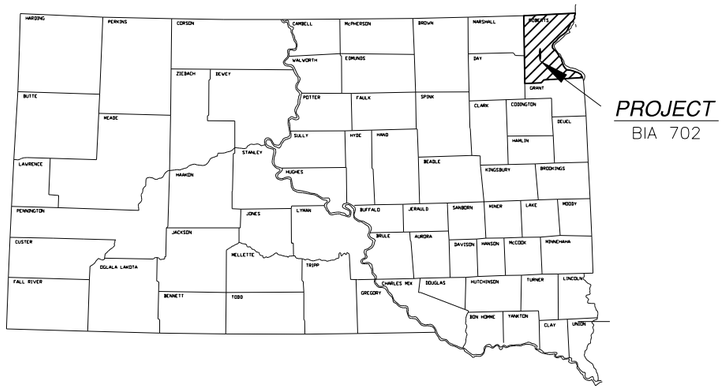


PROJECT
BIA 702

SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

PCAS A0970200 "POW WOW ROAD"
BIA 702 ROADWAY OVERLAY PROJECT

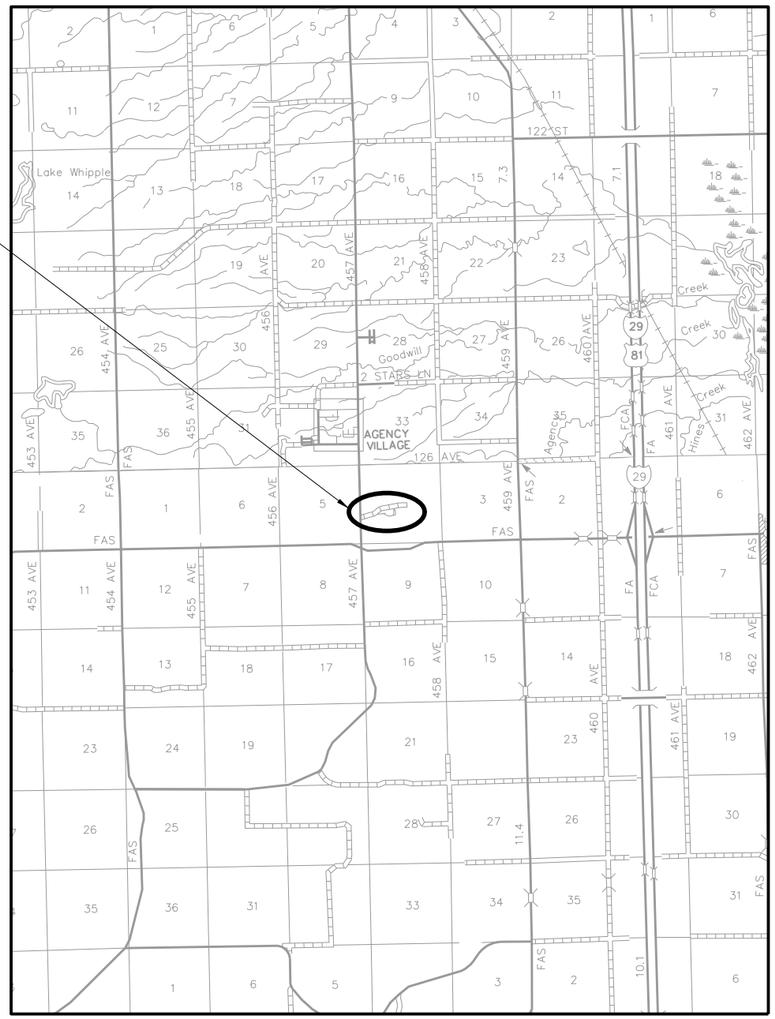
ASPHALT SURFACING, PAVEMENT MARKING, SIGNING

PROJECT LENGTH
4,753.53' (0.900 MILES)

INDEX OF SHEETS

LOCATION MAP

PROJECT LOCATION: BIA 702
STA. 100+75.00 TO STA. 148+28.53 (BIA702)



N

SISSETON-WAHPETON OYATE
TRANSPORTATION PROGRAM

SUBMITTED FOR APPROVAL:

DIRECTOR, SISSETON-WAHPETON OYATE TRIBAL TRANSPORTATION PROGRAM — DATE 12-6-24

R/W AGREEMENTS
RIGHT-OF-WAY FOR THE ENTIRE PROJECT AS SHOWN ON PLANS HAS BEEN OBTAINED.
UTILITY AGREEMENTS
AGREEMENTS HAVE BEEN COORDINATED WITH UTILITY COMPANIES WHOSE PROPERTIES ARE INVOLVED IN THE RIGHT-OF-WAY AND CONSTRUCTION AREAS FOR THIS PROJECT.
RAILROAD
ALL AGREEMENTS HAVE BEEN OBTAINED FOR ANY RAILROAD CROSSINGS AFFECTED BY THE PROJECT.
SPECIFICATIONS
CONFORM TO SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2015 EDITION AND REQUIRED PROVISIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS, OR AS OTHERWISE NOTED IN THESE PLANS.
CERTIFICATION

I CERTIFY THAT THE PS&E MEETS OR EXCEEDS THE DESIGN, HEALTH, AND SAFETY STANDARDS IN APPENDIX B TO SUBPART D OF 25 CFR PART 170.462. I ALSO CERTIFY THAT THE ATTACHED PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF SOUTH DAKOTA.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
12-5-24
SOUTH DAKOTA

PROFESSIONAL ENGINEER, P.E.

DATE 12-5-24 *REGISTRATION NUMBER* 12804

KLJ

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	1.2	3.5

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNITS	TOTAL ESTIMATED QUANTITY
009E0010	MOBILIZATION	LUMP SUM	1
009E3200	CONSTRUCTION STAKING	LUMP SUM	1
100E0100	CLEARING	LUMP SUM	1
110E1010	REMOVE ASPHALT CONCRETE PAVEMENT	SQ YD	352
110E7150	REMOVE SIGN FOR RESET	EACH	3
210E1005	SURFACE PREPARATION	MILE	1
250E0020	INCIDENTAL WORK, GRADING	LUMP SUM	1
260E1010	BASE COURSE	TON	48
320E1050	CLASS E ASPHALT CONCRETE	TON	2633
330E0010	MC-70 ASPHALT FOR PRIME	TON	11
330E0100	SS-1H ASPHALT FOR TACK	TON	7
632E1320	2.0"X2.0" PERFORATED TUBE POST	FT	270
632E3205	FLAT ALUMINUM SIGN, NONREMOVABLE COPY SUPER/VERY HIGH	SQ FT	268
633E1222	HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, 4" YELLOW	FT	2468
633E1230	HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, 6" WHITE	FT	84
634E0120	TRAFFIC CONTROL, MISCELLANEOUS	LUMP SUM	1
650E6260	8" CONCRETE VALLEY GUTTER	SQ YD	43
700E0310	CLASS C RIPRAP	TON	10
730E0212	TYPE G PERMANENT SEED MIXTURE	LB	31
732E0250	FIBER MULCHING	LB	3580
734E0150	6" DIAMETER EROSION CONTROL WATTLE	FT	100
734E5010	SWEEPING	HOUR	12
831E0110	TYPE B DRAINAGE FABRIC	SQ YD	10

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BIA 702 OVERLAY
SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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SUMMARY OF ESTIMATE QUANTITIES

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	1.3	3.5

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 Sisseton Wahpeton Oyate Tribe (Tribe) is committed to protecting the environment and uses this environmental commitment list as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact.

COMMITMENT 1: 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 waters within South Dakota without prior approval from the Tribe. All construction equipment will be thoroughly washed to prevent and control the introduction and spread of invasive species into the project vicinity.

Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies, such as the US Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of Aquatic Invasive Species in South Dakota can be accessed at: http://sdleastwanted.com/maps/default.aspx.

COMMITMENT 2: WATER QUALITY STANDARDS

Action Taken/Required:

The Contractor is advised that the Water Quality Standards, administered by the Environmental Protection Agency (EPA) and USACE, 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 3: STORM WATER

Construction activities constitute 1-acre or more of earth disturbance and/or work in a waterway.

Action Taken/Required:

The US Environmental Protection Agency (EPA) 2022 Construction General Permit is required for this project. The Tribe is the owner of this permit and will submit the Notice of Intent (NOI) to EPA 15 days prior to project start in order to obtain coverage. Work can begin after authorization is received from the EPA. This permit provides coverage for construction and dewatering activities for this project.

The Contractor must adhere to the "Special Provision Regarding Storm Water Discharge to Waters of the United States within Indian Reservations."

Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) will be developed prior to the submittal of the NOI and will be implemented for all construction activities for compliance with the permit. The SWPPP must be kept on-site and updated as site conditions change. Erosion control measures and best management practices will be implemented in accordance with the SWPPP.

Information on storm water permits and SWPPPs are available on the following websites:

https://www.epa.gov/npdes/2022-construction-general-permit-cgp

COMMITMENT 4: TRIBAL MONITORING

Tribal monitors will be required during all earth moving activities. Contact will be made to the SWO prior.

Action Taken/Required:

If evidence of a Tribal Cultural Property (TCP) is identified by Tribal Monitors during project construction activities, such activities will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will work with the THPO to determine the appropriate course of action.

All artifacts, features, or other items of interest uncovered by project construction activities will not be displaced unless the THPO consents to it.

Prior to the pre-construction meeting, the Contractor will notify the THPO to arrange for tribal monitors to be present prior to earth disturbing activities so the tribal monitor is present to monitor the removal of topsoil and identify any cultural resources that may be uncovered during earth disturbing activities.

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 Engineer's intent for traffic control and sequencing of the work.

Special Conditions

1. Asphalt paving along roadway will be completed with a minimum of on - 12 foot lane open to traffic.
2. Contractor shall maintain access to driveways during construction.

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 CONTROL, MISCELLANEOUS

Installation, maintenance, relocation and removal of cones, drums, watchmen, tubular markers and flags, construction fence, or any other miscellaneous traffic items shall be included in the lump sum price bid for "Traffic Control, Miscellaneous".

FLAGGING

Operations will be conducted so that the traveling public will not have to wait longer than 15 minutes at the flagger station.

If an emergency vehicle needs to pass through the project, the Contractor will be required to expedite traffic movement. All costs associated with this will be incidental to the contract unit price for "Traffic Control, Miscellaneous".

INCIDENTS

An incident is an emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic such as a crash, hazardous materials spill, or other event.

The Contractor will set up a meeting prior to start of work to plan and coordinate responses to an incident. The Contractor will invite the South Dakota Highway Patrol, the Sheriff and local emergency response entities to the meeting.

The Contractor will assist to maintain traffic as required by these plan notes and as agreed to at that meeting.

Emergency vehicle access through the project will be considered and discussed at the meeting.

The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

Cost for the relocation of an advance warning sign due to an incident will be 50% of the designated sign rate.

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.

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

CONSTRUCTION STAKING

The Engineer will provide construction staking at the expense of the Owner.

The Contractor will include staking activities in the construction schedule and coordinate work with the Engineer. The Contractor will give 48-hour notification for staking. The Contractor will be responsible for all costs associated with replacing construction stakes which were unnecessarily damaged, destroyed, or removed by the contractor's operations.

MATERIAL WEIGHT TICKETS

The Contractor will clearly identify material stockpiles for various products used on the project, i.e. temporary surfacing, base course, gravel surfacing etc.

The Contractor will submit weight tickets for all items including incidental work items, not just pay items. All weight tickets will be clearly marked.

SAWING OF EXISTING SURFACING

Where new asphalt concrete is placed adjacent to existing asphalt pavement, the existing pavement will be sawed full depth to a true and vertical face. No separate payment will be made for sawing.

GRADING

Surface Preparation shall be applied to the alignments of BIA702 and Access Rd. Bid item shall be paid per mile of roadway. Payment includes the furnishing of all equipment, labor and skill necessary for shaping and compacting the existing roadway surface prior to placing of the asphalt concrete.

Incidental Work, Grading shall be applied to the alignment of Service Rd. Bid item shall be paid per the lump sum. Payment includes the Payment includes the furnishing of all equipment, labor and skill necessary for shaping and compacting the existing subbase prior to the placement of the proposed aggregate base.

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BIA 702 OVERLAY
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ROBERTS COUNTY, SOUTH DAKOTA

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GENERAL NOTES AND TABLES

DRWN. BY	CHK'D. BY	PROJECT NO.
TD	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	1.4	3.5

CLASS E ASPHALT CONCRETE

The asphalt section will be four inches (4") of Class E Asphalt Concrete. Asphalt concrete will be placed in two (2) lifts. The thickness of the top lift will not exceed two inches (2").

