

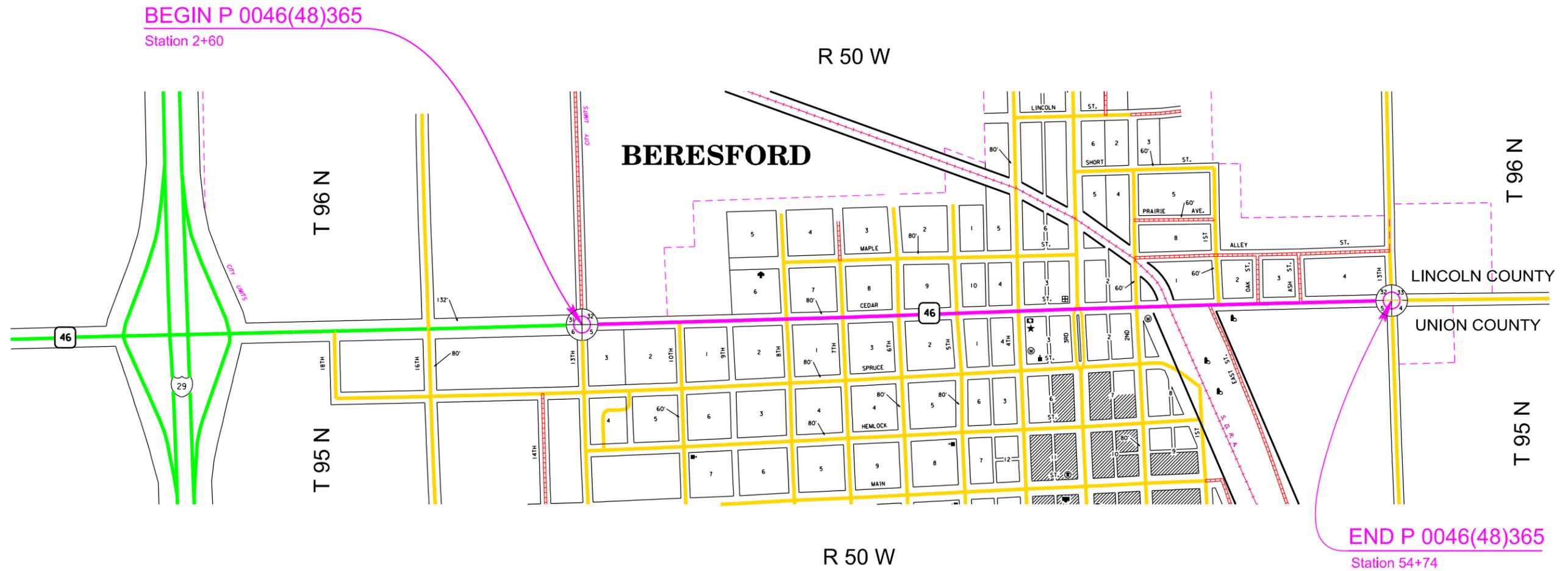
Section L: Lighting Plans

STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L1	TOTAL SHEETS L23
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Plotting Date: 09/04/2014

INDEX OF SHEETS

- L1 General Layout With Index
- L2-L5 Estimate With General Notes and Tables
- L6-L15 Conduit Layouts
- L16-L18 Wiring Diagrams
- L19-L23 Standard Plates



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SECTION L ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
110E1540	Remove Luminaire Pole Footing	35	Each
635E0045	Breakaway Base Luminaire Pole with Arm, 45' Mounting Height	23	Each
635E3700	Roadway Luminaire, LED with Photoelectric Cell	23	Each
635E4010	1 Section Vehicle Signal Head	2	Each
635E5020	2' Diameter Footing	184.0	Ft
635E5302	Type 2 Electrical Junction Box	18	Each
635E5400	Electrical Service Cabinet	3	Each
635E5510	Signal Flasher Unit	2	Each
635E8015	1.5" Rigid Galvanized Steel Conduit	50	Ft
635E8120	2" Rigid Conduit, Schedule 40	4,385	Ft
635E8130	3" Rigid Conduit, Schedule 40	180	Ft
635E8220	2" Rigid Conduit, Schedule 80	1,615	Ft
635E9016	1/C #6 AWG Copper Wire	19,455	Ft
635E9020	1/C #10 AWG Copper Wire	2,120	Ft
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	1,380	Ft

SUPPLYING AS BUILT PLANS

If the roadway lighting system is constructed differently than what is stated in the plans, the Contractor shall supply as built plans to the Engineer and a copy shall 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 shall submit shop drawings and catalog cuts in accordance with Section 985 of the Specifications or in Adobe PDF format.

Adobe PDF submittals shall be sent to the following email addresses:

Stacy.Bartlett@state.sd.us
Pete.Longman@state.sd.us

REMOVAL OF EXISTING LUMINAIRE POLES

Existing luminaire poles EL2-EL36 shall be removed by the Beresford Electric Department. The Contractor shall coordinate the installation of new luminaire poles with the removal of the existing luminaire poles at least two weeks before installation. The Beresford Electric Department contact is Jay Nordquist at (605)-957-5693.

All costs for coordinating the installation of luminaire poles with the removal of existing luminaire poles shall be incidental to the contract unit price per each for "Breakaway Base Luminaire Pole with Arm, 45' Mounting Height".

REMOVE LUMINAIRE POLE FOOTING

The footings of existing luminaire poles EL2-EL36 shall be removed and disposed by the Contractor. Restoration of the disturbed area shall be to the satisfaction of the Engineer.

All costs for removing and disposing the footings of the existing luminaire poles shall be incidental to the contract unit price per each for "Remove Luminaire Pole Footing"

TABLE OF FOOTING DATA

Site Designation	Footing Diameter	* Footing Depth	**Spiral Diameter	**Spiral Length	Vertical Reinforcement
L1-L23	2' - 0"	8' - 0"	1' - 8"	54' - 9"	8-#7 x 7' - 6"

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

SUBSURFACE CONDITIONS

The subsurface conditions within the limits of the project consist of brown silt-clay to 14.5' below the surface. Lab results classify the soil samples obtained from the borings as clay-silt to sand-clay. Groundwater was encountered in one of the eight borings initially after drilling at a depth of 13.2' below the surface. All of the borings remained open to depths of 10' or greater. Groundwater was measured to be between 4.0' and 10.2' below the surface after at least 14 hours after the holes were drilled.

During construction of the cylindrical footings, concrete placement operations should closely follow excavation procedures. The longer the excavations are left open the more likely caving may occur. If caving soils are encountered during excavation, casing may be required to construct the cylindrical footings.

Concrete shall not be dropped through standing water. If water is present in the excavation it shall be removed prior to concrete placement or the concrete shall be tremied. If caving occurs during dewatering the concrete shall be placed through a tremie or by means of a casing.

The boring logs and laboratory tests are available for review at the Central Office in Pierre. If questions arise or additional information is needed concerning the cylindrical footings contact the Geotechnical Engineering Activity in Pierre at 605.773.3401.

BREAKAWAY BASES

A statement is required, signed by a Professional Engineer registered in the State of South Dakota, certifying that the breakaway base devices meet the design requirements, including breakaway and structural adequacy, of the current edition of the "AASHTO Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals". The physical testing procedures outlined in Section 8 of the Fifth Edition of the Aluminum Association's "Specifications for Aluminum Structures" may be used to establish service limits for structural adequacy certification of aluminum breakaway transformer bases and frangible couplings. If requested, test data of production samples to support the certification shall be provided.

STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L2	TOTAL SHEETS L23
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Plotting Date: 09/04/2014

POLES

New poles shall be galvanized steel. Galvanizing shall be in accordance with AASHTO Specification M111 (ASTM A123). Steel pole material shall be in accordance with ASTM A36, A242, A570, A572, A607 or A595 Grade A or B. A595 material shall be limited to a 3/8 inch maximum thickness. Steel pole material with a thickness of 1/2 inch to 2 inches, shall satisfy Charpy V-Notch toughness test requirements of 15 ft. lb. at 40 degrees F. The SDDOT Office of Bridge Design shall be contacted for Charpy impact requirements for steel pole material thickness greater than 2 inches.

The steel pole-to-base-plate connection shall be a full-penetration groove-welded connection with a backing ring as described in Table 11.9.3.1-1, Section 4.5 of the current edition of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

Luminaire poles shall have a 45 Ft. mounting height with 8 Ft. arm.

All poles shall have transformer bases.

LUMINAIRES

The accepted design for the roadway luminaires L1- L23 shall provide 1.2 and greater average maintained foot-candles and a uniformity ratio (average maintained to minimum maintained foot-candles) of 3:1 and less using the following parameters:

Setback:	0 Ft.
Lamp Loss Factor (LLF):	0.7
Width of Lighted Area:	44 Ft.
Spacing:	490 Ft. (245 Ft.)
Configuration:	Staggered
Mounting Height:	45 Ft.
Lamp:	LED

The following luminaire or equivalent meets the requirements for this design:

- a.) Cooper Lighting: Test No. NVN-AE-06-U-T2R
Medium, cutoff, Type II

Three copies of the isofootcandle charts and utilization curves shall be furnished to the Engineer for approval. The Contractor must get approval from the Engineer prior to installation of the luminaires.

The approved isofootcandle data for each case shall be used to determine the correct socket position at each site. Each luminaire shall be installed with its lamp socket in the proper position and in a level attitude.

METER SOCKETS

The Beresford Electric Department shall supply meter sockets at the power sources. The Contractor shall contact the Beresford Electric Department for the meter sockets. The Beresford Electric Department contact is Jay Nordquist at (605)-957-5693.

All costs for obtaining and the installing the meter sockets shall be incidental to the contract unit price per each for "Electrical Service Cabinet".

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REMOVAL OF STOP SIGN BEACON ASSEMBLIES

Existing stop sign beacon assemblies, ES1 and ES2, at station 34+08R and 34+72L shall be removed by the City of Beresford. Stop sign beacon assemblies include hardware and two 1 section vehicle signal heads. The Contractor shall coordinate the removal of existing stop sign beacon assemblies and associated power and utility poles with the City of Beresford. The Beresford Electric Department contact is Jay Nordquist at 605.957.5693.

All costs for coordinate the removal of existing stop sign beacon assemblies with the City of Beresford shall be incidental to the contract unit price per each for "1 Section Vehicle Signal Head".

FLASHING STOP SIGN BEACONS

Conduit shall be installed on the side of the stop sign support post from the ground extending up the support post to a location 2' below the top of the support where the conduit will be changed to the backside of the sign support.

A frangible coupler shall be installed at ground level to allow the sign support and conduit to breakaway upon impact.

The 1 section vehicle signal heads shall be fabricated from ultraviolet stabilized polycarbonate. Each 1 section vehicle signal head shall consist of a yellow body with a black door and black tunnel visor. No backplate is required. The optical units shall be red light emitting diode (LED) signal modules. The size of the LED signal module shall be 12".

