior to construction of the entrance at 41+47-L at 248-524-2776, 248-417-7202, 605-578-1294 (Ext. 300) or 605-641-4323.

CONTRACTOR FURNISHED PORTABLE CHANGEABLE MESSAGE SIGN

The Contractor shall furnish 3 portable changeable message signs to be located in advance of the work zone. The Contractor shall place 2 portable changeable message signs on Highway 85 for northbound and southbound traffic and 1 on Highway 14A south of the intersection of Highway 85 and 14A. Message signs shall be installed to inform the traveling public of when construction will begin for each phase, changes that impact traffic, and as directed by the Engineer. The changeable message sign shall be furnished, programmed and maintained for the entire project duration.

The Engineer shall approve the locations and messages to be programmed into the message signs. The message signs shall be clearly visible from a minimum of 900 feet and shall be solar powered or wired directly to a power source. Diesel and gas powered message signs will not be allowed.

The portable message signs will be paid for at the contract unit price per each for Contractor Furnished Portable Changeable Message Sign. Payment will be full compensation for furnishing, maintaining, and relocating as many times as required by the Engineer and the Contractor's operations.

KEEP RIGHT SIGNS

Keep Right Signs that are used in two way traffic situations shall be "Safe-Hit RubberTough 360" with heavy duty sign post, or an approved equal. The sign post shall be predominantly orange in color and shall be reflectorized. The sign panel shall be 18" x 24". The back side of the sign panel shall also be sheeted with high intensity retro-reflective sheeting for visibility.

Keep Right Signs shall be maintained in a like new condition as directed by the Engineer.

Payment for Keep Right Signs will be at the contract unit price per unit for Traffic Control. Payment shall be full compensation for furnishing, installing, maintaining, replacing, and removal of the Keep Right Signs as required by the Engineer.

OVERWIDTH DETOUR SIGNING

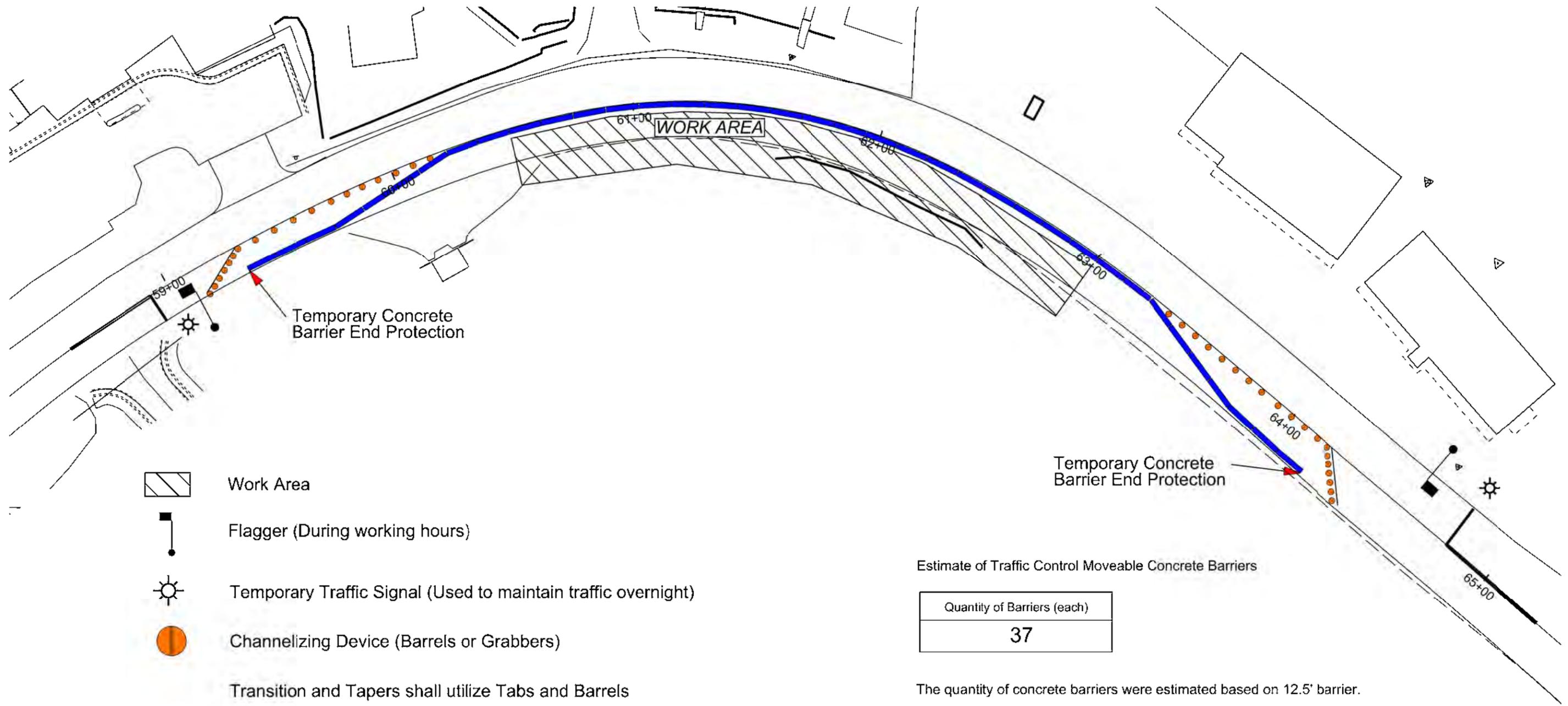
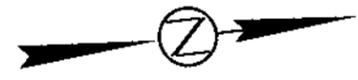
Overwidth signs shall be furnished and installed by the Contractor. See Traffic Control Overwidth Detour sheet for signs and locations. See the Typical Overwidth Sign Detail sheet for sheeting color and legend size details.

