

PLOT SCALE - 1"=800'

PLOTTED FROM - TRAB10100

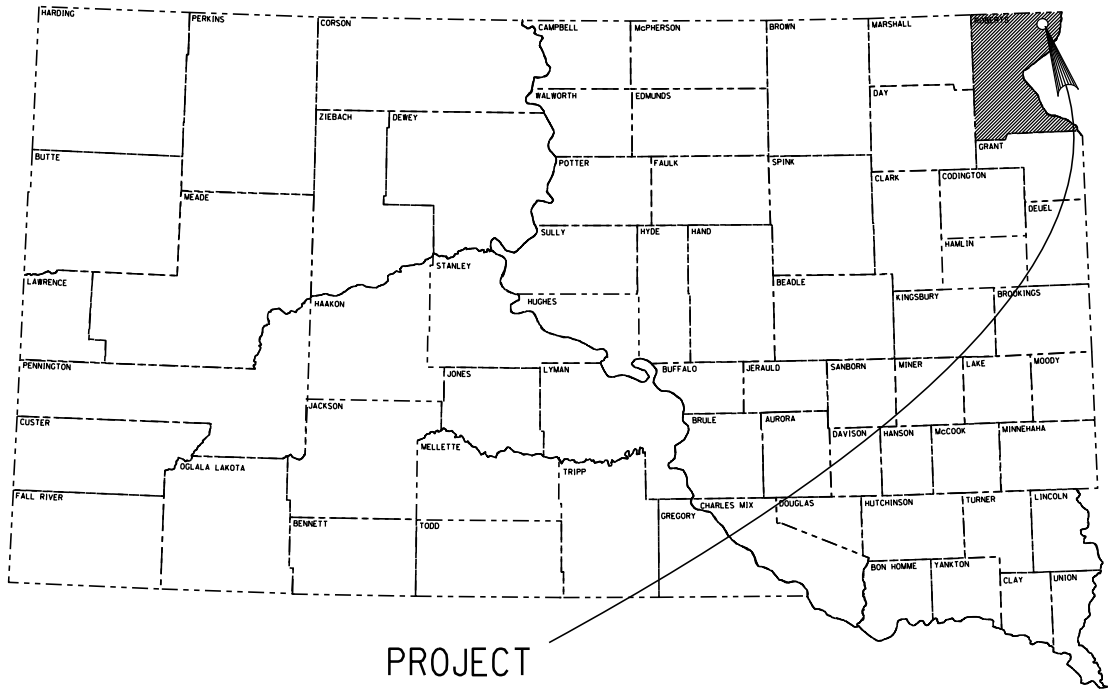
STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION  
PLANS FOR PROPOSED

PROJECT 000N-172  
SD HIGHWAY 127  
ROBERTS COUNTIES  
SCHOOL CROSSING SIGN IMPROVEMENT  
PCN 159H

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	000N-172	1	9
Plotting Date: 07/01/2021			

