



Planning & Engineering
Office of Project Development
700 East Broadway Avenue
Pierre, South Dakota 57501-2586
O: 605.773.3275
dot.sd.gov

September 11, 2026

To Whom it May Concern,

Beginning with the 10/7/2026 letting, the SDDOT will be using the new Electronic Standard Specifications for Roads and Bridges, 10-7-26 Version. The Standard Specifications for Roads and Bridges is available for download and viewing at <https://dot.sd.gov/doing-business/contractors/standard-specifications> . A printed version of the Standard Specifications for Roads and Bridges will not be provided.

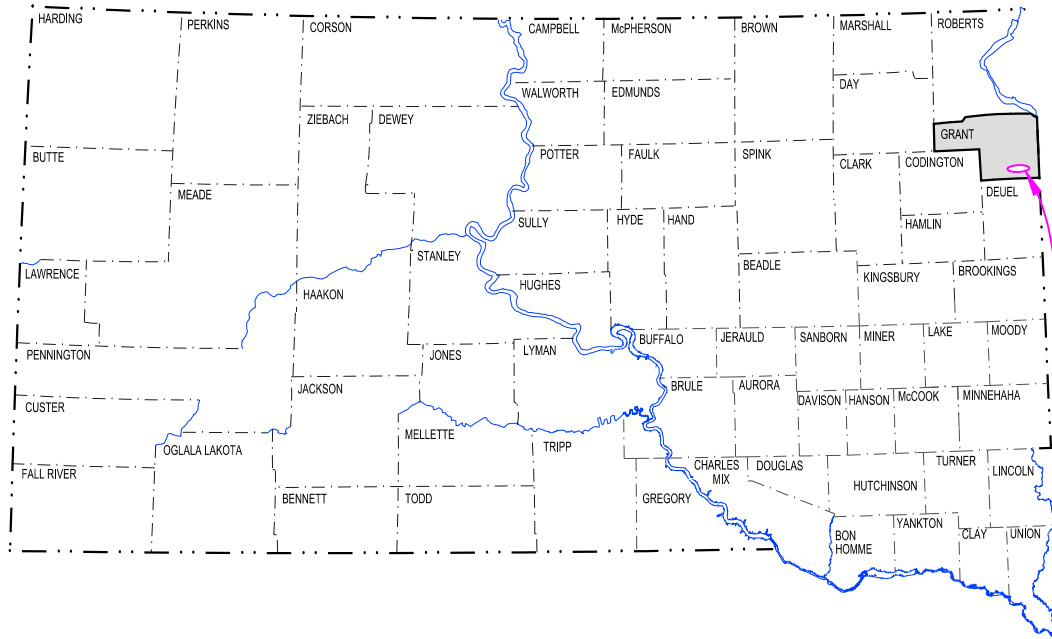
A revised Buy America specification is in effect beginning with the 10/7/26 letting, which aligns with the expiration of the Federal Manufactured Products General Waiver. Contractors should be aware that new provisions for manufactured products, along with updates to material classifications, documentation requirements, and compliance procedures, are included in Section 6.9 of the Standard Specifications (10/07/2026 version). All contractors and suppliers are strongly encouraged to review the updated specification in full. Contractors are encouraged to attend the Buy America Informational Webinar being put on by the SDDOT and AGC. Information on the webinar can be found at:

<https://dot.sd.gov/doing-business/contractors/webinars/>

FHWA has updated the FHWA-1273 commonly known as the "Pink Sheets". The new FHWA-1273 will be incorporated into all contracts awarded after 10/7/26. Additional information regarding the updated FHWA-1273 can be found at:

<https://www.fhwa.dot.gov/construction/cqit/form1273.cfm>

Sincerely,
SDDOT – Bid Letting Office



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

PROJECT BRO-B 8026(37)
GRANT COUNTY

STRUCTURE AND APPROACH GRADING
STRUCTURE NO. 26-293-210
09MR

PROJECT

BAI JOB # 24020.14



PROJECT
BRO-B 8026(37)

SHEET
1

TOTAL
SHEETS
31

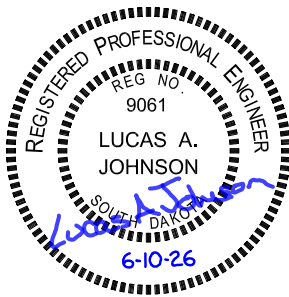
Plotting Date: 06/10/2026

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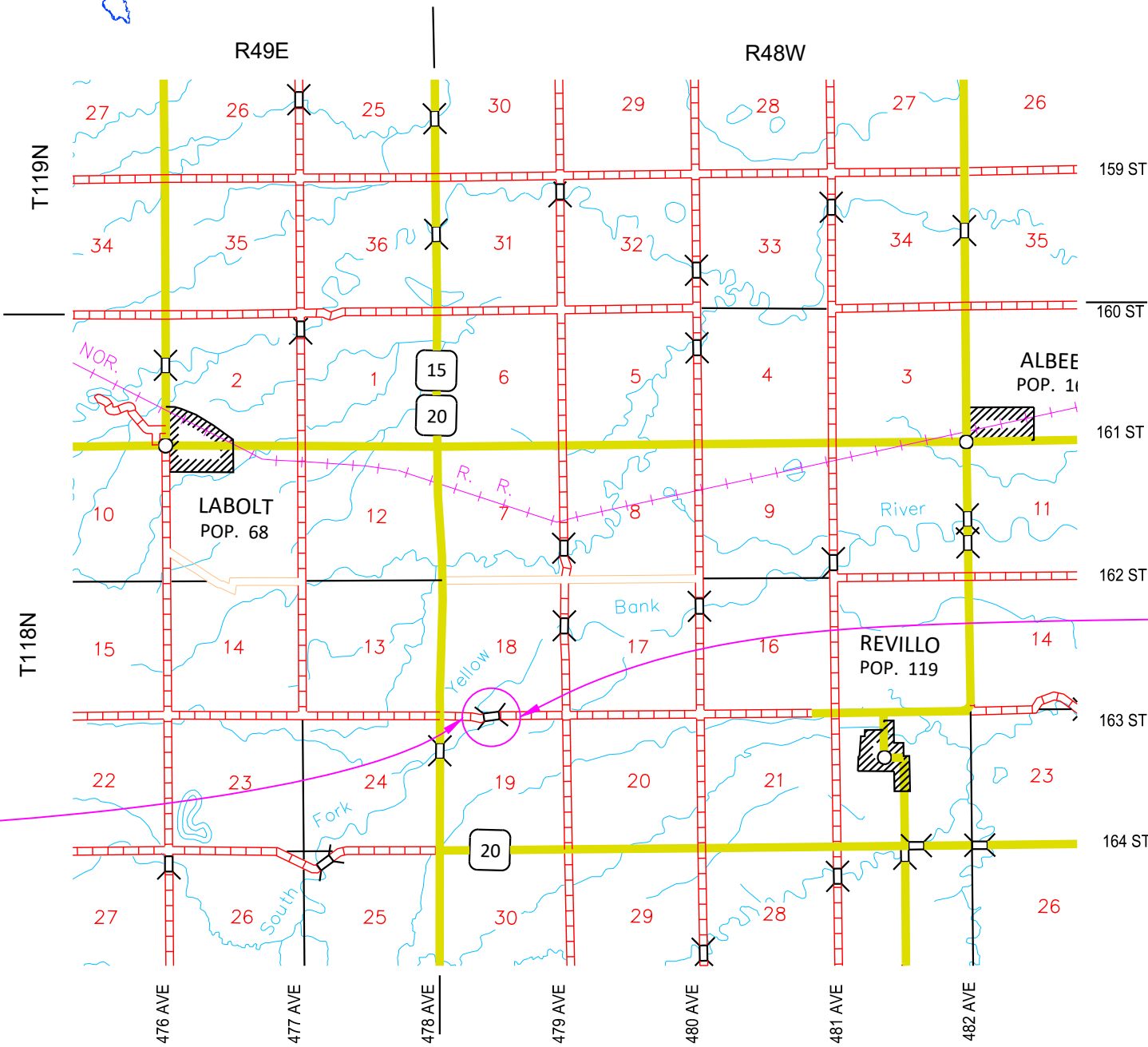
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STORM WATER PERMIT
Major Receiving Body of Water: S. Fork Yellow Bank River
Total Project Area: 1.5 Acres
Area Disturbed: 1.4 Acres
Approx. Begin Lat/Long: 45.019967° N -96.631344° W

DESIGN DESIGNATION
AADT (2023) 98
AADT (2043) 134
DHV 20
D 50%
DHV T% 3.6
AADT T% 8.0
V 30 mph



BEGIN BRO-B 8026(37)
Station 4+00.00 located 3095.61' West and
212.70' South of the southeast corner of
Section 18 - Township 118 North - Range 48 West



END BRO-B 8026(37)
Station 7+00.00 located 2808.85' West and
139.61' South of the southeast corner of
Section 18 - Township 118 North - Range 48 West



6

October 7, 2026

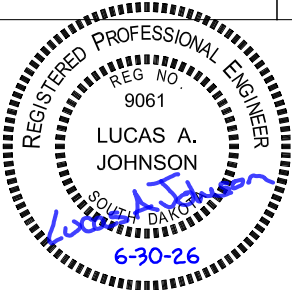
ESTIMATE OF QUANTITIES

GRADING

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E4100	Construction Schedule, Category I	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E1690	Remove Sediment	1.0	CuYd
120E0010	Unclassified Excavation	2,499	CuYd
120E0600	Contractor Furnished Borrow Excavation	100	CuYd
230E0010	Placing Topsoil	210	CuYd
634E0110	Traffic Control Signs	141.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	8	Each
734E0010	Erosion Control	Lump Sum	LS
734E0102	Type 2 Erosion Control Blanket	515	SqYd
734E0154	12" Diameter Erosion Control Wattle	320	Ft

STRUCTURE NO. 26-293-210

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
250E0030	Incidental Work, Structure	Lump Sum	LS
420E0200	Structure Excavation, Box Culvert	121	CuYd
421E0200	Box Culvert Undercut	317	CuYd
464E0100	Controlled Density Fill	20.6	CuYd
560E2170	2-12'x8' Precast Concrete Box Culvert, Furnish	88.0	Ft
560E2171	2-12'x8' Precast Concrete Box Culvert, Install	88.0	Ft
560E3170	2-12'x8' Precast Concrete Box Culvert End Section, Furnish	4	Each
560E3171	2-12'x8' Precast Concrete Box Culvert End Section, Install	4	Each
700E0210	Class B Riprap	157.8	Ton
831E0110	Type B Drainage Fabric	254	SqYd



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/doing-business/environmental/about-environmental/>>

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 A: AQUATIC RESOURCES

COMMITMENT A1: WETLANDS

All efforts to avoid and minimize wetland impacts from the project have resulted in approximately 0.06 acres of wetlands (includes temporary and permanent) becoming impacted. Refer to the plans for location and boundaries of the impacted wetlands.

Table of Impacted Wetlands

Wetland No.	Station	Permanent Impact (Acres)	Temporary Impact (Acres)	Total Impact (Acres)
1	5+13 to 5+82 (L)	0.00	0.04	0.04
2	5+83 to 6+00 (L)	0.01	0.01	0.02
3	5+83 to 5+90 (R)	0.00	0.00	0.00

Action Taken/Required:

Mitigation is required in accordance with the "Statewide Finding Regarding Wetlands for South Dakota Federal-Aid Highway Projects (February 2018)". Replacement of 0.01 acres of permanent wetland impacts will be completed through another wetland mitigation opportunity in a manner which considers FHWA's program-wide goal of 'net gain' of wetlands through enhancement, creation, and preservation.

Temporary impacts identified in the Table of Impacted Wetlands will not be mitigated as original contours and elevations will be re-established as designated in the plans. Prior to initiating temporary work in wetlands, the

Contractor will submit a plan to the Project Engineer in accordance with Section 7.18 of the Specifications.

The Contractor will notify the Project Engineer if additional easement is needed to complete work adjacent to any wetland. The Project Engineer will obtain an appropriate course of action from the Environmental Office before proceeding with construction activities that affect any wetlands beyond the work limits and easements shown in the plans.

COMMITMENT A2: STREAMS

All efforts to avoid and minimize stream impacts from the project have resulted in approximately 0.16 acres of stream (includes temporary and permanent) becoming impacted. Refer to the plans for location and boundaries of the impacted streams.

Table of Impacted Streams

Stream Name	Station	Permanent Impact (Acres)	Temporary Impact (Acres)	Total Impact (Acres)
South Fork Yellow Bank River	4+90 to 5+75 (L/R)	0.08	0.08	0.16

Action Taken/Required:

It has been determined that project impacts do not require mitigation. Temporary impacts identified in the Table of Impacted Streams will not be mitigated as the finished ground under the bridge will be shaped to match the upstream channel and flood plain and the existing low water channel will be maintained as near as practical to the existing location.

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B5: NORTHERN LONG-EARED AND TRI-COLORED BAT

This project is within the range of suitable habitat for the Northern Long-Eared Bat (NLEB) and/ or the Tri-Colored Bat (TCB) and project work will avoid conflicts with NLEB and/or TCB roosting habitat.

Action Taken/Required:

Ensure all operators, employees, and contractors are aware the project occurs adjacent to NLEB or TCB suitable habitat and tree trimming/clearing is limited to that designated in the plans.

Project activities that include tree removal, structure work, and/or work within one-quarter mile of a known hibernacula or 150 feet of a known maternity roost tree, or suitable habitat should not occur within the location(s) listed below during the NLEB and/or TCB seasonal work restriction timeframe without approval from the SDDOT Environmental Office.

COMMITMENT A2: STREAMS (CONTINUED)

Table of Bat Seasonal Restrictions

Station	NLEB/TCB Seasonal Work Restriction
4+00 to 7+00 L/R	April 15 to October 31 South Dakota Plains

Tree removal will occur between November 1st and April 14th.

If project activities cannot be conducted outside of the seasonal restriction the Contractor will notify the Project Engineer and the Environmental Office (605-773-3309) to schedule a presence/absence survey.

If bats are observed roosting on trees or infrastructure within the project area prior to and/or during construction, the contractor will halt all on-site activities. The contractor will notify the Project Engineer and the Environmental Office (605-773- 3309 or 605-773-5679) of the observed bat presence.

COMMITMENT C: WATER SOURCE

If a Contractor needs access to state waters for extraction, the Contractor must obtain a water right, through the application of a Temporary Permit to Use Public Waters before work begins.

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species (AIS) positive waters within South Dakota without prior approval from the SDDOT Environmental Office. To prevent and control the introduction and spread of invasive species into the project vicinity, all equipment will be power washed with hot water (≥140 °F) and completely dried for a minimum of 7 days prior to subsequent use. South Dakota administrative rule 41:10:04:02 forbids the possession and transport of AIS; therefore, all attached dirt, mud, debris and vegetation must be removed and all compartments and tanks capable of holding standing water must be drained. This includes, but is not limited to, all equipment, pumps, lines, hoses and holding tanks.

Action Taken/Required:

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

Temporary permit to use public waters for highway construction purposes application can be found on the SDDANR website:
<https://danr.sd.gov/OfficeOfWater/WaterRights/PermitForms/default.aspx>

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

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

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

The South Fork Yellow Bank River is classified as a coldwater marginal fishery with a total suspended solids standard of less than 90 mg/L 30-day average, less than 158 mg/L daily maximum.

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

Action Taken/Required:

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

COMMITMENT D2: SURFACE WATER DISCHARGE

The DANR General Permit for Temporary Discharge Activities is required for temporary dewatering and discharges to waters of the state. The effluent limit for total suspended solids will be 90 mg/L 30-day average. The effluent limit applies to discharges to all waters of the state except discharges to waters classified as coldwater permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as coldwater permanent fish life propagation waters, the effluent limit for total suspended solids will be 53 mg/L daily maximum.

The permittee has the option of completing effluent testing or implementing a pollution prevention plan for compliance with this permit. If the permittee develops a pollution prevention plan instead of total suspended solids sampling, the plan must be developed and implemented prior to discontinuing total suspended solids sampling. Refer to Section 4.0 of the permit. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in Section 3.4 of the permit.

Refer to Commitment D1: Surface Water Quality for stream classification.

Action Taken/Required:

If construction dewatering is required and this project is currently covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the contractor will need to submit the dewatering information to the Project Engineer using the following SDDOT Dewatering Info CDX form:

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

The Contractor will provide a copy of the approved permit or the submitted dewatering information to the Project Engineer prior to proceeding with any dewatering activities. The approved permit or submitted dewatering information must be kept on-site and as part of the project records.

Effluent monitoring, as a result of dewatering activities, will be summarized for each month and recorded on a separate Discharge Monitoring Report (DMR) and submitted to DANR monthly. Additional information can be found at:
<
<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/swdpermitting/Ereporting.aspx> >

COMMITMENT E: STORM WATER

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

Action Taken/Required:

The DANR General Permit for Stormwater Discharges Associated with Construction Activities is required for construction activity disturbing one or more acres of earth and work in a waterway. The SDDOT is the owner of this permit and will submit the NOI to DANR 15 days prior to project start in order to obtain coverage under the General Permit. Work can begin once the DANR letter of approval is received.

The Contractor must adhere to the “Special Provision Regarding Storm Water Discharges to Waters of the State.”

The Contractor will complete the DANR Contractor Authorization Form prior to the pre-construction meeting. The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the permit for this project. Work may not begin on this project until this form is signed and submitted to DANR.

The form can be found at:
<
https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_CGPAppendixCCA2023Fillable.pdf >

The Contractor is advised that permit coverage may also be required for off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

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.

The DOT 298 Form will be used for site inspections and to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents and retained for a minimum of three years.

The inspection will include disturbed areas of the construction site that have not been finally stabilized, areas used for storage materials, structural control measures, and locations where vehicles enter or exit the site. These areas will be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the SWPPP will be observed to ensure that they are operating correctly, and sediment is not tracked off the site.

	PROJECT	SHEET	TOTAL SHEETS
	BRO-B 8026(37)	4	31

COMMITMENT E: STORM WATER (CONTINUED)

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

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

DANR:<
<https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/stormwater/default.aspx> >

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

COMMITMENT I: HISTORIC PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historic Preservation Office (SHPO) 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 150 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 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.

COMMITMENT J: CONSTRUCTION PRACTICES FOR TEMPORARY WORKS IN WATERWAYS OF THE U.S.

The Contractor is advised that special construction measures must be taken to ensure that the waterways of the U.S. are not impacted.

Action Taken/Required:

Excavation will not occur below the ordinary high-water elevation in waterways outside of caissons, cribs, cofferdams, steel piling, or sheeting. The natural streambed will not be disturbed unless specified by the plans and under the observation of the Project Engineer. Refer to the Table of U.S. Waterways to Protect for ordinary high-water elevations. Any structure work over or within the waterway will be constructed according to Section 7.18 C of the Specifications.

All dredged or excavated materials will be placed at a site above the ordinary high-water elevation in a confined area (not classified as a wetland) that is a minimum of 50 feet away from concentrated flows of storm water, drainage courses, and inlets to prevent return of such material to the waterway.

