

March 3, 2025

**ADDENDUM NO. 3**

**RE: Item #13, March 5, 2025 Letting - NH 0081(114)0, PCN 07DH, Yankton County - ADA, Modify Intersection, 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

**SDEBS BID PROPOSAL:** *The electronic bid proposal for this contract has been revised to include the changes associated with this addendum. Bidders must log in to the SDEBS to retrieve and incorporate these changes into their bid.*

**Quantities for Bid Items were changed:**

Bid Item 110E1530 "Remove Signal Pole Footing" changed from 19 to 18 Each

Bid Item 635E5020 "2' Diameter Footing" changed from 13 to 7 Ft

**PLANS:** Please destroy sheets A2, L2, L3, L4, L5, L11 and L21 and replace with the enclosed sheets, dated 3/3/25.

**Sheets A2 & L2:** **Quantities for Bid Items were changed:**  
Bid Item 110E1530 "Remove Signal Pole Footing" changed from 19 to 18 Each  
Bid Item 635E5020 "2' Diameter Footing" changed from 13 to 7 Ft

**Sheet L2:** PEDESTAL SIGNAL POLE A5 note was added.

**Sheets L3:** Note placement was adjusted.

**Sheet L4:** TABLE OF FOOTING DATA and VIDEO DETECTION SYSTEM note was revised. Note placement was adjusted.

**Sheet L5:** Note placement was adjusted.

**Sheets L11 & L21:** ESTIMATE OF QUANTITIES was revised.

Sincerely,

Sam Weisgram  
Engineering Supervisor

SW/cj

CC: Travis Dressen, Mitchell Region Engineer  
Greg Rothschadl, Yankton Area Engineer

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	A2	A4

Plotting Date: 03/03/2025

Revised Date: 03/03/2025 MDJ

Section L - Signal and Lighting

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1510	Remove Luminaire Pole	1	Each
110E1520	Remove Signal Equipment	Lump Sum	LS
110E1530	Remove Signal Pole Footing	18	Each
110E1540	Remove Luminaire Pole Footing	1	Each
110E5110	Salvage Signal Equipment	Lump Sum	LS
635E0040	Breakaway Base Luminaire Pole with Arm, 40' Mounting Height	1	Each
635E2000	Pedestal Signal Pole	1	Each
635E2025	Signal Pole with 25' Mast Arm	2	Each
635E2120	Signal Pole with 20' Mast Arm and Luminaire Arm	1	Each
635E2135	Signal Pole with 35' Mast Arm and Luminaire Arm	1	Each
635E2145	Signal Pole with 45' Mast Arm and Luminaire Arm	2	Each
635E2150	Signal Pole with 50' Mast Arm and Luminaire Arm	6	Each
635E2155	Signal Pole with 55' Mast Arm and Luminaire Arm	3	Each
635E2160	Signal Pole with 60' Mast Arm and Luminaire Arm	2	Each
635E2165	Signal Pole with 65' Mast Arm and Luminaire Arm	2	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	89	Each
635E3815	Decorative Luminaire, LED with Photoelectric Cell	61	Each
635E4030	3 Section Vehicle Signal Head	49	Each
635E4050	5 Section Vehicle Signal Head	10	Each
635E4090	4 Section Directional Vehicle Signal Head	32	Each
635E5020	2' Diameter Footing	7.0	Ft
635E5030	3' Diameter Footing	249.0	Ft
635E5301	Type 1 Electrical Junction Box	15	Each
635E5303	Type 3 Electrical Junction Box	14	Each
635E5400	Electrical Service Cabinet	5	Each
635E5430	Traffic Signal Controller	5	Each
635E5515	Battery Backup System for Traffic Signal	5	Each
635E5520	Video Detection System	6	Each
635E5560	Emergency Vehicle Preemption Unit	5	Each
635E5570	Optical Detector	19	Each
635E5880	Accessible Pedestrian Signal	38	Each
635E5910	Pedestrian Push Button Pole	38	Each
635E5922	Pedestrian Signal Head with Countdown Timer	38	Each
635E5930	Pedestrian Crossing Sign	38	Each
635E6200	Miscellaneous, Electrical	Lump Sum	LS
635E8110	1" Rigid Conduit, Schedule 40	890	Ft
635E8120	2" Rigid Conduit, Schedule 40	780	Ft
635E8130	3" Rigid Conduit, Schedule 40	85	Ft
635E8140	4" Rigid Conduit, Schedule 40	120	Ft
635E8220	2" Rigid Conduit, Schedule 80	920	Ft
635E8230	3" Rigid Conduit, Schedule 80	1,315	Ft
635E9016	1/C #6 AWG Copper Wire	455	Ft

