

FOR BIDDING PURPOSES ONLY

Revised 01/04/24

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	1	103

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED

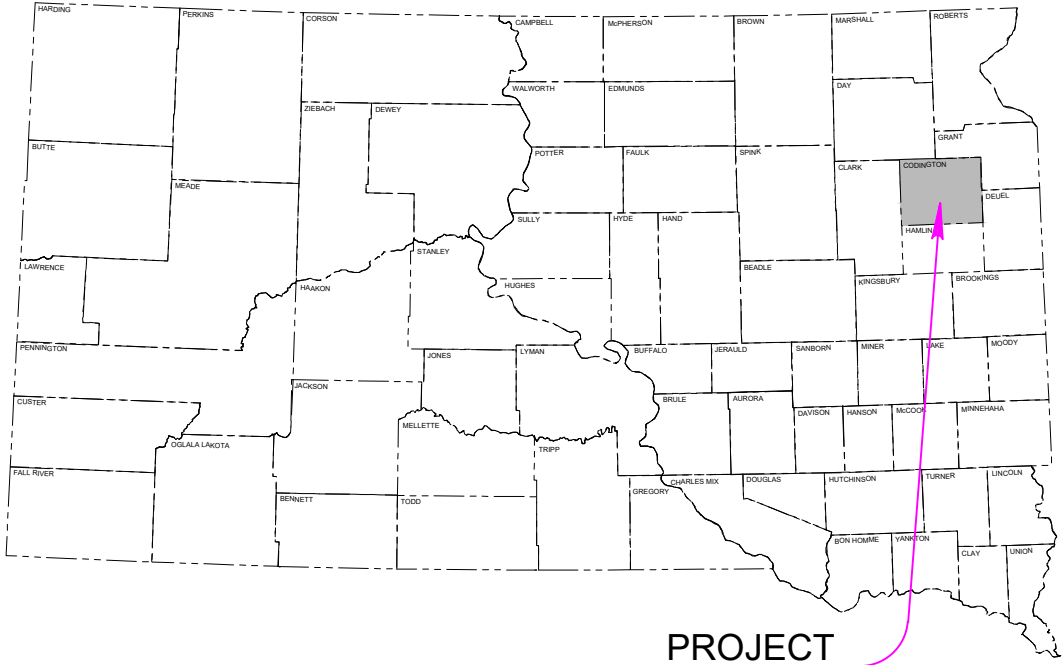
PROJECT P TAPU(34)
LAKE KAMPESKA TRAIL - PHASE 3B
CITY OF WATERTOWN
CODINGTON COUNTY

GRADING, STORM SEWER,
CURB RAMPS, AND AC SURFACING

PCN 08W3

INDEX OF SECTIONS

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PROJECT

R 54 W

R 53 W

END P TAPU(34)
STATION 152+10.0

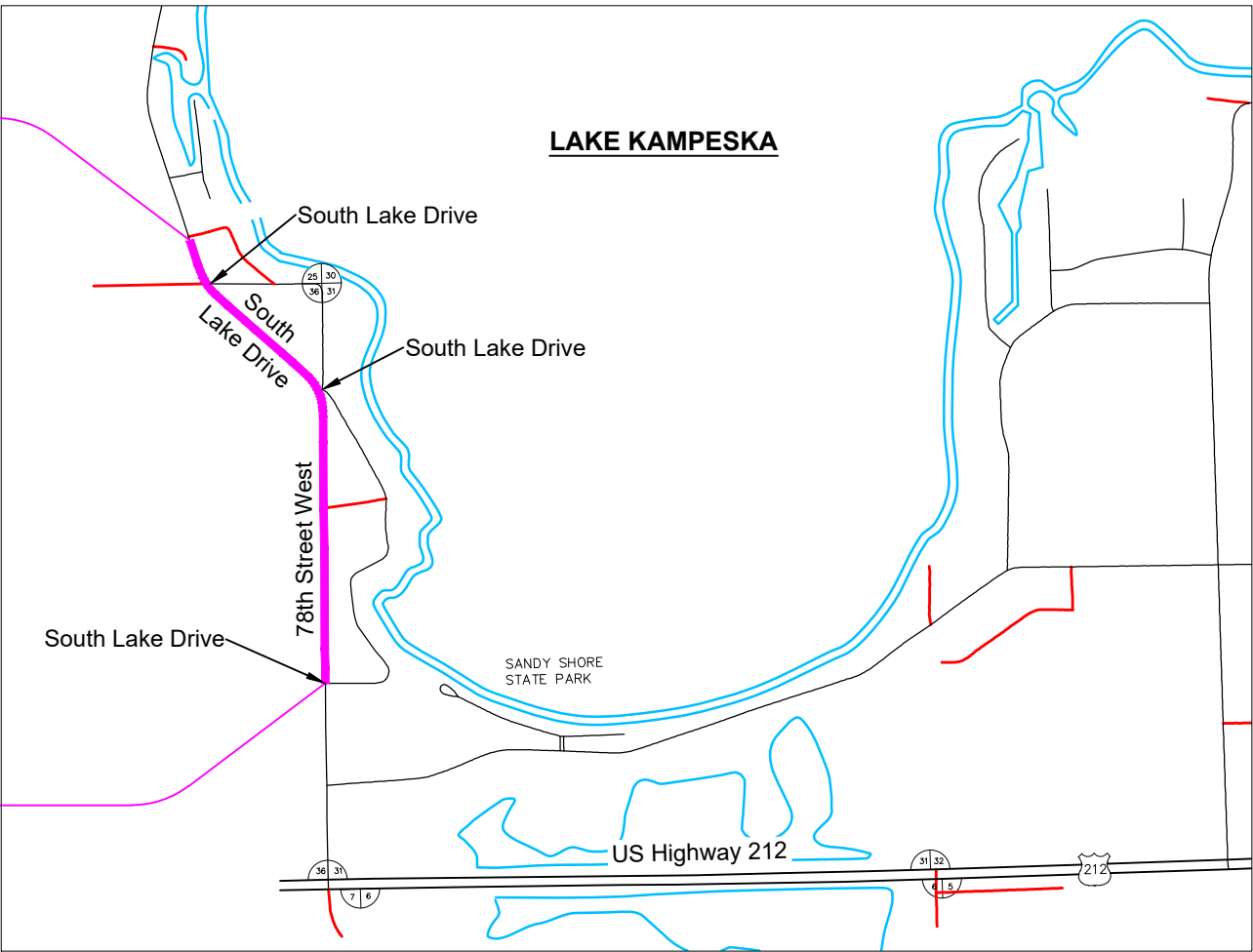
STORM WATER PERMIT

MAJOR RECEIVING
BODY OF WATER: LAKE KAMPESKA
AREA DISTURBED: 4.26 AC
TOTAL PROJECT AREA: 6.22 AC
APPROX. BEGIN LAT, LONG: 44.8952, -97.2492

08W3 DESIGN DESIGNATION

ADT (2022)	1150
ADT (2042)	1650
DHV	185
D	50%
T DHV	1.3%
T ADT	2.9%
V	35 MPH

BEGIN P TAPU(34)
STATION 108+06.2



I, Mathew D. Martin, hereby certify that these plans were prepared by me, or under my direct supervision and that I am a duly registered engineer under the laws of the State of South Dakota.

Mathew D. Martin
S.D. No. 15561
Date 1/4/2024

PLANS BY: **infrastructure** design group, inc. March 20, 2024
20 S Maple Street, Watertown, SD 57201

ESTIMATE OF QUANTITIES FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU(34)	2	103

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	0.418	Mile
009E3250	Miscellaneous Staking	0.210	Mile
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
100E0020	Clear and Grub Tree	30	Each
100E0100	Clearing	Lump Sum	LS
110E1100	Remove Concrete Pavement	182.7	SqYd
110E1700	Remove Silt Fence	150	Ft
110E7150	Remove Sign for Reset	5	Each
110E7500	Remove Pipe for Reset	56	Ft
110E7510	Remove Pipe End Section for Reset	2	Each
120E0010	Unclassified Excavation	5,420	CuYd
120E0600	Contractor Furnished Borrow Excavation	3,725	CuYd
120E6300	Water for Vegetation	1,475.0	MGal
230E0010	Placing Topsoil	2,580	CuYd
250E0020	Incidental Work, Grading	Lump Sum	LS
260E1010	Base Course	2,025.0	Ton
260E3010	Gravel Surfacing	20.0	Ton
320E1200	Asphalt Concrete Composite	1,100.0	Ton
380E0030	7" Nonreinforced PCC Pavement	209.5	SqYd
450E0123	18" RCP Class 3, Furnish	10	Ft
450E0130	18" RCP, Install	10	Ft
450E0143	24" RCP Class 3, Furnish	10	Ft
450E0150	24" RCP, Install	10	Ft
450E2008	18" RCP Flared End, Furnish	1	Each
450E2009	18" RCP Flared End, Install	1	Each
450E2016	24" RCP Flared End, Furnish	1	Each
450E2017	24" RCP Flared End, Install	1	Each
450E9000	Reset Pipe	56	Ft
450E9001	Reset Pipe End Section	2	Each
632E1320	2.0"x2.0" Perforated Tube Post	55.5	Ft
632E2510	Type 2 Object Marker Back to Back	2	Each
632E3500	Reset Sign	5	Each
634E0010	Flagging	8.0	Hour
634E0110	Traffic Control Signs	320.9	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	2	Each
651E0060	6" Concrete Sidewalk	364	SqFt
651E7000	Type 1 Detectable Warnings	60	SqFt
671E7010	Adjust Manhole	3	Each
700E0210	Class B Riprap	80.0	Ton
730E0251	Special Permanent Seed Mixture 1	80	Lb
730E0252	Special Permanent Seed Mixture 2	435	Lb

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
731E0100	Fertilizing	1,705	Lb
732E0100	Mulching	10.0	Ton
732E0250	Fiber Mulching	620	Lb
734E0602	Low Flow Silt Fence	600	Ft
734E0610	Mucking Silt Fence	42	CuYd
734E0620	Repair Silt Fence	150	Ft
734E5010	Sweeping	30	Hour
831E0110	Type B Drainage Fabric	79	SqYd
900E0010	Refurbish Single Mailbox	3	Each
900E1310	Concrete Washout Facility	1	Each
900E1320	Construction Entrance	3	Each

SPECIFICATIONS

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



ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. During construction, the Project Engineer will verify that the Contractor has met Environmental Commitment requirements. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

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

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

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

COMMITMENT A: AQUATIC RESOURCES

COMMITMENT A1: WETLANDS

All efforts to avoid and minimize wetland impacts from the project have resulted in approximately 0.54 acre of wetlands (includes temporary and permanent) becoming impacted. Refer to Section B – Grading Plans/plans for location and boundaries of the impacted wetlands.

Table of Impacted Wetlands

Wetland No.	Station	Perm. Impact Left (Acres)	Perm. Impact Right (Acres)	Temp. Impact Left (Acres)	Temp. Impact Right (Acres)	Total Impact (Acres)
1	117+50 - 119+00	0.06	-	0.02	-	0.08
2	125+75 - 129+25	0.21	-	0.25	-	0.46
Total		0.27		0.27		0.54

Action Taken/Required:

SDDOT will acquire 1.155 credits from the Hatch wetland mitigation bank site or Ducks Unlimited In-Lieu Fee program to mitigate permanent impacts.

Temporary impacts identified in the Table of Impacted Wetlands will not be mitigated as original contours and elevations will be re-established. Prior to initiating temporary work in wetlands, the Contractor will submit a plan to the Project Engineer in accordance with Section 7.21 D 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 B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B6: MIGRATORY BIRDS WORK RESTRICTION

Migratory birds are known to use the project area for nesting, which primarily occurs from April 1st to July 15th.

Action Taken/Required:

The Contractor is responsible for contracting the services of a qualified biologist for conducting preconstruction migratory bird surveys in suitable areas that have not been mowed or cleared prior to April 1st to determine if there are current nests and to determine offsetting measures to compensate for impacts to migratory birds. A survey will be conducted annually for each year of construction. Contractor will coordinate the survey findings with the Project Engineer. If any nests are found, appropriate minimization measures will need to be developed in cooperation with the Environmental Office.

Construction activities should not occur in the locations listed in the table below during the migratory bird work restriction without prior approval from the SDDOT Environmental Office to avoid conflicts with nesting migratory birds.

Station	Migratory Bird Restriction
108+06 to 152+10 (L)	April 1 to July 15
108+06 to 152+10 (L)	Mow/Clear prior to April 1, 2024

COMMITMENT C: WATER SOURCE

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

The Contractor will not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

Action Taken/Required:

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

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

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

COMMITMENT D: WATER QUALITY STANDARDS

COMMITMENT D1: SURFACE WATER QUALITY

Lake Kampeska is classified as a warm water permanent fishery with a total suspended solids standard of less than 90 mg/L 30-day average, less than 158 mg/L daily maximum.

Lake Kampeska is classified as fish and wildlife propagation, recreation, irrigation, and stock watering waters. Because of these beneficial uses, special construction measures may have to be taken to ensure that this water body is not impacted.

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 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 cold water permanent fish life propagation waters according to the ARSD 74:51:01:45. For discharges to waters of the state classified as cold water 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 not required to be covered under a General Permit for Stormwater Discharges Associated with Construction Activities, the Contractor will obtain the General Permit for Temporary Discharge Activities from the DANR Surface Water Program, 605-773-3351.

<
https://danr.sd.gov/OfficeOfWater/SurfaceWaterQuality/docs/DANR_TemporaryDischargeNOI2018Fillable.pdf >

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

Action Taken/Required:

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

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

COMMITMENT E: STORM WATER (CONTINUED)

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 Certification 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_CGPAppendixCCA2018Fillable.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.

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 H: WASTE DISPOSAL SITE

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

Action Taken/Required:

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

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

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

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

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

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

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

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



STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU(34)	5	103

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 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.



GRADING OPERATIONS

Water for Embankment is estimated at the rate of 10 gallons of water per cubic yard of Embankment minus Waste.

The estimated cubic yards of excavation and/or embankment required to construct outlet ditches, ditch blocks, and approaches are included in the earthwork balance notes on the profile sheets.

Special ditch grades and other sections of the roadway different than the typical sections will be constructed to the limits shown on the cross sections. If significant changes to the cross sections are necessary during construction, the Engineer will contact the Designer for the proposed change.

Generally, all shallow inlet and outlet ditches as noted on the plan sheets will be cut with an 8-foot wide bottom with 4:1 backslopes. However, the Engineer may direct the Contractor to adjust the ditch width for proper alignment with the drainage structure.

CLEARING

Before clearing activities begin, the Contractor shall contact the Engineer to determine the limits of clearing for the project. If the trees or shrubs that are supposed to remain within the limits of work are damaged or destroyed by the Contractor, the Contractor shall replace them with the same size and type at the Contractor's Expense.

Clearing activities include removing the trees in the areas listed in the Table of Clearing. The area is approximately 0.03 acres of tree removal. Payment for removal of these trees will be paid at the lump sum price for "Clearing".

Removal of trees along South Lake Drive shall be paid for at the contract unit price per each for "Clear and Grub Tree".

TABLE OF CLEARING

Station	to	Station	Offset (L/R)	Description	Quantity (Acres)
122+87		123+08	L	Grading	0.01
123+25		123+81	L	Grading	0.02
Total:					0.03

TABLE OF CLEAR AND GRUB TREE

Station	Offset (L/R)	Quantity (Each)
107+94	40' L	1
109+02	39' L	1
109+28	39' L	1
109+53	39' L	1
109+77	39' L	1
110+02	39' L	1
110+93	45' L	1
111+24	46' L	1
111+55	48' L	1
111+80	22' L	1
121+44	20' L	1
122+29	61' L	1
122+86	20' L	1
122+98	20' L	1
123+25	47' L	1
123+34	22' L	1
124+38	45' L	1
124+69	26' L	1
125+46	20' L	1
125+62	23' L	1
125+90	24' L	1
131+41	14' L	1
133+22	40' L	1
134+78	54' L	1
134+94	49' L	1
135+32	45' L	1
136+56	31' L	1
138+25	30' L	1
138+91	26' L	1
151+30	33' L	1
Total:		30

SHRINKAGE FACTOR: Embankment + 35%

TABLE OF EXCAVATION QUANTITIES BY BALANCES

Station to	Station	**		* Contractor
		Excavation (CuYd)	Embankment +35% (CuYd)	Furnished Borrow Exc. (CuYd)
107+85	152+10	2015	5740	3725
Totals:		2015	5740	3725

* The quantities for these items are in the Estimate of Quantities under their respective contract items.

** The quantities for these items are for information only.

TABLE OF UNCLASSIFIED EXCAVATION

	(CuYd)
Excavation	2015
Topsoil	3405
Total	5420

PROCEDURES FOR DETERMINING UNCLASSIFIED EXCAVATION QUANTITY

When plan quantities are used for payment, the Unclassified Excavation quantity will be used for final payment and the plans quantity of Topsoil and salvaged surfacing items listed in the Table of Unclassified Excavation will not be adjusted according to field measurements.

The following paragraphs are general earthwork information and information in regard to computing the Unclassified Excavation quantity when final cross sections are taken in the field:

The Unstable Material Excavation quantity is included in the Excavation quantity listed in the Table of Unclassified Excavation. When finaling a project, the Unstable Material Excavation quantity will be added to the Excavation quantity to compute the Unclassified Excavation quantity.

The Topsoil quantity in the Table of Unclassified Excavation is an estimate. When finaling a project, the total quantity of field measured Topsoil will be used in place of the estimated Topsoil quantity. The quantity of Topsoil from the cuts will be paid for twice as Unclassified Excavation, as it will be in both the Excavation and Topsoil quantities. This will be full compensation for Excavation, which includes necessary undercutting to provide space for placement of topsoil.

The Excavation quantities from individual balances and the Table of Unclassified Excavation have been reduced by the volume of in place surfacing that will be removed and/or salvaged.



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 borrow material will be approved by the Engineer. The plans quantity for “Contractor Furnished Borrow Excavation” as shown in the Estimate of Quantities will be the basis of payment for this item.

Restoration of the Contractor furnished borrow excavation site will be the responsibility of the Contractor.

TABLE OF CONCRETE DRIVEWAY PAVEMENT REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
108+15		108+80	L	182.7
Total:				182.7

INCIDENTAL WORK, GRADING

Location	Remarks
110+62 – 25’ L	Remove Wood Post
111+81 – 19’ L	Remove Wood Post
115+03 – 19’ L	Remove Wood Post
116+99 – 19’ L	Remove Wood Post
117+47 – 20’ L	Remove Wood Post
128+86 – 12’ L	Remove Wood Post
129+31 – 23’ L	Remove Wood Post
133+21 – 18’ L	Remove Wood Post
134+08 – 17’ L	Remove Wood Post
147+97 – 36’ L	Remove Wood Post
148+04 – 47’ L	Remove Wood Post
148+12 – 60’ L	Remove Wood Post
150+24 – 17’ L	Remove Wood Post

STORM SEWER

Reinforced concrete pipe may be bell and spigot. The pipe sections will be adjoined such that the ends are fully entered and the inner surfaces are reasonably flush and even.

Lift holes in the reinforced concrete pipe will be plugged with grout.

Watertight joints are required for reinforced concrete pipe, drop inlets, manholes, and junction boxes where storm sewers run parallel to and within 10 feet horizontally from existing or proposed water mains.

Watertight joints are required where reinforced concrete pipes, drop inlets, manholes, or junction boxes cross water mains and are separated a distance of 18 inches or less, above or below, the water main.

If watertight joints are required then the watertight joints will extend for a distance of 10 feet beyond the water main. This measurement will be from the sealed concrete joint to the outer most surface of the water main.

Watertight joint seals will conform to the following requirements:

- Reinforced Concrete Pipe (Circular):** Gasketed pipe will conform to the requirements of ASTM C443 and the gasket will be in conformance with Section 990 of the Specifications. Non-gasketed concrete pipe will be sealed with a mastic joint seal conforming to the requirements of ASTM C990 and encased with a minimum 2-foot wide by 6-inch thick M6 concrete collar reinforced with 6x6 W2.9 x W2.9 wire mesh.
- Reinforced Concrete Pipe (Arch):** Gasketed pipe will conform to the requirements of ASTM C443 and the gasket will be in conformance with Section 990 of the Specifications. Non-gasketed concrete pipe joints will be sealed with a hydrophilic flexible water stop seal and wrapped with a 1-foot wide strip of fabric above the cradle. The fabric will conform to the requirements of Section 831 of the Specifications for Type A Drainage Fabric. The hydrophilic flexible water stop will be from the list below.
- Drop Inlets, Manholes, and Junction Boxes:** Joints will be sealed with one of the following methods:
 - A flexible strip seal placed in the joints conforming to the requirements of ASTM C990 and the perimeter encased with a minimum 2-foot wide by 6-inch thick M6 concrete collar reinforced with 6x6 W2.9 x W2.9 wire mesh.
 - A hydrophilic flexible water stop seal placed in the joints and a 1-foot wide strip of fabric wrapped around the perimeter of the pipe. The fabric will conform to the requirements of Section 831 of the Specifications for Type A Drainage Fabric. The hydrophilic flexible water stop will be from the list below.
 - A self-adhesive external joint seal wrap. The seal wrap will be from the list below.

Approved List of Self-adhesive Joint Wrap

Product	Manufacturer
Mar Mac Seal Wrap	Mar Mac Construction Products McBee, SC 843-335-5909 www.marmac.com
ConWrap CS-212	Concrete Sealants, Inc. Tipp City, OH 800-332-7325 conseal.com

Approved List of Hydrophilic Flexible Water Stop Seal:

Product	Manufacturer
Waterstop RX	Cetco Hoffman Estates, IL 800-527-9948 www.cetco.com
Conseal CS-231	Concrete Sealants, Inc. Tipp City, OH 800-332-7325 conseal.com

Gaskets and seals (mastic, waterstop, and seal wraps) will be installed in accordance with the Manufacturer’s recommendations.

The cost for furnishing and installing all gaskets, mastic joint seal, water stop seal, seal wrap, concrete collars, and for plugging the lift holes will be incidental to the contract unit price per foot for the corresponding pipe contract item.

TABLE OF REINFORCED CONCRETE STORM SEWER

Station	Offset (L/R)	Description	Quantity	Units
128+85	L	24” RC Pipe	10	Ft
128+85	L	24” RC Flared End Section	1	Each
141+75	L	18” RC Pipe	10	Ft
141+75	L	18” RC Flared End Section	1	Each

ADJUSTMENT OF MANHOLES

The Contractor will adjust manholes to the extent necessary on this project. Adjusting the manholes may consist of removing the upper course of brick or removing the concrete walls, replacing the removed materials with brick or Class M6 concrete, placing adjusting rings if necessary, and resetting the manhole frame and lid. The elevation of the lid will be set at the same elevation of the adjacent new pavement or surrounding ground. All manhole frames, lids, and rings that are cracked or broken due to carelessness of the Contractor will be replaced with new manhole frames, lids, and rings that conform with the Specifications at the Contractor’s expense. Manholes will be adjusted to the satisfaction of the Engineer. All costs involved in adjusting the manholes will be incidental to the contract unit price per each for “Adjust Manhole”.

The Engineer may direct adjustment of manholes that were not included in these plans. Payment for adjusting manholes that were not included in the plans will be at the contract unit price per each for “Adjust Manhole”.



TABLE OF ADJUST MANHOLES

Station	L/R	Type of Adjustment
108+49	L	Adjust rim elevation
110+54	L	Add barrel section (approx. 1.05'), Adjust rim elevation
110+55	L	Add barrel section (approx. 2.25'), Adjust rim elevation

TABLE OF RIPRAP AND DRAINAGE FABRIC

Station	L/R	Class B Riprap (Ton)	Type B Drainage Fabric (SqYd)
110+15	L	80.0	79
Totals:		80.0	79

TYPE 1 DETECTABLE WARNINGS

Detectable warnings will be in compliance with the Americans with Disabilities Act regulations.

The detectable warnings will be installed according to the manufacturer's installation instructions.

A concrete thickness equal to the adjacent concrete sidewalk thickness and 2 inches of granular cushion material will be placed below the Type 1 Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness will be transitioned at the rate of 1" per foot to match the adjacent concrete sidewalk thickness.

The detectable warnings will be a brick red color for application in concrete curb ramps. Cast iron plates may be a natural patina (weathered steel).

Type 1 Detectable Warning Panels will be one of the following products:

Type 1 Detectable Warnings	
Product	Manufacturer
Detectable Warning Plate Cast Iron Plate	Neenah Foundry Company Neenah, WI 800-558-5075 http://www.neenahfoundry.com/
Detectable Warning Plate Cast Iron Plate	Deeter Foundry Lincoln, NE 800-234-7466 http://www.deeter.com/
Detectable Warning Plate Cast Iron Plate(No Coating)	East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 http://www.ejiw.com

Iron Dome
Cast Iron Detectable
Warning Tile

ADA Solutions, Inc.
323 Andover Street
Suite 3
Wilmington, MA 01887
800-372-0519
<https://adatile.com>

TufTile (wet-set)
Cast Iron
Replaceable Tile

TufTile
1200 Flex Court
Lake Zurich, IL 60047
888-960-8897
<http://www.tuftile.com/>

Advantage Tactile
Detectable Warning
Cast Iron Plate

Advantage Tactile Systems, Inc.
241 Main Street, Suite 100
Buffalo, NY 14203
800-679-4022
<https://advantagetactile.com/>

TABLE OF TYPE 1 DETECTABLE WARNINGS

Station	L/R	Quantity (SqFt)
108+10.20	0.27' L	20
147+96.43	11.00' L	20
148+61.87	11.00' L	20
Total:		60

TABLE OF 7" PCC APPROACH PAVEMENT

Station	L/R	Opening (Ft)	Type	Quantity (SqYd)
108+50	L	64	Special	209.5
Total:				209.5

TABLE OF 6" CONCRETE SIDEWALK

Station	to	Station	L/R	Quantity (SqFt)
108+05.20		108+15.19	L	162.0
147+86.71		147+96.60	L	101.0
148+61.71		148+71.59	L	101.0
Total:				364.0

MAILBOXES

The Contractor will reset the existing mailboxes on new posts with the necessary support hardware for single mailbox assemblies. The local Postmaster will determine the recommended mounting height of the mailboxes throughout the project. The Contractor will coordinate with the Engineer on the proper postal representative to contact.

All costs for removing existing mailboxes, providing temporary mailboxes, and resetting mailboxes with new posts and necessary support hardware will be incidental to the contract unit price per each for "Refurbish Single Mailbox".

TABLE OF REFURBISH MAILBOX

Station	L/R	Single (Each)
126+51	L	1
142+23	L	1
143+64	L	1
Total:		3

UTILITIES

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

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

WATER FOR COMPACTION

Water for compaction of earth embankments will be applied at the rate of 10 gallons per cubic yard of Unclassified Excavation. The cost of the water will be incidental to the contract unit price per cubic yard for Unclassified Excavation.

The cost of water for compaction of the granular material will be incidental to the various other contract items. Six percent plus or minus moisture will be required at the time of compaction unless otherwise directed by the Engineer.



ASPHALT CONCRETE COMPOSITE

Asphalt Concrete Composite will include MC-70 Asphalt for Prime placed at the rate of 0.30 gallons per square yard. The Asphalt for Prime will be applied to the Base Course for the full width of the bottom layer of Asphalt Concrete Composite plus one foot additional on the outside shoulder.

Asphalt for tack SS-1h or CSS-1h will be applied prior to each lift of Asphalt Concrete Composite. Asphalt for tack will be applied at a rate of 0.09 gallons per square yard on existing pavement or milled asphalt concrete surfaces and at a rate of 0.06 gallons per square yard on primed base course or new asphalt concrete pavement. The Asphalt for tack will be applied for the full width of the bottom layer of Asphalt Concrete Composite plus one-half foot additional on the outside shoulder.

SEQUENCE OF OPERATIONS

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

GENERAL TRAFFIC CONTROL

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

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

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

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

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

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

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

All haul trucks will be equipped with an additional flashing amber light that is visible from the backside of the haul truck. The costs for the flashing amber lights will be incidental to the various related contract items.

At no time will a vertical drop-off of greater than 3 inches be left overnight adjacent to the traveled way. The Contractor will utilize embankment material to ensure a 3-inch vertical drop-off is not exceeded. The slope of the embankment material will not be steeper than a 4:1 within 30 feet of the traveled way.

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

The Contractor will notify businesses/homeowners a minimum of two weeks prior to construction to inform them of upcoming construction and again a minimum of 48 hours prior to any blocked access to make appropriate arrangements.

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

		CONVENTIONAL ROAD			
SIGN CODE	SIGN DESCRIPTION	NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
R1-1	STOP	2	30"	5.2	10.4
W1-4R	REVERSE CURVE RIGHT	1	48" x 48"	16.0	16.0
W3-1a	STOP AHEAD (symbol)	2	48" x 48"	16.0	32.0
W7-3aP	NEXT XX MILES (plaque)	1	36" x 18"	4.5	4.5
W20-1	ROAD WORK AHEAD	11	48" x 48"	16.0	176.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W21-5aR	RIGHT SHOULDER CLOSED	1	48" x 48"	16.0	16.0
W21-5bR	RIGHT SHOULDER CLOSED AHEAD	1	48" x 48"	16.0	16.0
G20-2	END ROAD WORK	4	36" x 18"	4.5	18.0
		CONVENTIONAL ROAD SQFT			320.9

INCIDENTS

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

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

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

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

The Contractor should be prepared to relocate advance warning signs if determined to be necessary for a major traffic incident lasting more than two

hours. Fixed location ground mounted signs may be covered and additional portable signs provided.

Cost for the relocation of an advance warning sign due to an incident will be 50% of the designated sign rate. Flaggers will be paid for at the contract unit price per hour for "Flagging".

PRESS RELEASE ANNOUNCEMENTS

The City of Watertown Engineering Department will prepare a press release to be released 5 days prior to any phase change or any other major change that affects traffic flow. The City of Watertown Engineering Department will be responsible to keep law enforcement, emergency services, and the traveling public notified of changes in project access. The Contractor will provide the Engineer with pertinent information 7 days prior to any phase change or any other major change that affects traffic flow.

PLACING TOPSOIL

The thickness will be approximately 6 inches within the right-of-way and 6 inches on permanent and temporary easements.

The estimated amount of topsoil to be placed is as follows:

Station	to	Station	Topsoil (CuYd)
107+85		152+10	2580
Total:			2580



MYCORRHIZAL INOCULUM

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

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

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

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

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

FERTILIZING

A commercial fertilizer with a minimum guaranteed analysis of 13-13-13, 18-46-0, 11-52-0, or an approved alternate fertilizer sold for use as a lawn starter fertilizer will be applied to all areas designated for permanent seeding. The application rate of fertilizer will be 335 pounds per acre.

PERMANENT SEEDING

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways and temporary easements under cultivation.

Special Permanent Seed Mixture 1 will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SF)
Kentucky Bluegrass		2.4
Fine-Leaf Perennial Ryegrass		1.8
Creeping Red Fescue		1.8
Total:		6.0

Station	to	Station	L/R	Quantity (Lb)
107+74		111+49	L	80

Special Permanent Seed Mixture 2 will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Kentucky Bluegrass		22
Fine-Leaf Perennial Ryegrass		18
Creeping Red Fescue		18
Fairway Crested Wheatgrass		18
Turf Type Fall Fescue		14
Total:		90

Station	to	Station	L/R	Quantity (Lb)
111+49		152+10	L	435

WATER FOR VEGETATION

Water for vegetation consists of applying water to seeded areas to enhance germination and/or root growth. When watering, use the following guidelines:

Immediately after seeding:

- Keep the topsoil moist but not excessively wet until the seed has germinated.
- Water a minimum of 3 days a week for 2 weeks preferably watering 2 or 3 times a day in small quantities.
- Use fine spray and low pressure to avoid topsoil wash and to prevent uncovering buried seeds.

After emergence:

- Topsoil will be kept thoroughly moistened by sprinkling, as necessary, for 6 weeks. After the 6-week period, an inspection will be made to determine if grass is established enough to suspend watering. Continue watering until grass has been thoroughly established.
- Never apply water at a rate faster than the topsoil can absorb.
- Water during early morning hours or early evening hours.
- Do not water when rain is forecasted for the area.
- If rainfall occurs, suspend watering according to rainfall amount.

An estimated 100 Gallons of water per square yard of seeding area was used to compute the quantity for the bid item "Water for Vegetation".

All costs for furnishing and applying the water including hauling, materials, equipment, labor, and incidentals necessary will be paid for at the contract unit price per MGal for "Water for Vegetation".

MULCHING (GRASS HAY OR STRAW)

An additional 0.4 tons of Grass Hay or Straw Mulch has been added to the Estimate of Quantities for temporary erosion control on areas determined by the Engineer during construction.

If the Contractor uses a no-till drill, mulch may be applied prior to seeding and the mulch can then be punched into the soil by the no-till drill. If the Contractor uses this process, the no-till drill seeding will be completed immediately following the mulch application and the mulch will be punched into the soil at a 3-inch depth.

TABLE OF MULCHING (GRASS HAY OR STRAW)

Station	Location	Quantity (Ton)
111+49 to 152+10 L	Inslope/Backslope/Ditch	9.6
	Additional Quantity:	0.4
Total:		10.0



FIBER MULCHING

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 2,000 pounds per acre.

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

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

The fiber mulch provided will be from the approved product list. The approved product list for fiber mulch may be viewed at the following internet site:
<http://apps.sd.gov/HC60ApprovedProducts/main.aspx>

TABLE OF FIBER MULCHING

Station	Location	Quantity (Lb)
107+74 to 111+49 L	Inslope/Backslope/Ditch	598
	Additional Quantity:	22
	Total:	620

LOW FLOW SILT FENCE

The low flow silt fence fabric provided will be from the approved product list. The approved product list for low flow silt fence may be viewed at the following internet site:

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

Low flow silt fence will be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.04 for details.