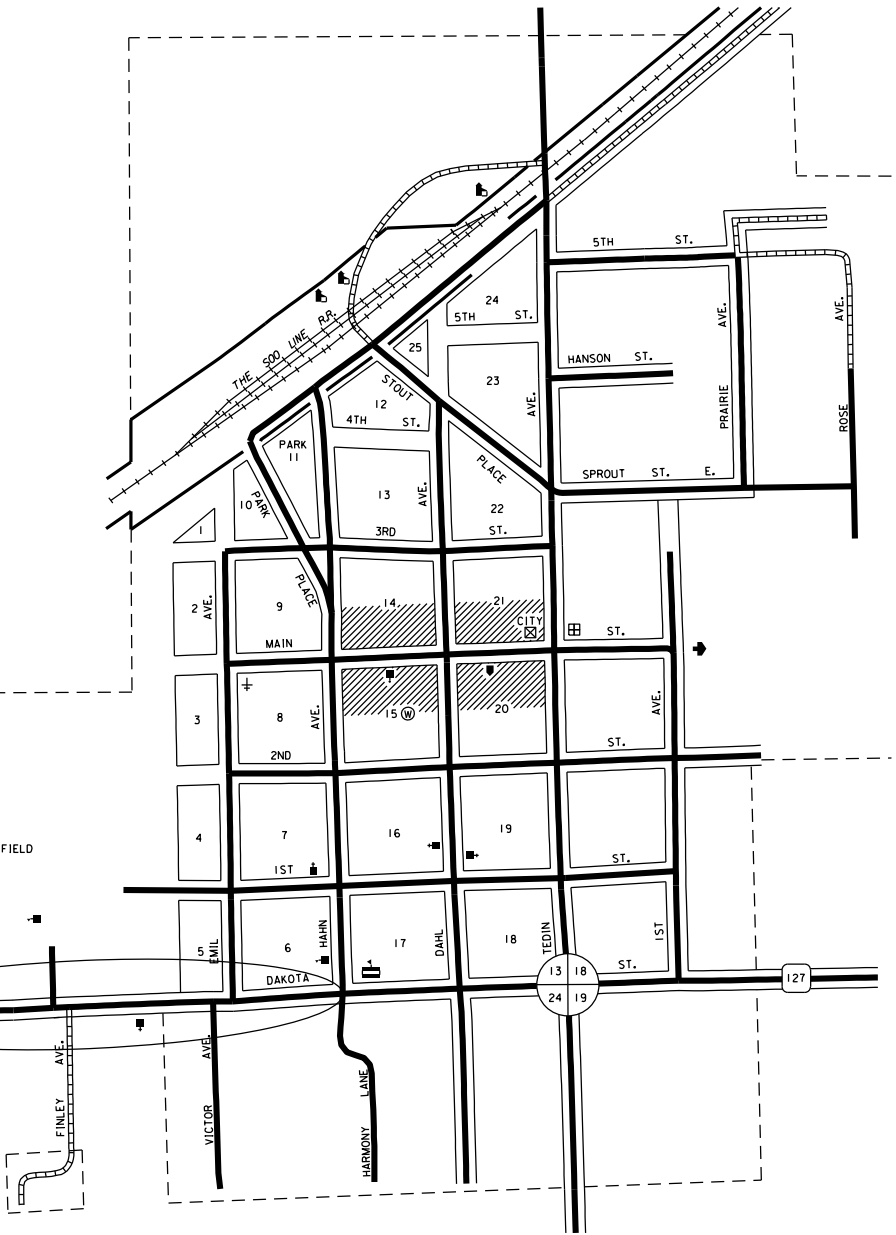
INDEX OF SHEETS

SHEET 1	TITLE SHEETS
SHEET 2-3	ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS
SHEET 4	PLAN NOTES
SHEET 5-6	TRAFFIC CONTROL
SHEET 7	CONDUIT LAYOUTS
SHEET 8-9	STANDARD PLATES



ROSHOLT

PROJECT



DESIGN DESIGNATION SD127

ADT (2020)	688
ADT (2040)	725
DHV	80
D	50%
T DHV	10.7%
T ADT	23.6%
V	65 MPH

STORM WATER PERMIT  
NONE NEEDED

PLOT NAME - 1

FILE - ... \PRJ\ROBT159H\159H TITLE.DGN

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-172	2	9

## ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E1520	Remove Signal Equipment	Lump Sum	LS
250E0010	Incidental Work	Lump Sum	LS
634E0110	Traffic Control Signs	105.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
635E4010	1 Section Vehicle Signal Head	4	Each
635E5301	Type 1 Electrical Junction Box	5	Each
635E5400	Electrical Service Cabinet	1	Each
635E5500	Meter Socket	1	Each
635E5510	Signal Flasher Unit	1	Each
635E8120	2" Rigid Conduit, Schedule 40	1,340	Ft
635E8220	2" Rigid Conduit, Schedule 80	105	Ft
635E9020	1/C #10 AWG Copper Wire	4,335	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 B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

### COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

#### Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

### COMMITMENT B4: BALD EAGLE

Bald eagles are known to occur in this area.

#### Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

## 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.

SDDOT: < <https://dot.sd.gov/doing-business/environmental/stormwater> >

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

EPA: < <https://www.epa.gov/npdes> >

## COMMITMENT H: WASTE DISPOSAL SITE

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

#### Action Taken/Required:

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

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

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

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

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".

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.