Mineral aggregate for Asphalt Concrete Composite will conform to the requirements for Class E.

All other requirements for Class E will apply.

Compaction of asphalt concrete will be by the Specified Roller Coverage Method.

All costs for the asphalt concrete including labor, equipment, and materials will be incidental to the contract unit price per ton for, "Class E Asphalt Concrete".

STATION TO STATION	ASPHALT CONCRETE COMPOSITE (TONS)
BIA 702 STA. 100+75 TO STA. 148+29	2,176 TONS
SERVICE RD STA. 200+11 TO STA. 204+91	160 TONS
ACCESS RD STA. 301+16 TO STA. 304+94	114 TONS
ELDERS ACCESS STA. 400+00 TO STA. 406+27	183 TONS
TOTAL:	2,633 TONS

MISCELLANEOUS CONCRETE

Concrete for curb and gutter, fillets, valley gutters, and sidewalk shall be Class M-6 as detailed in the SDDOT Standards Specifications Section 462.

Concrete shall be cured using a curing compound in accordance with section 821.1 of the SDDOT Standard Specification for Roads and Bridges. A ½" preformed expansion material shall be placed between the sidewalk and other concrete items (back of curb, driveways, existing sidewalks, etc.) except at curb ramps, where the expansion material shall be placed on the back side of the landing area. Payment for this item shall be incidental and included in the unit price for the respective bid item.

TABLE OF CONCRETE VALLEY GUTTER

STATION TO STATION	LT/RT	QUANTITIY (SQ YD)
BIA 702 STA. 122+98 & STA. 130+93	8' LT - 8' RT	43 SQ YD

HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

All materials will be applied as per manufacturer's recommendations. High build waterborne pavement marking paint will conform to the supplemental specifications for Section 980.1 B.

Reflective media will consist of glass beads.

High Build Waterborne Pavement Marking Paint applied after October 15 must be formulated as cold-weather waterborne paint. Cold weather waterborne paint will meet the requirements of Section 980.1 C.

RATES OF MATERIALS FOR HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT

Solid 4"line = 22.5 Gal/Mile
Dashed 4"line = 6.2 Gal/Mile
Glass Beads = 8 Lbs/Gal.

All cost for materials, labor and equipment necessary to furnish and install the pavement markings will be incidental to the contract unit price for the respective High Build Waterborne Pavement Marking Paint items.

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 address:

Darin.Falcon@KLJeng.com

OML NOTE:

Ensure if any disturbed areas on the project to restore w topsoil and seed, of if other erosion control measures may be needed during construction. We may need to remove, change, or add notes pertaining to EC and restoration below as needed.

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits.

Type G Permanent Seed Mixture will consist of the following:

GRASS SPECIES	VARIETY	PURE LIVE SEED (PLS) (POUNDS/ACRE)
Western Wheatgrass	Arriba, Flintlock, Rodan, Rosana, Walsh	7
Switchgrass	Dacotah, Forestburg, Nebraska 28, Pathfinder, Summer, Sunburst, Trailblazer	3
Indiangrass	Holt, Tomahawk, Chief, Nebraska 54	3
Big Bluestream	Bison, Bonilla, Champ, Sunnyview, Roundtree, Bonanza	3
Oats or Spring Wheat: April through May Winter Wheat: August through November		10
TOTAL:		26

FERTILIZING

Application of fertilizer will not be required on this project.

MYCORRHIZAL INOCULUM

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

25% *Glomus intraradices*
25% *Glomus aggregatum or deserticola*
25% *Glomus mosseae*
25% *Glomus etunicatum*

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

The mycorrhizal inoculum will be as shown below or an approved equal:

PRODUCT	MANUFACTURER
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 www.mycorrhizae.com
AM 120 Multi Species Blend	Reforestation Technologies Int. Gilroy, CA Phone: 1-800-784-4769 www.reforest.com
LALRISE Prime and Max WP	Lallemand Specialties Inc. Milwaukee, WI Phone: 1-844-590-7781 www.lallemandplantcare.com

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment will be installed at locations noted in the table and at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor will provide certification that the erosion control wattles do not contain noxious weed seeds.

Erosion control wattles will remain on the project to decompose.

The erosion control wattle provided will be from the approved product list. The approved product list for erosion control wattle may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

FIBER MULCHING

Fiber mulch will be applied in a separate operation following permanent seeding.

Fiber mulch will be applied at the rate of 3,000 pounds per acre.

The Contractor will allow the fiber mulch to cure a minimum of 18 hours prior to watering or any storm event to ensure proper cohesion between the soil and fiber particles.

All costs for the fiber mulch including labor, equipment, and materials will be incidental to the contract unit price per pound for "Fiber Mulching".

The fiber mulch provided will be from the approved product list. The approved product list for fiber mulch may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

STANDARD PLATES

PLATE NO.	DESCRIPTION
632.18	BREAKAWAY SUPPORT STUB CLEARANCE
632.90	OFFSETS FOR SIGN INSTALLATION
635.37	30' WOOD UTILITY POLE WITH OVERHEAD UTILITY POLE
635.40	SERVICE CABINET ON OVERHEAD UTILITY POLE
650.40	VALLEY GUTTER
734.06	EROSION CONTROL WATTLE

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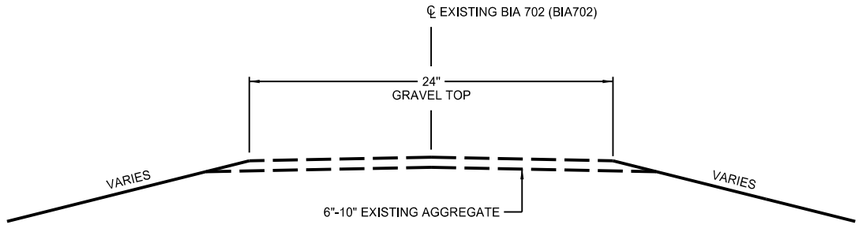
GENERAL NOTES AND TABLES

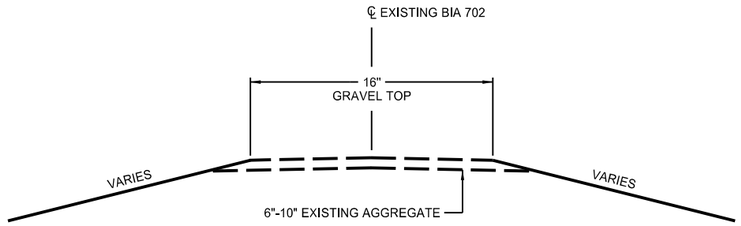
DRWN. BY	CHK'D. BY	PROJECT NO.
TD	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	1.5	3.5

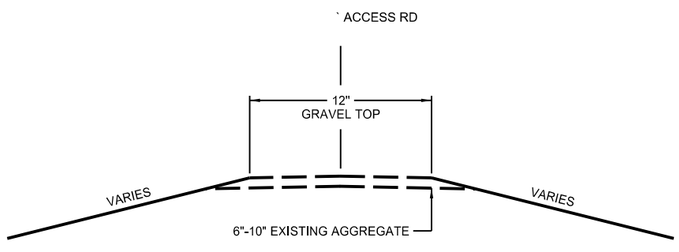
EXISTING BIA 702 - TWO-WAY TRAFFIC
STA. 100+33.96 TO STA. 113+98.50 (BIA702)



EXISTING BIA 702 - ONE-WAY TRAFFIC
STA. 113+98.50 TO STA. 148+28.63 (BIA702)



ACCESS RD
STA. 300+00.00 TO STA. 304+94.23 (ACCESS_RD)



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ROBERTS COUNTY BIA 702 OVERLAY
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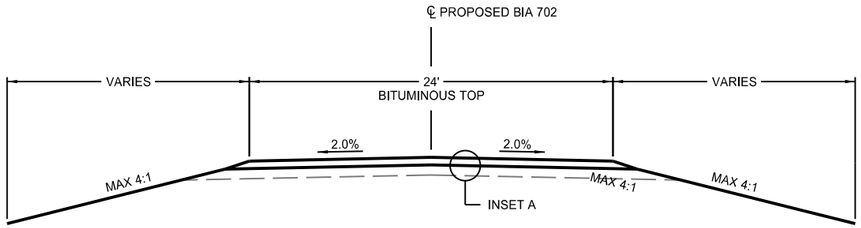
EXISTING TYPICAL SECTIONS

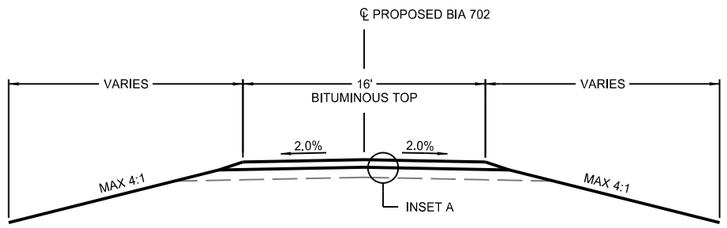
DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	1.6	3.5

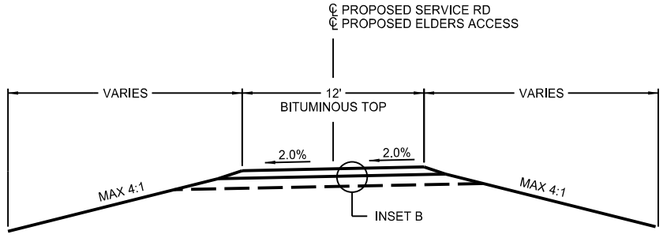
PROPOSED BIA 702 - TWO-WAY TRAFFIC
STA. 100+33.96 TO STA. 113+98.50 (BIA702)



PROPOSED BIA 702 - ONE-WAY TRAFFIC
STA. 113+98.50 TO STA. 148+28.63 (BIA702)



PROPOSED SERVICE RD
STA. 200+00.00 TO STA. 204+91.35 (SERVICE_RD)
STA. 400+00.00 TO STA. 406+27.91 (ELDERS)



PROPOSED ACCESS RD
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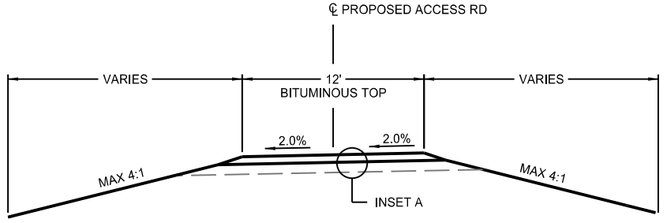
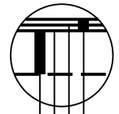
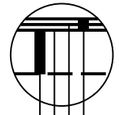


INSET A



4" CLASS E ASPHALT CONCRETE
(PLACED IN TWO EVEN 2" LIFTS)
PLACE SS-1H ASPHALT FOR TACK
(APPLY 0.10 GAL/SQYD)
PLACE MC-70 ASPHALT FOR PRIME
(APPLY 0.20 GAL/SQYD)
6"-10" EXISTING AGGREGATE

INSET B



4" CLASS E ASPHALT CONCRETE
(PLACED IN TWO EVEN 2" LIFTS)
PLACE SS-1H ASPHALT FOR TACK
(APPLY 0.10 GAL/SQYD)
PLACE MC-70 ASPHALT FOR PRIME
(APPLY 0.20 GAL/SQYD)
PLACE 8" BASE COURSE

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ROBERTS COUNTY BIA 702 OVERLAY
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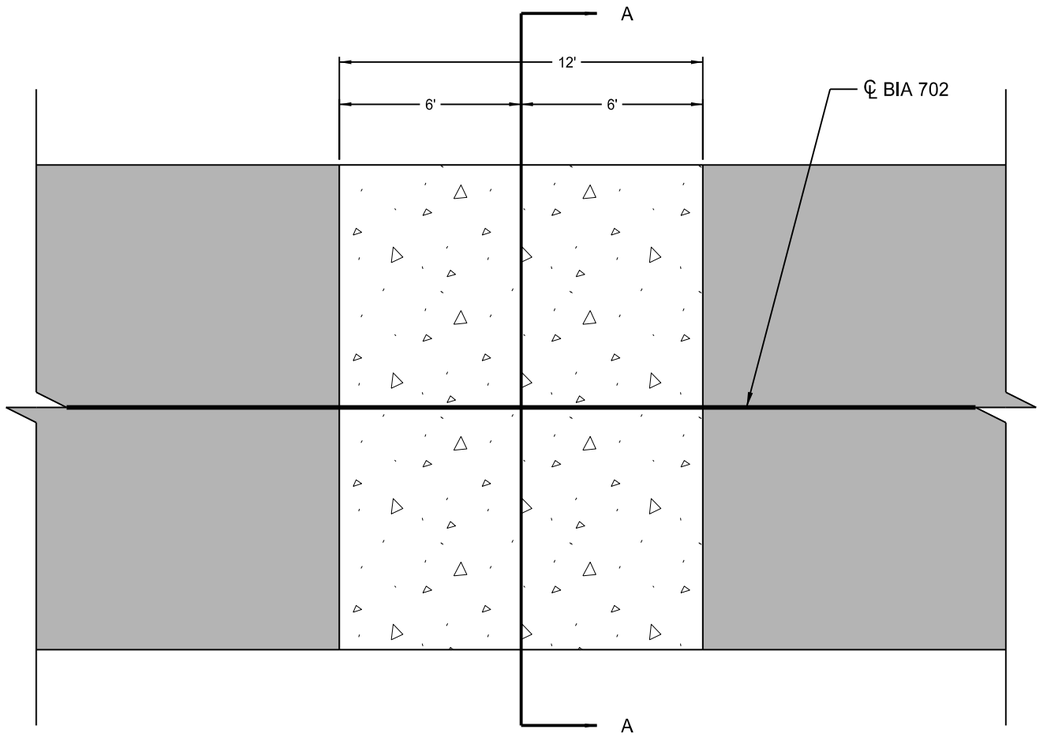
PROPOSED TYPICAL SECTIONS