An additional quantity of Low Flow Silt Fence has been added to the Estimate of Quantities for temporary sediment control.

TABLE OF LOW FLOW SILT FENCE

Station	Location	Quantity (Ft)
107+80 to 107+80 L	Perimeter Control	44
108+83 to 108+83 L	Inlet Protection	36
128+85 to 128+85 L	Inlet Protection	36
141+75 to 141+75 L	Inlet Protection	36
148+14 to 148+31 L	Perimeter Control	22
148+57 to 149+00 L	Perimeter Control	47
149+00 to 152+23 L	Perimeter Control	344
	Additional Quantity:	35
	Total:	600

STREET SWEEPING

Vehicle tracking of sediment from the construction site will be minimized. Street sweeping will be used if erosion and sediment control best management practices are not adequate to prevent sediment from being tracked onto the street.

The Contractor will use a pickup broom having integral self-contained storage to clean the roadway. The pickup broom used will be a minimum of 6 feet wide and have working gutter brooms.

All costs for cleaning the roadway with a pickup broom will be incidental to the contract unit price per hour for "Sweeping".

CONSTRUCTION ENTRANCE

The Contractor will install a Construction Entrance at locations where there is a potential for mud tracking and sediment flow from the construction site and work area onto a paved public roadway.

It is the Contractor's option to use the SDDOT Construction Entrance (See SDDOT Construction Entrance notes and details), a product from the list provided in these notes, or other products or processes as approved by the Engineer during construction.

If the Contractor elects to use one of the products listed in the table, then the Contractor will install the construction entrance product in accordance with the manufacturer's installation instructions or as directed by the Engineer.

The Contractor will maintain the construction entrance such that mud tracking and sediment flow will not enter the roadway or adjacent drainage areas. The construction entrance will be routinely inspected, and the Contractor will repair or replace material as deemed necessary by the Engineer.

All costs for furnishing, installing, maintaining, and removal of the construction entrance including equipment, labor, materials, and incidentals will be included in the contract unit price per each for "Construction Entrance".

The following table is a list of known construction entrance products available for use:

Product	Manufacturer
Grizzly Rumble Grate (10' width and 24' length required)	Trackout Control, LLC Tempe, AZ Phone: 1-800-761-0056 www.trackoutcontrol.com
Pro Grid (12' width and 24' length including combination of grids and ramps required)	Pro-Tec Equipment, Inc. Charlotte, MI Phone: 1-800-292-1225 www.pro-tecequipment.com
Tracking Pad (12' width and 24' length (2 – 12'x12' pads) and 2 – 4'x4' turning flares)	Tracking Pads LLC Commerce City, CO Phone: 1-303-501-5640 www.trackingpads.com
FODS Trackout Control Mat (12' width and 5 mats to get a 35' length)	FODS, LLC Denver, CO Phone: 1-844-200-3637 http://www.getfods.com
DuraDeck and MegaDeck HD An adequate quantity is needed to prevent tires from becoming muddy (does not remove mud)	Signature Systems Group, LLC Flower Mound, TX Phone: 1-800-931-7301 https://www.signature-systems.com/
Track-Out Control Mat (10' width and 24' length required)	RubberForm Recycled Products, LLC Lockport, NY Phone: 1-716-478-0408 www.rubberform.com



STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU(34)	12	103

SDDOT CONSTRUCTION ENTRANCE

If the SDDOT Construction Entrance is utilized, then the Contractor will install the SDDOT Construction Entrance in accordance with these notes and the detail drawings.

Pit run material will be obtained from a granular source and will conform to the following gradation:

<u>Sieve Size</u>	<u>Percent Passing</u>
6"	100%
#4	0-60%
#200	0-20%

The pit run material will be compacted to the satisfaction of the Engineer.

The aggregate for the granular material will conform to the following gradation requirements:

<u>Sieve Size</u>	<u>Percent Passing</u>
3"	100%
2 ½"	90-100%
1 ½"	25-60%
¾"	0-10%
½"	0-5%

The granular material will be placed in 6" maximum lifts.

It is anticipated that the granular material will need to be periodically removed and replaced as it becomes inundated with mud and sediment.

The Reinforcement Fabric (MSE) will be in conformance with Section 831 of the Specifications. The Reinforcement Fabric (MSE) will be on the Approved Products List for this material or will be certified by the supplier to meet this specification prior to installation.

The Reinforcement Fabric (MSE) should be kept as taut as possible prior to placing.

Equipment will not be allowed on the Reinforcement Fabric (MSE) until the first lift of granular material is in place.

All seams in the Reinforcement Fabric (MSE) will be overlapped at least 2' and shingled.

CONCRETE WASHOUT AREA

A concrete washout area will be installed on the project site at a location approved by the Engineer if concrete trucks deliver concrete to the site. No washout area is necessary if all concrete trucks will wash out at approved site constructed by the concrete supplier.



TABLE OF CONSTRUCTION STAKING FOR PROJECT P TAPU(34)
(See Special Provision for Contractor Staking)

Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Grade Staking			Miscellaneous Staking Quantity (Mile)
					Length (Mile)	Lane Factor	*Sets of Stakes	**Grade Staking Quantity (Mile)
78 th Street West - Recreational Trail	108+06	134+33	1	2,627	0.498	0.5	1	0.249
South Lake Drive - Recreational Trail	134+33	152+10	1	1,777	0.337	0.5	1	0.169
Totals:								0.418
								0.210

* 1 = Blue Top Stakes Only (Asphalt Concrete Pavement)
2 = Blue Top and Paving Hub Stakes (PCC Pavement)

** Grade Staking Quantity = (Length) x (Lane Factor) x (Sets of Stakes)



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** 6.22 ac
 - **5.3 (3b): Total Area to be Disturbed** 4.26 ac
 - **5.3 (3c): Maximum Area Disturbed at One Time** 4.26 ac
 - **5.3 (3d): Existing Vegetative Cover (%)** 75%
 - **5.3 (3d): Description of Vegetative Cover** Rural Grass Vegetation
 - **5.3 (3e): Soil Properties:** USDA-NRCS Soil Series Classification
 - Poinsett-Buse-Waubay complex, 1% - 6% slopes
 - Cubden-Tonka silty clay loams, coteau, 0% - 2% slopes
 - Poinsett-Waubay silty clay loams, 0% - 2% slopes
 - **5.3 (3f): Name of Receiving Water Body/Bodies** Lake Kampeska
 - **5.3 (3g): Location of Construction Support Activity Areas**

5.3 (3h): ORDER OF CONSTRUCTION ACTIVITIES
➤ **Special sequencing requirements** (see sheet).
The Contractor will enter the Estimated Start Date.

Description	Estimated Start Date
Install stabilized construction entrance(s).	
Install perimeter protection where runoff may exit site.	
Install perimeter protection around stockpiles.	
Install channel and ditch bottom protection.	
Clearing and grubbing.	
Remove and stockpile topsoil.	
Stabilize disturbed areas.	
Install utilities, storm sewers, curb and gutter.	
Install inlet and culvert protection after completing storm drainage and other utility installations.	
Final grading.	
Final paving.	
Removal of protection devices.	
Reseed areas disturbed by removal activities.	

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
<input type="checkbox"/> Natural Buffers (within 50 ft of Waters of State)	
<input checked="" type="checkbox"/> Silt Fence	
<input type="checkbox"/> Erosion Control Wattles	
<input type="checkbox"/> Temporary Berm / Windrow	
<input type="checkbox"/> Floating Silt Curtain	
<input checked="" type="checkbox"/> Stabilized Construction Entrances	
<input type="checkbox"/> Entrance/Exit Equipment Tire Wash	
<input type="checkbox"/> Other:	

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

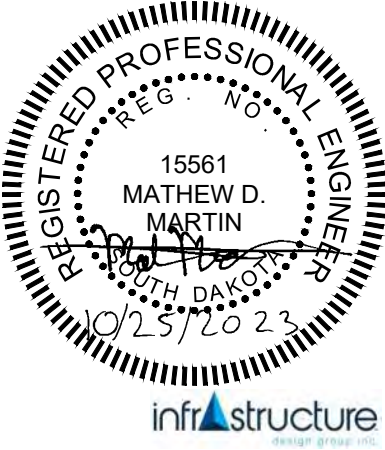
Dust Controls	
Description	Estimated Start Date
<input type="checkbox"/> Tarps & Wind impervious fabrics	
<input type="checkbox"/> Watering	
<input type="checkbox"/> Stockpile location/orientation	
<input type="checkbox"/> Dust Control Chlorides	
<input type="checkbox"/> Other	

Dewatering BMPs	
Description	Estimated Start Date
<input type="checkbox"/> Sediment Basins	
<input type="checkbox"/> Dewatering bags	
<input type="checkbox"/> Weir tanks	
<input type="checkbox"/> Temporary Diversion Channel	
<input type="checkbox"/> 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
<input type="checkbox"/> Vegetation Buffer Strips	
<input type="checkbox"/> Temporary Seeding (Cover Crop Seeding)	
<input checked="" type="checkbox"/> Permanent Seeding	
<input type="checkbox"/> Sodding	
<input type="checkbox"/> Planting (Woody Vegetation for Soil Stabilization)	
<input checked="" type="checkbox"/> Mulching (Grass Hay or Straw)	
<input checked="" type="checkbox"/> Fiber Mulching (Wood Fiber Mulch)	
<input type="checkbox"/> Soil Stabilizer	
<input type="checkbox"/> Bonded Fiber Matrix	
<input type="checkbox"/> Fiber Reinforced Matrix	
<input type="checkbox"/> Erosion Control Blankets	
<input type="checkbox"/> Surface Roughening (e.g. tracking)	
<input type="checkbox"/> 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 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 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.
- 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.



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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.

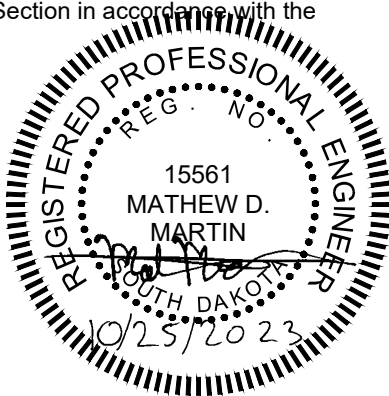
➤ 5.5 (4): Certification Requirements

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.



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GENERAL PERMANENT SIGNING

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

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

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

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

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

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

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

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

REMOVE SIGN FOR RESET AND RESET SIGN

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

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

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

NEW PERMANENT SIGNING

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

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

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

DIGITALLY PRINTED SIGNS

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

PROTECTIVE OVERLAY FILM

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

Table 1: Retroreflective Film Minimum Durability Requirements

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

FABRICATION

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

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

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

TRAFFIC SIGN PERFORMANCE WARRANTY PROVISIONS

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

CERTIFIED DIGITAL SIGN FABRICATOR

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



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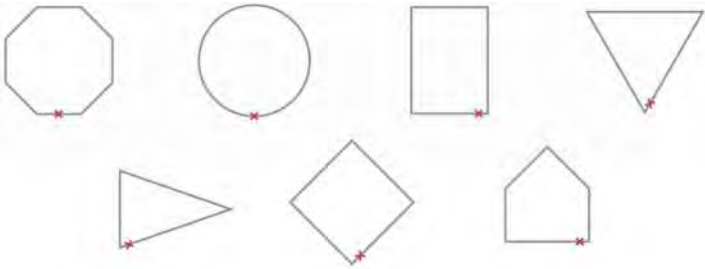
DIGITALLY PRINTED SIGNS (CONTINUED)

DATE TAGGING SIGNS WITH PERTINENT INFORMATION

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

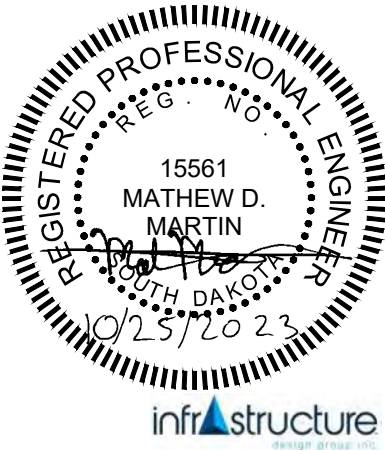
1. Date tags on the back of signs
- Tags will have the following information and be fabricated with material and printing system that are as durable as the warranted sign.
- Name of Sign Fabricator
 - Date the sign was fabricated (month and year)
 - Process that was used for sign fabrication (digitally printed)
 - Supplier of sheeting that was used for fabricating the sign.

2. Border date
- The month and year (mm/yyyy) of sign fabrication will be printed in the border of the sign in 3/8" sans serif font. Border date will be printed with the same warranted printed system as the sign face. The date should be printed in the locations indicated below.



SQUARE TUBE ANCHOR SLEEVE

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



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FOR BIDDING PURPOSES ONLY

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TOTAL
SHEETS

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TABLE OF PERMANENT SIGNING

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SHEET 1

TOTAL
SHEETS

20	
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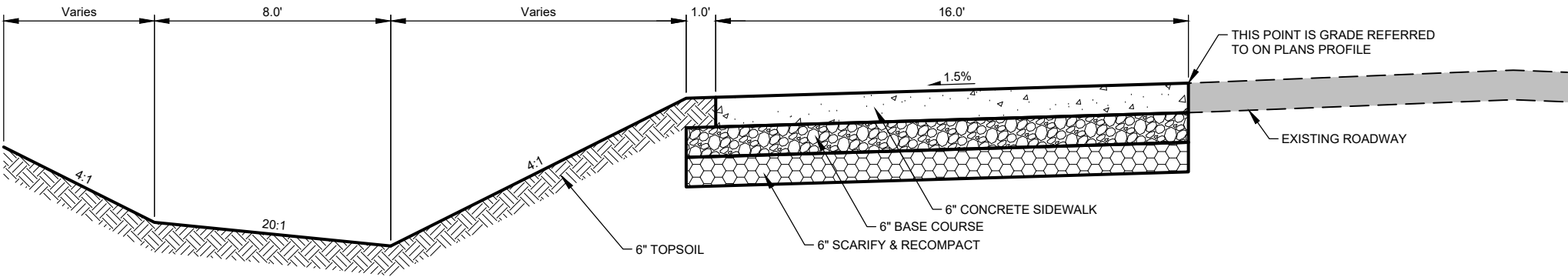
FOR BIDDING PURPOSES ONLY

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TYPICAL SECTIONS

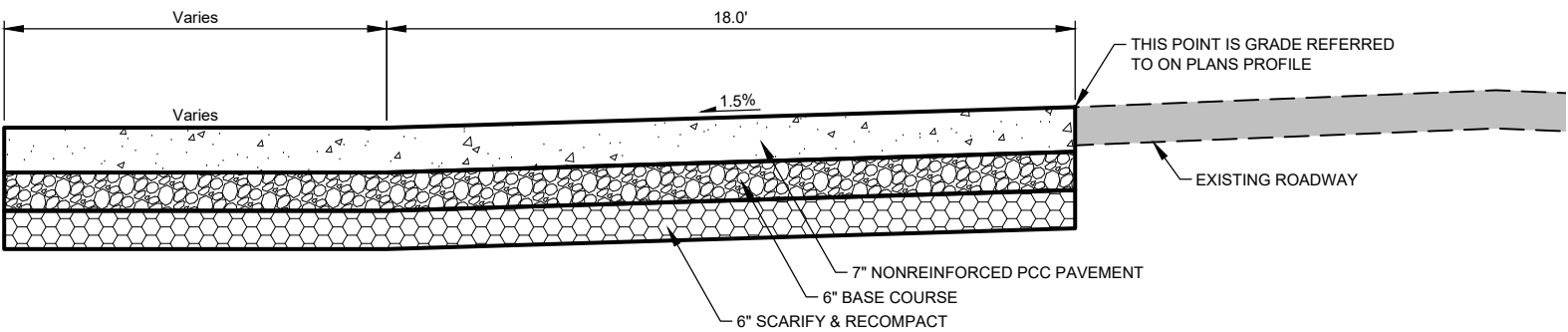
FOR BIDDING PURPOSES ONLY

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PROPOSED RECREATIONAL TRAIL TYPICAL SECTION 1

STA 108+05.2 TO 108+31.4
STA 108+69.0 TO 108+79.0



PROPOSED RECREATIONAL TRAIL TYPICAL SECTION 2

STA 108+31.4 TO 108+69.0

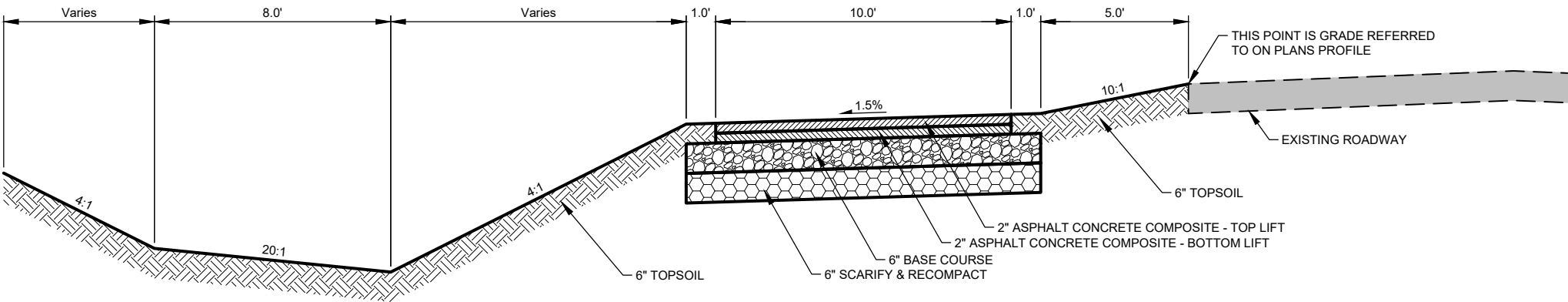


TYPICAL SECTIONS

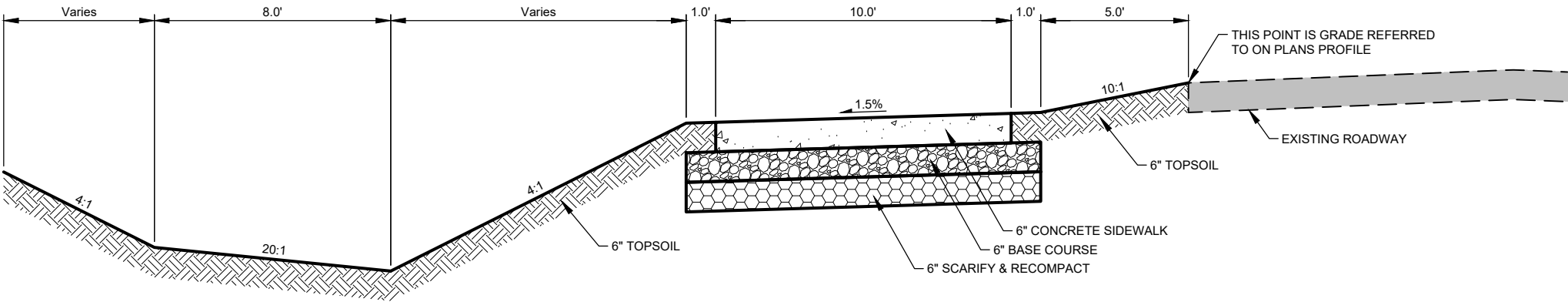
FOR BIDDING PURPOSES ONLY

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PROPOSED RECREATIONAL TRAIL TYPICAL SECTION 3
STA 108+79.0 TO 147+86.7



PROPOSED RECREATIONAL TRAIL TYPICAL SECTION 4
STA 147+86.7 TO 147+96.6
STA 148+61.7 TO 148+71.6

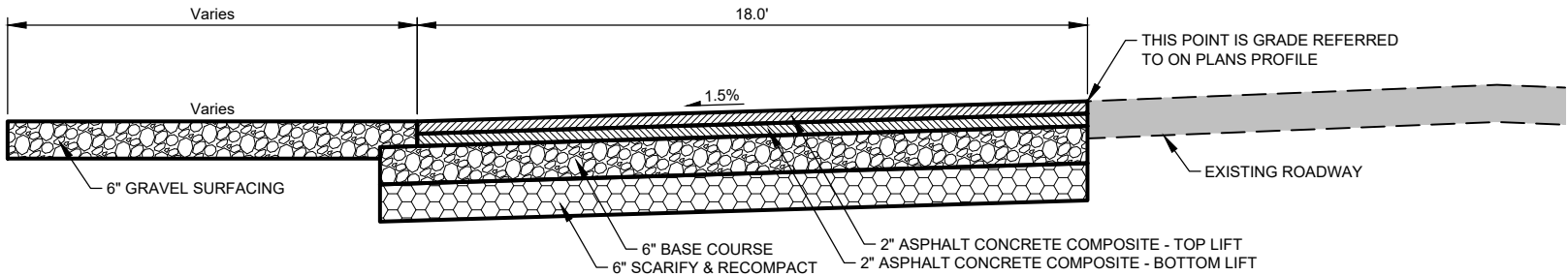


TYPICAL SECTIONS

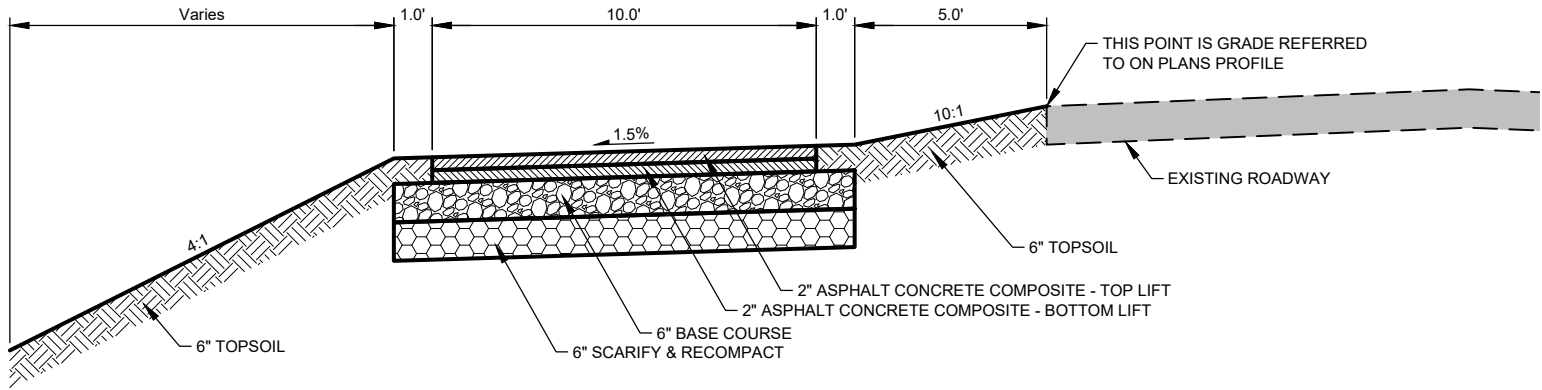
FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	23	103



PROPOSED RECREATIONAL TRAIL TYPICAL SECTION 5
STA 147+96.6 TO 148+61.7



PROPOSED RECREATIONAL TRAIL TYPICAL SECTION 6
STA 148+71.6 TO 152+10.0



TRAFFIC CONTROL - FIXED SIGNING

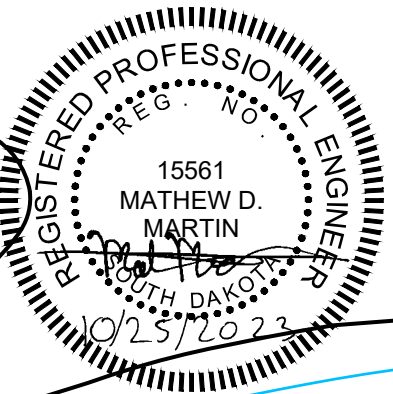
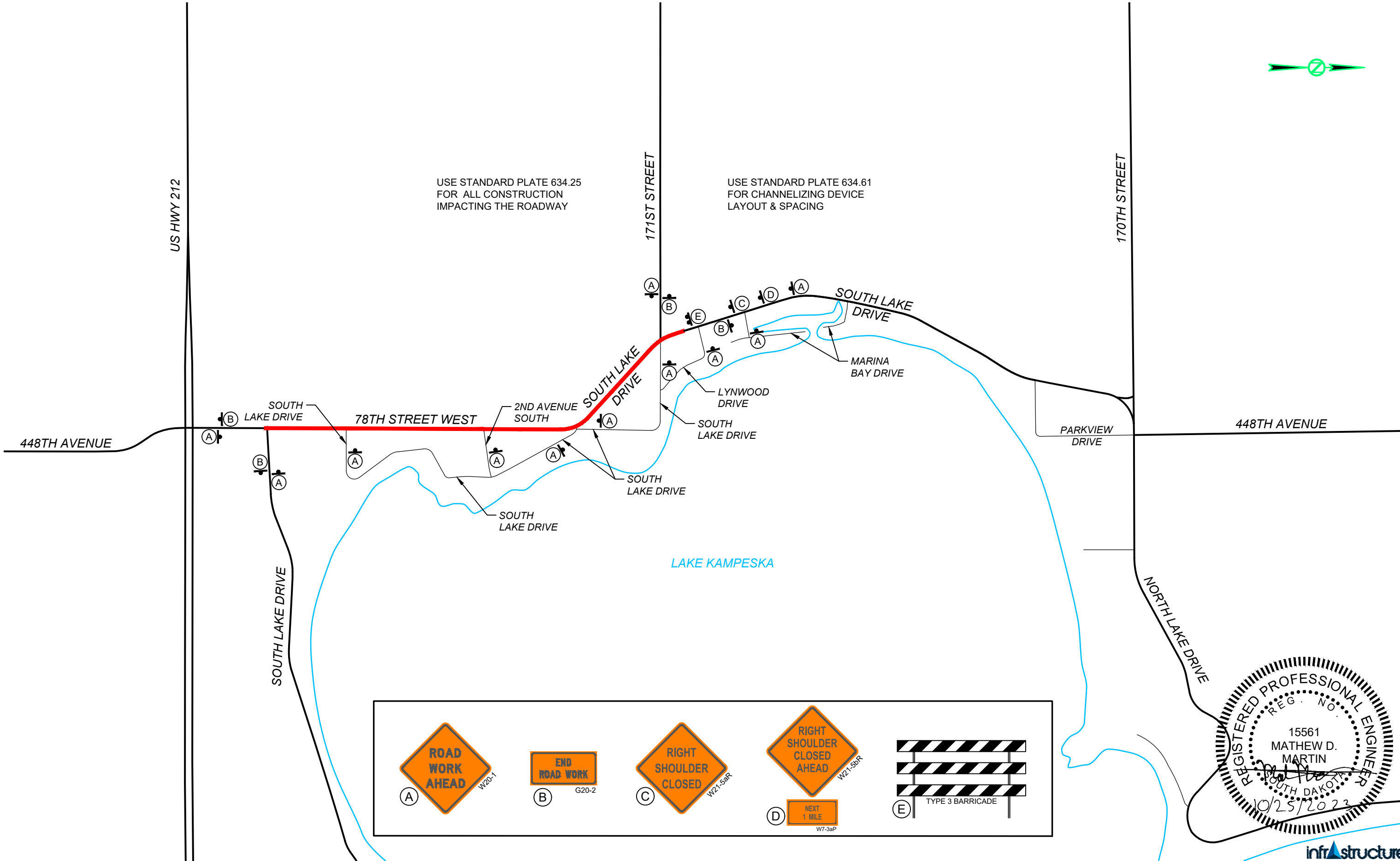
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	24	103




USE STANDARD PLATE 634.25
FOR ALL CONSTRUCTION
IMPACTING THE ROADWAY


USE STANDARD PLATE 634.61
FOR CHANNELIZING DEVICE
LAYOUT & SPACING





EROSION AND SEDIMENT CONTROL LEGEND


- Low Flow Silt Fence
- SF—


Low Flow Silt Fence
- 


High Flow Silt Fence at Pipe
- 


Sediment Control at Inlet Before Placement of Surfacing
- 


Sediment Control at Type S Drop Inlets
- 


Sediment Control at Drop Inlets when Frame and Grate is in place
- Temporary Sediment Barrier
- 


Erosion Control Wattles on Slopes
- 


Erosion Control Wattles at Inlets
- 


Erosion Control Wattles in Ditches
- 


Erosion Bales
- 


Surfacing Roughening
- 


Temporary Grass Hay or Straw Mulch/ Soil Stabilizer
- 

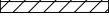
Special Permanent Seed Mixture #1 w/ Fiber Mulching
- 


Special Permanent Seed Mixture #2 w/ Mulching
- 

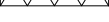
Type 1 Erosion Control Blanket
- 

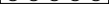
Type 2 Erosion Control Blanket
- 


Type 3 Erosion Control Blanket
- 


Type 4 Erosion Control Blanket
- 


Type 1 Turf Reinforcement Mat
- 


Type 2 Turf Reinforcement Mat
- 


Type 3 Turf Reinforcement Mat
- 


Transition Mat
- 


Silt Trap (See Standard Plate 734.04)
- 

Temporary Water Barrier
- 

Floating Silt Curtain
- 

Triangular Silt Barriers
- 

Rock Check Dam
- 

Cut Interceptor Ditch
- 

Temporary Slope Drain

BEST MANAGEMENT PRACTICES

Best Management Practices (BMPs) are split into three categories and are to be used throughout construction.

INITIAL PHASE

BMPs from the Legend shown as Orange Symbols on the Erosion and Sediment Control Plan Sheets are to be installed in the Initial Phase prior to earth disturbing activities and remain in place for the Intermediate Phase for temporary stabilization and in the Final Phase to achieve final stabilization.

INTERMEDIATE PHASE

BMPs from the Legend shown as Blue Symbols on the Erosion and Sediment Control Plan Sheets are to be installed in the Intermediate Phase for temporary stabilization and remain in place in the Final Phase to achieve final stabilization.

FINAL PHASE

BMPs from the Legend shown as Green Symbols on the Erosion and Sediment Control Plan Sheets are to be installed in the Final Phase to achieve final stabilization.

If these items are applicable they are to be shown in the updated SWPPP using the Symbols given.

