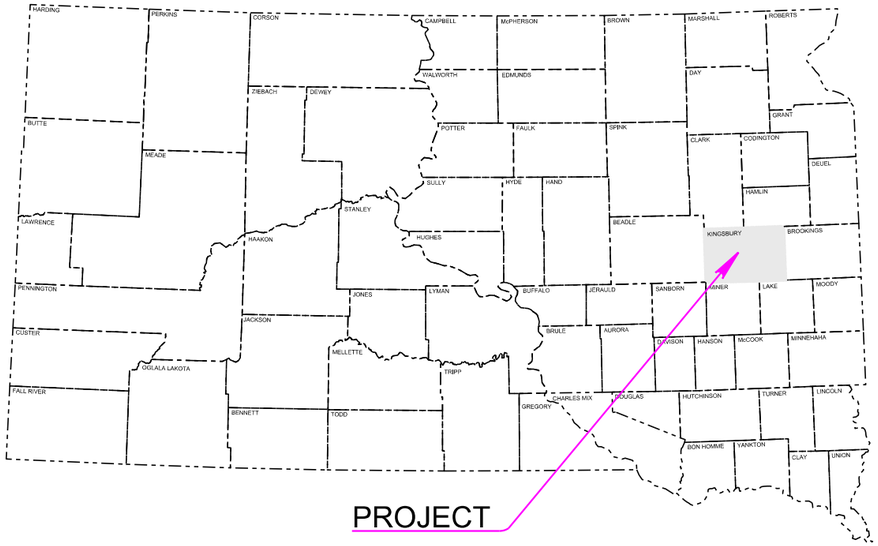


STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

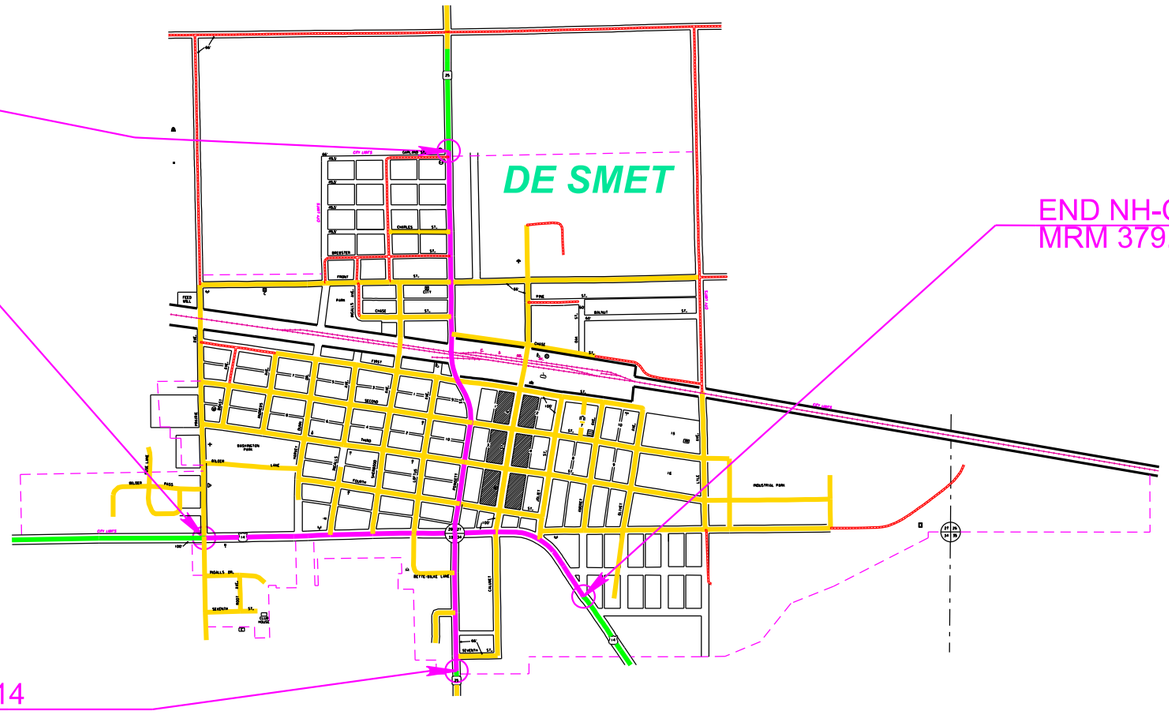
PROJECT NH-CR 0014(262)378 & CR 0025(111)114
US HWY 14 & SD HWY 25
KINGSBURY COUNTY

LIGHTING
PCN 09PE & 09PF

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	1	36

Plotting Date: 02/03/2025

INDEX OF SHEETS



END CR 0025(111)114
MRM 115.0+0.55

BEGIN NH-CR 0014(262)378
MRM 378.0+0.14

END NH-CR 0014(262)378
MRM 379.0+0.00

BEGIN CR 0025(111)114
MRM 114.0+0.49

DESIGN DESIGNATION US14

AADT (2023)	2437
AADT (2053)	4045
DHV	838
D	50%
DHV T%	8
AADT T%	17.5
V	45mph

DESIGN DESIGNATION SD25

AADT (2023)	1339
AADT (2053)	2223
DHV	461
D	50%
DHV T%	8.2
AADT T%	18
V	50mph

STORM WATER PERMIT
None Required

Gross Length	9296 Feet	1.76 Miles
Length of Exceptions	0.00 Feet	0.00 Miles
Net Length	9296 Feet	1.76 Miles

4

April 16, 2025

NONSECTION ESTIMATE OF QUANTITIES

King09PE

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3260	Miscellaneous Staking	Lump Sum	LS
110E1510	Remove Luminaire Pole	18	Each
110E1540	Remove Luminaire Pole Footing	18	Each
110E7150	Remove Sign for Reset	16	Each
250E0020	Incidental Work, Grading	Lump Sum	LS
632E1320	2.0"x2.0" Perforated Tube Post	93.0	Ft
632E3500	Reset Sign	16	Each
634E0110	Traffic Control Signs	210.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
635E0050	Breakaway Base Luminaire Pole with Arm, 50' Mounting Height	20	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	20	Each
635E5020	2' Diameter Footing	170.0	Ft
635E5301	Type 1 Electrical Junction Box	11	Each
635E5400	Electrical Service Cabinet	2	Each
635E8120	2" Rigid Conduit, Schedule 40	4,100	Ft
635E8220	2" Rigid Conduit, Schedule 80	885	Ft
635E9013	1/C #3 AWG Copper Wire	6,035	Ft
635E9014	1/C #4 AWG Copper Wire	2,345	Ft
635E9016	1/C #6 AWG Copper Wire	1,465	Ft
635E9018	1/C #8 AWG Copper Wire	7,475	Ft
635E9024	1/C #14 AWG Copper Wire	900	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	1,300	Ft

King09PF

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3260	Miscellaneous Staking	Lump Sum	LS
110E1510	Remove Luminaire Pole	26	Each
110E1540	Remove Luminaire Pole Footing	26	Each
250E0020	Incidental Work, Grading	Lump Sum	LS
634E0110	Traffic Control Signs	210.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
635E0050	Breakaway Base Luminaire Pole with Arm, 50' Mounting Height	21	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	21	Each
635E5020	2' Diameter Footing	178.0	Ft
635E5301	Type 1 Electrical Junction Box	5	Each
635E5400	Electrical Service Cabinet	3	Each
635E8120	2" Rigid Conduit, Schedule 40	3,870	Ft
635E8220	2" Rigid Conduit, Schedule 80	1,225	Ft
635E9013	1/C #3 AWG Copper Wire	8,875	Ft
635E9016	1/C #6 AWG Copper Wire	2,525	Ft
635E9018	1/C #8 AWG Copper Wire	8,110	Ft
635E9024	1/C #14 AWG Copper Wire	900	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	1,365	Ft

SPECIFICATIONS

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

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's

primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

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

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

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

COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT

Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

Action Taken/Required:

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

Additional information and mapping of water sources impacted by Aquatic Invasive Species in South Dakota can be accessed at:
< https://sdleastwanted.sd.gov/maps/default.aspx>

< South Dakota Administrative Rule 41:10:04 Aquatic Invasive Species: https://sdlegislature.gov/rules/DisplayRule.aspx?Rule=41:10:04 >

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

This project may be in the vicinity of multiple streams and wetlands. These waters are considered waters of the state and are protected under Administrative Rules of South Dakota (ARSD) Chapter 74:51. Special construction measures may have to be taken to ensure that this water body is not impacted.

Action Taken/Required:

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

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

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

Action Taken/Required:

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

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

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

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

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

COMMITMENT H: WASTE DISPOSAL SITE (CONTINUED)

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

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.
Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

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

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO or THPO) for all work included within the project limits and all department designated sources and designated option material sources, stockpile sites, storage areas, and waste sites provided within the plans.

Action Taken/Required:

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

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state

Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously

surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view in which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously

disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

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

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

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting. If changes to the sequence of operations are proposed during the project, these must be submitted for review a minimum of one week prior to potential implementation. Approval for changes to the sequence of operations will only be allowed when the proposed changes meet with the Department's intent for traffic control and sequencing of the work.

GENERAL TRAFFIC CONTROL

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

Traffic will be maintained on the driving lanes. Use of the shoulder as a driving lane will not be permitted. Any damage to the shoulder due to rerouted traffic or Contractor's equipment will be repaired at no expense to the Department.

US 14

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W21-5	SHOULDER WORK	8	48" x 48"	16.0	128.0
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			210.0

SD 25

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	4	48" x 48"	16.0	64.0
W21-5	SHOULDER WORK	8	48" x 48"	16.0	128.0
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			210.0

SUPPLYING AS BUILT PLANS

If the roadway lighting system is 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:

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

UTILITIES

The Contractor will contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It will be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor will contact the Engineer to determine modifications that will be necessary to avoid utility impacts.

INCIDENTAL WORK, GRADING

Incidental work includes, but is not limited to, the restoration of all disturbed areas to the satisfaction of the Engineer.

Any existing pavements removed by the contractor will be replaced in kind or replaced as directed by the Engineer. All costs associated with the replacement of existing pavements will be incidental to the lump sum price for “Incidental Work, Grading”.

REMOVE LUMINAIRE POLE FOOTING

The footings of existing luminaire poles EL1-EL44 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 luminaire poles will be incidental to the contract unit price per each for “Remove Luminaire Pole Footing”.

LUMINAIRE POLES

Luminaire poles L1-L41 will have a mounting height of 50-feet with 8-feet arms.

Luminaire poles L2, L4, L6, L8, L10, L12, L14, L16, L18, L20, L22, L24, L26, L28, L30, L32, L34, L36, L38, and L40 will be designed to include loading created by banners that are 36” wide by 80” long mounted 15’ from the bottom of the pole to the bottom of the banner.

Luminaire poles L2, L4, L6, L8, L10, L12, L14, L16, L18, L20, L22, L24, L26, L28, L30, L32, L34, L36, L38, and L40 will have a convenience duplex festoon outlet receptacle (15-amp, 3 wire) suitable for outdoor use. Festoon will be placed 90° counterclockwise to the pole arm. All costs associated with making the festoon receptacles operational including but not limited to, the necessary hardware and connecting the #14 AWG wiring (wire is not incidental to poles), will be incidental to the contract unit price per each “Breakaway Base Luminaire Pole with Arm, 50’ Mounting Height”.

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

LUMINAIRES

The lighting design used the following parameters to provide 1.0 and greater average maintained foot-candles and uniformity ratios of 3:1 (average maintained to minimum maintained foot-candles) and 5:1 (maximum to minimum maintained foot candles):

Pole Setback:	8 Ft.
Lamp Loss Factor (LLF):	0.8
Width of Lighted Area:	28 Ft.
Luminaire Cycle Length:	480 Ft.
Configuration:	Staggered
Mounting Height:	50 Ft.
Arm Length	8 Ft.

The following luminaires, or an approved equivalent, meet the requirements for this design:

a.) Cooper: ARCH-L-AF72-210-U-T2R-PR7

b.) AEL AUTOBAHN ATB0-P454-MVOLT-R2-P7

TABLE OF FOOTING DATA

Site_Designation	Footing Diameter	* Footing Depth	**Spiral Diameter	**Spiral Length	Vertical Reinforcement
L1, L3, L5, L7, L9, L11, L13, L15, L17, L19, L21, L23, L25, L27, L29, L31, L33, L35, L37, L39, L41	2’ - 0”	8’ - 0”	1’ - 8”	54’ - 9”	8-#7 x 7’ - 6”
L2, L4, L6, L8, L10, L12, L14, L16, L18, L20, L22, L24, L26, L28, L30, L32, L34, L36, L38, L40	2’ - 0”	9’ - 0”	1’ - 8”	60’ - 0”	8-#7 x 8’ - 6”

* Footing depth will be below ground level.
** The size of all spirals will be #3.

SUBSURFACE

Groundwater and caving soils are likely to be encountered during the installation of the cylindrical footings. Concrete placement operations should immediately follow excavation procedures. The longer the excavations are left open, the more likely caving will occur. 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.

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.

ELECTRICAL SERVICE

The Contractor will be responsible for coordinating the installation of the electrical services and connection to the electrical service. The Contractor will contact the utility company at least 2 weeks prior to needing the electrical service installed.
Contact:

Ottertail Power Company
218-739-8619

All cost for contacting the utility company and coordinating the electrical service installations and all hookup fees will be incidental to the contract unit price per each for “Electrical Service Cabinet.”

GENERAL PERMANENT SIGNING

New sign installations will be staked in the field by the Contractor and checked by the Engineer. The Contractor will give the Engineer a minimum of one week to check staked locations prior to signpost installation. Lateral offset of signs will be as shown in the plans or as directed by the Engineer.

The Contractor will be responsible for contacting South Dakota One Call to locate the utilities at the staked sign installation locations.

When signs are mounted in an assembly, they will be 1-2 inches apart vertically and horizontally.

The height of the post must not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign will be cut off. No separate payment will be made for cutting the post or for that length cut off.

Aluminum U-Channel stiffeners will be used on all signs 36 inches or greater in width and will conform to ASTM B221 Alloy 6063-T6 or 6061-T6. The U-Channel will be 2 inches in width and free of holes. The U-Channel stiffeners will also be used to connect various signs together so that an entire sign assembly can be erected on a single installation. Stiffeners may be fastened to signs by use of 1/4-inch diameter drive rivets.

The Contractor will use 3/8-inch diameter rust proof machine sign bolts, flat metal washers, neoprene washers (against the sign sheeting), lock washers, and nuts to fasten the sign to the channel aluminum and posts. A minimum of two bolts will extend through each post.

Prior to ordering signs, the Contractor will verify dimensions, background, border, and legend of the signs.

Prior to use, the Contractor will provide documentation for the sign support devices showing they meet the applicable NCHRP 350 or MASH requirements.

REMOVE SIGN FOR RESET AND RESET SIGN

Signs that are scheduled for reset will be dismantled and reassembled to the extent needed by the Contractor to properly reset the sign. Signs will be handled with care so that the existing signs, posts, and bases are not damaged during the relocation process. The Contractor will replace and pay for any reset signs damaged in their care. The Contractor will remove and dispose of any existing posts for all reset signs that require use of new posts as shown in the Table of Permanent Signing.

All costs for removing, dismantling, and disposing of any existing posts will be incidental to the contract unit price per each for “Remove Sign for Reset”. All costs for resetting the existing signs will be incidental to the contract unit price per each for “Reset Sign”. All quantities for Remove Sign for Reset and Reset Sign will be per assembly at the contract unit price per each.

Any 911 Emergency Number signs within the project work limits will not be stockpiled but temporarily repositioned at a location outside the work limits but within the immediate proximity of the existing location. To complete the project sign work, the 911 Emergency Number signs will be permanently installed at their original locations, or as near as practicable where entrances have been reconfigured by the project. The existing supports will be reused. Cost for removing, temporarily repositioning, and permanently resetting 911 Emergency Number signs will be included in the contract unit price per each for “Remove Sign for Reset” and “Reset Sign”.