The flashing beacons shall be installed 1' above the stop signs by the Contractor, refer to Section S for stop sign locations. The Contractor shall coordinate the removal of the existing flashing stop sign beacons with the installation of the new flashing stop sign beacons.

The flashing stop sign beacons shall be aimed to meet the requirements Section 4D.12 and 4D.13 of the Federal Manual on Uniform Traffic Control Devices, and be visible for a minimum distance of 1/4 mile.

All costs for installing the flashing stop sign beacons shall be incidental to the contract unit price per each for "1 Section Vehicle Signal Head."

The flasher units shall meet NEMA specifications for Type 3 flashers. The flasher units shall be mounted in the 1 section vehicle signal heads. All costs for labor and materials required to make the flashing beacon system operational shall be incidental to the contract unit price per each for "Signal Flasher Unit".

EXISTING CONDUIT AT SD46 & 8th ST

The Beresford Electric Department installed conduit for roadway lighting use from the power source to the end of the radius in the northwest quadrant of the intersection of SD46 & 8th St. The Contractor may use this existing conduit instead of installing new conduit from the power source to JL4 as indicated on the Conduit Layout Sheet to avoid disturbing existing utilities. If the Contractor opts to use the existing conduit from the power source to the end of the radius, the Contractor shall coordinate the location of the existing conduit with the Beresford Electric Department and inform the Project Engineer. The Beresford Electric Department contact is Jay Nordquist at (605)-957-5693.

All costs for using the existing conduit for the roadway lighting system shall be incidental to the contract unit price per foot for "3" Rigid Conduit, Schedule 40".

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0046(48)365	L3	L23

Plotting Date: 09/04/2014

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TABLE OF CONDUIT AND CABLE QUANTITIES

Location to Location		Rigid Conduit				Pole and Bracket Cable																											
		Schedule 40		Schedule 80	Galvanized Steel	1/C #6 AWG Ft	1/C #10 AWG Ft	2/C #10 AWG Ft																									
		2"	3"	2"	1.5"																												
		Ft	Ft	Ft	Ft																												
LIGHTING																																	
L1	JL1			70			220																										
JL1	L2	255					790																										
L2	JL2	250					775																										
JL2	L3			80			250																										
JL2	L4	260					805																										
L4	JL3	245					760																										
JL3	L5			70			220																										
JL3	JL4	185					575																										
JL4	SERVICE CABINET		100				620																										
JL4	L6			70			220																										
L6	JL5	250					775																										
JL5	L7			70			220																										
JL5	L8	165		55			680																										
L8	JL6	240					745																										
JL6	L9			80			250																										
JL6	L10	195		70			820																										
L11	JL7			70			220																										
JL7	L12	235					730																										
L12	JL8	200		55			790																										
JL8	L13			70			220																										
JL8	JL9	80					250																										
JL9	SERVICE CABINET		45				310	310																									
JL9	JL10	155					480	960																									
JL10	JS1			70				220																									
JS1	S1	25						80																									
JL10	L14	15					50																										
JL10	JS2			100			310	310																									
JS2	S2	25						80																									
JS2	JL11	170					530																										
JL11	L15			70			220																										
JL11	L16	215		50			820																										
L17	JL12			70			220																										
JL12	L18	195		55			805																										
L18	JL13	230					715																										
JL13	L19			80			250																										
JL13	L20	190		60			775																										
L20	JL14	35		55			280																										
JL14	SERVICE CABINET		35				220																										
JL14	JL15	175					545																										
JL15	L21			65			205																										
JL15	L22	240					745																										
L22	JL16	155		110			820																										
JL16	L23			70			220																										
Subtotal:		4,385	180	1,615			19,455	1,960	0																								

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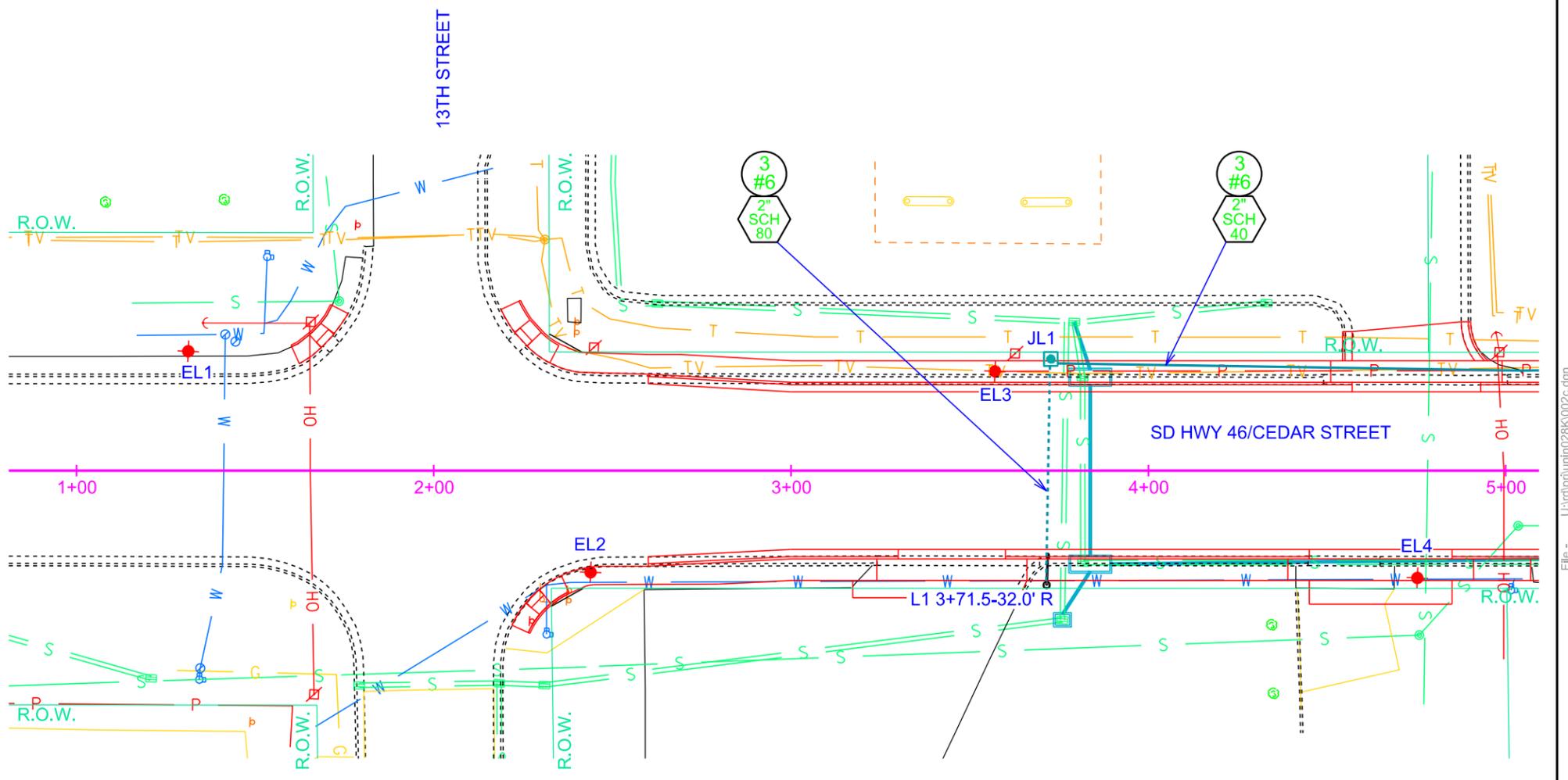
CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L6	TOTAL SHEETS L23
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Plotting Date: 09/04/2014

SCALE
1" = 40'



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ESTIMATE OF QUANTITIES

KEY	ITEM	EST QUANT	UNIT
	REMOVE LUMINAIRE POLE FOOTING (EL2-EL36)	35	EACH
	BREAKAWAY BASE LUMINAIRE POLE W/ 8' ARM 45' MT HT (L1-L23)	23	EACH
	ROADWAY LUMINAIRE, LED W/ P.E. (L1-L23)	23	EACH
	1 SECTION VEHICLE SIGNAL HEAD (1,2)	2	EACH
	2' DIAMETER FOOTING (L1-L23)	184	FT
	TYPE 2 ELECTRICAL JUNCTION BOX (JL1-JL16)(JS1,JS2)	18	EACH
	ELECTRICAL SERVICE CABINET	3	EACH
	SIGNAL FLASHER UNIT	2	EACH
	GALVANIZED STEEL UTILITY POLE NOT A BID ITEM	3	EACH
	METER SOCKET NOT A BID ITEM	3	EACH
	1.5" RIGID GALVANIZED STEEL CONDUIT	50	FT
	2" RIGID CONDUIT, SCHEDULE 40	4,385	FT
	3" RIGID CONDUIT, SCHEDULE 40	180	FT
	2" RIGID CONDUIT, SCHEDULE 80	1,615	FT
	1/C #6 AWG COPPER WIRE	19,455	FT
	1/C #10 AWG COPPER WIRE	2,120	FT
	2/C #10 AWG COPPER POLE & BRACKET CABLE	1,380	FT

EXISTING ITEMS

KEY	ITEM
	LUMINAIRE POLE (EL1)

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CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L7	TOTAL SHEETS L23
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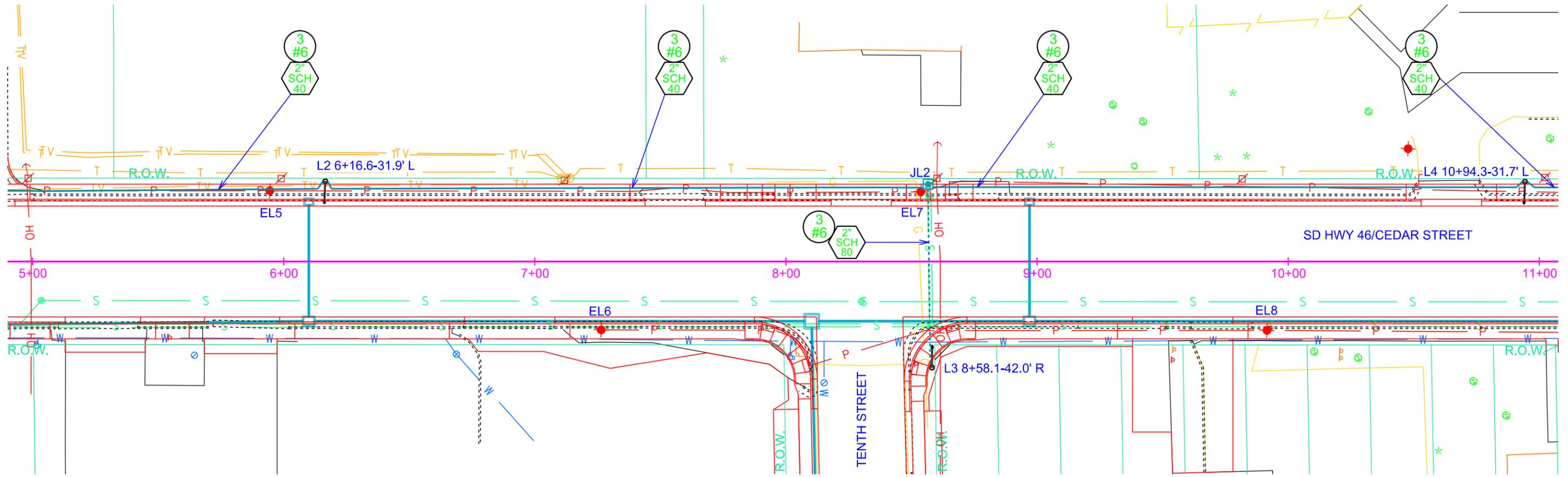
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CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