Section L - Signal and Lighting (Continued)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
635E9018	1/C #8 AWG Copper Wire	7,005	Ft
635E9502	2/C #14 AWG Copper Tray Cable, K2	7,200	Ft
635E9503	3/C #14 AWG Copper Tray Cable, K2	920	Ft
635E9504	4/C #14 AWG Copper Tray Cable, K2	2,675	Ft
635E9505	5/C #14 AWG Copper Tray Cable, K2	1,400	Ft
635E9506	6/C #14 AWG Copper Tray Cable, K2	2,020	Ft
635E9507	7/C #14 AWG Copper Tray Cable, K2	1,435	Ft
635E9515	15/C #14 AWG Copper Tray Cable, K2	140	Ft
635E9519	19/C #14 AWG Copper Tray Cable, K2	710	Ft
635E9525	25/C #14 AWG Copper Tray Cable, K2	2,900	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	6,525	Ft

Section M - Pavement Marking

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
633E0210	Preformed Thermoplastic Pavement Marking, 4"	47,340	Ft
633E0225	Preformed Thermoplastic Pavement Marking, 24"	3,240	Ft
633E0230	Preformed Thermoplastic Pavement Marking, Area	19	SqFt
633E0235	Preformed Thermoplastic Pavement Marking, Arrow	98	Each
633E0250	Preformed Thermoplastic Pavement Marking, Railroad Crossing	4	Each
633E5000	Grooving for Cold Applied Plastic Pavement Marking, 4"	47,340	Ft
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	3,240	Ft
633E5020	Grooving for Cold Applied Plastic Pavement Marking, Area	19	SqFt
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	98	Each
633E5040	Grooving for Cold Applied Plastic Pavement Marking, Railroad Crossing	4	Each

Section S – Permanent Signing

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E0130	Remove Traffic Sign	22	Each
632E1320	2.0"x2.0" Perforated Tube Post	68.0	Ft
632E1340	2.5"x2.5" Perforated Tube Post	148.0	Ft
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	660.0	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	25.2	SqFt

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Plot Scale -

TRSF12140

Plotted From -

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Plot Scale -

Plotted From -  
TRPRt7199

SECTION L ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1510	Remove Luminaire Pole	1	Each
110E1520	Remove Signal Equipment	Lump Sum	LS
110E1530	Remove Signal Pole Footing	18	Each
110E1540	Remove Luminaire Pole Footing	1	Each
110E5110	Salvage Signal Equipment	Lump Sum	LS
635E0040	Breakaway Base Luminaire Pole with Arm, 40' Mounting Height	1	Each
635E2000	Pedestal Signal Pole	1	Each
635E2025	Signal Pole with 25' Mast Arm	2	Each
635E2120	Signal Pole with 20' Mast Arm and Luminaire Arm	1	Each
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635E2165	Signal Pole with 65' Mast Arm and Luminaire Arm	2	Each
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635E9504	4/C #14 AWG Copper Tray Cable, K2	2,675	Ft
635E9505	5/C #14 AWG Copper Tray Cable, K2	1,400	Ft
635E9506	6/C #14 AWG Copper Tray Cable, K2	2,020	Ft
635E9507	7/C #14 AWG Copper Tray Cable, K2	1,435	Ft
635E9515	15/C #14 AWG Copper Tray Cable, K2	140	Ft
635E9519	19/C #14 AWG Copper Tray Cable, K2	710	Ft
635E9525	25/C #14 AWG Copper Tray Cable, K2	2,900	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	6,525	Ft

SUPPLYING AS BUILT PLANS

If the traffic signal systems are constructed differently than what is stated in the plans, the Contractor will supply as built plans to the Engineer and a copy will be sent to the Traffic Design Engineer. The as built plans may include conduit layouts, wiring diagrams, or other drawings depicting the changes from the original plans.