- TS

Topsoil Stockpile
- B

Borrow Area
- CE

Stabilized Construction Entrance
- VB

Vegetated Buffer Strip
- CW

Concrete Washout
- AP

Asphalt Plant Site
- CP

Concrete Plant Site
- V

Vehicle and Equipment Parking, Fueling, and Maintenance Areas
- D

Dumpster or other Trash and Debris Containers
- M

On-Site Construction Material Storage Area
- SK

Spill Kit
- WP

Work Platform



EROSION & SEDIMENT CONTROL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	26	103

INITIAL PHASE

INSTALL CONSTRUCTION ENTRANCE
STA 108+50, 0' L - 1 EA

INSTALL LOW FLOW SILT FENCE
STA 107+80, 1' L TO STA 107+80, 45' L - 44 FT

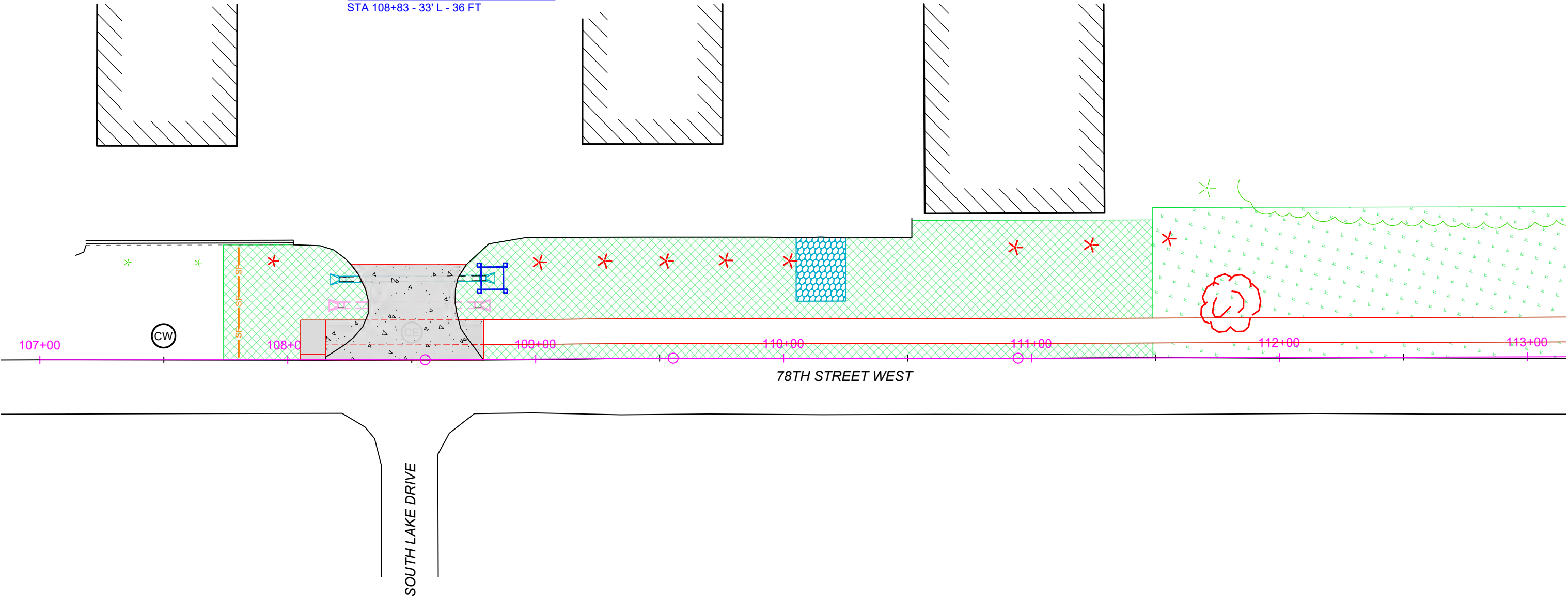
INTERMEDIATE PHASE

INSTALL CONCRETE WASHOUT FACILITY
STA 107+50, 10' L - 1 EA

INSTALL LOW FLOW SILT FENCE
AROUND INLET PRIOR TO SURFACING
STA 108+83 - 33' L - 36 FT

FINAL PHASE

SEED, FERTILIZE AND MULCH ALL
DISTURBED AREAS AS SHOWN



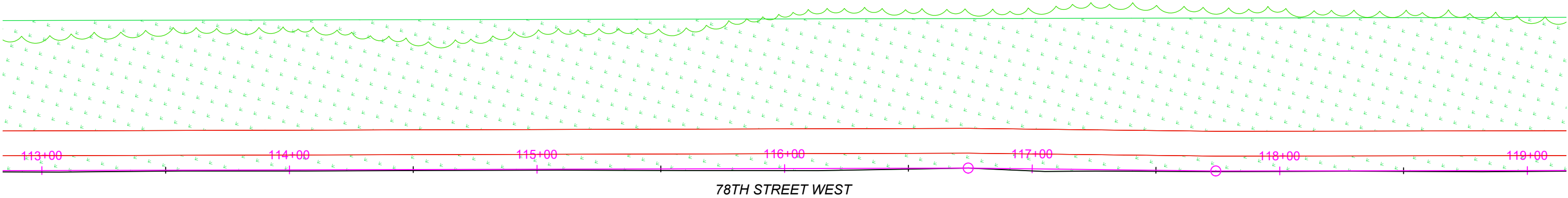
EROSION & SEDIMENT CONTROL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	27	103

FINAL PHASE

SEED, FERTILIZE AND MULCH ALL
DISTURBED AREAS AS SHOWN



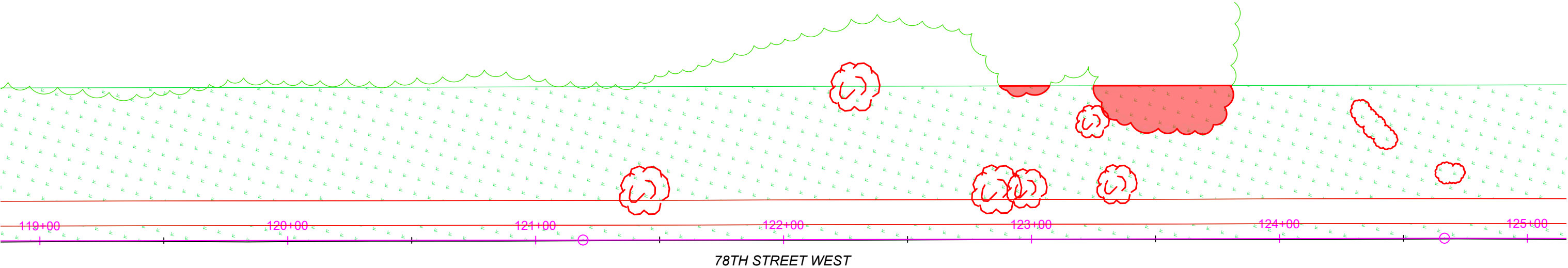
EROSION & SEDIMENT CONTROL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	28	103

FINAL PHASE

SEED, FERTILIZE AND MULCH ALL
DISTURBED AREAS AS SHOWN



2ND AVENUE SOUTH



EROSION & SEDIMENT CONTROL

FOR BIDDING PURPOSES ONLY

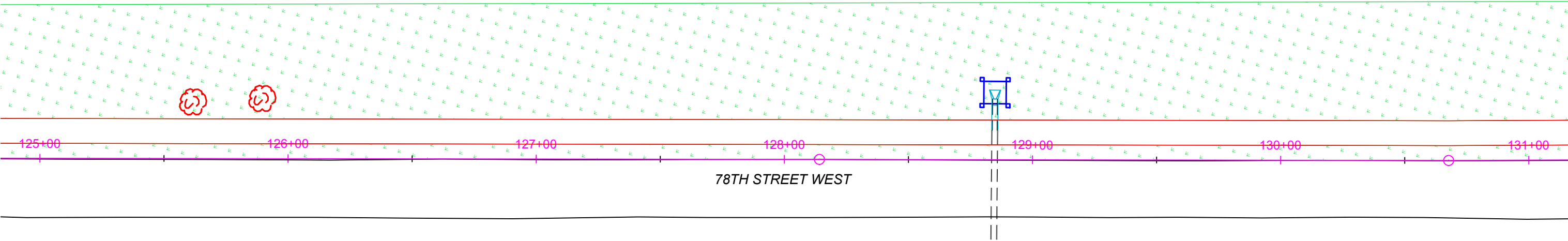
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	29	103

INTERMEDIATE PHASE

INSTALL LOW FLOW SILT FENCE
AROUND INLET PRIOR TO SURFACING
STA 128+85 - 27' L - 36 FT

FINAL PHASE

SEED, FERTILIZE AND MULCH ALL
DISTURBED AREAS AS SHOWN



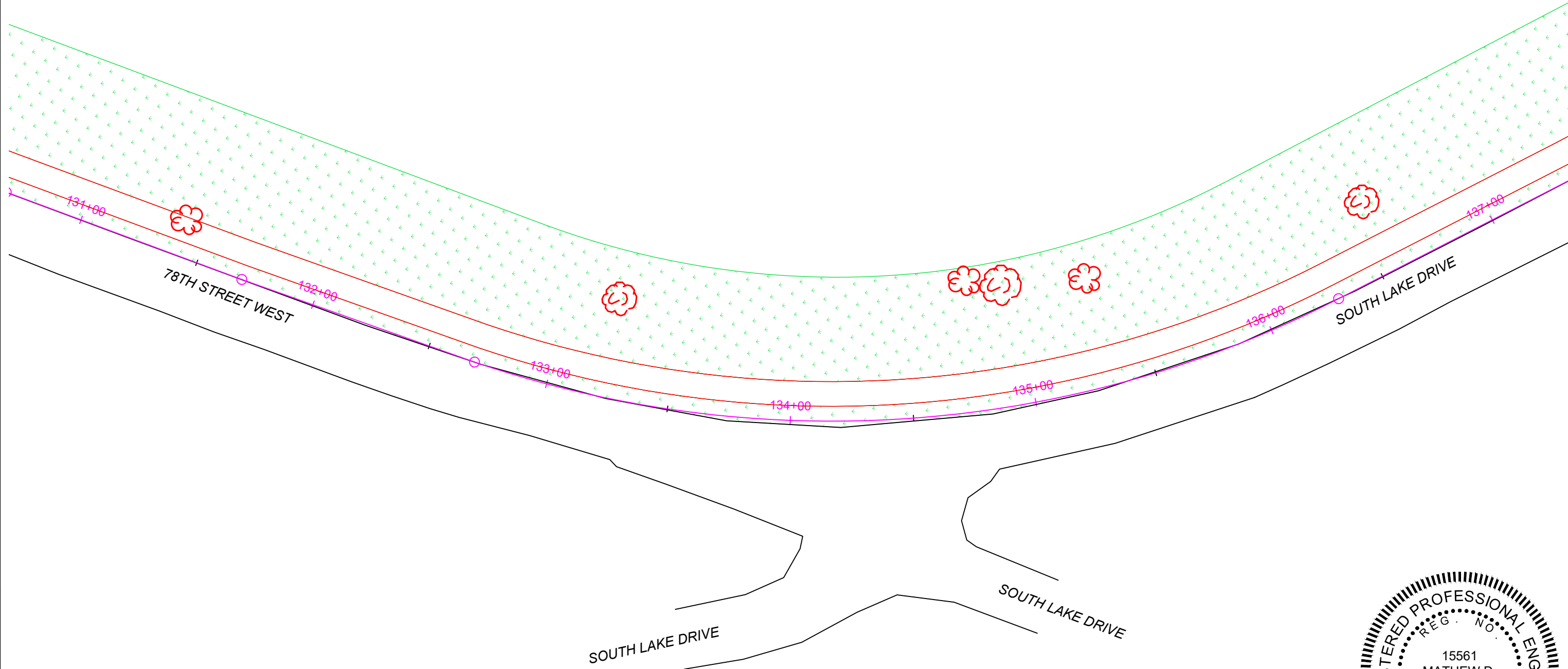
EROSION & SEDIMENT CONTROL

FOR BIDDING PURPOSES ONLY

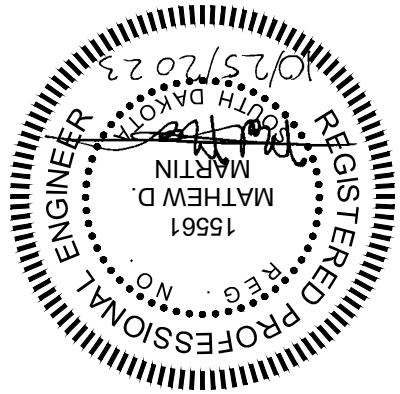
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	30	103

FINAL PHASE

SEED, FERTILIZE AND MULCH ALL
DISTURBED AREAS AS SHOWN



FOR BIDDING PURPOSES ONLY



EROSION & SEDIMENT CONTROL

STATE OF
SOUTH
DAKOTA

PROJECT
P TAPU(34)

SHEET
NO.
31

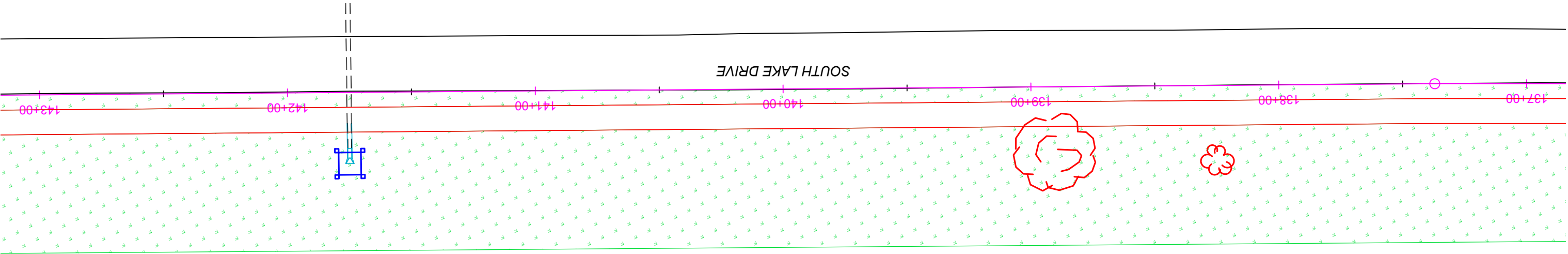
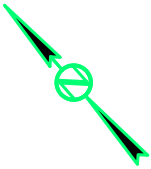
TOTAL
SHEETS
103

INTERMEDIATE PHASE

INSTALL LOW FLOW SILT FENCE
AROUND INLET PRIOR TO SURFACING
STA 141+75 - 29' L - 36 FT

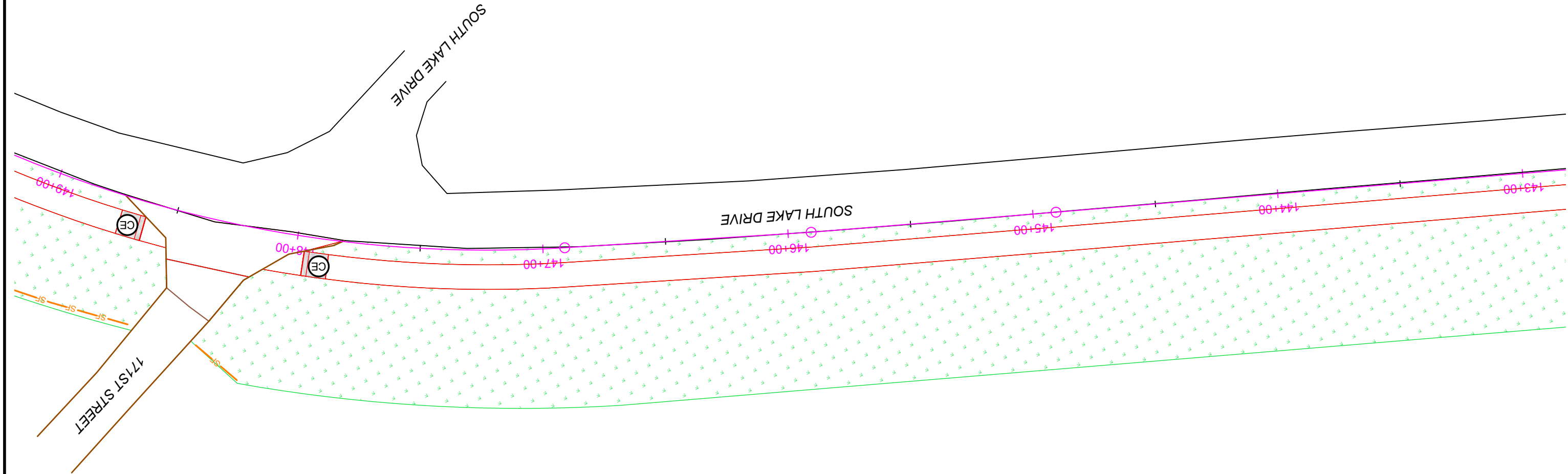
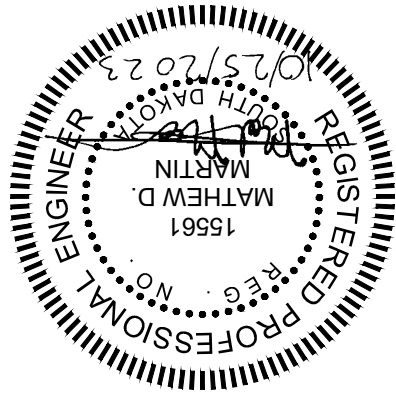
FINAL PHASE

SEED, FERTILIZE AND MULCH ALL
DISTURBED AREAS AS SHOWN



SOUTH LAKE DRIVE

FOR BIDDING PURPOSES ONLY



INITIAL PHASE
INSTALL CONSTRUCTION ENTRANCE
STA 147+90, 0' L - 1 EA
STA 148+68, 0' L - 1 EA
INSTALL LOW FLOW SILT FENCE
STA 148+14, 62' L TO STA 148+31, 52' L - 22 FT
STA 148+57, 50' L TO STA 149+00, 51' L - 47 FT

FINAL PHASE
SEED, FERTILIZE AND MULCH ALL
DISTURBED AREAS AS SHOWN

EROSION & SEDIMENT CONTROL

STATE OF SOUTH DAKOTA	PROJECT	P TAPU(34)	SHEET NO.	32	TOTAL SHEETS	103
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EROSION & SEDIMENT CONTROL

FOR BIDDING PURPOSES ONLY

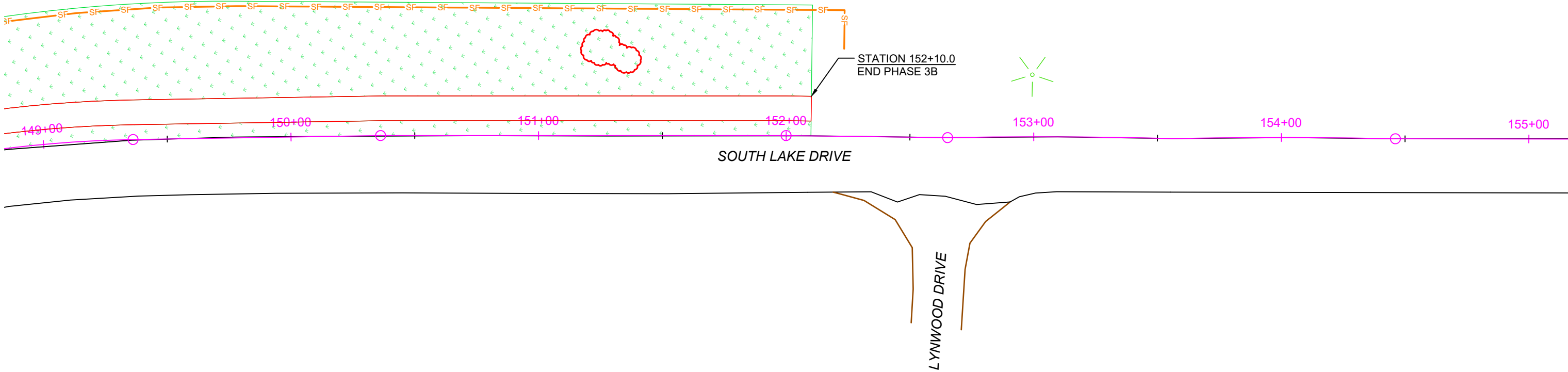
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	33	103

INITIAL PHASE

INSTALL LOW FLOW SILT FENCE
STA 149+00, 51' L TO STA 152+23, 35' L - 344 FT

FINAL PHASE

SEED, FERTILIZE AND MULCH ALL
DISTURBED AREAS AS SHOWN



S:\0-2017 Projects\17116-06-SDDOT-Weidman Trail Phase 3B\Design\CAD Sheets\16116-06-ALIGNMENT-CONTROL-DATA.dwg
PLOT DATE: 8/3/2023 8:11 AM, Mathew Martin

HORIZONTAL ALIGNMENT DATA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	34	103

ALIGNMENT P3B - WEST EDGE OF 78TH STREET WEST & SOUTH LAKE DRIVE					ALIGNMENT P3B - WEST EDGE OF 78TH STREET WEST & SOUTH LAKE DRIVE				
TYPE	STATION		NORTHING	EASTING	TYPE	STATION		NORTHING	EASTING
POB	107+00.00		16,314,834.7658	2,093,968.9594	PI	145+90.59		16,318,355.9991	2,093,071.5563
		TL = 155.449'	N0° 30' 22.83"W				TL = 100.528'	N47° 32' 39.24"W	
PI	108+55.45		16,314,990.2085	2,093,967.5857	PC	146+91.11		16,318,423.8575	2,092,997.3870
		TL = 100.000'	N0° 51' 57.87"W		PI	148+16.18	R = 500.000'	Delta = 28° 5 ' 12"	16,318,508.2791
PI	109+55.45		16,315,090.1971	2,093,966.0742	PT	149+36.21		16,318,626.2016	2,092,863.4535
		TL = 139.154'	N0° 30' 51.64"W				TL = 100.000'	N19° 21' 11.36"W	
PI	110+94.60		16,315,229.3460	2,093,964.8250	PI	150+36.21		16,318,720.5510	2,092,830.3145
		TL = 579.558'	N0° 39' 37.47"W				TL = 163.786'	N18° 26' 06.72"W	
PI	116+74.16		16,315,808.8650	2,093,958.1450	PI	152+00.00		16,318,875.9314	2,092,778.5203
		TL = 100.000'	N0° 10' 08.93"E				TL = 65.245'	N17° 43' 24.79"W	
PI	117+74.16		16,315,908.8646	2,093,958.4402	PC	152+65.25		16,318,938.0800	2,092,758.6580
		TL = 344.981'	N0° 35' 17.08"W		PI	153+10.63	R = 2124.859'	Delta = 2° 26 ' 50"	16,318,980.8822
PI	121+19.14		16,316,253.8270	2,093,954.8994	PT/PC	153+56.00		16,319,024.2900	2,092,730.3070
		TL = 347.485'	N0° 37' 40.99"W		PI	154+01.07	R = 2263.973'	Delta = 2° 16 ' 51"	16,319,066.7723
PI	124+66.63		16,316,601.2913	2,093,951.0905	PT	154+46.13		16,319,109.8200	2,092,701.9080
		TL = 347.491'	N0° 25' 25.83"W				TL = 142.762'	N18° 21' 11.58"W	
PI	128+14.12		16,316,948.7730	2,093,948.5200	PI	155+88.89		16,319,245.3200	2,092,656.9560
		TL = 253.576'	N0° 24' 16.85"W				TL = 348.241'	N18° 19' 50.46"W	
PI	130+67.69		16,317,202.3430	2,093,946.7290	POE	159+37.13		16,319,575.8900	2,092,547.4340
		TL = 101.791'	N0° 46' 23.89"W						
PI	131+69.49		16,317,304.1246	2,093,945.3552					
		TL = 99.999'	N1° 34' 29.58"W						
PC	132+69.48		16,317,404.0861	2,093,942.6069					
PI	134+60.07	R = 450.000'	Delta = 45° 54 ' 26"	16,317,594.5106					
PT	136+30.04		16,317,721.4181	2,093,792.6324					
		TL = 107.027'	N48° 14' 58.28"W						
PI	137+37.07		16,317,792.6863	2,093,712.7845					
		TL = 753.519'	N48° 42' 29.92"W						
PI	144+90.59		16,318,289.9281	2,093,146.6204					
		TL = 100.000'	N48° 38' 45.36"W						



CONTROL DATA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	35	103



POINT	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION
40	152+36.95	58.62' RT	REBAR	16318928.971	2092823.106	1735.846
49	135+46.58	33.82' RT	REBAR	16317681.051	2093876.192	1741.012
50	123+94.62	62.85' RT	REBAR	16316529.794	2094014.730	1732.706



LEGEND

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	36	103

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	
---	--



FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	37	103



Adjust Sanitary Manhole:

108+49-17' L
110+54-6' L
110+55-17' L

108+22-22' L to 108+76-22' L
Remove Pipe for Reset 24" - 56' RCP

Remove Pipe End Section for Reset
at the following locations:
108+23-22' L
108+76-22' L

SEC 36-T117N-R54W

Clear and Grub Trees
at the following locations:

107+94-40' L
109+02-39' L
109+28-39' L
109+53-39' L
109+77-39' L
110+02-39' L
110+93-45' L
111+24-46' L
111+55-48' L
111+80-22' L

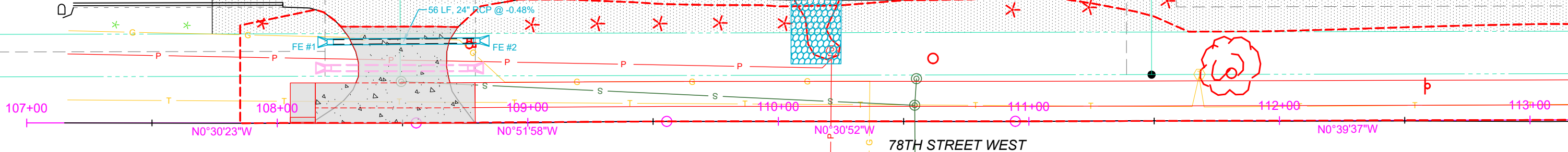
Remove Wood Post

110+62-25' L
111+81-19' L
(Incidental Work, Grading)

Parcel 1
Scott Munger

Parcel 2
Westside Condominium
Association

Parcel 3
Williston Inc.



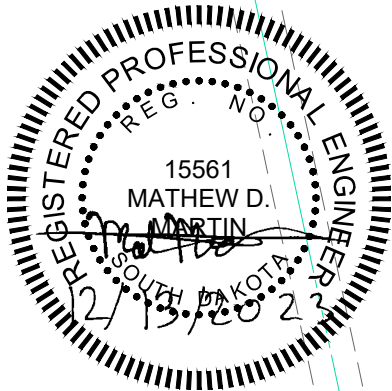
78TH STREET WEST

SOUTH LAKE DRIVE

108+22.39-32.43' L
Reset Pipe End Section (FE #1)
108+22.39-32.43' L to 108+78.59-32.72' L
Reset Pipe 24"-56' RCP (Between FE #1 and FE #2)
108+78.59-32.72' L
Reset Pipe End Section (FE #2)

110+15-36' L
Install Class B Riprap (80 Ton)
Install Type B Drainage Fabric (79 SqYd)
(Riprap Dimensions: 26' x 20' x 2')

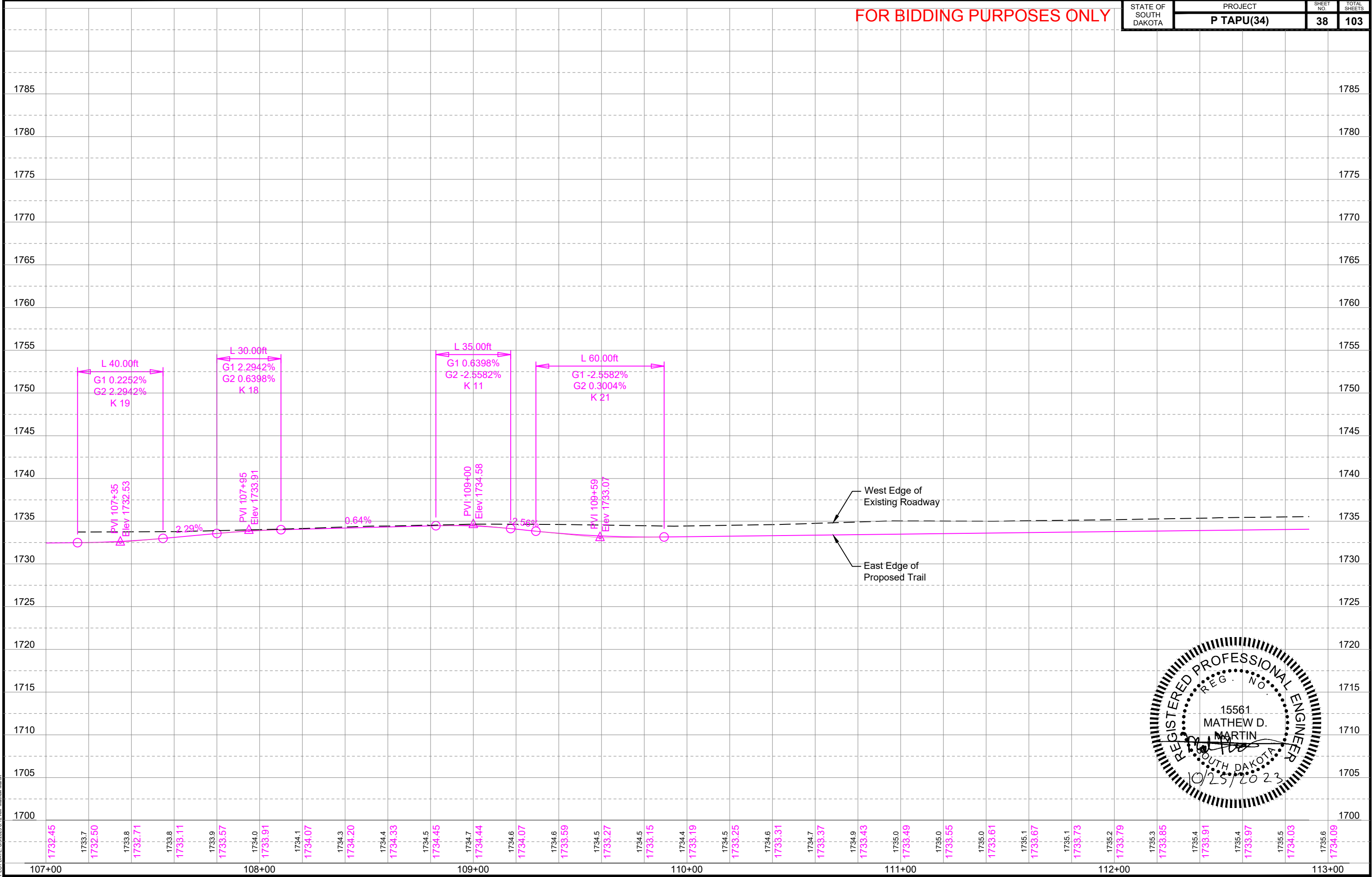
WATERTOWN
SEC 31-T117N-R53W



S:\0-2017 Projects\17116-06 SDDOT Wetdown Trail Phase 3B\Design\CAD Sheets\17116-06-PLAN-PROFILE.dwg
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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	38	103



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	39	103



Remove Wood Post
115+03-19' L
116+99-19' L
117+47-20' L
(Incidental Work, Grading)

SEC 36-T117N-R54W

Parcel 3
Williston Inc.

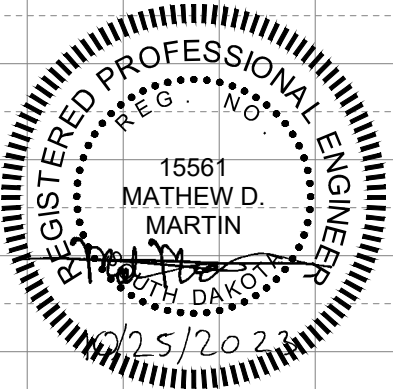
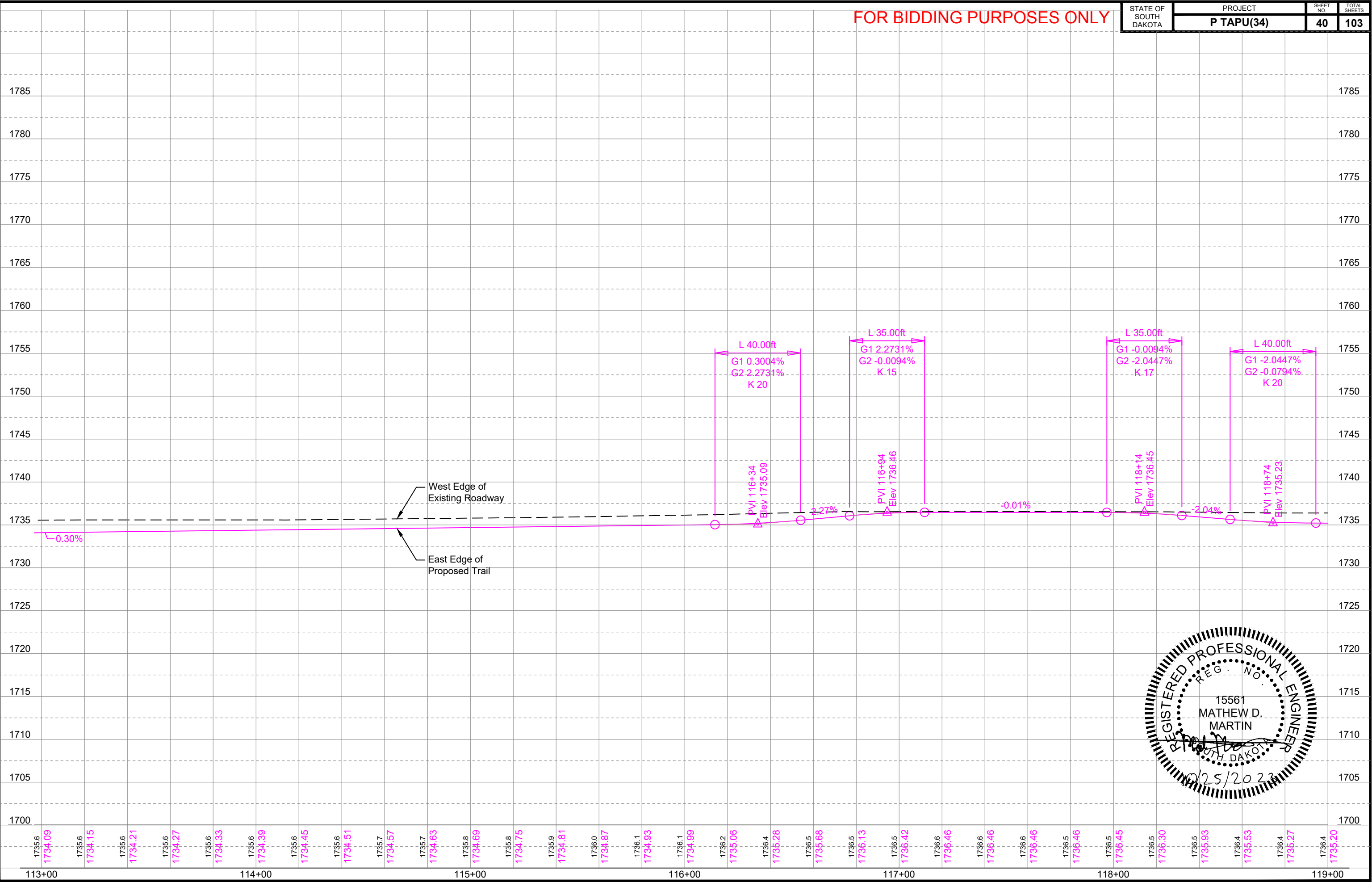
113+00 114+00 115+00 116+00 117+00 118+00 119+00
N0°39'37"W N0°10'09"E N0°35'17"W

78TH STREET WEST

WATERTOWN
SEC 31-T117N-R53W



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FOR BIDDING PURPOSES ONLY

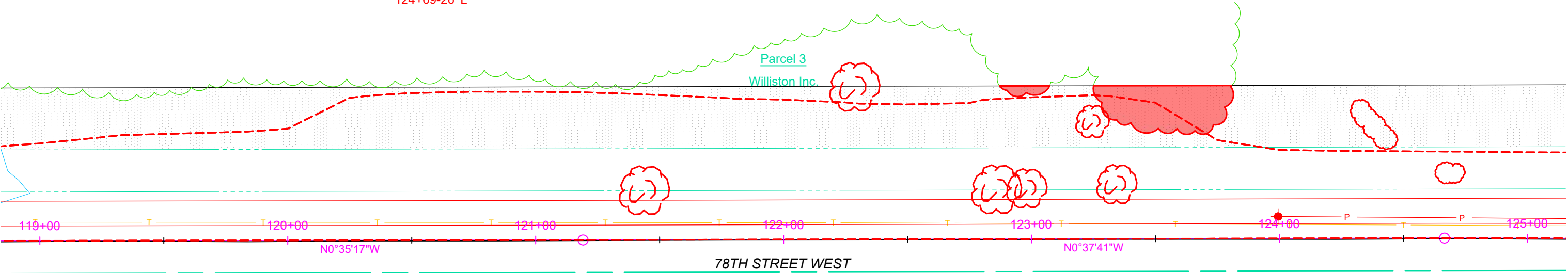
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	41	103

SEC 36-T117N-R54W



Clear and Grub Trees
at the following locations:
121+44-20' L
122+29-61' L
122+86-20' L
122+98-20' L
123+25-47' L
123+34-22' L
124+38-45' L
124+69-26' L

Parcel 3
Williston Inc.