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

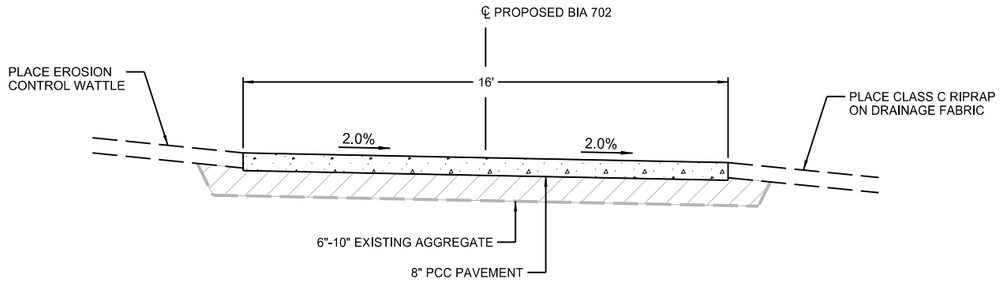
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	1.7	3.5

CONCRETE VALLEY GUTTER DETAIL

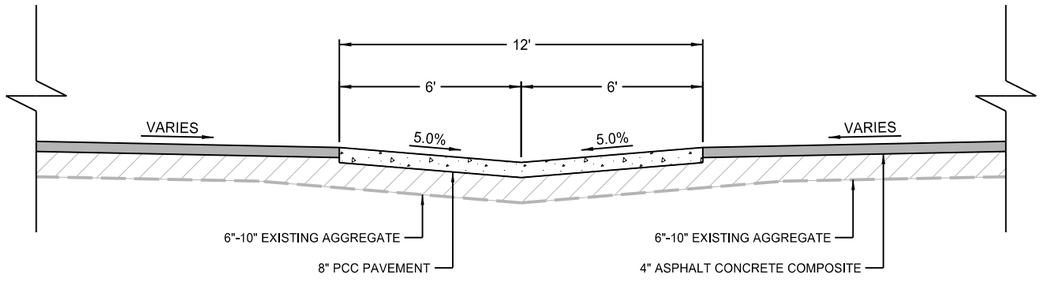
PLAN VIEW



SECTION A-A



PROFILE VIEW



GENERAL NOTES:

- PLACE CONCRETE VALLEY GUTTER AT LOW POINTS IN ROADWAY. DRAINAGE TO SURFACE FLOW OVER CONCRETE PAVEMENT.
- PROPOSED VALLEY GUTTER PAID FOR AS 8" CONCRETE VALLEY GUTTER BY THE SQ YD.
- SEE STANDARD PLATE 650.40 FOR ADDITIONAL DETAILS.
- PLACE CLASS C RIPRAP ON DRAINAGE FABRIC AT THE DOWNSTREAM SIDE OF VALLEY GUTTER. RIPRAP TO FOLLOW STANDARD SPEC 700 AND 830. DRAINAGE FABRIC TO FOLLOW STANDARD SPEC 831.
- PLACE EROSION CONTROL WATTLE ON THE UPSTREAM SIDE OF THE VALLEY GUTTER.

ROBERTS COUNTY BIA 702 OVERLAY
SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

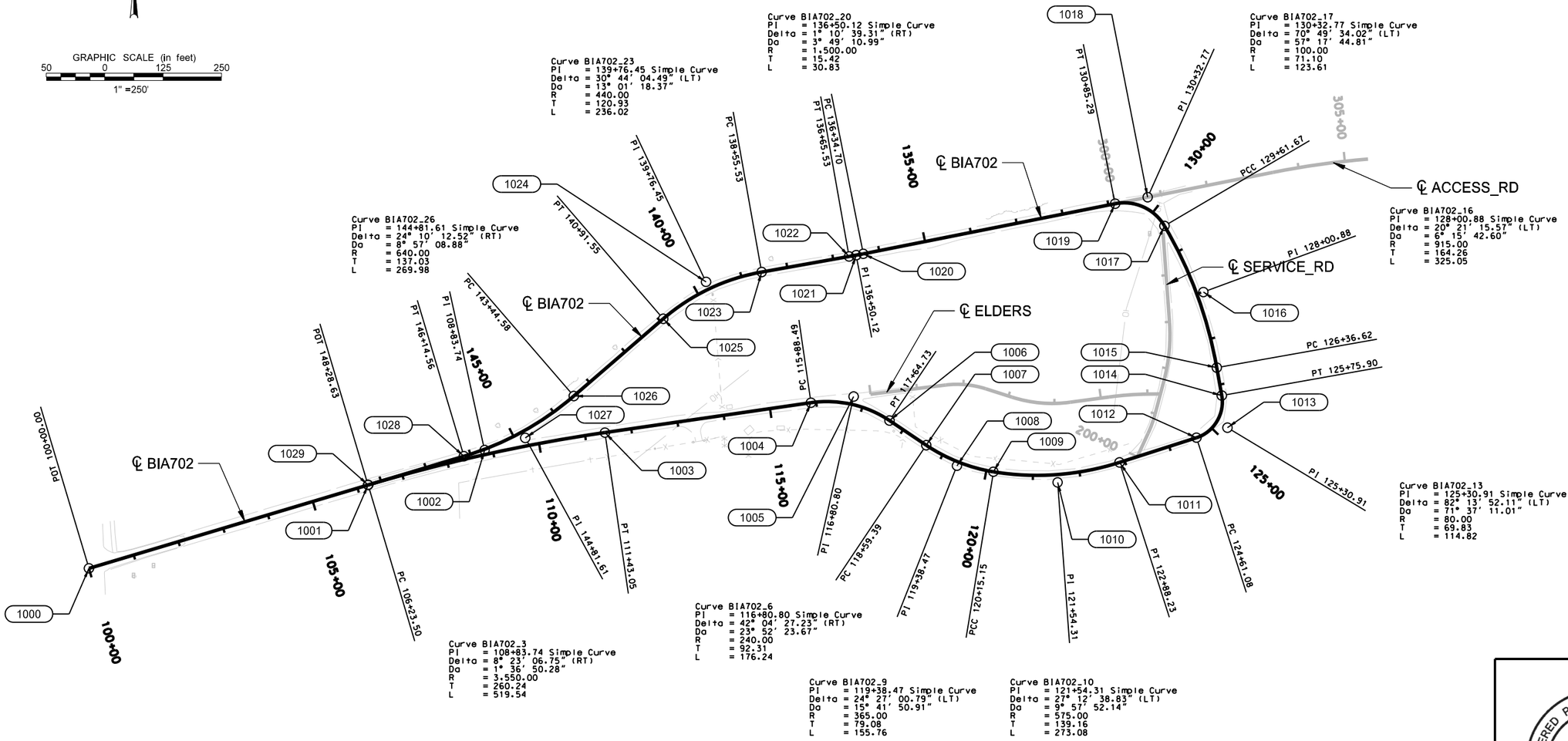
CONCRETE VALLEY GUTTER DETAIL

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	1.8	3.5

N

GRAPHIC SCALE (in feet)
50 0 125 250
1" =250'



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
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12-5-24
SOUTH DAKOTA

BIA 702 OVERLAY

SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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ALIGNMENT PLAN
BIA 702

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	1.9	3.5

N

GRAPHIC SCALE (in feet)
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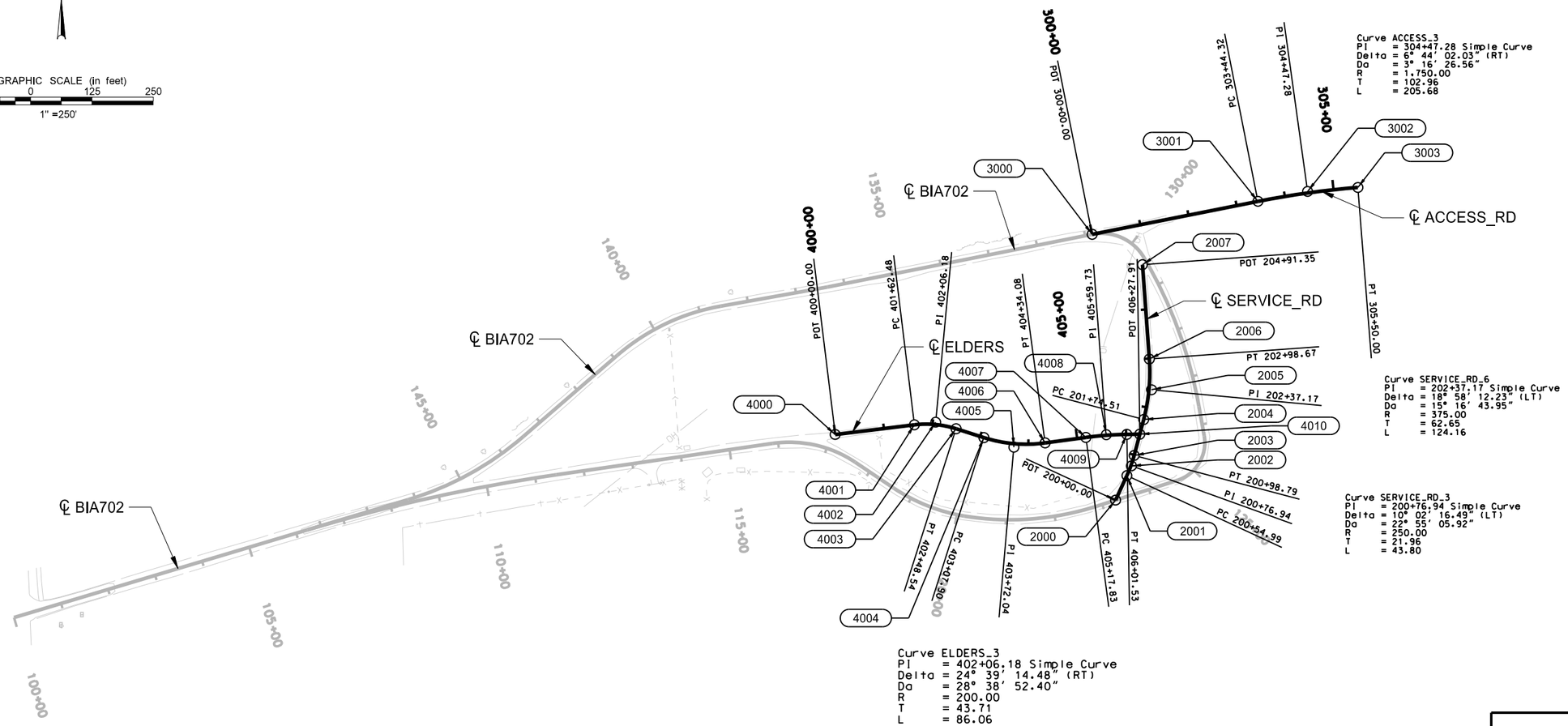
1" =250'



Curve ACCESS_3
PI = 304+47.28 Simple Curve
Delta = 6° 44' 02.03" (RT)
Da = 3° 16' 26.56"
R = 1,750.00
T = 102.96
L = 205.68

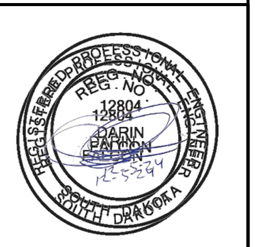
Curve SERVICE_RD_6
PI = 202+37.17 Simple Curve
Delta = 18° 58' 12.23" (LT)
Da = 15° 16' 43.95"
R = 375.00
T = 62.65
L = 124.16