SHOP DRAWING AND CATALOG CUTS SUBMITTALS

The Contractor will submit shop drawings and catalog cuts in accordance with Section 985 of the Specifications.

PDF submittals will be sent to the following email addresses:

Ryley.Rapp@ state.sd.us  
Stacy.Bartlett@state.sd.us

ON-SITE INSPECTION

An on-site inspection of the traffic signals will be conducted before acceptance of the project once the traffic signals are completed and operational. The on-site inspection will be conducted by the Project Engineer or Region Traffic Engineer with the Contractor, City of Yankton personnel, and the Traffic Design Engineer present.

REMOVE SIGNAL POLE FOOTING

The footings of existing signal poles EA1, EA3, EA4, EB1, EB3, EB4, EC1 to EC4, ED1 to ED4, and EE1 to EE4 will be removed by the Contractor to a minimum of 2' below the ground surface. Restoration of the disturbed area will be to the satisfaction of the Engineer.

All costs for removing the footings of the existing signal poles will be incidental to the contract unit price per each for "Remove Signal Pole Footing".

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	NH 0081(114)0	L2	L43

Revised 3/03/2025 - RR

REMOVE LUMINAIRE POLE FOOTING

The footing of existing luminaire pole EB2 will be removed by the Contractor to a minimum of 2' below the ground surface. Restoration of the disturbed area will be to the satisfaction of the Engineer.

All costs for removing the footing of the existing luminaire pole will be incidental to the contract unit price per each for "Remove Luminaire Pole Footing".

SIGNAL POLES

Cantilever traffic signal supports, including anchor bolts, will be designed for fatigue in accordance with Fatigue Importance Category III without galloping and truck induced gusts.

The pole fabricator will be responsible for the determining the diameter, length, and number of anchor bolts.

Signal poles will have rotatable mast arms.

Luminaire extension(s) will have a 50-foot mounting height with 6-foot arm.

SIGNAL POLE C2

A minimum of 4 weeks prior to installation of signal pole C2 the Contractor will contact MidAmerican Energy Company and coordinate the relocation of the gas line that is currently at the proposed location of C2. Contact information is:

Nicolle Rasmusson  
MidAmerican Energy Company  
1200 South Blauvelt Ave.  
Sioux Falls, SD 57105  
605-373-6081  
Nicolle.Rasmusson@midamerican.com

LUMINAIRE POLE

Luminaire pole B2 will have a mounting height of 40 foot with an 8-foot arm.

The pole fabricator will be responsible for the determining the diameter, length, and number of anchor bolts.

PEDESTAL SIGNAL POLE A5

Existing signal pole EA2 will be removed as shown in the plans. Pedestal signal pole A5 will be installed on the footing of existing signal pole EA2. The footing of existing signal pole EA2 is in a sonotube backfilled with rumble and concrete. The Contractor will cut anchor rods for existing signal pole EA2 flush with the top of the footing and coat the exposed ends with a zinc-rich galvanizing paint in conformance with ASTM A780. The Contractor will drill-in and epoxy new anchor rods for pedestal signal pole A5 as designed by the pole manufacturer.

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PEDESTAL SIGNAL POLE A5 (Continued)

All costs involved with installing the new pedestal signal pole on the existing footing for signal pole EA2, including new anchor rods and associated hardware, will be incidental to the contract unit price per each for "Pedestal Signal Pole".

SALVAGE SIGNAL EQUIPMENT

The existing signal equipment identified on the plans will be salvaged and delivered to the city of Yankton by the Contractor. The Contractor will notify the city 5 days before the delivery of the salvaged signal equipment for a time and location of delivery. The city contact is:

Corey Potts  
City of Yankton Street Department  
605-668-5250

Any equipment damaged during salvaging or delivery will be repaired or replaced by the Contractor at no cost to the State.