SQUARE TUBE ANCHOR SLEEVE

The Contractor will furnish and install new 2.5” x 2.5” x 18”, 12 Gauge square tube anchor sleeve or equivalent components as approved by the Engineer for 2.0” x 2.0” perforated tube posts. A 2.25” x 2.25” x 4’, 12 Gauge perforated tube post will be used as the anchor post for installation with the square tube anchor sleeve.

POLE MOUNTED SIGNS

Signs that are mounted on luminaire poles will be attached with high strength stainless steel bands or galvanized pole clamps. Signs will be attached as recommended by the manufacturer. All sign mounting hardware will be stainless steel or galvanized steel.

Pole mounted signs will be mounted a minimum of 7 ft above the ground. Mounting heights are measured to the bottom of the signs.

The Permanent Signing Table provides direction as to which sings will be moved to the new luminaire poles and which ones need to stay in their current location.

All costs for pole sign mounting hardware will be incidental to the contract unit price per square foot for Reset Sign.

Table of Luminaire Permenant Signing

Signs/Sign Assembley Current Loctaion	Description	Location for Signs/Sign Assembly after construction	2.0"x2.0" Perforated Tube Post 12 ga. (FT)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Remove Sign for Reset (Each)	Reset Sign (Each)	Remarks
EL 2	Hospital Symbol w/ Right Arrow	L2			1	1	Move current assembly from EL 2 to newly installed L2
EL 3	Truck Route w/ Right Arrow	L4			1	1	Move current assembly from EL 3 to newly installed L4
EL 11	Hospital Symbol w/ Up Arrow	L10			1	1	Move current assembly from EL 11 to newly installed L10
EL 13	SD25 w/ Double Arrow; US14 w/ Up Arrow	Existing Location	12	1	1	1	Remove current assembly from EL 13 and install in current location
EL 14	Laura Ingalls Wilder Info w/ Left Arrow; Business District w/ Left Arrow; Speed Limit 30 MPH	Existing Location	30	2	1	1	Remove current assembly from EL 14 and install in current location
EL 24	South & SD25	L25			1	1	Move current assembly from EL 24 to L25
EL 25	Jct w/ US14; Hospital w/ Left Arrow	Existing Location	15	1	1	1	Remove current assembly from EL 25 and install in current location
EL 27	US14 w/ Double Arrow; SD 25 w/ Up Arrow	L27			1	1	Move current assembly from EL 27 to newly installed L27
EL 28	Hospital w/ Right Arrow	L28			1	1	Move current assembly from EL 28 to newly installed L28
EL 29	Jct w/ US14	L29			1	1	Move current assembly from EL 29 to newly installed L29
EL 30	Stop Ahead	L30			1	1	Move current assembly from EL 30 to newly installed L30
EL 31	Street Crossing	Existing Location	12	1	1	1	Remove current assembly from EL 31 and install in current location
EL 32	Hospital w/ Up Arrow	L31			1	1	Move current assembly from EL 32 to newly installed L31
EL 33	Street Crossing	Existing Locaiton	12	1	1	1	Remove current assembly from EL 33 and install in current location
EL 38	Railroad Crossing	Existing Locaiton	12	1	1	1	Remove current assembly from EL 38 and install in current location
EL 42	Truck Route w/ Double Arrow	L40			1	1	Move current assembly from EL 42 to newly installed L40
		TOTALS:	**93**	**7**	**16**	**16**	

CONDUIT AND CABLE QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	5	36

Plotting Date: 02/03/2025

		Rigid Conduit		Copper Wire				Pole and Bracket Cable	Festoon Wiring
		Schedule 40	Schedule 80						
		2"	2"	1/C #8 AWG	1/C #6 AWG	1/C #4 AWG	1/C #3 AWG	2/C #10 AWG	1/C #14 AWG
Location to Location		Ft	Ft	Ft				Ft	Ft
King 09PE									
Lighting									
L1	JL1	190	70		805				
JL1	L2		70		220				
L2	JL2	255				1,055			
JL2	L3		70		220				
JL2	L4	255				1,055			
L4	L5	230					950		
L5	L6	270					1,115		
L6	JL3	175	85				1,075		
JL3	L7		70		220				
JL3	L8	265					1,095		
L8	JL4	105	70				725		
JL4	Elec. Service	20					85		
JL4	L10	320					990		
L10	JL5		75			235			
JL5	L9	255		790					
JL5	L11	250		775					
L14	L15	185	70	790					
L15	JL15	225		930					
JL15	L16		75	310					
L16	L17	170	80	1,030					
L17	JL8	80		330					
JL8	Elec. Service	25		180					
JL8	L18	210		650					
L18	JL9	185	75	805					
JL9	L19		75	235					
JL9	L20	210		650					
Luminaire Poles									
Lumin. Pole	L1							65	
Lumin. Pole	L2							65	90
Lumin. Pole	L3							65	
Lumin. Pole	L4							65	90
Lumin. Pole	L5							65	
Lumin. Pole	L6							65	90
Lumin. Pole	L7							65	
Lumin. Pole	L8							65	90
Lumin. Pole	L9							65	
Lumin. Pole	L10							65	90
Lumin. Pole	L11							65	
Lumin. Pole	L12							65	90
Lumin. Pole	L13							65	
Lumin. Pole	L14							65	90
Lumin. Pole	L15							65	
Lumin. Pole	L16							65	90
Lumin. Pole	L17							65	
Lumin. Pole	L18							65	90
Lumin. Pole	L19							65	
Lumin. Pole	L20							65	90
Subtotal:		3,880	885	7,475	1,465	2,345	6,035	1,300	900

Plot Scale - 1:200

Plotted From - TPPR17199

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CONDUIT AND CABLE QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	6	36

Plotting Date: 02/03/2025

		Rigid Conduit		Copper Wire				Pole and Bracket Cable	Festoon Wiring
		Schedule 40	Schedule 80						
		2"	2"	1/C #8 AWG	1/C #6 AWG	1/C #4 AWG	1/C #3 AWG	2/C #10 AWG	1/C #14 AWG
Location to Location		Ft	Ft	Ft				Ft	Ft
King09PF									
L12	JL6	60		185					
JL6	JL7		90				375		
JL7	Elec. Service	20		65			85		
JL6	L28	80					330		
L28	L29	145	80				930		
L29	L30	305					1,260		
L30	L31	180	80				1,075		
L31	L32	250					1,030		
L32	L33	140					580		
L32	JL14	165	85				1,030		
JL14	L33		75				310		
L33	L34	160	125				1,175		
L34	L35	225					695		
JL7	JL13		110	340					
JL13	L13	30		95					
L27	JL13		100	310					
L21	L22	220		680					
L22	JL10	240		990					
JL10	L23	70		220					
JL10	L24	200	60	1,075					
L24	L25	240			990				
JL25	JL11	135	45		745				
JL11	Elec. Service	60			250				
JL11	L26	75		235					
L36	L37	250		775					
L37	L38	200	70	835					
L38	JL12	105		325					
JL12	Elec. Service	130			540				
JL12	L39	25	80	325					
L39	L40	185	70	790					
L40	L41	195	85	865					
Lumin. Pole	L21							65	
Lumin. Pole	L22							65	90
Lumin. Pole	L23							65	
Lumin. Pole	L24							65	90
Lumin. Pole	L25							65	
Lumin. Pole	L26							65	90
Lumin. Pole	L27							65	
Lumin. Pole	L28							65	90
Lumin. Pole	L29							65	
Lumin. Pole	L30							65	90
Lumin. Pole	L31							65	
Lumin. Pole	L32							65	90
Lumin. Pole	L33							65	
Lumin. Pole	L34							65	90
Lumin. Pole	L35							65	
Lumin. Pole	L36							65	90
Lumin. Pole	L37							65	
Lumin. Pole	L38							65	90
Lumin. Pole	L39							65	
Lumin. Pole	L40							65	90
Lumin. Pole	L41							65	
Subtotal:		4,090	1,155	8,110	2,525	0	8,875	1,365	900
Total:		7,970	2,040	15,585	3,990	2,345	14,910	2,665	1,800

HORIZONTAL ALIGNMENT DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	7	36

Plotting Date: 02/03/2025

Alignment Name: US14 Mainline
Alignment Description: CENTERLINE
Alignment Style: Mainline

Type	Station			Northing	Easting
POB	0+00.00			210059.95	2605745.36
		TL= 92.45	N 88°16'30" E		
PI	0+92.45			210062.73	2605837.77
		TL= 38.48	N 88°22'53" E		
PI	1+30.93			210063.82	2605876.23
		TL= 37.58	N 88°27'24" E		
PI	1+68.50			210064.83	2605913.80
		TL= 89.18	N 88°18'38" E		
PI	2+57.68			210067.46	2606002.94
		TL= 76.22	N 88°19'27" E		
PI	3+33.90			210069.69	2606079.13
		TL= 58.15	N 88°02'09" E		
PI	3+92.06			210071.68	2606137.24
		TL= 73.66	N 88°21'45" E		
PI	4+65.72			210073.79	2606210.87
		TL= 112.73	N 88°12'53" E		
PI	5+78.44			210077.30	2606323.55
		TL= 76.06	N 88°15'26" E		
PI	6+54.50			210079.61	2606399.57
		TL= 75.07	N 88°16'18" E		
PI	7+29.57			210081.88	2606474.60
		TL= 87.24	N 88°11'28" E		
PI	8+16.81			210084.63	2606561.80
		TL= 78.37	N 88°21'20" E		
PI	8+95.18			210086.88	2606640.14
		TL= 87.65	N 88°09'39" E		
PI	9+82.83			210089.69	2606727.74
		TL= 97.85	N 88°15'38" E		
PI	10+80.68			210092.66	2606825.55
		TL= 85.92	N 88°13'40" E		
PI	11+66.60			210095.32	2606911.42
		TL= 106.74	N 88°18'38" E		
PI	12+73.34			210098.47	2607018.12
		TL= 54.75	N 88°13'00" E		
PI	13+28.09			210100.17	2607072.84
		TL= 95.82	N 88°13'39" E		
PI	14+23.91			210103.13	2607168.62
		TL= 51.66	N 88°21'50" E		
PI	14+75.57			210104.61	2607220.26
		TL= 45.79	N 88°08'43" E		
PI	15+21.36			210106.09	2607266.02
		TL= 58.22	N 88°16'07" E		
PI	15+79.58			210107.85	2607324.22
		TL= 131.19	N 88°15'18" E		
PI	17+10.77			210111.84	2607455.34
		TL= 118.02	N 88°16'28" E		
PI	18+28.79			210115.40	2607573.31
		TL= 69.35	N 88°13'28" E		
PI	18+98.15			210117.55	2607642.63
		TL= 49.33	N 88°20'28" E		
PI	19+47.48			210118.98	2607691.94
		TL= 94.50	N 88°11'13" E		
PI	20+41.98			210121.97	2607786.40
		TL= 87.91	N 88°15'35" E		
PI	21+29.89			210124.64	2607874.27
		TL= 85.44	N 88°11'59" E		
PI	22+15.33			210127.32	2607959.67
		TL= 95.66	N 88°13'36" E		
PI	23+10.99			210130.28	2608055.28
		TL= 82.53	N 88°19'03" E		
PI	23+93.52			210132.70	2608137.77
		TL= 27.51	N 88°08'45" E		
PI	24+21.03			210133.59	2608165.27
		TL= 59.29	N 89°37'54" E		
PI	24+80.31			210133.97	2608224.55
		TL= 62.77	N 89°51'01" E		
PI	25+43.08			210134.14	2608287.32
		TL= 99.64	N 89°51'12" E		
PI	26+42.72			210134.39	2608386.96
		TL= 91.11	N 88°15'35" E		
PI	27+33.82			210137.16	2608478.02
		TL= 106.09	N 88°28'02" E		
PI	28+39.92			210140.00	2608584.08
		TL= 67.34	N 88°38'58" E		
PI	29+07.25			210141.58	2608651.40
		TL= 118.48	N 88°41'18" E		
PI	30+25.74			210144.30	2608769.85
		TL= 115.97	N 88°42'02" E		
PI	31+41.70			210146.93	2608885.78
		TL= 28.87	N 88°35'35" E		
PI	31+70.58			210147.64	2608914.65
		TL= 44.68	N 88°47'12" E		
PI	32+15.25			210148.58	2608959.32
		TL= 33.47	N 88°28'10" E		
PI	32+48.72			210149.48	2608992.77
		TL= 81.21	N 88°44'39" E		
PI	33+29.94			210151.26	2609073.97
		TL= 47.87	N 88°39'38" E		
PI	33+77.81			210152.37	2609121.83
		TL= 23.15	S 89°36'05" E		

HORIZONTAL ALIGNMENT DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	8	36

Plotting Date: 02/03/2025

PI	34+00.96			210152.21	2609144.97
		TL= 12.35	S 88°48'11" E		
PI	34+13.31			210151.96	2609157.32
		TL= 11.69	S 87°09'56" E		
PI	34+25.00			210151.38	2609168.99
		TL= 12.15	S 86°08'59" E		
PI	34+37.15			210150.56	2609181.12
		TL= 17.14	S 84°20'59" E		
PI	34+54.29			210148.87	2609198.18
		TL= 18.82	S 82°44'11" E		
PI	34+73.11			210146.49	2609216.85
		TL= 11.66	S 80°55'29" E		
PI	34+84.77			210144.66	2609228.36
		TL= 12.24	S 79°56'01" E		
PI	34+97.01			210142.52	2609240.41
		TL= 11.72	S 78°47'47" E		
PI	35+08.73			210140.24	2609251.91
		TL= 12.29	S 77°15'34" E		
PI	35+21.02			210137.53	2609263.90
		TL= 11.75	S 76°18'36" E		
PI	35+32.78			210134.75	2609275.32
		TL= 12.24	S 74°48'07" E		
PI	35+45.01			210131.54	2609287.13
		TL= 23.71	S 73°16'37" E		
PI	35+68.73			210124.71	2609309.84
		TL= 12.01	S 71°46'40" E		
PI	35+80.74			210120.96	2609321.25
		TL= 23.77	S 69°56'59" E		
PI	36+04.51			210112.81	2609343.58
		TL= 24.27	S 66°40'36" E		
PI	36+28.78			210103.20	2609365.87
		TL= 23.95	S 64°47'41" E		
PI	36+52.74			210093.00	2609387.54
		TL= 22.56	S 63°43'24" E		
PI	36+75.30			210083.01	2609407.77
		TL= 25.17	S 61°48'04" E		
PI	37+00.47			210071.11	2609429.96
		TL= 24.09	S 59°00'26" E		
PI	37+24.56			210058.71	2609450.61
		TL= 25.80	S 56°49'21" E		
PI	37+50.35			210044.59	2609472.20
		TL= 26.63	S 53°58'58" E		
PI	37+76.99			210028.93	2609493.74
		TL= 24.00	S 51°10'37" E		
PI	38+00.99			210013.89	2609512.44
		TL= 24.00	S 49°04'05" E		
PI	38+24.99			209998.16	2609530.57
		TL= 23.93	S 47°08'49" E		
PI	38+48.92			209981.88	2609548.12
		TL= 23.81	S 43°50'52" E		
PI	38+72.73			209964.72	2609564.61
		TL= 11.98	S 41°15'09" E		
PI	38+84.71			209955.71	2609572.50
		TL= 24.09	S 38°52'00" E		
PI	39+08.80			209936.95	2609587.62
		TL= 23.88	S 36°03'49" E		
PI	39+32.68			209917.65	2609601.68
		TL= 34.57	S 34°51'43" E		
PI	39+67.25			209889.29	2609621.44
		TL= 14.77	S 34°22'52" E		
PI	39+82.01			209877.10	2609629.78
		TL= 143.43	S 35°06'08" E		
PI	41+25.44			209759.76	2609712.25
		TL= 112.04	S 35°02'34" E		
PI	42+37.48			209668.03	2609776.58
		TL= 76.18	S 35°01'15" E		
PI	43+13.65			209605.65	2609820.30
		TL= 79.86	S 35°04'41" E		
PI	43+93.52			209540.29	2609866.20
		TL= 84.21	S 35°04'05" E		
PI	44+77.73			209471.37	2609914.58
		TL= 88.57	S 35°10'35" E		
PI	45+66.29			209398.97	2609965.60
		TL= 75.82	S 35°05'19" E		
PI	46+42.11			209336.94	2610009.18
		TL= 153.98	S 35°04'13" E		
PI	47+96.08			209210.91	2610097.65
		TL= 146.19	S 35°00'03" E		
PI	49+42.27			209091.17	2610181.51
		TL= 170.58	S 35°03'09" E		
PI	51+12.85			208951.53	2610279.47
		TL= 193.67	S 35°05'24" E		
PI	53+06.52			208793.06	2610390.81
		TL= 67.67	S 34°57'57" E		
POE	53+74.19			208737.60	2610429.59