Curve SERVICE_RD_3
PI = 200+76.94 Simple Curve
Delta = 10° 02' 16.49" (LT)
Da = 22° 55' 05.92"
R = 250.00
T = 21.96
L = 43.80

Curve ELDERS_3
PI = 402+06.18 Simple Curve
Delta = 24° 39' 14.48" (RT)
Da = 28° 38' 52.40"
R = 200.00
T = 43.71
L = 86.06

Curve ELDERS_6
PI = 403+72.04 Simple Curve
Delta = 25° 22' 02.97" (LT)
Da = 20° 06' 13.62"
R = 285.00
T = 64.14
L = 126.18

Curve ELDERS_9
PI = 405+59.73 Simple Curve
Delta = 6° 51' 03.25" (RT)
Da = 8° 11' 06.40"
R = 700.00
T = 41.90
L = 83.70



BIA 702 OVERLAY

SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

KLJ

ALIGNMENT PLAN
ELDERS ACCESS

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
SD	PCAS A0970200	2.0	3.5

ALIGNMENT TABULATION

POINT NUMBER	POINT	STATION	CIRCULAR CURVE DATA					COORDINATES	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH		
			SPIRAL CURVE DATA					X	Y
			ANGLE (θs)	DEGREE	ST	LT	LS		
BIA 702 <BIA702>									
1000	POT	100+00.00						639,012.7815	2,721,136.6933
	CC							635,789.9675	2,722,750.6104
1001	PC	106+23.50						639,191.3182	2,721,734.0900
1002	PI	108+83.74	8° 23' 07" RT	1° 36' 50.28"	3,550.000'	260.235'	519.541'	639,265.8348	2,721,983.4282
1003	PT	111+43.05						639,303.1945	2,722,240.9675
	CC							639,129.6292	2,722,716.2523
1004	PC	115+88.49						639,367.1431	2,722,681.7976
1005	PI	116+80.80	42° 04' 27" RT	23° 52' 23.67"	240.000'	92.306'	176.240'	639,380.3947	2,722,773.1472
1006	PT	117+64.73						639,329.0183	2,722,849.8337
	CC							639,579.5699	2,723,131.6300
1007	PC	118+59.39						639,276.3323	2,722,928.4749
1008	PI	119+38.47	24° 27' 01" LT	15° 41' 50.91"	365.000'	79.083'	155.759'	639,232.3154	2,722,994.1763
1009	PCC	120+15.15						639,219.4399	2,723,072.2044
	CC							639,786.7679	2,723,165.8201
	PCC	120+15.15						639,219.4399	2,723,072.2044
1010	PI	121+54.31	27° 12' 39" LT	9° 57' 52.14"	575.000'	139.164'	273.078'	639,196.7826	2,723,209.5120
1011	PT	122+88.23						639,239.4187	2,723,341.9843
	CC							639,368.5307	2,723,482.0202
1012	PC	124+61.08						639,292.3777	2,723,506.5300
1013	PI	125+30.91	82° 13' 52" LT	71° 37' 11.01"	80.000'	69.827'	114.816'	639,313.7707	2,723,572.9989
1014	PT	125+75.90						639,382.5214	2,723,560.7874
	CC							639,282.2873	2,722,649.2694
1015	PC	126+36.62						639,442.3060	2,723,550.1684
1016	PI	128+00.88	20° 21' 16" LT	6° 15' 42.60"	915.000'	164.258'	325.054'	639,604.0326	2,723,521.4423
1017	PCC	129+61.67						639,745.6693	2,723,438.2574
	CC							639,695.0265	2,723,352.0292
	PCC	129+61.67						639,745.6693	2,723,438.2574
1018	PI	130+32.77	70° 49' 34" LT	57° 17' 44.81"	100.000'	71.101'	123.615'	639,806.9781	2,723,402.2500
1019	PT	130+85.29						639,793.1042	2,723,332.5161
	CC							641,157.0629	2,722,500.9683
1020	PC	136+34.70						639,685.8970	2,722,793.6639
1021	PI	136+50.12	1° 10' 39" RT	3° 49' 10.99"	1,500.000'	15.415'	30.829'	639,682.8890	2,722,778.5451
1022	PT	136+65.53						639,680.1924	2,722,763.3676
	CC							639,213.7404	2,722,653.2713
1023	PC	138+55.53						639,646.9557	2,722,576.3008
1024	PI	139+76.45	30° 44' 04" LT	13° 01' 18.37"	440.000'	120.926'	236.025'	639,625.8018	2,722,457.2394
1025	PT	140+91.55						639,546.7714	2,722,365.7119
	CC							639,865.8151	2,721,755.9298
1026	PC	143+44.58						639,381.4064	2,722,174.1979
1027	PI	144+81.61	24° 10' 13" RT	8° 57' 08.88"	640.000'	137.030'	269.983'	639,291.8515	2,722,070.4817
1028	PT	146+14.56						639,252.6139	2,721,939.1898
1029	POT	148+28.63						639,191.3182	2,721,734.0900

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
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BIA 702 OVERLAY
SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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ALIGNMENT TABULATION
BIA 702

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	2.1	3.5

ALIGNMENT TABULATION

POINT NUMBER	POINT	STATION	CIRCULAR CURVE DATA					COORDINATES	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH		
			SPIRAL CURVE DATA					X	Y
			ANGLE (θs)	DEGREE	ST	LT	LS		
SERVICE RD <SERVICE_RD>									
2000	POT	200+00.00						639,251.7060	2,723,380.1613
	CC							639,406.6591	2,723,176.4136
2001	PC	200+54.99						639,301.6025	2,723,403.2684
2002	PI	200+76.94	10° 02' 16" LT	22° 55' 05.92"	21.956'	43.799'	250.000'	639,321.5253	2,723,412.4947
2003	PT	200+98.79						639,342.7513	2,723,418.1072
	CC							639,511.8258	2,723,074.9255
2004	PC	201+74.51						639,415.9641	2,723,437.4659
2005	PI	202+37.17	18° 58' 12" LT	15° 16' 43.95"	62.653'	124.159'	375.000'	639,476.5352	2,723,453.4819
2006	PT	202+98.67						639,539.0230	2,723,448.9379
2007	POT	204+91.35						639,731.1900	2,723,434.9640

ALIGNMENT TABULATION

POINT NUMBER	POINT	STATION	CIRCULAR CURVE DATA					COORDINATES	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH		
			SPIRAL CURVE DATA					X	Y
			ANGLE (θs)	DEGREE	ST	LT	LS		
ACCESS RD <ACCESS_RD>									
3000	POT	300+00.00						639,793.1042	2,723,332.5161
	CC							638,143.9322	2,724,011.7002
3001	PC	303+44.32						639,860.2925	2,723,670.2220
3002	PI	304+47.28	6° 44' 02" RT	3° 16' 26.56"	102.956'	205.675'	1,750.000'	639,880.3823	2,723,771.1991
3003	PT	305+50.00						639,888.4932	2,723,873.8352

ALIGNMENT TABULATION

POINT NUMBER	POINT	STATION	CIRCULAR CURVE DATA					COORDINATES	
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH		
			SPIRAL CURVE DATA					X	Y
			ANGLE (θs)	DEGREE	ST	LT	LS		
ELDERS ACCESS <ELDERS>									
4000	POT	400+00.00						639,385.4235	2,722,809.2116
	CC							639,206.6082	2,722,994.7481
4001	PC	401+62.48						639,405.1314	2,722,970.4887
4002	PI	402+06.18	24° 39' 14" RT	28° 38' 52.40"	43.706'	86.059'	200.000'	639,410.4328	2,723,013.8718
4003	PT	402+48.54						639,397.1542	2,723,055.5117
	CC							639,650.6468	2,723,198.6565
4004	PC	403+07.90						639,379.1187	2,723,112.0684
4005	PI	403+72.04	25° 22' 03" LT	20° 06' 13.62"	64.143'	126.183'	285.000'	639,359.6310	2,723,173.1789
4006	PT	404+34.08						639,368.2035	2,723,236.7461
	CC							638,685.6765	2,723,413.3000
4007	PC	405+17.83						639,379.3968	2,723,319.7467
4008	PI	405+59.73	6° 51' 03" RT	8° 11' 06.40"	41.900'	83.700'	700.000'	639,384.9966	2,723,361.2705
4009	PT	406+01.53						639,385.6032	2,723,403.1658
4010	POT	406+27.91						639,385.9850	2,723,429.5389

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SOUTH DAKOTA

BIA 702 OVERLAY
SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

KLJ

ALIGNMENT TABULATION
SERVICE RD, ELDERS
ACCESS & ACCESS RD

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	2.2	3.5

N

GRAPHIC SCALE (in feet)
50 0 50 100
1" =100'

140+00

MATCHLINE - STA. 139+50

℄ BIA702

145+00

MATCHLINE - STA. 114+30

OH

OH

END CONSTRUCTION
BIA 702
STA. 148+28.63 (BIA702)

457TH AVE

SAWCUT ASPHALT 27'

REMOVE ASPHALT PAVEMENT
(352 SQ YD)

110+00

105+00

℄ BIA702

100+00

REMOVE
"BIA 702"
SIGN

BEGIN CONSTRUCTION
BIA 702
STA. 100+75.00 (BIA702)

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FALCON
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BIA 702 OVERLAY

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ROBERTS COUNTY, SOUTH DAKOTA

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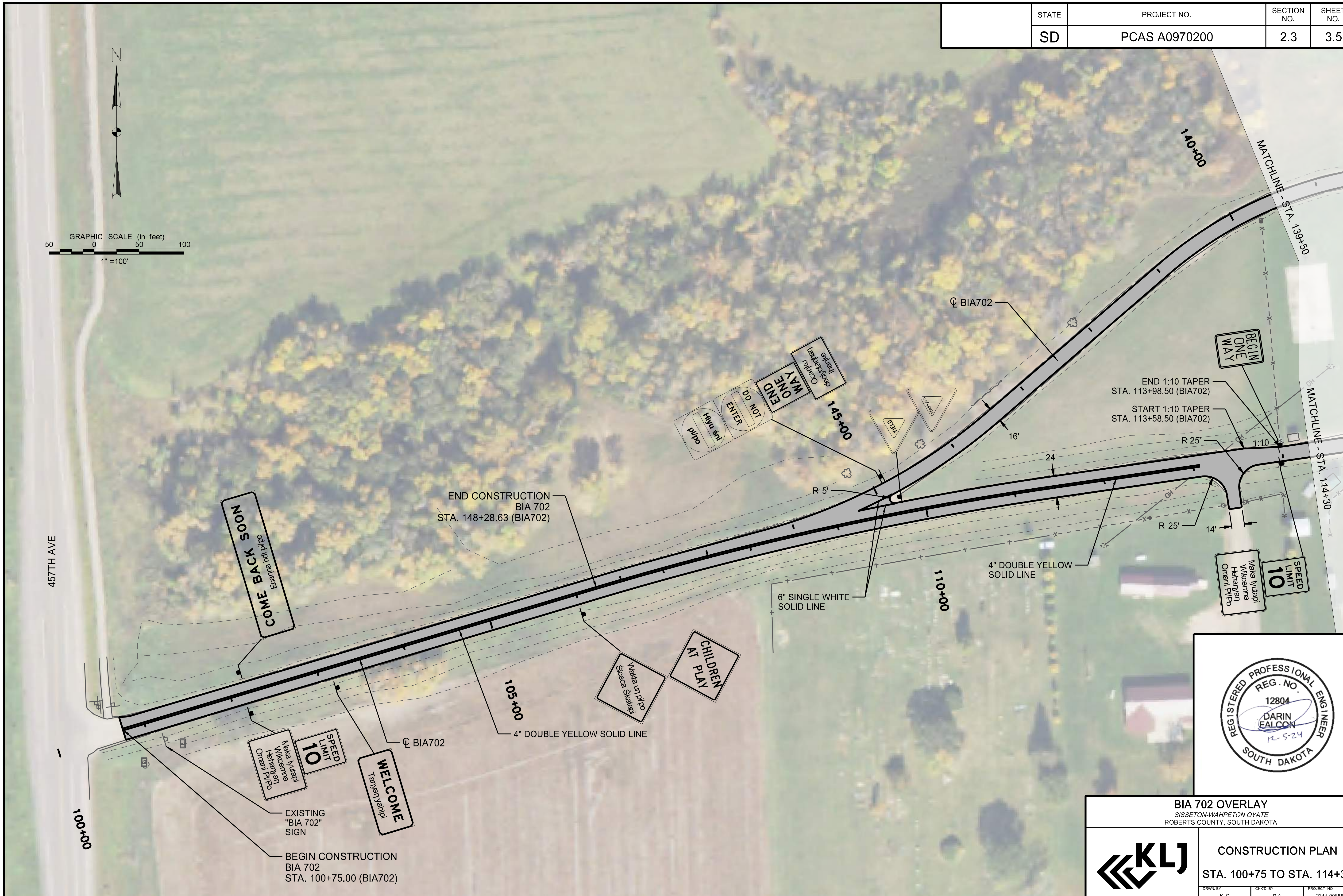
REMOVAL PLAN