The construction of temporary work platforms, crossings, or berms below the ordinary high-water elevation will be allowed if all material placed below the ordinary high-water elevation consists of Class B or larger riprap.

All temporary caissons, cribs, cofferdams, steel piling, sheeting, work platforms, crossings, and berms will be removed with minimal disturbance to the streambed. Proper construction practices will be used to minimize increases in suspended solids and turbidity in the waterway.

Bridge berms, wing dams, traffic diversions, channel reconstruction, stream diversions, grading, etc. will be constructed in close conformity with the plans to ensure that the hydraulic capacity of the waterway is not changed.

Temporary waterway crossings required for the Contractor's construction operations will be constructed with an adequate drainage structure size and minimum fill height to reduce the potential for upstream flooding. The Contractor will be responsible for sizing the temporary drainage structure for these crossings.

All temporary works in waterways of the US are required to be covered in the Corp of Engineers 404 Permit. At the time of the preconstruction meeting, the Contractor will submit documentation for all temporary works for the purpose of complying with the 404 Permit requirements in accordance with Section 423.3 A of the Specifications.

Table of U.S. Waterways to Protect

Station	Waterway	Ordinary High-Water Elevation
5+15	South Fork Yellow Bank River	1290.4'

Stream channel excavation within "Waters of the US" is subject to USACE regulatory jurisdiction. Stream channel excavation cannot exceed the permitted quantities and/or surface area. The 404 Permit is included in the Special Provisions.

The Contractor will take all precautions necessary to prevent any incidental discharges associated with the excavation and hauling of material from the stream channel. This pertains to any excavation operations such as, foundation, pier, or abutment excavation, channel cleanout, excavation for riprap protection, and removal of any temporary fill associated with construction activities.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the USACE for the permanent actions associated with this project.

Action Taken/Required:

The Contractor will comply with all requirements contained in the Section 404 Permit.

The Contractor will also be responsible for obtaining a Section 404 Permit for any dredge, excavation, or fill activities associated with material sources, storage areas, waste sites, and Contractor work sites outside the plan work limits that affect wetlands, floodplains, or waters of the United States.

COUNTY REQUIREMENTS

The County will perform the following items:

1.

Obtain temporary & permanent easements as shown in plans.
2.

Assist in the coordination of utility adjustments.
3.

Remove existing bridge end marker signs, delineators, weight limit signs, and all sign posts.
4.

Salvage items from existing bridge per Incidental Work, Structure note.
5.

Furnish and install 6" Gravel Surfacing.
6.

Furnish and install all temporary and permanent fencing.
7.

Furnish & install permanent signing in accordance with the MUTCD.

EXISTING UTILITIES

Utilities within the limits of the proposed construction are to be adjusted by the utility owner unless otherwise indicated on these plans.

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

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.

UTILITY CONTACT INFORMATION

Brookings-Deuel Rural Water System
(2" PVC water line on the north side of the road)
47602 SD Hwy 28
Toronto, SD 57268
605-794-4201 (Casey Skonhovd)

Grant-Roberts Rural Water
(No utilities present as of 4/17/2023)
1209 S. Dakota St.
Milbank, SD 57252
605-432-6793 (Brent Hoffman)

Northwestern Energy
(4" PVC gas line on the south side of the road)
1232 S. 22nd St.
Brookings, SD 57006
605-403-4310 (Tyler Brunswig)
605-660-9139 (Brian Kemnitz)

Interstate Telecommunications Cooperative, Inc. (Stockholm & Strandberg Telephone)
(12-fiber optic line on the north side of the road)
312 4th Street W
Clear Lake, SD 57226
605-874-2181 (Jerome Salanoa)

Whetstone Valley Electric Cooperative, Inc.
(Single phase #4 ACSR overhead power line south of project area)
1101 E 4th Ave
Milbank, SD 57042
605-432-5331 (Eric Pederson)

UTILITY ADJUSTMENT NOTICE

All utility owners require at least **60-days notice** to relocate their utilities. The utility owners will not relocate utilities when the ground is frozen. **It is the responsibility of the Contractor to give the required utility adjustment notice to all utility owners.**

TABLE OF ANTICIPATED UTILITY ADJUSTMENTS

Location	Description
4+00 L to 7+00 L (North of Road)	Brookings-Deuel Rural Water System: Verify location and depth of 2" PVC water line. No adjustment anticipated if location is correct and if depth is adequate.
4+00 L to 7+00 L (North of Road)	Interstate Telecommunications Cooperative, Inc.: Relocate the 12-fiber optic line.
4+00 R to 7+00 R (South of Road)	Northwestern Energy: Relocate the 4" PVC gas main.

GENERAL MAINTENANCE OF TRAFFIC

This project will be closed to through traffic and the roadway barricaded. Local access to entrances must be maintained.

STREAM DIVERSION

Any stream diversion will be considered temporary works in accordance with Section 423.

CLEARING

The removal and disposal of trees will be in accordance with Section 100 of the Standard Specifications.

At a minimum, all trees, stumps, and shrubs within the cut and fill limits, right-of-way, and permanent easements will be removed and disposed of. All costs for removal and disposal will be incidental to the contract lump sum price for "Clearing".

In addition, any tree removal and disposal necessary for the temporary stream diversion will be incidental to the contract lump sum price for "Clearing". The Contractor will take care to remove only the trees necessary for the temporary stream diversion on the Schultz property (south side of road). Mrs. Schultz wants to save as many trees as possible.

All trees and stumps will be removed from the project. Burying or burning of trees on-site will not be allowed.

Before preparing a bid, it is the responsibility of the Contractor to make a visual inspection of the site to verify the extent of the work involved.

TABLE OF
CLEARING

Trees to be removed with cut and fill limits, right-of-way, and permanent easements:

Station	Offset (ft)	Side	Diameter (in)
4+01.3	32.0	L	36
4+06.8	13.9	L	6
4+08.1	27.6	L	12
4+11.1	33.0	L	12
4+17.7	29.8	L	12
4+23.5	30.3	L	12
4+46.1	25.8	L	6
4+64.4	25.5	L	12
4+66.4	24.3	R	6
4+66.8	25.8	L	12
4+74.7	31.5	L	18
4+74.8	25.1	L	6
4+80.8	26.3	R	6
4+82.2	16.5	L	6
4+94.3	47.8	R	6
4+95.8	49.0	R	6
4+97.8	49.0	R	6
4+99.7	43.3	R	6
5+00.0	42.7	R	6
5+00.7	58.6	R	6
5+01.4	58.2	R	6
5+02.5	57.4	R	6
5+02.5	66.2	R	6
5+02.8	53.9	R	6
5+04.6	64.6	R	6
5+05.9	77.3	R	12
5+07.2	74.0	R	6
5+07.6	68.1	R	6
5+08.4	75.2	R	6
5+08.9	49.9	R	6
5+10.2	55.2	R	6
5+10.3	71.4	R	6
5+10.8	79.8	R	6
5+11.4	71.2	R	6
5+12.3	81.2	R	6
5+12.3	94.5	R	12
5+13.4	73.3	R	6
5+14.7	81.0	R	6
5+20.2	98.8	R	6
5+20.3	99.9	R	6
5+20.6	85.4	R	6
5+21.2	83.6	R	6
5+23.2	85.8	R	6
5+27.9	95.8	R	6
5+33.2	108.1	R	6
5+34.6	30.6	L	18
5+35.7	105.6	R	6

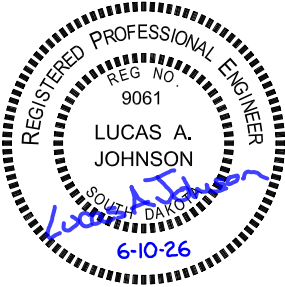


TABLE OF CLEARING (CONTINUED)

Station	Offset (ft)	Side	Diameter (in)
5+38.1	109.2	R	6
5+46.0	45.3	L	6
5+48.8	29.5	L	24
5+49.0	48.2	L	12
5+51.0	21.6	R	6
5+52.2	35.9	L	3
5+53.9	38.7	R	36
5+61.6	27.9	L	3
5+65.6	39.2	L	12
5+70.1	32.2	R	6
5+71.4	27.8	R	6
5+74.3	32.2	L	12
5+78.6	35.0	L	12
5+78.9	33.4	L	12
5+80.3	25.8	R	6
5+81.1	30.5	L	6
5+81.8	28.8	L	12
5+83.1	33.7	L	6
5+83.4	34.7	L	12
5+86.6	30.0	R	3
5+87.5	31.6	L	12
5+88.9	29.4	L	12
5+98.8	20.4	R	6
5+99.4	24.5	R	6
6+07.6	29.4	R	6
6+14.4	27.6	R	12
6+21.9	22.8	R	6
6+22.9	30.1	R	6

Additional trees will be removed as necessary for the temporary stream diversion.

GRADING OPERATIONS

Shrinkage factor: Embankment plus 35%.

Compaction of roadway embankment and box culvert backfill material will be governed by the Ordinary Compaction Method.

Water for Embankment and Backfill is estimated at the rate of 10 gallons of water per cubic yard of Embankment. The estimated quantity of Water is **5.0 MGal**. No separate payment will be made for the Water and all costs associated will be incidental to the contract unit price per cubic yard for "Unclassified Excavation" and "Contractor Furnished Borrow Excavation".

UNCLASSIFIED EXCAVATION

The plans quantity for "Unclassified Excavation" as shown in the Estimate of Quantities will be the basis for payment for this item unless the Engineer orders a change.

Station to Station	Excavation General (CuYd)	*Contractor Furnished Borrow Exc (CuYd)	* Str Exc Box, Box Undercut, & Riprap Exc (CuYd)	Total Excavation (CuYd)	** Waste (CuYd)
4+00 to 7+00	915	100	550	1565	1070

* The quantities for these bid items are not included in the Unclassified Excavation quantity. These quantities are included and paid for under their respective bid items.

** The quantity for this item is for information only.

TABLE OF UNCLASSIFIED EXCAVATION

Excavation General		915
+ Excavation for Box Culvert Installation	+	1375
+ Stripping Topsoil	+	210
Total Unclassified Excavation	=	2499 CuYd

The Excavation General quantity includes excavation for the roadway, excavation in the channel to the box culvert flowline, excavation in the channel to the top of the riprap, and excavation of the channel banks.

Excavation of the channel and channel banks will be as shown on the Riprap and Channel Grading Details sheet.

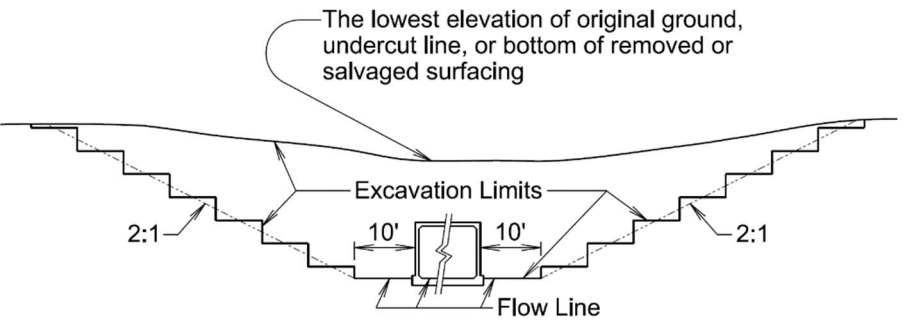
All excavation waste material will be disposed of by the Contractor at a site approved by the Engineer. The removal and disposal of the waste material will be incidental to the contract unit price per cubic yard for "Unclassified Excavation."

EXCAVATION FOR BOX CULVERT INSTALLATION

Included in the quantity of "Unclassified Excavation" are 1375 cubic yards of excavation for installation of the box culvert.

All work necessary to excavate a trench for installation of the box culvert including labor, equipment, and incidentals will be incidental to the contract unit price per cubic yard for "Unclassified Excavation". Payment for excavation of the box culvert will be based only on plans quantity and measurement of this excavation quantity during construction will not be performed.

The excavation quantity for installation of the box culvert is not included in the Table of Excavation Quantities nor with the earthwork balance quantities on the plan & profile sheet. The quantity computed for excavation of the box culvert is based on the limits shown in the drawing below.



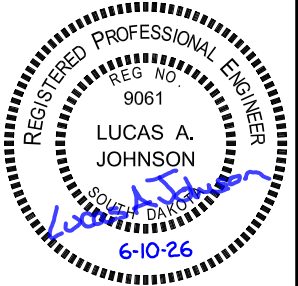
CONTRACTOR FURNISHED BORROW EXCAVATION

The Contractor will provide a suitable site for Contractor Furnished Borrow Excavation Material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site.

The Contractor Furnished Borrow Excavation material will be uniform in texture and free from organic material. The liquid limit will not exceed 45 and the plastic index will not exceed 25. The borrow material will be approved by the Engineer.

There may be a sufficient quantity of on-site excavation material for the embankment. The quantity for Contractor Furnished Borrow Excavation may be omitted from the project as determined by the Engineer.

Restoration of the Contractor Furnished Borrow Excavation site will be the responsibility of the Contractor.



PLACING TOPSOIL

Existing vegetation will be salvaged, incorporated, and placed with the topsoil as far as practical.

The areas to receive topsoil comprise of all newly graded areas, within the project limits, exclusive of top of roadway and riprap area.

The plans quantity for “Placing Topsoil” as shown in the Estimate of Quantities will be the basis for payment for this item unless the Engineer orders a change.

The amount of topsoil shown in the Estimate of Quantities is based upon a 4 inch depth within the right of way limits and a 6 inch depth on all Temporary Easement areas.

EROSION CONTROL

All areas of soil disturbed by construction will require erosion control except areas where agricultural crops have been and will be planted. For informational purposes only, the estimated area requiring erosion control is **1.3 acres**. All costs for the erosion control work for furnishing, placing, and maintaining erosion control including equipment, labor, seeding and mulching will be incidental to the contract lump sum price for “Erosion Control”.

Type G Permanent Seed Mixture used north side of road and south side of road east of creek (1.12 Acres) 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 Bluestem	Bison, Bonilla, Champ, Sunnyview, Rountree, Bonanza	3
Oats or Spring Wheat: April through May; Winter Wheat: August through November		10
Total:		26

Type D Permanent Seed Mixture used on south side of road west of creek (0.18 Acres) will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SqFt)
Kentucky Bluegrass	Avalanche, Appalachian, Wildhorse, Blue Bonnet, Action	1.4
Perennial Ryegrass	Turf Type Varieties	1.4
Creeping Red Fescue	Epic, Boreal, Chantilly	1.4
Chewings Fescue	Ambrose, K2, Zodiac, Shadow III	1.4
Alkali Grass	Fults, Fults II, Quill, Salty	1.4
Total:		7

Seeding will be installed by drilling in accordance with Section 730.

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

An additional 2% by weight of tackifier will be added to the fiber mulch product selected from the approved product list. If the product selected has guar gum tackifier included, then the additional 2% of tackifier will be guar gum. If the product selected has synthetic tackifier included, then the additional 2% of tackifier will be synthetic.

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.

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:

<https://apps.sd.gov/HC60ApprovedProducts/main.aspx>

EROSION CONTROL BLANKET

Erosion control blanket will be installed at the locations noted in the table and as shown on the *Erosion and Sediment Control Plan*. Refer to Standard Plate 734.01 for details.

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

<https://apps.sd.gov/HC60ApprovedProducts/main.aspx>

TABLE OF EROSION CONTROL BLANKET

Station	Location	Type	Quantity (SqYd)
4+85 L	Inslope & Channel Bank	2	70
4+88 R	Inslope & Channel Bank	2	193
4+93 to 5+47 L	Inslope over Box	2	47
4+93 to 5+47 R	Inslope over Box	2	47
5+50 L	Inslope & Channel Bank	2	88
5+50 R	Inslope & Channel Bank	2	70
Total:			515

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment will be installed at locations noted in the table and as shown on the *Erosion and Sediment Control Plan* 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.

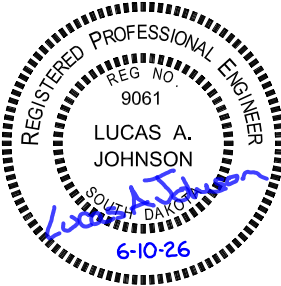
An additional quantity of 12” Diameter Erosion Control Wattles has been added to the Estimate of Quantities for temporary erosion and sediment control during construction.

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:

<https://apps.sd.gov/HC60ApprovedProducts/main.aspx>

TABLE OF EROSION CONTROL WATTLE

Station	Location	Diameter (inch)	Quantity (ft)
4+73 R	At Top of Bank	12	30
4+78 L	At Top of Bank	12	30
5+56 L	At Top of Bank	12	30
5+70 R	At Top of Bank	12	30
Additional Quantity:		12	200
Total:			320



TYPICAL GRADING SECTION

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PROJECT

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SHEET

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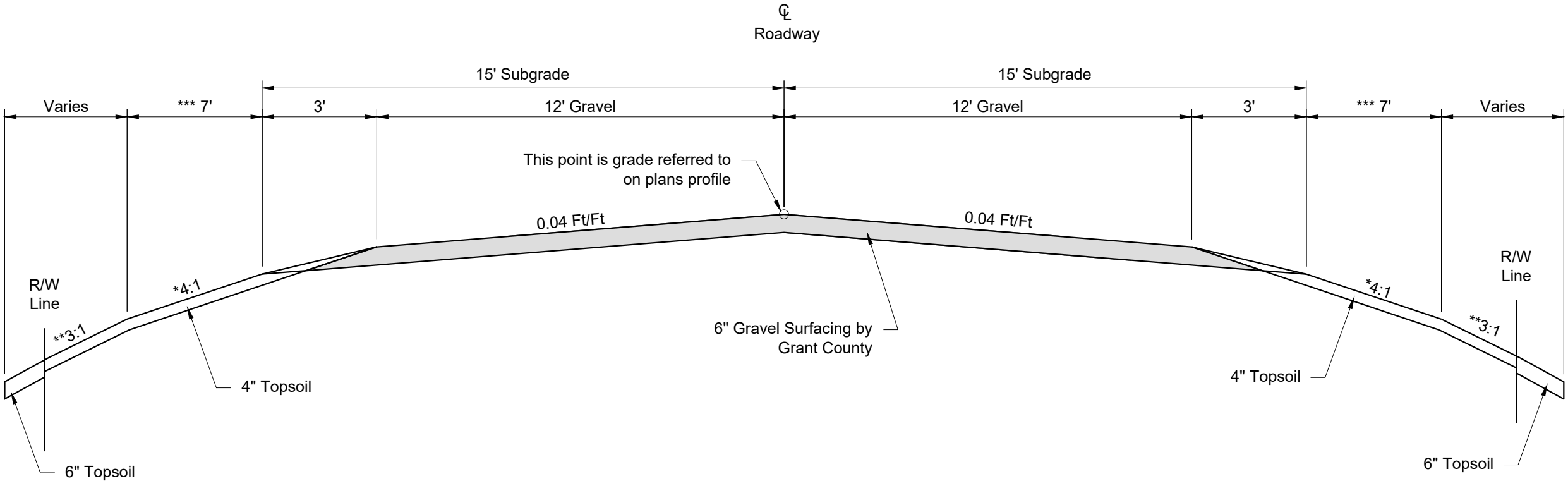
TOTAL SHEETS

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4+10 to 6+90

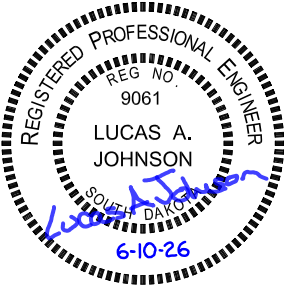


Inslope Transitions:

- * Warp inslope from 4:1 to 9:1 beginning 50' +/- from each wingwall.
- ** Warp inslope from Typical to 2:1 beginning 50' +/- from each wingwall.