Plot Scale - 1:200

Plotted From - TRPR17199

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HORIZONTAL ALIGNMENT DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	9	36

Plotting Date: 02/03/2025

Alignment Name: SD25
Alignment Description:
Alignment Style: Default

Type	Station			Northing	Easting
POB	0+00.00			208504.78	2608571.99
		TL= 95.83	N 1°38'55" W		
PI	0+95.83			208600.57	2608569.24
		TL= 71.34	N 1°38'40" W		
PI	1+67.16			208671.87	2608567.19
		TL= 131.93	N 1°38'29" W		
PI	2+99.09			208803.75	2608563.41
		TL= 107.03	N 1°36'05" W		
PI	4+06.12			208910.74	2608560.42
		TL= 123.11	N 1°37'05" W		
PI	5+29.23			209033.80	2608556.94
		TL= 77.84	N 1°36'23" W		
PI	6+07.07			209111.61	2608554.76
		TL= 91.49	N 1°31'37" W		
PI	6+98.56			209203.06	2608552.32
		TL= 64.35	N 1°37'27" W		
PI	7+62.90			209267.38	2608550.50
		TL= 276.98	N 1°37'13" W		
PI	10+39.89			209544.25	2608542.67
		TL= 142.97	N 1°35'41" W		
PI	11+82.85			209687.16	2608538.69
		TL= 111.59	N 1°37'50" W		
PI	12+94.44			209798.71	2608535.51
		TL= 75.47	N 1°38'46" W		
PI	13+69.91			209874.15	2608533.35
		TL= 72.92	N 1°36'00" W		
PI	14+42.83			209947.03	2608531.31
		TL= 60.05	N 1°43'56" W		
PI	15+02.87			210007.05	2608529.49
		TL= 40.91	N 1°22'16" W		
PI	15+43.79			210047.95	2608528.52
		TL= 43.60	N 1°33'22" W		
PI	15+87.39			210091.54	2608527.33
		TL= 46.25	N 1°50'38" W		
PI	16+33.63			210137.76	2608525.84
		TL= 7.80	N 0°50'16" E		
PI	16+41.43			210145.56	2608525.96
		TL= 27.59	N 0°37'45" E		
PI	16+69.02			210173.14	2608526.26
		TL= 65.20	N 7°51'23" E		
PI	17+34.22			210237.73	2608535.17
		TL= 50.36	N 8°10'35" E		
PI	17+84.57			210287.58	2608542.33
		TL= 60.46	N 7°52'10" E		
PI	18+45.03			210347.47	2608550.61
		TL= 76.51	N 8°05'56" E		
PI	19+21.55			210423.22	2608561.39
		TL= 76.03	N 7°40'50" E		
PI	19+97.58			210498.57	2608571.55
		TL= 106.80	N 7°55'11" E		
PI	21+04.38			210604.35	2608586.27
		TL= 105.14	N 7°53'51" E		
PI	22+09.51			210708.49	2608600.71
		TL= 126.46	N 7°54'49" E		
PI	23+35.97			210833.74	2608618.13
		TL= 85.21	N 7°52'18" E		
PI	24+21.19			210918.15	2608629.80
		TL= 93.61	N 7°59'15" E		
PI	25+14.80			211010.85	2608642.80
		TL= 64.21	N 7°52'50" E		
PI	25+79.00			211074.45	2608651.61
		TL= 112.52	N 7°53'53" E		
PI	26+91.53			211185.91	2608667.07
		TL= 77.90	N 7°53'06" E		
PI	27+69.43			211263.07	2608677.76
		TL= 37.68	N 6°45'01" E		
PI	28+07.11			211300.49	2608682.18
		TL= 23.82	N 3°33'27" E		
PI	28+30.93			211324.27	2608683.66
		TL= 23.52	N 0°44'43" E		
PI	28+54.45			211347.79	2608683.97
		TL= 25.76	N 1°09'09" W		
PI	28+80.21			211373.54	2608683.45
		TL= 19.39	N 3°48'42" W		
PI	28+99.60			211392.89	2608682.16
		TL= 19.04	N 5°10'09" W		
PI	29+18.63			211411.84	2608680.45
		TL= 18.32	N 7°12'37" W		
PI	29+36.96			211430.02	2608678.15
		TL= 19.16	N 8°30'17" W		
PI	29+56.12			211448.98	2608675.31
		TL= 19.60	N 11°09'35" W		
PI	29+75.72			211468.21	2608671.52
		TL= 18.62	N 13°06'14" W		
PI	29+94.34			211486.34	2608667.30
		TL= 19.29	N 14°48'25" W		
PI	30+13.63			211504.99	2608662.37
		TL= 18.74	N 16°11'58" W		
PI	30+32.37			211522.98	2608657.14
		TL= 20.06	N 19°04'38" W		

HORIZONTAL ALIGNMENT DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	10	36

Plotting Date: 02/03/2025

PI	30+52.43			211541.94	2608650.58
		TL= 18.86	N 20°11'38" W		
PI	30+71.29			211559.65	2608644.07
		TL= 19.30	N 22°44'11" W		
PI	30+90.60			211577.45	2608636.61
		TL= 19.25	N 24°27'03" W		
PI	31+09.85			211594.97	2608628.64
		TL= 18.93	N 26°12'47" W		
PI	31+28.78			211611.96	2608620.28
		TL= 19.59	N 27°45'24" W		
PI	31+48.37			211629.29	2608611.16
		TL= 18.88	N 30°42'17" W		
PI	31+67.25			211645.53	2608601.52
		TL= 14.19	N 30°37'56" W		
PI	31+81.44			211657.74	2608594.28
		TL= 26.91	N 33°37'54" W		
PI	32+08.35			211680.15	2608579.38
		TL= 25.06	N 33°43'55" W		
PI	32+33.42			211700.99	2608565.46
		TL= 25.30	N 31°09'52" W		
PI	32+58.72			211722.64	2608552.37
		TL= 20.91	N 28°23'41" W		
PI	32+79.63			211741.04	2608542.42
		TL= 16.84	N 26°38'39" W		
PI	32+96.47			211756.09	2608534.87
		TL= 17.65	N 25°22'18" W		
PI	33+14.13			211772.04	2608527.31
		TL= 3.65	N 22°03'06" W		
PI	33+17.78			211775.43	2608525.94
		TL= 14.61	N 22°43'50" W		
PI	33+32.39			211788.91	2608520.29
		TL= 18.89	N 21°37'41" W		
PI	33+51.29			211806.47	2608513.33
		TL= 18.82	N 19°24'29" W		
PI	33+70.11			211824.22	2608507.07
		TL= 19.01	N 18°32'16" W		
PI	33+89.12			211842.25	2608501.03
		TL= 19.06	N 15°04'10" W		
PI	34+08.18			211860.65	2608496.07
		TL= 19.18	N 14°55'32" W		
PI	34+27.35			211879.18	2608491.13
		TL= 18.88	N 11°37'02" W		
PI	34+46.23			211897.67	2608487.33
		TL= 19.52	N 10°45'08" W		
PI	34+65.75			211916.85	2608483.69
		TL= 19.12	N 7°06'41" W		
PI	34+84.87			211935.82	2608481.32
		TL= 19.07	N 7°05'43" W		
PI	35+03.93			211954.74	2608478.97
		TL= 19.18	N 2°09'38" W		
PI	35+23.11			211973.90	2608478.25
		TL= 19.22	N 5°50'27" W		
PI	35+42.33			211993.02	2608476.29
		TL= 58.63	N 1°12'18" W		
PI	36+00.97			212051.64	2608475.06
		TL= 64.12	N 1°56'09" W		
PI	36+65.09			212115.73	2608472.89
		TL= 68.98	N 1°55'33" W		
PI	37+34.07			212184.67	2608470.57
		TL= 46.34	N 1°35'25" W		
PI	37+80.41			212230.99	2608469.29
		TL= 23.74	N 1°37'45" W		
PI	38+04.15			212254.72	2608468.61
		TL= 53.83	N 1°32'59" W		
PI	38+57.98			212308.54	2608467.15
		TL= 73.15	N 1°48'35" W		
PI	39+31.13			212381.65	2608464.85
		TL= 43.66	N 1°40'10" W		
PI	39+74.80			212425.30	2608463.57
		TL= 43.54	N 1°46'03" W		
PI	40+18.34			212468.81	2608462.23
		TL= 23.05	N 1°23'58" W		
PI	40+41.39			212491.86	2608461.67
		TL= 66.07	N 1°51'44" W		
PI	41+07.46			212557.90	2608459.52
		TL= 39.80	N 1°40'23" W		
PI	41+47.26			212597.68	2608458.36
		TL= 20.03	N 1°11'55" W		
PI	41+67.29			212617.71	2608457.94
		TL= 30.54	N 2°14'06" W		
PI	41+97.83			212648.22	2608456.75
		TL= 63.76	N 1°35'27" W		
PI	42+61.59			212711.96	2608454.98
		TL= 36.73	N 1°20'13" W		
PI	42+98.32			212748.68	2608454.12
		TL= 14.45	N 1°53'04" W		
PI	43+12.77			212763.12	2608453.65
		TL= 31.86	N 1°29'21" W		
PI	43+44.63			212794.97	2608452.82
		TL= 38.10	N 2°10'30" W		
PI	43+82.73			212833.05	2608451.37
		TL= 53.02	N 1°26'15" W		
PI	44+35.75			212886.05	2608450.04
		TL= 66.84	N 1°45'58" W		

HORIZONTAL ALIGNMENT DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	11	36

Plotting Date: 02/03/2025

PI	45+02.59			212952.85	2608447.98
		TL= 89.75	N 1°42'04" W		
PI	45+92.34			213042.56	2608445.32
		TL= 12.57	N 0°01'22" E		
PI	46+04.91			213055.14	2608445.32
		TL= 88.81	N 1°47'56" W		
PI	46+93.73			213143.91	2608442.54
		TL= 134.60	N 1°37'04" W		
PI	48+28.33			213278.46	2608438.74
		TL= 40.26	N 1°17'27" W		
PI	48+68.59			213318.71	2608437.83
		TL= 47.29	N 2°26'45" W		
PI	49+15.88			213365.95	2608435.81
		TL= 97.84	N 1°42'25" W		
POE	50+13.72			213463.75	2608432.90

Plot Scale - 1:200

Plotted From - TRPR17199

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CONTROL DATA

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	12	36

Plotting Date: 02/03/2025

HORIZONTAL AND VERTICAL CONTROL POINTS
US14 HORIZONTAL ALIGNMENT

POINT	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION
RM3	8+69.45	49.38 L		210135.50	2606613.00	1740.82
RM8	19+22.53	34.17 R		210084.10	2607668.00	1723.69
RM14	32+49.64	14.00 R		210135.50	2608994.00	1708.95
RM16	36+89.00	16.61 R		210061.90	2609412.00	1703.46

HORIZONTAL AND VERTICAL CONTROL POINTS
SD25 HORIZONTAL ALIGNMENT

POINT	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION
RM8	16+07.60	859.13 L		210084.10	2607668.00	1723.69
RM14	16+16.31	467.84 R		210135.50	2608994.00	1708.95
RM16	15+36.59	883.57 R		210061.90	2609412.00	1703.46

LEGEND

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	13	36

Plotting Date: 02/03/2025

Plot Scale - 1:200

- Anchor
- Antenna
- Approach
- Assumed Corner
- Azimuth Marker
- BBQ Grill/ Fireplace
- Bearing Tree
- Bench Mark
- Box Culvert
- Bridge
- Brush
- Buildings
- Bulk Tank
- Cattle Guard
- Cemetery
- Centerline
- Cistern
- Clothes Line
- Commercial Sign Double Face
- Commercial Sign One Post
- Commercial Sign Overhead
- Commercial Sign Two Post
- Concrete Symbol
- Creek Edge
- Curb/Gutter
- Curb
- Dam Grade/Dike/Levee
- Deck Edge
- Ditch Block
- Doorway Threshold
- Drainage Profile
- Drop Inlet
- Edge Of Asphalt
- Edge Of Concrete
- Edge Of Gravel
- Edge Of Other
- Edge Of Shoulder
- Elec. Trans./Power Jct. Box
- Fence Barbwire
- Fence Chainlink
- Fence Electric
- Fence Misc.
- Fence Rock
- Fence Snow
- Fence Wood
- Fence Woven
- Fire Hydrant
- Flag Pole
- Flower Bed
- Gas Valve Or Meter
- Gas Pump Island
- Grain Bin
- Guardrail
- Guide Sign One Post
- Guide Sign Two Post
- Gutter
- Guy Pole
- Haystack
- Hedge
- Highway R.O.W. Marker
- Interstate Close Gate
- Iron Pin
- Irrigation Ditch
- Lake Edge
- Lawn Sprinkler
- Mailbox
- Manhole Electric
- Manhole Gas
- Manhole Misc
- Manhole Sanitary Sewer
- Manhole Storm Sewer
- Manhole Telephone
- Manhole Water
- Merry-Go-Round
- Microwave Radio Tower
- Misc. Line
- Misc. Property Corner
- Misc. Post
- Overhang Or Encroachment
- Overhead Utility Line — OH —
- Parking Meter
- Pipe With End Section
- Pipe With Headwall
- Pipe Without End Section
- Playground Slide
- Playground Swing
- Power And Light Pole
- Power And Telephone Pole
- Power Meter
- Power Pole
- Power Pole And Transformer
- Power Tower Structure
- Propane Tank
- Property Pipe
- Property Pipe With Cap
- Property Stone
- Public Telephone
- Railroad Crossing Signal
- Railroad Milepost Marker
- Railroad Profile
- Railroad R.O.W. Marker
- Railroad Signs
- Railroad Switch
- Railroad Track
- Railroad Trestle
- Rebar
- Rebar With Cap
- Reference Mark
- Regulatory Sign One Post
- Regulatory Sign Two Post
- Retaining Wall
- Riprap
- River Edge
- Rock And Wire Baskets
- Rockpiles
- Satellite Dish
- Septic Tank
- Shrub Tree
- Sidewalk
- Sign Face
- Sign Post
- Slough Or Marsh
- Spring
- Stream Gauge
- Street Marker
- Subsurface Utility Exploration Test Hole
- Telephone Fiber Optics — T/F —
- Telephone Junction Box
- Telephone Pole
- Television Cable Jct Box
- Television Tower
- Test Wells/Bore Holes
- Traffic Signal
- Trash Barrel
- Tree Belt
- Tree Coniferous
- Tree Deciduous
- Tree Stumps
- Triangulation Station
- Underground Electric Line — P —
- Underground Gas Line — G —
- Underground High Pressure Gas Line — HG —
- Underground Sanitary Sewer — S —
- Underground Storm Sewer — S —
- Underground Tank
- Underground Telephone Line — T —
- Underground Television Cable — TV —
- Underground Water Line — W —
- Warning Sign One Post
- Warning Sign Two Post
- Water Fountain
- Water Hydrant
- Water Meter
- Water Tower
- Water Valve
- Water Well
- Weir Rock
- Windmill
- Wingwall
- Witness Corner

- State and National Line
- County Line
- Section Line
- Quarter Line
- Sixteenth Line
- Property Line
- Construction Line
- R. O. W. Line
- New R. O. W. Line
- Cut and Fill Limits
- Control of Access
- New Control of Access
- Proposed ROW (After Property Disposal)