STA. 100+75 TO STA. 114+30

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858


N
GRAPHIC SCALE (in feet)
50 0 50 100
1" =100'
457TH AVE
100+00
105+00
110+00
140+00
145+00
MATCHLINE - STA. 139+50
MATCHLINE - STA. 114+30
BEGIN CONSTRUCTION
BIA 702
STA. 100+75.00 (BIA702)
EXISTING
"BIA 702"
SIGN
SPEED LIMIT 10
Maka Iyutapi Wikcemna Hehanyan Omani Pi/Po
WELCOME
Tanyan yahipi
℄ BIA702
4" DOUBLE YELLOW SOLID LINE
COME BACK SOON
Ecanna hdi pi/po
Wakta un pi/po
Šiceca Škatapi
CHILDREN AT PLAY
END CONSTRUCTION
BIA 702
STA. 148+28.63 (BIA702)
Hiyu šni pi/po
DO NOT ENTER
END ONE WAY
YIELD
R 5'
6" SINGLE WHITE
SOLID LINE
16'
24'
℄ BIA702
4" DOUBLE YELLOW
SOLID LINE
BEGIN ONE WAY
END 1:10 TAPER
STA. 113+98.50 (BIA702)
START 1:10 TAPER
STA. 113+58.50 (BIA702)
R 25'
1:10
R 25'
14'
SPEED LIMIT 10
Maka Iyutapi Wikcemna Hehanyan Omani Pi/Po
REGISTERED PROFESSIONAL ENGINEER
REG. NO.
12804
DARIN FALCON
12-5-24
SOUTH DAKOTA

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
SD	PCAS A0970200	2.3	3.5

BIA 702 OVERLAY

SISSETON-WAHPETON OYATE

ROBERTS COUNTY, SOUTH DAKOTA

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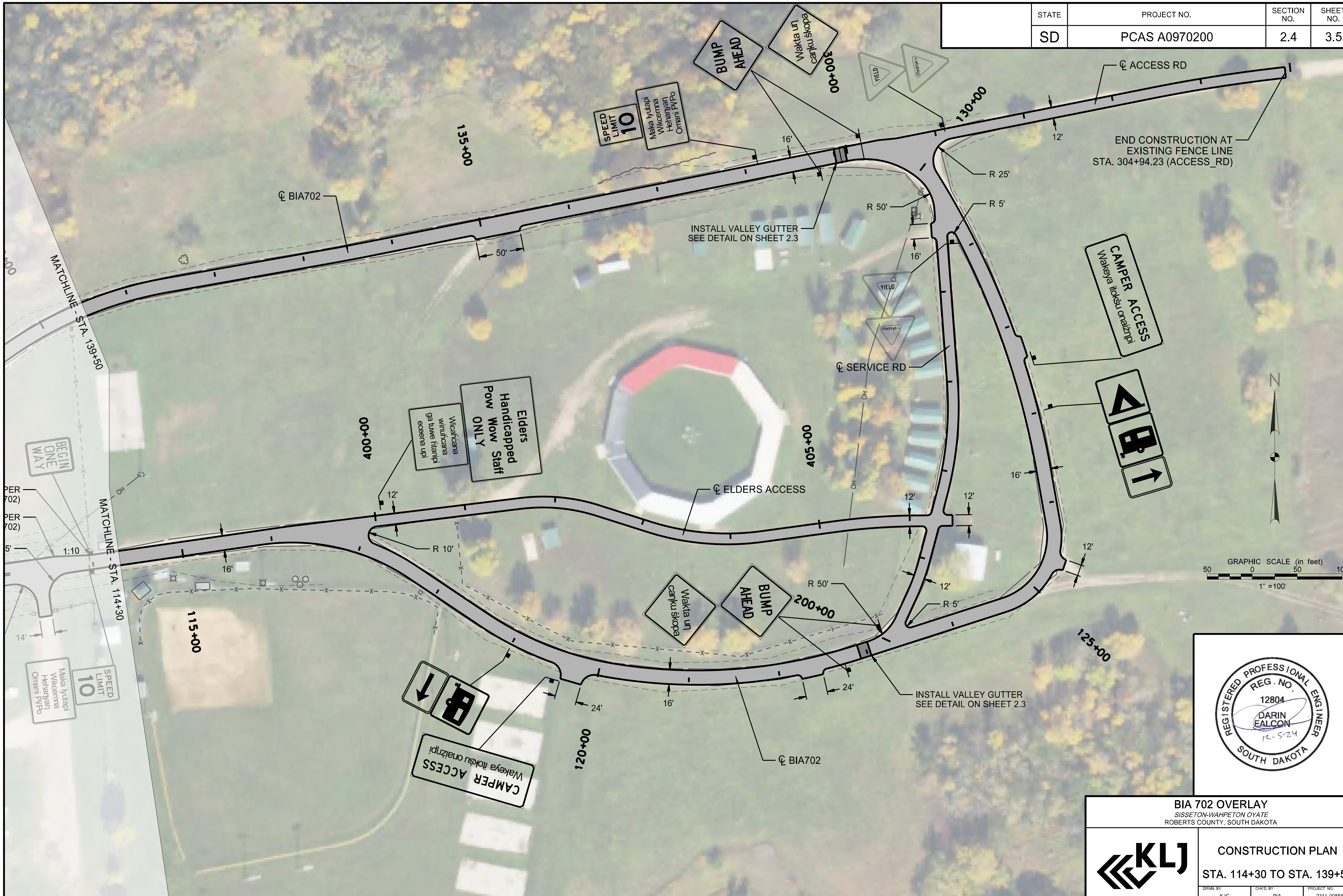
CONSTRUCTION PLAN

STA. 100+75 TO STA. 114+30

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
SD	PCAS A0970200	2.4	3.5



℄ ACCESS RD
END CONSTRUCTION AT
EXISTING FENCE LINE
STA. 304+94.23 (ACCESS_RD)
BUMP AHEAD
Wakta un cankuśkopa
300+00
YIELD
130+00
SPEED LIMIT 10
Maka Iyutapi Wikcemna Heharyan Omani PyPo
135+00
16'
12'
R 25'
R 5'
R 50'
℄ BIA702
INSTALL VALLEY GUTTER
SEE DETAIL ON SHEET 2.3
50'
16'
CAMPER ACCESS
Wakeya itokśu onaiżnpi
MATCHLINE - STA. 139+50
℄ SERVICE RD
Elders Handicapped Pow Wow Staff ONLY
Wicaĥcana winuhcana ga tuwe htanipi eceena upi
BEGIN ONE WAY
400+00
405+00
℄ ELDERS ACCESS
12'
12'
12'
16'
12'
R 10'
1:10
MATCHLINE - STA. 114+30
16'
R 50'
R 5'
12'
200+00
BUMP AHEAD
Wakta un cankuśkopa
125+00
115+00
14'
SPEED LIMIT 10
Maka Iyutapi Wikcemna Heharyan Omani PyPo
24'
24'
16'
INSTALL VALLEY GUTTER
SEE DETAIL ON SHEET 2.3
CAMPER ACCESS
Wakeya itokśu onaiżnpi
120+00
℄ BIA702
N
GRAPHIC SCALE (in feet)
50 0 50 100
1" =100'
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12804
DARIN FALCON
12-5-24
SOUTH DAKOTA

BIA 702 OVERLAY

SISSETON-WAHPETON OYATE

ROBERTS COUNTY, SOUTH DAKOTA

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CONSTRUCTION PLAN

STA. 114+30 TO STA. 139+50

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

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SECTION S – ESTIMATE OF QUANTITIES – BIA 702 OVERLAY

ITEM NO.	Item	Quantity	Unit
632E1320	2.0"x2.0" Perforated Tube Post	270	Ft
632E3205	Flat Aluminum Sign, Non removable Copy Super/Very High Intensity	267.6	SqFt

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 TRAFFIC SIGN

Existing signs that are shown as being removed in the Permanent Signing Table will become the property of the Contractor. Existing signposts and bases will be removed in their entirety. All existing signs, posts, and/or hardware removed will not be reused. Holes remaining from the removal of wood posts will be backfilled and compacted with material placed in layers not to exceed 6 inches in depth.

All costs associated with the removal of existing signs, posts, hardware, and backfilled holes will be incidental to the contract unit price per each for “Remove Traffic Sign”. Quantities will be per assembly at the contract unit price per each.

NEW PERMANENT SIGNING

All signs will be manufactured in accordance with the sheeting manufacturer’s recommendations utilizing a matched component system, including inks, electronic cuttable films, and protective overlay films.

All Flat Aluminum Signs, Nonremovable Copy High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type IV. All Flat Aluminum Signs, Nonremovable Copy Super/Very High Intensity will have sheeting in conformance with the requirements of ASTM D4956 Type XI.

All costs associated with furnishing and installing the new permanent signs, and with furnishing and installing stiffeners and hardware will be incidental to the contract unit price per square foot for “Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity”.

DIGITALLY PRINTED SIGNS

Digitally printed signs will be allowed on this project. If the Contractor elects to provide digitally printed signs, such signs will adhere to the following specifications.

PROTECTIVE OVERLAY FILM

Permanent traffic signs printed with digital ink systems will be fabricated with a full sign protective overlay film designed to provide a smooth surface needed for retroreflectivity, and to protect the sign from fading and UV degradation. The overlaminate will comply with the retroreflective sheeting manufacturer’s recommendations to ensure proper adhesion and transparency and will also meet the reflective film durability as identified in Table 1.

Table 1: Retroreflective Film Minimum Durability Requirements

ASTM D4956 Type	Full Sign Replacement Term (years)	Sheeting Replacement Term (years)
I	0	7
III	7	10
IV	7	10
VIII	7	10
IX	7	12
XI	7	12

FABRICATION

Retroreflective sheeting will be applied to a properly cleaned and prepared aluminum sign blank in accordance with the retroreflective sheeting manufacturer’s recommendations. Sign legend will be applied using digital print technologies and systems in accordance with the retroreflective sheeting manufacturer’s recommendations and the requirements of these plans.

Finished signs will be free of ragged edges and must be supplied clean and free of scratches, grease, oil, lubricants or other contaminants. Minor blemishes (dirt speck, dust, etc.) may settle on the fresh ink surface or become entrapped between the sheeting surface and transparent overlay film due to static charge within the sign shop environment. Any blemish must be minor and not interfere with the communication of the sign message to the motorist. The blemish must not be visible to the naked eye when viewed from 30 feet or greater.

After application of the retroreflective sheeting, sign blanks will be stacked and packaged face to face, back to back, and protected in accordance with the sheeting manufacturer’s recommendations. Finished signs will be securely packaged to prevent damage during transit or storage according to the sheeting manufacturer’s recommendations.

TRAFFIC SIGN PERFORMANCE WARRANTY PROVISIONS

Based on the ASTM Type of sheeting specified, traffic control signs will be warranted for the duration shown in Table 1. Full product terms and conditions are as established by each sheeting manufacturer and may contain certain limitations based on sheeting and ink colors, and geographic exposure of the sign. A copy of the warranty document with complete details of terms and conditions will be supplied if requested by the Engineer.

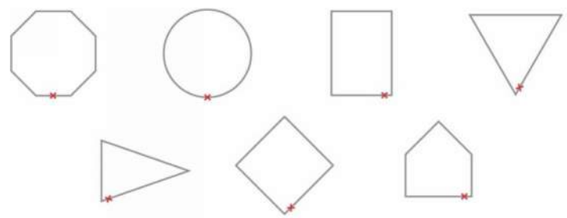
CERTIFIED DIGITAL SIGN FABRICATOR

Sign fabricators using digital imaging methods to produce regulated traffic signs must be certified by the reflective sheeting manufacturer whose materials are used to produce the delivered signs.

DATE TAGGING SIGNS WITH PERTINENT INFORMATION

All digitally printed signs are required to be date-tagged with the following 2 components:

1. Date tags on the back of signs
   Tags will have the following information and be fabricated with material and printing system that are as durable as the warranted sign.
   - Name of Sign Fabricator
   - Date the sign was fabricated (month and year)
   - Process that was used for sign fabrication (digitally printed)
   - Supplier of sheeting that was used for fabricating the sign.
2. Border date
   The month and year (mm/yyyy) of sign fabrication will be printed in the border of the sign in 3/8” sans serif font. Border date will be printed with the same warranted printed system as the sign face. The date should be printed in the locations indicated below.