SCOPE OF WORK

Work on the project consists of removal and replacement of existing electrical materials required for school zone crossing. Installation of timed flashing warning beacons and conduit on SD127 at MRM 240.94.

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.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

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.

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.

SHOP DRAWING AND CATALOG CUTS SUBMITTALS

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

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

Dan.Martell@state.sd.us

Wyatt.Ewing@state.sd.us

ADVANCE WARNING SIGN FLASHING BEACON

The Contractor will install all material, including flex metal conduit, to the advance warning sign.

The flashing amber beacon will be a 1 section vehicle signal head. All costs for materials and installing the flashing amber beacon to the advance warning

sign will be incidental to the contract unit price per each for "1 Section Vehicle Signal Head."

SUPPLYING AS BUILT PLANS

If the advance warning sign flashing beacon 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 Region Traffic Engineer. The as built plans may include conduit layouts, wiring diagrams, or other drawings depicting the changes from the original plans.

FLASHING AMBER BEACON SYSTEM

The Contractor will install the flashing amber beacons SC1 and SC2 with two flashers being installed at each location on existing "School Speed Limit 15 When Flashing" posts. All posts and signs will be previously placed by the SDDOT. 2 weeks advance notice starting the project will be given to ensure the SDDOT forces have placed existing signs.

The flashing amber beacon system will include a signal flasher unit. The signal flasher unit will be equipped with a programmable timing relay with 8 programmable options. The signal flasher unit will be housed in a NEMA 3R weatherproof cabinet. The flasher unit will be located at the location of the existing flasher unit.

The flasher system will operate in a wig-wag format by having two flashers installed at the. The Contractor will make all necessary connections to make the flasher system operational.

All costs for cabinet and labor and materials required to make the flashing amber beacon system operational will be incidental to the contract unit price per each for "Signal Flasher Unit".

All cost for the removal of current posts and conduit down 1' below ground level connected to existing signal heads will be incidental to the contract unit price for "Remove Signal Equipment".

METER SOCKETS FOR SIGNAL FLASHER UNIT

The meter sockets provided for signal flasher unit by the Contractor will be a 200-amp, positive by-pass.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-172	4	9

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	000N-172	5	9

		CONVENTIONAL ROAD				
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE		SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	2	48"	x 48"	16.0	32.0
W21-5	SHOULDER WORK	4	48"	x 48"	16.0	64.0
G20-2	END ROAD WORK	2	36"	x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT 105.0				