- Drainage Arrow

- Remove Concrete Pavement
- Remove Concrete Driveway Pavement
- Remove Asphalt Concrete Pavement
- Remove Concrete Sidewalk
- Remove Concrete Median Pavement
- Remove Concrete Curb and/or Gutter

- Detectable Warning
- Pedestrian Push Button Pole and 30" x 48" Clear Space with 1.5% slope

Plotted From - TRPR17199

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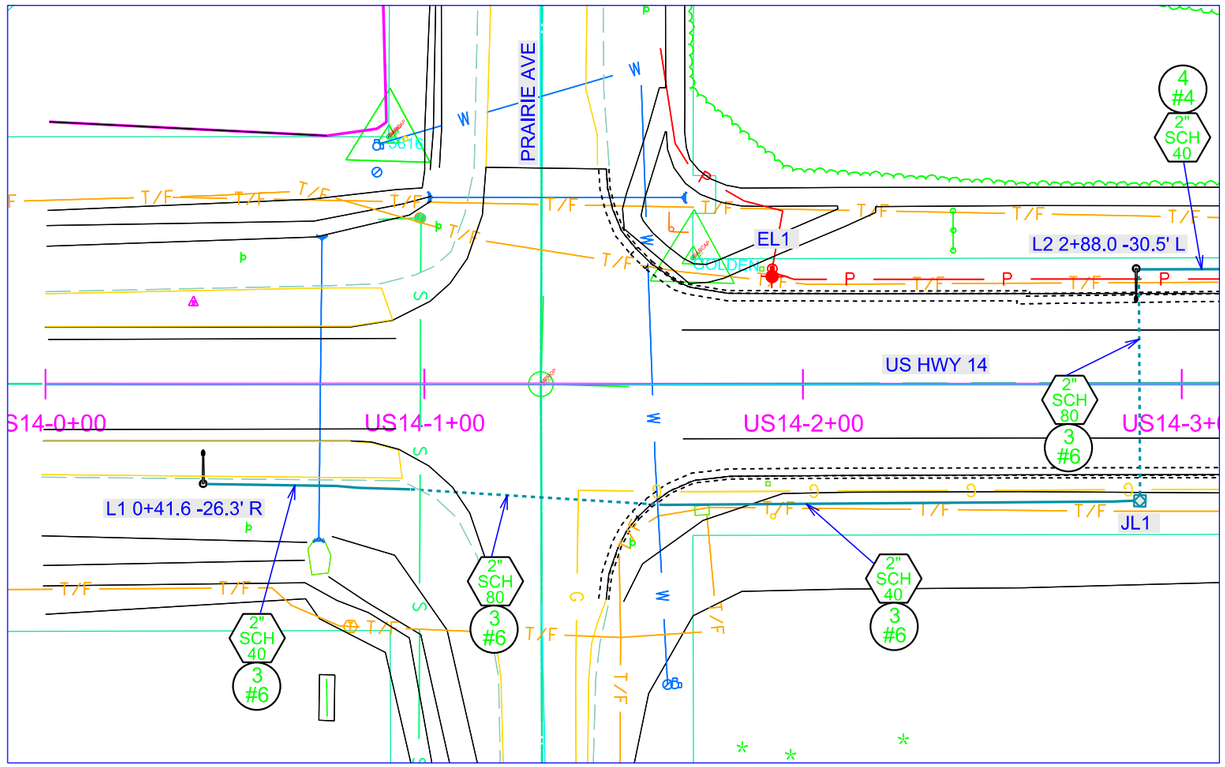
CONDUIT LAYOUT
US HWY 14

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	14	36

Plotting Date: 02/03/2025

ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
	Remove Luminaire Pole (EL1-EL44)	44	EACH
	Remove Luminaire Pole Footing (EL1-EL44)	44	EACH
	Breakaway Base Luminaire Pole w/8' Arm 50' Mounting Height (L1-L41)	41	EACH
	Roadway Luminaire (L1-L41)	41	EACH
	2' Diameter Footing (L1-L41)	348	FT
	Type 1 Electrical Junction Box (JL1-JL15)	15	EACH
	Electrical Service Cabinet	5	EACH
	Galvanized Steel Utility Pole Not a Bid Item	5	EACH
M	Meter Socket Not a Bid Item	5	EACH
2" SCH 40	2" Rigid Conduit, Schedule 40	7,970	FT
2" SCH 80	2" Rigid Conduit, Schedule 80	2,040	FT
#8	1/C #8 AWG Copper Wire	15,585	FT
#6	1/C #6 AWG Copper Wire	3,990	FT
#4	1/C #4 AWG Copper Wire	2,345	FT
#3	1/C #3 AWG Copper Wire	14,910	FT
	2/C #10 AWG Copper Pole & Bracket Cable	2,665	FT
	1/C #14 AWG Copper Wire	1,800	FT



Plot Scale - 1:40

Plotted From - TRPR17199

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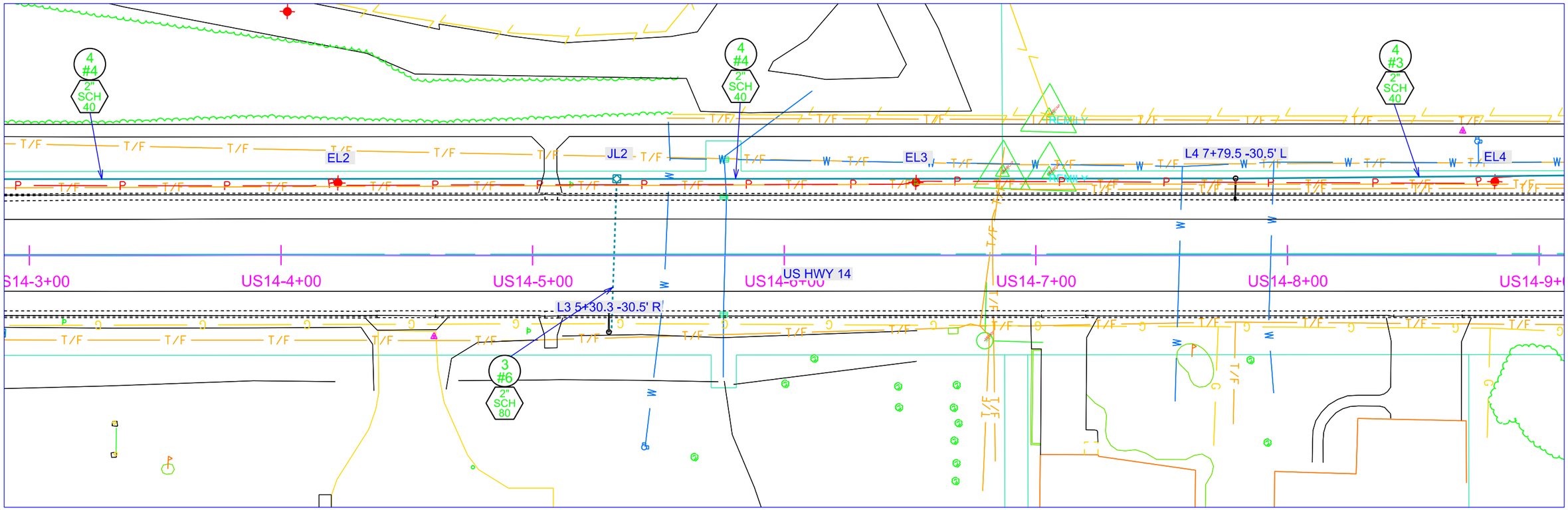
CONDUIT LAYOUT
US HWY 14

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	15	36

Plotting Date: 02/03/2025



Plot Scale - 1:40

Plotted From - TRPR17199

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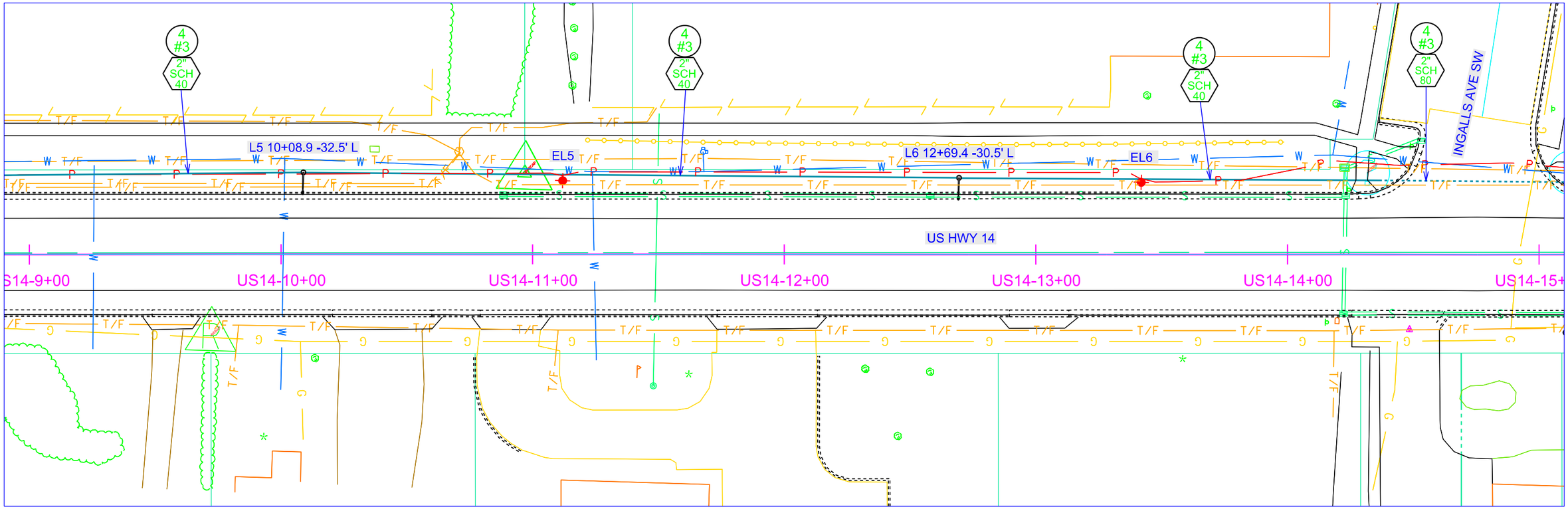
CONDUIT LAYOUT
US HWY 14

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	16	36

Plotting Date: 02/03/2025



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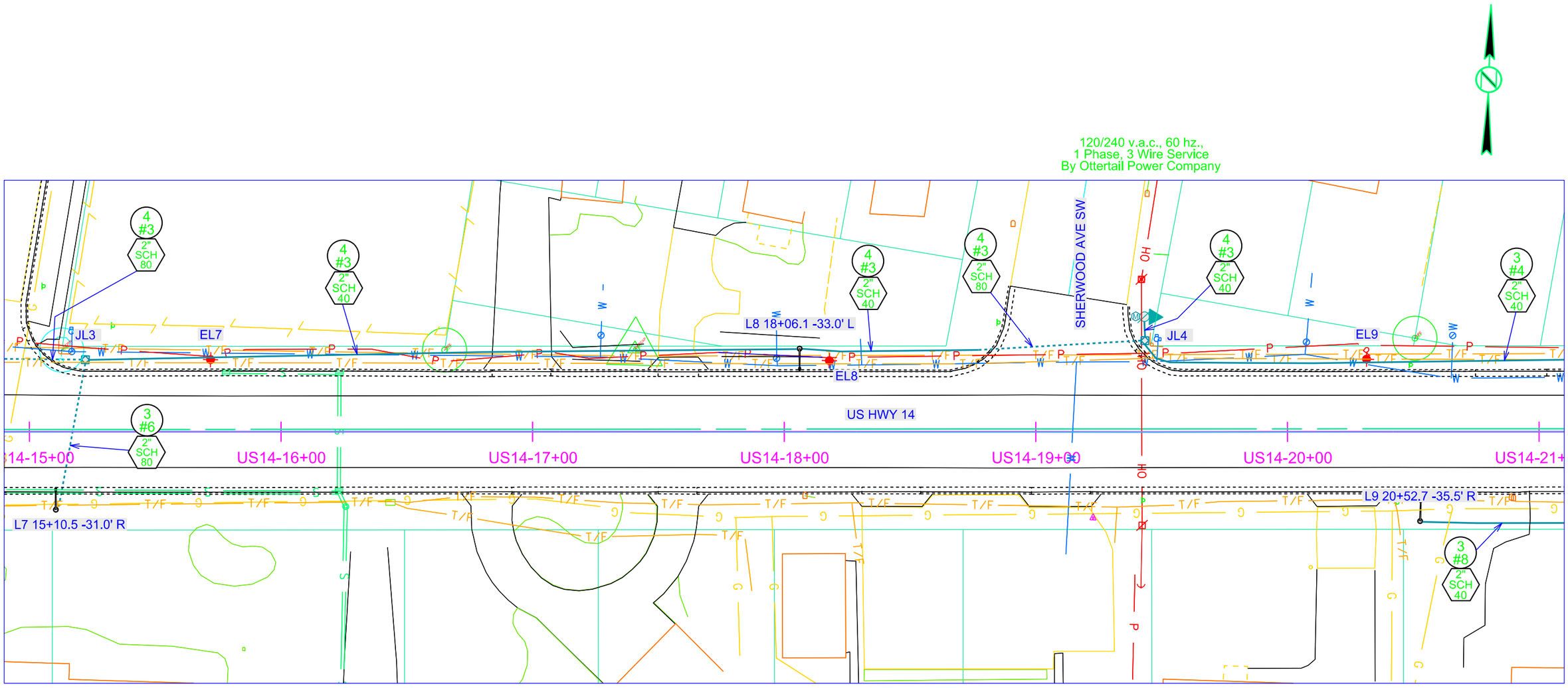
CONDUIT LAYOUT
US HWY 14

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	17	36

Plotting Date: 02/03/2025



Plot Scale - 1:40

Plotted From - TRPR17199

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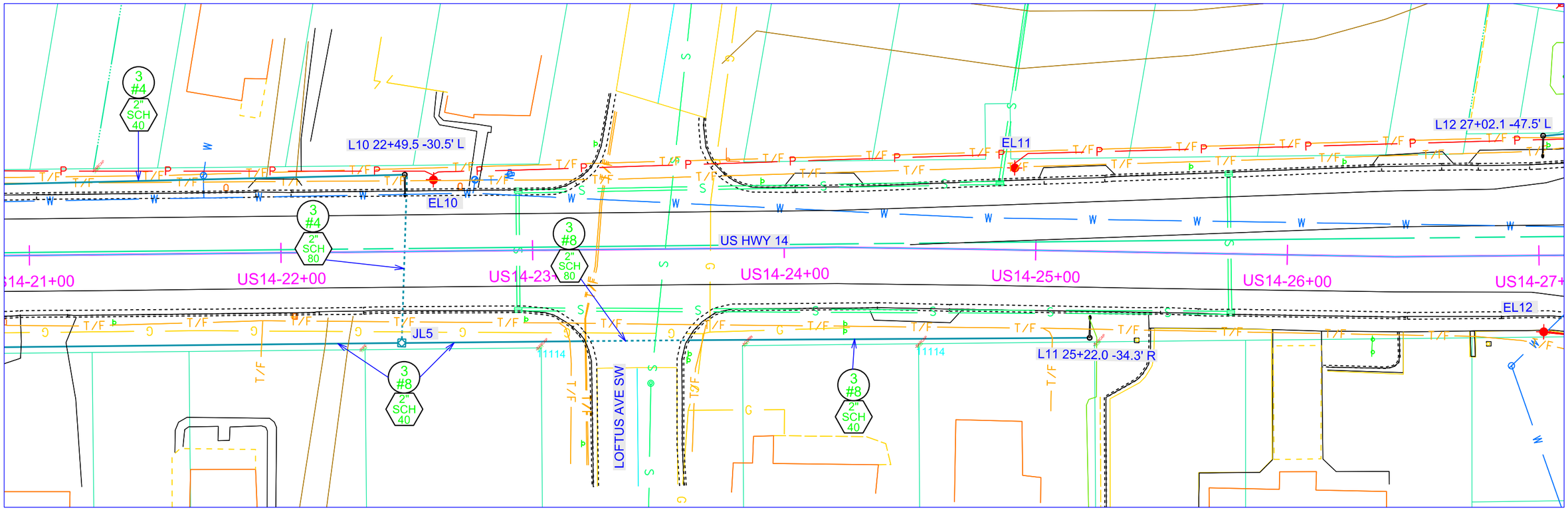
CONDUIT LAYOUT
US HWY 14