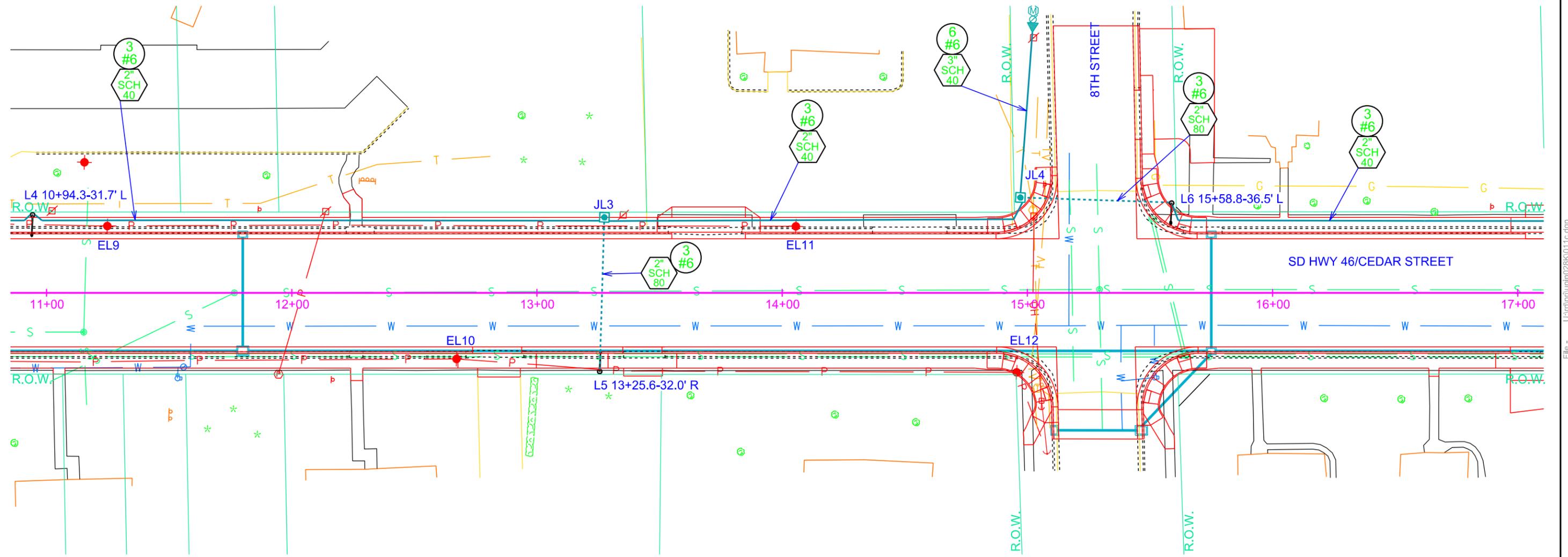
STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L8	TOTAL SHEETS L23
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Plotting Date: 09/04/2014

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POWER SOURCE
120/240 v.a.c., 60hz.,
1 Phase, 3 Wire Service
By Beresford Electric Department



Plot Scale - 1"=40'

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CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L9	TOTAL SHEETS L23
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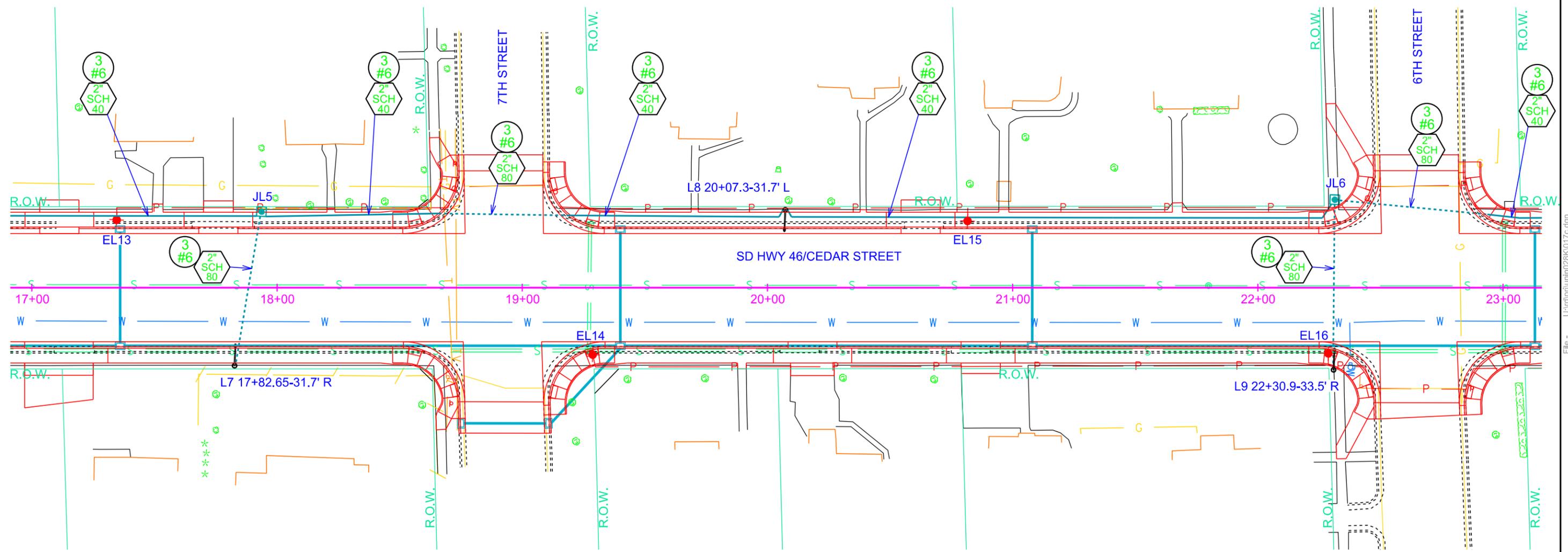
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SCALE
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CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0046(48)365	L10	L23

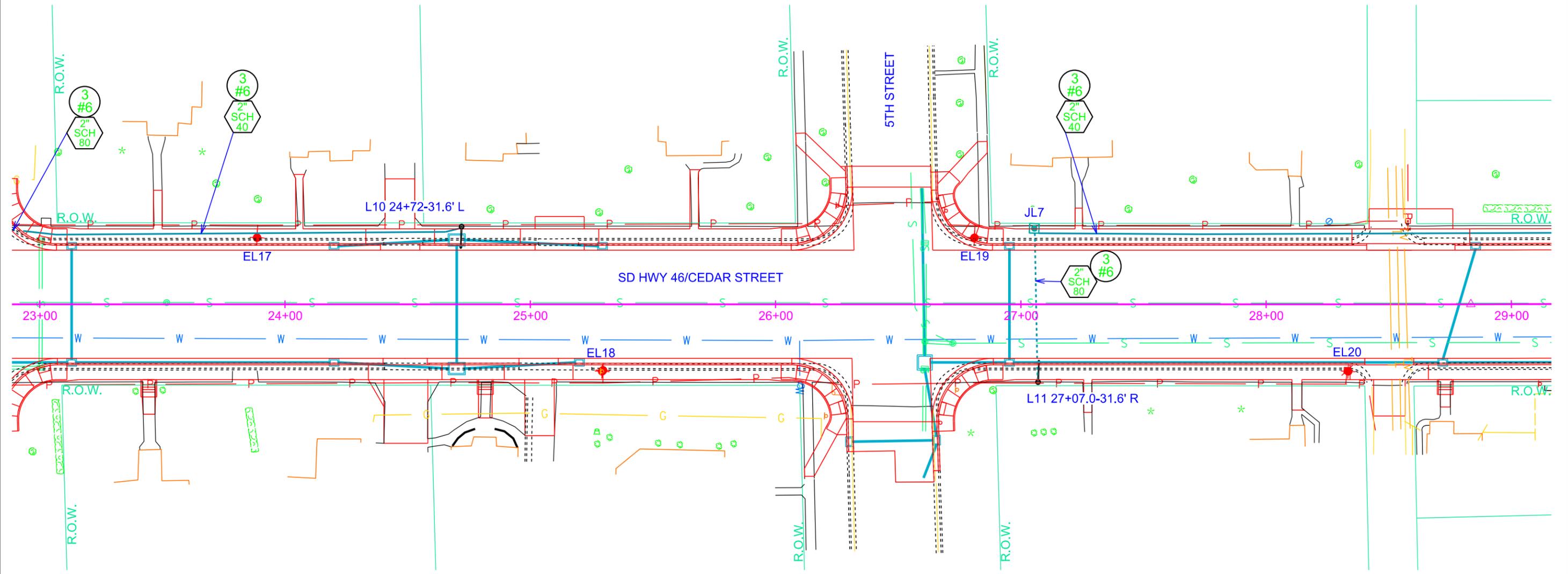
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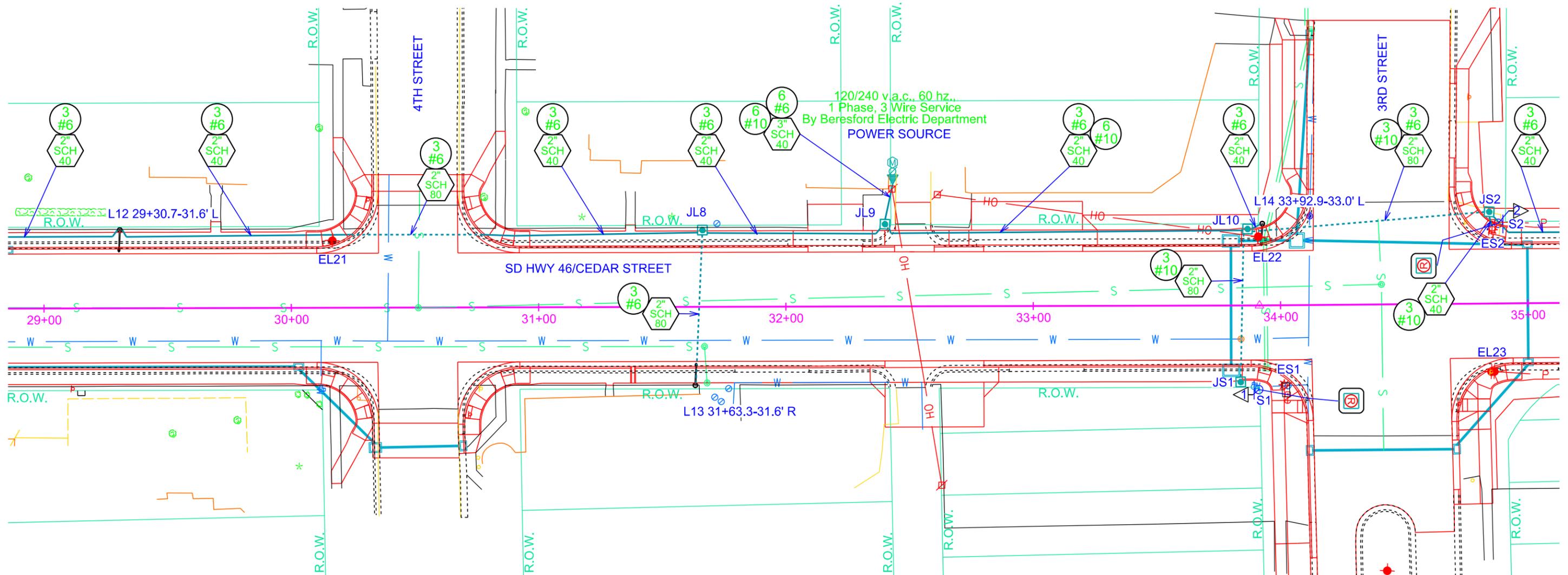
CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L11	TOTAL SHEETS L23
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Plotting Date: 09/04/2014