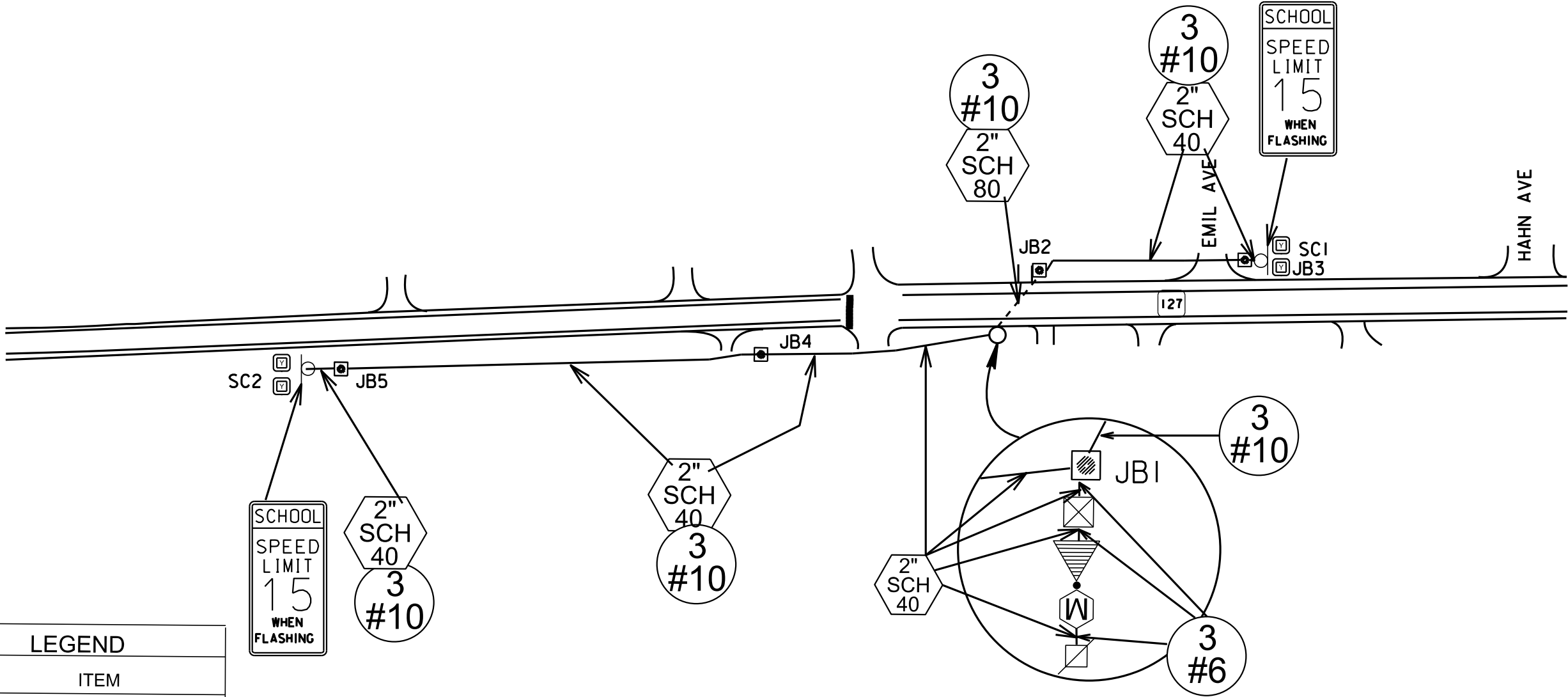
PLOT SCALE - 1:147.623

PLOTTED FROM - TRAB10100

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	000N-172	7	9
Plotting Date: 07/29/2021			

# CONDUIT LAYOUT

## SD 127 ROSHOLT



120/240 v.a.c., 60 hz.,  
1 Phase, 3 Wire Service  
By Otter Tail Power Co.

PLOT NAME - 1

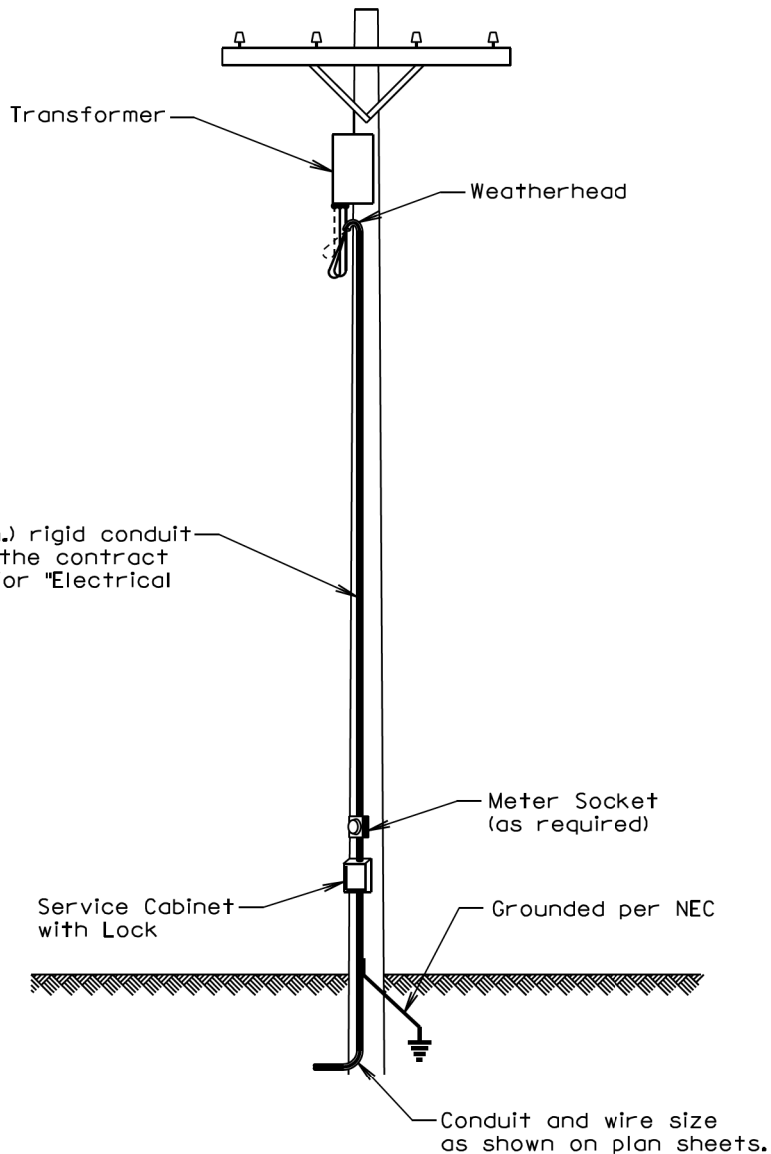
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PLOT SCALE - 1:200