All costs for work involved in the salvage and delivery of the existing signal equipment will be incidental to the contract lump sum price for "Salvage Signal Equipment".

PEDESTAL SIGNAL POLES

Pedestal signal poles may be aluminum. Aluminum poles will conform to the following requirements:

Aluminum will conform to ASTM B221, Alloy 6061, and Temper T6.

Poles will be round with a minimum outside pole diameter of 4 inches, and the pole assembly will have a square, cast aluminum base with aluminum access door. The base will conform to the breakaway requirements of NCHRP 350 or MASH. A grounding lug will be provided in the base.

The pole to base connection will be a threaded connection; threads will be 8 TPI, NPT. A collar (integral or non-integral) to prevent wind-induced loosening of pole will be provided. All bolt and connection threads will be coated with a commercially available anti-seize compound intended for use in aluminum-to-aluminum and steel-to-aluminum connections.

The pole finish will either be brushed satin or spun. The top of the pole will be sealed by the traffic signal head mounting hardware or by an aluminum cap.

Measurement and payment for aluminum poles will be as specified in Specifications Section 635.

DECORATIVE LUMINAIRES

Decorative luminaire heads on the existing 15' luminaire poles from the Missouri River Bridge to 10<sup>th</sup> Street (47 total) will be removed and replaced with a LED post top fixture. The 47 existing metal halide fixtures will be removed and disposed of by the contractor. Any damage done to the poles will be repaired, or the poles will be replaced, at the Contractor's expense. All cost associated with removal, disposal and replacement of the fixtures will be

incidental to the unit price for each "Decorative Luminaire, LED with Photoelectric Cell."

Existing 2/C #10 AWG Copper Pole and Bracket Cable will be removed and replaced with new cable. Contractor will be responsible of disposing of the existing Pole and Bracket Cable. All cost associated with removal, disposal

and replacement of Pole and Bracket Cable will be incidental to the cost for "2/C #10 AWG Copper Pole and Bracket Cable".

The lighting design used the following parameters and provides 1.1 and greater average maintained foot-candles and uniformity ratios of 3:1 (average maintained to minimum maintained foot-candles):

Pole Setback:	2 Ft.
Lamp Loss Factor (LLF):	0.8
Width of Lighted Area:	84 Ft.
Luminaire Cycle Length:	96 Ft.
Configuration:	Staggered
Mounting Height:	15 Ft.
Arm Length	NA
Light Source:	LED

The following LED luminaire meets the requirements for this design:

Holophane: AWDE3-P79-40K-MVOLT-SPL-AL3-BK-CL

DECORATIVE FLOODLIGHT, LED

The existing vertical flood lights mounted on the river-side of the decorative bridge columns of the Discovery Bridge (14 total) will be removed, disposed of, and replaced. The following LED luminaire (or an approved equivalent) meets the requirements for this design:

Beacon Alpha: AL-U / 60L-136 / 4K7 / 3x5 / sf3 / BLS

All costs associated with the removal & disposal of the existing vertical flood lights, and the installation of the new light will be incidental to the contract unit for each "Decorative Luminaire, LED with Photoelectric Cell".

STANDARD LUMINAIRES

The Contractor will remove the existing luminaires on the 40-ft poles between 10<sup>th</sup> and 23<sup>rd</sup> Street (57 total), and on the bridge pier towers of the Discovery Bridge (14 total). The existing HPS luminaires will be removed and disposed of by the contractor. New LED luminaires will be reinstalled onto the existing poles/bridge pier towers. All cost associated with the removal and disposal of the luminaires will be incidental to the unit price for each "Roadway Luminaire, LED with Photoelectric Cell".

Existing 2/C #10 AWG Copper Pole and Bracket Cable will be removed and replaced with new cable. Contractor will be responsible of disposing of the existing Pole and Bracket Cable. All cost associated with removal, disposal and replacement of Pole and Bracket Cable will be incidental to the cost for "2/C #10 AWG Copper Pole and Bracket Cable".