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.

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
SD	PCAS A0970200	2.6	3.5

SIGN										POST			
Description	Width (In)	Height (In)	Sign Code	Direction Sign Faces	Remove Traffic Sign (Each)	Remove Sign for Reset (Each)	Reset Sign (Each)	Type IV High Intensity (SqFt)	Type XI Super/ Very High Intensity (SqFt)	Flourescent Yellow/ Green	2.0"X2.0" Perforated Tube Post 12 ga. (FT)	(N.A.B.I.) Square Tube Anchor Sleeve (Each)	Current Type of Post	Remarks
SPEED LIMIT 10	24	30	R2-1	W					5.0		16.0	1		Install New Sign on New Post
Maka Iyutapi Wikcemna Hehaŋyaŋ Omani Pi/P	42	30	SPECIAL SIGN 1	W					8.8					
COME BACK SOON Ecaŋna hdi pi/po	96	24	SPECIAL SIGN 7	E					16.0		13.0	2		Install New Sign on New Post
WELCOME Taŋyaŋ yahipi	54	24	SPECIAL SIGN 9	W					9.0		13.0	2		Install New Sign on New Post
CHILDREN AT PLAY	36	36	SPECIAL SIGN 4	W					9.0		16.0	1		Install New Sign on New Post
Wakta uŋ pi/po ; Śiceca Śkatapi	36	36	SPECIAL SIGN 5	W					9.0					
DO NOT ENTER	30	30	R5-1	W					6.3		13.0	1		Install New Sign on New Post
Hiyu śni pi/po	30	30	SPECIAL SIGN 8	W					6.3					
END ONE WAY	24	30	R6-7	E					5.0					
Ocaŋku deciyotaŋhaŋ ihaŋke	36	24	SPECIAL SIGN 13	E					6.0					
YIELD	30	30	R1-2	E					6.3		16.0	1		Install New Sign on New Post
Ḣ'aŋhiya u	30	30	SPECIAL SIGN 10	E					6.3					
SPEED LIMIT 10	24	30	R2-1	W					5.0		16.0	1		Install New Sign on New Post
Maka Iyutapi Wikcemna Hehaŋyaŋ Omani Pi/P	42	30	SPECIAL SIGN 1	W					8.8					
BEGIN ONE WAY	24	30	R6-6	W					5.0		13.5	1		Install New Sign on New Post
Elders Handicapped Pow Wow Staff ONLY	66	48	SPECIAL SIGN 11	W					22.0		16.0	1		Install New Sign on New Post
Wicaȟcana, winuȟcana, ga tuwe ȟtanipi eceena	42	36	SPECIAL SIGN 12	W					10.5					
TRAILER SITE	24	24	RS-040	W					4.0		14.5	1		Install New Sign on New Post
RIGHT ARROW	21	15	M6-1P	W					2.2					
CAMPER ACCESS	78	30	SPECIAL SIGN 6	N					16.3		13.5	1		Install New Sign on New Post
BUMP AHEAD	36	36	SPECAIL SIGN 2	W					9.0		16.0	1		Install New Sign on New Post
Wakta uŋ , caŋku śkopa	36	36	SPECIAL SIGN 3	W					9.0					
SPEED LIMIT 10	24	30	R2-1	E					5.0		16.0	1		Install New Sign on New Post
Maka Iyutapi Wikcemna Hehaŋyaŋ Omani Pi/P	42	30	SPECIAL SIGN 1	E					8.8					
BUMP AHEAD	36	36	SPECAIL SIGN 2	E					9.0		16.0	1		Install New Sign on New Post
Wakta uŋ , caŋku śkopa	36	36	SPECIAL SIGN 3	E					9.0					
YIELD	30	30	R1-2	E					6.3		16.0	1		Install New Sign on New Post
Ḣ'aŋhiya u	30	30	SPECIAL SIGN 10	E					6.3					
YIELD	30	30	R1-2	S					6.3		16.0	1		Install New Sign on New Post
Ḣ'aŋhiya u	30	30	SPECIAL SIGN 10	S					6.3					
TRAILER SITE	24	24	RS-040	S					4.0		16.0	1		Install New Sign on New Post
CAMPING	24	24	D9-3	S					4.0					
RIGHT ARROW	21	15	M6-1P	S					2.2					
CAMPER ACCESS	78	30	SPECIAL SIGN 6	N					16.3		13.5	2		Install New Sign on New Post
Total	0	0	0	0.0	267.6						270.0	21		

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REG. NO. 12804
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SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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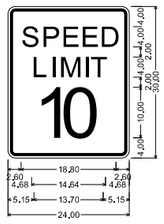
SIGN TABULATION

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

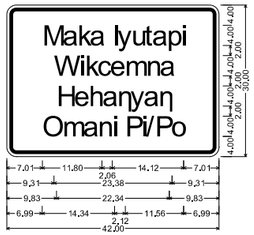
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	2.7	3.5

R2-1



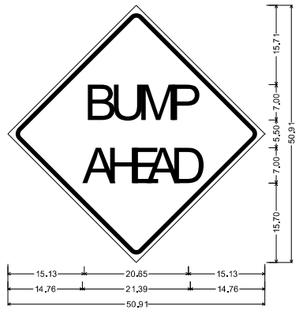
1.50" Radius, 0.63" Border, 0.38" Indent, Black on White:
"SPEED", E 2K:
"LIMIT", E 2K: "10", E 2K:

SPECIAL SIGN 1



1.88" Radius, 0.75" Border, 0.50" Indent, Black on White:
"Maka Iyutapi", Arial; "Wikcemna", Arial;
"Hehanyaŋ", Arial; "Omani PiPo", Arial;

SPECIAL SIGN 2



36.00" across sides 0.88" Border, 0.63" Indent, Black on Yellow:
"BUMP", C 2K; "AHEAD", C 2K 25% spacing:

SPECIAL SIGN 3

36.00" across sides 0.88" Border, 0.63" Indent, Black on Yellow:
"Wakta uŋ", Arial 70% spacing:
"caŋku škopa", Arial 3 % spacing

SPECIAL SIGN 4

36.00" across sides 0.88" Border, 0.63" Indent, Black on Yellow:
"CHILDREN", C 2K; "AT PLAY", C 2K 80% spacing:

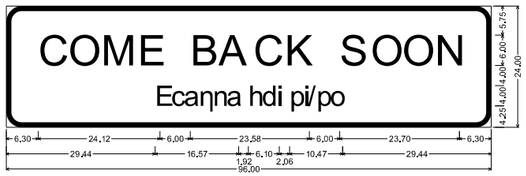
SPECIAL SIGN 5

36.00" across sides 0.88" Border, 0.63" Indent, Black on Yellow:
"Wakta uŋ pi/po", Arial 70% spacing:
"Šiceca Škatapi", Arial 70 % spacing

SPECIAL SIGN 6

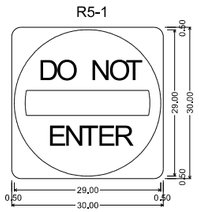
3.00" Radius, 1.00" Border, White on Green:
"CAMPER ACCESS", D 2K; "Wakeya itokšu onažiŋpi", Arial

SPECIAL SIGN 7



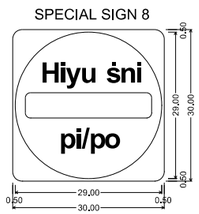
3.00" Radius, 1.00" Border, White on Brown:
"COME BACK SOON", E Mod 2K; "Ecaŋna hdi piʼpo", Arial;

R5-1



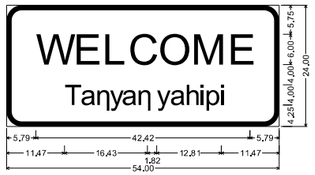
1.88" Radius, No border, White:

SPECIAL SIGN 8



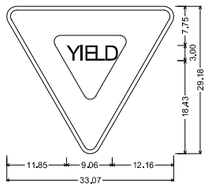
1.88" Radius, No border, Black on White:
Rounded Rectangle 14.50" Radius Red:

SPECIAL SIGN 9



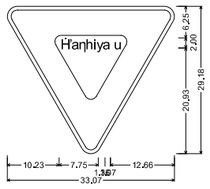
3.00" Radius, 1.00" Border, White on Brown:
"WELCOME", E Mod 2K; "Taŋyaŋ yahipiʼ, Arial;

R1-2



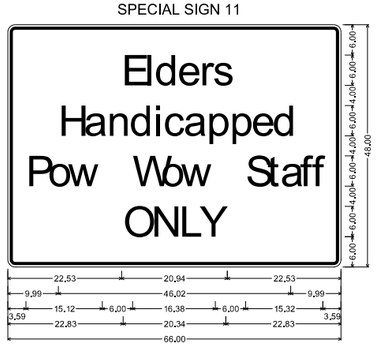
36.00" corner to corner 2.00" Radius, 5.00" Border, 0.75" Indent, Red on White:
"YIELD", C 2K specified length:

SPECIAL SIGN 10



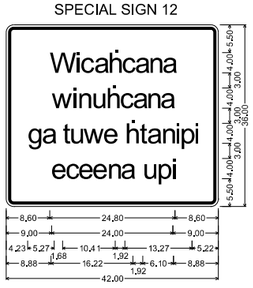
36.00" corner to corner 2.00" Radius, 5.00" Border, 0.75" Indent, Red on White:
"Hanhiya u", Arial specified length

SPECIAL SIGN 11



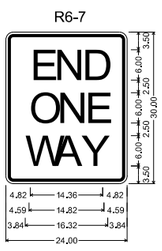
1.50" Radius, 0.63" Border, 0.38" Indent, Black on White:
"Elders", D 2K; "Handicapped", D 2K; "Pow Wow Staff", D 2K 59% spacing:
"ONLY", D 2K:

SPECIAL SIGN 12



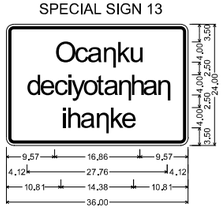
1.50" Radius, 0.63" Border, 0.38" Indent, Black on White:
"Wicahcana", Arial; "winuhcana", Arial
"ga tuwe htanipi", Arial; "eceena upi", Arial

R6-7



1.50" Radius, 0.63" Border, 0.38" Indent, Black on White:
"END", D 2K specified length:
"ONE", D 2K specified length:
"WAY", D 2K specified length:

SPECIAL SIGN 13



1.50" Radius, 0.63" Border, 0.38" Indent, Black on White:
"Ocaŋku", Arial;
"deciyotanhaŋ", Arial 60% spacing:
"ihaŋke", Arial;

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ROBERTS COUNTY, SOUTH DAKOTA

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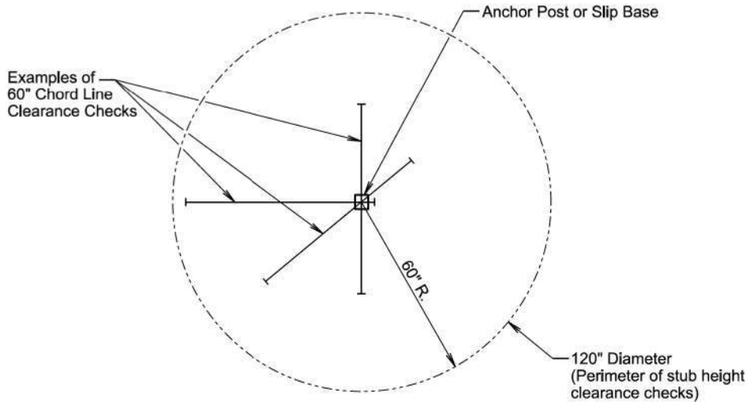
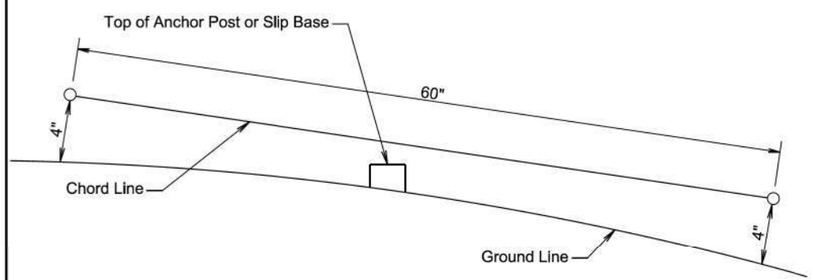
SIGN PANEL LAYOUTS

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	2.8	3.5



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

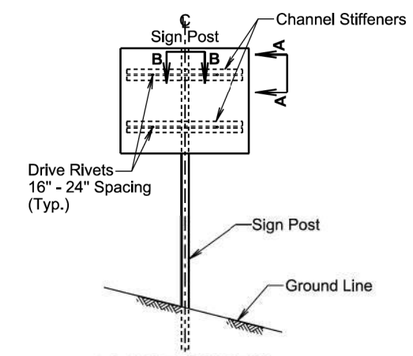
GENERAL NOTES:

The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

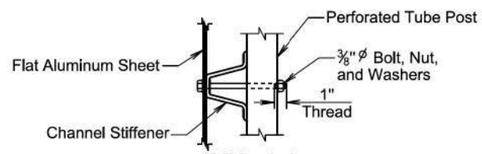
At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

January 22, 2021

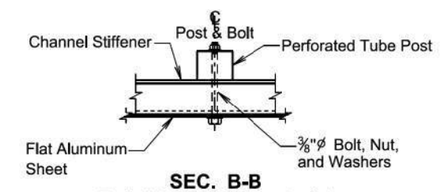
Published Date: 2025	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 632.18
			Sheet 1 of 1



ELEVATION VIEW
(One post breakaway sign supports.)