It will be the responsibility of the Contractor to maintain and reinstall these signs during the project as required by construction progress. Upon completion of the project the Contractor shall remove the width restriction signs. Payment for furnishing, installing, maintaining, and removing the overwidth signs and hardware shall be paid for at the contract unit price per square foot for "Detour Signing".

TEMPORARY MOVEABLE CONCRETE BARRIER LAYOUT

Rock Excavation from Sta. 60+50 to 63+00 Rt.

Plot Scale - 1:40



-  Work Area
-  Flagger (During working hours)
-  Temporary Traffic Signal (Used to maintain traffic overnight)
-  Channelizing Device (Barrels or Grabbers)

Transition and Tapers shall utilize Tabs and Barrels

Sign spacing, barrel spacing, taper lengths, and temporary signal locations shall conform to standard plates 634.23 and 634.26

Estimate of Traffic Control Moveable Concrete Barriers

Quantity of Barriers (each)
37

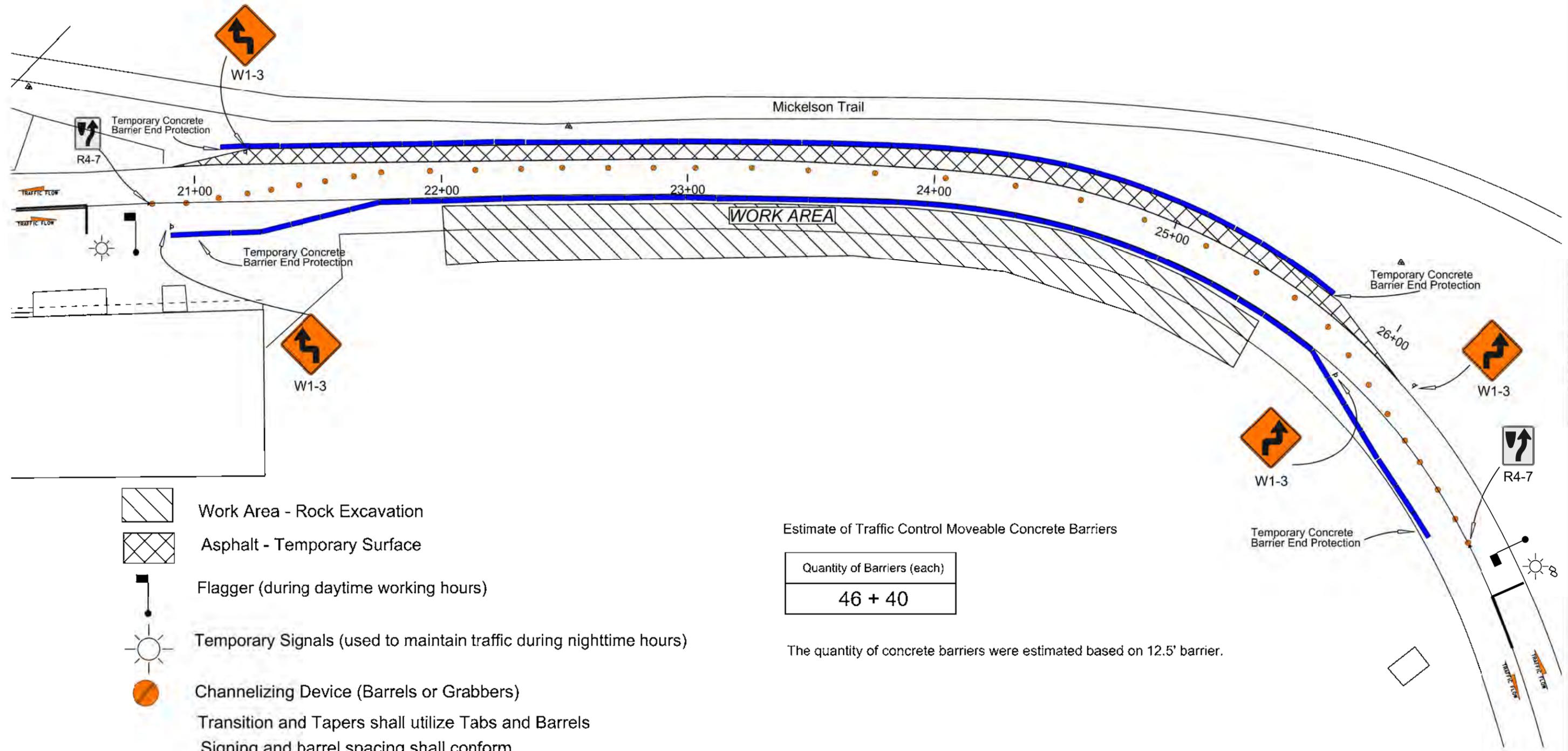
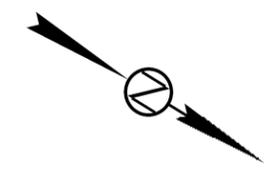
The quantity of concrete barriers were estimated based on 12.5' barrier.

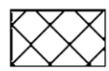
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TEMPORARY MOVEABLE CONCRETE BARRIER LAYOUT

Rock Excavation Sta. 22+00 to 25+50 Rt.



-  Work Area - Rock Excavation
-  Asphalt - Temporary Surface
-  Flagger (during daytime working hours)
-  Temporary Signals (used to maintain traffic during nighttime hours)
-  Channelizing Device (Barrels or Grabbers)
- Transition and Tapers shall utilize Tabs and Barrels
- Signing and barrel spacing shall conform to standard plate 634.23 and 634.26

Estimate of Traffic Control Moveable Concrete Barriers

Quantity of Barriers (each)
46 + 40

The quantity of concrete barriers were estimated based on 12.5' barrier.