SCALE
1" = 40'



REFER TO SECTION S FOR LOCATIONS OF SIGNS S1 & S2

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CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P 0046(48)365	L12	L23

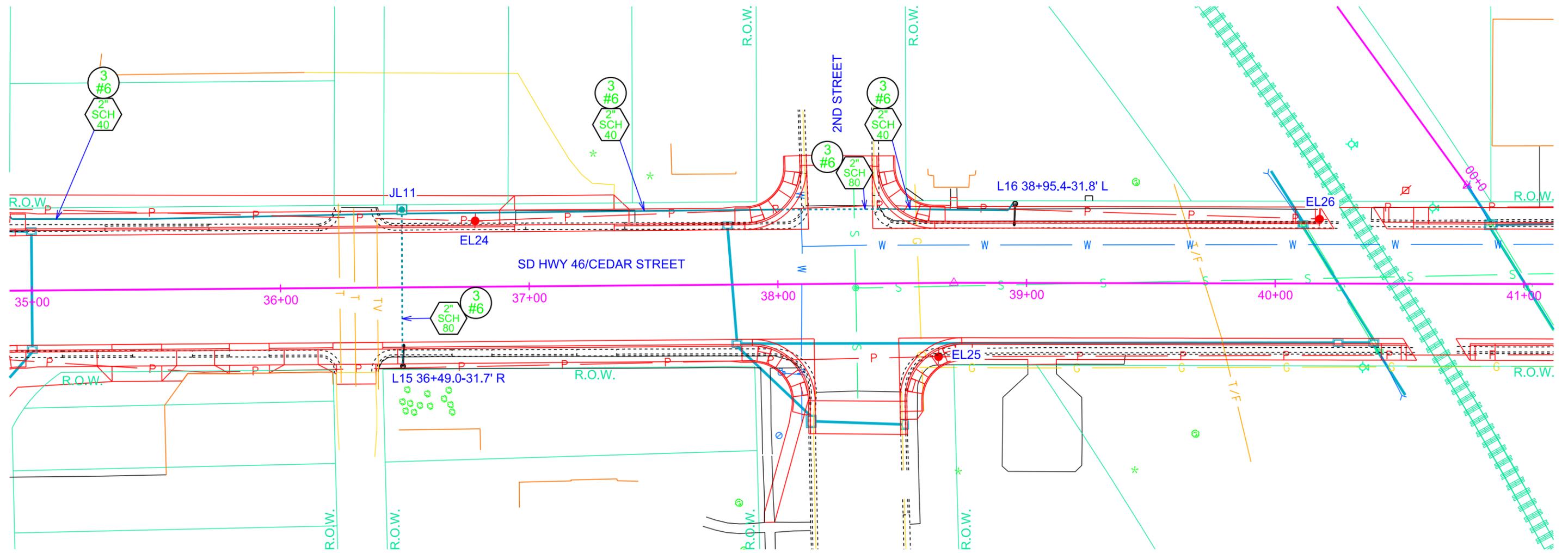
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SCALE
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CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L13	TOTAL SHEETS L23
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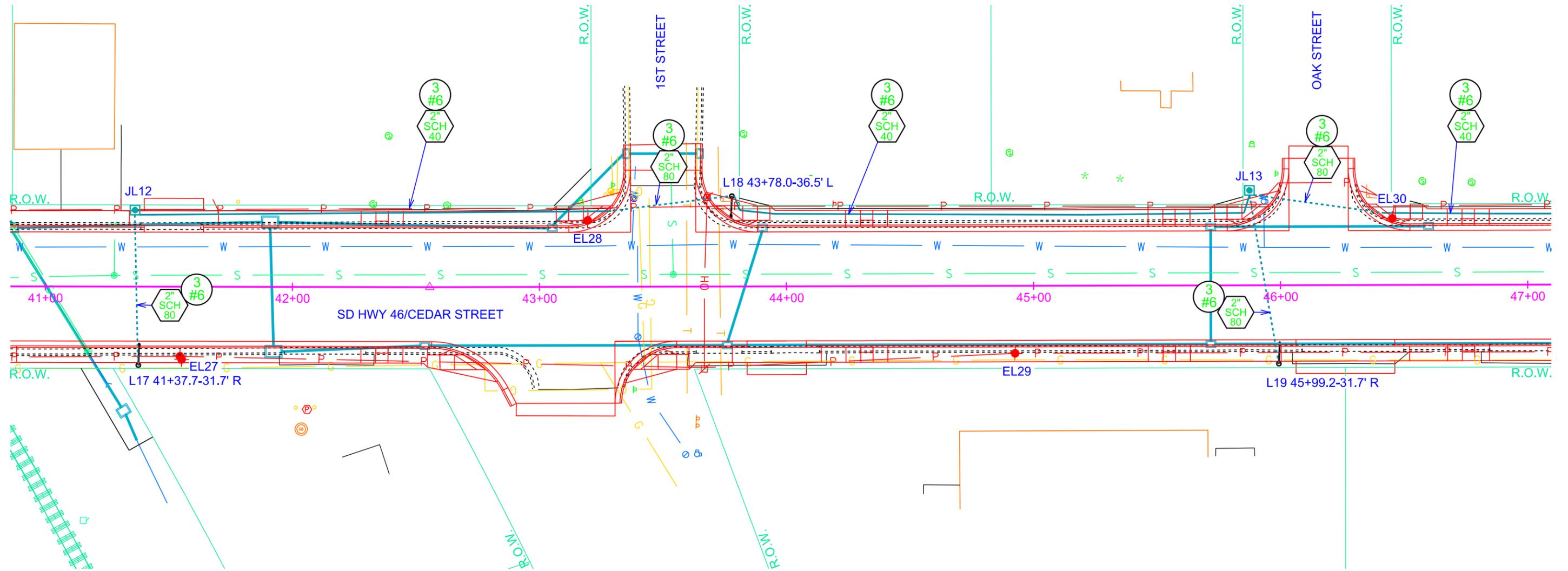
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CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

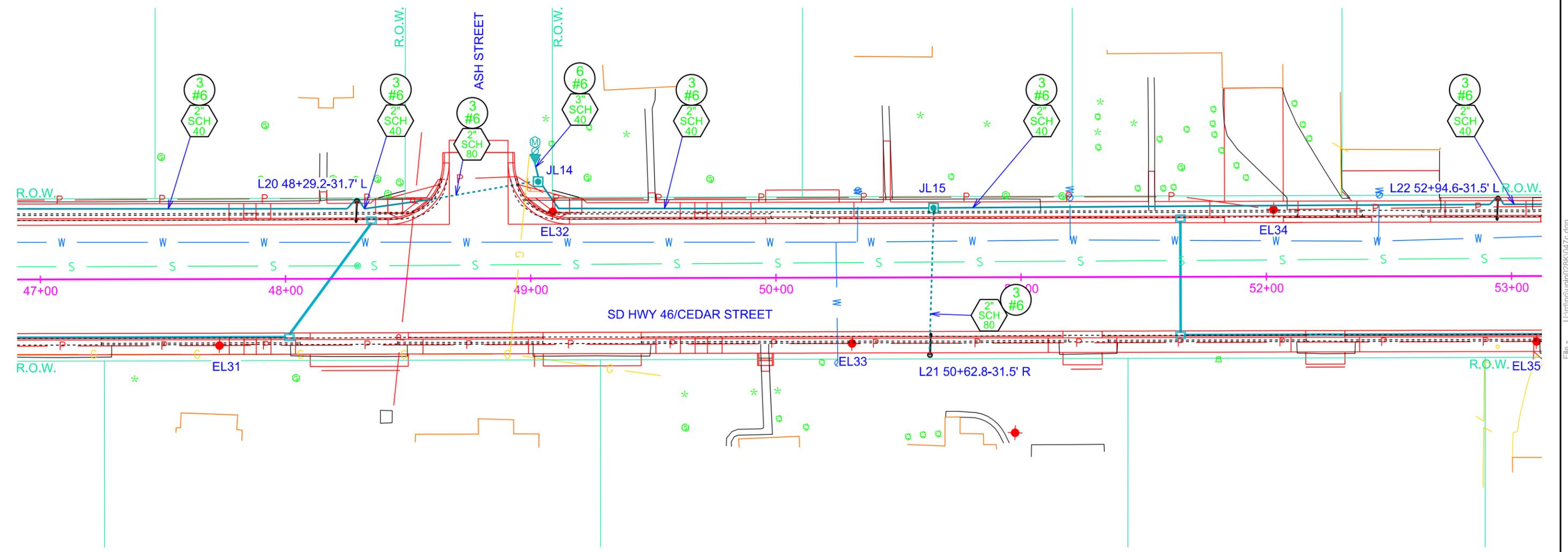
STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L14	TOTAL SHEETS L23
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Plotting Date: 09/04/2014

SCALE
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POWER SOURCE
120/240 v.a.c., 60 hz.,
1 Phase, 3 Wire Service
By Beresford Electric Department



Plot Scale - 1"=40'

Plotted From - trpr14286

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CONDUIT LAYOUT

SD HWY 46/CEDAR STREET

STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L15	TOTAL SHEETS L23
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Plotting Date: 09/04/2014