Width Transitions:

- *** 8' from Sta. 4+93.44 to Sta. 5+46.56. Begin width transition 50' +/- from each wingwall.



HORIZONTAL ALIGNMENT DATA

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MAINLINE

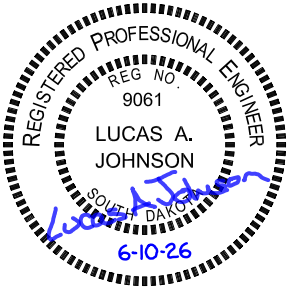
Type	Station			Northing	Easting
POB	0+00.00			450666.328	2838916.993
		TL= 201.16	S 83°36'54" E		
PC	0+96.31			450655.618	2839012.702
PI	2+01.16	R = 375.00'	Delta = 31°14'32" L	450643.958	2839116.904
PT	3+00.79			450688.034	2839212.042
		TL= 370.28	N 65°08'32" E		
PC	4+88.22			450766.824	2839382.110
PI	5+66.22	R = 375.00'	Delta = 23°29'58" R	450799.612	2839452.882
PT	6+42.03			450801.461	2839530.859
		TL= 326.99	N 88°38'31" E		
PI	8+91.01			450807.362	2839779.778
		TL= 330.66	N 87°43'13" E		
POE	12+21.67			450820.515	2840110.174

CONTROL DATA

HORIZONTAL AND VERTICAL CONTROL POINTS						
POINT	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION
CP WEST	0+01.80	0.03' L	18" Rebar w/ CP Cap	450666.156	2838918.787	-
BM NW	3+95.69	11.29' L	5' Rebar w/ CP Cap	450738.172	2839293.408	1299.68
BM NE	6+54.09	13.96' L	5' Rebar w/ CP Cap	450815.701	2839542.587	1297.13
CP EASTCL	12+01.32	0.72' L	18" Rebar w/ CP Cap	450820.428	2840089.807	-

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. North Zone NAD 83(2011); epoch 2010.00; SF = 0.9999999489

The elevations shown on this sheet are based on NAVD 88 (GEOID 18).



TRAFFIC CONTROL FOR BIDDING PURPOSES ONLY

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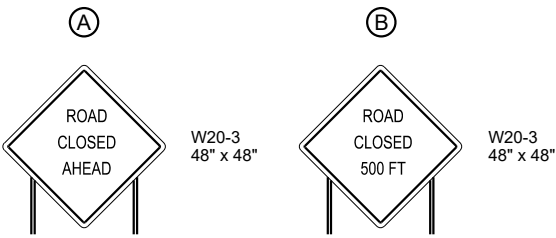
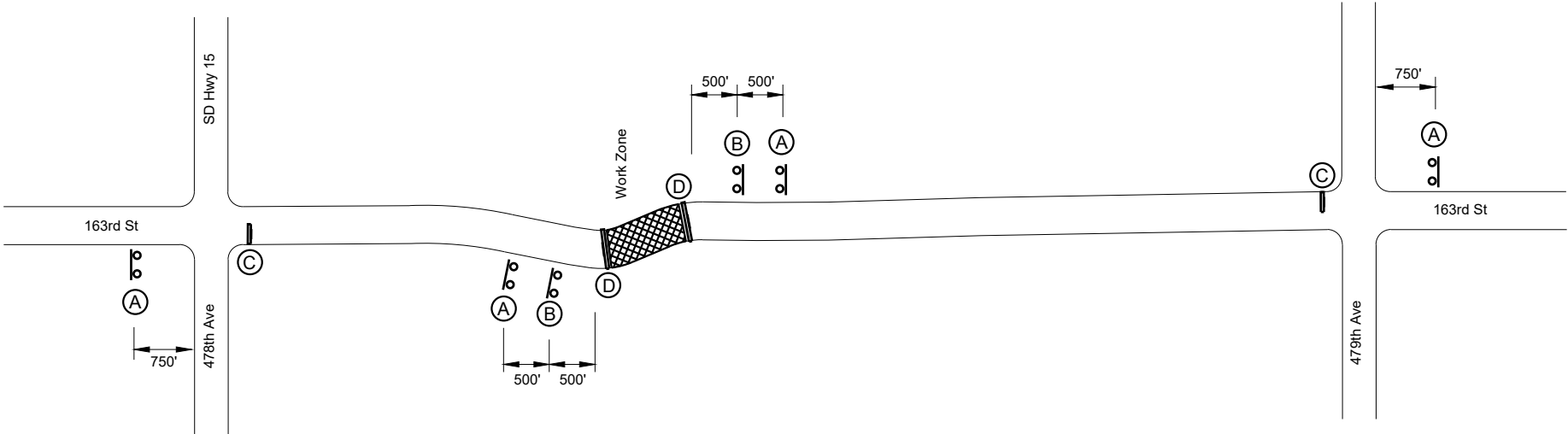
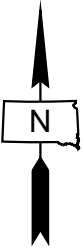
SHEET

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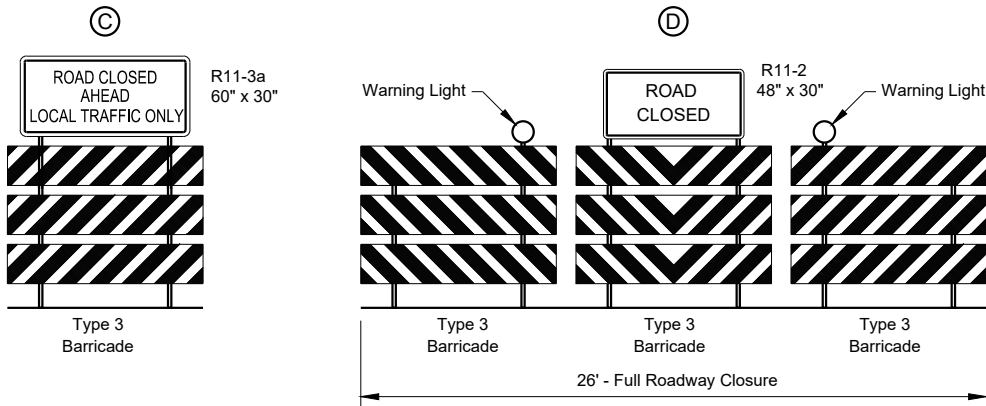
TOTAL SHEETS

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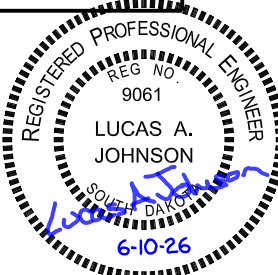


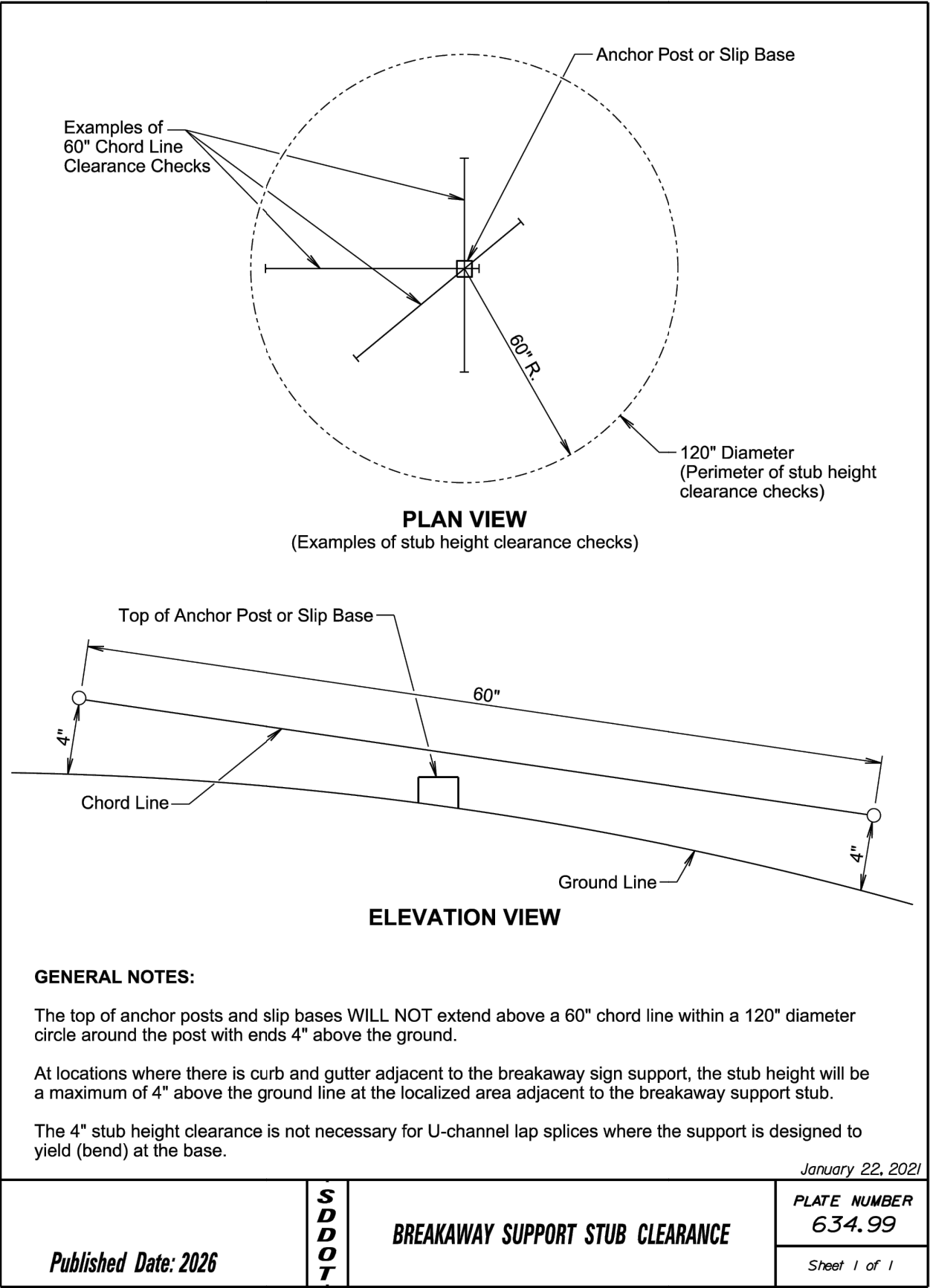
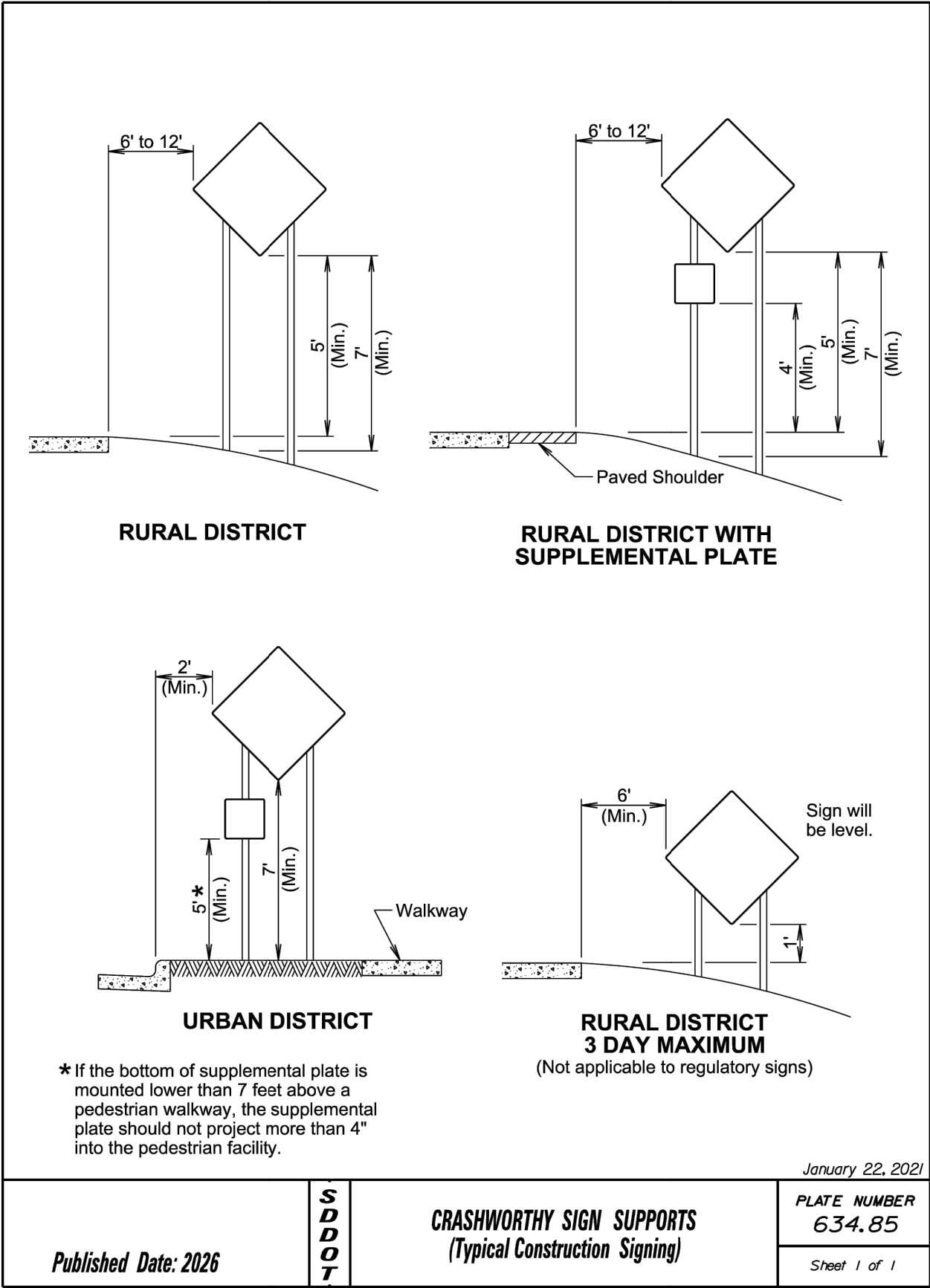
FIXED LOCATION SIGNING



ITEMIZED LIST FOR TRAFFIC CONTROL					
SIGN CODE	DESCRIPTION	NUMBER REQUIRED	SIGN SIZE	SQ. FT. PER SIGN	SQ. FT.
R11-2	ROAD CLOSED	2	48" x 30"	10.0	20.0
R11-3a	ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY	2	60" x 30"	12.5	25.0
W20-3	ROAD CLOSED AHEAD OR 500 FT	6	48" x 48"	16.0	96.0
Conventional Road Traffic Control Signs Sq. Ft.					141.0
DESCRIPTION		Each			
Type 3 Barricade		8			

NOTE:
The exact location and spacing of signs shown will be determined in the field by the Engineer.





STORMWATER POLLUTION PREVENTION PLAN CHECKLIST
*(The numbers left of the title headings are **reference numbers** to the **GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES** (Stormwater Permit))*

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION

To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

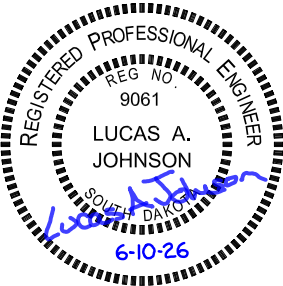
5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES

- **5.3 (3a): Project Limits** (See Title Sheet)
- **5.3 (3a): Project Description** (See Title Sheet)
- **5.3 (4): Site Map(s)** (See Title Sheet and Plans)
- **Major Soil Disturbing Activities** (check all that apply)
 - ☒ Clearing and grubbing
 - ☒ Excavation/borrow
 - ☒ Grading and shaping
 - ☒ Filling
 - ☐ Other (describe):
- **5.3 (3b): Total Project Area** 1.5 Acres
- **5.3 (3b): Total Area to be Disturbed** 1.4 Acre
- **5.3 (3c): Maximum Area Disturbed at One Time** 1.4 Acre
- **5.3 (3d): Existing Vegetative Cover (%)** 70
 - **5.3 (3d): Description of Vegetative Cover** Pasture type grass, shrubs and trees
- **5.3 (3e): Soil Properties:** AASHTO Soil Classifications: A-7-6
- **5.3 (3f): Name of Receiving Water Body/Bodies** South Fork of the Yellow Bank River
- **5.3 (3g): Location of Construction Support Activity Areas** within ROW and temporary easements

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES

The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Install temporary sediment control as needed.	
Remove existing structure.	
Install new structure.	
Grade roadway and ditches	
Install seeding, blankets, mulch and wattles.	



5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES
All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (check all that apply)

Perimeter Controls (See Detail Plan Sheets)	
Description	Estimated Start Date
☐ Natural Buffers (within 50 ft of Waters of State)	
☐ Silt Fence	
☒ Erosion Control Wattles	
☐ Temporary Berm / Windrow	
☐ Floating Silt Curtain	
☐ Stabilized Construction Entrances	
☐ Entrance/Exit Equipment Tire Wash	
☐ Other:	

Structural Erosion and Sediment Controls	
Description	Estimated Start Date
☐ Silt Fence	
☐ Temporary Berm/Windrow	
☒ Erosion Control Wattles	
☐ Temporary Sediment Barriers	
☐ Erosion Bales	
☐ Temporary Slope Drain	
☐ Turf Reinforcement Mat	
☒ Riprap	
☐ Gabions	
☐ Rock Check Dams	
☐ Sediment Traps/Basins	
☐ Culvert Inlet Protection	
☐ Transition Mats	
☐ Median/Area Drain Inlet Protection	
☐ Curb Inlet Protection	
☐ Interceptor Ditch	
☐ Concrete Washout Facility	
☐ Work Platform	
☐ Temporary Water Barrier	
☐ Temporary Water Crossing	
☐ Permanent Stormwater Ponds	
☐ Permanent Open Vegetated Swales	
☐ Natural Depressions to allow for Infiltration	
☐ Sequential Systems that combine several practices	
☐ Other:	

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	PROJECT	SHEET	TOTAL SHEETS
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Dust Controls	
Description	Estimated Start Date
☐ Tarps & Wind impervious fabrics	
☐ Watering	
☐ Stockpile location/orientation	
☐ Dust Control Chlorides	
☐ Other	

Dewatering BMPs	
Description	Estimated Start Date
☐ Sediment Basins	
☐ Dewatering bags	
☐ Weir tanks	
☒ Temporary Diversion Channel	
☐ Other:	

Stabilization Practices (See Detail Plan Sheets)
(Stabilization measures will begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization will be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (3.18))

Description	Estimated Start Date
☐ Vegetation Buffer Strips	
☐ Temporary Seeding (Cover Crop Seeding)	
☒ Permanent Seeding	
☐ Sodding	
☐ Planting (Woody Vegetation for Soil Stabilization)	
☐ Mulching (Grass Hay or Straw)	
☒ Fiber Mulching (Wood Fiber Mulch)	
☐ Soil Stabilizer	
☐ Bonded Fiber Matrix	
☐ Fiber Reinforced Matrix	
☒ Erosion Control Blankets	
☐ Surface Roughening (e.g. tracking)	
☐ Other:	

Wetland Avoidance
Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes ☒ No ☐ If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches $\frac{1}{3}$ of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches $\frac{1}{2}$ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The SDDOT Project Engineer and Contractor's Erosion Control Supervisor are responsible for inspections. Maintenance and repair activities are the responsibility of the Contractor. The SDDOT Project Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT

Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

5.3 (8): POLLUTION PREVENTION PROCEDURES**5.3 (8a): Spill Prevention and Response Procedures****➤ Material Management****▪ Housekeeping**

- Only needed products will be stored on-site by the Contractor.
- Except for bulk materials the contractor will store all materials under cover and/or in appropriate containers.
- Products must be stored in original containers and labeled.
- Material mixing will be conducted in accordance with the manufacturer's recommendations.
- When possible, all products will be completely used before properly disposing of the container off-site.
- The manufacturer's directions for disposal of materials and containers will be followed.
- The Contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
- Dust generated will be controlled in an environmentally safe manner.