-PLOTTED FROM - TRAB10100

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	000N-172	8	9
Plotting Date: 07/01/2021			



ELEVATION VIEW

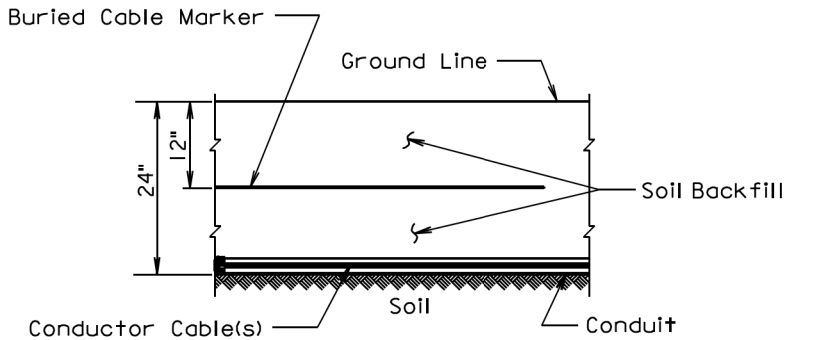
GENERAL NOTE:

The service cabinet shall include an externally mounted 15A receptacle outlet. The receptacle shall be housed in a lockable NEMA 3R enclosure. The Contractor shall furnish a lock and keys to the Engineer as directed.

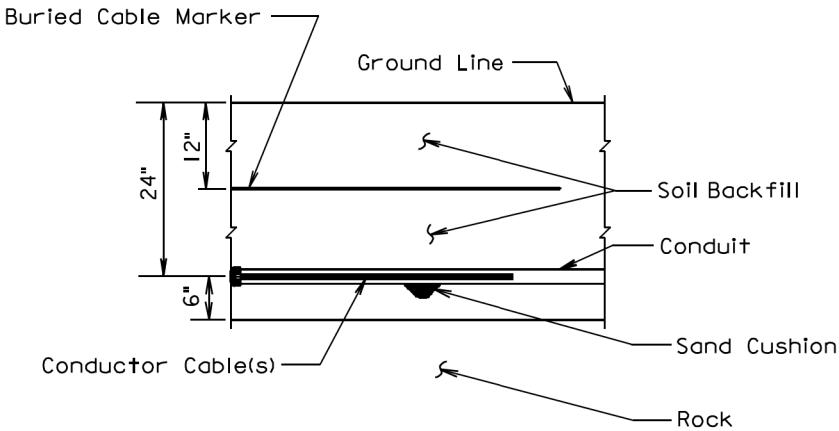
All costs for furnishing and installing all materials from the electrical service cabinet to the transformer including labor, wire, equipment, hookup fees, all items within the cabinet, lockable enclosure with receptacle outlet, lock and keys, meter socket if required, conduit and incidentals shall be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

June 26, 2016

Published Date: 2nd Qtr. 2021	S D D O T	SERVICE CABINET ON OVERHEAD UTILITY POLE	PLATE NUMBER 635.40
			Sheet 1 of 1