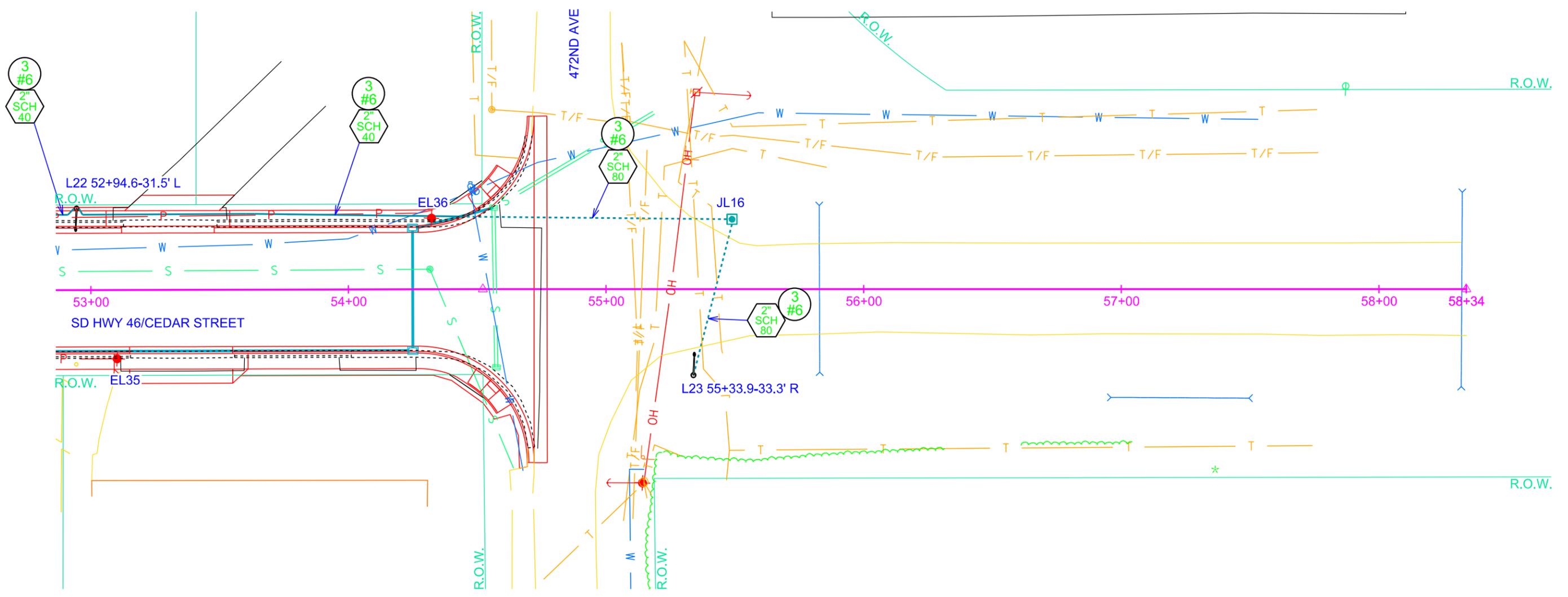
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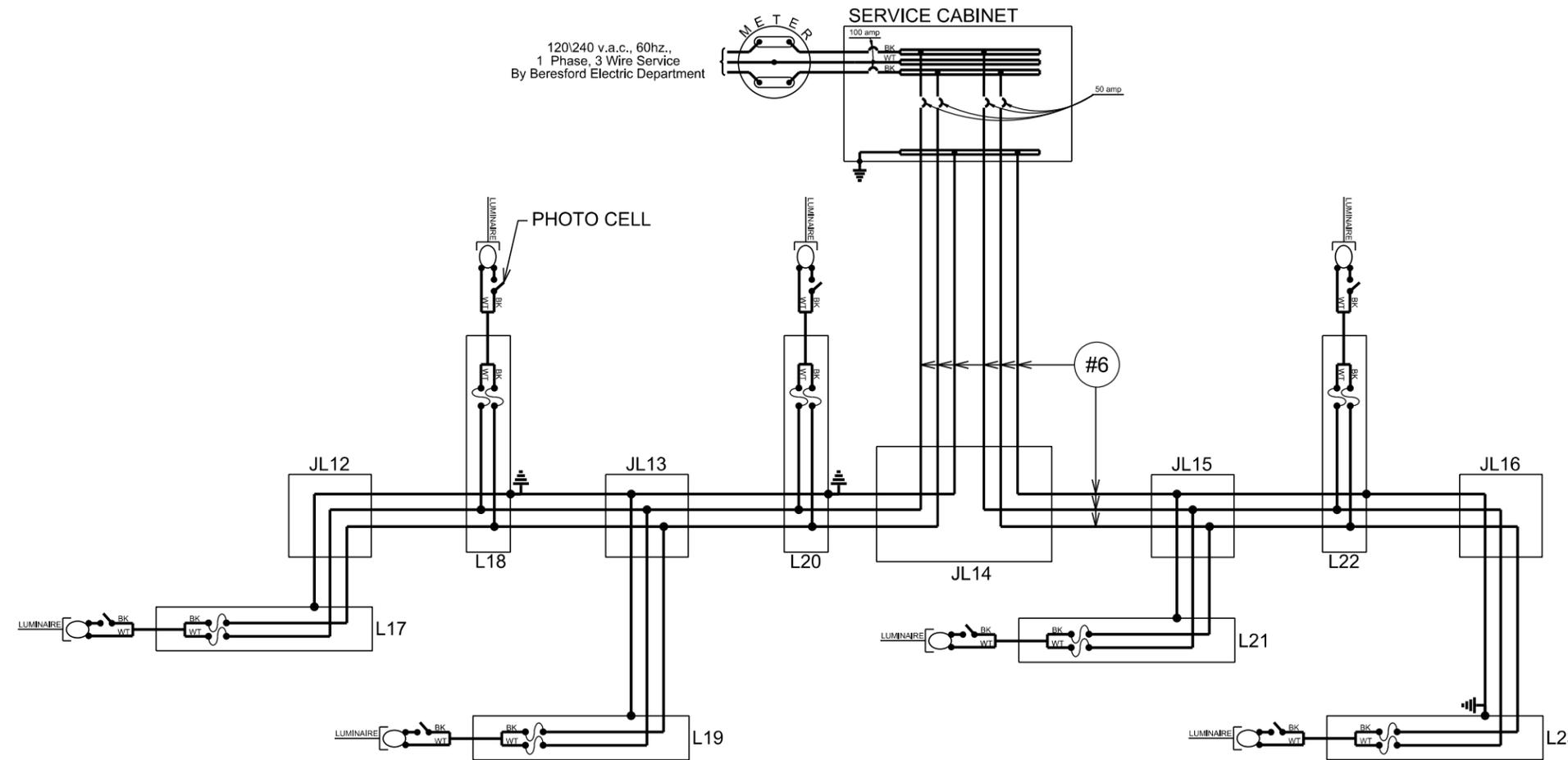


WIRING DIAGRAM

SD HWY 46/CEDAR STREET

STATE OF SOUTH DAKOTA	PROJECT P 0046(48)365	SHEET L18	TOTAL SHEETS L23
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Plotting Date: 09/04/2014



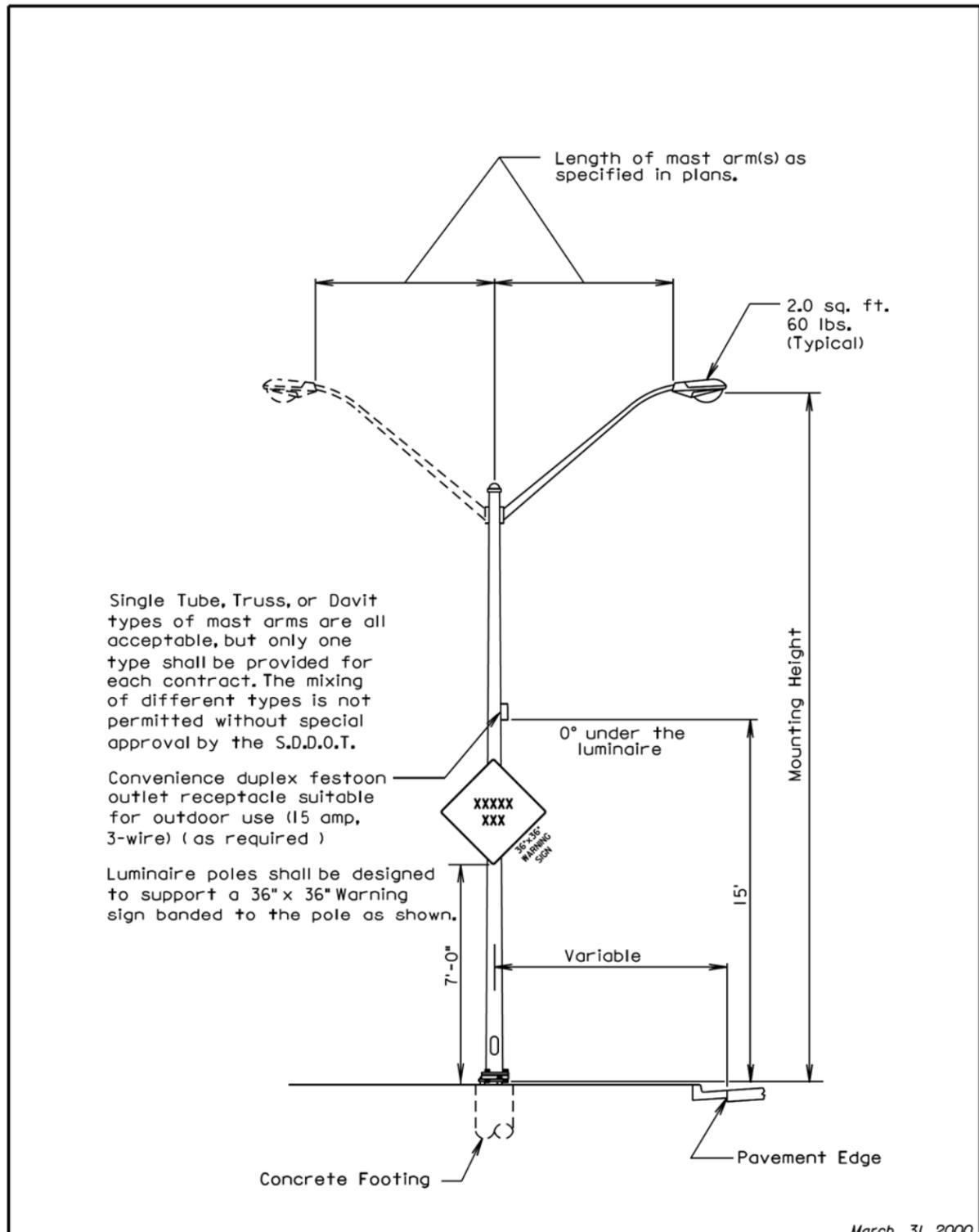
LEGEND:

- FUSE: 6 amp. Non-Time Delay
or
2 8/10 amp. Dual Element
- LUMINAIRE: LED Lamp

NOTE:

All circuits shall be bonded in accordance with the NATIONAL ELECTRICAL CODE. Quantities for bonding conductors are not included in these plans.