WATERTOWN
SEC 31 - T117N - R53W

2ND AVENUE SOUTH

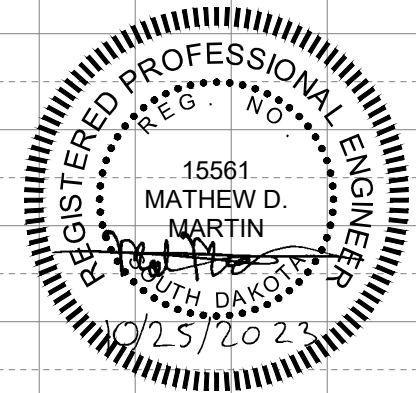
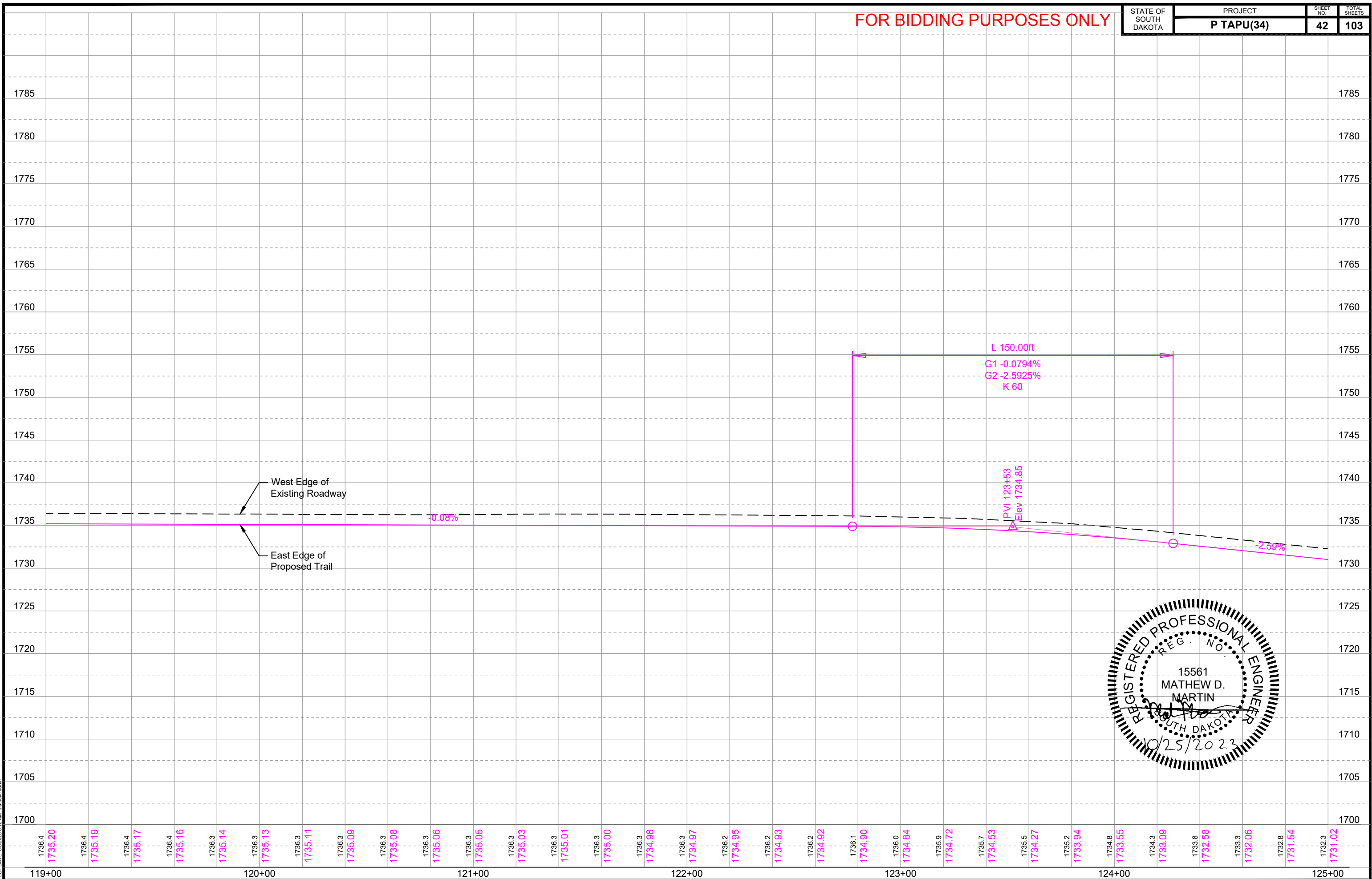


FOR BIDDING PURPOSES ONLY

STATE OF
SOUTH
DAKOTA

PROJECT
P TAPU(34)

SHEET NO.	
42	



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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	43	103

SEC 36-T117N-R54W

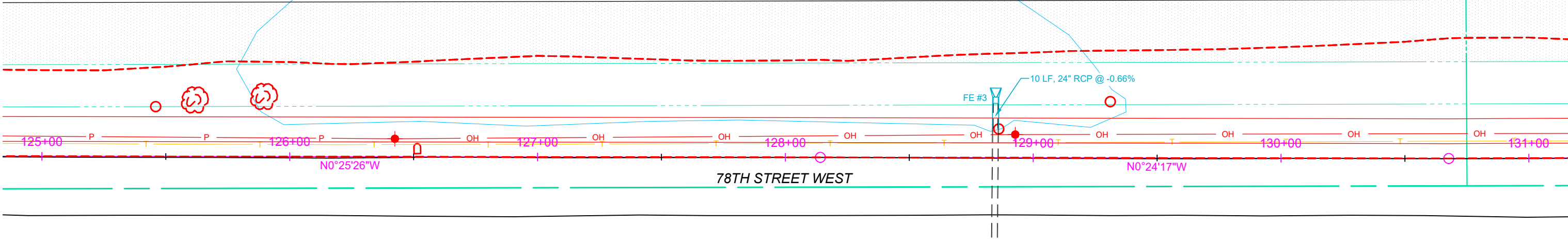


Clear and Grub Trees
at the following locations:
125+46-20' L
125+62-23' L
125+90-24' L

Refurbish Single Mailbox
126+51-3' L

Remove Wood Post:
128+86-12' L
129+31-23' L
(Incidental Work, Grading)

Parcel 3
Williston Inc.



128+84.76-11.92' L to 128+84.83-21.92' L
Install 24\"-10' RCP (Between Existing RCP and FE #3)

128+84.83-21.92' L
Install Flared End Section (FE #3)

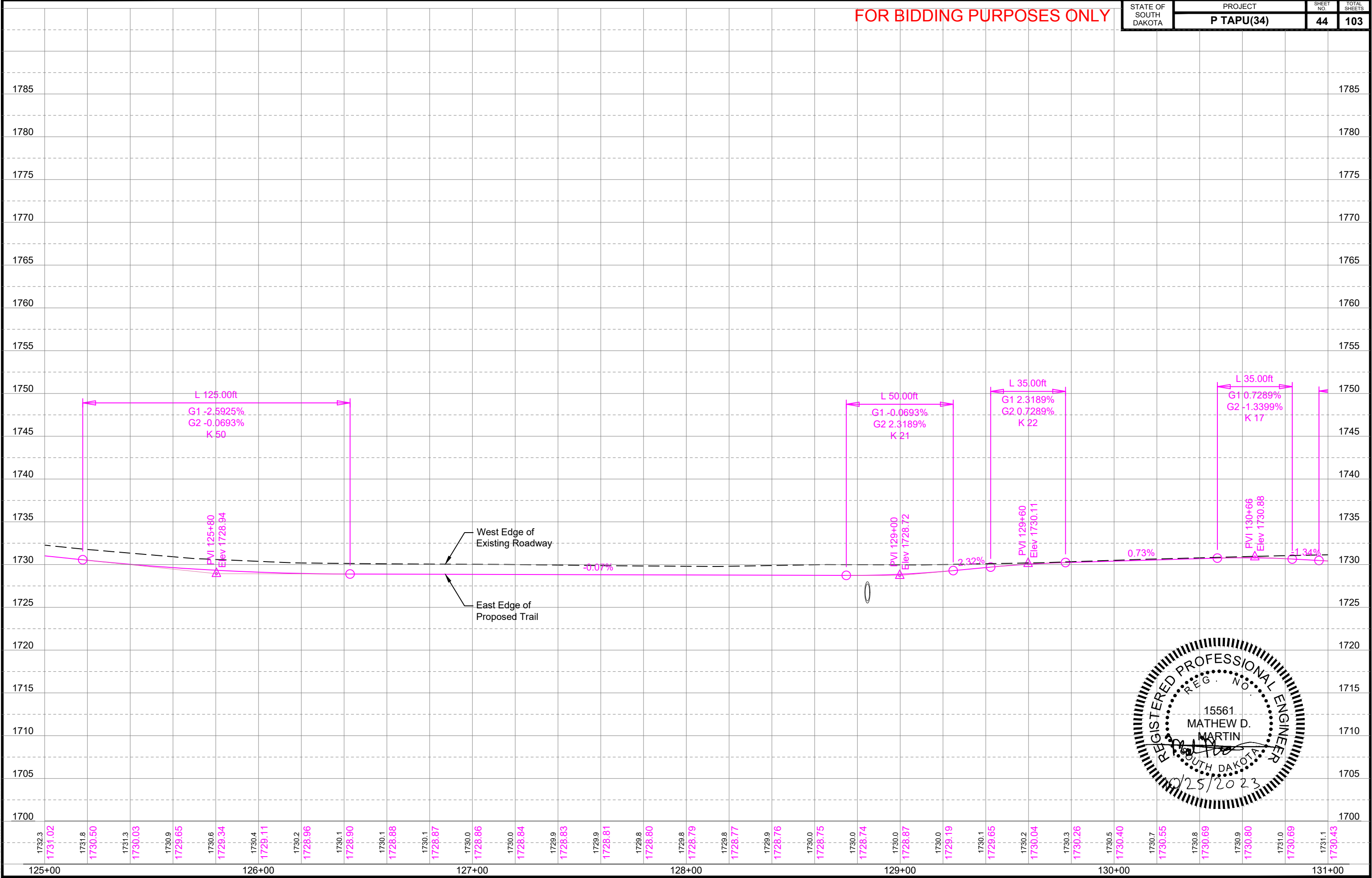
WATERTOWN
SEC 31-T117N-R53W



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PLOT DATE: 8/30/2023 8:12 AM Mathew Martin

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	44	103



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	45	103

SEC 36-T117N-R54W



Clear and Grub Trees
at the following locations:
131+41-14' L
133+22-40' L
134+78-54' L
134+94-49' L
135+32-45' L
136+56-31' L

Remove Wood Post:
133+21-18' L
134+08-17' L
(Incidental Work, Grading)

Parcel 3
Williston Inc.

PI 134+46.79
N 16317592.174
E 2093937.436
Del 45°54'26"
T 190.58'
L 360.55'
R 450.00'

78TH STREET WEST

SOUTH LAKE DRIVE

SOUTH LAKE DRIVE

WATERTOWN
SEC 31-T117N-R53W

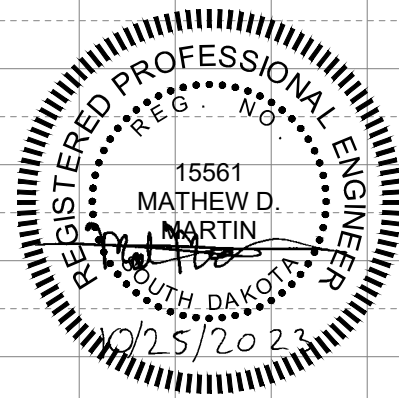
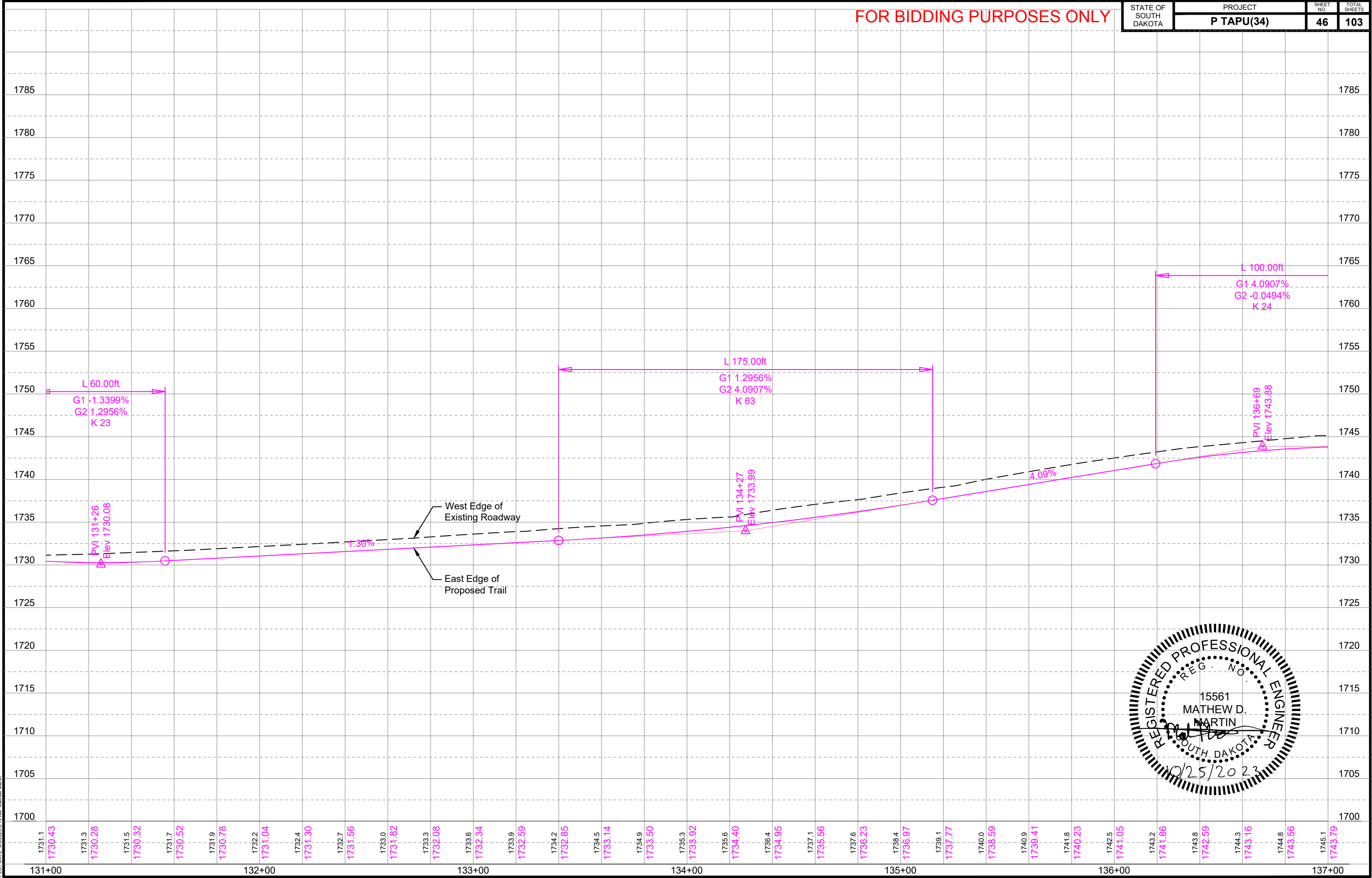


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PLOT DATE: 8/29/2023 8:13 AM Mathew Martin

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	46	103

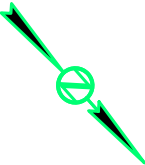


FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	47	103

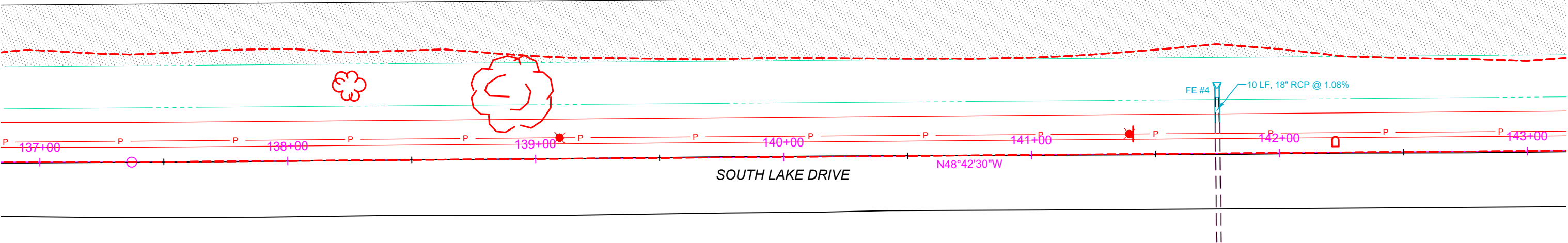
SEC 36-T117N-R54W



Clear and Grub Trees
at the following locations:
138+25-30' L
138+91-26' L

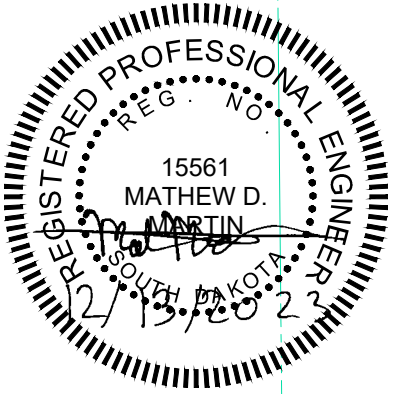
Refurbish Single Mailbox
142+23-4' L

Parcel 3
Williston Inc.

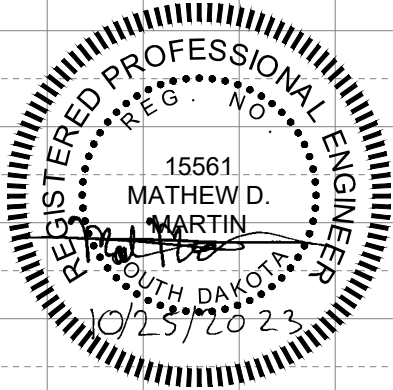
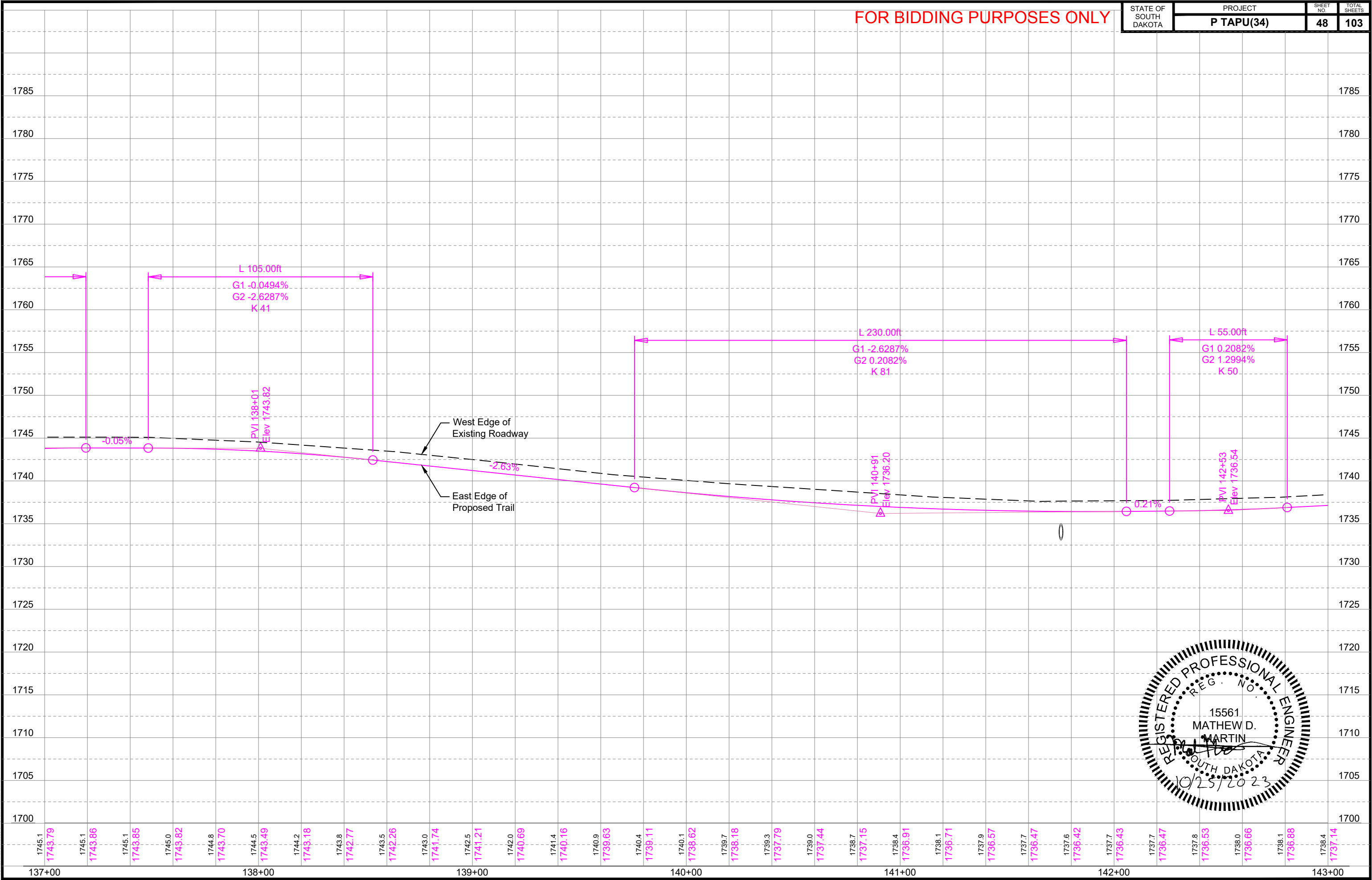


141+75.06-22.60' L to 141+75.11-12.60' L
Install 18"-10' RCP (Between Existing Pipe and FE #4)
141+75.06-22.60' L
Install Flared End Section (FE #4)

WATERTOWN



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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	49	103

Refurbish Single Mailbox
143+64-3' L

Remove Wood Post:
147+97-36' L
148+04-47' L
148+12-60' L
(Incidental Work, Grading)

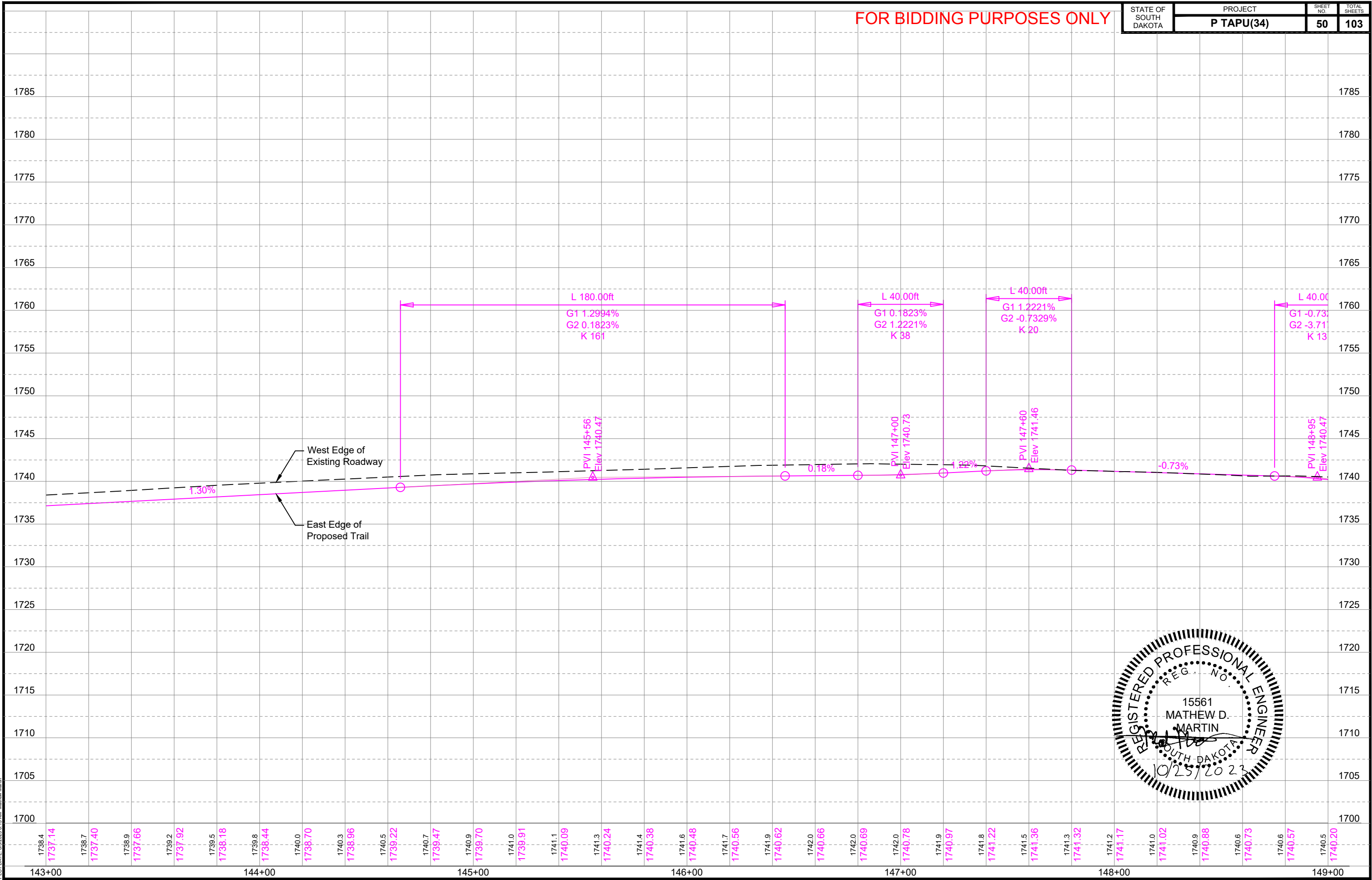
Parcel 3
Williston Inc.

WATERTOWN
SEC 36-T117N-R54W

SEC 25-T117N-R54W



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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	51	103



WATERTOWN



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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	52	103

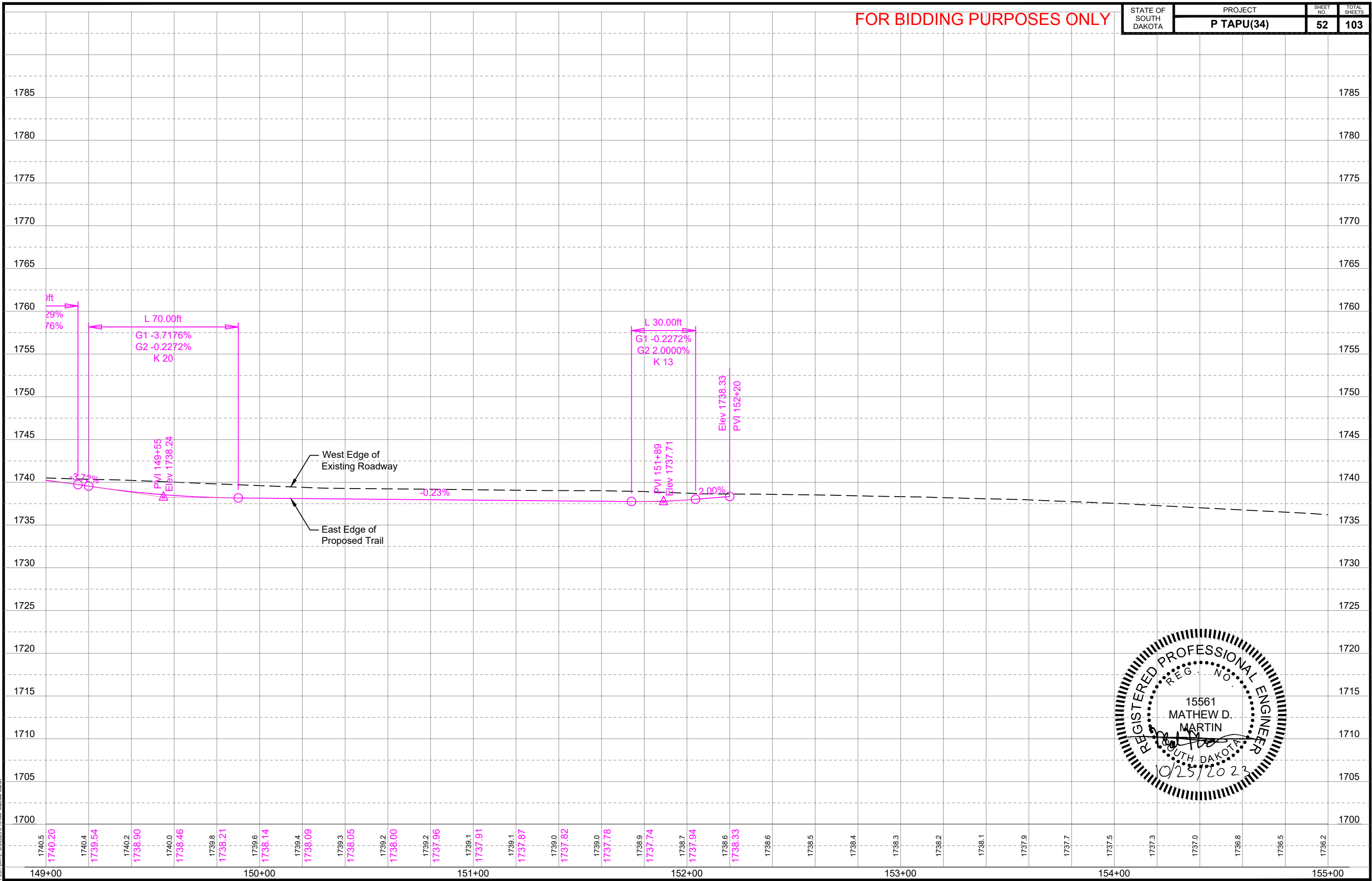


TABLE OF CONSTRUCTION AND TRAIL EASEMENTS									
PARCEL	STATION TO STATION			SIDE	TYPE	PURPOSE	AREA (SF±)	OWNER	LEGAL DESCRIPTION
1	107+74.01	TO	108+49.03	LT	TEMP	CONSTRUCTION	1,500	SCOTT MUNGER	LOT 2 OF WILLISTON ADDITION, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA
2	108+49.01	TO	111+49.02	LT	TEMP	CONSTRUCTION	5,998	WESTSIDE CONDUMINIUM ASSOCIATION	LOT 1 OF WILLISTON ADDITION, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA
3	111+49.02	TO	148+10.56	LT	TEMP	CONSTRUCTION	90,759	WILLISTON INC.	THE NW1/4 OF THE NE1/4 & THE S1/2 OF THE NE1/4 & THE SE1/4 LESS NWPS ADDITION & LESS WILLISTON ADDITION & LESS LOT H1 & LESS LOTS H1-H4, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA
4	148+61.73	TO	151+95.38	LT	PERM	TRAIL	5,025	BONNIE J. REDLIN	THE SW1/4 & THE W1/2 OF THE SE1/4 LYING W OF SD HWY 139 LESS THE S400' & E616' & LESS BRYLEE-REDLIN FARM ADDITION, SECTION 25, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA
4	148+68.94	TO	152+25.00	LT	TEMP	CONSTRUCTION	5,640		



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	54	103

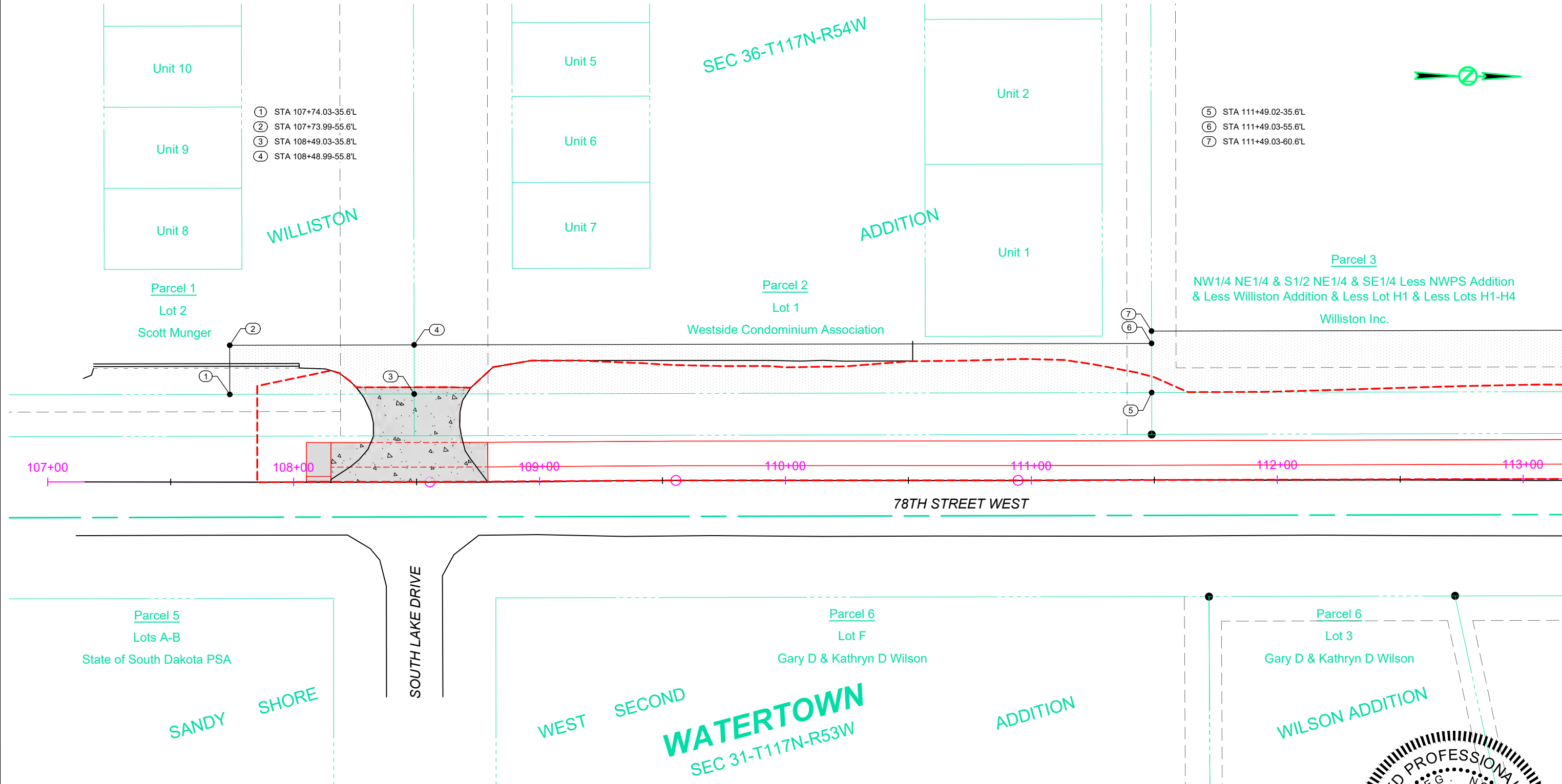
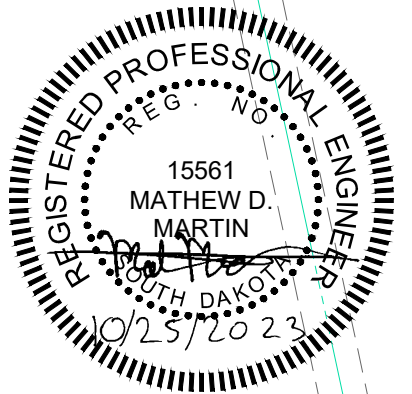


TABLE OF CONSTRUCTION AND TRAIL EASEMENTS

PARCEL	STATION TO STATION			SIDE	TYPE	PURPOSE	AREA (SF±)	OWNER	LEGAL DESCRIPTION
1	107+74.01	TO	108+49.03	LT	TEMP	CONSTRUCTION	1,500	SCOTT MUNGER	LOT 2 OF WILLISTON ADDITION, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA
2	108+49.01	TO	111+49.02	LT	TEMP	CONSTRUCTION	5,998	WESTSIDE CONDUMINIUM ASSOCIATION	LOT 1 OF WILLISTON ADDITION, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA
3	111+49.02	TO	148+10.56	LT	TEMP	CONSTRUCTION	90,759	WILLISTON INC.	THE NW1/4 OF THE NE1/4 & THE S1/2 OF THE NE1/4 & THE SE1/4 LESS NWPS ADDITION & LESS WILLISTON ADDITION & LESS LOT H1 & LESS LOTS H1-H4, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	55	103

SEC 36-T117N-R54W



Parcel 3
NW1/4 NE1/4 & S1/2 NE1/4 & SE1/4 Less NWPS Addition
& Less Williston Addition & Less Lot H1 & Less Lots H1-H4
Williston Inc.