▪ Hazardous Materials

- Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
- Original labels and material safety data sheets will be retained in a safe place to relay important product information.

- If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
- Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
- Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any stormwater system or stormwater treatment system.
- Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

➤ Spill Control Practices

In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill cleanup will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the Contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for cleanup purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The Contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator.

➤ Spill Response

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The Contractor's site superintendent will be notified immediately when a spill or the threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.

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- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the Contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SDDANR.
- Personnel with primary responsibility for spill response and cleanup will receive training by the Contractor's site superintendent or designee. The training must include identifying the location of the spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities.

5.3 (8b): WASTE MANAGEMENT PROCEDURES**➤ Waste Disposal**

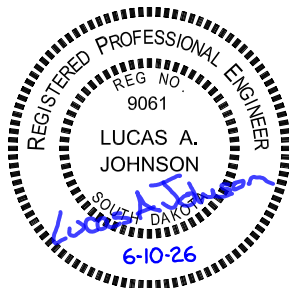
- All liquid waste materials will be collected and stored in approved sealed containers. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted. The Contractor is responsible for ensuring waste disposal procedures are followed.

➤ Hazardous Waste

- All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the Contractor will be responsible for seeing that these practices are followed.

➤ Sanitary Waste

- Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.



	PROJECT	SHEET	TOTAL SHEETS
	BRO-B 8026(37)	14	31

5.3 (9): CONSTRUCTION SITE POLLUTANTS

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the heading “POLLUTION PREVENTION PROCEDURES” (check all that apply).

- ☒ Concrete and Portland Cement
- ☐ Detergents
- ☐ Paints
- ☐ Metals
- ☐ Bituminous Materials
- ☒ Petroleum Based Products
- ☐ Diesel Exhaust Fluid
- ☐ Cleaning Solvents
- ☐ Wood
- ☐ Cure
- ☐ Texture
- ☒ Chemical Fertilizers
- ☐ Other:

Product Specific Practices

- **Petroleum Products**
All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.
- **Fertilizers**
Fertilizers will be applied only in the amounts specified by the SDDOT. Once applied, fertilizers will be worked into the soil to limit the exposure to stormwater. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.
- **Paints**
All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer’s instructions and any applicable state and local regulations.
- **Concrete Trucks**
Contractors will provide designated truck washout facilities on the site. These areas must be self-contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater discharges are anticipated during the course of this project (check all that apply).

- ☐ Discharges from water line flushing.
- ☐ Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
- ☒ Uncontaminated ground water associated with dewatering activities.

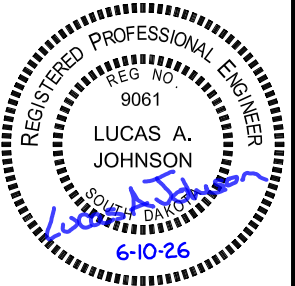
5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

7.0: SPILL NOTIFICATION

In the event of a spill, the Contractor’s site superintendent will make the appropriate notification(s), consistent with the following procedures:

- A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to SDDANR immediately **if any one of the following** conditions exists:
 - The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
 - The release or spill causes an immediate danger to human health or safety
 - The release or spill exceeds 25 gallons
 - The release or spill causes a sheen on surface water
 - The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
 - The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01
 - The release or spill of any substance that harms or threatens to harm wildlife or aquatic life
 - The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.
- To report a release or spill, call SDDANR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDANR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged, and the location of the discharge will be sent to SDDANR within 14 days of the discharge.



5.4: SWPPP CERTIFICATIONS

➤ Certification of Compliance with Federal, State, and Local Regulations

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for sediment and erosion control plans, permits, notices or documentation as appropriate.

➤ South Dakota Department of Transportation

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

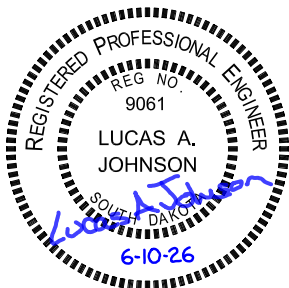
Authorized Signature (See the General Permit, Section 7.4 (1))

➤ Prime Contractor

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signature



CONTACT INFORMATION

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

➤ Contractor Information:

- Prime Contractor Name: _____
- Contractor Contact Name: _____
- Address: _____
- _____
- City: _____ State: _____ Zip: _____
- Office Phone: _____ Field: _____
- Cell Phone: _____ Fax: _____

➤ Erosion Control Supervisor

- Name: _____
- Address: _____
- _____
- City: _____ State: _____ Zip: _____
- Office Phone: _____ Field: _____
- Cell Phone: _____ Fax: _____

➤ SDDOT Project Engineer

- Name: _____
- Business Address: _____
- Job Office Location: _____
- City: _____ State: _____ Zip: _____
- Office Phone: _____ Field: _____
- Cell Phone: _____ Fax: _____

➤ SDDANR Contact Spill Reporting

- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

➤ SDDANR Contact for Hazardous Materials.

- (605) 773-3153

➤ National Response Center Hotline

- (800) 424-8802.

➤ SDDANR Stormwater Contact Information

- SDDANR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351

5.5: REQUIRED SWPPP MODIFICATIONS

➤ 5.5 (1): Conditions Requiring SWPPP Modification

The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part the SWPPP begins work on the site.
- When changes to the construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SDDANR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of application.

➤ 5.5 (2): Deadlines for SWPPP Modification

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

➤ 5.5 (3): Documentation of Modifications to the Plan

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

➤ 5.5 (4): Certification Requirements

All modifications made to the SWPPP must be signed and certified as required in Section 7.4.

➤ 5.5 (5): Required Notice to Other Operators

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings on the plan will be modified to reflect the needed changes. Copies of the DOT 298 forms and the SWPPP will be retained on site in a designated place for review throughout the course of the project. A copy of the DOT 298 form will be given to the Contractor Erosion Control Supervisor and a copy will be emailed to the SDDOT Environmental Section in accordance with the DOT 298 Form.

LEGEND

FOR BIDDING PURPOSES ONLY

BAI JOB # 24020.14



PROJECT

BRO-B 8026(37)

SHEET

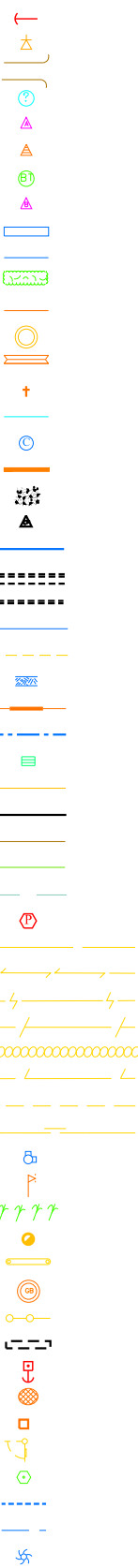
16

TOTAL SHEETS

31

Plotting Date: 06/10/2026

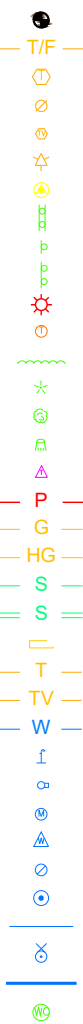
Anchor
Antenna
Approach
Assumed Corner
Azimuth Marker
BBQ Grill/ Fireplace
Bearing Tree
Bench Mark
Box Culvert
Bridge
Brush/Hedge
Buildings
Bulk Tank
Cattle Guard
Cemetery
Centerline
Cistern
Clothes Line
Concrete Symbol
Control Point
Creek Edge
Curb/Gutter
Curb
Dam Grade/Dike/Levee
Deck Edge
Ditch Block
Doorway Threshold
Drainage Profile
Drop Inlet
Edge Of Asphalt
Edge Of Concrete
Edge Of Gravel
Edge Of Other
Edge Of Shoulder
Electric Transformer/Power Junction Box
Fence Barbwire
Fence Chainlink
Fence Electric
Fence Miscellaneous
Fence Rock
Fence Snow
Fence Wood
Fence Woven
Fire Hydrant
Flag Pole
Flower Bed
Gas Valve Or Meter
Gas Pump Island
Grain Bin
Guardrail
Gutter
Guy Pole
Haystack
Highway ROW Marker
Interstate Close Gate
Iron Pin
Irrigation Ditch
Lake Edge
Lawn Sprinkler



Mailbox
Manhole Electric
Manhole Gas
Manhole Miscellaneous
Manhole Sanitary Sewer
Manhole Storm Sewer
Manhole Telephone
Manhole Water
Merry-Go-Round
Microwave Radio Tower
Miscellaneous Line
Miscellaneous Property Corner
Miscellaneous Post
Overhang Or Encroachment
Overhead Utility Line
Parking Meter
Pedestrian Push Button Pole
Pipe With End Section
Pipe With Headwall
Pipe Without End Section
Playground Slide
Playground Swing
Power And Light Pole
Power And Telephone Pole
Power Meter
Power Pole
Power Pole And Transformer
Power Tower Structure
Propane Tank
Property Pipe
Property Pipe With Cap
Property Stone
Public Telephone
Railroad Crossing Signal
Railroad Milepost Marker
Railroad Profile
Railroad ROW Marker
Railroad Signs
Railroad Switch
Railroad Track
Railroad Trestle
Rebar
Rebar With Cap
Reference Mark
Retaining Wall
Riprap
River Edge
Rock And Wire Baskets
Rockpiles
Satellite Dish
Septic Tank
Shrub Tree
Sidewalk
Sign Face
Sign Post
Slough Or Marsh
Spring
Stream Gauge
Street Marker



Subsurface Utility Exploration Test Hole
Telephone Fiber Optics
Telephone Junction Box
Telephone Pole
Television Cable Jct Box
Television Tower
Test Wells/Bore Holes
Traffic Sign Double Face
Traffic Sign One Post
Traffic Sign Two Post
Traffic Signal
Trash Barrel
Tree Belt
Tree Coniferous
Tree Deciduous
Tree Stumps
Triangulation Station
Underground Electric Line
Underground Gas Line
Underground High Pressure Gas Line
Underground Sanitary Sewer
Underground Storm Sewer
Underground Tank
Underground Telephone Line
Underground Television Cable
Underground Water Line
Water Fountain
Water Hydrant
Water Meter
Water Tower
Water Valve
Water Well
Weir Rock
Windmill
Wingwall
Witness Corner

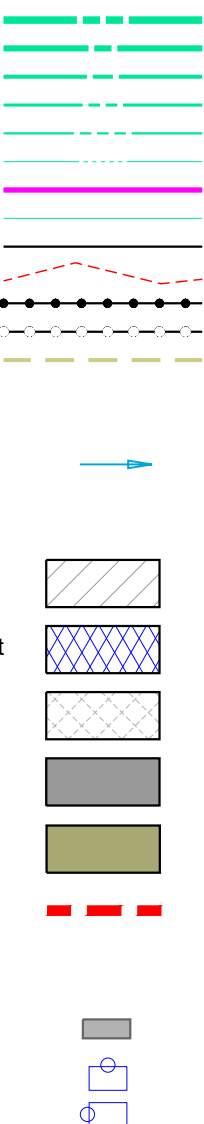


State and National Line
County Line
Section Line
Quarter Line
Sixteenth Line
Property Line
Construction Line
ROW Line
New ROW Line
Cut and Fill Limits
Control of Access
New Control of Access
Proposed ROW
(After Property Disposal)

Drainage Arrow

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

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



CLEARING PLAN

FOR BIDDING PURPOSES ONLY

BAI JOB # 24020.14



PROJECT

BRO-B 8026(37)

SHEET

17

TOTAL SHEETS

31

Plotting Date: 06/10/2026

LEGEND:

X Remove Tree

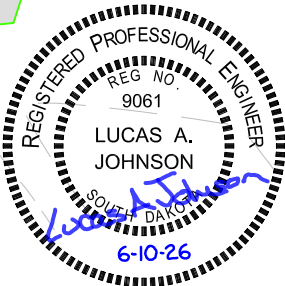
TABLE OF CLEARING

Trees to be removed with cut and fill limits, right-of-way, and permanent easements:

Station	Offset (ft)	Side	Diameter (in)
4+01.3	32.0	L	36
4+06.8	13.9	L	6
4+08.1	27.6	L	12
4+11.1	33.0	L	12
4+17.7	29.8	L	12
4+23.5	30.3	L	12
4+46.1	25.8	L	6
4+64.4	25.5	L	12
4+66.4	24.3	R	6
4+66.8	25.8	L	12
4+74.7	31.5	L	18
4+74.8	25.1	L	6
4+80.8	26.3	R	6
4+82.2	16.5	L	6
4+94.3	47.8	R	6
4+95.8	49.0	R	6
4+97.8	49.0	R	6
4+99.7	43.3	R	6
5+00.0	42.7	R	6
5+00.7	58.6	R	6
5+01.4	58.2	R	6
5+02.5	57.4	R	6
5+02.5	66.2	R	6
5+02.8	53.9	R	6
5+04.6	64.6	R	6
5+05.9	77.3	R	12
5+07.2	74.0	R	6
5+07.6	68.1	R	6
5+08.4	75.2	R	6
5+08.9	49.9	R	6
5+10.2	55.2	R	6
5+10.3	71.4	R	6
5+10.8	79.8	R	6
5+11.4	71.2	R	6
5+12.3	81.2	R	6
5+12.3	94.5	R	12
5+13.4	73.3	R	6
5+14.7	81.0	R	6
5+20.2	98.8	R	6
5+20.3	99.9	R	6
5+20.6	85.4	R	6
5+21.2	83.6	R	6
5+23.2	85.8	R	6
5+27.9	95.8	R	6
5+33.2	108.1	R	6
5+34.6	30.6	L	18
5+35.7	105.6	R	6
5+38.1	109.2	R	6
5+46.0	45.3	L	6
5+48.8	29.5	L	24
5+49.0	48.2	L	12
5+51.0	21.6	R	6
5+52.2	35.9	L	3
5+53.9	38.7	R	36
5+61.6	27.9	L	3
5+65.6	39.2	L	12
5+70.1	32.2	R	6
5+71.4	27.8	R	6
5+74.3	32.2	L	12
5+78.6	35.0	L	12
5+78.9	33.4	L	12
5+80.3	25.8	R	6
5+81.1	30.5	L	6
5+81.8	28.8	L	12
5+83.1	33.7	L	6
5+83.4	34.7	L	12
5+86.6	30.0	R	3
5+87.5	31.6	L	12
5+88.9	29.4	L	12
5+98.8	20.4	R	6
5+99.4	24.5	R	6
6+07.6	29.4	R	6
6+14.4	27.6	R	12
6+21.9	22.8	R	6
6+22.9	30.1	R	6

NOTE:

Additional trees will be removed as part of the temporary stream diversion.



EROSION AND SEDIMENT CONTROL

BAI JOB # 24020.14



PROJECT

BRO-B 8026(37)

SHEET

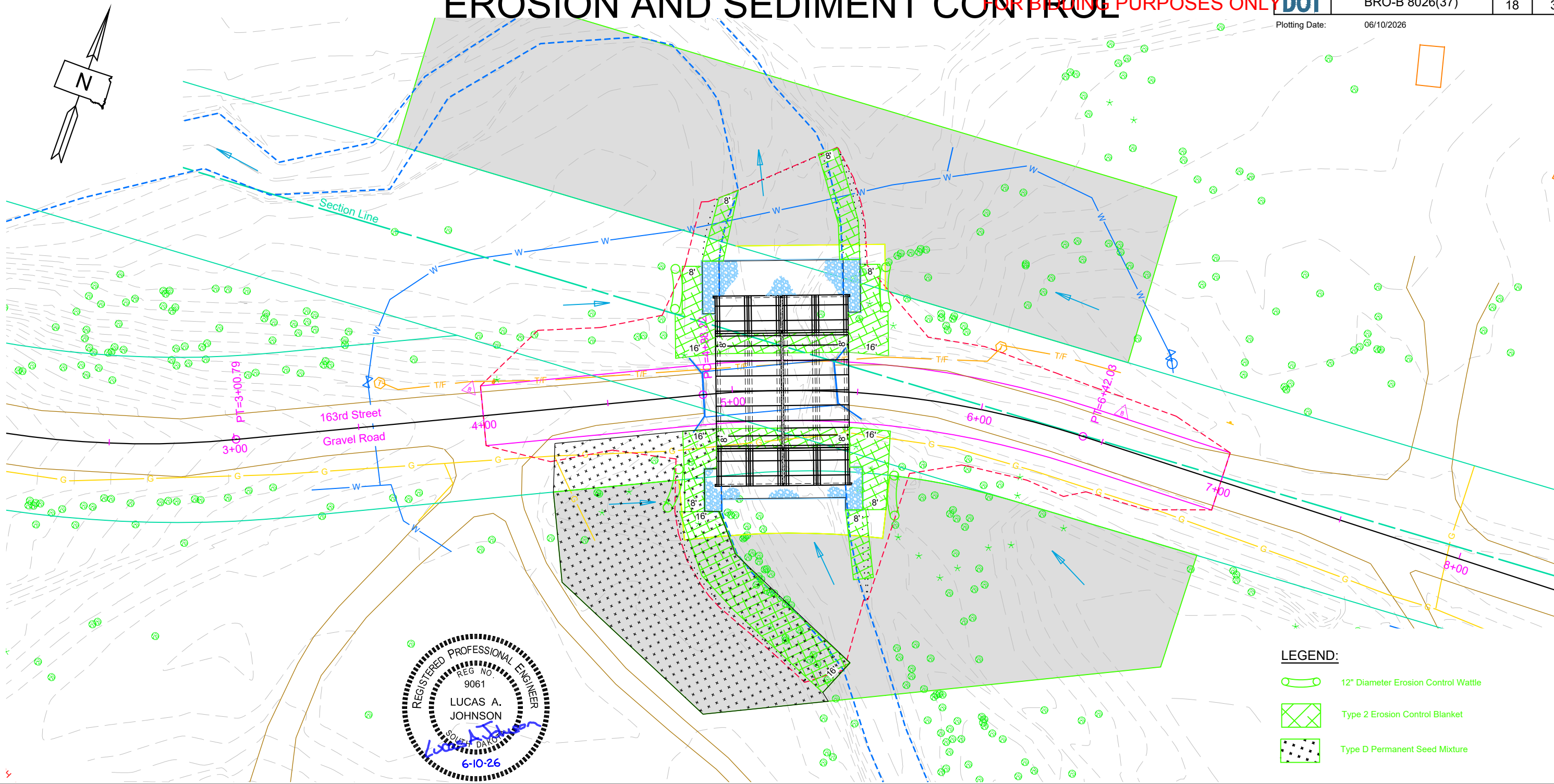
18

TOTAL SHEETS

31

Plotting Date: 06/10/2026

FOR BEDDING PURPOSES ONLY



LEGEND:

- 12" Diameter Erosion Control Wattle
- Type 2 Erosion Control Blanket
- Type D Permanent Seed Mixture

NOTES:

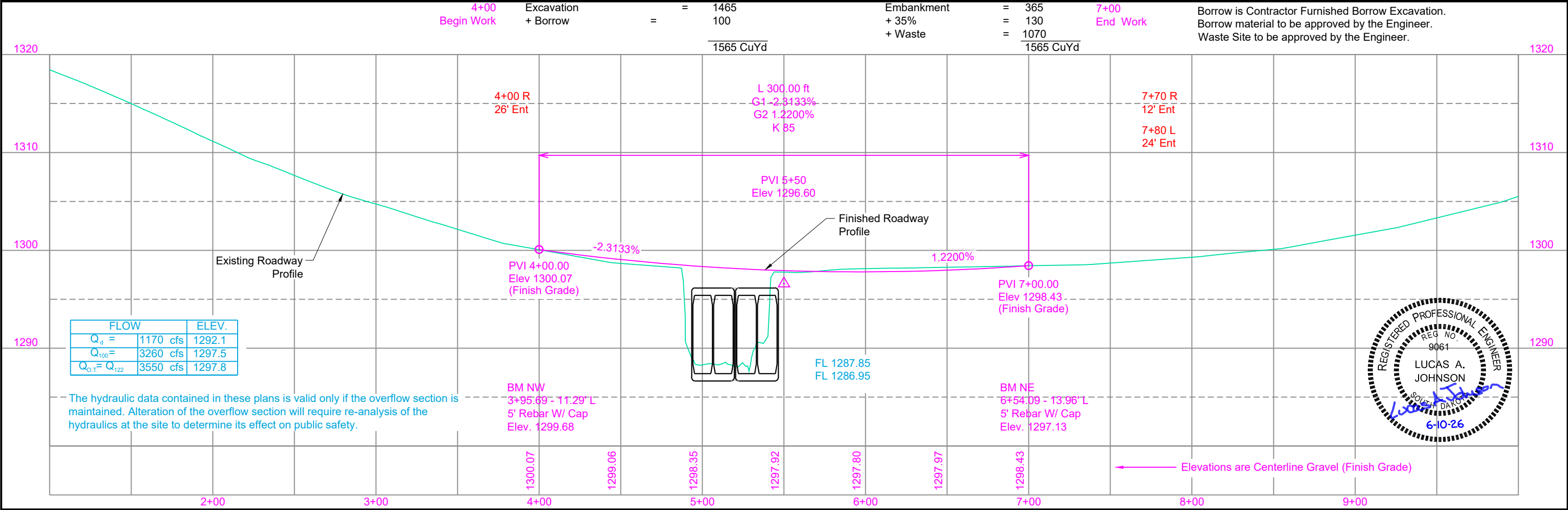
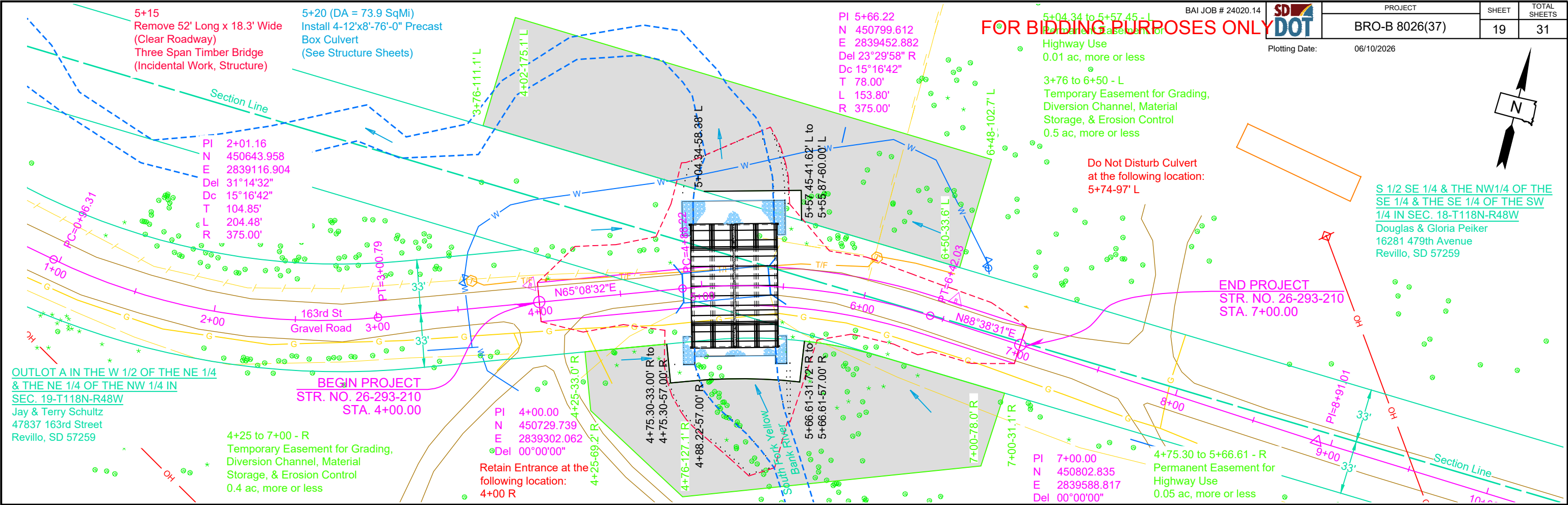
- Maintain as much existing vegetation as possible during construction.
- Type D Permanent Seed Mixture will be used in the area indicated. Type G Permanent Seed Mixtrure will be used elsewhere.
- The final proposed wattle placement is shown. Wattles will be installed during construction as determined by the Engineer. An additional 200 Ft is included in the quantities. Wattles will be installed per Standard Plate No. 734.06.
- Remove and Reset wattles as necessary to complete grading work and install the erosion control blankets and riprap. Install additional wattles as directed by the Engineer.
- Wattles will remain in place until vegetation has been established in seeded areas and will be left to biodegrade.
- Install Erosion Control Blanket as shown and as directed by the Engineer. Erosion Control Blanket will be installed as per Standard Plate No. 734.01.

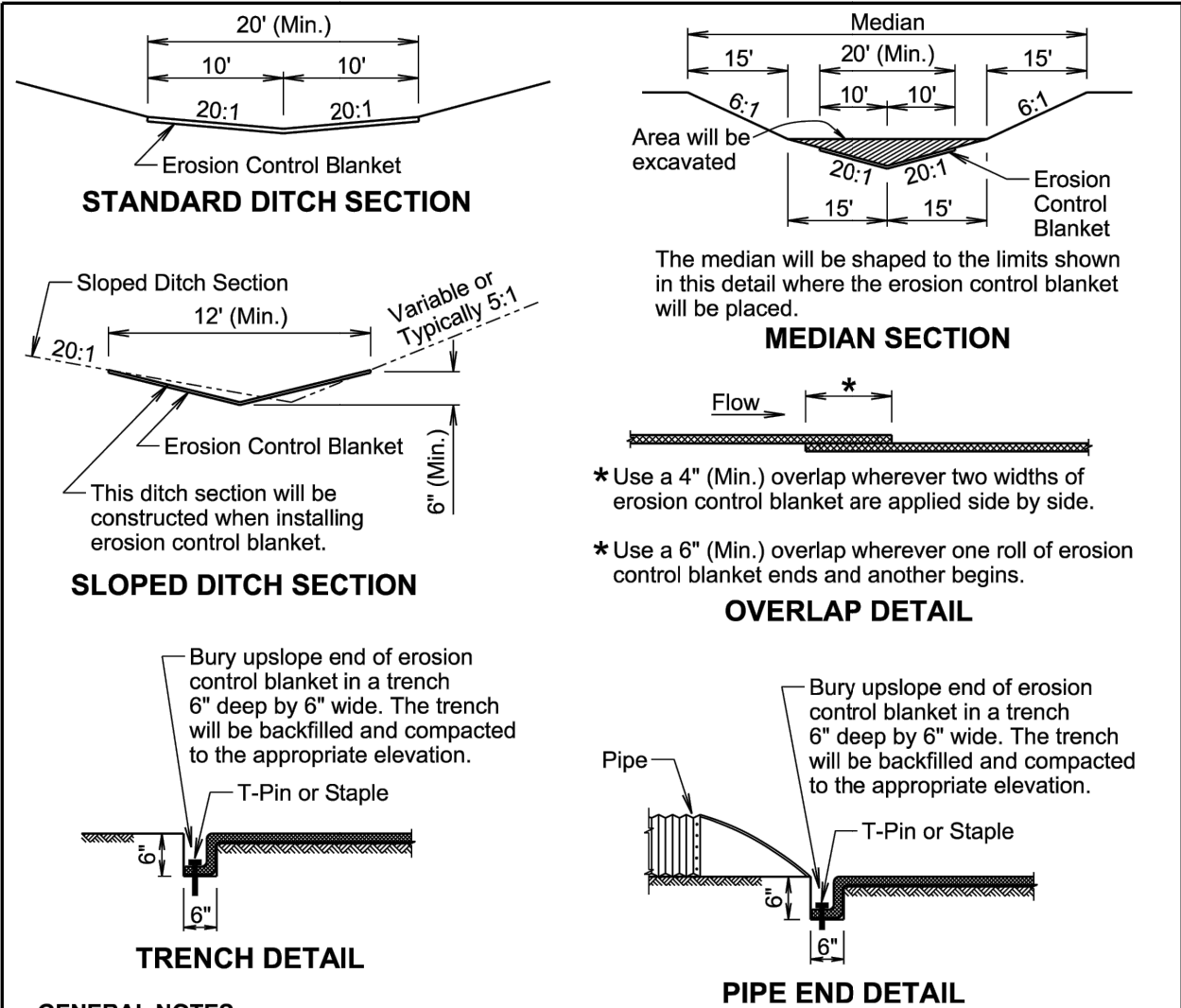
TABLE OF EROSION CONTROL WATTLE

Station	Location	Diameter (inch)	Quantity (ft)
4+73 R	At Top of Bank	12	30
4+78 L	At Top of Bank	12	30
5+56 L	At Top of Bank	12	30
5+70 R	At Top of Bank	12	30
Additional Quantity:		12	200
		Total:	320

TABLE OF EROSION CONTROL BLANKET

Station	Location	Type	Quantity (SqYd)
4+85 L	Inslope & Channel Bank	2	70
4+88 R	Inslope & Channel Bank	2	193
4+93 to 5+47 L	Inslope over Box	2	47
4+93 to 5+47 R	Inslope over Box	2	47
5+50 L	Inslope & Channel Bank	2	88
5+50 R	Inslope & Channel Bank	2	70
		Total:	515





GENERAL NOTES:

Prior to placement of the erosion control blanket, the areas will be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket will be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket will be buried in a trench 6" wide by 6" deep. There will be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

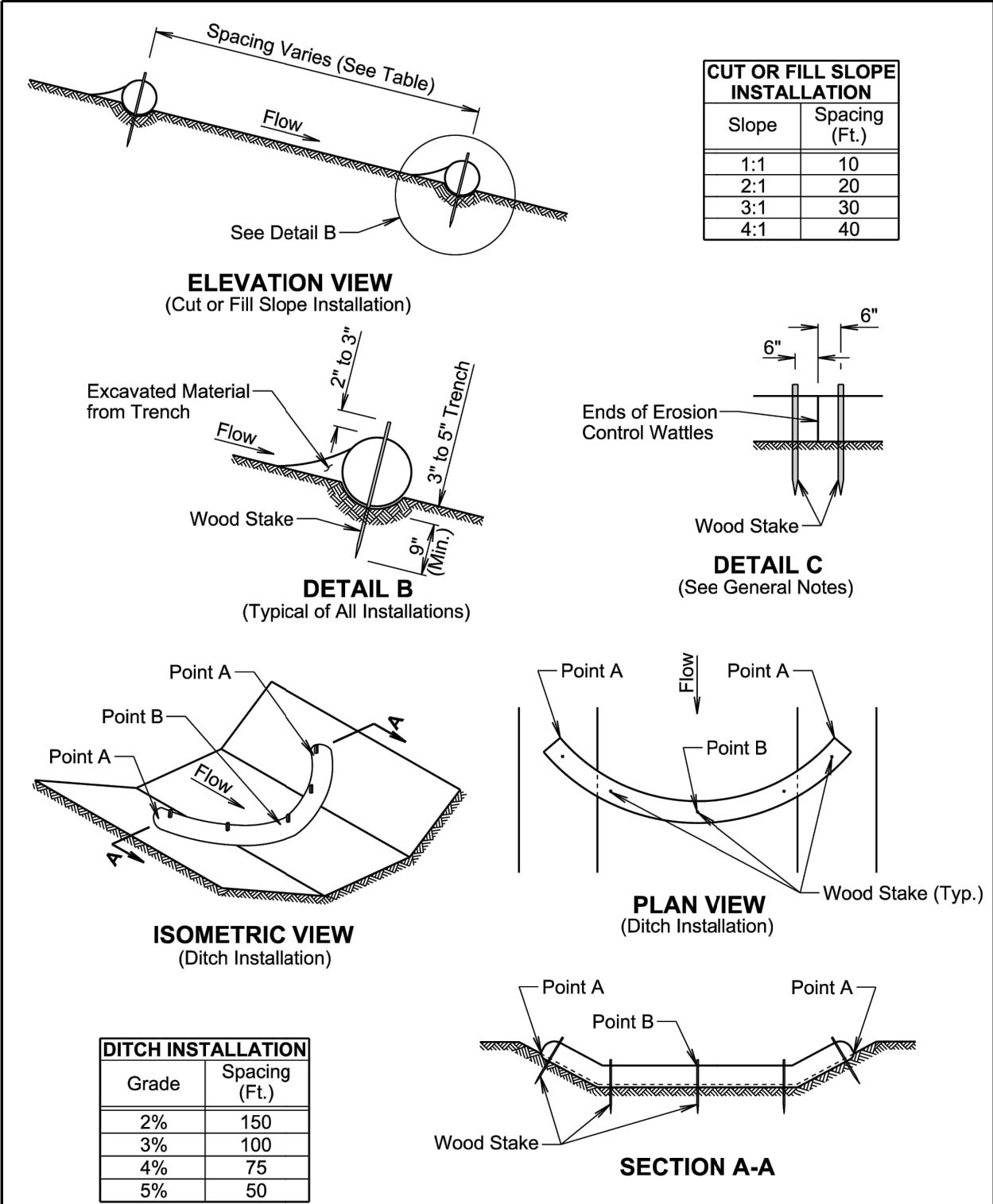
The erosion control blanket will be pinned to the ground according to the manufacturer's installation recommendations.

After the placement of the erosion control blanket, the Contractor will fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

All ditch sections will be shaped when installing the erosion control blanket. All costs for shaping the ditches will be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

February 14, 2020

Published Date: 2026	SD DOT	EROSION CONTROL BLANKET	PLATE NUMBER 734.01
			Sheet 1 of 1



GENERAL NOTES:

At cut or fill slope installations, wattles will be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor will dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes will be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes will be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles will be 3' to 4'.

Where installing running lengths of wattles, the Contractor will butt the second wattle tightly against the first and will not overlap the ends. See Detail C.

The Contractor and Engineer will inspect the erosion control wattles in accordance with the storm water permit. The Contractor will remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping will be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping will be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials will be incidental to the contract unit price per foot for the corresponding erosion control wattle contract item.

All costs for removing the erosion control wattle from the project including labor, equipment, and materials will be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

February 14, 2020

Published Date: 2026	SD DOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 1 of 2

February 14, 2020

Published Date: 2026	SD DOT	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 2 of 2

The elevations shown in these plans are based on the National Geodetic Survey (NGS) North American Vertical Datum 1988 (NAVD88).

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	BRO-B 8026(37)	22	31

~~FOR BIDDING PURPOSES ONLY~~

-X028-
INDEX OF CULVERT SHEETS
Sheet No. 1 - General Drawing and Quantities
Sheet No. 2 - Notes
Sheet No. 3 - Undercut Details
Sheet No. 4 - Riprap and Channel Grading Details
Sheet No. 5 - Standard Plate No. 460.02 & No. 560.01
Sheet No. 6 - Standard Plate No. 560.20 & No. 620.16

ESTIMATED QUANTITIES		
	ITEM	UNIT QUANTITY
	<i>Incidental Work, Structure</i>	LS Lump Sum
x	<i>Structure Excavation, Box Culvert</i>	Cu. Yd. 121
	<i>Box Culvert Undercut</i>	Cu. Yd. 317
x	<i>Controlled Density Fill</i>	Cu. Yd. 20.6
	<i>2 - 12' x 8' Precast Concrete Box Culvert, Furnish</i>	Ft. 88
	<i>2 - 12' x 8' Precast Concrete Box Culvert, Install</i>	Ft. 88
	<i>2 - 12' x 8' Precast Concrete Box Culvert End Section, Furnish</i>	Ea. 4
	<i>2 - 12' x 8' Precast Concrete Box Culvert End Section, Install</i>	Ea. 4
±	<i>Class B Riprap</i>	Ton 157.8
	<i>Type B Drainage Fabric</i>	Sq. Yd. 254

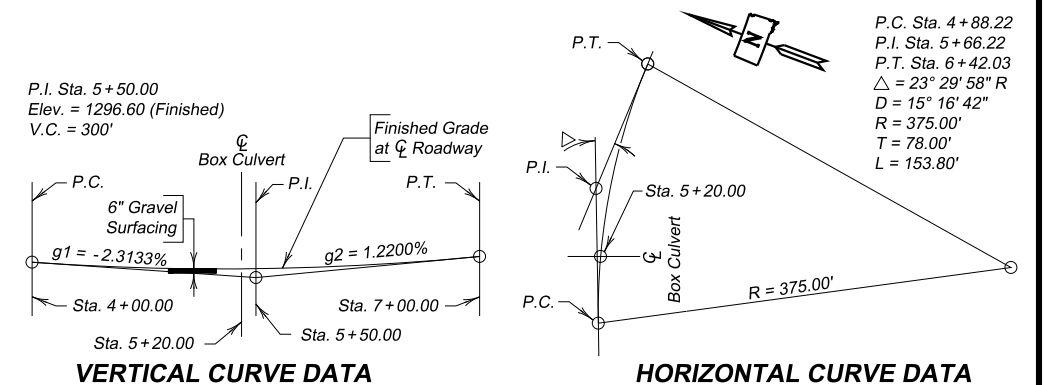
≠ For estimating purposes only, a factor of 1.4 tons/cu. yd. was used to convert Cu. Yd. to Tons.