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	18	36

Plotting Date: 02/03/2025



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Plotted From - TRPR17199

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CONDUIT LAYOUT
US HWY 14

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	19	36

Plotting Date: 02/03/2025

120/240 v.a.c., 60 hz.,
1 Phase, 3 Wire Service
By Ottertail Power Company

4 #3 2" SCH 40
3 #8 2" SCH 40
4 #3 2" SCH 80
3 #8 2" SCH 80

JL6
JL7
JL13
EL12
EL13
EL14
EL15
EL27
L12 27+02.1 -47.5' L
L13 28+52.8 -28.9' R
L14 31+15.2 -26.3' R
L27 15+56.0 -33.1' L
SD HWY 25
SD25 17+00
SD25 16+00
US HWY 14
CALUMET AVE SE

US14-27+00
US14-28+00
US14-29+00
US14-30+00
US14-31+00
US14-32+00
US14-33+

Plot Scale - 1:40
Plotted From - TRPR17199
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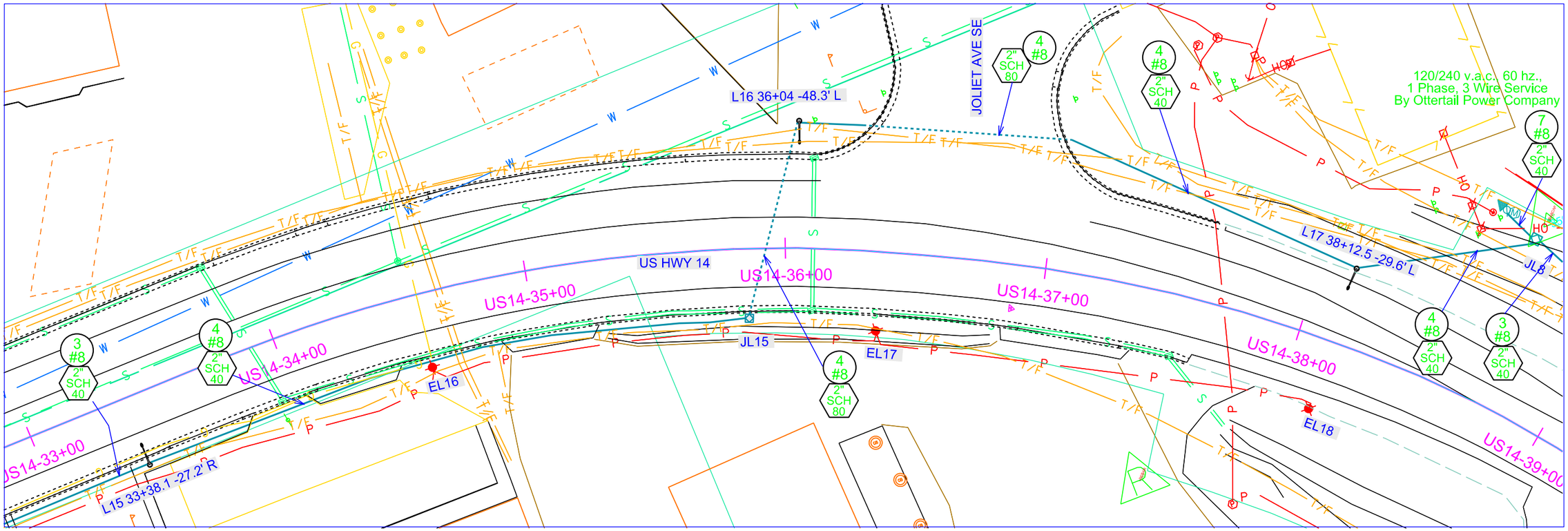
CONDUIT LAYOUT
US HWY 14

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	20	36

Plotting Date: 02/03/2025



Plot Scale - 1:40

Plotted From - TRPR17199

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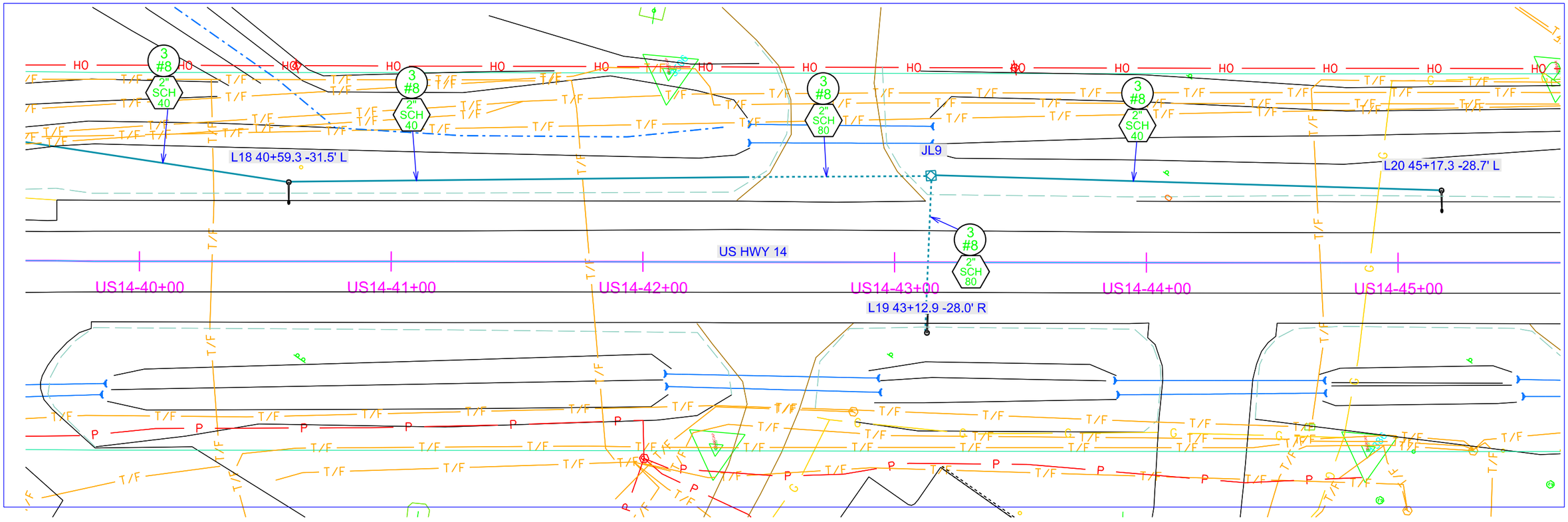
CONDUIT LAYOUT
US HWY 14

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	21	36

Plotting Date: 02/03/2025



Plot Scale - 1:40

Plotted From - TRPR17199

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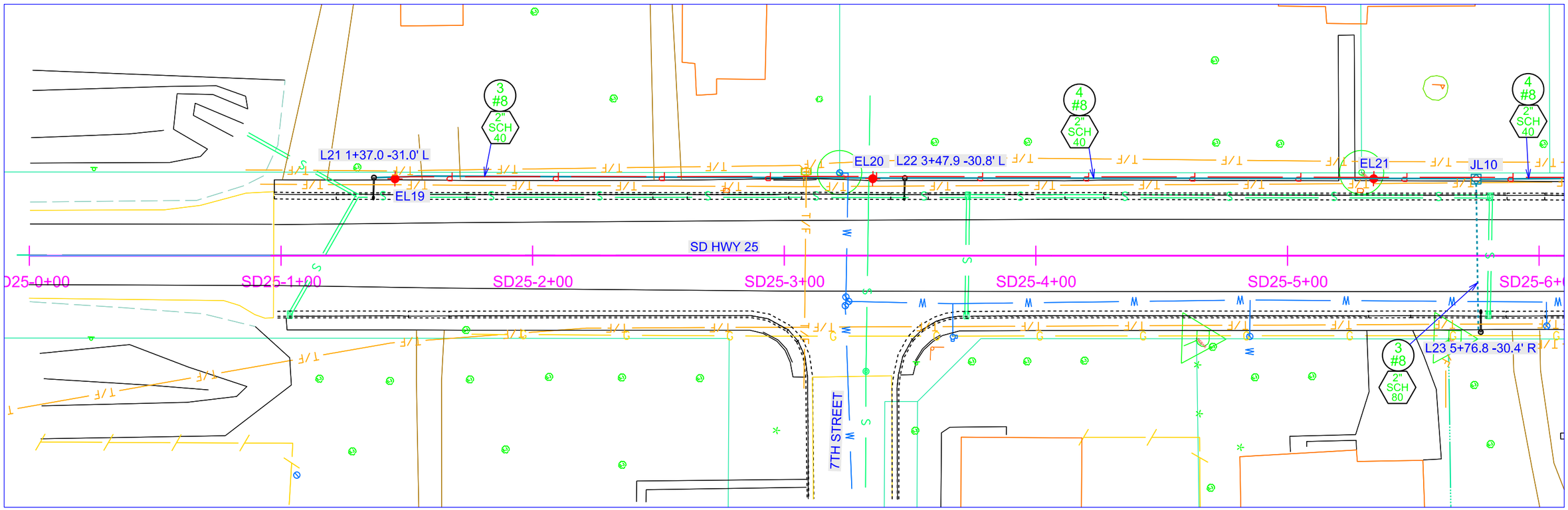
CONDUIT LAYOUT
SD HWY 25

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	22	36

Plotting Date: 02/03/2025



Plot Scale - 1:40

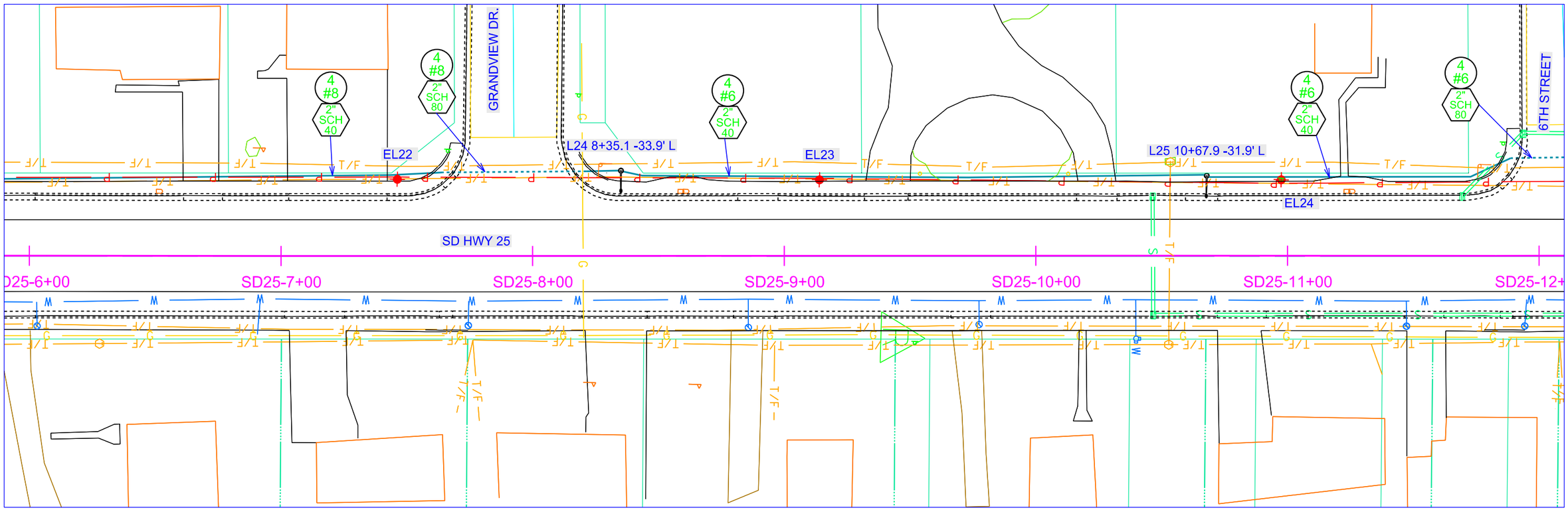
Plotted From - TRPR17199

File - U:\traf\pj\kingg09PE\SD25-1.dgn

CONDUIT LAYOUT
SD HWY 25

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	23	36

Plotting Date: 02/03/2025



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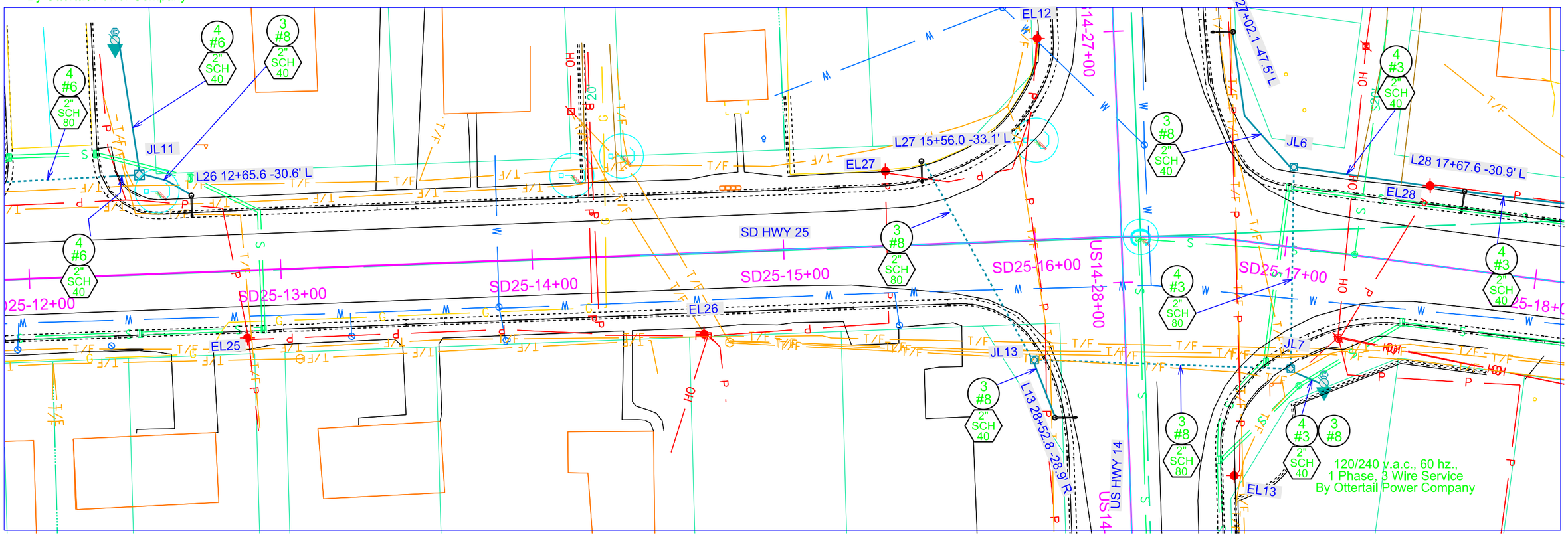
Plotted From - TRPR17199