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Revised 3/03/2025 - RR

The lighting design used the following parameters and provides 1.1 and greater average maintained foot-candles and uniformity ratios of 3:1 (average maintained to minimum maintained foot-candles).

Pole Setback:	0 Ft.
Lamp Loss Factor (LLF):	0.8
Width of Lighted Area:	80 Ft.
Luminaire Cycle Length:	97 Ft.
Configuration:	Staggered
Mounting Height:	40 Ft.
Arm Length	8 Ft.
Light Source:	LED

The following LED luminaires meet the requirements for this design for all standard poles and luminaire extensions:

- a.) GE Evolve: ERL2-0-19-C5-40-A
- b.) AEL Autobahn ATB0-P452-MVOLT-R3-P7

SIGNAL BACKPLATES

All new vehicle signal heads will have backplates with retroreflective border. The vehicle signal head backplates will have a factory applied 3-inch wide yellow retroreflective border. Sheeting for the border will be Type XI or Type IX in conformance with ASTM D4956. Backplates will be polycarbonate, aluminum, or aluminum-composite. Minimum material thicknesses are:

Polycarbonate, 0.10-inch  
Aluminum, 0.06-inch  
Aluminum-Composite, 0.08-inch

Signal backplates will extend not less than 5 inches from the edge of the signal head at the top, bottom, and sides. The bottom of the backplate on vehicle signal faces mounted directly above pedestrian signal indications will be sized to permit the separate adjustment of the vehicle and pedestrian signal indication and may be less than 4 inches.

All costs involved with furnishing and installing backplates with retroreflective border for the new vehicle signal heads will be incidental to the contract unit price per each for "3 Section Vehicle Signal Head", "3 Section Directional Vehicle Signal Head", "4 Section Directional Vehicle Signal Head". and "5 Section Vehicle Signal Head",

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TABLE OF FOOTING DATA

Site Designation	Footing Diameter	* Footing Depth	**Spiral Diameter	**Spiral Length	Vertical Reinforcement
B2	2' - 0"	7' - 0"	1' - 8"	49' - 6"	8-#7 x 6' - 6"
B4	3' - 0"	10' - 0"	2' - 8"	104' - 3"	14-#8 x 9' -6"
B3, C2, C4, D4, & E2	3' - 0"	12' - 0"	2' - 8"	120' - 9"	14-#8 x 11' -6"
A2***, C3, D2	3' - 0"	13' - 0"	2' - 8"	129' - 3"	14-#8 x 12' -6"
A1, A3, A4, B1, C1, D1, D3, E1, E3, & E4	3' - 0"	14' - 0"	2' - 8"	137' - 6"	14-#8 x 13' -6"

\* Footing depth will be below ground level.  
\*\* The size of all spirals will be #3.  
\*\*\*At pole footing location A2, if drilled shaft excavation cannot be completed due to obstructions, contact the Office of Bridge Design for alternate footing details

SUBSURFACE

The soils at the proposed traffic signal footing locations range from silt clay to clay sand.

Footing locations that have high water tables are potential candidates for caving soils. If caving soils are encountered, it may be necessary to use casing or drilling fluids to maintain an open excavation. Casing will be of sufficient strength to withstand handling and installation procedures. Casing material may consist of Sonotube, corrugated metal pipe, pvc, smooth metal pipe or any other material as approved by the Engineer. Drilling fluids can be water or other slurries as approved by the engineer. Concrete placed through drilling fluids will be tremied. If caving is not an issue but, water is present, it will be removed prior to concrete placement or the concrete will be tremied.

At signal A2 an old building foundation was encountered at 8' when trying to install the cylindrical footing in 2003. The excavation ended up being enlarged while trying to drill through the obstruction. Drilling was terminated at 8'. A 4' diameter sonotube was installed with the enlarged area (size unknown) around the sonotube backfilled with flowable fill and concrete rubble.

METER SOCKETS FOR TRAFFIC SIGNALS

The meter sockets provided for traffic signals by the Contractor will be a 200-amp, positive by-pass.