HYDRAULIC DATA

Q_d	1170 cfs
A_d	148 sq. ft.
V_d	7.9 fps
Q_f	1170 cfs
Q_{100}	3260 cfs
$Q_{O.T.f.}$	3550 cfs
V_{MAX}	11.4 fps

Q_d = Design discharge for the proposed culvert or bridge based on 10 year frequency. Elev. = 1292.1
 $Q_{O.T.fr}$ = Overtopping discharge and frequency 122 - year recurrence interval, Elev. = 1297.8. Location: Station 5+54.
 Q_f = Designated peak discharge for the basin approaching proposed project based on 10 year frequency.
 Q_{100} = Computed discharge for the basin approaching proposed project based on 100 year frequency Elev. = 1297.5.
 V_{MAX} = Maximum computed outlet velocity for the proposed culvert or bridge, based on a 100 year frequency.

The hydraulic data contained in these plans is valid only if the overflow section is maintained. Alteration of the overflow section will require re-analysis of the hydraulics at the site to determine its effect on public safety.



GENERAL DRAWING AND QUANTITIES

FOR

4- 12' x 8' BOX CULVERT (PRECAST)

S. FORK YELLOW BANK RIVER
STA. 5+20.00
STR. NO. 26-293-210
PCN 09MR

0° SKEW
SEC. 18/19-T118N-R48W
BRO-B 8026(37)
HL-93

GRANT COUNTY

S. D. DEPT. OF TRANSPORTATION

JUNE 2026

OF 6

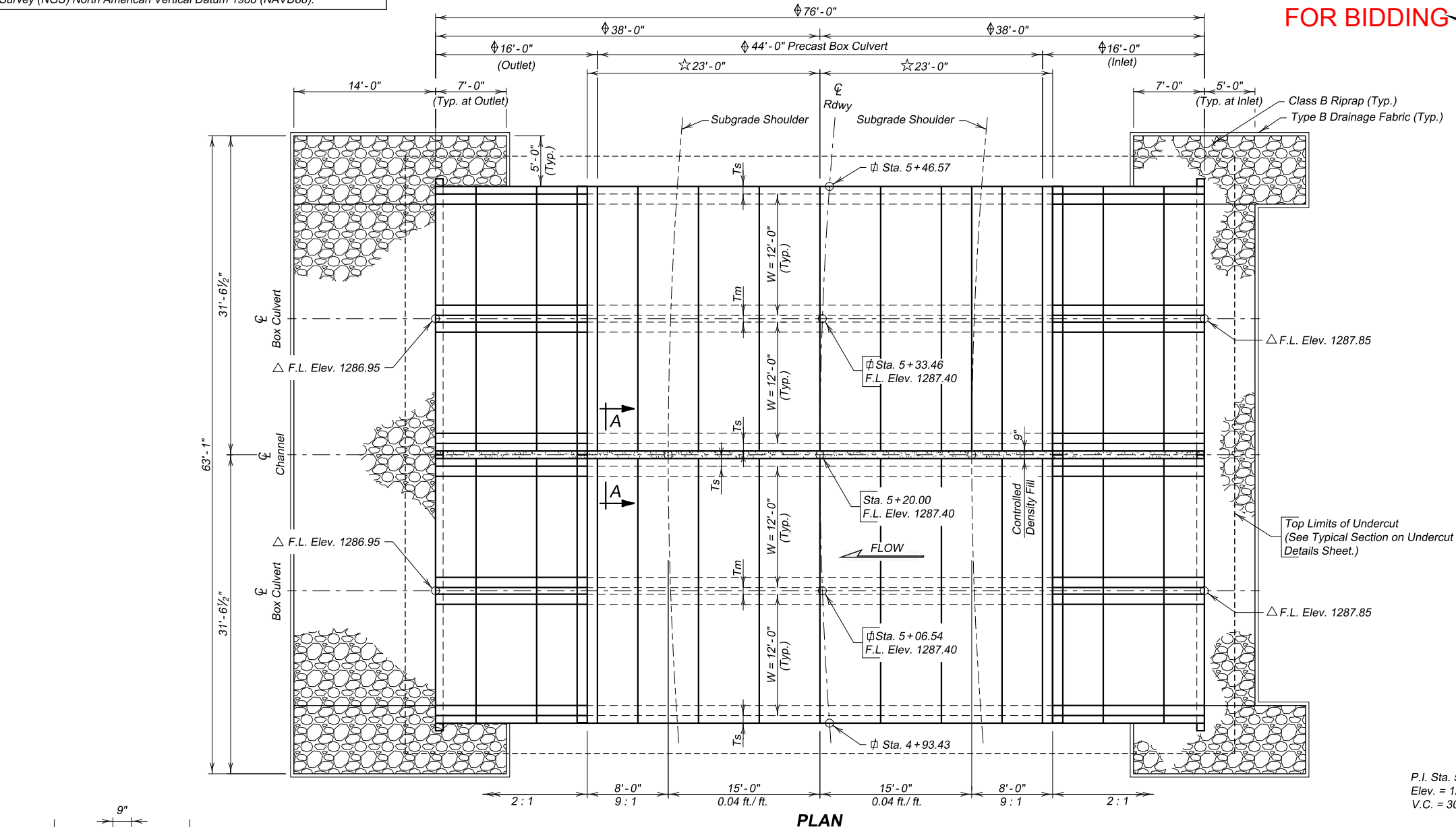
-X028-

DESIGNED BY
LAJ

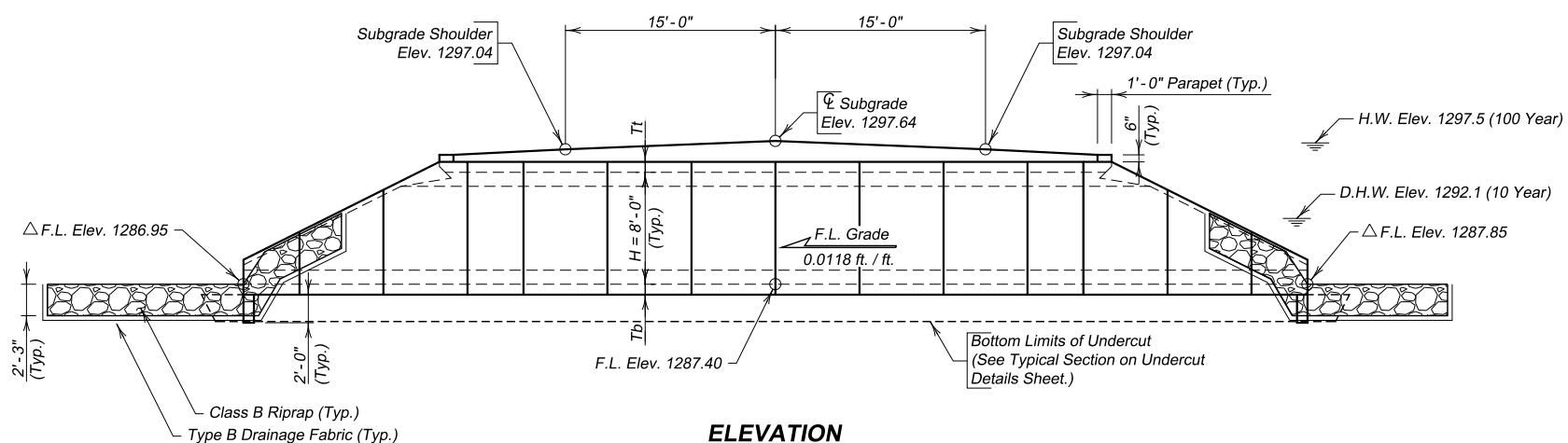
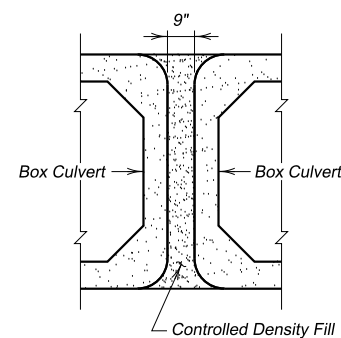
CK. DES. BY MJB

DRAFTED BY LAJ

BRIDGE ENGINEER



SEC. A - A



LEGEND

W = Width of Opening
 H = Height of Opening
 T_t = Thickness of Top Slab
 T_b = Thickness of Bottom Slab
 T_s = Thickness of Side Wall
 T_m = Thickness of Middle Wall

- ◆ Dimension may vary with fabricator and/or installation.
See Shop Plans for actual installation length.
- ☆ Minimum distance to clear zone.
- △ Based on dimensions shown.
- ▢ Based on 8" middle walls and 9" side walls.

NOTE:
Box culvert flow line has been depressed 1'-0" below channel flow line to accommodate aquatic organisms. The 1'-0" depression will be allowed to fill in naturally over time.

REGISTERED PROFESSIONAL ENGINEER
REG NO.
9061
LUCAS A. JOHNSON
SOUTH DAKOTA
6-10-26

Plans By:

BANNER
engineering a better community

-X028-
DESIGNED BY
LAJ

CK. DES. BY MJB

DRAFTED BY LAJ

BRIDGE ENGINEER

SPECIFICATIONS

Construction Specifications: Standard Specifications for Roads and Bridges, 10-7-26 Version; and the Standard General Conditions & Supplementary Conditions as included in the Project Manual. The Standard Specifications for Roads and Bridges are available for download and viewing at:
https://dot.sd.gov/doing-business/contractors/standard-specifications

INCIDENTAL WORK, STRUCTURE

In place from station 4+88.2 to 5+41.9 is a 52' long x 18.3' (clear roadway) wide three - span timber bridge. The existing bridge consists of a timber deck, timber beams, timber abutments, timber wingwalls, timber deadman piles with steel cable buried in the roadway, and timber bents.

The County will salvage the railings, deck, and beams (all items above the pile caps). The County will remove the salvaged items from the project site. The County will be responsible for traffic control during the salvage work. Coordinate with the Grant County Highway Superintendent, Daren Peterson (605 - 432 - 5861).

The Contractor will remove and dispose of the remaining existing structure. The existing structure will be removed to 1' below the bottom of the undercut.

Before preparing a bid, it is the responsibility of the Contractor to make a visual inspection of the structure to verify the extent of the work involved.

All costs for labor, equipment, and materials in performing the foregoing work will be incidental to the contract lump sum price for "Incidental Work, Structure".

GENERAL NOTES

Design will be in accordance with Section 560 of the Construction Specifications with the following criteria:

- Box culvert and box culvert end section design will conform to the AASHTO LRFD Bridge Design Specifications, 10th Edition.
- Design Live Load: HL - 93. No construction loading in excess of legal load is anticipated. If construction loading in excess of legal load is anticipated by the Contractor, the Contractor will submit a proposal including a design analysis for the anticipated construction loading, through the proper channels, to the Office of Bridge Design for approval. Upon approval, the construction load shall not be applied until the depth of fill over the box culvert as required by analysis has been placed. At a minimum, 4 feet of fill will be placed over the box culvert prior to applying the construction load. All costs associated with accommodating any construction loads will be borne by the Contractor.
- The box culvert will be load rated in accordance with the AASHTO Manual for Bridge Evaluation, 2018 Edition with latest Interim Revisions using the LRFR method. The rating will include evaluation of the Design HL - 93 truck at both Inventory and Operating levels and a Legal Load rating for the three SD legal trucks (Type 3, 3S2, and 3 - 2) as well as the notional rating load and four specialized hauling vehicles. The structure will also be evaluated for the emergency vehicles, EV2 and EV3, at the legal load rating level. All sections of the box culvert will rate at HL - 93 or better (Inventory Level). The three SD Legal Loads, the notional rating load, the four specialized hauling vehicles, and two emergency vehicles will rate greater than 1.0 at legal load rating level. The emergency vehicles, EV2 and EV3, will rate 0.8 or greater at the legal load rating level. AASHTOWare Bridge Rating (BrR) is required to be used to rate the box culvert. Include the BrR rating model and a load rating summary sheet with load rating calculations. Submit load rating calculations with the design and independent check design calculations or shop plans, as appropriate.
- The design of the barrel sections will be based on a minimum fill height of 0 feet and include all subsequent fill heights up to and including the maximum fill height of 5 feet over the box culvert.
- Minimum inside corner fillet will be 6 - inch.
- Minimum precast barrel section length will be 6 - foot sections; however, no more than two 4 - foot sections are allowed in any one length of precast barrel.
- Lift holes will be plugged with an approved non - shrinkable grout.
- The fabricator will imprint on the structure the date of construction as specified and detailed on Standard Plate 460.02.
- Alternate end section details will be allowed, subject to the approval of the Bridge Construction Engineer. No additional payment will be made for any change in the barrel/end section configuration.
- Installation of the precast sections will be in accordance with the final approved shop plans.
- Care will be taken when placing sections. Sections will only be moved using the lifting holes by approved equipment.

GENERAL NOTES (Cont.)

- Adjust cutoff wall shown on Standard Plates 560.20 to extend the full width of the end sections (out - to - out) plus the 9 - inch spacing.
- The fabricator will install reinforced concrete parapets as shown on the General Drawing and Parapet Details. All costs associated with furnishing and installing the parapets, whether precast or cast - in - place, will be incidental to the contract unit price per each for "2 - 12'x8' Precast Concrete Box Culvert End Section, Furnish".
- Controlled Density Fill will be in conformance with Section 464 of the Specifications. The Controlled Density Fill will be placed between the box culvert sections as shown in these plans and will extend to the ends of the end sections.
- Compaction of earth embankment and box culvert backfill material will be governed by the Ordinary Compaction Method.

DESIGN MIX OF CONCRETE

- Mix will be as per fabricator's design; however, a minimum compressive strength shall not be less than 4,500 psi at 28 days.

SHOP PLANS

The fabricator will submit shop plans in accordance with the Construction Specifications to Banner Associates, 10 Austin Street, Vermillion, SD 57069 (lukej@bannerassociates.com). After review, corrections (if necessary), and approval by Banner Associates, the Office of Bridge Design will review the submittals, authorize fabrication, arrange for fabrication inspection, and distribute the shop drawings.

SUBSURFACE CONDITIONS

Soils below the bottom of the proposed RCBC consist of gray clay.

Surface water was encountered at an elevation of 1288.9 feet during the subsurface investigation conducted in August 2023. Dewatering will be required during construction.

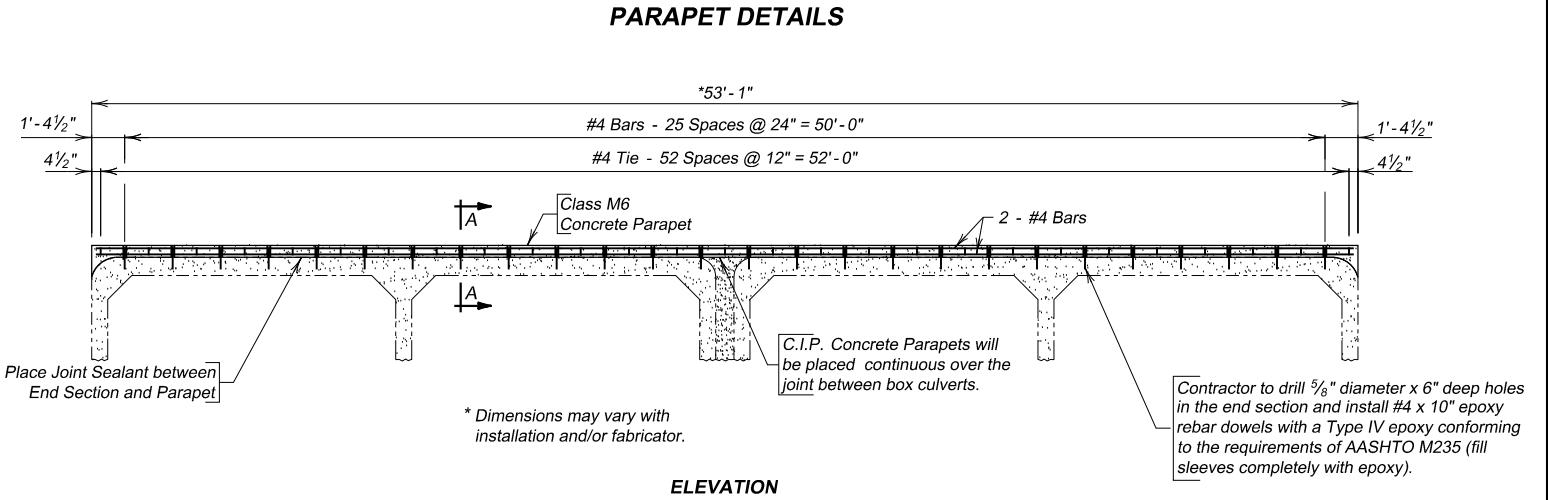
CLASS B RIPRAP

Riprap will be ledge rock.