113+00 114+00 115+00 116+00 117+00 118+00 119+00

78TH STREET WEST

Parcel 7
Lot 2
Scott & Sheri Campbell

Parcel 8
Lot 1
Randy & Sandra Parkin

Parcel 9
Pelican View Bay Addition
David W & Ann M Schmidt

Parcel 10
Gov't Lot 2
Timothy & Carla Peterson

WILSON

ADDITION

WATERTOWN
SEC 31-T117N-R53W



TABLE OF CONSTRUCTION AND TRAIL EASEMENTS

PARCEL	STATION TO STATION			SIDE	TYPE	PURPOSE	AREA (SF±)	OWNER	LEGAL DESCRIPTION
3	111+49.02	TO	148+10.56	LT	TEMP	CONSTRUCTION	90,759	WILLISTON INC.	THE NW1/4 OF THE NE1/4 & THE S1/2 OF THE NE1/4 & THE SE1/4 LESS NWPS ADDITION & LESS WILLISTON ADDITION & LESS LOT H1 & LESS LOTS H1-H4, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA

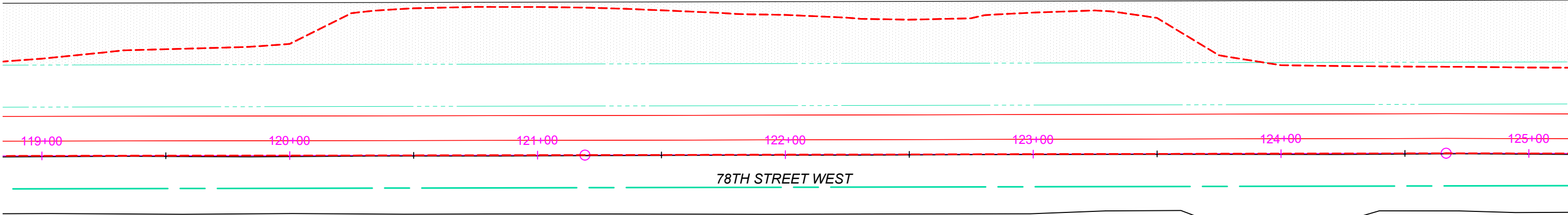
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	56	103

SEC 36-T117N-R54W



Parcel 3
NW1/4 NE1/4 & S1/2 NE1/4 & SE1/4 Less NWPS Addition
& Less Williston Addition & Less Lot H1 & Less Lots H1-H4
Williston Inc.



Parcel 10
Gov't Lot 2
Timothy & Carla Peterson

2ND AVENUE SOUTH

WATERTOWN
SEC 31 - T117N - R53W



TABLE OF CONSTRUCTION AND TRAIL EASEMENTS

PARCEL	STATION TO STATION			SIDE	TYPE	PURPOSE	AREA (SF±)	OWNER	LEGAL DESCRIPTION
3	111+49.02	TO	148+10.56	LT	TEMP	CONSTRUCTION	90,759	WILLISTON INC.	THE NW1/4 OF THE NE1/4 & THE S1/2 OF THE NE1/4 & THE SE1/4 LESS NWPS ADDITION & LESS WILLISTON ADDITION & LESS LOT H1 & LESS LOTS H1-H4, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	57	103

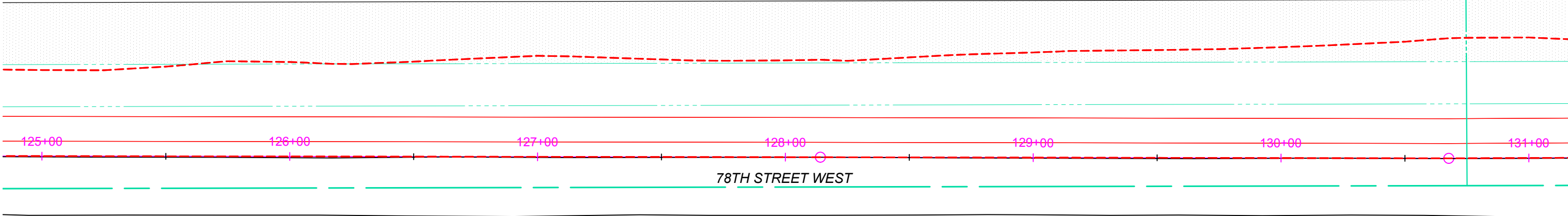
SEC 36-T117N-R54W



Parcel 3

NW1/4 NE1/4 & S1/2 NE1/4 & SE1/4 Less NWPS Addition
& Less Williston Addition & Less Lot H1 & Less Lots H1-H4

Williston Inc.



Parcel 11

Lot C

John Miller

Parcel 12

Lot B

Jeffrey & Jodi Lundgaard

Parcel 13

Lot A

Gary & Rebecca Delvo

Parcel 14

Lot 3

Dana & Marlie Dockter

Parcel 15

Lot 2

Brian & Laretta
Kranz Trust Et Al.

ANDERSON'S

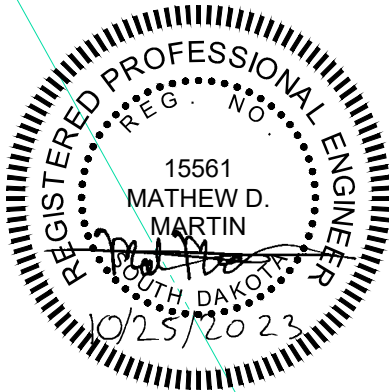
OUTLOT

WATERTOWN
SEC 31-T117N-R53W

SUBDIVISION

TABLE OF CONSTRUCTION AND TRAIL EASEMENTS

PARCEL	STATION TO STATION			SIDE	TYPE	PURPOSE	AREA (SF±)	OWNER	LEGAL DESCRIPTION
3	111+49.02	TO	148+10.56	LT	TEMP	CONSTRUCTION	90,759	WILLISTON INC.	THE NW1/4 OF THE NE1/4 & THE S1/2 OF THE NE1/4 & THE SE1/4 LESS NWPS ADDITION & LESS WILLISTON ADDITION & LESS LOT H1 & LESS LOTS H1-H4, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	58	103

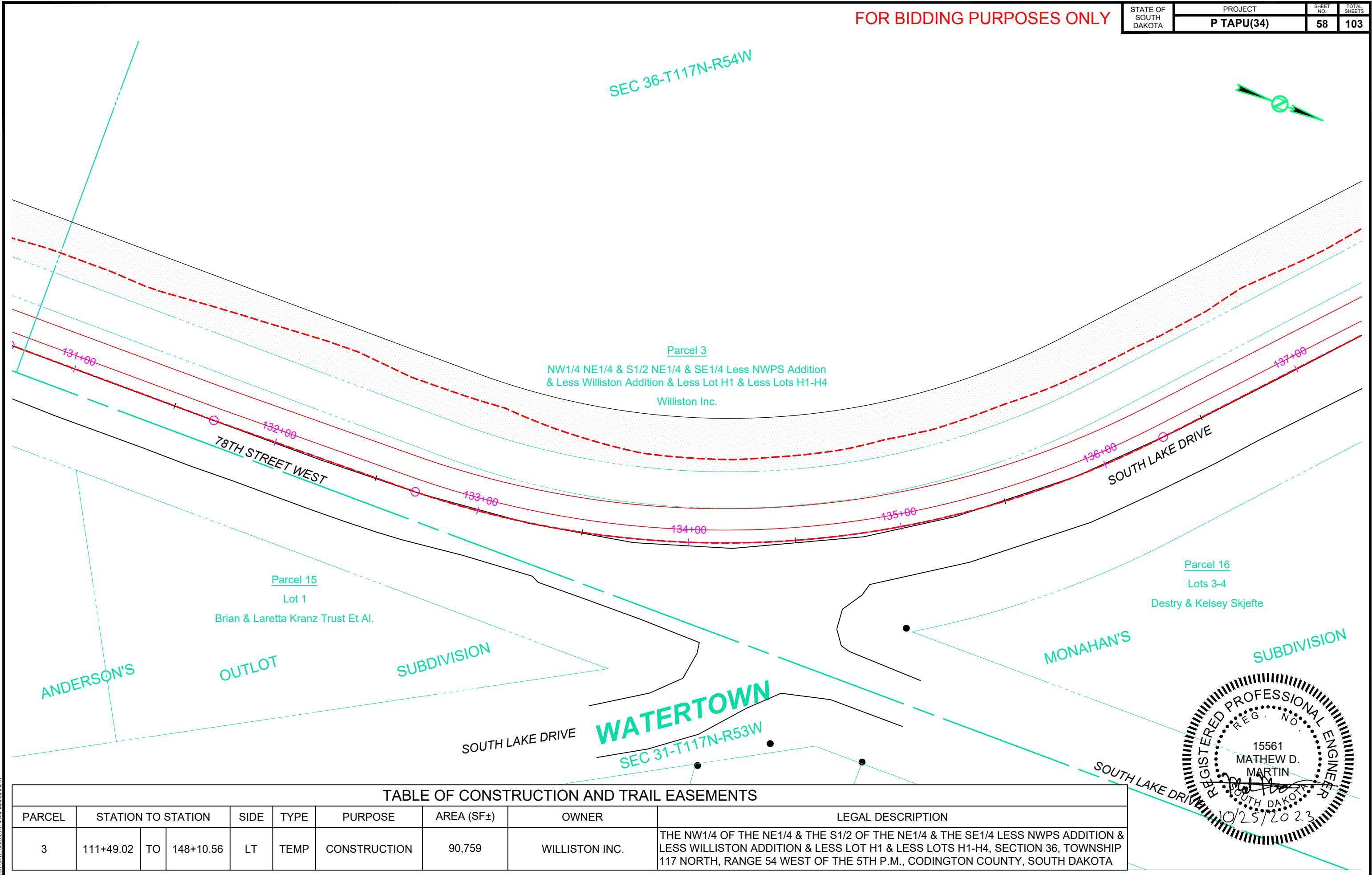
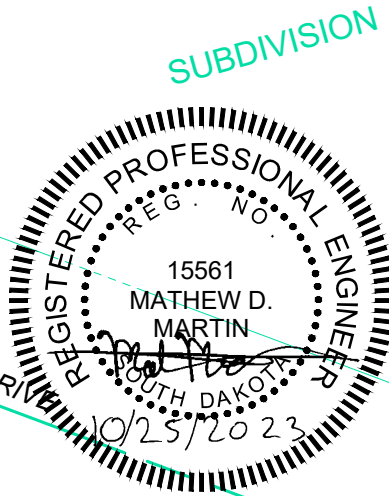


TABLE OF CONSTRUCTION AND TRAIL EASEMENTS

PARCEL	STATION TO STATION			SIDE	TYPE	PURPOSE	AREA (SF±)	OWNER	LEGAL DESCRIPTION
3	111+49.02	TO	148+10.56	LT	TEMP	CONSTRUCTION	90,759	WILLISTON INC.	THE NW1/4 OF THE NE1/4 & THE S1/2 OF THE NE1/4 & THE SE1/4 LESS NWPS ADDITION & LESS WILLISTON ADDITION & LESS LOT H1 & LESS LOTS H1-H4, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA

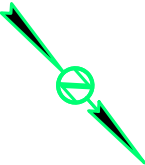


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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	59	103

SEC 36-T117N-R54W



Parcel 3

NW1/4 NE1/4 & S1/2 NE1/4 & SE1/4 Less NWPS Addition
& Less Williston Addition & Less Lot H1 & Less Lots H1-H4
Williston Inc.

SOUTH LAKE DRIVE

Parcel 16

Lots 3-4 of Block 1
Destry & Kelsey Skjefte

Parcel 17

Block 2 Less N 280'
Ed & Laurie Painter

Parcel 18

Lot 3 of Block 3
Richard & Joan Zwieg

BENTHIN

ACRES

WATERTOWN

TABLE OF CONSTRUCTION AND TRAIL EASEMENTS

PARCEL	STATION TO STATION			SIDE	TYPE	PURPOSE	AREA (SF±)	OWNER	LEGAL DESCRIPTION
3	111+49.02	TO	148+10.56	LT	TEMP	CONSTRUCTION	90,759	WILLISTON INC.	THE NW1/4 OF THE NE1/4 & THE S1/2 OF THE NE1/4 & THE SE1/4 LESS NWPS ADDITION & LESS WILLISTON ADDITION & LESS LOT H1 & LESS LOTS H1-H4, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	60	103

- ① STA 147+98.37-38.5'L
- ② STA 148+13.45-63.5'L
- ③ STA 148+61.73-22.2'L
- ④ STA 148+68.94-37.4'L
- ⑤ STA 148+75.71-52.6'L

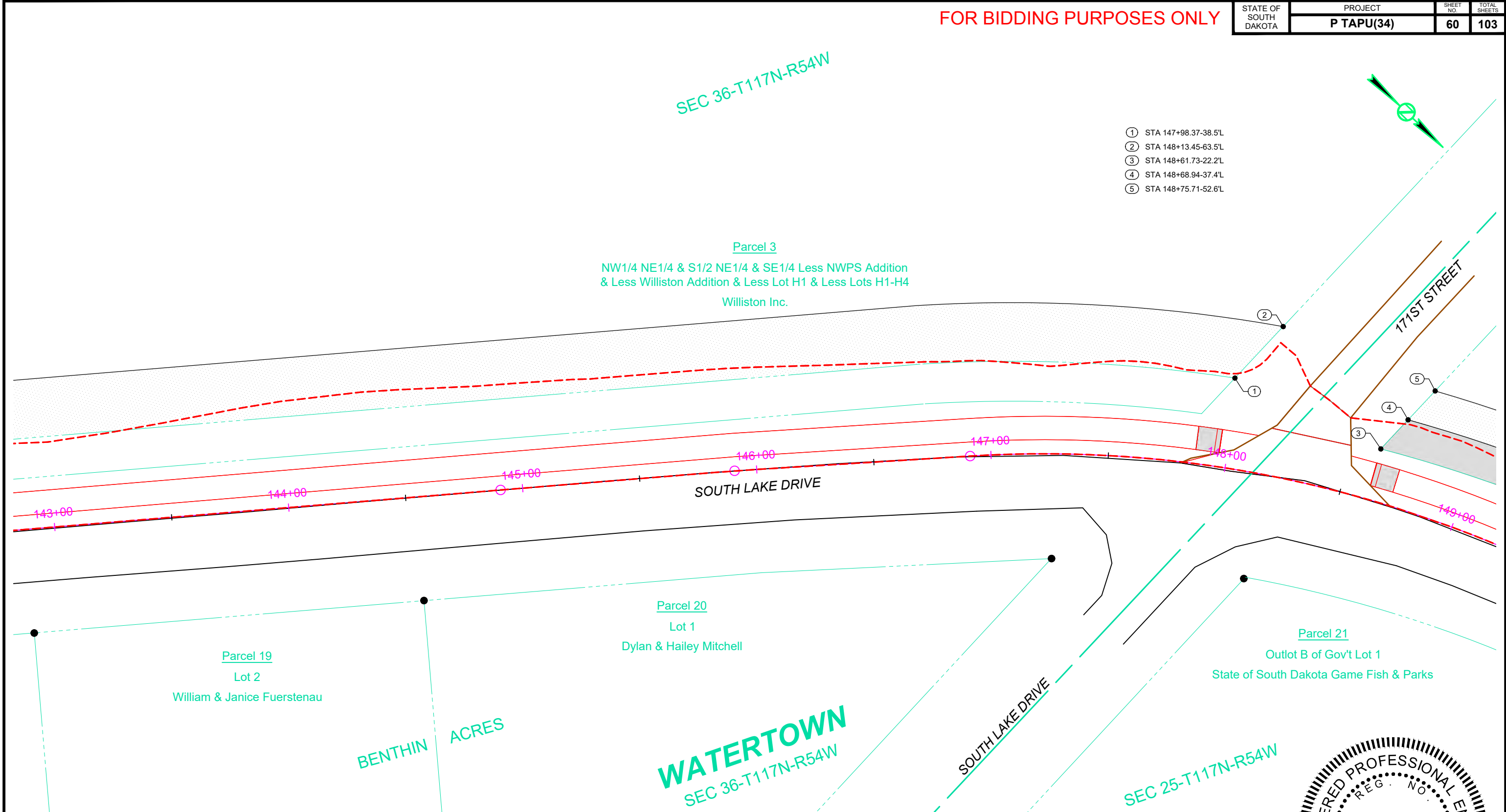


TABLE OF CONSTRUCTION AND TRAIL EASEMENTS

PARCEL	STATION TO STATION			SIDE	TYPE	PURPOSE	AREA (SF±)	OWNER	LEGAL DESCRIPTION
3	111+49.02	TO	148+10.56	LT	TEMP	CONSTRUCTION	90,759	WILLISTON INC.	THE NW1/4 OF THE NE1/4 & THE S1/2 OF THE NE1/4 & THE SE1/4 LESS NWPS ADDITION & LESS WILLISTON ADDITION & LESS LOT H1 & LESS LOTS H1-H4, SECTION 36, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA
4	148+61.73	TO	151+95.38	LT	PERM	TRAIL	5,025	BONNIE J. REDLIN	THE SW1/4 & THE W1/2 OF THE SE1/4 LYING W OF SD HWY 139 LESS THE S400' & E616' & LESS BRYLEE-REDLIN FARM ADDITION, SECTION 25, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA
4	148+68.94	TO	152+25.00	LT	TEMP	CONSTRUCTION	5,640		



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	61	103

SEC 25-T117N-R54W

- ① STA 151+95.29-22.8'L
- ② STA 151+95.42-37.8'L
- ③ STA 152+25.00-30.0'L
- ④ STA 152+25.00-53.0'L



Parcel 4
Bonnie J Redlin

SOUTH LAKE DRIVE

LYNWOOD DRIVE

Parcel 21
Outlot B of Gov't Lot 1
State of South Dakota Game Fish & Parks

WATERTOWN

TABLE OF CONSTRUCTION AND TRAIL EASEMENTS

PARCEL	STATION TO STATION			SIDE	TYPE	PURPOSE	AREA (SF±)	OWNER	LEGAL DESCRIPTION
4	148+61.73	TO	151+95.38	LT	PERM	TRAIL	5,025	BONNIE J. REDLIN	THE SW1/4 & THE W1/2 OF THE SE1/4 LYING W OF SD HWY 139 LESS THE S400' & E616' & LESS BRYLEE-REDLIN FARM ADDITION, SECTION 25, TOWNSHIP 117 NORTH, RANGE 54 WEST OF THE 5TH P.M., CODINGTON COUNTY, SOUTH DAKOTA
4	148+68.94	TO	152+25.00	LT	TEMP	CONSTRUCTION	5,640		



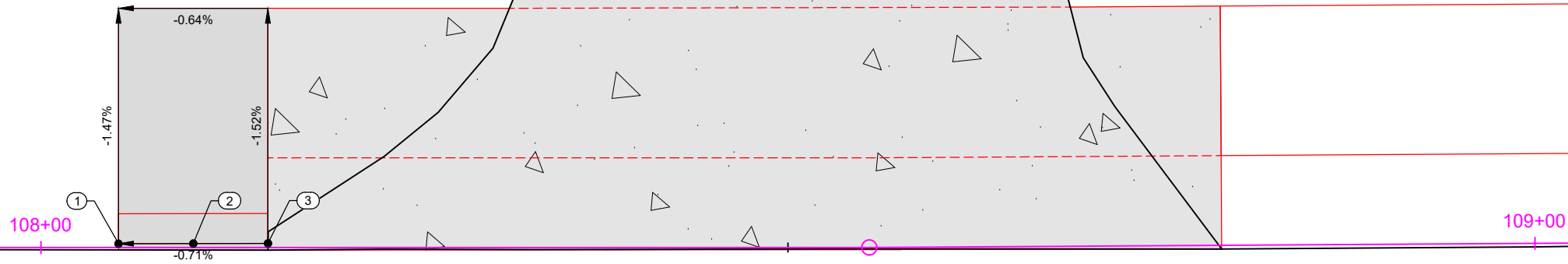
CURB RAMP LAYOUT
78TH STREET WEST & SOUTH LAKE DRIVE INTERSECTION

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	62	103



- ① 108+05.20-0.00'
Corner of 6" Concrete
TC Elev. 1734.05
- ② 108+10.20-0.27'L
Center of Detectable Warning Panel
TC Elev. 1734.07
- ③ 108+15.19-0.00'
Corner of 6" Concrete
TC Elev. 1734.12



78TH STREET WEST

SOUTH LAKE DRIVE

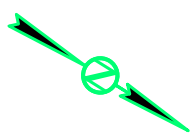


CURB RAMP LAYOUT

SOUTH LAKE DRIVE & 171ST STREET INTERSECTION

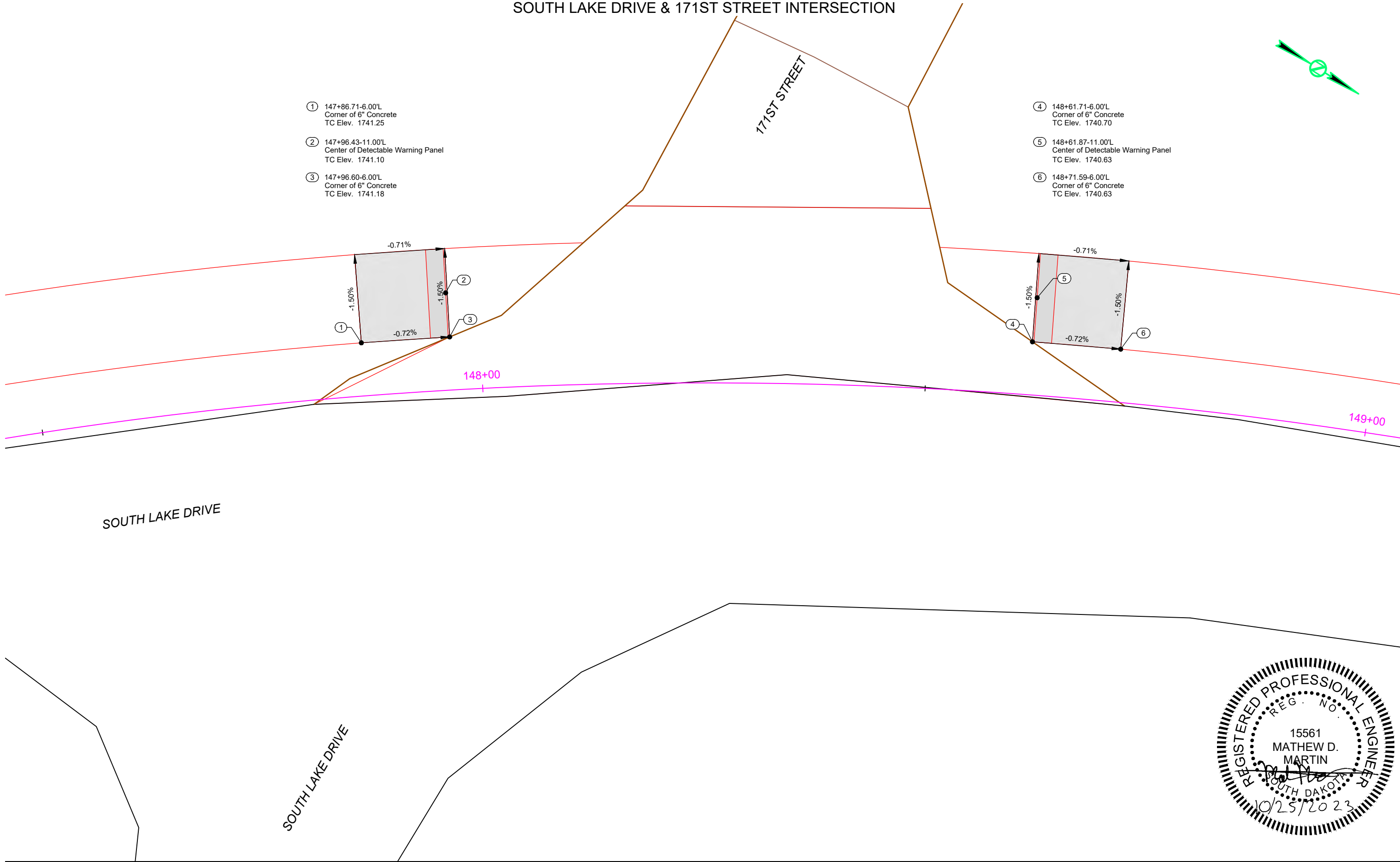
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	62	103



- ① 147+86.71-6.00'L
Corner of 6" Concrete
TC Elev. 1741.25
- ② 147+96.43-11.00'L
Center of Detectable Warning Panel
TC Elev. 1741.10
- ③ 147+96.60-6.00'L
Corner of 6" Concrete
TC Elev. 1741.18

- ④ 148+61.71-6.00'L
Corner of 6" Concrete
TC Elev. 1740.70
- ⑤ 148+61.87-11.00'L
Center of Detectable Warning Panel
TC Elev. 1740.63
- ⑥ 148+71.59-6.00'L
Corner of 6" Concrete
TC Elev. 1740.63



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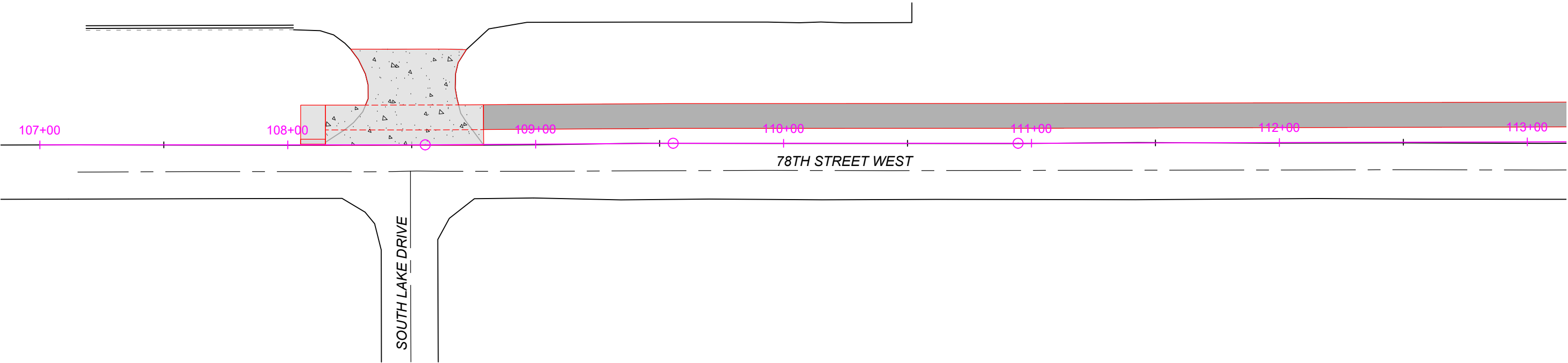


PAVEMENT LAYOUT

FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	64	103



PAVEMENT LEGEND

- ASPHALT CONCRETE COMPOSITE
- 6" CONCRETE SIDEWALK
- TYPE 1 DETECTABLE WARNING
- 7" NONREINFORCED PCC PAVEMENT
- GRAVEL SURFACING

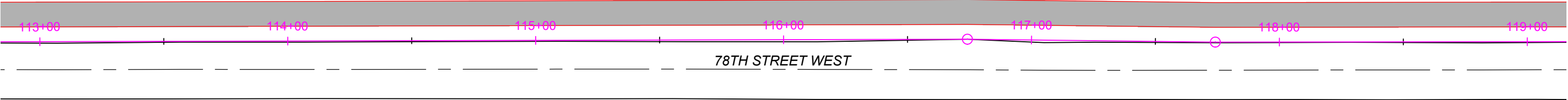


PAVEMENT LAYOUT



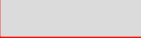
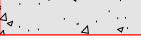

FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	65	103



PAVEMENT LEGEND

-  ASPHALT CONCRETE COMPOSITE
-  6" CONCRETE SIDEWALK
-  TYPE 1 DETECTABLE WARNING
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-  GRAVEL SURFACING

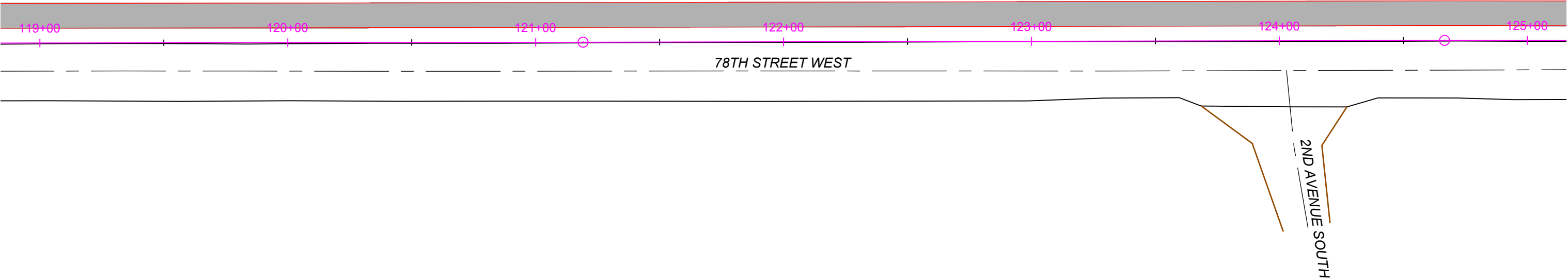


PAVEMENT LAYOUT


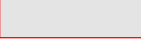

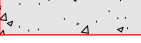

FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	66	103



PAVEMENT LEGEND

-  ASPHALT CONCRETE COMPOSITE
-  6" CONCRETE SIDEWALK
-  TYPE 1 DETECTABLE WARNING
-  7" NONREINFORCED PCC PAVEMENT
-  GRAVEL SURFACING

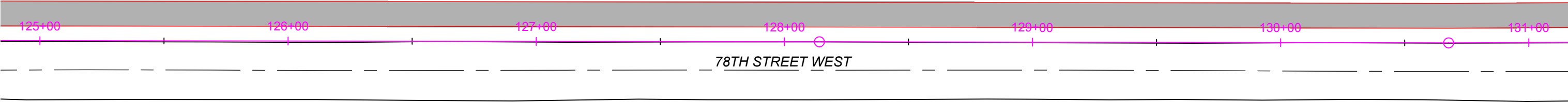


PAVEMENT LAYOUT




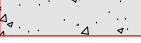

FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	67	103



PAVEMENT LEGEND

-  ASPHALT CONCRETE COMPOSITE
-  6" CONCRETE SIDEWALK
-  TYPE 1 DETECTABLE WARNING
-  7" NONREINFORCED PCC PAVEMENT
-  GRAVEL SURFACING



PAVEMENT LAYOUT

FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	68	103



PAVEMENT LEGEND

- ASPHALT CONCRETE COMPOSITE
- 6" CONCRETE SIDEWALK
- TYPE 1 DETECTABLE WARNING
- 7" NONREINFORCED PCC PAVEMENT
- GRAVEL SURFACING