SEC. A-A



SEC. B-B
(Typical sign and stiffener details.)

ø A plastic washer, as recommended by the sheeting manufacturer, will be installed between the sign face and the metal washer shown.

November 19, 2020

Published Date: 2025	SDDOT	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
			Sheet 1 of 2

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ROBERTS COUNTY, SOUTH DAKOTA

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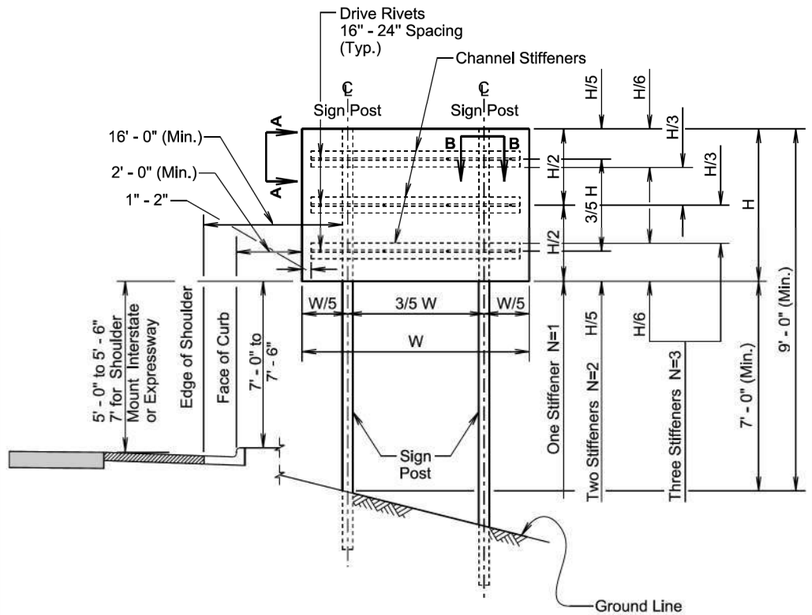
STANDARD PLATES

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	2.9	3.5



TWO POST BREAKAWAY SIGN SUPPORTS

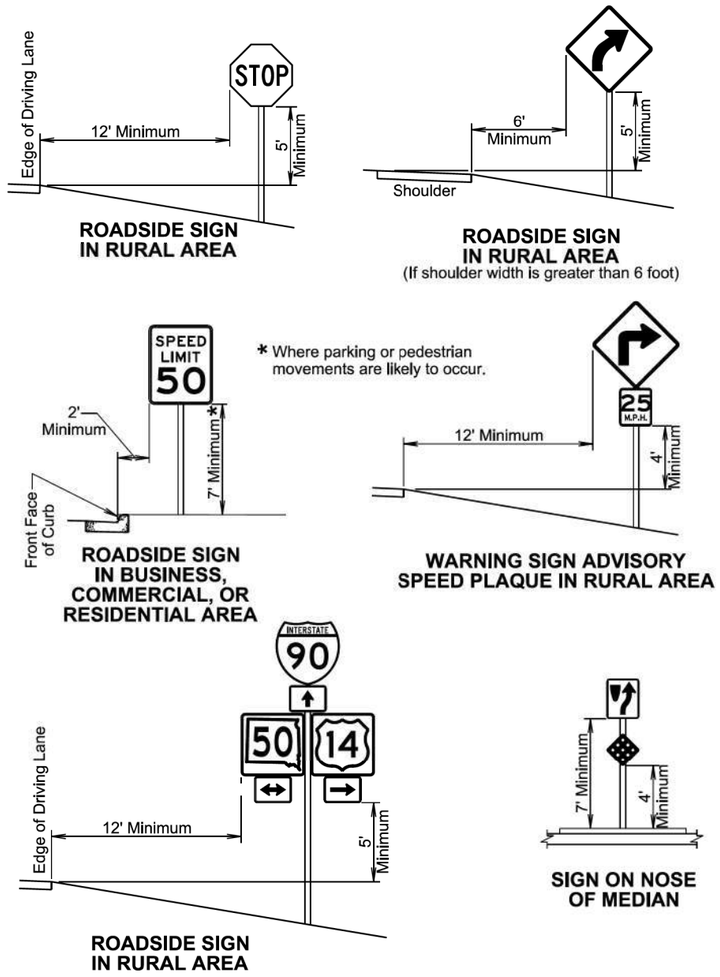
GENERAL NOTES:

The number of stiffeners used (N) will be as follows:
If H < = 2' - 0" then N = 1
if 2' - 0" < H < = 8' - 0" then N = 2
if 8' - 0" < H < = 15' - 0" then N = 3
where H is the vertical dimension of the sign.

A minimum of two bolts will be required to fasten the sign to each post.

November 19, 2020

Published Date: 2025	SDDOT	SIGN STIFFENER DETAILS	PLATE NUMBER 632.60
			Sheet 2 of 2



November 19, 2020

Published Date: 2025	SDDOT	OFFSETS FOR SIGN INSTALLATION	PLATE NUMBER 632.90
			Sheet 1 of 1

BIA 702 OVERLAY
SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

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STANDARD PLATES

DRWN. BY	CHK'D. BY	PROJECT NO.
KJC	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	3.0	3.5

STATEMENT OF ESTIMATED QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	UNITS	TOTAL ESTIMATED QUANTITY
635E0040	BREAKAWAY BASE LUMINAIRE POLE WITH ARM, 40' MOUNTING	EACH	13
635E3700	ROADWAY LUMINAIRE, POLE PHOTOELECTRIC CELL	EACH	16
635E5020	2' DIAMETER FOOTING	FT	26
635E5301	TYPE 1 ELECTRICAL JUNCTION BOX	EACH	4
635E5400	ELECTRICAL SERVICE CABINET	EACH	3
635E9016	1/C #6 AWG COPPER WIRE (1-2)	FT	3671

ALTERNATE A - AREA LIGHTING, NON-TTP FUNDING SOURCE			
635E3700	ROADWAY LUMINAIRE, POLE PHOTOELECTRIC CELL	EACH	10

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LIGHTING QUANTITIES

DRWN. BY	CHK'D. BY	PROJECT NO.
TD	PIA	2311-00858

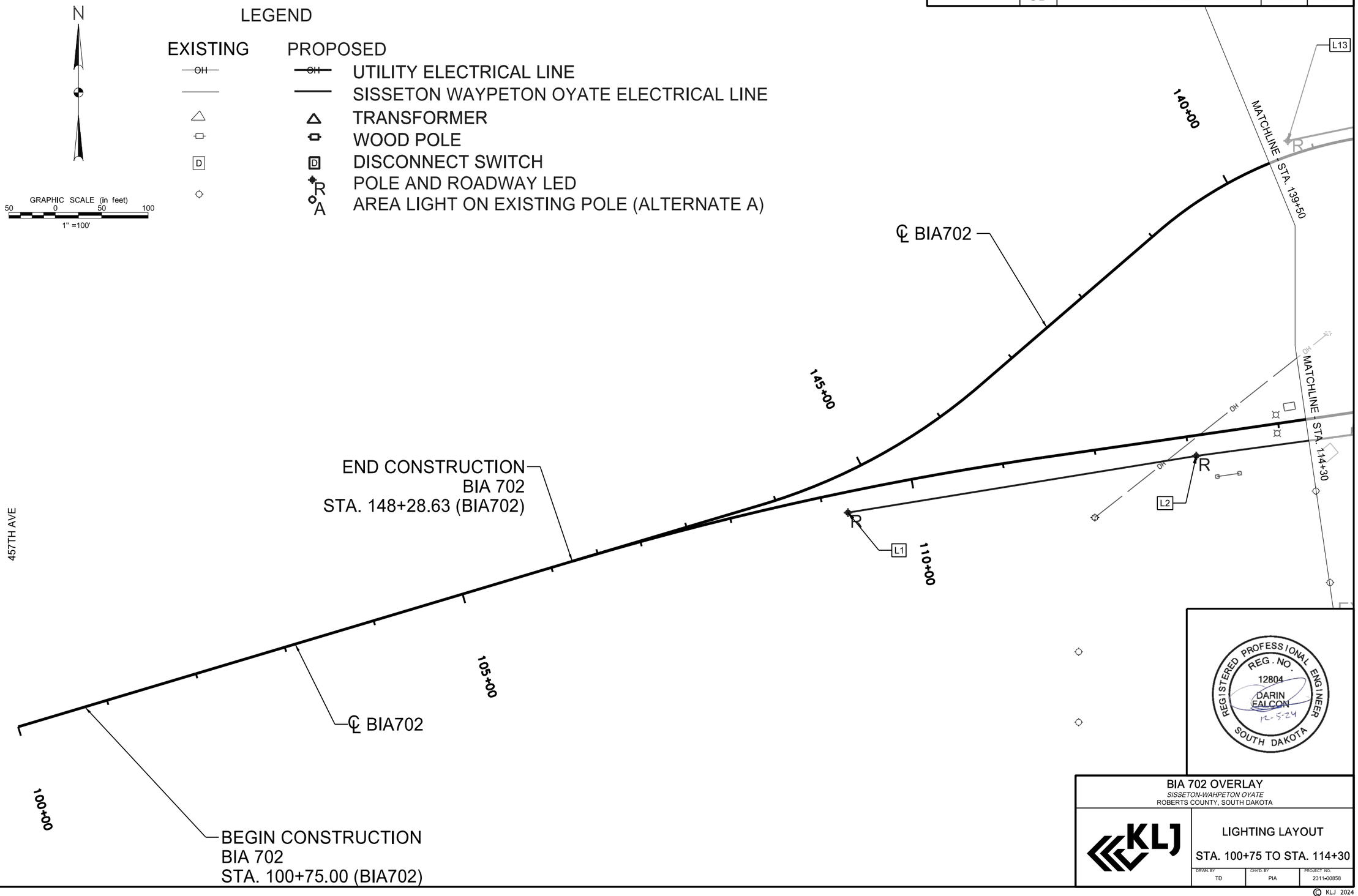
	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	3.1	3.5

N

GRAPHIC SCALE (in feet)
50 0 50 100
1" =100'

LEGEND

EXISTING	PROPOSED	
—OH—	—OH—	UTILITY ELECTRICAL LINE
———	———	SISSETON WAYPETON OYATE ELECTRICAL LINE
△	△	TRANSFORMER
▭	▭	WOOD POLE
D	D	DISCONNECT SWITCH
◇	R	POLE AND ROADWAY LED
	A	AREA LIGHT ON EXISTING POLE (ALTERNATE A)



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KLJ

LIGHTING LAYOUT
STA. 100+75 TO STA. 114+30

DRWN. BY	CHK'D. BY	PROJECT NO.
TD	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	3.2	3.5

℄ ACCESS RD

℄ BIA702

℄ SERVICE RD

300+00

135+00

130+00

400+00

405+00

200+00

125+00

115+00

120+00

L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13

#6 TRIPLEX VOLUTA

R (Replace Luminaire)

END CONSTRUCTION AT EXISTING FENCE LINE STA. 304+94.23 (ACCESS_RD)

SERVICE POINT 3

SERVICE POINT 2

SERVICE POINT 1

ELDERS ACCESS

MATCHLINE - STA. 139+50

MATCHLINE - STA. 114+30

OH

N

GRAPHIC SCALE (in feet)
50 0 50 100
1" =100'