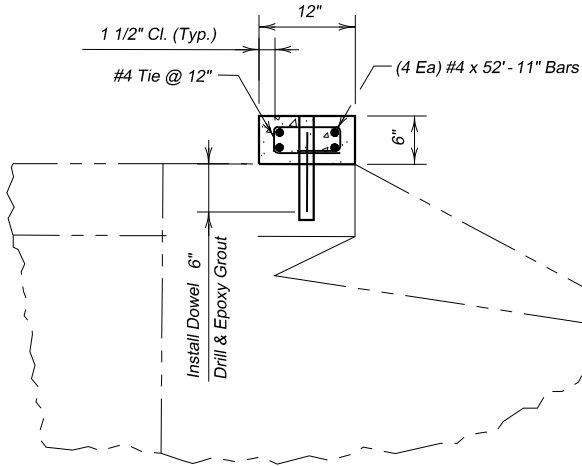
FOR BIDDING PURPOSES ONLY

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
	BRO-B 8026(37)	23	31

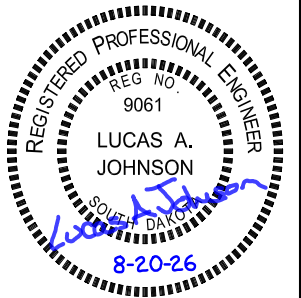
Rev: 8/20/2026 LAJ



ELEVATION



SEC. A - A



NOTES & PARAPET DETAILS

FOR

4 - 12' x 8' BOX CULVERT (PRECAST)

S. FORK YELLOW BANK RIVER 0° SKEW
STA. 5+20.00 SEC. 18/19-T118N-R48W
STR. NO. 26-293-210 BRO-B 8026(37)
HL-93

GRANT COUNTY

S. D. DEPT. OF TRANSPORTATION

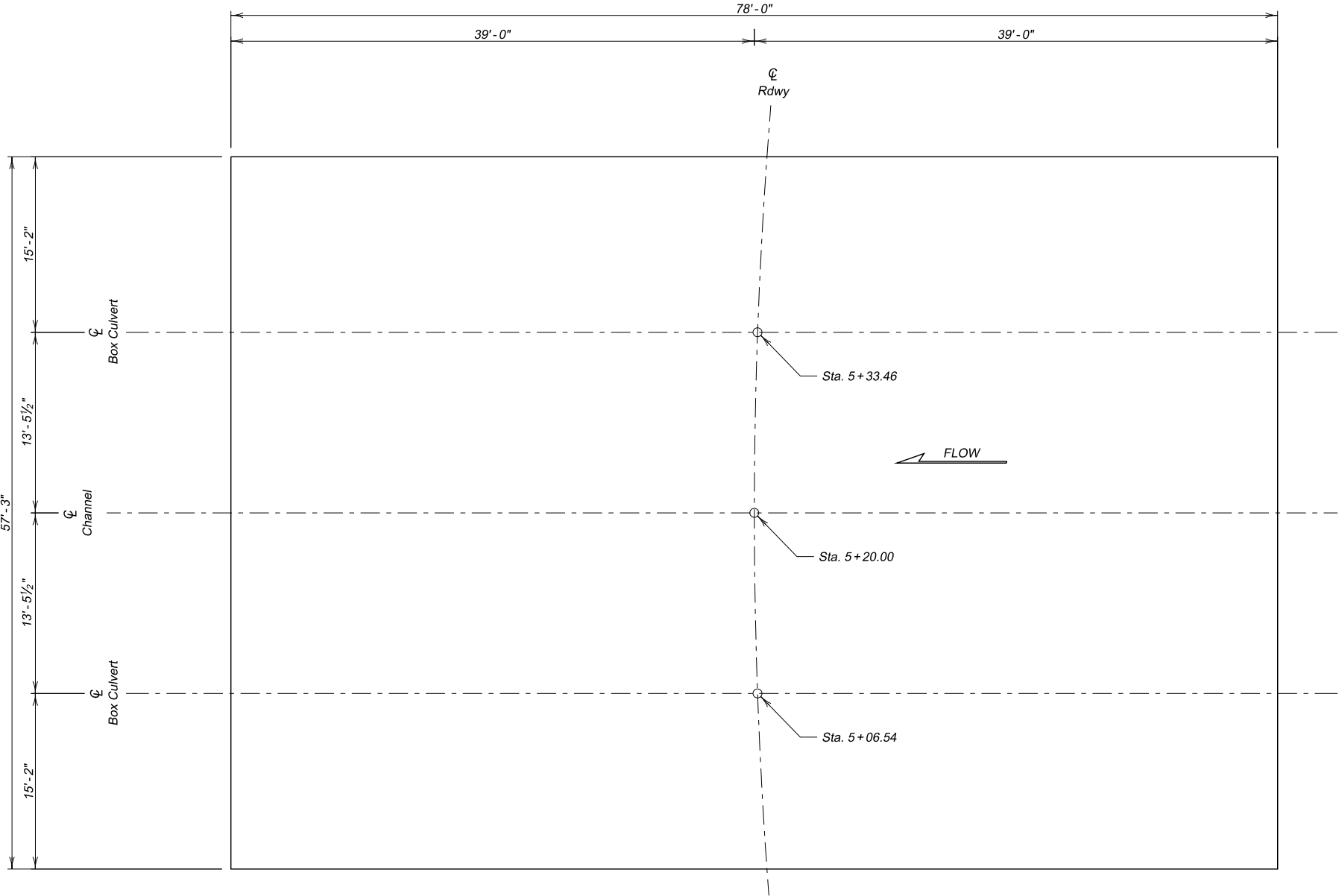
JUNE 2026

2 OF 6

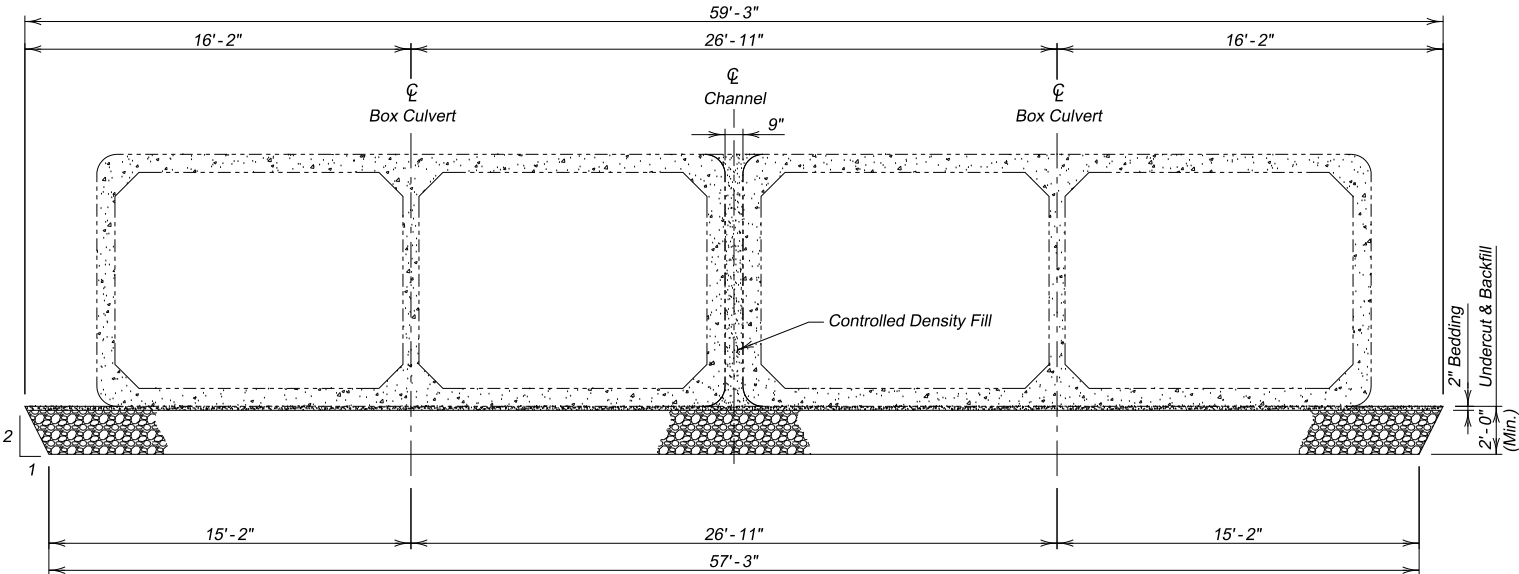
DESIGNED BY LAJ	CK. DES. BY MJB	DRAFTED BY LAJ	BRIDGE ENGINEER
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FOR BIDDING PURPOSES ONLY

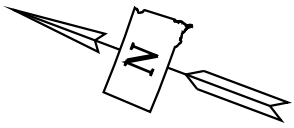
STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
	BRO-B 8026(37)	24	31



UNDERCUT LAYOUT
(Bottom Dimensions)



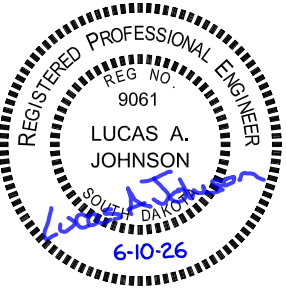
TYPICAL SECTION
(For Limits of Undercut)



ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
Box Culvert Undercut	Cu. Yd.	317

For payment, quantity is based on plan shown undercut dimensions and will not be measured unless the Engineer orders a change.



UNDERCUT DETAILS

FOR

4 - 12' x 8' BOX CULVERT (PRECAST)

S. FORK YELLOW BANK RIVER 0° SKEW
STA. 5+20.00 SEC. 18/19-T118N-R48W
STR. NO. 26-293-210 BRO-B 8026(37)
HL-93

GRANT COUNTY

S. D. DEPT. OF TRANSPORTATION

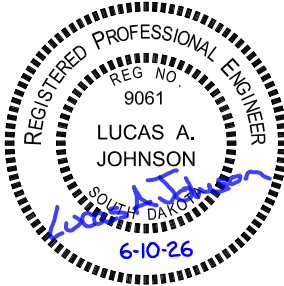
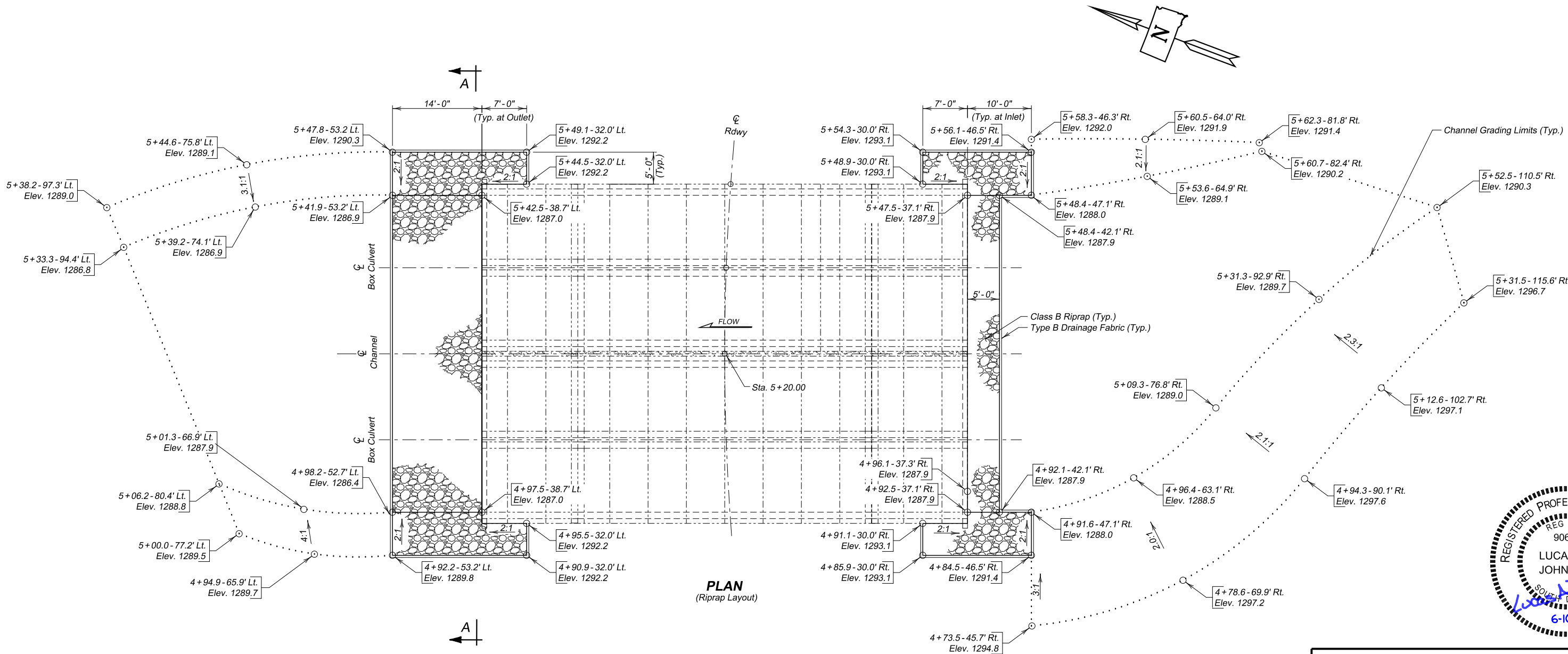
JUNE 2026

3 OF 6

DESIGNED BY LAJ	CK. DES. BY MJB	DRAFTED BY LAJ	BRIDGE ENGINEER
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FOR BIDDING PURPOSES ONLY

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
	BRO-B 8026(37)	25	31



ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Class B Riprap	Ton	157.8
Type B Drainage Fabric	Sq. Yd.	254

For estimating purposes only, a factor of 1.4 tons/cu.yd. was used to convert CuYds. to Tons.

RIPRAP AND CHANNEL GRADING DETAILS

FOR

4- 12' x 8' BOX CULVERT (PRECAST)

S. FORK YELLOW BANK RIVER 0° SKEW
STA. 5+20.00 SEC. 18/19-T118N-R48W
STR. NO. 26-293-210 BRO-B 8026(37)
HL-93

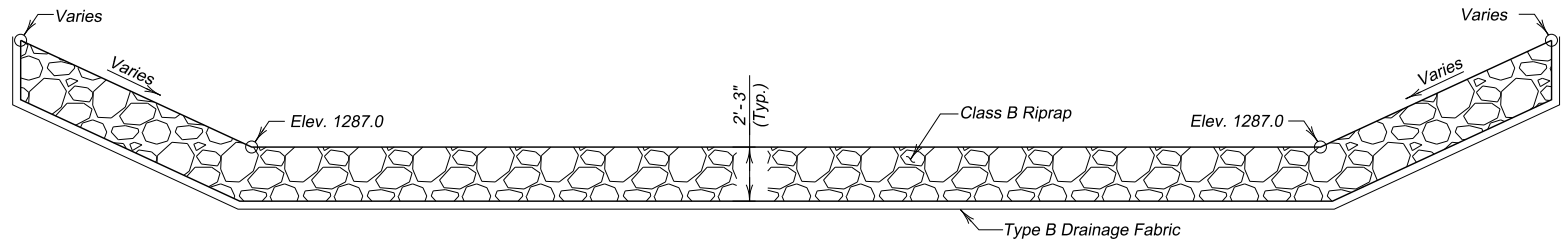
GRANT COUNTY

S. D. DEPT. OF TRANSPORTATION

JUNE 2026

4 OF 6

DESIGNED BY LAJ	CK. DES. BY MJB	DRAFTED BY LAJ	BRIDGE ENGINEER
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1. Year plates of the general dimensions shown will be constructed on all box culverts and bridges. The year plates will be constructed in reverse and attached to the forms in such a manner that the finished imprint in the concrete does not exceed one-half (1/2) inch in depth.
2. Year plates will be located on structure(s) as follows:
 - a. On cast-in-place box culverts the year plates will be four and one - half (4 1/2) inches below the top of the upstream parapet wall and centered laterally on the upstream face. On precast box culverts the year plate will be centered laterally on the upstream face of the top slab. Where an extended interior wall interferes with this location, the year plate will be centered in an adjacent barrel.
 - b. On bridges with six (6) inch curbs, "Jersey" shaped barriers with no endblocks, or "Single Slope" shaped barriers with no endblocks, the year plate will be centered vertically on the curb face approximately six (6) inches from the end of the bridge, or as designated by the Engineer. On bridges with barrier endblocks, the year plate will be centered on the upper sloped portion of the barrier approximately 5'-6" for "Jersey" shaped barriers from the end of the bridge and 7'-6" for "Single Slope" shaped barriers from the end of bridge, or as designated by the Engineer. There will be one year plate at each end of the bridge on opposite sides.
 - c. When the plans specify that both the original date of construction and the date of reconstruction are to be shown, one date will be placed as listed above and the other located adjacent to it. Both year plates will be shown at each end of the bridge on opposite sides.
3. There will be no separate measurement or payment made for year plates on box culverts and bridges. All costs for this work will be incidental to other contract items.



SINGLE SLOPE BARRIER

January 22, 2021

***S
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D
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T***

YEAR PLATE DETAILS

PLATE NUMBER
460.02

Sheet 1 Of 1



1. *All holes for tie bolts shall be cast-in-place, 16 inches from outside edge of joint. Cast in inserts or sleeves, if used, shall be made of a corrosion resistant material.*
2. *Ties shall be 1 inch ϕ and conform to the requirements of ASTM A36, ASTM A307, or ASTM F1554, Gr. 36. Nuts shall be heavy hex in conformance with ASTM A563. Washers shall conform to ASTM F436, Type 1. The welded pipe sleeve shall conform to ASTM A53, Grade B.*
3. *Welding and weld inspection shall be in conformance with AWS/ANSI D1.1 - (Current Year) Structural Welding Code - Steel.*
4. *Tie Bolt Assembly shall be galvanized in accordance with ASTM A153 or ASTM F2329 as applicable.*
5. *Tie Bolt Assembly details may vary from that shown, but alternate tie bolt assemblies are subject to testing to demonstrate equal strength. Submit details, through proper channels, to the Office of Bridge Design for approval.*
6. *All costs for furnishing and installing the precast box culvert tie bolt assembly shall be incidental to the contract unit price per Foot for "Precast Concrete Box Culvert, Furnish".*