EXISTING ELECTRICAL SERVICES

The existing electrical services at 4<sup>th</sup> Street, 8<sup>th</sup> Street, 15<sup>th</sup> Street, 21<sup>st</sup> Street, and 23<sup>rd</sup> Street will be removed by the Contractor and replaced as shown on the plans. Contractor will coordinate with NorthWestern Energy to connect new conduit and wire between the new service and the existing service. All cost associated with removal, disposal, and replacement of electrical services will be incidental to the contract unit price per each "Electrical Service Cabinet".

The contact for NorthWestern Energy is:  
Robert Gehm  
605-668-4602  
Robert.gehm@northwestern.com

TRAFFIC SIGNAL CONTROLLER

The new Traffic Signal Controllers will be Econolite Cobalt.

The Contractor is responsible for programming controllers with the signal timings provided in these plans.

Controllers and flashers are not required to have dimming capability.

Anchor bolts for traffic signal cabinets may have hooked ends.

All costs for the detector units necessary to operate the signal as shown in these plans, constructing the concrete pad and footing, materials, labor, and furnishing and installing the controller cabinet will be incidental to the contract unit price per each for "Traffic Signal Controller".

The Contractor will ensure that the Traffic Signal Controller at 23<sup>rd</sup> Street will be orientated that the door faces to the east.

BATTERY BACKUP CABINET

The Contractor will supply cabinets with concrete pad and footing for housing the battery backup system for each signal in the plans. The cabinets will be an aluminum NEMA 3R type and will have a thermostatically controller exhaust fan. The cabinet will be securely attached to the concrete pad with steel anchors and to the back wall of the controller cabinet using chase nipples as approved by the Engineer. Anchor bolts for battery backup cabinets may have hooked ends.

All costs for constructing the concrete pad and footing, materials, labor, and furnishing and installing the battery backup cabinet will be incidental to the contract unit price per each for "Battery Backup System for Traffic Signal."

VIDEO DETECTION SYSTEM

The video detection system will be one of the following, or an approved equal:

Product	Manufacturer
GRIDSMART System	GRIDSMART Technologies, Inc. Knoxville TN 37932 Phone: 1-865-482-2112 <a href="http://www.gridsmart.com">www.gridsmart.com</a>
Autoscope AIS-IV or Vision	Econolite Anaheim, CA 92807 Phone: 1-714-630-3700 <a href="http://www.econolite.com">www.econolite.com</a>
Vantage Next	Iteris, Inc. Santa Ana, CA 92705-5551 Phone: 1-949-270-9400 <a href="http://www.iteris.com">www.iteris.com</a>
TrafficLink Detection	Miovision Technologies, Inc. 137 Glasgow St., Suite 110 Kitchener, Ontario Canada N2G 4X8 Phone: 1-519-513-2407 <a href="http://www.miovision.com">www.miovision.com</a>

NoTraffic Detection System

Currex Vision AI-Vision GPU Server  
w/Axis M4318 Camera

The new video detection system provided at 31<sup>st</sup> Street (North US81&SD50 intersection) will be capable of dilemma zone detection.

All cabling and hardware necessary to make the detection system operational will be incidental to the contract unit price per each for "Video Detection System".

ACCESSIBLE PEDESTRIAN SIGNAL

The work will consist of furnishing and installing accessible pedestrian signals (APS). Each APS will consist of an interactive vibrotactile pedestrian pushbutton with speaker, an informational sign, a latching light emitting diode (LED) indicator light, a solid-state electronic control board, a power supply, wiring, and all necessary mounting hardware. The operation and performance of the APS units will meet the requirements of MUTCD Sections 4E.08 to 4E.13. and the applicable sections of NEMA Standards Publication TS-2.

The APS units will be capable of supporting a minimum of 16 push button stations.

The traffic signal cabinet must have four dedicated load switches for the pedestrian phases. If the traffic signal cabinet does not have four dedicated load switches for the pedestrian phases, then the Contractor will furnish and install the necessary number of load switches. All costs associated with furnishing and installing any additional load switches will be incidental to the contract unit price per each for "Accessible Pedestrian Signal".