File - U:\rdp\hking\09PE\SD25-2.dgn

CONDUIT LAYOUT
SD HWY 25

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	24	36

Plotting Date: 02/03/2025



Plot Scale - 1:40

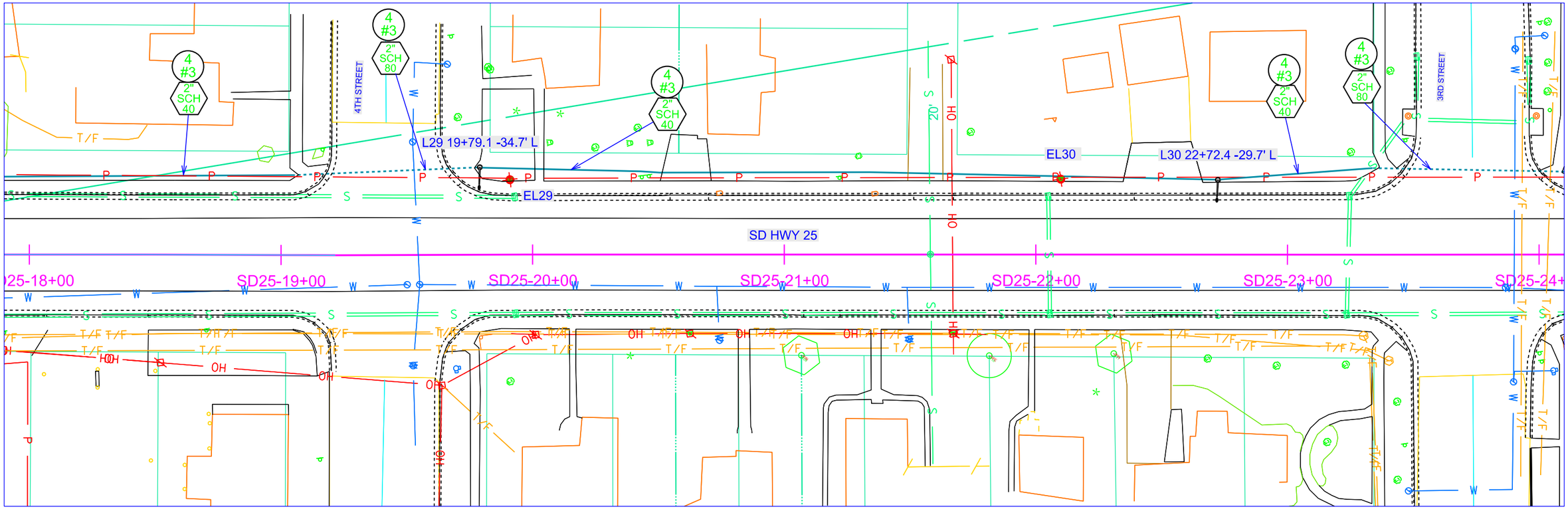
Plotted From - TRPR17199

File - U:\trapr\Mng\09PE\SD25-3.dgn

CONDUIT LAYOUT
SD HWY 25

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	25	36

Plotting Date: 02/03/2025



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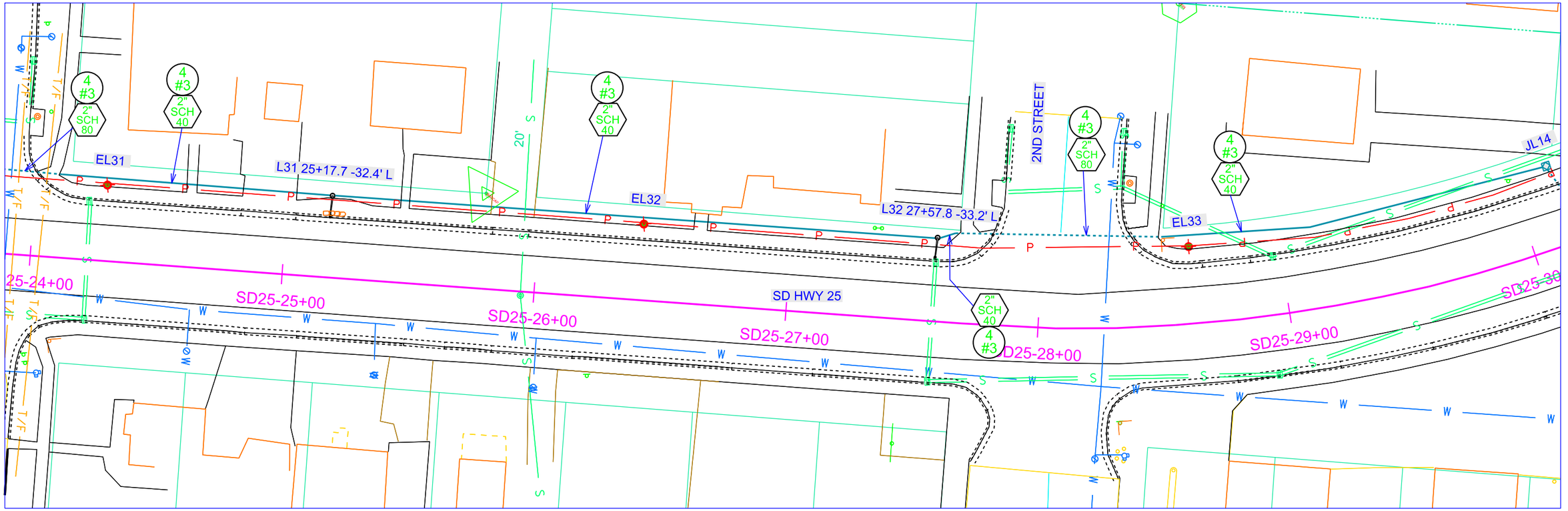
CONDUIT LAYOUT
SD HWY 25

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	26	36

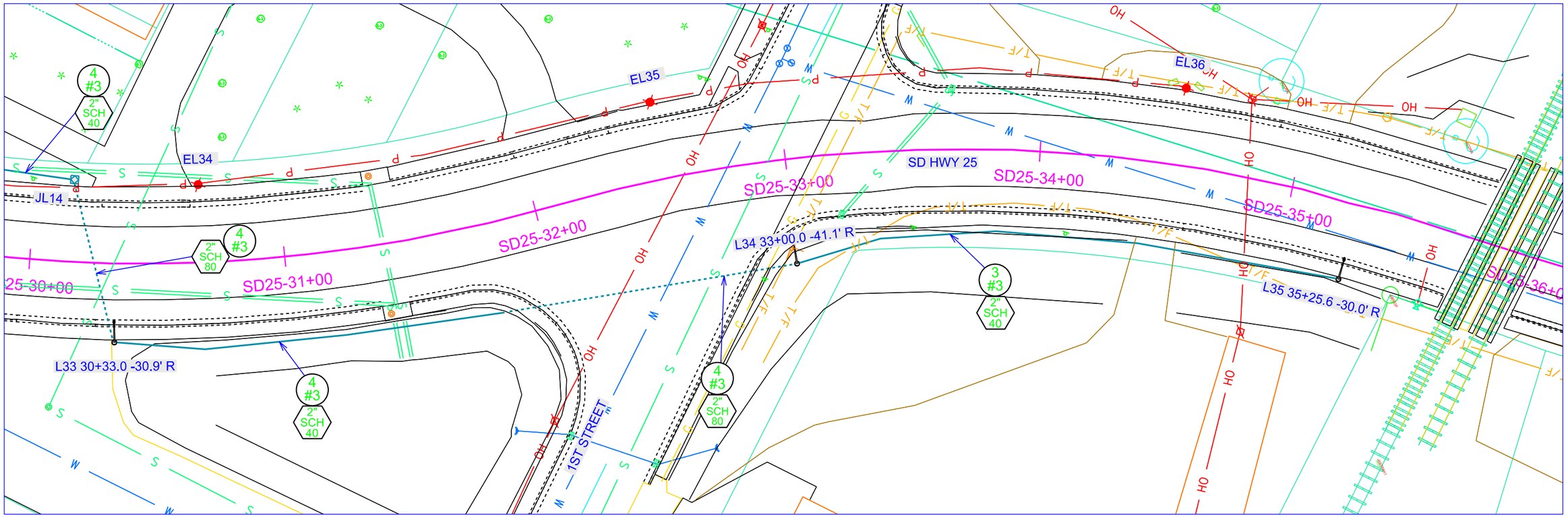
Plotting Date: 02/03/2025



CONDUIT LAYOUT
SD HWY 25

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	27	36

Plotting Date: 02/03/2025



Plot Scale - 1:40

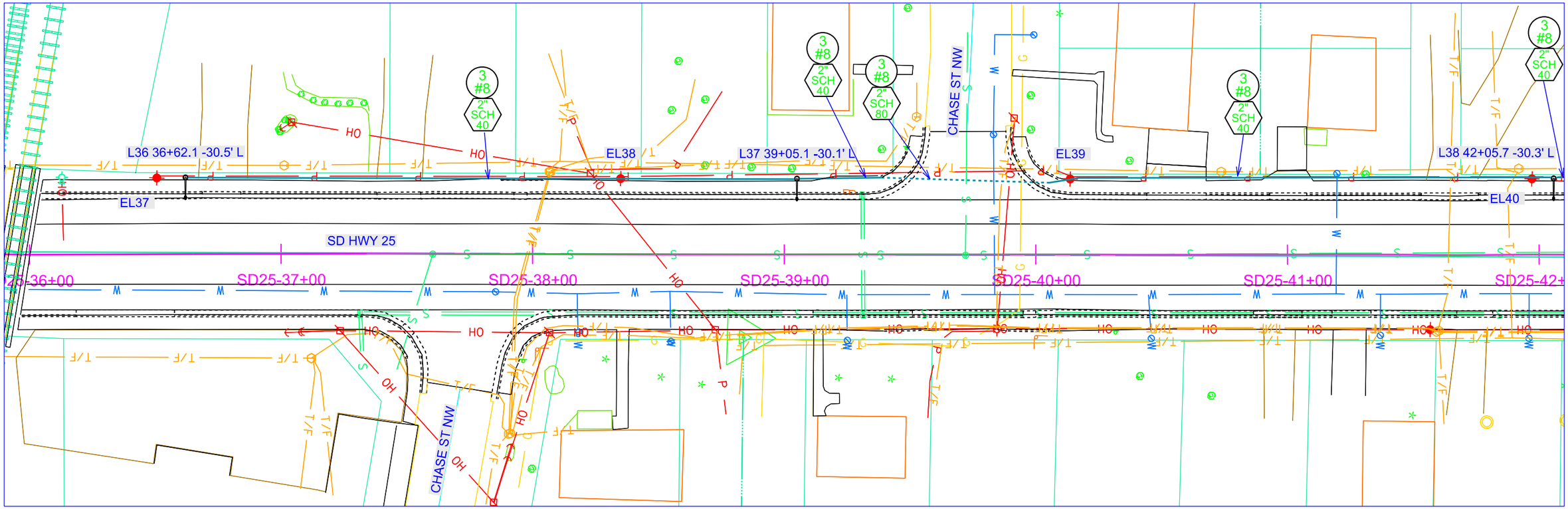
Plotted From - TRPR17199

File - U:\rdp\rlking09\PES\SD25-6.dgn

CONDUIT LAYOUT
SD HWY 25

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	28	36

Plotting Date: 02/03/2025



Plot Scale - 1:40

Plotted From - TRPR17199

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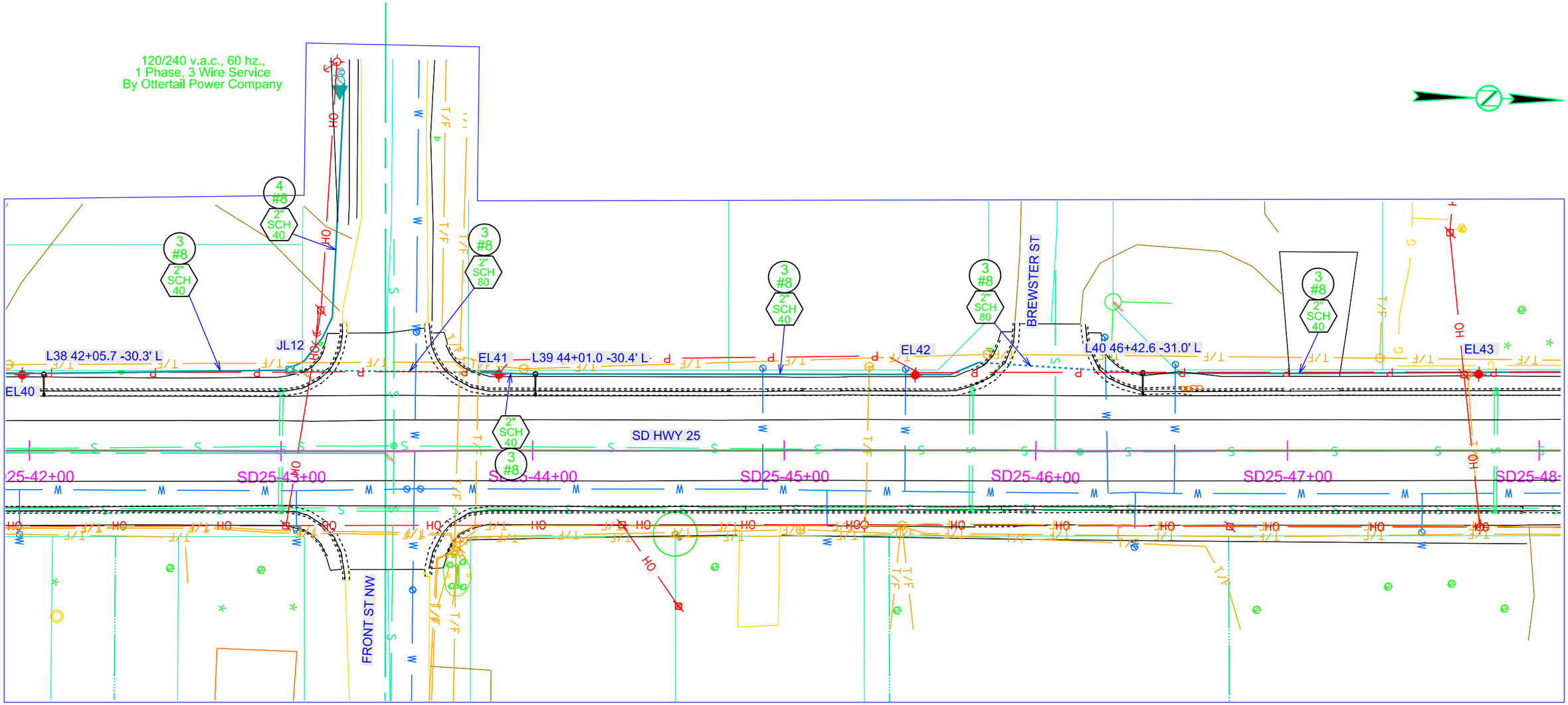
CONDUIT LAYOUT
SD HWY 25

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	29	36

Plotting Date: 02/03/2025

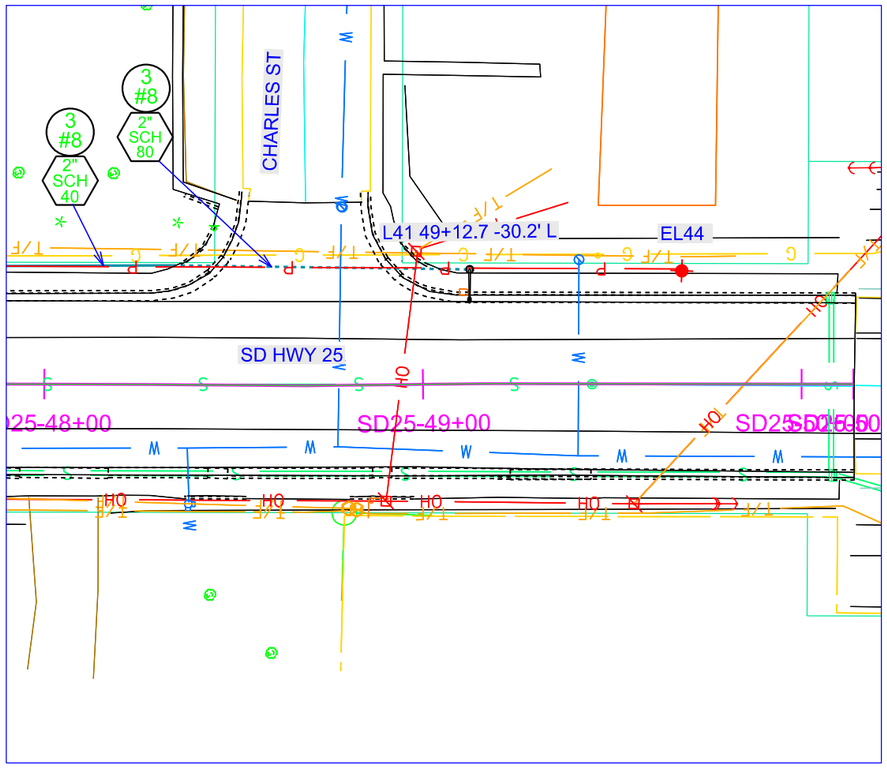
120/240 v.a.c., 60 hz.,
1 Phase, 3 Wire Service
By Ottertail Power Company