SECTION VIEW



SECTION VIEW

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

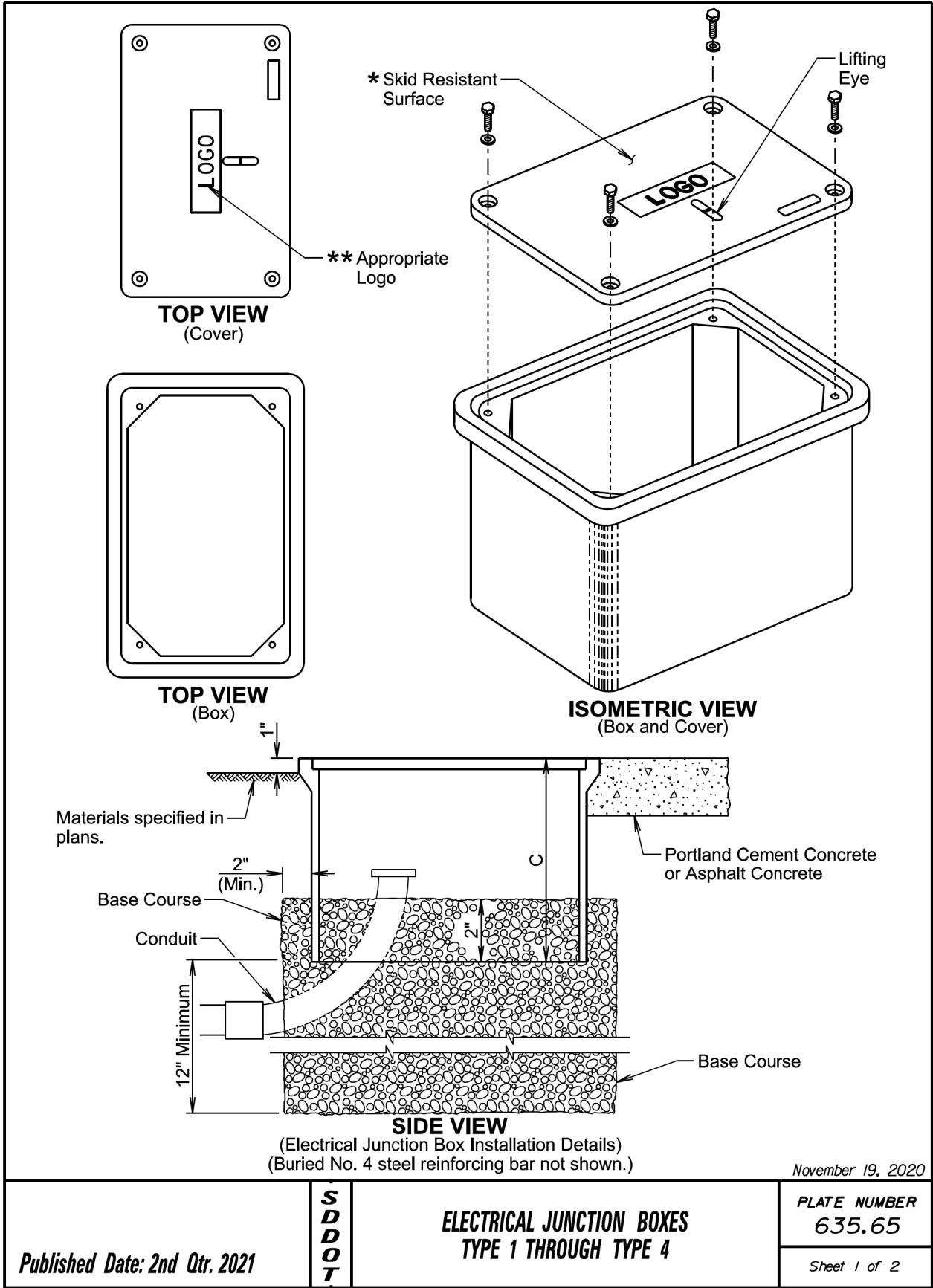
Published Date: 2nd Qtr. 2021	S D D O T	CONDUIT INSTALLATION	PLATE NUMBER 635.76
			Sheet 1 of 1

PLOT NAME - 4

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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	000N-172	9	9
Plotting Date: 07/01/2021			



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: 2nd Qtr. 2021	S D D O T	<b>ELECTRICAL JUNCTION BOXES TYPE 1 THROUGH TYPE 4</b>	PLATE NUMBER 635.65
		Sheet 2 of 2	