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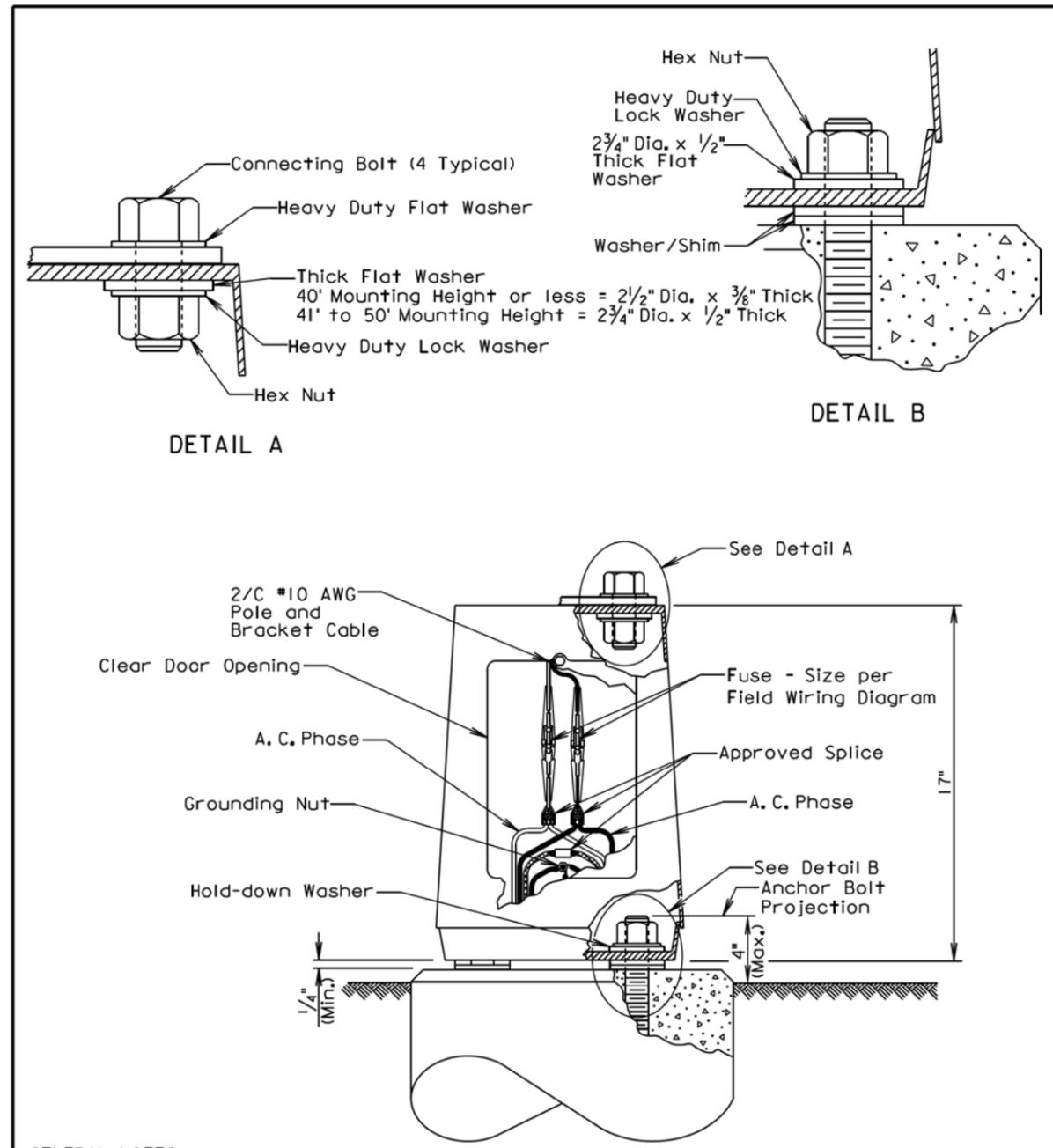
Single Tube, Truss, or Davit types of mast arms are all acceptable, but only one type shall be provided for each contract. The mixing of different types is not permitted without special approval by the S.D.D.O.T.

Convenience duplex festoon outlet receptacle suitable for outdoor use (15 amp, 3-wire) (as required)

Luminaire poles shall be designed to support a 36" x 36" Warning sign banded to the pole as shown.

March 31, 2000

S D D O T	STEEL ROADWAY LUMINAIRE POLE WITH MAST ARM(S)	PLATE NUMBER 635.01
	Published Date: 3rd Qtr. 2014	Sheet 1 of 1



GENERAL NOTES:

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

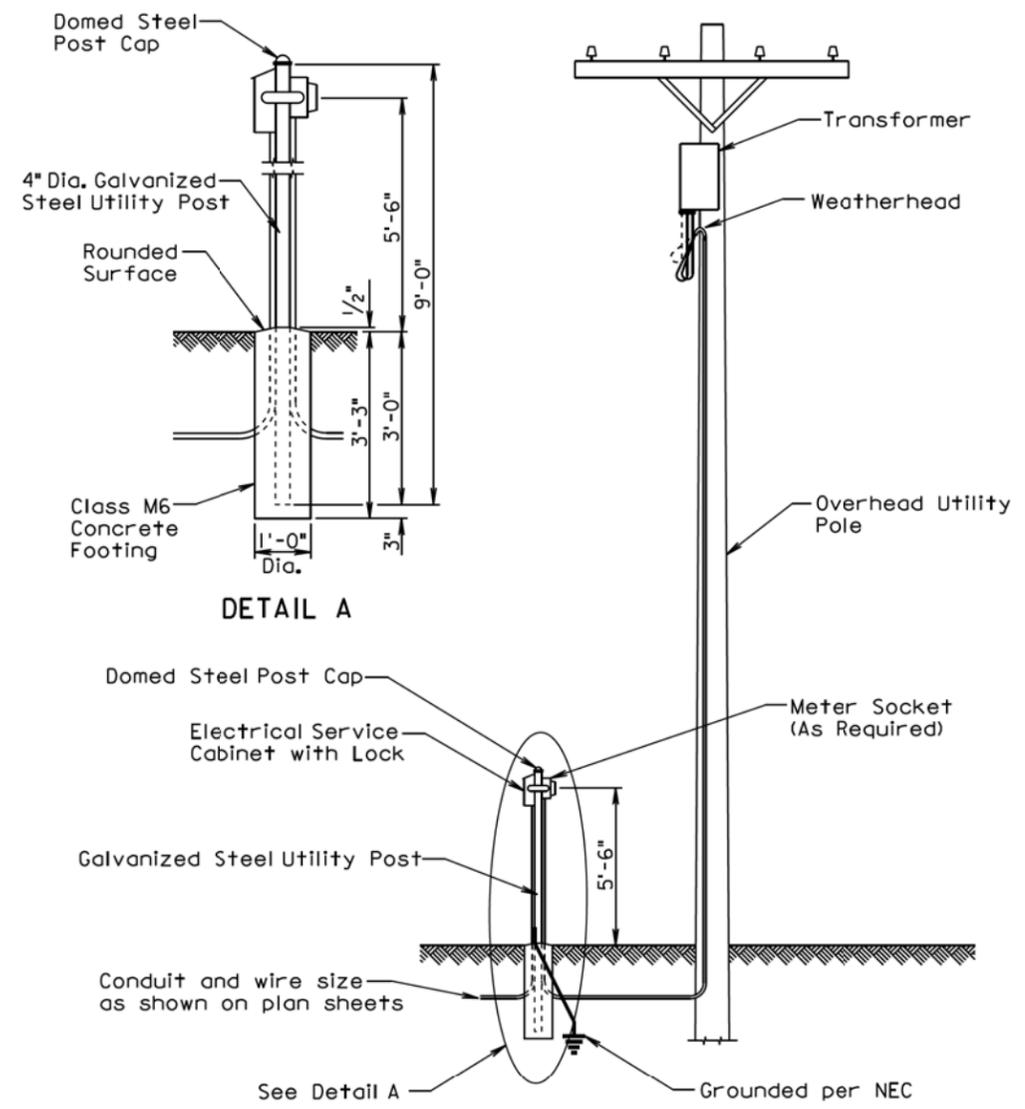
The Contractor shall install "U" shaped shims or round flat washers if shimming is necessary to install the light poles plumb and level. The washers and shims shall be installed around the anchor bolts.

June 26, 2013

S D D O T	ROADWAY LUMINAIRE POLE BREAKAWAY TRANSFORMER BASE	PLATE NUMBER 635.21
	Published Date: 3rd Qtr. 2014	Sheet 1 of 1

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GENERAL NOTES:

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

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

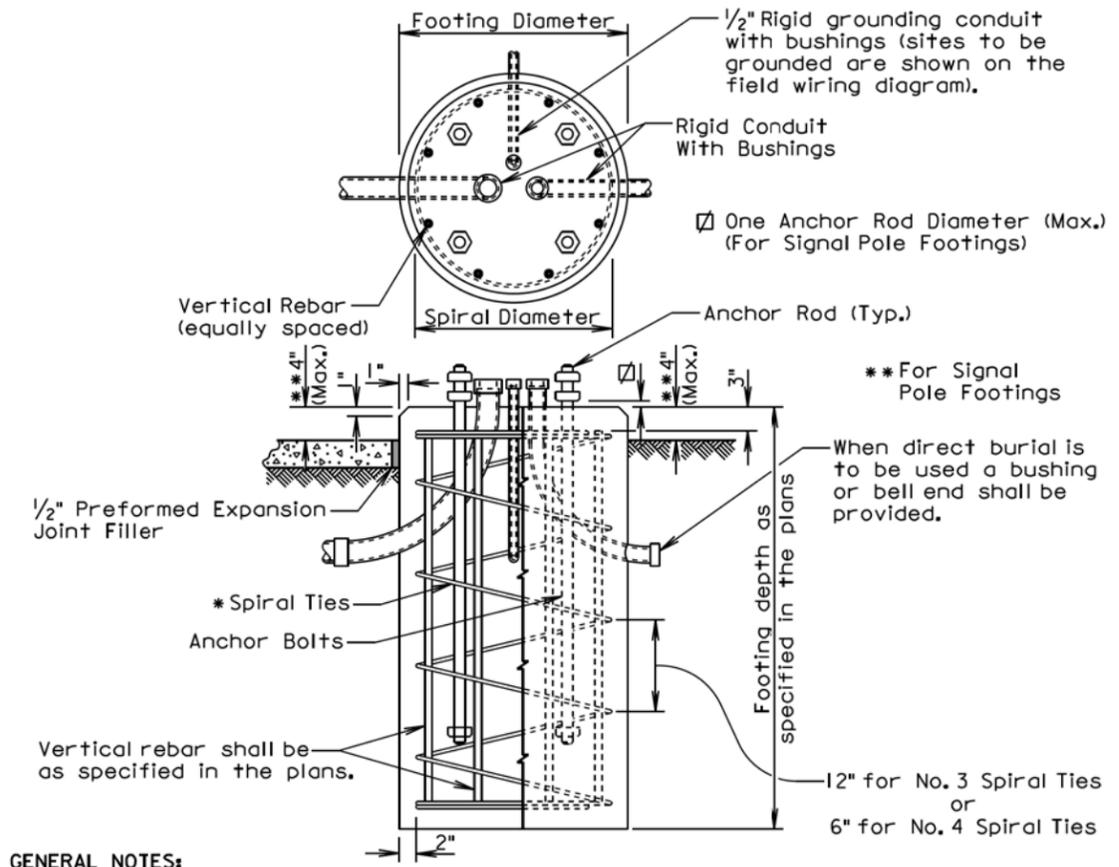
The Contractor shall contact and coordinate his/her work with the Utility Companies regarding hookup requirements, fees, materials, and equipment necessary.