CONDUIT LAYOUT
SD HWY 25

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	30	36

Plotting Date: 02/03/2025



WIRING DIAGRAM

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	31	36

Plotting Date: 02/03/2025

Plot Scale - 1:40

Plotted From - TRPR17199

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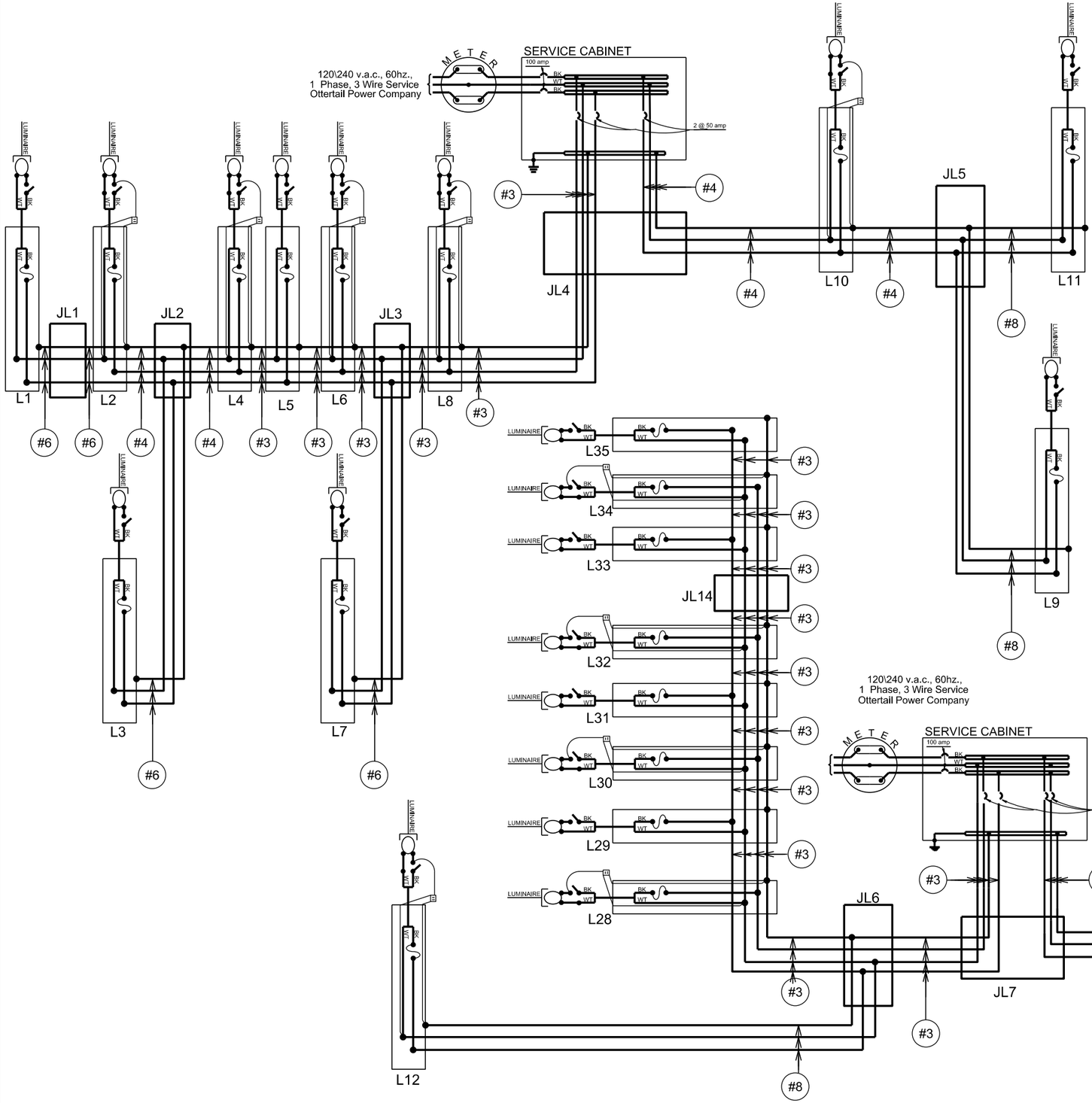
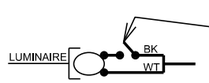


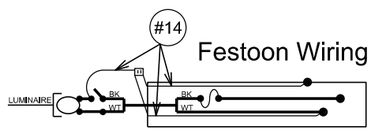
LEGEND:

FUSE: 10 amp.

LUMINAIRE: LED



PHOTOCELL
(Typical of all)



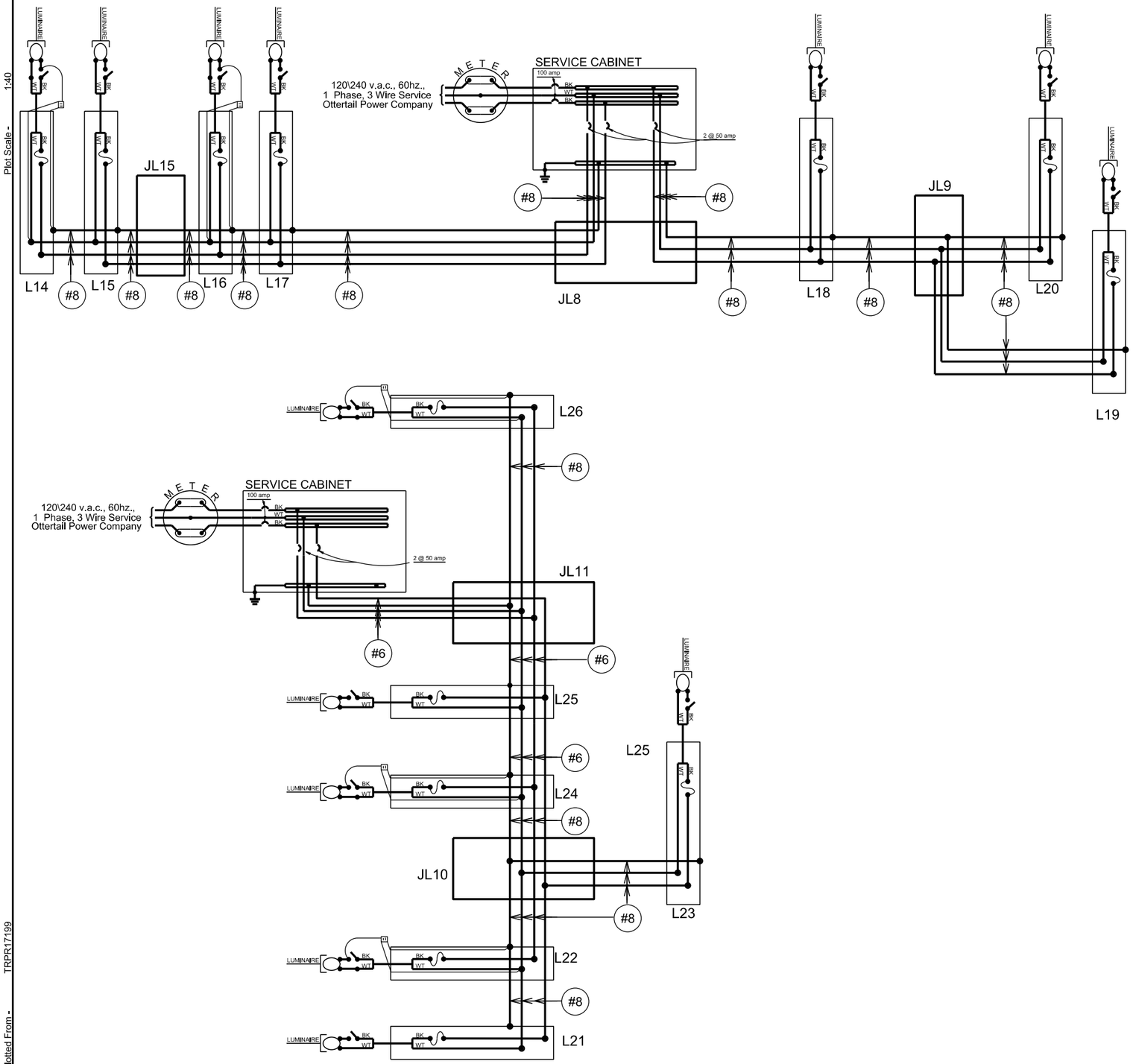
Festoon Wiring

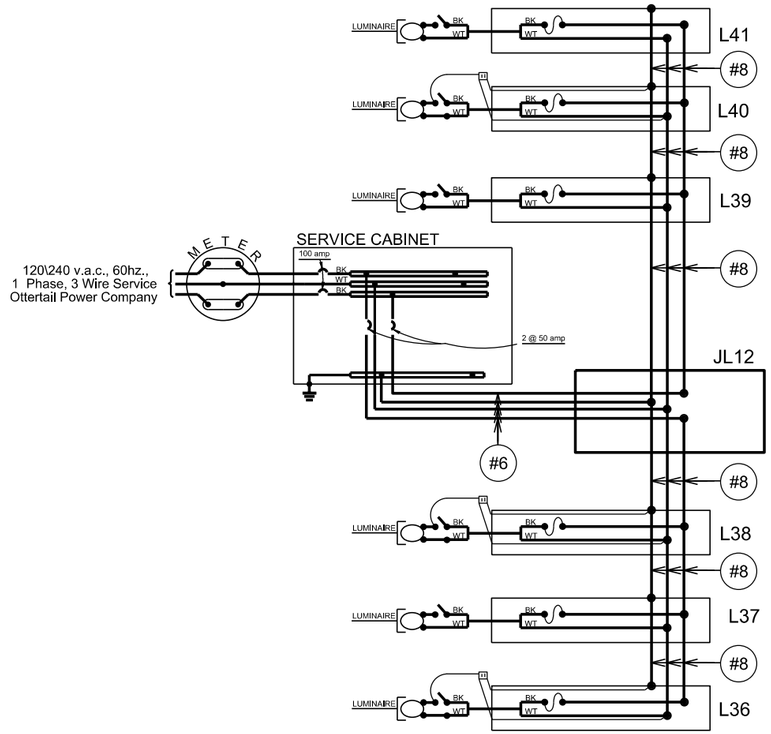
WIRING DIAGRAM

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-CR 0014(262)378 CR 0025(111)114	32	36

Plotting Date: 02/03/2025

Plot Scale - 1:40

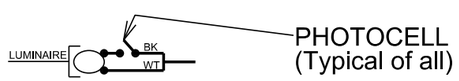


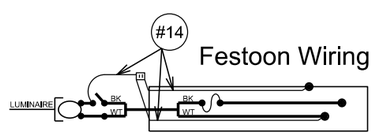


LEGEND:

FUSE: 10 amp.

LUMINAIRE: LED





Plotted From - TRPR17199

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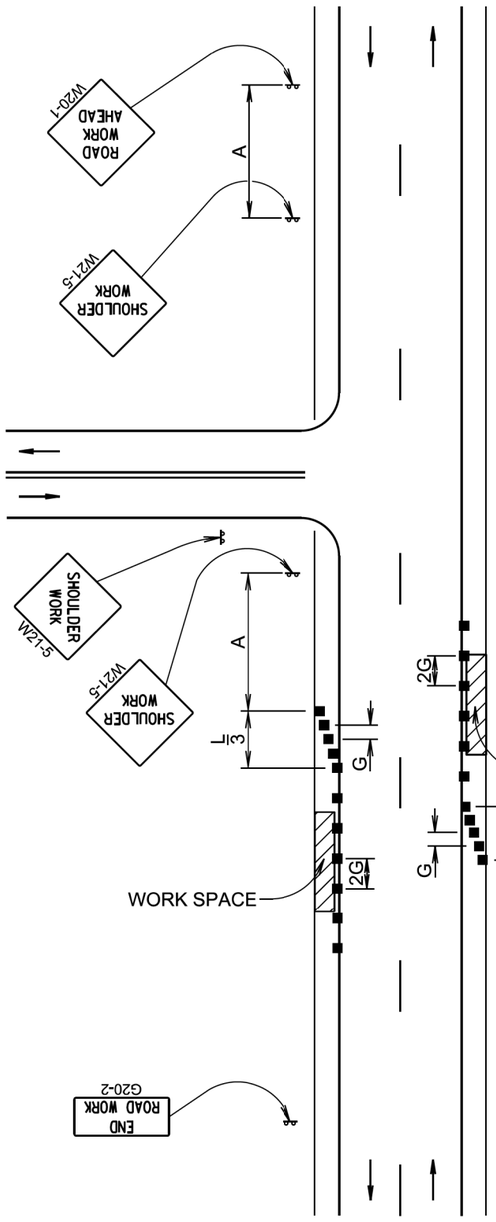
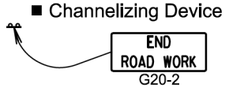


Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)	Taper Length (Feet) (L)	Spacing of Channelizing Devices (Feet) (G)
0 - 30	200	180	25
35 - 40	350	320	25
45	500	600	25
50	500	600	50
55	750	660	50
60 - 65	1000	780	50

■ Channelizing Device



The channelizing devices will be drums or 42" cones if traffic control must remain overnight.

For short duration operations (1 hour or less) all channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.

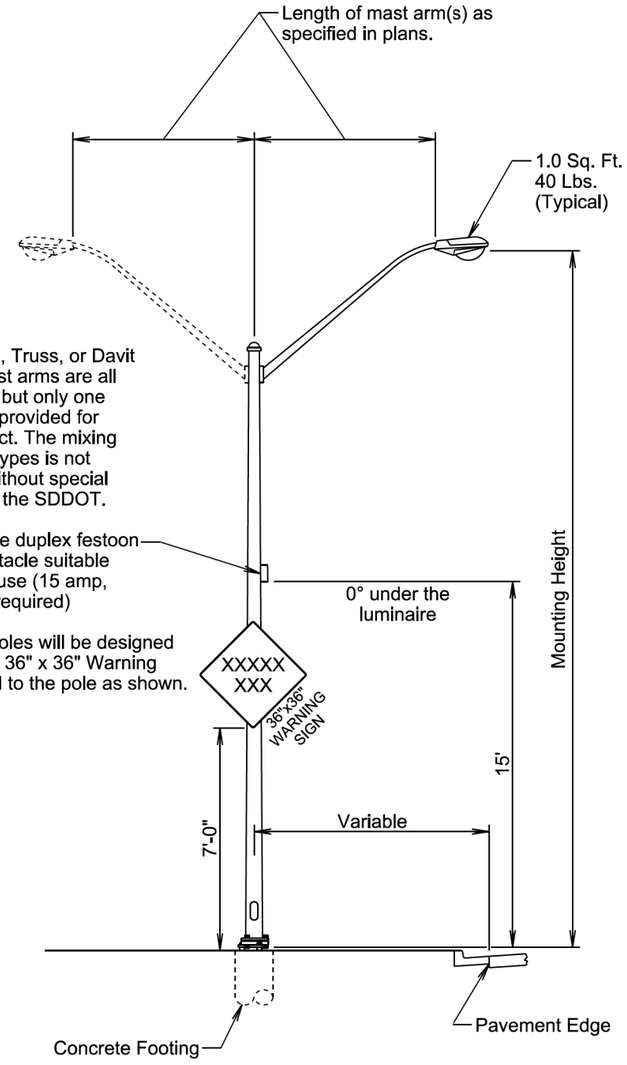
Worker signs (W21-1 or W21-1a) may be used instead of SHOULDER WORK signs.

A SHOULDER WORK sign should be placed on the left side of a divided or one-way roadway only if the left shoulder is affected.

The SHOULDER WORK sign on an intersecting roadway is not required if drivers emerging from that roadway will encounter another advance warning sign before they reach a work activity area.