Plot Scale - 1:40

Plotted From - Irrc12247

File - ...IBarrier 3 - Rock Excavation (Sta. 22+00 to 25+50).dgn

SECTION D ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
110E1690	Remove Sediment	30.0	CuYd
110E1695	Remove Sediment Filter Bag	2,880	Ft
110E1700	Remove Silt Fence	2,256	Ft
120E6300	Water for Vegetation	15.4	MGal
230E0010	Placing Topsoil	1,675	CuYd
230E0020	Placing Contractor Furnished Topsoil	800	CuYd
230E0050	Soil Amendment	7,875	Lb
730E0206	Type D Permanent Seed Mixture	378	Lb
730E0251	Special Permanent Seed Mixture 1	12	Lb
730E0252	Special Permanent Seed Mixture 2	2	Lb
731E0100	Fertilizing	3,395	Lb
733E0100	Sodding	855	SqYd
734E0042	Soil Stabilizer	11,000.0	SqYd
734E0103	Type 3 Erosion Control Blanket	4,500	SqYd
734E0131	Type 1 Turf Reinforcement Mat	2,705.0	SqYd
734E0170	Temporary Sediment Barrier	2,000	Ft
734E0180	Sediment Filter Bag	2,880	Ft
734E0604	High Flow Silt Fence	2,500	Ft
734E0610	Mucking Silt Fence	170	CuYd
734E0620	Repair Silt Fence	625	Ft
734E0845	Sediment Control at Inlet with Frame and Grate	109	Each
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	195	Ft
734E3000	Water Pollution Control	Lump Sum	LS
734E5000	Dewatering	144	Hour
900E5149	Landscaping Rock	5.5	CuYd
900E5152	Weed Barrier Fabric	70	SqYd

WEED BARRIER FABRIC/LANDSCAPE FABRIC

Weed barrier fabric shall be placed from approximately 88+00 to 89+36 L as shown in Section B. Fabric and rock shall blend in with the existing fabric and rock at this location.

Weed barrier fabric shall be anchored to the ground with 6" U shaped staples. The staples shall be placed at a 4' spacing along all edges, overlaps, and throughout the area of weed barrier fabric. The weed barrier fabric shall be overlapped 4" between rolls.

Weed barrier fabric shall be measured to the nearest square yard. Measurement of the overlaps will not be made. All costs for furnishing, handling, and placing the weed barrier fabric including the materials, equipment, labor, and incidentals necessary shall be incidental to the contract unit price per square yard for "Weed Barrier Fabric".

The approved product list for weed barrier/landscape fabric may be viewed at the following internet site under landscape fabric:

<http://sddot.com/business/certification/products/Default.aspx>

LANDSCAPING ROCK

The landscaping rock shall be placed at a thickness of 3 inches at planting bed areas from approximately 88+00 to 89+36 L as shown in Section B. The landscaping rock shall be the same size and type as what is currently on site.

The Contractor shall provide a sample of the landscaping rock to the Engineer for approval two weeks prior to installation.

All costs for furnishing, handling, and placing the landscaping rock including the materials, equipment, labor, and incidentals necessary shall be incidental to the contract unit price per cubic yard for "Landscaping Rock".

PLACING TOPSOIL AND CONTRACTOR FURNISHED TOPSOIL

The thickness will be approximately 4 inches within the right-of-way and on temporary easements. Topsoil will not be placed on rock cut slopes.

The estimated amount of topsoil to be placed is 1,675 CuYd. Approximately 800 CuYd of Contractor Furnished Topsoil has been included in the estimate in the event there isn't enough soil available to cover areas to be vegetated with 4" of soil.

Satisfactory topsoil for this project may be material that would otherwise be wasted. This material may not contain cobbles or stones and must appear to be more silt, clay, and fine sand than gravel, although 25% of the total composition may be gravelly. To compensate for lower quality topsoil material, topsoil amendment has been added to the plans. If material meeting the above specifications is not available on site, Contractor Furnished Topsoil may be used.