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, post, concrete footing, post cap, meter socket if required, conduit, and incidentals shall be incidental to the contract unit price per each for "Electrical Service Cabinet".

June 26, 2006

S D D O T	GALVANIZED STEEL UTILITY POST WITH OVERHEAD UTILITY POLE	PLATE NUMBER 635.35
		Sheet 1 of 1

Published Date: 3rd Qtr. 2014



GENERAL NOTES:

* The tie sizes are specified in the plans. Circular ties may be used in lieu of the spiral ties. The No. 3 ties shall be spaced 12 inches apart except for the top two which shall be spaced 6 inches apart. The No. 4 ties shall be spaced 6 inches apart except for the top two which shall be spaced 3 inches apart. The ties shall be lapped 18 inches and the laps shall be staggered around the cage.

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

See section 985 of the Standard Specifications for footing materials.

Conduits and bushings may project 2 1/2 inches to 6 inches above footing for fixed base poles but shall not project above the slip plane or fracture plane for breakaway poles.

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

The anchor rods shall 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 shall be incidental to the footing bid item(s).

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

The contour of the area surrounding the breakaway pole shall 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.

September 6, 2013

S D D O T	POLE FOOTING	PLATE NUMBER 635.55
		Sheet 1 of 1

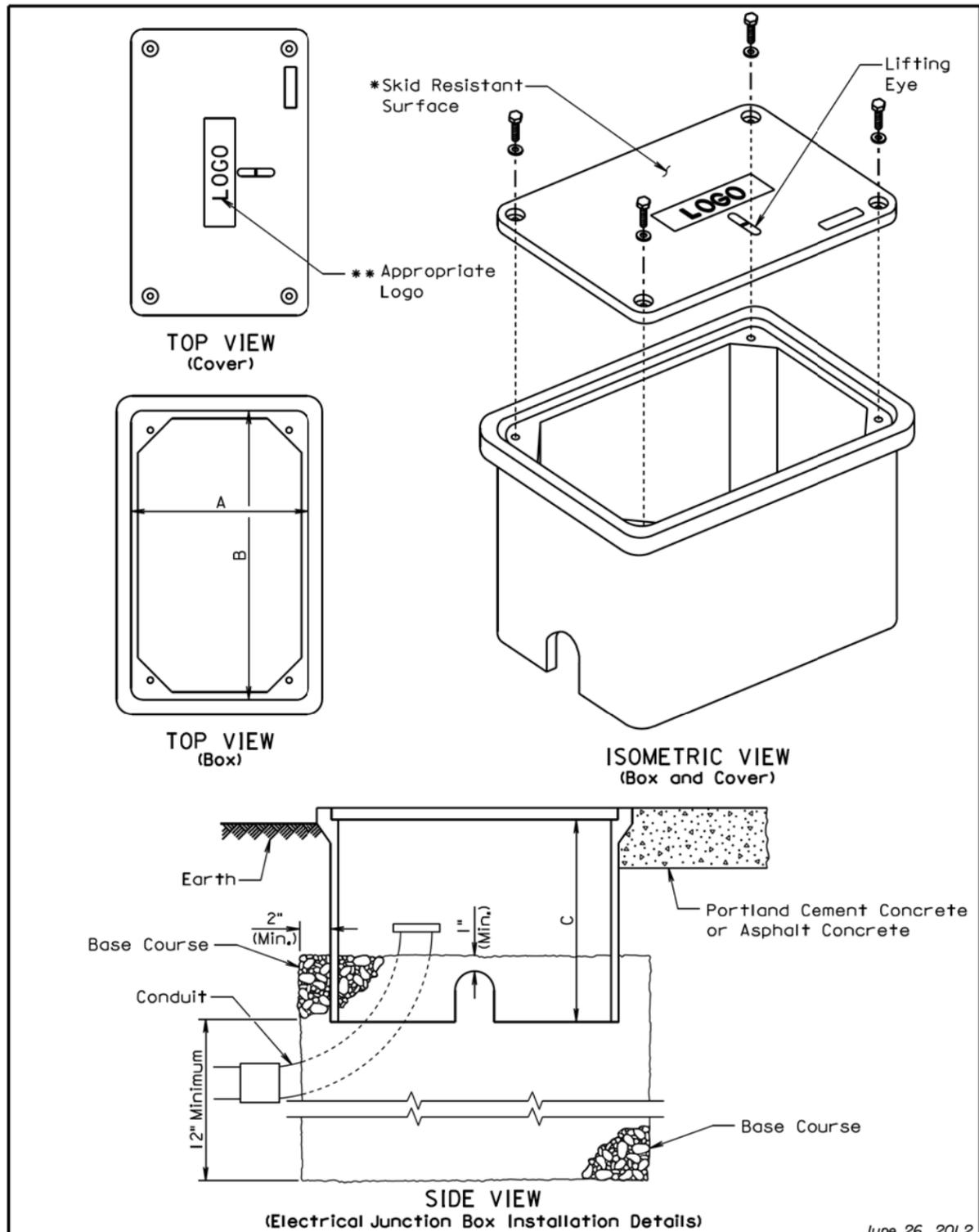
Published Date: 3rd Qtr. 2014

Plot Scale - 1:200

- Plotted From - tpr14286

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Plot Scale - 1:200



June 26, 2012

S D D O T	ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4	PLATE NUMBER 635.65
		Sheet 1 of 2

Published Date: 3rd Qtr. 2014

ELECTRICAL JUNCTION BOX

TYPE	DESCRIPTION	DIMENSIONS		
		A	B	C
1	Open Bottom with Gasket	11"-15"	18"-21"	18" (Min.)
2	Open Bottom with Gasket	13"-18"	23"-28"	18" (Min.)
3	Open Bottom with Gasket	17"-22"	24"-30"	18" (Min.)
4	Open Bottom with Gasket	28"-33"	36"-48"	24" (Min.)

GENERAL NOTES:

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

The cover shall have a lifting eye.

*The surface of the cover shall have a minimum wet and dry coefficient of friction value of 0.5 as determined by ASTM F 609.

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

The electrical junction boxes shall 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 the electrical junction boxes shall be Tier 8 of ANSI/SCTE 77 2007.

The electrical junction boxes shall be UL listed.

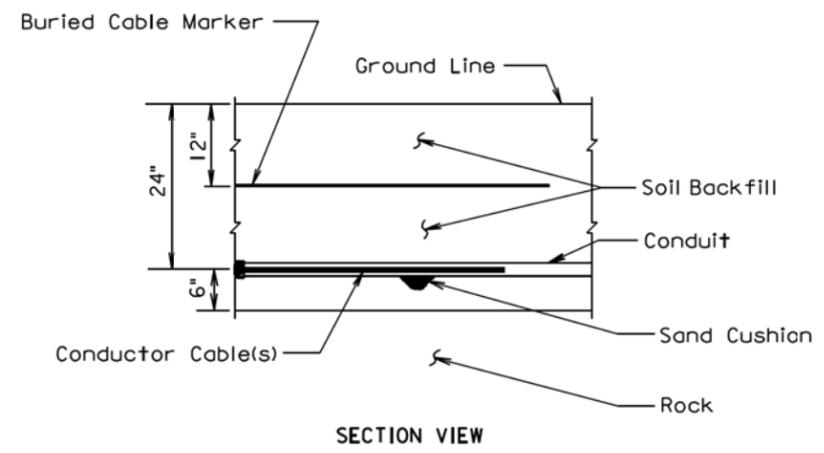
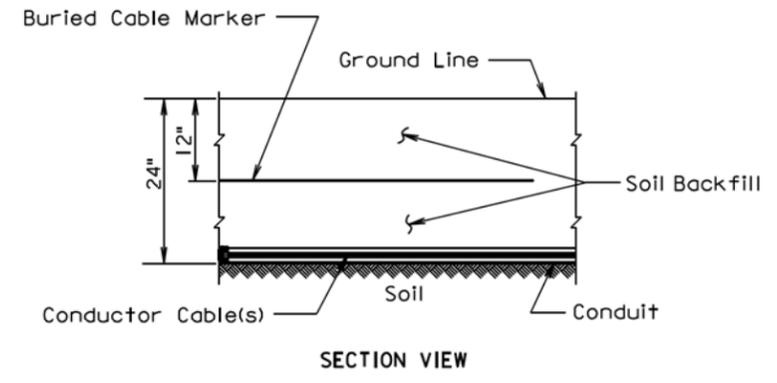
June 26, 2012

S D D O T	ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4	PLATE NUMBER 635.65
		Sheet 2 of 2

Published Date: 3rd Qtr. 2014

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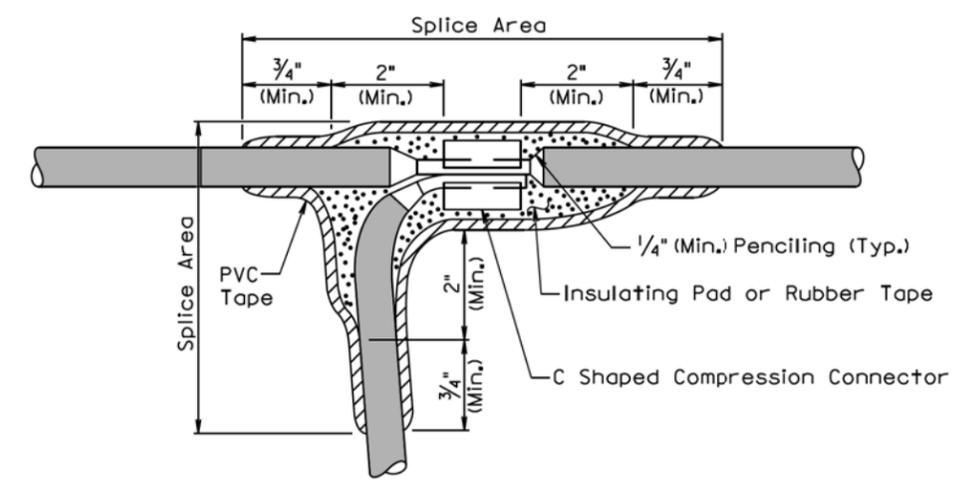
GENERAL NOTE:

The Buried Cable Marker shall be plastic, approximately 6" wide, and shall be capable of sustaining a minimum of a 350% tolerance of elongation without tearing. The Buried Cable Marker shall 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 shall be printed in a contrasting color on the cable marker. The Buried Cable Marker shall be subject to approval by the Engineer. All costs associated with furnishing and installing the Buried Cable Marker shall be incidental to the contract unit price per Foot for the bid item used for the electrical conductor.