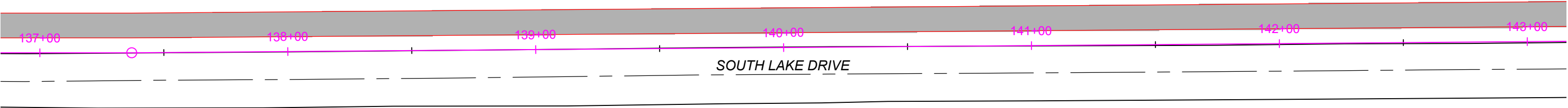
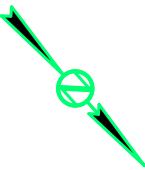


PAVEMENT LAYOUT

FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	69	103



PAVEMENT LEGEND

- ASPHALT CONCRETE COMPOSITE
- 6" CONCRETE SIDEWALK
- TYPE 1 DETECTABLE WARNING
- 7" NONREINFORCED PCC PAVEMENT
- GRAVEL SURFACING

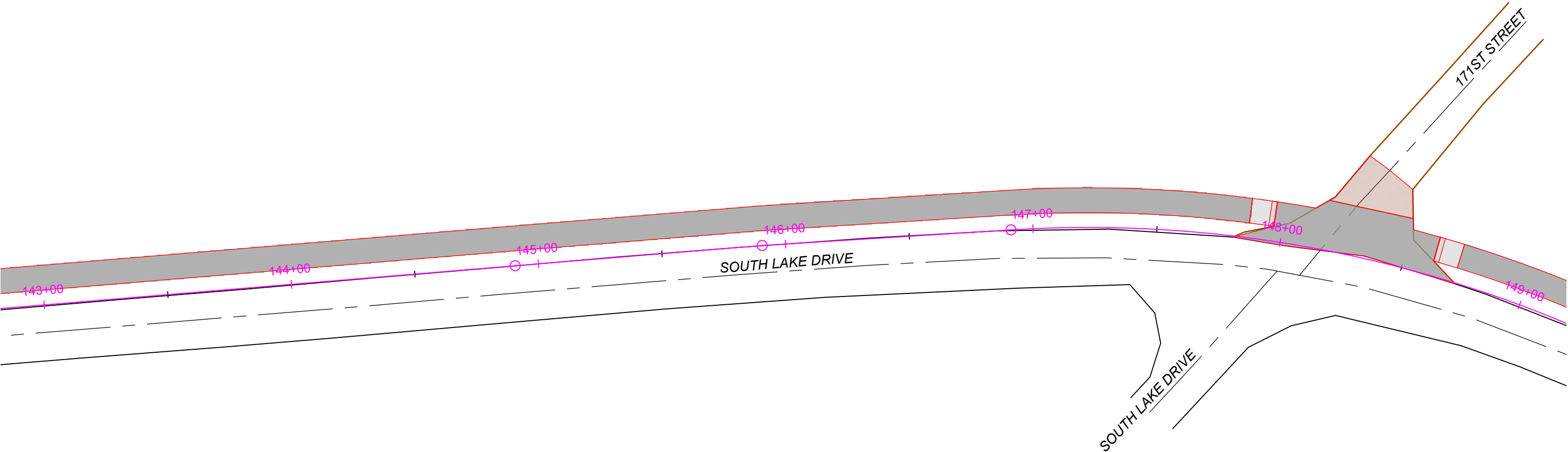
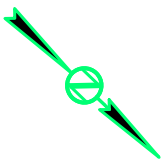


PAVEMENT LAYOUT

FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	70	103



PAVEMENT LEGEND

- ASPHALT CONCRETE COMPOSITE
- 6" CONCRETE SIDEWALK
- TYPE 1 DETECTABLE WARNING
- 7" NONREINFORCED PCC PAVEMENT
- GRAVEL SURFACING

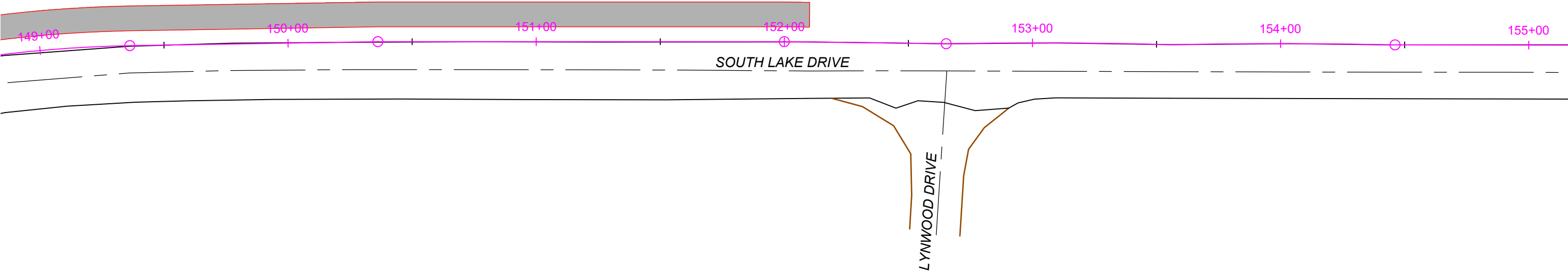


PAVEMENT LAYOUT

FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	71	103



PAVEMENT LEGEND

- ASPHALT CONCRETE COMPOSITE
- 6" CONCRETE SIDEWALK
- TYPE 1 DETECTABLE WARNING
- 7" NONREINFORCED PCC PAVEMENT
- GRAVEL SURFACING



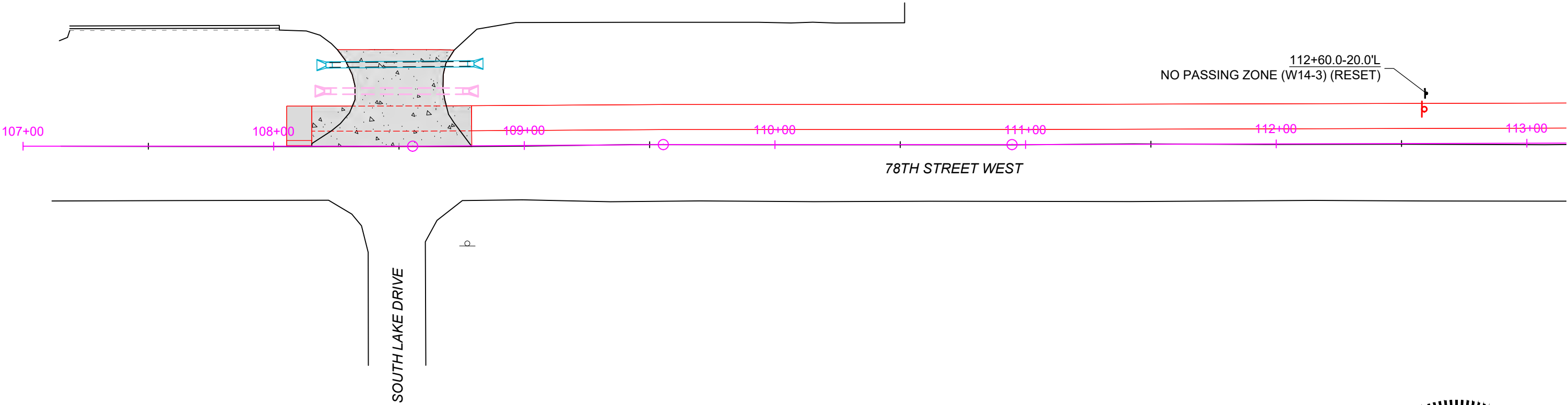
PERMANENT SIGNING

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	72	103



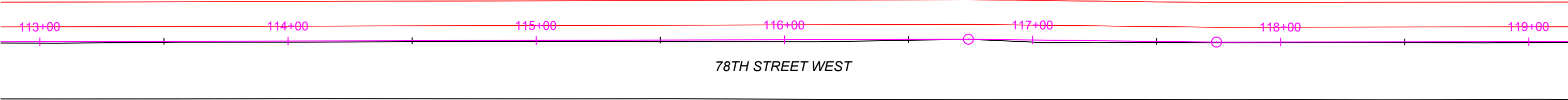
REMOVE SIGN FOR RESET:
112+59-14' L



PERMANENT SIGNING

FOR BIDDING PURPOSES ONLY

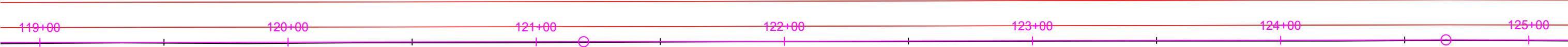
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	73	103



PERMANENT SIGNING

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	74	103



78TH STREET WEST

2ND AVENUE SOUTH

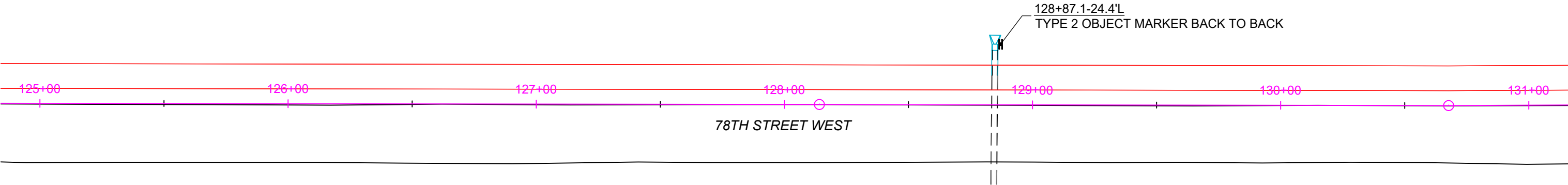


PERMANENT SIGNING

FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	75	103



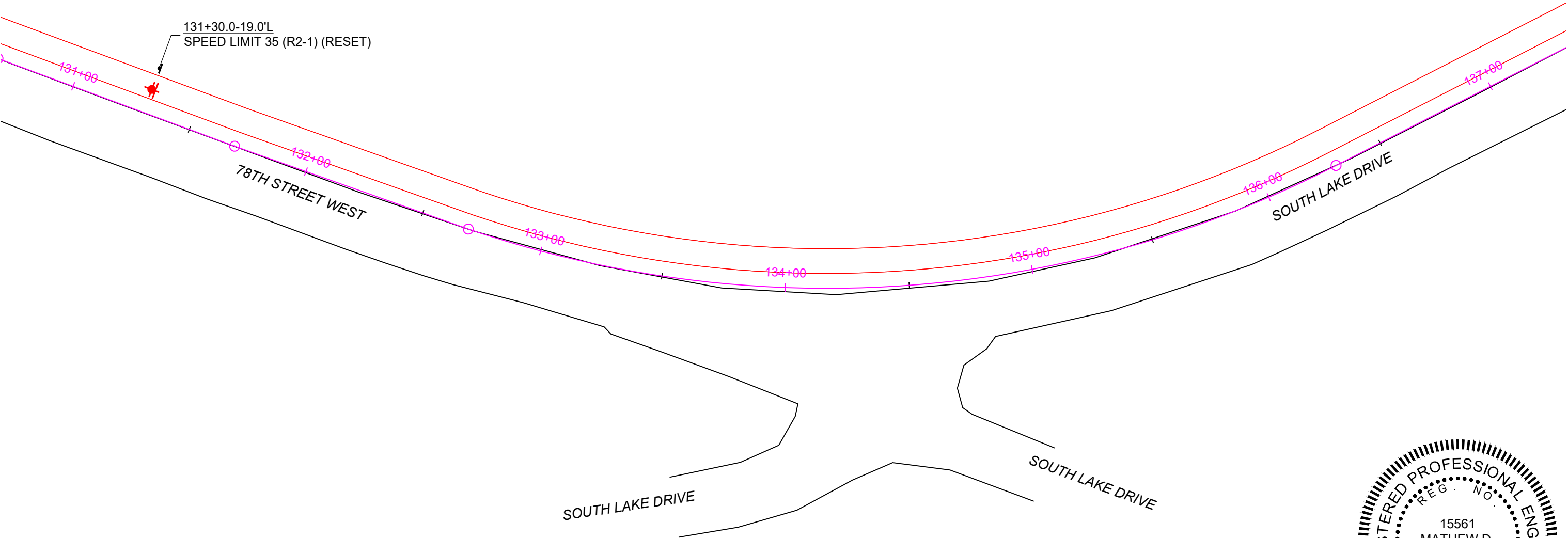
PERMANENT SIGNING

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	76	103



REMOVE SIGN FOR RESET:
131+30-10' L

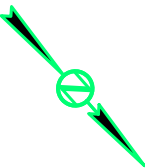


PERMANENT SIGNING

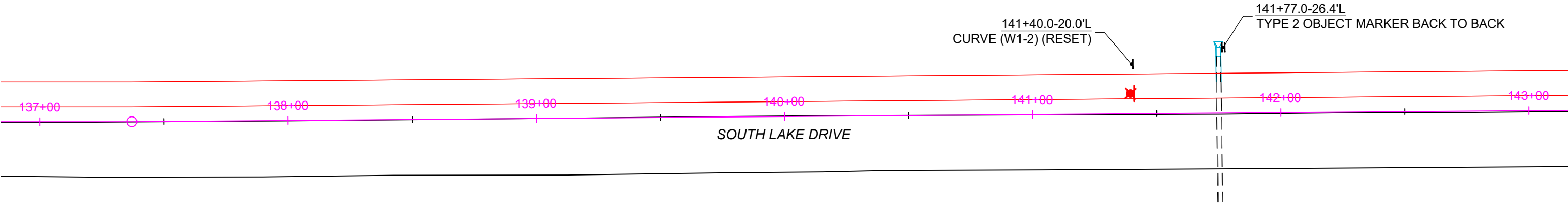
FOR BIDDING PURPOSES ONLY

Revised 12/13/23

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	77	103



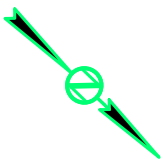
REMOVE SIGN FOR RESET:
141+40-8' L



PERMANENT SIGNING

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	78	103



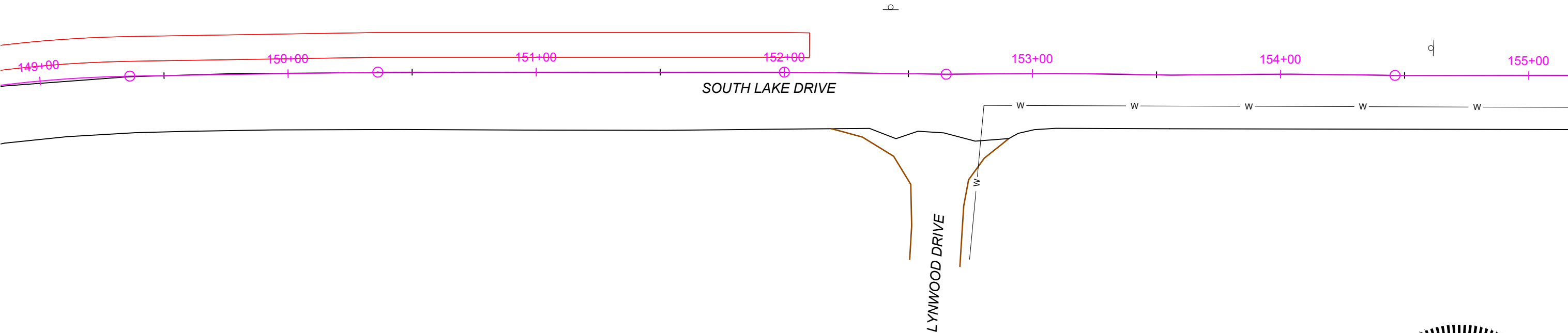
REMOVE SIGN FOR RESET:
148+00-23' L
148+13-34' L



PERMANENT SIGNING

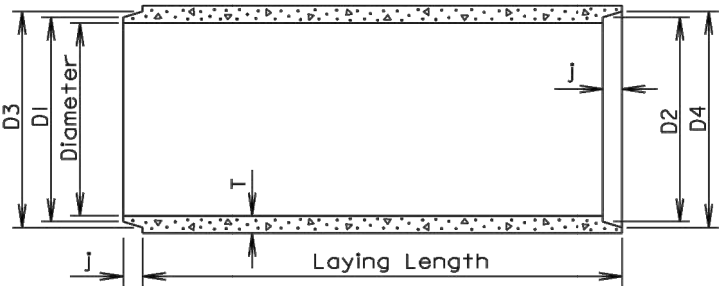
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	79	103

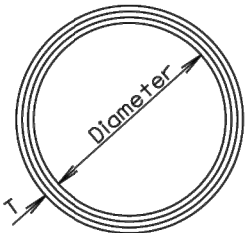


TOLERANCES IN DIMENSIONS

Diameter: $\pm 1.5\%$ for 24" Dia. or less and $\pm 1\%$ or $\frac{3}{8}"$ whichever is more for 27" Dia. or greater.
Diameters at joints: $\pm \frac{3}{16}"$ for 30" Dia. or less and $\pm \frac{1}{4}"$ for 36" or greater.
Length of joint (J): $\pm \frac{1}{4}"$.
Wall thickness (T): not less than design T by more than 5% or $\frac{3}{16}"$, whichever is greater.
Laying length: shall not underrun by more than $\frac{1}{2}"$.



LONGITUDINAL SECTION



END VIEW

GENERAL NOTES:

Construction of R.C.P. shall conform to the requirements of Section 990 of the Specifications.

Not more than 2 four-foot sections shall be permitted near the ends of any culvert. Four-foot lengths shall be used only to secure the required length of culvert.

Diam. (In.)	Approx. Wt. /Ft. (lb.)	T (In.)	J (In.)	D1 (In.)	D2 (In.)	D3 (In.)	D4 (In.)
12	92	2	1 3/4	13 1/4	13 5/8	13 7/8	14 1/4
15	127	2 1/4	2	16 1/2	16 7/8	17 1/4	17 5/8
18	168	2 1/2	2 1/4	19 5/8	20	20 3/8	20 3/4
21	214	2 3/4	2 1/2	22 7/8	23 1/4	23 3/4	24 1/8
24	265	3	2 3/4	26	26 3/8	27	27 3/8
27	322	3 1/4	3	29 1/4	29 5/8	30 1/4	30 5/8
30	384	3 1/2	3 1/4	32 3/8	32 3/4	33 1/2	33 7/8
36	524	4	3 3/4	38 3/4	39 1/4	40	40 1/2
42	685	4 1/2	4	45 1/8	45 5/8	46 1/2	47
48	867	5	4 1/2	51 1/2	52	53	53 1/2
54	1070	5 1/2	4 1/2	57 7/8	58 3/8	59 3/8	59 7/8
60	1296	6	5	64 1/4	64 3/4	66	66 1/2
66	1542	6 1/2	5 1/2	70 5/8	71 1/8	72 1/2	73
72	1810	7	6	77	77 1/2	79	79 1/2
78	2098	7 1/2	6 1/2	83 3/8	83 7/8	85 5/8	86 1/8
84	2410	8	7	89 3/4	90 1/4	92 1/8	92 5/8
90	2740	8 1/2	7	95 3/4	96 1/4	98 1/8	98 5/8
96	2950	9	7	102 1/8	102 5/8	104 1/2	105
102	3075	9 1/2	7 1/2	109	109 1/2	111 1/2	112
108	3870	10	7 1/2	115 1/2	116	118	118 1/2

June 26, 2015

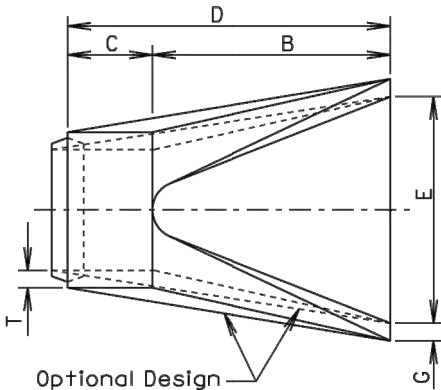
Published Date: 2024

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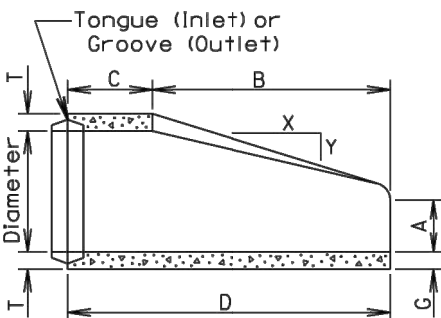
REINFORCED CONCRETE PIPE

PLATE NUMBER
450.01

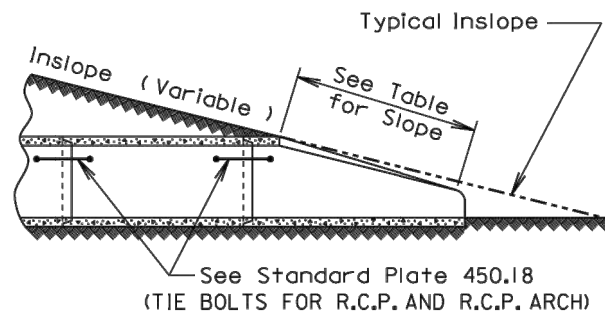
Sheet 1 of 1



TOP VIEW



LONGITUDINAL SECTION

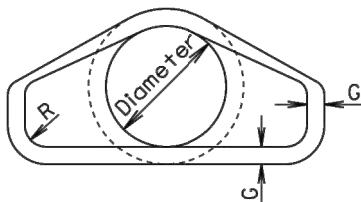


SLOPE DETAIL

GENERAL NOTES:

Lengths of concrete pipe shown on plan sheets are between flared ends only.

Construction of R.C.P. Flared End shall conform to the requirements of Section 990 of the Specifications.



END VIEW

Dia. (In.)	Approx. Wt. of Section (lbs.)	Approx. Slope (X to Y)	T (In.)	A (In.)	B (In.)	C (In.)	D (In.)	E (In.)	G (In.)	R (In.)
12	530	2.4: 1	2	4	24	48 7/8	72 7/8	24	2	1 1/2
15	740	2.4: 1	2 1/4	6	27	46	73	30	2 1/4	1 1/2
18	990	2.3: 1	2 1/2	9	27	46	73	36	2 1/2	1 1/2
21	1280	2.4: 1	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	1 1/2
24	1520	2.5: 1	3	9 1/2	43 1/2	30	73 1/2	48	3	1 1/2
27	1930	2.5: 1	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	1 1/2
30	2190	2.5: 1	3 1/2	12	54	19 3/4	73 3/4	60	3 1/2	1 1/2
36	4100	2.5: 1	4	15	63	34 3/4	97 3/4	72	4	1 1/2
42	5380	2.5: 1	4 1/2	21	63	35	98	78	4 1/2	1 1/2
48	6550	2.5: 1	5	24	72	26	98	84	5	1 1/2
54	8240	2: 1	5 1/2	27	65	33 1/4	98 1/4	90	5 1/2	1 1/2
60	8730	1.9: 1	6	35	60	39	99	96	5	1 1/2
66	10710	1.7: 1	6 1/2	30	72	27	99	102	5 1/2	1 1/2
72	12520	1.8: 1	7	36	78	21	99	108	6	1 1/2
78	14770	1.8: 1	7 1/2	36	90	21	111	114	6 1/2	1 1/2
84	18160	1.6: 1	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2
90	20900	1.5: 1	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	6

June 26, 2015

Published Date: 2024

S
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T

R. C. P. FLARED ENDS

PLATE NUMBER
450.10

Sheet 1 of 1

Wall "t" (in.)	Rod Dia. (in.)	Pipe Sleeve Dia. (nominal)
≤ 3¼	5⁄8	¾
3½-6½	¾	1
≥ 7	1	1¼

GENERAL NOTES:

Tie bolts shall conform to ASTM F1554 Grade 36 or ASTM A36. Nuts shall be heavy hex conforming to ASTM A563. Washers shall conform to ASTM F436.

Pipe Sleeve shall conform to ASTM A500 or A53, Grade B.

Galvanize adjustable eye bolt tie assembly in accordance with ASTM A153.

ADJUSTABLE EYE BOLT TIE

Pipe Dia. (in.)	"L" (in.)	Bolt Dia. (in.)
≤ 48	4	¾
> 48	6	1

GENERAL NOTES:

Angles shall conform to ASTM A36.

Bolts shall conform to ASTM A307. Nuts shall be heavy hex conforming to ASTM A563. Washers shall conform to ASTM F436.

Galvanize angles, bolts, nuts, and washers in accordance with ASTM A153.

ANGLE AND BOLT TIE

GENERAL NOTES:

In lieu of the tie bolts detailed above other types of tie bolt connections may be installed as approved by the Office of Bridge Design.

All pipe sections of R.C.P. and R.C.P. Arch shall be tied with tie bolts except for pipe located between drop inlets, manholes, and junction boxes. All pipe sections of pipes that only enter or exit drop inlets, manhole, and junction boxes shall be tied with tie bolts.

There will be no separate measurement or payment for the tie bolts. The cost for furnishing and installing the tie bolts shall be incidental to the contract unit price per foot for the corresponding bid item for R.C.P. or R.C.P. Arch.

February 28, 2013

Published Date: 2024	S D D O T	TIE BOLTS FOR R.C.P. AND R.C.P. ARCH	PLATE NUMBER 450.18
			Sheet 1 of 1

PLAN VIEW
(Type 2 Object Marker Details and Post Orientation)

ELEVATION VIEW
(Type 2 Object Marker Detail)
(7⁄8" to 1 1⁄8" grip range
¼" twin rivet (single and back to back))

(Pipe culvert shown for illustrative purpose.)

TYPE 2 OBJECT MARKER POST LENGTHS										
OFFSET (*)	1'	2'	3'	4'	5'	6'	7'	8'	Greater Than 8'	
SLOPE	POST LENGTH (L)									
	3:1	8'-6"	8'-9"	9'-3"	9'-6"	9'-9"	10'-3"	10'-6"	10'-9"	8'-0"
	4:1	8'-6"	8'-9"	9'-0"	9'-3"	9'-9"	9'-9"	10'-0"	10'-3"	8'-0"
	5:1	8'-3"	8'-6"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	9'-9"	8'-0"
6:1	8'-3"	8'-6"	8'-9"	8'-9"	9'-0"	9'-3"	9'-3"	9'-6"	8'-0"	

GENERAL NOTES:

*** The type 2 object marker may be installed back to back when specified in the plans.

Post Length L was calculated based on a shoulder width of 6 feet at a crossslope of 4 percent and L was rounded up to the nearest 3 inches.

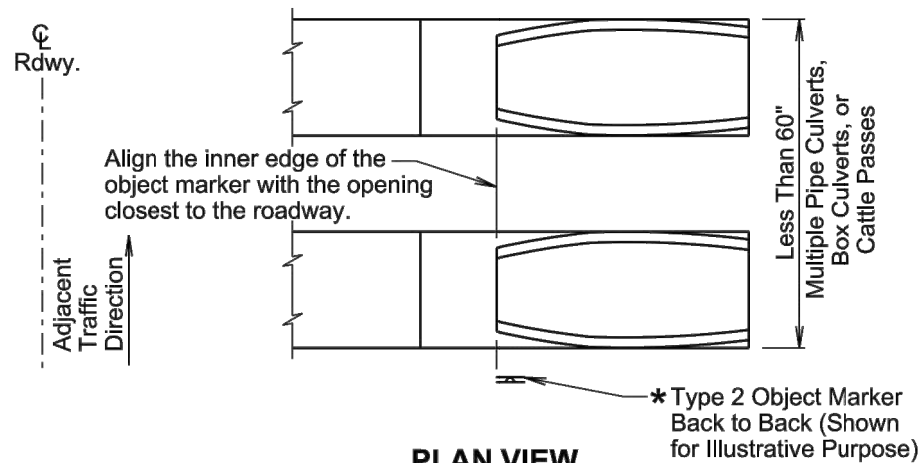
** Dimension A is 4 feet when the Offset * is 8 feet and less. Dimension B is 4 feet when Offset * is greater than 8 feet.

The type 2 object marker and the 1.12 lb/ft flanged channel steel post will be in conformance with Specifications Section 982.2 J.

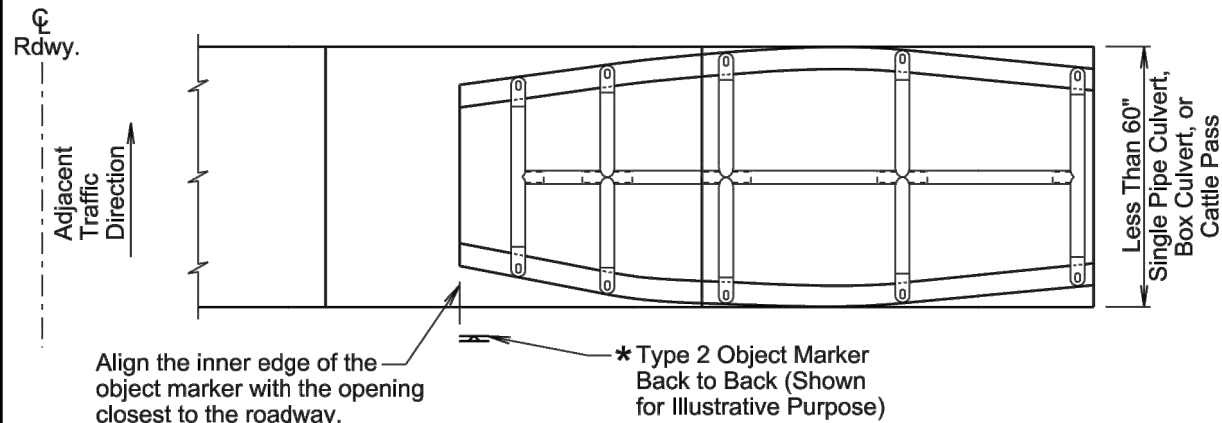
Payment for the type 2 object marker will be in conformance with Specification Section 632.5 B.

December 23, 2019

Published Date: 2024	S D D O T	TYPE 2 OBJECT MARKER (DIRECT DRIVE)	PLATE NUMBER 632.01
			Sheet 1 of 1



PLAN VIEW
(For Multiple Pipe Culverts, Box Culverts, and Cattle Passes)
(Pipe culverts shown for illustrative purpose.)
(Embankment is not shown.)



PLAN VIEW
(For Single Pipe Culvert, Box Culvert, and Cattle Pass)
(Pipe culvert shown for illustrative purpose.)
(Embankment is not shown.)

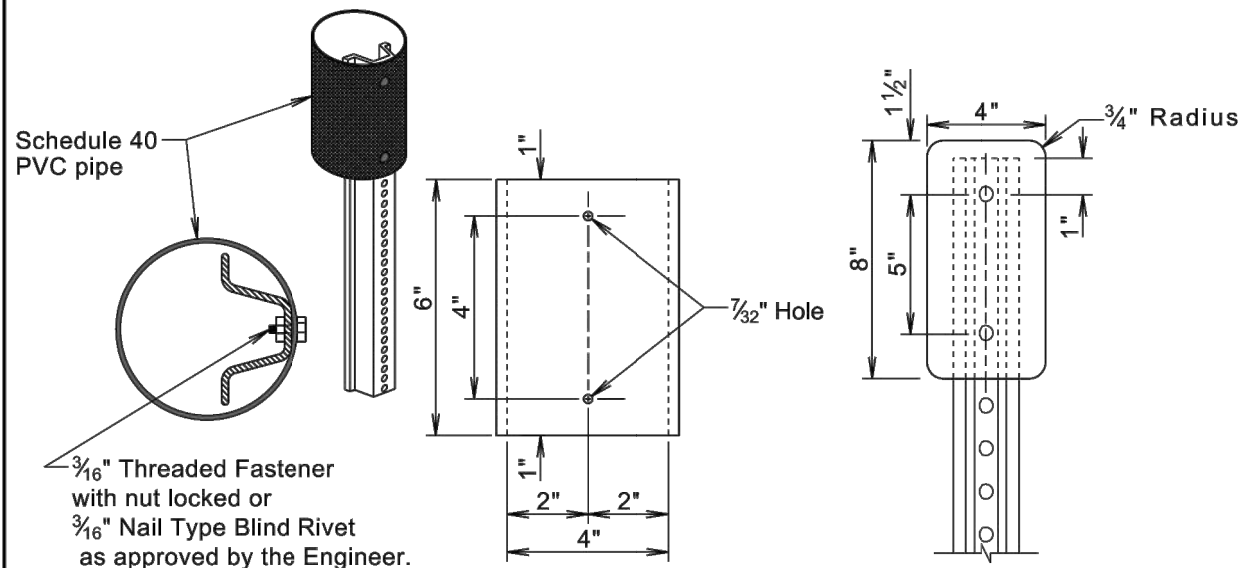
GENERAL NOTES:

This standard plate will be used in conjunction with standard plate 632.01.

* The type 2 object markers will be installed at the locations shown above. The type 2 object markers, single faced or back to back, will be as specified in the plans.