If Contractor Furnished Topsoil is used, the topsoil must contain any visible amount of gravel, stone, rocks, or debris. Areas receiving Contractor Furnished Topsoil do not require an application of Topsoil Amendment and should only be fertilized and sodded or fertilized and seeded and covered with Soil Stabilizer.

TOPSOIL AMENDMENT

The Contractor will be required to furnish and place 3,500 lbs/acre of topsoil amendment on all areas to be seeded.

All costs for furnishing and applying the topsoil amendment including hauling, materials, equipment, labor, and incidentals necessary shall be paid for at the contract unit price per pound for "Soil Amendment".

The topsoil amendment shall be from the list below or an approved equal hydraulic growth medium:

Product	Manufacturer
Biotic Earth Black HGM	Verdyol Riverton, Manitoba Canada Phone: 1-866-280-7327 http://www.bioteearth.com
Earth Essence Beta	Organic Earth Industries Fort Collins, Colorado Phone: 1-970-223-9772 http://www.OrganicEarthIndustries.com

Topsoil amendment shall be applied as described below:

- For areas to be seeded with Type D Permanent Seed Mixture, the amendment, fertilizer, and seed shall be mixed and applied in one step.
- For areas to be seeded with Special Permanent Seed Mixtures, the first step is applying 20% of the topsoil amendment with the fertilizer and Special Permanent Seed Mixture 1. The next step is applying 80% of the topsoil amendment and Special Permanent Seed Mixture 2.

FERTILIZING

The Contractor shall apply an all-natural slow release fertilizer prior to seeding or placing sod. The all-natural fertilizer shall have a minimum guaranteed analysis of 4-6-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 3.2%, a minimum of 6% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer shall be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer shall have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer shall also be stable, free of bad odors, and be unattractive as a food source for animals.

It should also be in a granular form that is easily spread. The all-natural slow release fertilizer shall be applied according to the manufacturer's application recommendations.

The application rate is 34 pounds per 1,000 square feet on areas to be seeded. The application rate is 9 pounds per 1,000 square feet on areas to be sodded.

The all-natural slow release fertilizer shall be from the list below or an approved equal:

Product	Manufacturer
Sustane	Sustane Corporate Headquarters Cannon Falls, Minnesota Phone: 1-800-352-9245 http://www.sustane.com/

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum shall consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier shall provide certification of the fungal species claimed and the live propagule count. The inoculum shall include the following fungal species:

<i>Glomus intraradices</i>	25%
<i>Glomus aggregatu</i>	25%
<i>Glomus mosseae</i>	25%
<i>Glomus etunicatum</i>	25%

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

All seed shall in Type D Permanent Seed Mixture shall be inoculated by the seed supplier with a minimum of 20,000 live propagules of mycorrhizal fungi per 1,000 square feet. All costs of inoculating the seed shall be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

Prior to placing sod, apply a minimum of 25,000 live propagules of inoculum per 1,000 square feet on bare soil. All costs of inoculating for the sod shall be incidental to the contract unit price per square yard for "Sodding".

The mycorrhizal inoculum shall be from the list below or an approved equal:

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 http://www.mycorrhizae.com/

SODDING

Bluegrass sod shall be placed behind curb and gutter sections in boulevards at locations shown in the plans and at locations determined by the Engineer during construction. Peat sod is not permitted. Sod is being placed for immediate erosion control. It is only being placed in boulevards because the boundaries are definite, unlike blending sod into residential yards.

An estimated 18 Gallons of water per square yard of sod was used to compute the quantity for the bid item "Water for Vegetation". All costs involved for watering the sod shall be incidental to the contract unit price per Mgal for "Water for Vegetation".

STATE OF SOUTH DAKOTA	PROJECT NH-PH 0085(20)26	SHEET D2	TOTAL SHEETS D31
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Plotting Date: 08/26/2014 Revised 8/26/2014 MD