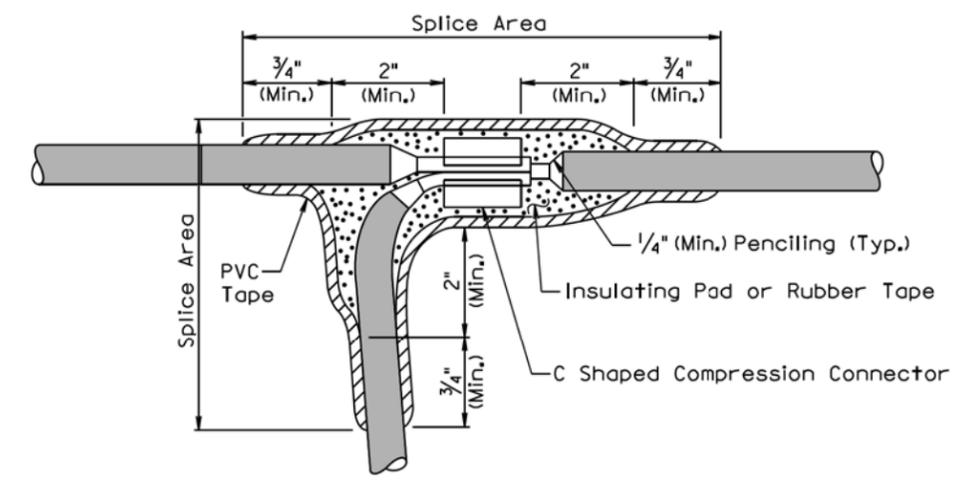
March 31, 2000

S D D O T	CONDUIT INSTALLATION	PLATE NUMBER 635.76
		Sheet 1 of 1

Published Date: 3rd Qtr. 2014



TYPE C SPLICE
(Between 1 free end and 1 through conductor)

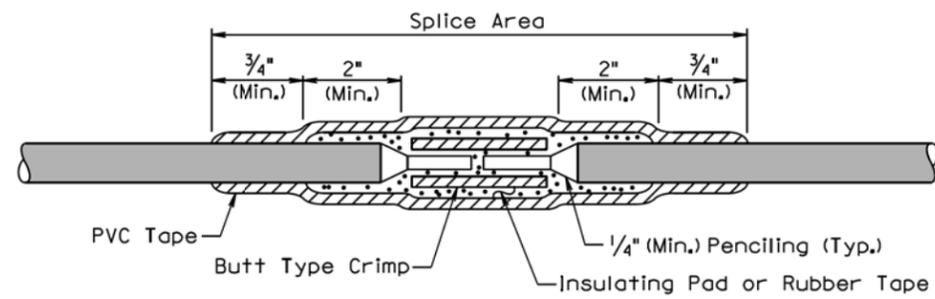


TYPE T SPLICE
(For 3 free ends)

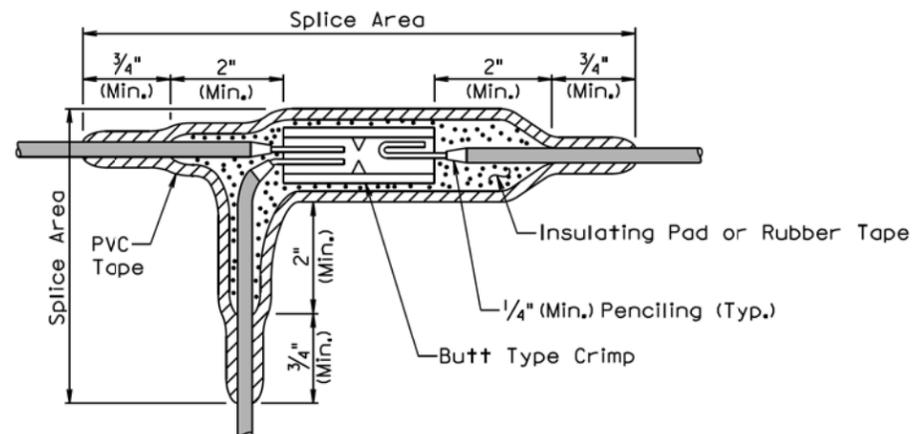
February 14, 2010

S D D O T	WIRE SPlicing FOR LIGHTING (LOW VOLTAGE CIRCUITS (0 to 600 V))	PLATE NUMBER 635.80
		Sheet 1 of 2

Published Date: 3rd Qtr. 2014



TYPE S SPLICE
(Between 2 free ends)



TYPE ST SPLICE
(For 3 free ends)

GENERAL NOTES:

The splice shall be environmentally sealed for protection from weather, moisture, and abrasion in accordance with the method stated below.

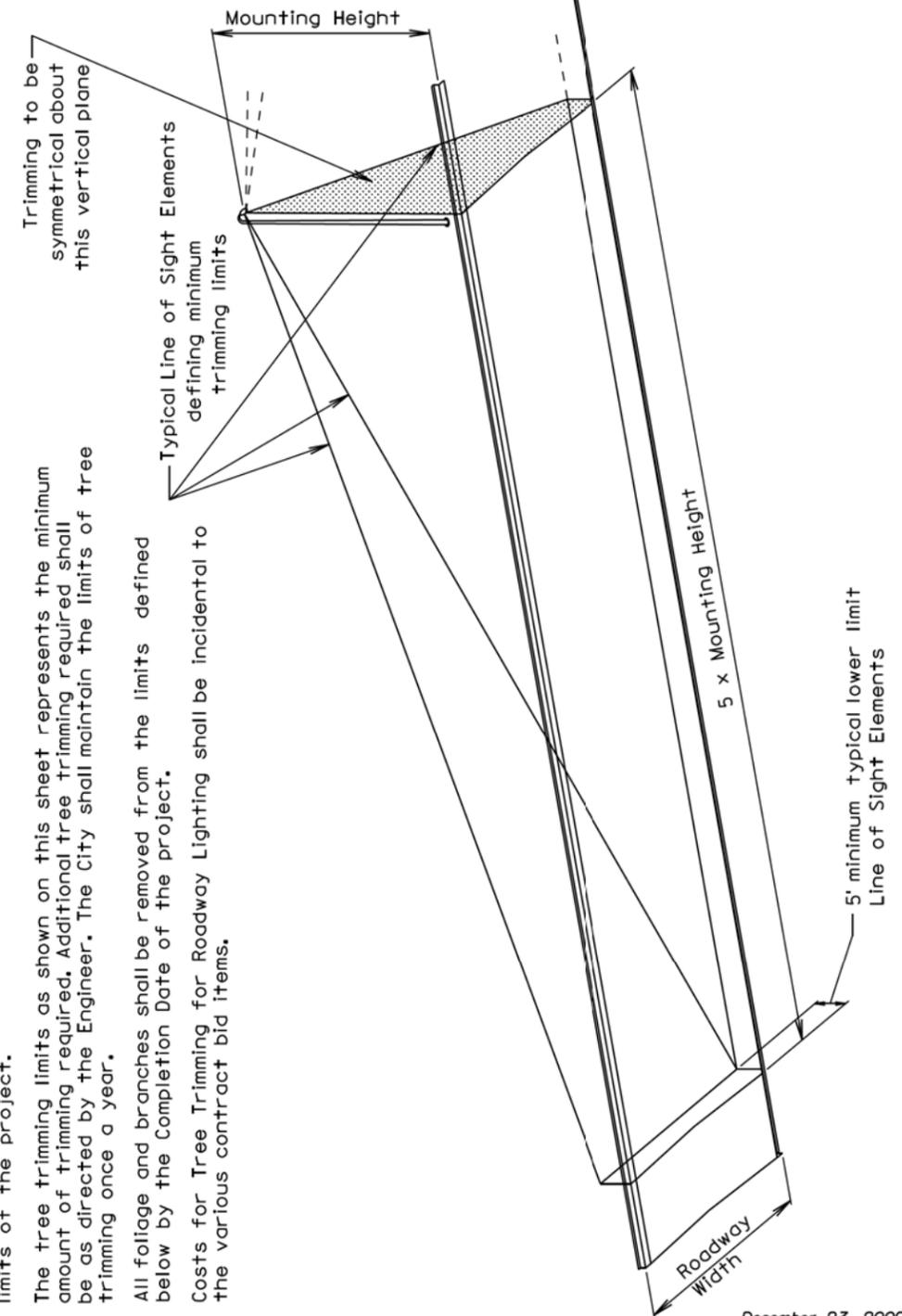
The rubber tapes shall be rolled after application.

Method for insulating splice area:

1. The splice area shall be completely covered with electrical insulating coating and dried.
2. Apply two layers of 1/8" minimum thickness electrical insulating pad or two layers of half lapped synthetic oil resistant self fusing rubber tape.
3. Three layers of half lapped polyvinyl chloride tape shall be applied.
4. The entire splice area shall be covered with electrical insulating coating and dried.

February 14, 2010

S D D O T	WIRE SPlicing FOR LIGHTING (LOW VOLTAGE CIRCUITS (0 to 600 V))	PLATE NUMBER 635.80
	Published Date: 3rd Qtr. 2014	Sheet 2 of 2



GENERAL NOTES:

Tree Trimming shall be done in accordance with proper tree trimming practices. The underside of each branch to be removed shall have a groove sawed through the bark (1/2" Min. depth) before any sawing is started on the top side of the branch.

Tree trimming shall be applied around each light source installed within the limits of the project.

The tree trimming limits as shown on this sheet represents the minimum amount of trimming required. Additional tree trimming required shall be as directed by the Engineer. The City shall maintain the limits of tree trimming once a year.

All foliage and branches shall be removed from the limits defined below by the Completion Date of the project.

Costs for Tree Trimming for Roadway Lighting shall be incidental to the various contract bid items.

December 23, 2009

S D D O T	TREE TRIMMING FOR ROADWAY LIGHTING	PLATE NUMBER 635.99
	Published Date: 3rd Qtr. 2014	Sheet 1 of 1