March 21, 2016

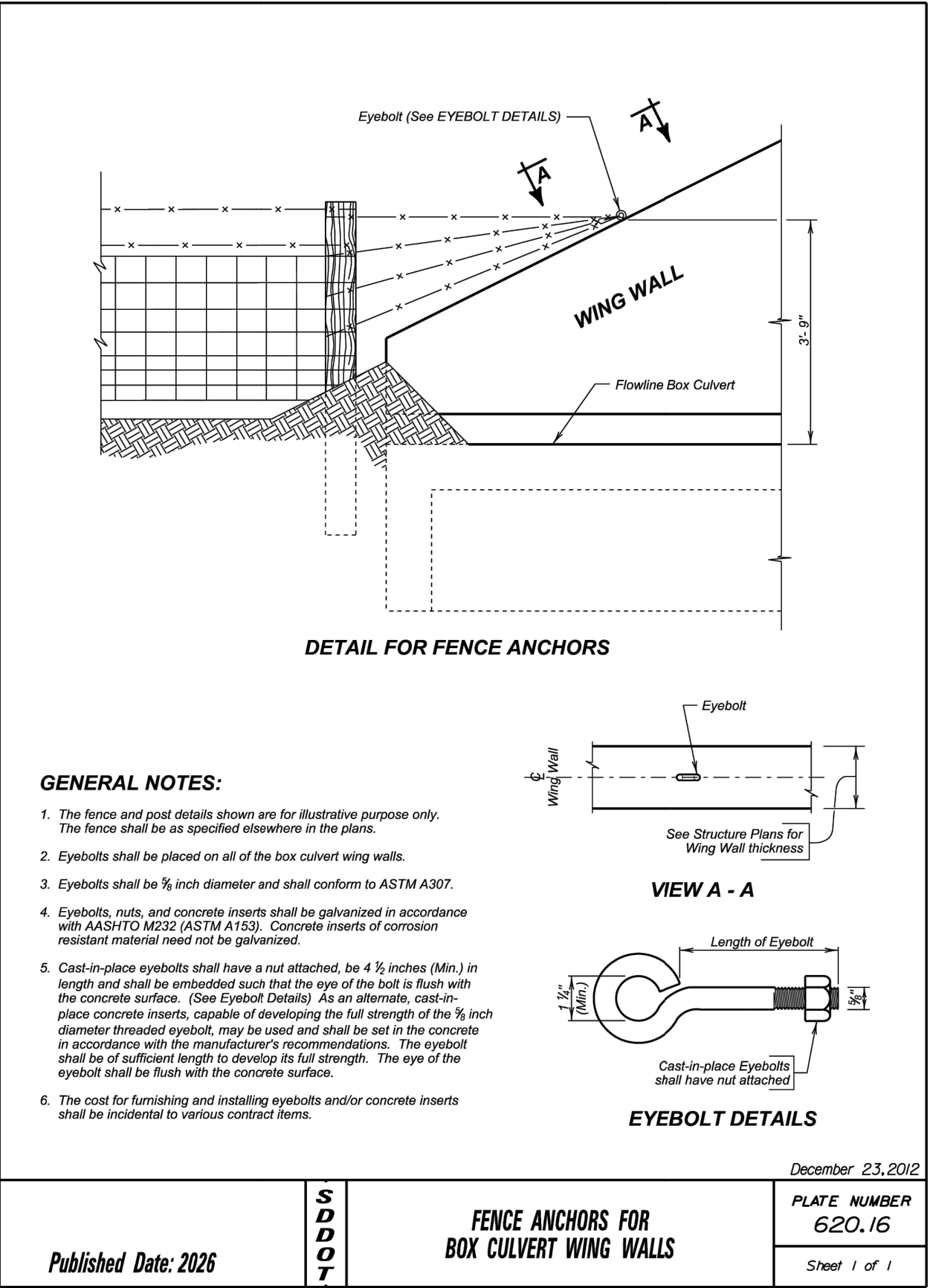
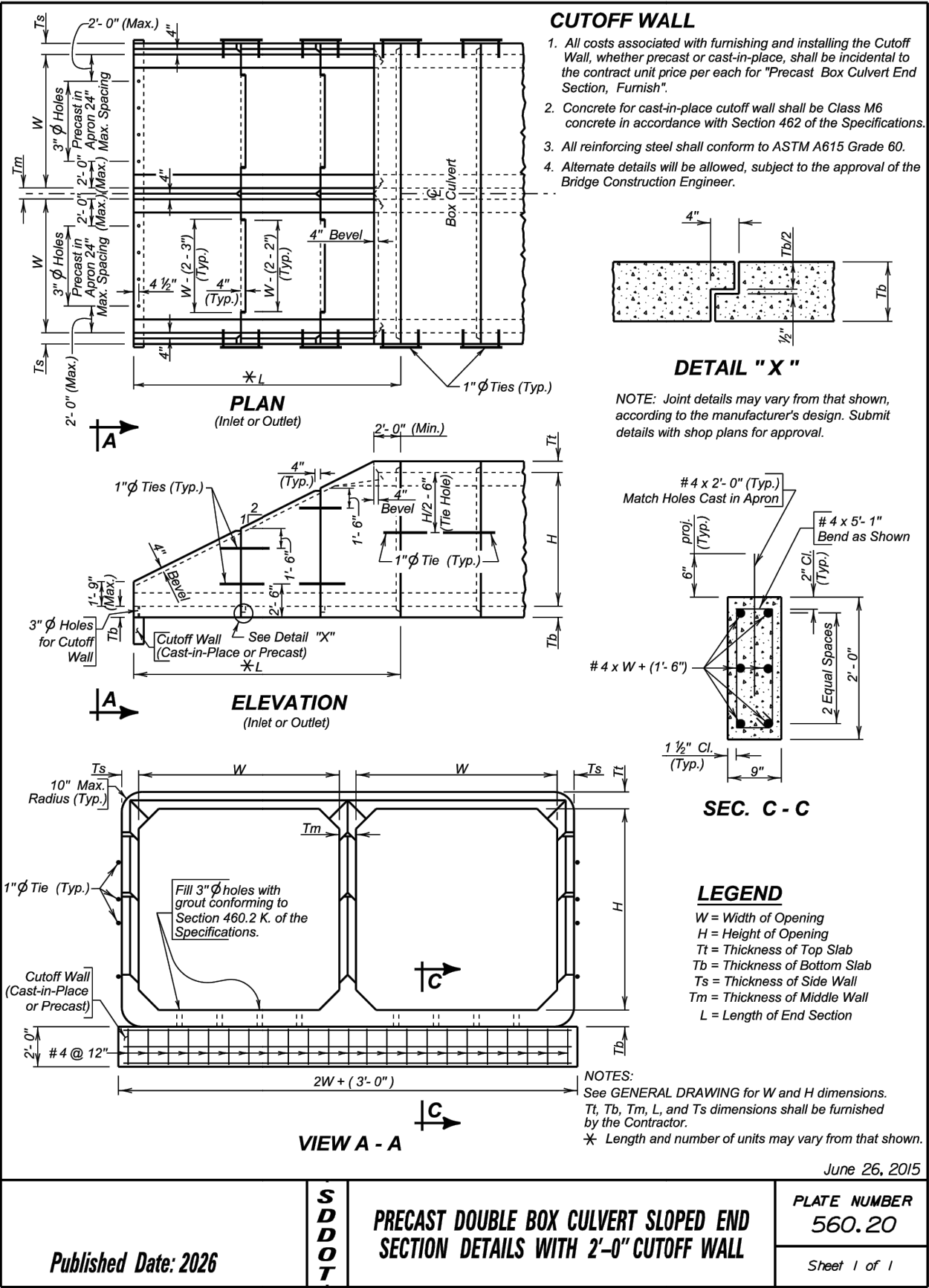
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PRECAST BOX CULVERT TIE BOLT ASSEMBLY DETAILS

PLATE NUMBER
560.01

Sheet 1 of 1

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	BRO-B 8026(37)	27	31



FOR BIDDING PURPOSES ONLY

BAI JOB # 24020.14

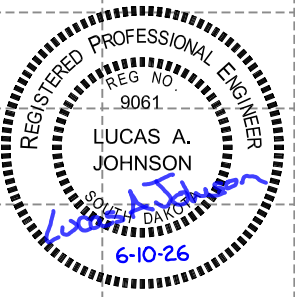
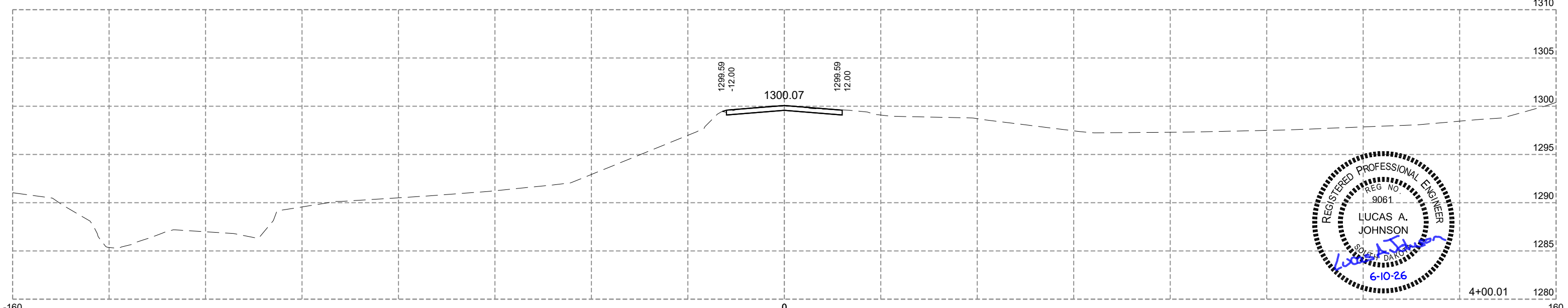
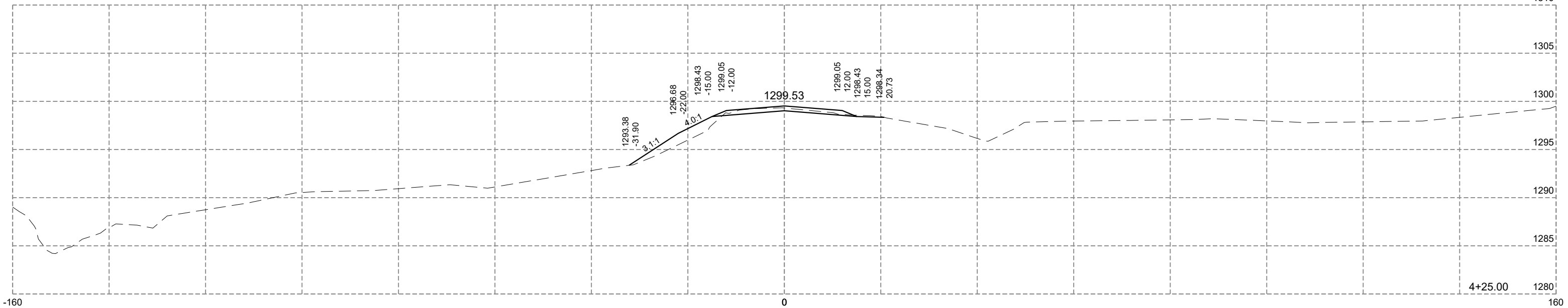
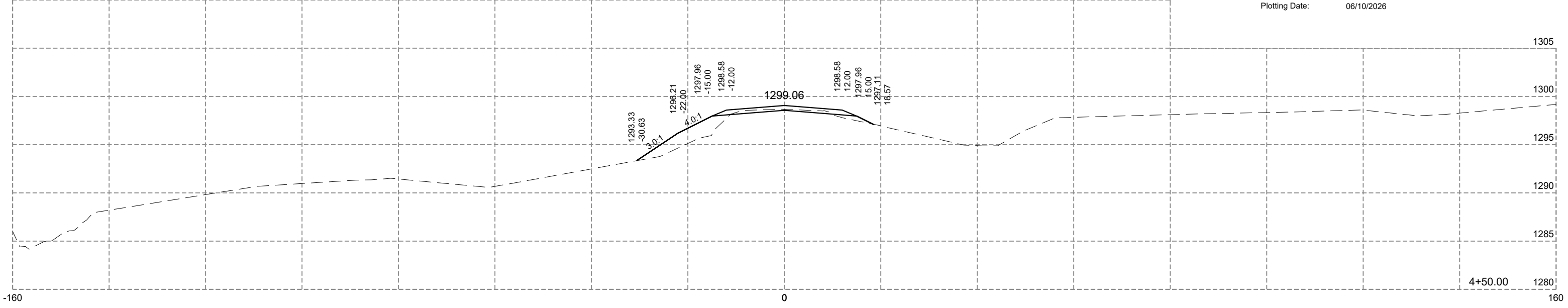


PROJECT	
BRO-B 8026(37)	

SHEET
28

TOTAL SHEETS
31

Plotting Date: 06/10/2026

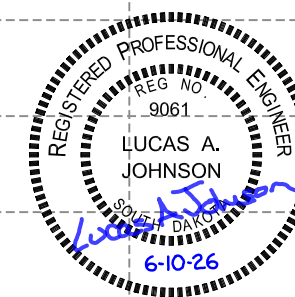
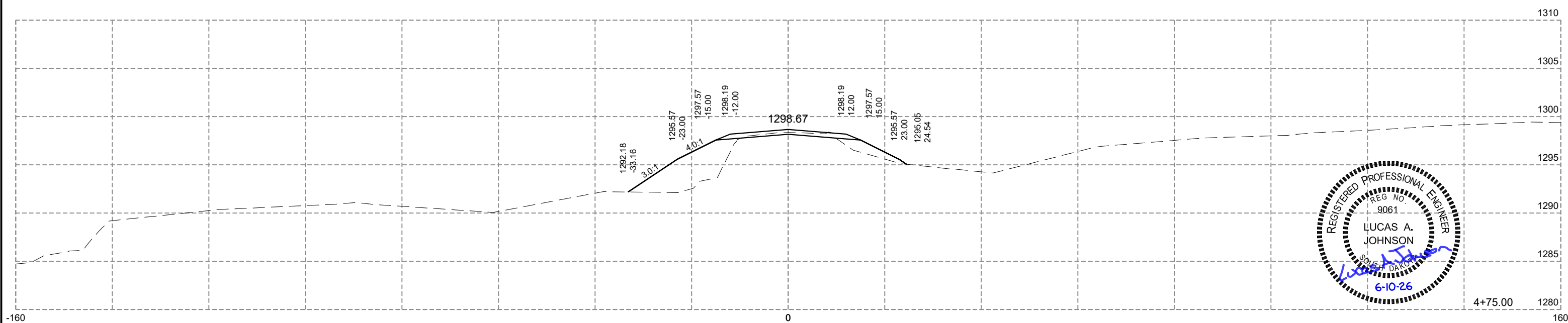
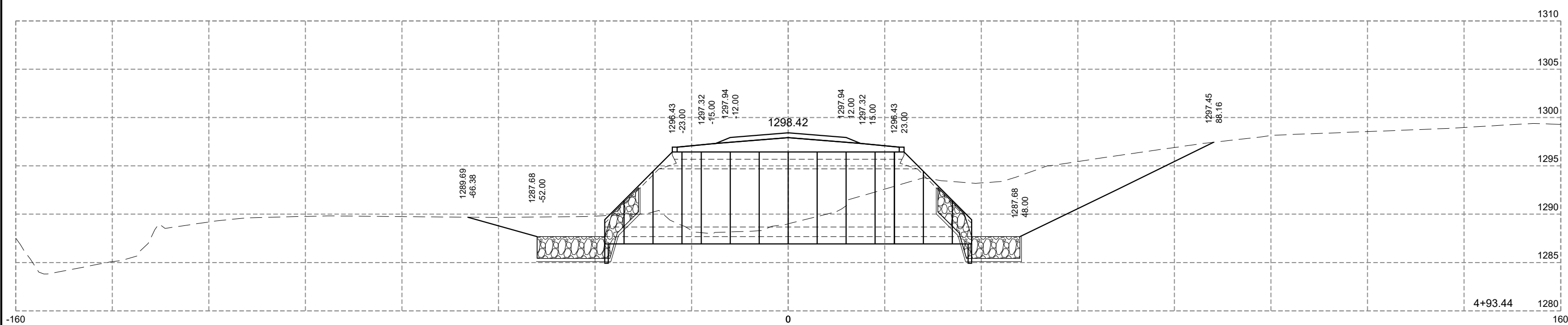
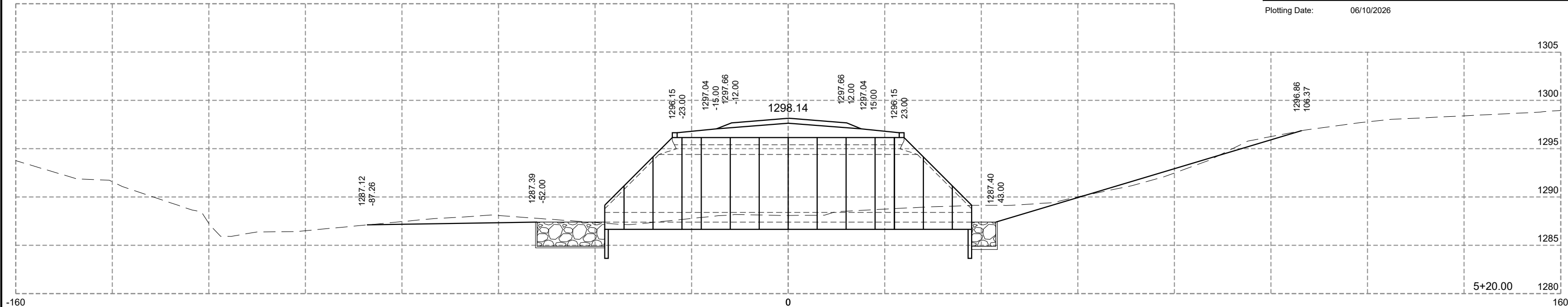




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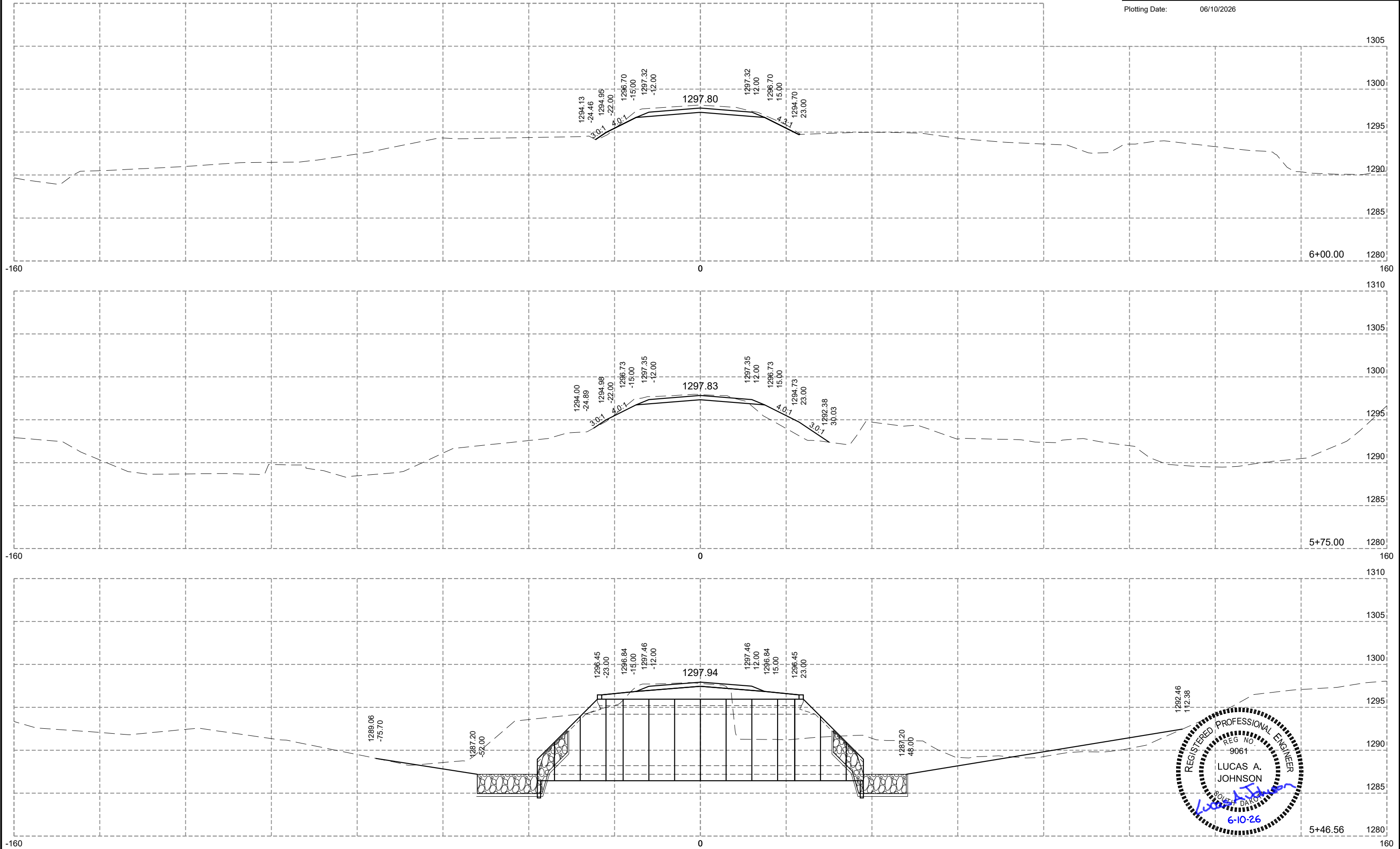
Plotting Date:

06/10/2026





FOR BIDDING PURPOSES ONLY



FOR BIDDING PURPOSES ONLY

BAI JOB # 24020.14



PROJECT
BRO-B 8026(37)

SHEET
31

TOTAL SHEETS
31

Plotting Date: 06/10/2026