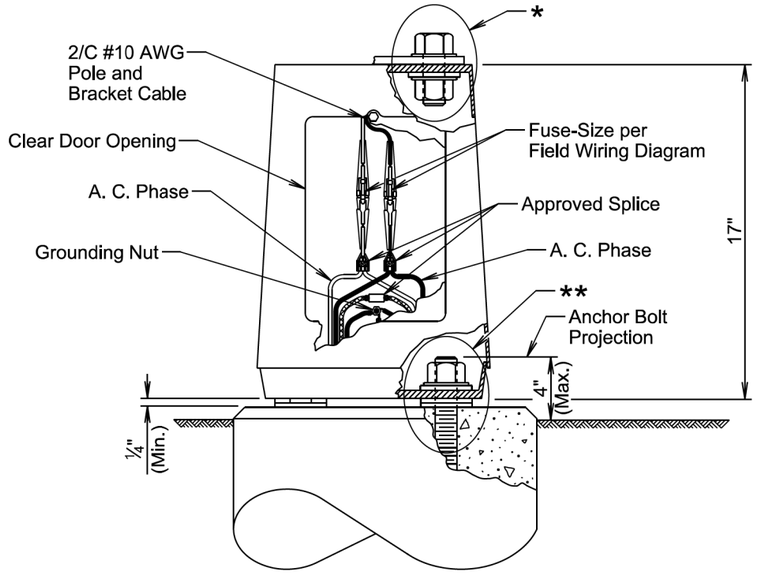
January 22, 2021

Published Date: 2025	SDDOT	WORK ON SHOULDERS	PLATE NUMBER 634.03
			Sheet 1 of 1



November 19, 2022

Published Date: 2025	SDDOT	STEEL ROADWAY LUMINAIRE POLE WITH MAST ARM(S)	PLATE NUMBER 635.01
			Sheet 1 of 1



GENERAL NOTES:

Base details are provided for example only and are not intended to be a complete design.

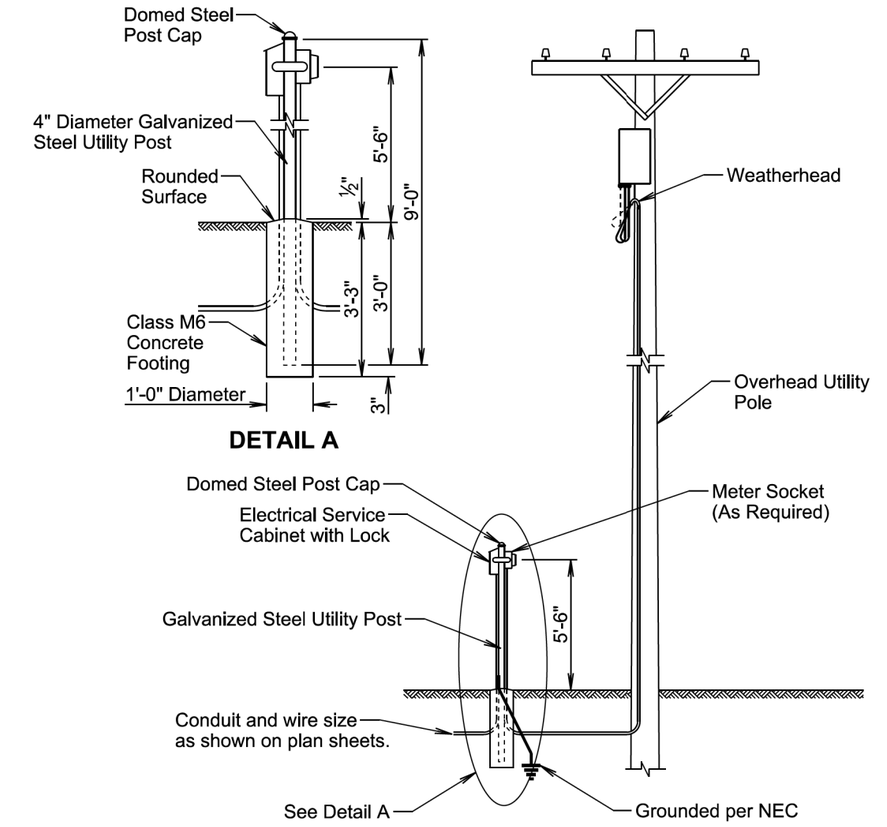
Fused connectors will be breakaway type.

* Hardware connecting the pole to the base will be installed in accordance with the manufacturer's recommendation.

** Hardware connecting the base to the footing will be installed in accordance with the manufacturer's recommendation. The Contractor will install leveling devices in accordance with the manufacturer's recommendation if shimming is necessary to install the light poles plumb and level. The washers and shims will be installed around the anchor bolts.

November 19, 2022

Published Date: 2025	SDDOT	ROADWAY LUMINAIRE POLE BREAKAWAY TRANSFORMER BASE	PLATE NUMBER 635.21 Sheet 1 of 1



ELEVATION VIEW

GENERAL NOTES:

The concrete for the post footing will be class M6 concrete.

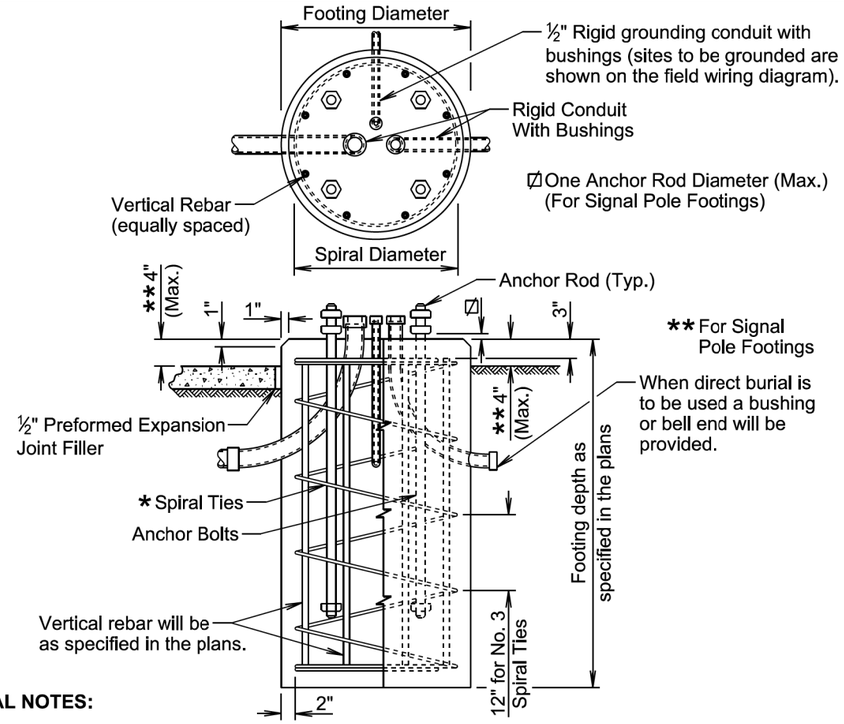
The 4" diameter galvanized steel utility post will be 9' long and will be in conformance with AASHTO Standard Specifications M181. The post will be Type 1 and either Grade 1 or Grade 2. The domed steel post cap will be in conformance with AASHTO Standard Specifications M181 and will be Type 1.

The Contractor will contact and coordinate his/her work with the Utility Companies regarding hookup requirements, fees, materials, and equipment necessary.

All costs for furnishing and installing all materials from the electrical service cabinet to the transformer including labor, equipment, hookup fees, all items within the cabinet, lockable enclosure with receptacle outlet, lock and keys, post, concrete footing, post cap, meter socket if required, conduit, and incidentals will be incidental to the contract unit price per each for "Electrical Service Cabinet".

March 31, 2024

Published Date: 2025	SDDOT	GALVANIZED STEEL UTILITY POST WITH OVERHEAD UTILITY POLE	PLATE NUMBER 635.35 Sheet 1 of 1



GENERAL NOTES:

* Circular ties may be used in lieu of the spiral ties. The No. 3 ties will be spaced 12 inches apart except for the top two which will be spaced 6 inches apart. The ties will be lapped 18 inches and the laps will be staggered around the cage.

Spiral ties will have 1-1/2 extra turns at each end.

See Section 985 of the Specifications for footing materials.

Conduits and bushings may project 2½ inches to 6 inches above footing for fixed base poles but will not project above the slip plane or fracture plane for breakaway poles.

Conduits will be sealed water-tight during all phases of construction until poles are in place.

The anchor rods will fit inside the reinforcing steel cage. If the anchor rods designed by the Pole Manufacturer do not fit, contact the Office of Bridge Design for footing redesign. No additional payment will be made for the redesigned footing.

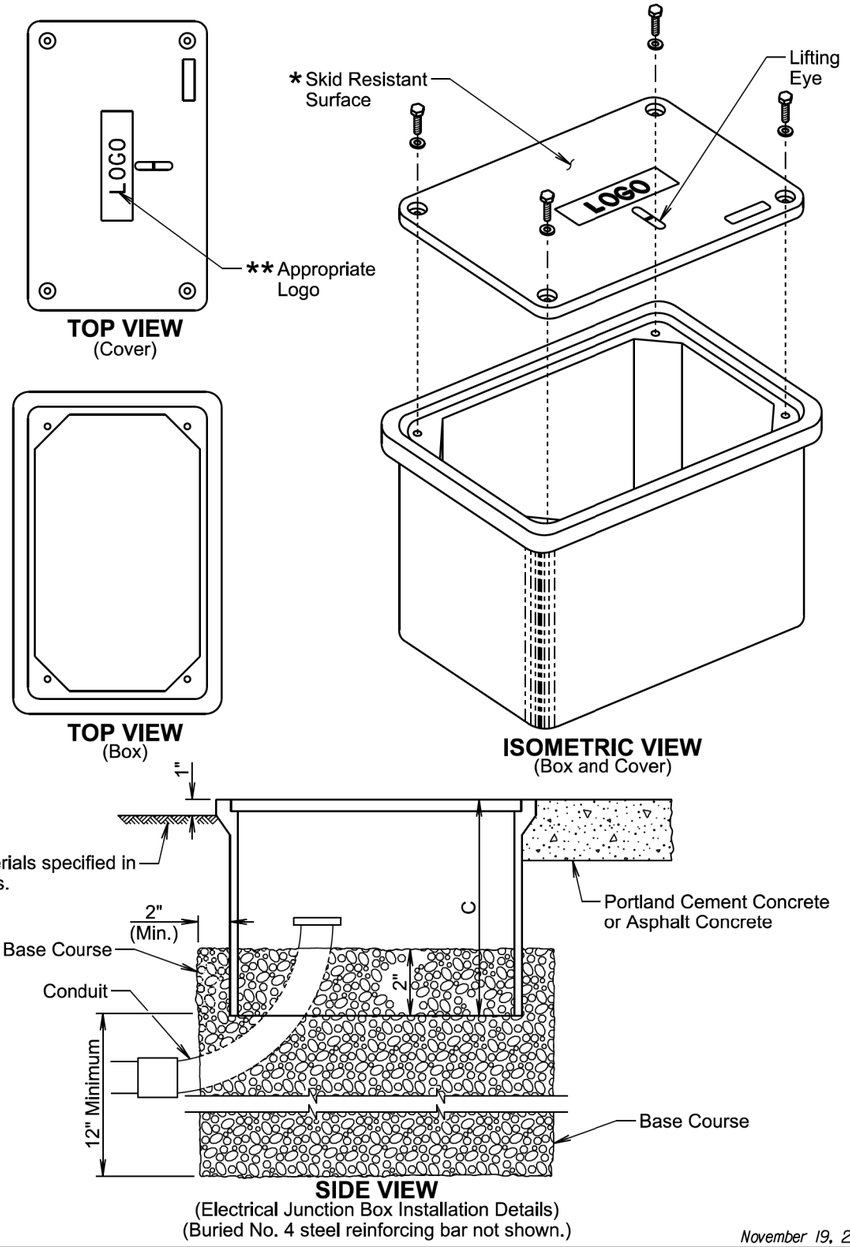
Costs of conduit and conduit bushings shown on footing detail will be incidental to the footing bid item(s).

The pole will not be installed until the concrete has attained design strength (4000 psi).

The contour of the area surrounding the breakaway pole will be flat, though not necessarily level for a distance of 5 feet in all directions. The Contractor may be required to provide finish grading at some breakaway pole locations.

November 19, 2022

Published Date: 2025	SDDOT	POLE FOOTING	PLATE NUMBER 635.55 Sheet 1 of 1



November 19, 2020

Published Date: 2025	SDDOT	ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4	PLATE NUMBER 635.65 Sheet 1 of 2

ELECTRICAL JUNCTION BOX			
TYPE	DESCRIPTION	APPROXIMATE COVER SIZE	MINIMUM DEPTH (C)
1	Open Bottom with Gasket	11"x18"	18"
2	Open Bottom with Gasket	13"x24"	18"
3	Open Bottom with Gasket	17"x30"	18"
3A	Open Bottom with Gasket	24"x36"***	24"
4	Open Bottom with Gasket	30"x48"***	24"

GENERAL NOTES:

The cover will be gasketed with a minimum of two stainless steel bolts and washers.

The cover will have a lifting eye.

* The surface of the cover will have a minimum wet and dry coefficient of friction value of 0.5 as determined by ASTM F609.

** The cover of the junction box will have the appropriate logo in one inch size letters and will be recessed. When the junction box contains cables or wires for a traffic signal then the logo will be "Signal". When the junction box contains lighting conductors then the logo will be "Lighting".

*** Two piece covers will be used for Type 3A and Type 4 junction boxes.

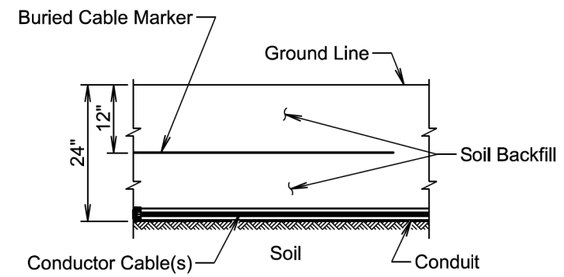
The electrical junction boxes will comply with the American National Standards Institute (ANSI)/Society of Cable Telecommunications Engineers (SCTE) 77 2007 Specification for Underground Enclosure Integrity. The loading requirement for all electrical junction boxes and covers will be Tier 22 of ANSI/SCTE 77 2007.

The electrical junction boxes will be UL listed.

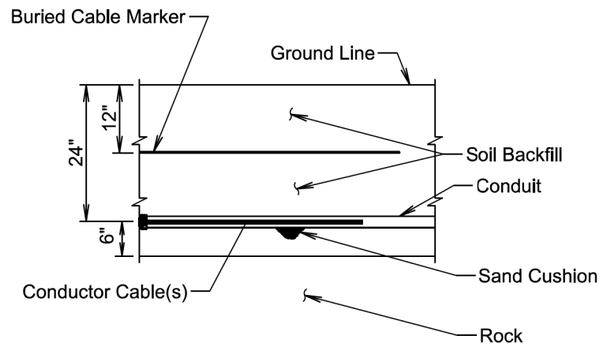
For junction boxes located outside of pavement, a No. 4 steel reinforcing bar with a minimum length of 18" will be buried adjacent to the long side of the junction box. All costs associated with furnishing and placing the steel reinforcing bar will be incidental to the contract unit price per each for "Type _ Electrical Junction Box".

November 19, 2020

Published Date: 2025	SDDOT	ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4	PLATE NUMBER 635.65 Sheet 2 of 2



SECTION VIEW



SECTION VIEW

GENERAL NOTE:

The Buried Cable Marker will be plastic, approximately 6" wide, and will be capable of sustaining a minimum of a 350% tolerance of elongation without tearing. The Buried Cable Marker will have a life expectancy approximately equal to that of the conductor(s) beneath it. A phrase indicating the presence of a buried electric circuit below will be printed in a contrasting color on the cable marker. The Buried Cable Marker will be subject to approval by the Engineer. All costs associated with furnishing and installing the Buried Cable Marker will be incidental to the contract unit price per foot for the bid item used for the electrical conductor.

November 19, 2022

Published Date: 2025	SDDOT	CONDUIT INSTALLATION	PLATE NUMBER 635.76 Sheet 1 of 1