All mounting fasteners will be stainless steel; all threads will be coated with anti-seize compound meeting the requirements of USA Dept. of Defense specification MIL-PRF-907F.

The push button component of APS will meet the requirements of Section 985.1 S of the Specifications except that all housings and external hardware will be aluminum, powder coated yellow.

The APS control unit will include capability to monitor the push buttons and pedestrian signal head displays. Conflicts will cause the channel to be powered off.

The APS control unit will include capability to monitor communications with the push buttons. Communication faults will automatically reset the control unit.

Two licensed copies of any APS programming software will be furnished. All software programming, firmware updates, and audio message programming of the APS will be through USB port or Ethernet connection.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	L4	L43

Revised 3/03/2025 - RR

NoTraffic  
720 Main St.  
Suite 12  
Kansas City, MO 64105  
[www.traffictech.com](http://www.traffictech.com)

Currux Vision LLC  
520 Post Oak Blvd.  
Suite 260  
Houston TX 77027  
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1:200  
Plot Scale -  
Plotted From -

ACCESSIBLE PEDESTRIAN SIGNAL (Continued)

All costs for furnishing and installing the accessible pedestrian signal including labor, materials, and equipment, will be incidental to the contract unit price per each for “Accessible Pedestrian Signal”.

PEDESTRIAN PUSH BUTTON POLE

Pedestrian push button poles will be aluminum and will conform to the following requirements:

Aluminum will conform to ASTM B221, Alloy 6061, and Temper T6.

Poles will be round with a minimum outside pole diameter of 4 inches, and the pole assembly will have a square, cast aluminum base with aluminum access door. The base will conform to the breakaway requirements of MASH.

The pole to base connection will be a threaded connection; threads will be 8 TPI, NPT. All bolt and connection threads will be coated with a commercially available anti-seize compound intended for use in aluminum-to-aluminum and steel-to-aluminum connections.

The pole finish will either be brushed satin or spun. The top of the pole will be sealed by an aluminum cap.

Anchor bolts for pedestrian push button poles may have hooked ends.

WIRE SPLICING FOR LIGHTING

All wire splices for lighting will be made using TE Connectivity GTAP connectors, NSI Industries Polaris Blue connectors, or an approved equal.

MULTICONDUCTOR CONTROL CABLE FOR SIGNAL CIRCUITS

The Conductor Jackets for the multiconductor control cables will be color coded in accordance with ICEA S-73-532 Table E2.

EXISTING FIBER CABLE AT 4TH STREET

The existing fiber optic cables at the 4th Street intersection will be disconnected from the existing controller and pulled back in both directions. The existing conduit for the fiber optic cables will then be exposed and a new junction box will be placed at the locations indicated on the plans (JF1 and JF2). New conduit will then be run from each new junction box directly to the new controller cabinet, existing fiber optic cable will then be repulled through new junction boxes and conduit back to the new cabinet and reconnected to the new controller with LC connectors. All cost for disconnecting the existing conduit from the existing controllers, pulling back existing fiber cables, exposing existing fiber conduits, splicing existing fiber conduits, repulling existing fiber cables back to controller, and connecting fiber to new controller will be incidental to the contract unit price for “Miscellaneous Electric”.

EXISTING FIBER CABLE AT 8TH STREET

The existing fiber optic cables at the 8th Street intersection will be disconnected from the existing controller and pulled back in both directions. The existing conduit for the fiber optic cables will then be exposed and a new

junction box will be placed at the locations indicated on the plans (JF3 and JF4). New conduit will then be run from each new junction box directly to the new controller cabinet, existing fiber optic cable will then be repulled through new junction boxes and conduit back to the new cabinet and reconnected to the new controller with LC connectors. All cost for disconnecting the existing conduit from the existing controllers, pulling back existing fiber cables, exposing existing fiber conduits, splicing existing fiber conduits, repulling existing fiber cables back to controller, and connecting fiber to new controller will be incidental to the contract unit price for “Miscellaneous Electric”.