LEGEND

EXISTING	PROPOSED	
OH	OH	UTILITY ELECTRICAL LINE
		SISSETON WAYPETON OYATE ELECTRICAL LINE
△	△	TRANSFORMER
▭	▭	WOOD POLE
D	D	DISCONNECT SWITCH
○	R	POLE AND ROADWAY LED
	A	AREA LIGHT ON EXISTING POLE (ALTERNATE A)

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SOUTH DAKOTA

BIA 702 OVERLAY
SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

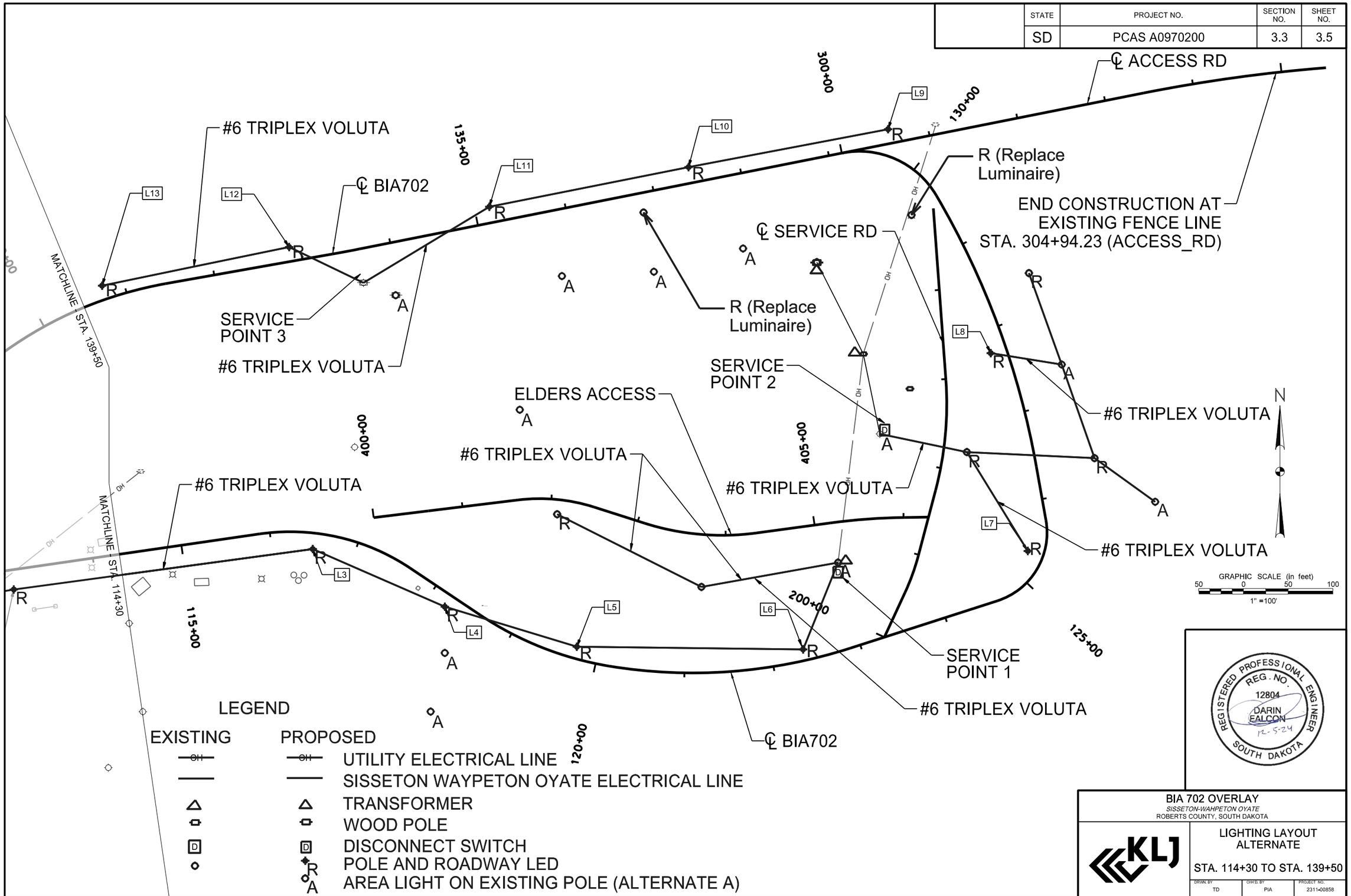
KLJ

LIGHTING LAYOUT ALTERNATE

STA. 114+30 TO STA. 139+50

DRWN. BY	CHK'D. BY	PROJECT NO.
TD	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	3.3	3.5



LEGEND

EXISTING	PROPOSED	
OH	OH	UTILITY ELECTRICAL LINE
		SISSETON WAYPETON OYATE ELECTRICAL LINE
		TRANSFORMER
		WOOD POLE
D	D	DISCONNECT SWITCH
	R	POLE AND ROADWAY LED
	A	AREA LIGHT ON EXISTING POLE (ALTERNATE A)

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SOUTH DAKOTA

BIA 702 OVERLAY
SISSETON-WAHPETON OYATE
ROBERTS COUNTY, SOUTH DAKOTA

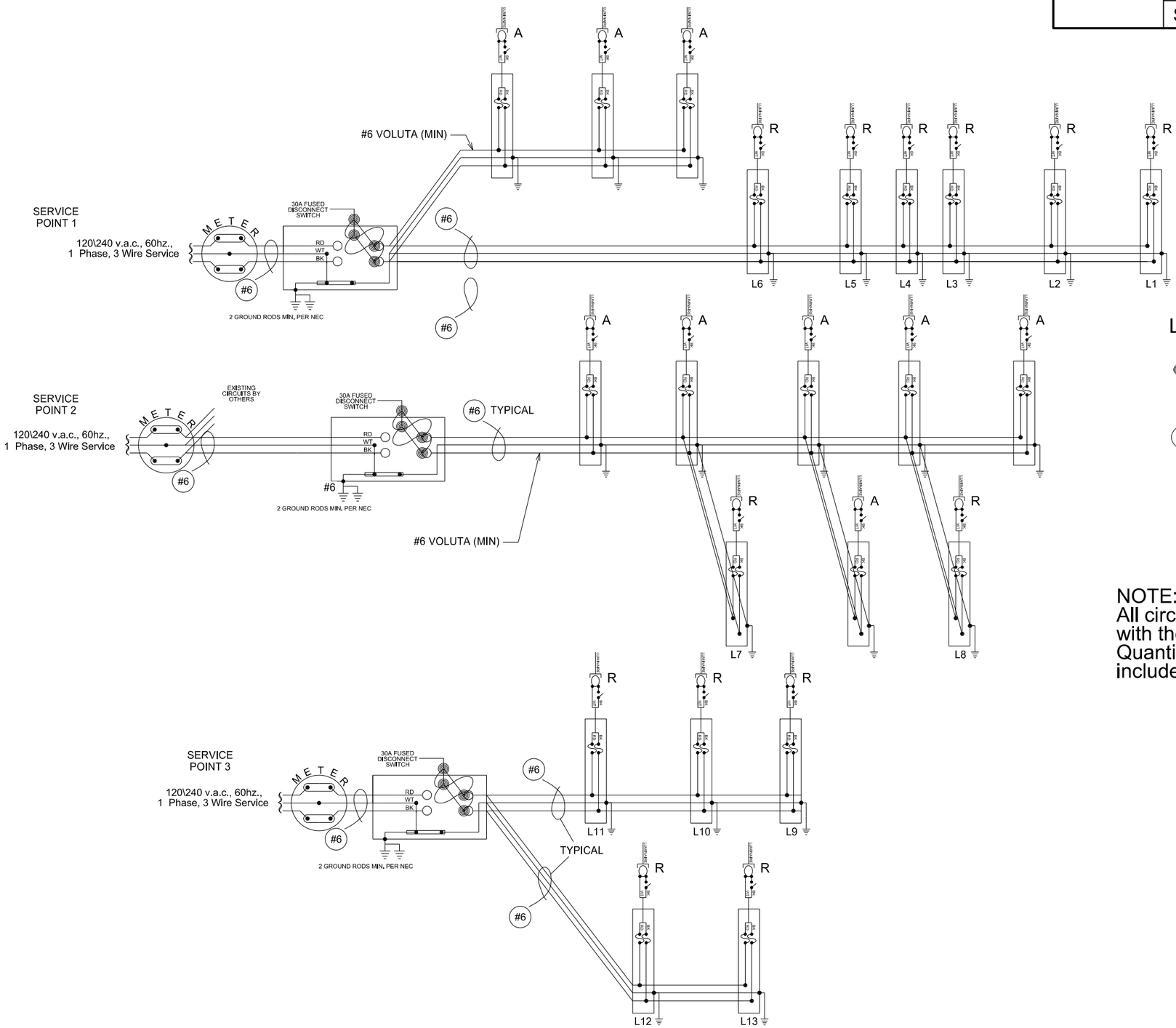
KLJ

LIGHTING LAYOUT ALTERNATE

STA. 114+30 TO STA. 139+50

DRWN. BY	CHK'D. BY	PROJECT NO.
TD	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	3.4	3.5



LEGEND:

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

LUMINAIRE: LED

GROUND ROD

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

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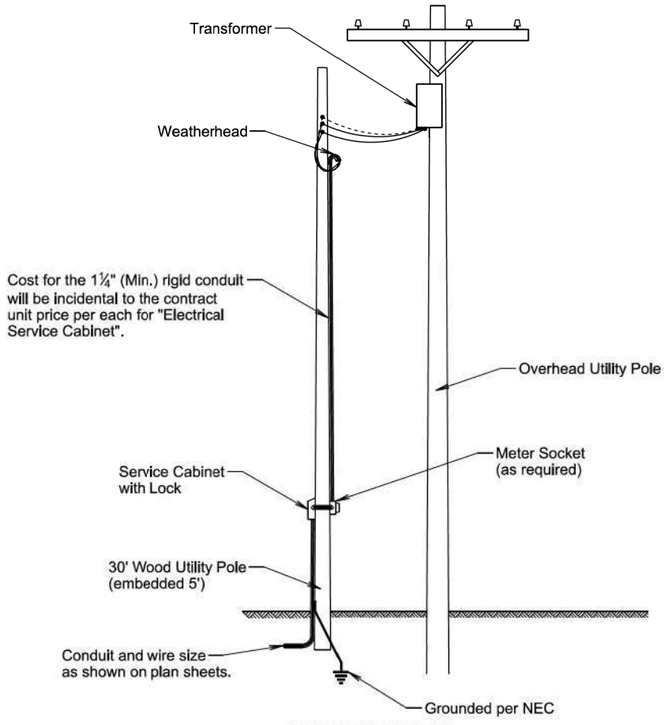
KLJ

LIGHTING DETAILS

DRWN. BY	CHK'D. BY	PROJECT NO.
TD	PIA	2311-00858

	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	SD	PCAS A0970200	3.5	3.5



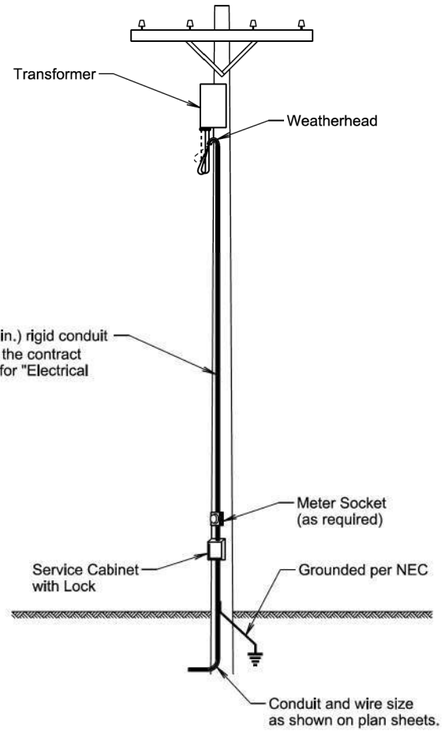
ELEVATION VIEW

GENERAL NOTES:

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, wood pole, 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	30' WOOD UTILITY POLE WITH OVERHEAD UTILITY POLE	PLATE NUMBER 635.37
			Sheet 1 of 1



ELEVATION VIEW

GENERAL NOTES:

All costs for furnishing and installing all materials from the electrical service cabinetto 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 will be incidental to the contract unit price per each for "Electrical Service Cabinet."

March 31, 2024

Published Date: 2025	SDDOT	SERVICE CABINET ON OVERHEAD UTILITY POLE	PLATE NUMBER 635.40
			Sheet 1 of 1

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KLJ

STANDARD PLATES

DRWN. BY	CHK'D. BY	PROJECT NO.
TD	PIA	2311-00858