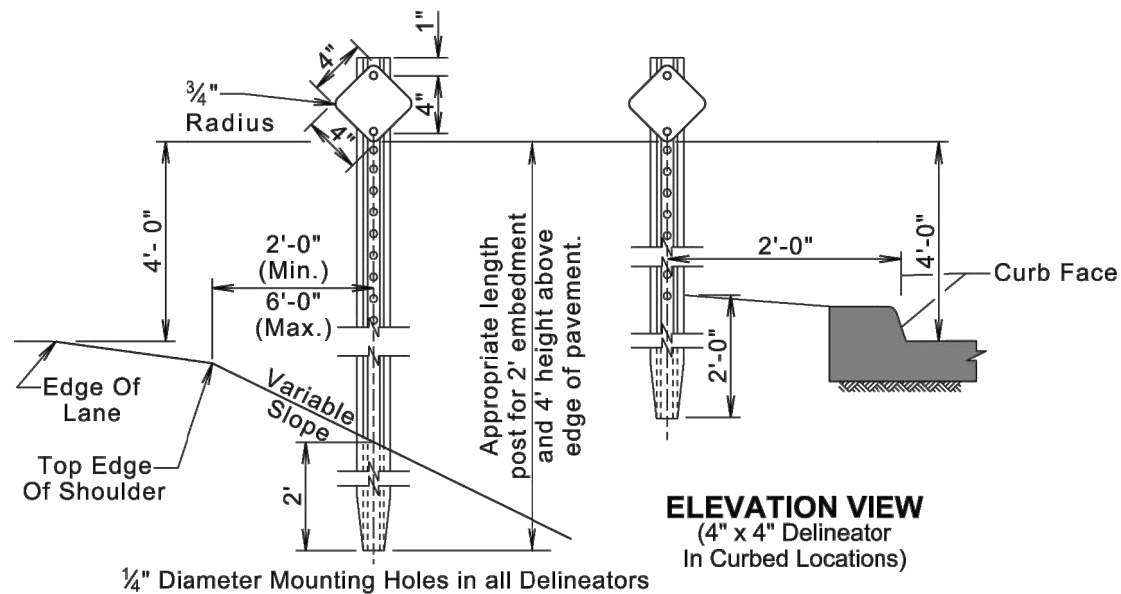
December 23, 2019

Published Date: 2024	S D D O T	TYPE 2 OBJECT MARKER AT PIPE CULVERTS, BOX CULVERTS, AND CATTLE PASSES (Less than 60" Overall Width)	PLATE NUMBER
			632.03
			Sheet 1 of 1



ELEVATION VIEW
(4" Tubular delineator
mounted on post)

ELEVATION VIEW
(4" x 8" Delineator)

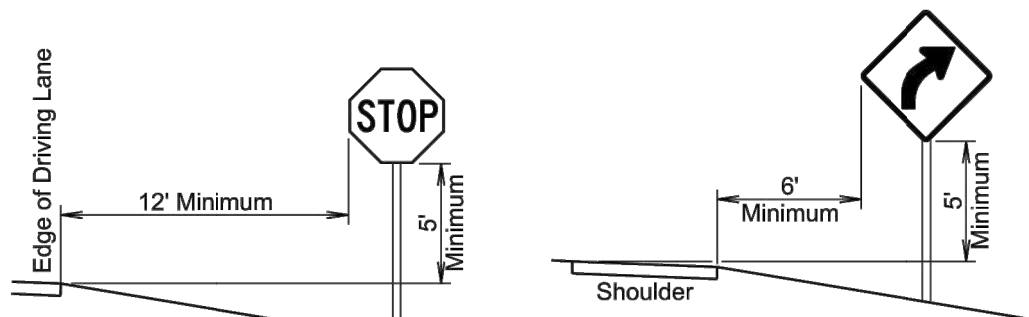


ELEVATION VIEW
(4" x 4" Delineators)

ELEVATION VIEW
(4" x 4" Delineator
In Curbed Locations)

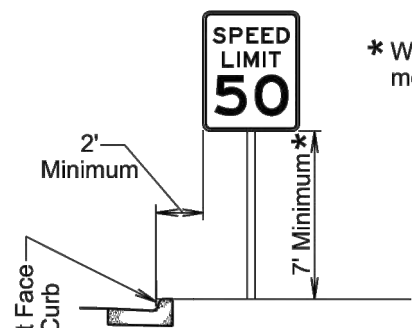
November 19, 2020

Published Date: 2024	S D D O T	DELINEATOR INSTALLATION DETAIL	PLATE NUMBER
			632.42
			Sheet 1 of 1



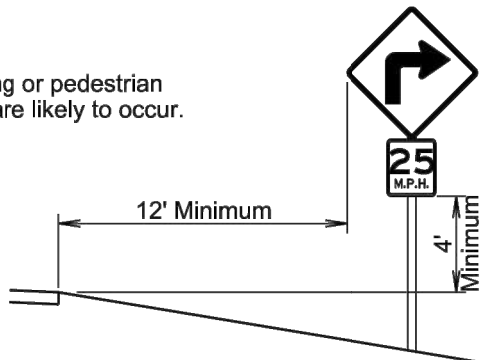
ROADSIDE SIGN
IN RURAL AREA

ROADSIDE SIGN
IN RURAL AREA
(If shoulder width is greater than 6 foot)

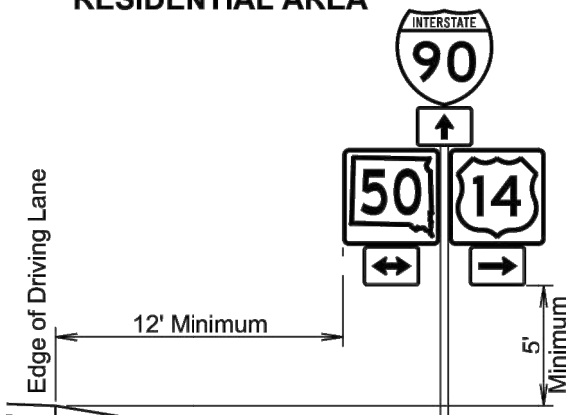


ROADSIDE SIGN
IN BUSINESS,
COMMERCIAL, OR
RESIDENTIAL AREA

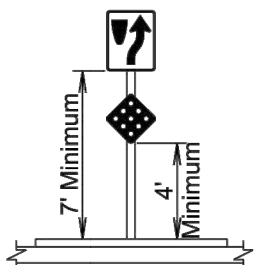
* Where parking or pedestrian
movements are likely to occur.



WARNING SIGN ADVISORY
SPEED PLAQUE IN RURAL AREA



ROADSIDE SIGN
IN RURAL AREA



SIGN ON NOSE
OF MEDIAN

November 19, 2020

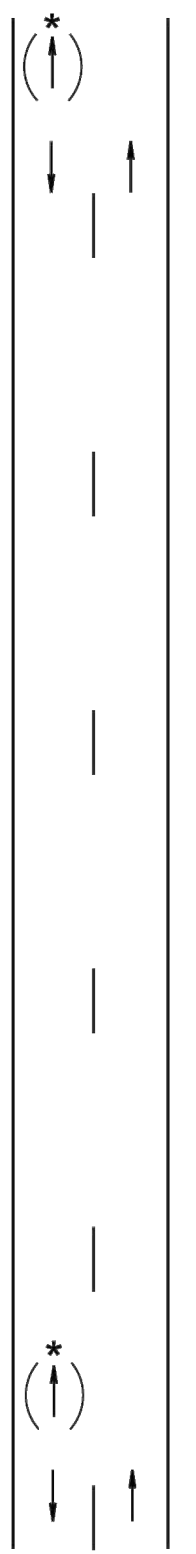
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated will be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



Posted Speed Prior to Work (M.P.H.)	Spacing of Advance Warning Signs (Feet) (A)
0 - 30	200
35 - 40	350
45 - 50	500
55	750
60 - 80	1000



A



January 22, 2021

Diagram illustrating the setup for work on shoulders. It shows a two-lane road with a shoulder. Signs include 'ROAD WORK AHEAD' (W20-1), 'SHOULDER WORK' (W21-5), and 'END ROAD WORK' (G20-2). Channelizing devices are used to create a 'WORK SPACE' on the shoulder. Dimensions A, G, and 2G are indicated for sign placement and device spacing.

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

■ Channelizing Device

END ROAD WORK G20-2

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

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

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

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

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

WORK SPACE

SHOULDER WORK W21-5

ROAD WORK AHEAD W20-1

END ROAD WORK G20-2

January 22, 2021

SDOT

WORK ON SHOULDERS

PLATE NUMBER 634.03

Sheet 1 of 1

Published Date: 2024

Diagram illustrating the setup for lane closure using stop signs. It shows a two-lane road with a 'WORK SPACE' in the center. Signs include 'ROAD WORK AHEAD' (W20-1), 'ONE LANE ROAD AHEAD' (W20-4), 'STOP' (RT-1), 'ROAD WORK AHEAD' (W20-1), 'END ROAD WORK' (G20-2), and 'SHOULDER WORK' (W21-5). Channelizing devices are used to create a 'WORK SPACE' in the center of the road. Dimensions A, G, and 2G are indicated for sign placement and device spacing.

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

END ROAD WORK G20-2 (Optional)

24" White Temporary Pavement Marking

4" Yellow Temporary Pavement Marking

■ Channelizing Device

** Need and safe speed to be determined at the site by the Engineer.

Type 3 Barricade

STOP RT-1

ONE LANE ROAD AHEAD W20-4

ROAD WORK AHEAD W20-1

END ROAD WORK G20-2 (Optional)

SHOULDER WORK W21-5

January 22, 2021

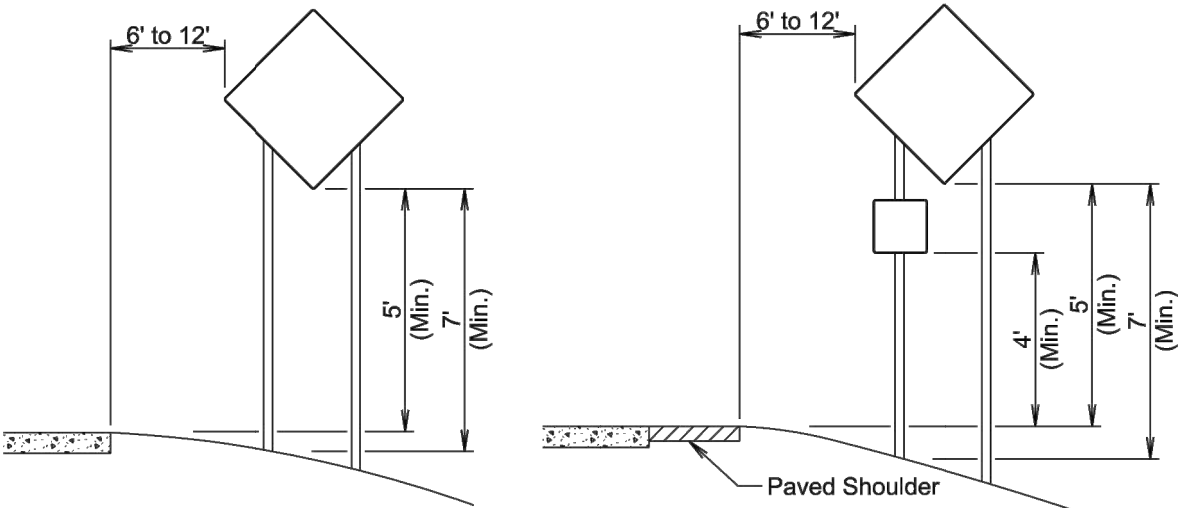
SDOT

LANE CLOSURE USING STOP SIGNS

PLATE NUMBER 634.25

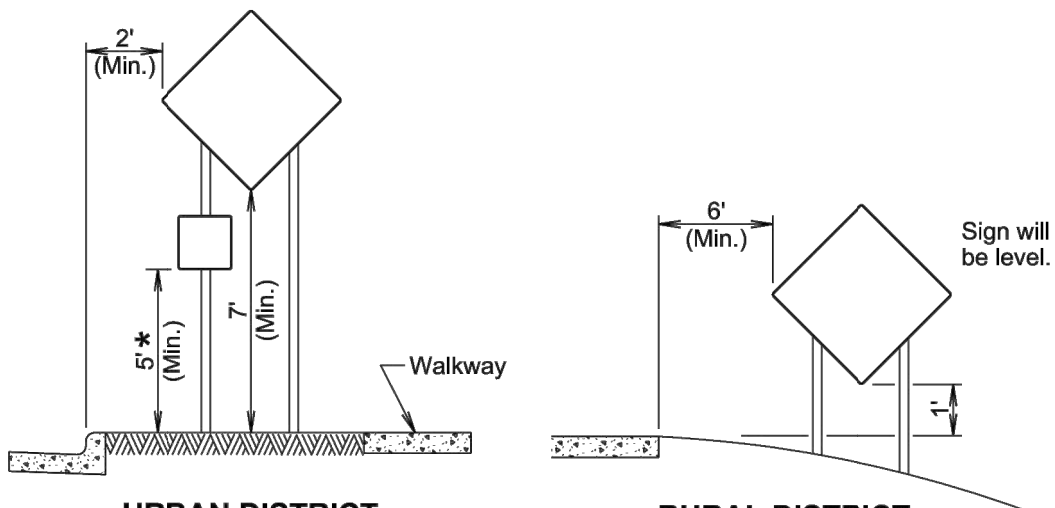
Sheet 1 of 1

Published Date: 2024



RURAL DISTRICT

RURAL DISTRICT WITH
SUPPLEMENTAL PLATE



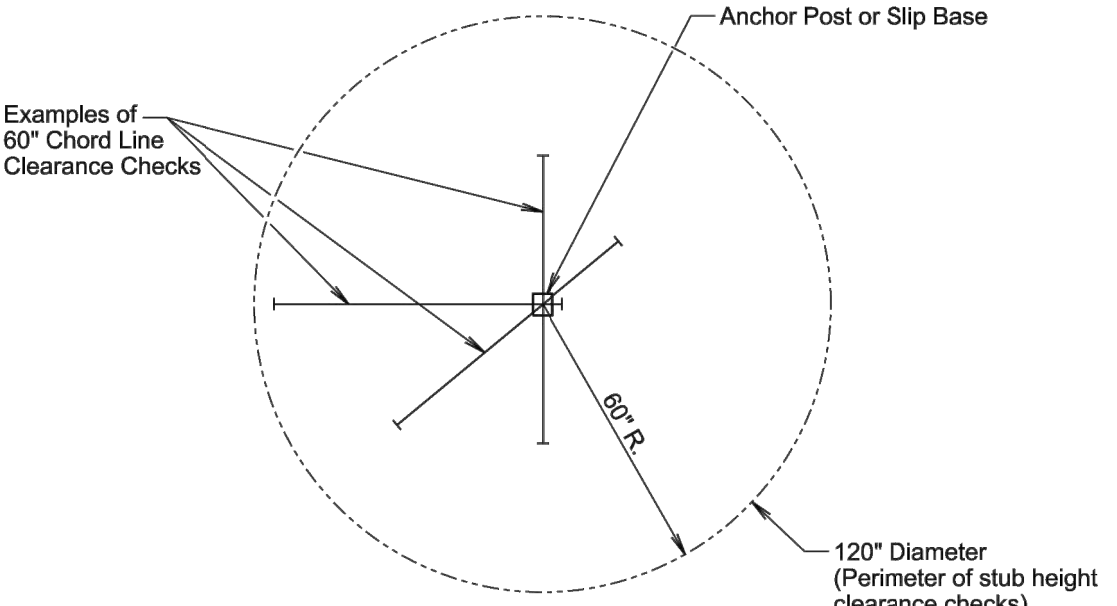
URBAN DISTRICT

RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

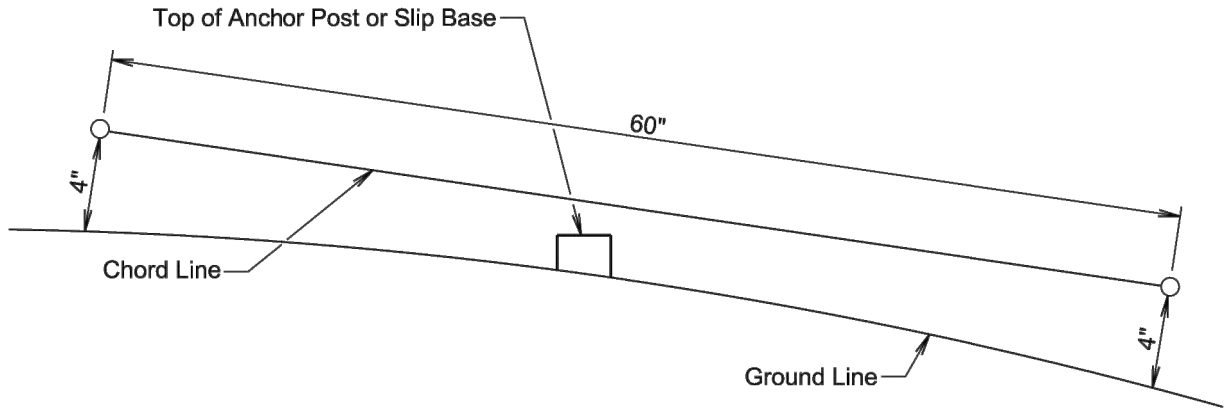
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.

January 22, 2021

Published Date: 2024	S D D O T	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER
			634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



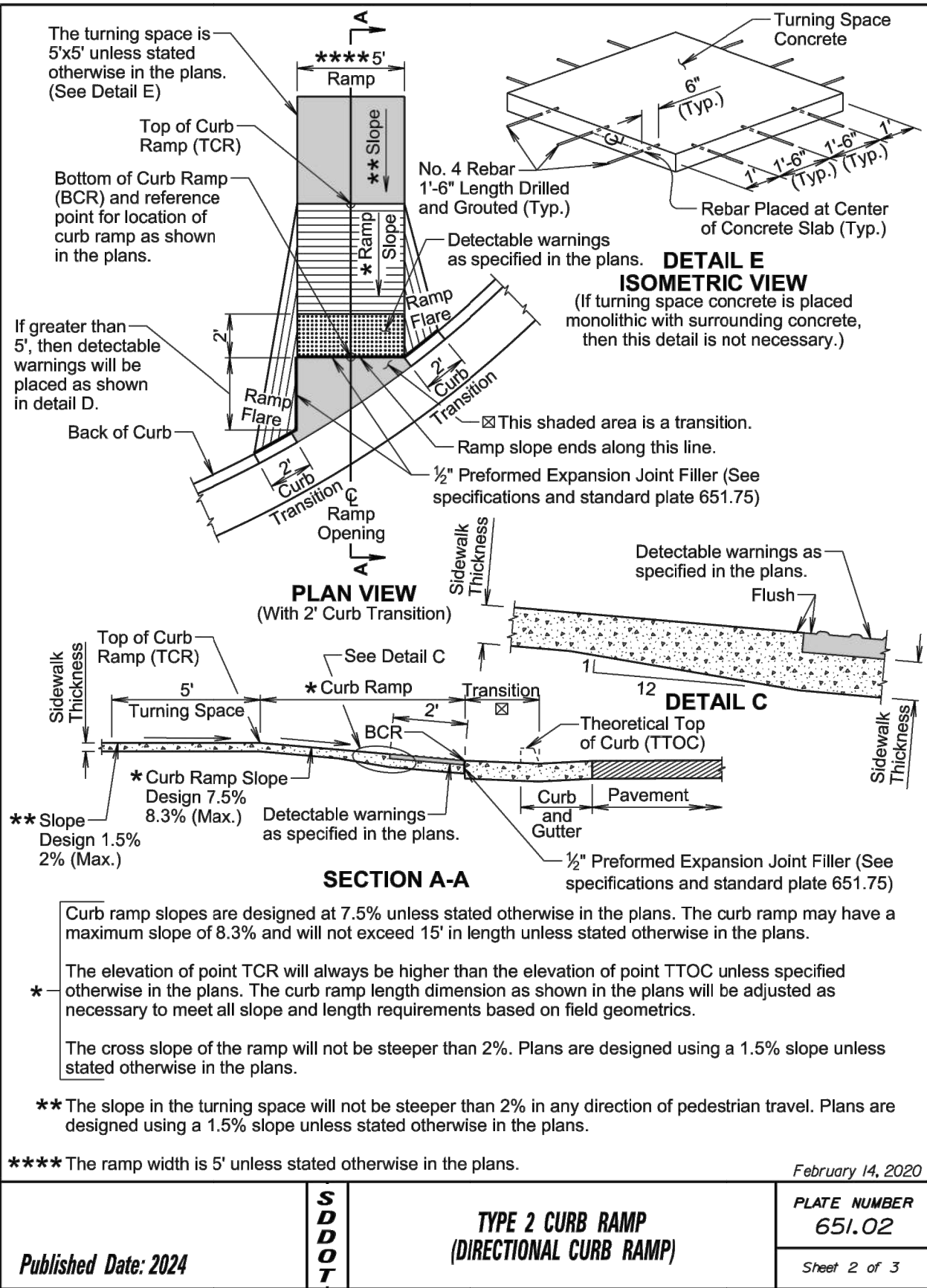
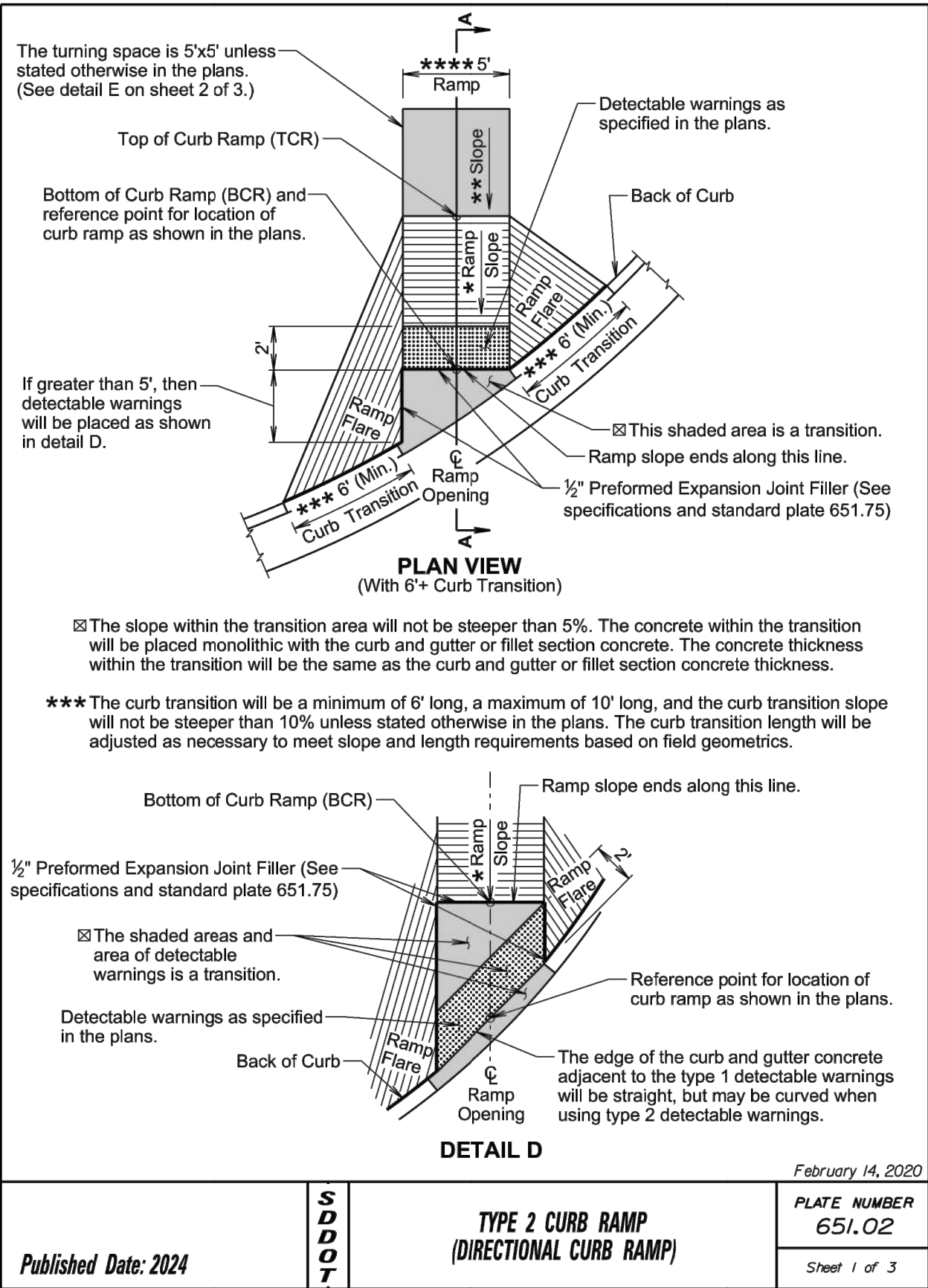
ELEVATION VIEW

GENERAL NOTES:

- The top of anchor posts and slip bases WILL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.
- At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height will be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.
- The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

January 22, 2021

Published Date: 2024	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER
			634.99
			Sheet 1 of 1



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	87	103

GENERAL NOTES:

For illustrative purpose only, type 1 detectable warnings are shown in the drawings.

The curb ramp depicted on this standard plate may be used with a PCC fillet section or curb and gutter. The curb ramp will be placed at the location stated in the plans.

Sidewalk will not be placed adjacent to the curb ramp flares when a 2-foot curb transition is used unless shown otherwise in the plans.

- * Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.

Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.

The normal gutter line profile will be maintained through the area of the ramp opening.

Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.

Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.

There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of the detectable warnings will be included in the measured and paid for quantity of sidewalk.

If rebar is placed in the Turning Space as depicted in DETAIL E, the cost of the materials, labor, and equipment to furnish and install the rebar will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.

The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

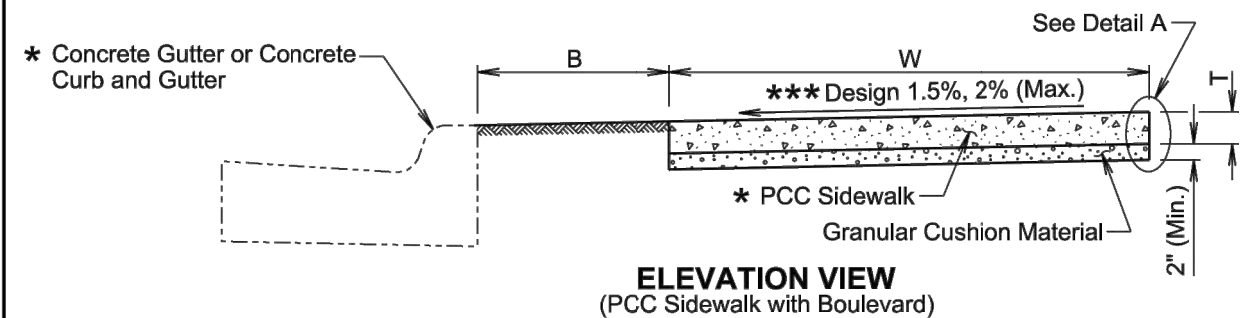
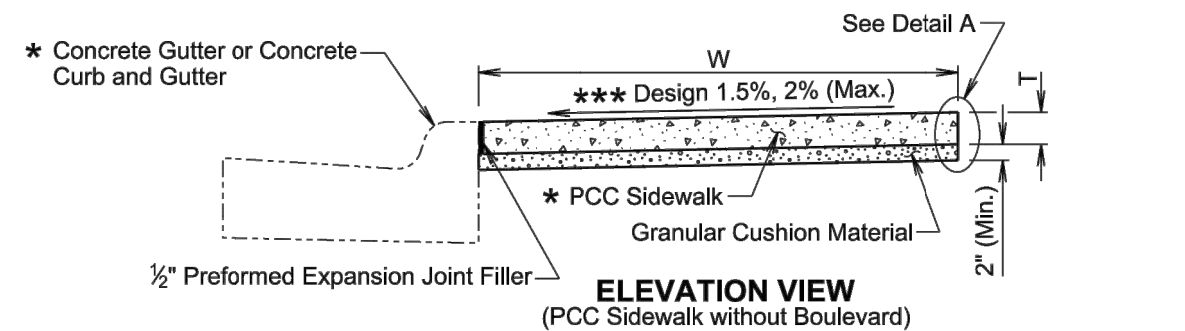
All costs for furnishing and installing the transition area at the base of the curb ramp will be incidental to the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used and will be incidental to the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

The type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Type 1 Detectable Warnings".

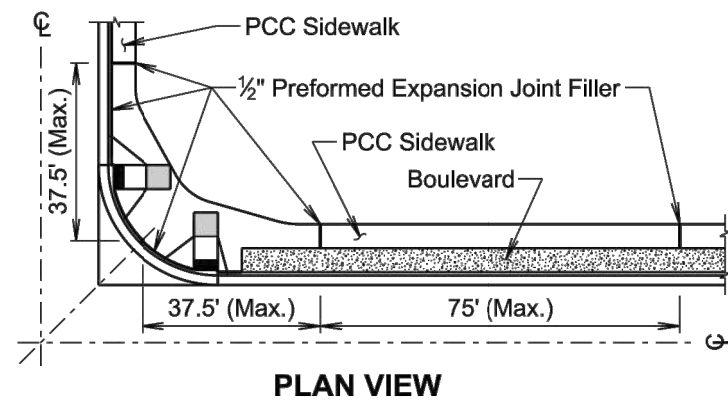
The type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

February 14, 2020

Published Date: 2024	S D O T	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 3 of 3



- B Width of boulevard as specified in the plans.
- T Thickness of PCC sidewalk as specified in the plans.
- W Width of PCC sidewalk as specified in the plans.
- * Type as specified in the plans.



GENERAL NOTES:

The PCC sidewalk will be constructed in accordance with Section 651 of the Specifications.

*** The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.

The maximum length between expansion joints in the PCC sidewalk is 75 feet.

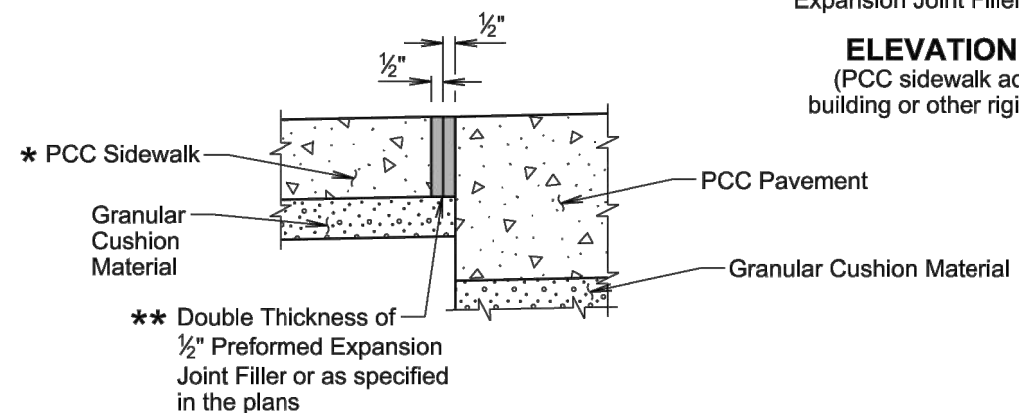
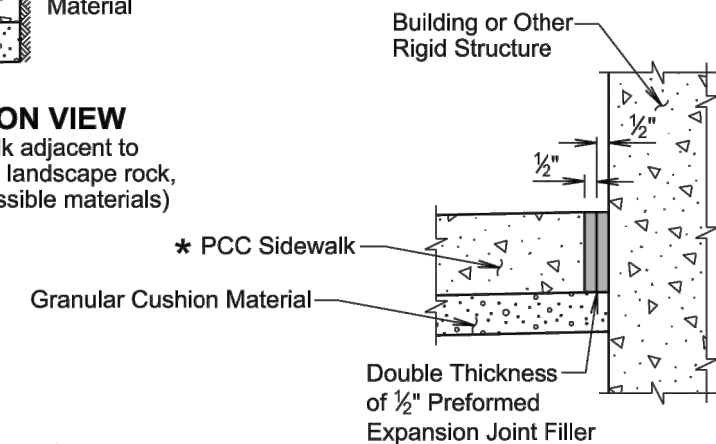
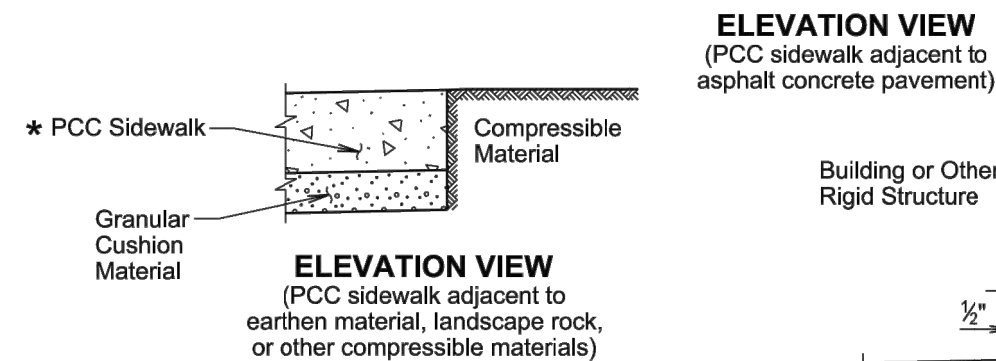
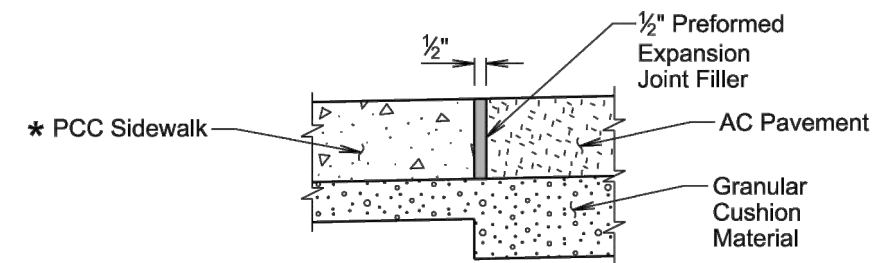
PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.