EXISTING FIBER CABLE AT 15TH STREET

The existing fiber optic cables at the 15th Street intersection will be disconnected from the existing controller and pulled back in both directions. The existing conduit for the fiber optic cables will then be exposed and a new junction box will be placed at the locations indicated on the plans (JF5 and JF6). New conduit will then be run from each new junction box directly to the new controller cabinet, existing fiber optic cable will then be repulled through new junction boxes and conduit back to the new cabinet and reconnected to the new controller with LC connectors. All cost for disconnecting the existing conduit from the existing controllers, pulling back existing fiber cables, exposing existing fiber conduits, splicing existing fiber conduits, repulling existing fiber cables back to controller, and connecting fiber to new controller will be incidental to the contract unit price for “Miscellaneous Electric”.

EXISTING FIBER CABLE AT 21st STREET

The existing fiber optic cables at the 21st Street intersection will be disconnected from the existing controller and pulled back in both directions. The existing conduit for the fiber optic cables will then be exposed and a new junction box will be placed at the locations indicated on the plans (JF7 and JF8). New conduit will then be run from each new junction box directly to the new controller cabinet, existing fiber optic cable will then be repulled through

new junction boxes and conduit back to the new cabinet and reconnected to the new controller with LC connectors. All cost for disconnecting the existing conduit from the existing controllers, pulling back existing fiber cables, exposing existing fiber conduits, splicing existing fiber conduits, repulling existing fiber cables back to controller, and connecting fiber to new controller will be incidental to the contract unit price for “Miscellaneous Electric”.

EXISTING FIBER CABLE AT 23RD STREET

The existing fiber optic cable at the 23rd Street intersection will be disconnected from the existing controller and pulled back to the south. The existing conduit for the fiber optic cable will then be exposed and a new junction box will be placed at the location indicated on the plans (JF9). New conduit will then be run from the new junction box directly to the new controller cabinet, existing fiber optic cable will then be repulled through new junction box and conduit back to the new cabinet and reconnected to the new controller with LC connectors. All cost for disconnecting the existing conduit from the existing controller, pulling back existing fiber cable, exposing existing fiber conduit, splicing existing fiber conduit, repulling existing fiber cable back to controller, and connecting fiber to new controller will be incidental to the contract unit price for “Miscellaneous Electric”.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	L5	L43

Revised 3/03/2025 - RR

TRAFFIC SIGNAL CONTROLLER AT 31ST STREET

The existing traffic signal controller settings will not be changed. The detection zones drawn in the new video detection system will replicate the location of the existing in-pavement loops. For location information see plan sheets.

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# EXISTING SIGNAL LAYOUT

## SD HWY 50 / BROADWAY AVE. & 4TH STREET

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH 0081(114)0	L11	L43

Revised 3/03/2025 - RR

Existing Items	
KEY	ITEM
	Signal Pole w/55' Mast Arm & 8' Lumin Arm (EA1)
	Signal Pole w/50' Mast Arm & 8' Lumin Arm (EA2)
	Signal Pole w/65' Mast Arm & 8' Lumin Arm (EA3)
	Signal Pole w/40' Mast Arm & 8' Lumin Arm (EA4)
	Roadway Luminaire, 250w with P.E. (EA1-EA4)
	Traffic Controller
	3 Section Vehicle Signal Head (2,4,6,8,10,12,14,16)
	5 Section Vehicle Signal Head (1,3,5,7,9,11,13,15)
	Emergency Vehicle Preemption Unit (4-Channel)
	Optical Detector
	Pedestrian Push Button
	Pedestrian Signal Head w/Countdown Timer (17-24)
	Pedestrian Crossing Sign (Left - 2/Right - 2)

SALVAGE ITEMS			
KEY	ITEM	EST QUANT	UNIT
	3 Section Vehicle Signal Head (2,4,6,8)	4	EACH
	5 Section Vehicle Signal Head (1,3,5,7)	4	EACH
	Traffic Controller	1	EACH

ESTIMATE OF QUANTITIES			
KEY	ITEM	EST QUANT	UNIT
	Remove Signal Equipment	LUMP SUM	LS
	Remove Signal Pole Footing (EA1, EA3, EA4)	3	EACH
	Salvage Signal Equipment	LUMP SUM	LS