An expansion joint in the PCC sidewalk will consist of a 1/2-inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

** Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

February 14, 2020

Published Date: 2024	S D D O T	PCC SIDEWALK	PLATE NUMBER
			651.75
			Sheet 1 of 2

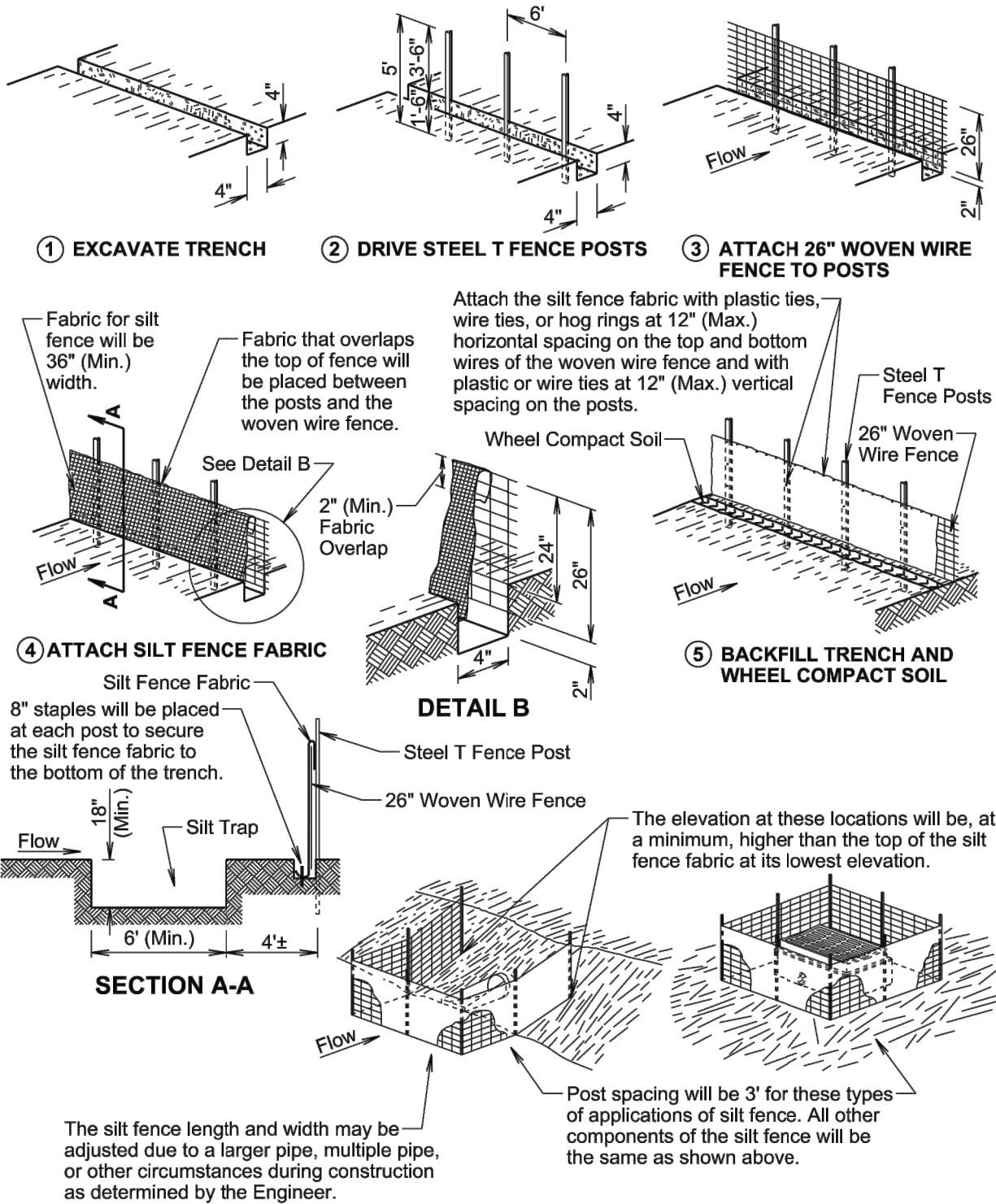


DETAIL A
(Use Appropriate Detail(s))

February 14, 2020

Published Date: 2024	S D D O T	PCC SIDEWALK	PLATE NUMBER
			651.75
			Sheet 2 of 2

MANUAL LOW FLOW SILT FENCE INSTALLATION



February 14, 2020

Published Date: 2024

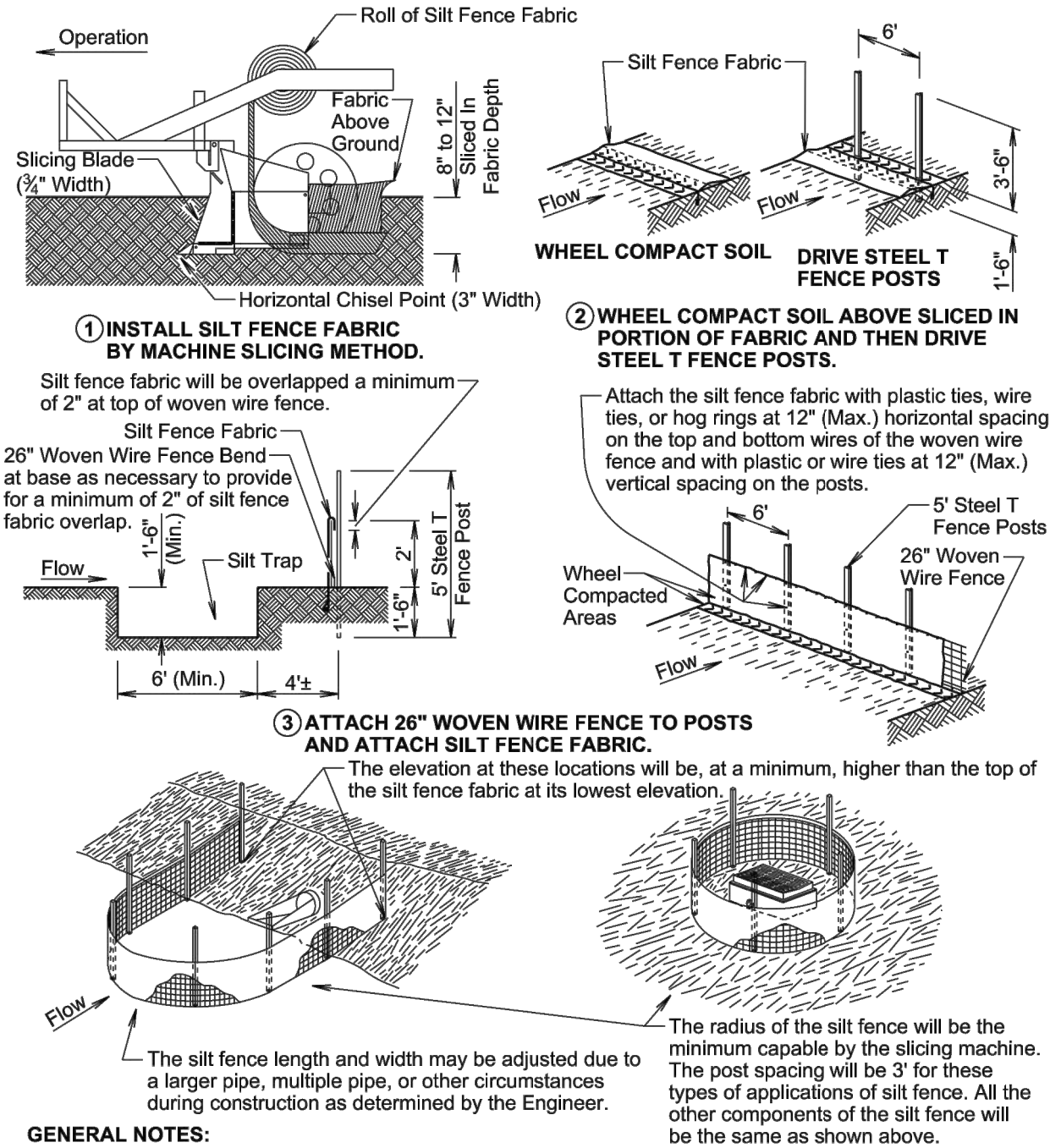
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LOW FLOW SILT FENCE
AND SILT TRAP

PLATE NUMBER
734.04

Sheet 1 of 2

MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION



GENERAL NOTES:

A silt trap will be provided when specified by a plan note. All costs for constructing the silt trap will be incidental to the contract unit price per cubic yard for "Silt Trap".

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

February 14, 2020

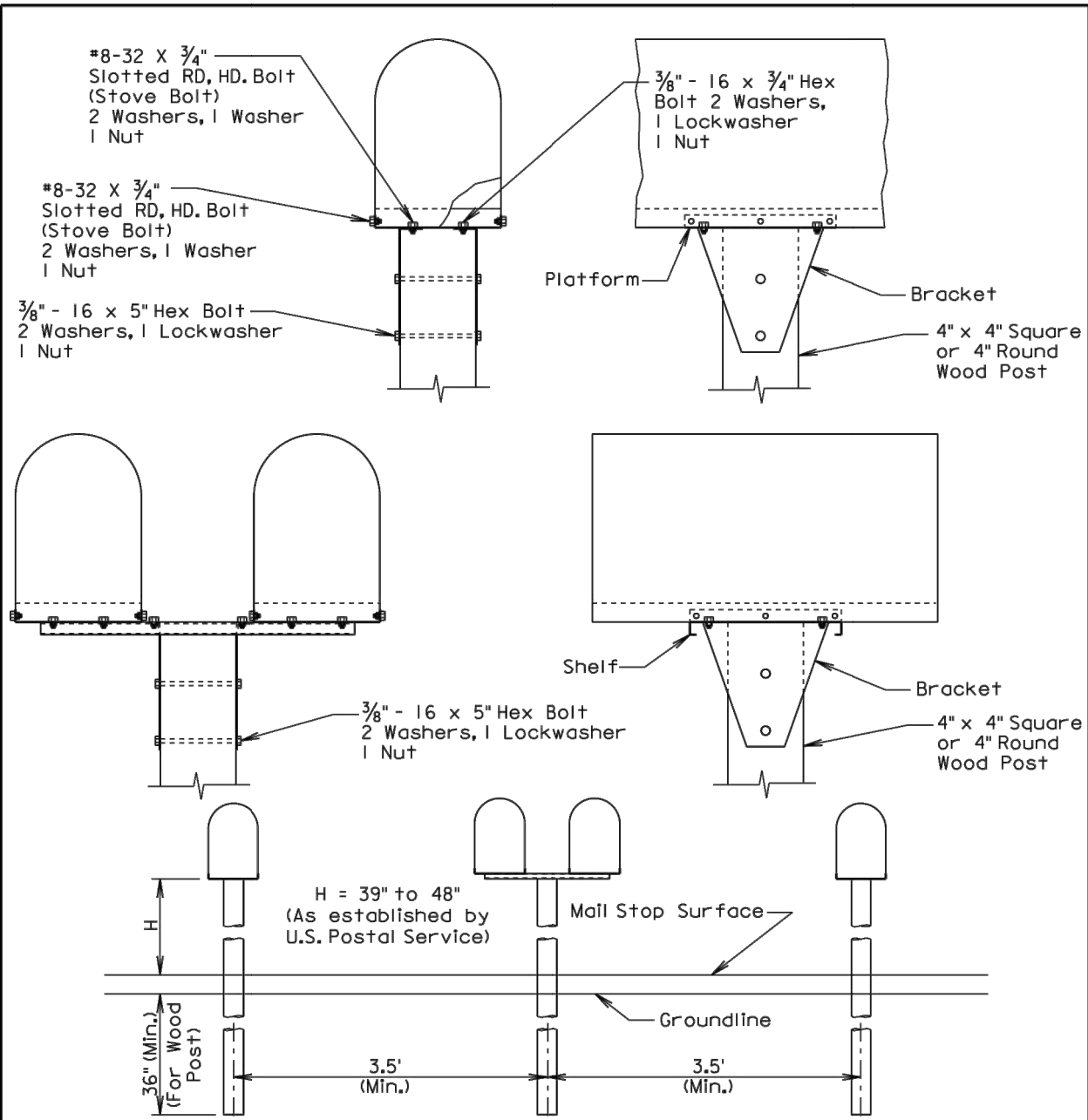
Published Date: 2024

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LOW FLOW SILT FENCE
AND SILT TRAP

PLATE NUMBER
734.04

Sheet 2 of 2



GENERAL NOTES:

SPACING FOR MULTIPLE POST INSTALLATION

The post support assemblies provided should be consistent throughout the project. Single and double mailboxes may be in any sequence.

Post support assemblies shall be one from the approved products list, a 4"x4" or 4" round wood post, or an alternate post support assembly that meets the test level 3 crash testing requirements of NCHRP 350 or MASH.

Alternate mailbox support assemblies shall be approved by the Engineer prior to installation. The Contractor shall provide the Engineer written certification that the mailbox support assembly has met the crash testing requirements and will be installed in accordance with the manufacturer's installation instructions.

September 6, 2013

Published Date: 2024

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SINGLE AND DOUBLE MAILBOX ASSEMBLIES

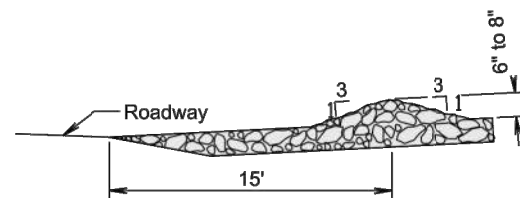
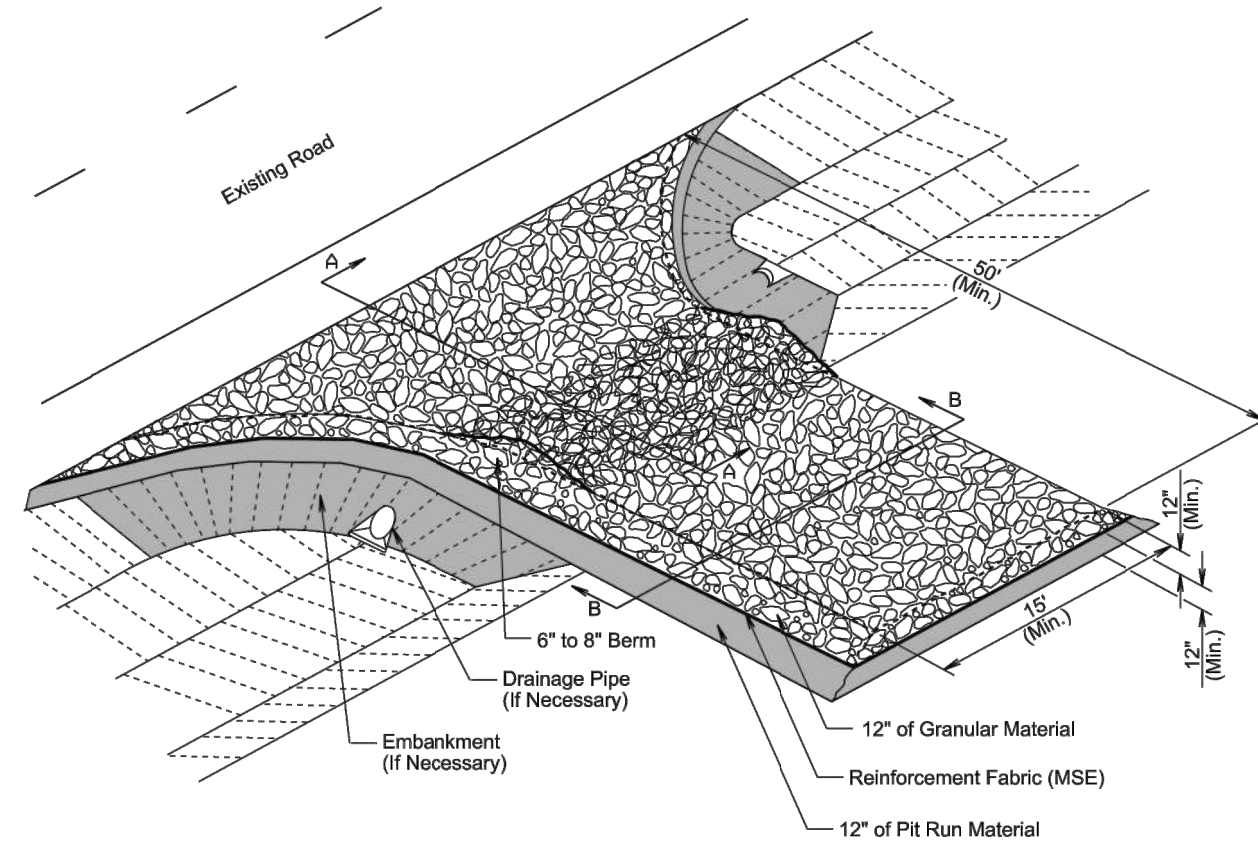
PLATE NUMBER
900.02

Sheet 1 of 1

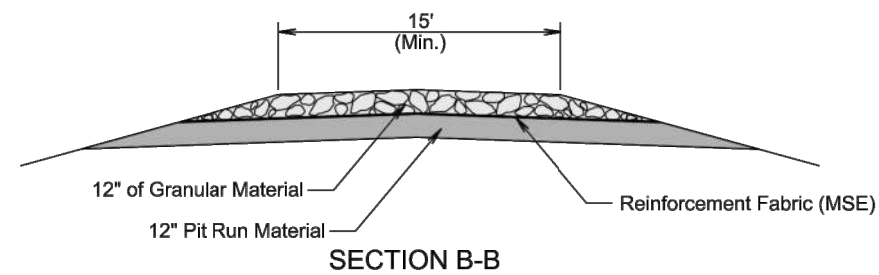
SDDOT CONSTRUCTION ENTRANCE

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	91	103



SECTION A-A



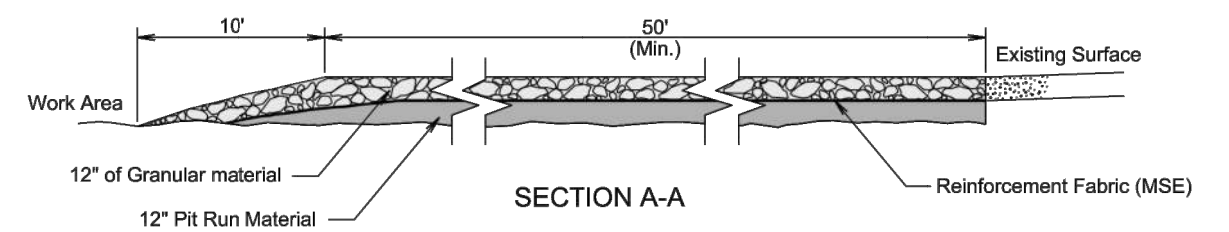
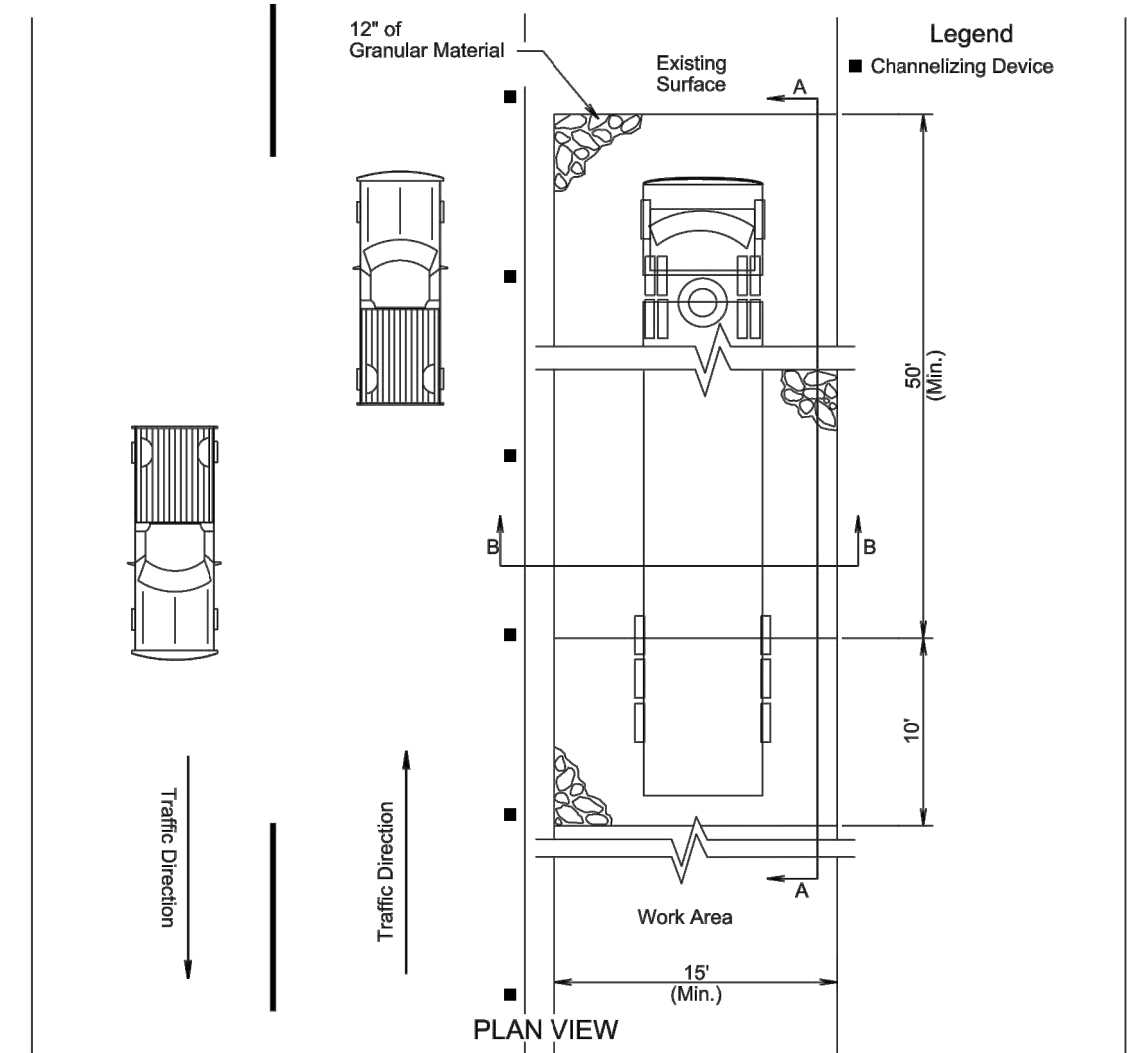
SECTION B-B

GENERAL NOTES:

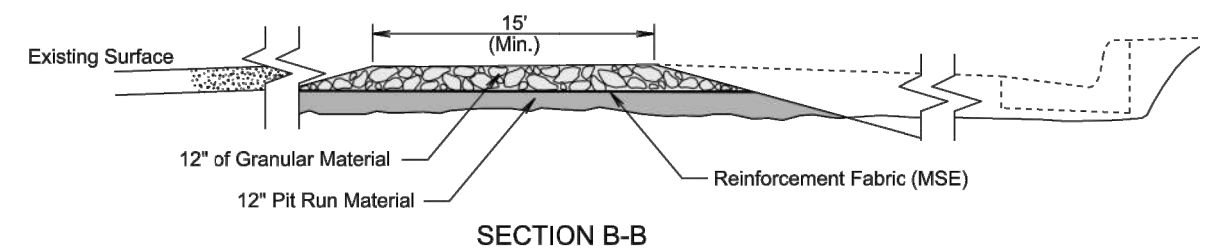
If the grade of the entrance slopes down to the roadway, a berm of extra rock shall be used to prevent sediment or mud from being deposited on the roadway. See SECTION A-A.

If a drainage pipe is necessary the size and type shall be determined by the Contractor to meet field conditions. All cost shall be incidental to the various bid items.

If embankment is necessary it shall be pit run material.



SECTION A-A



SECTION B-B

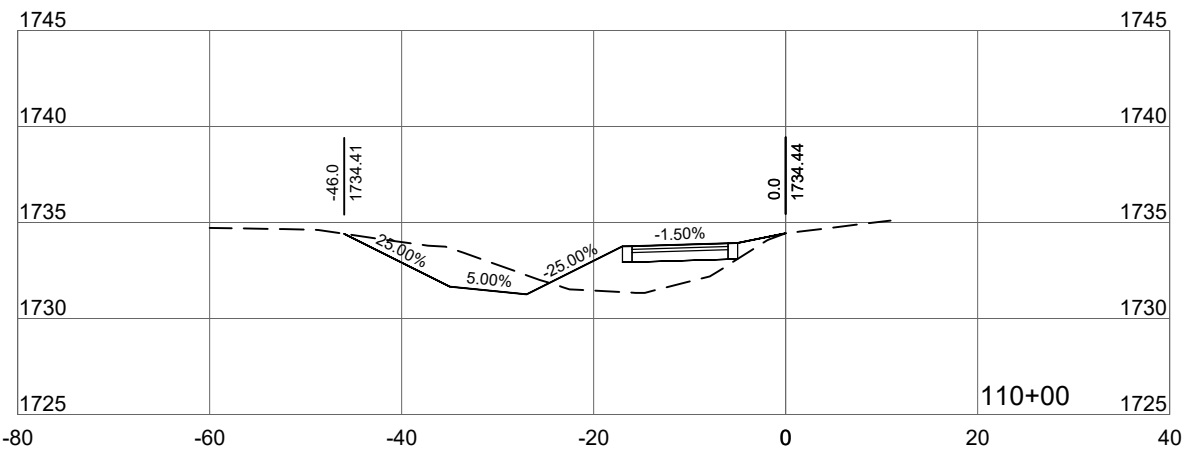
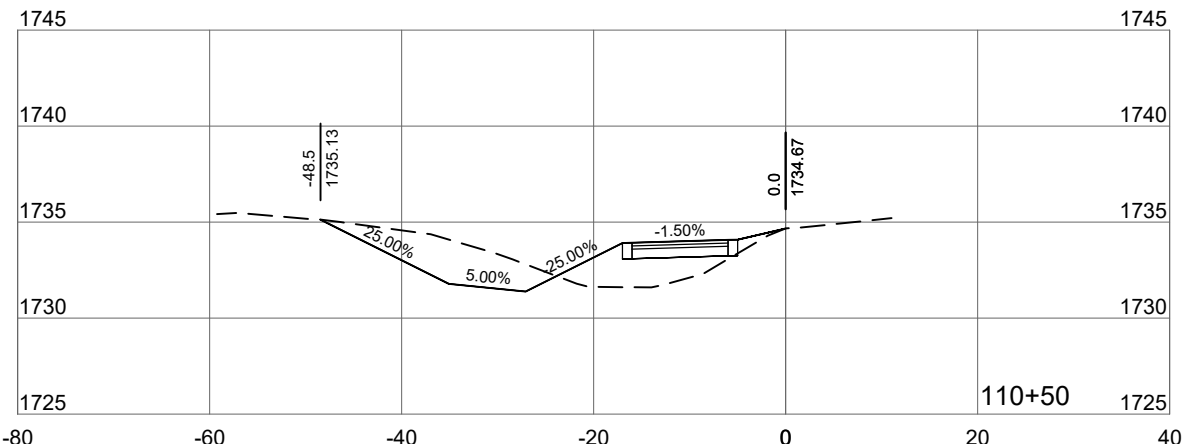
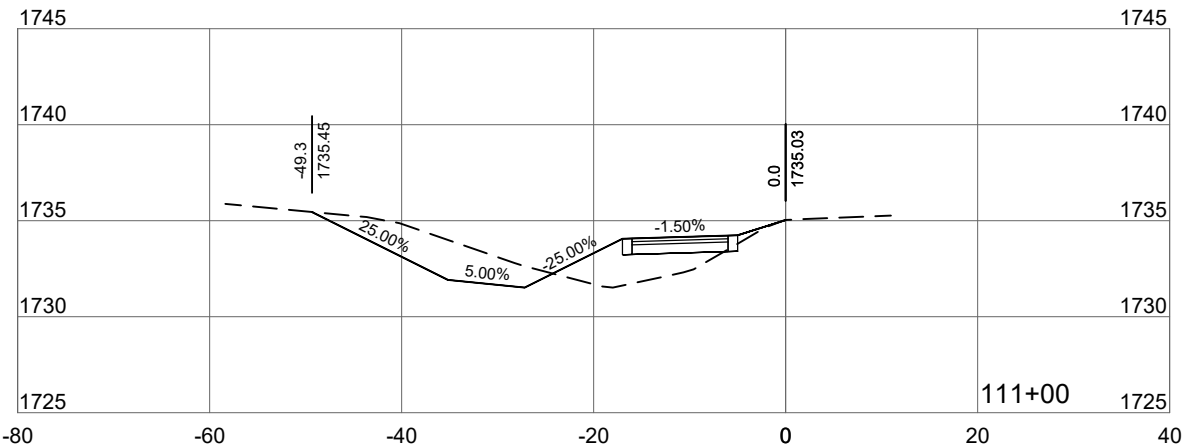
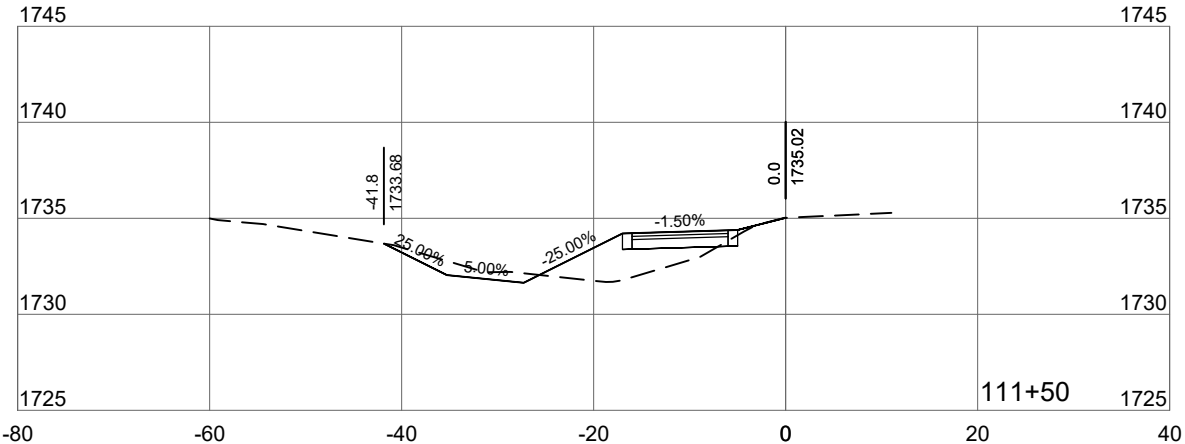
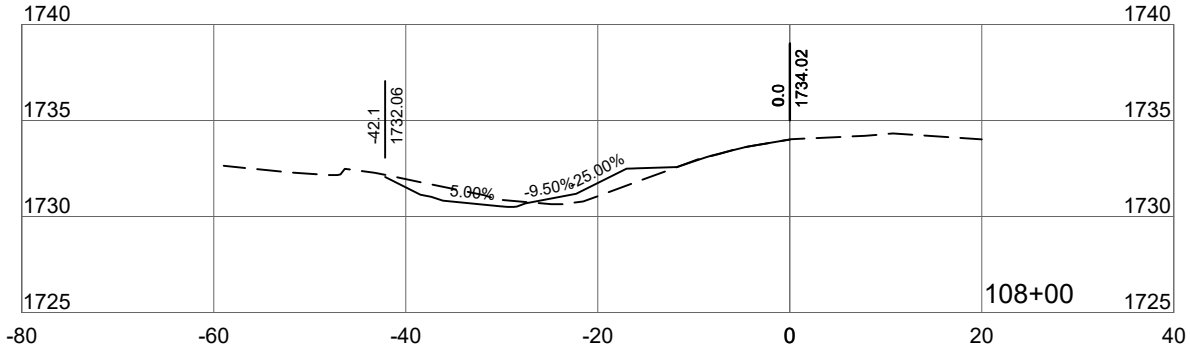
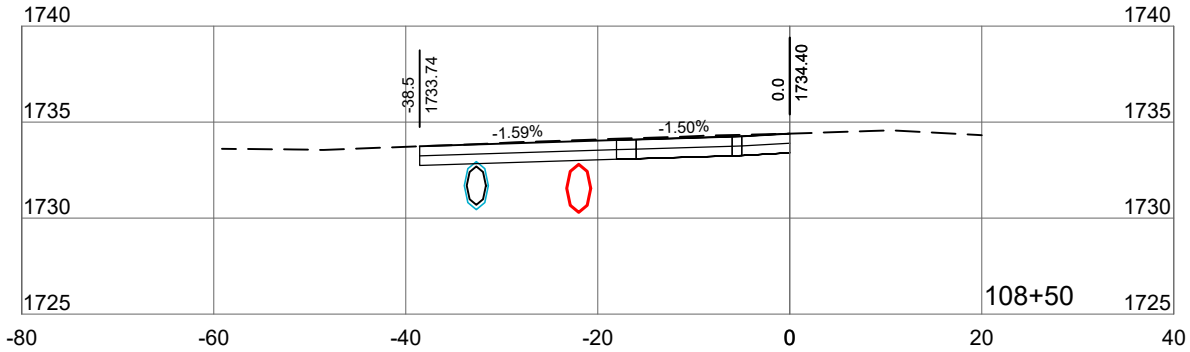
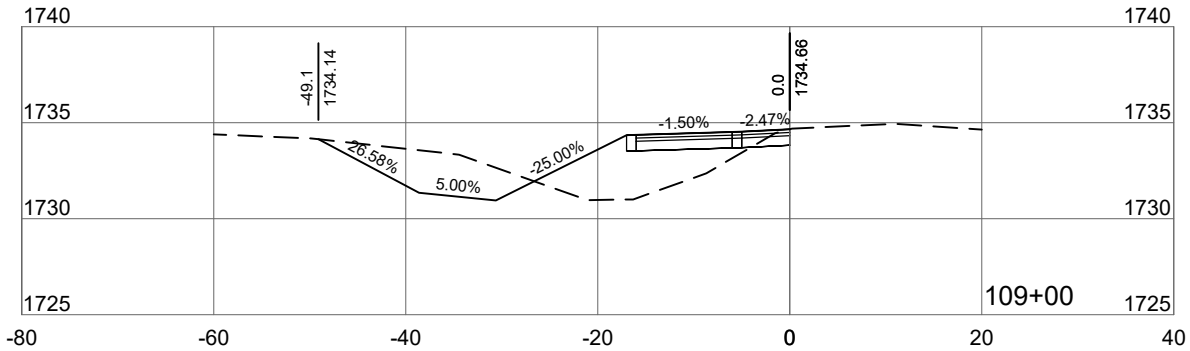
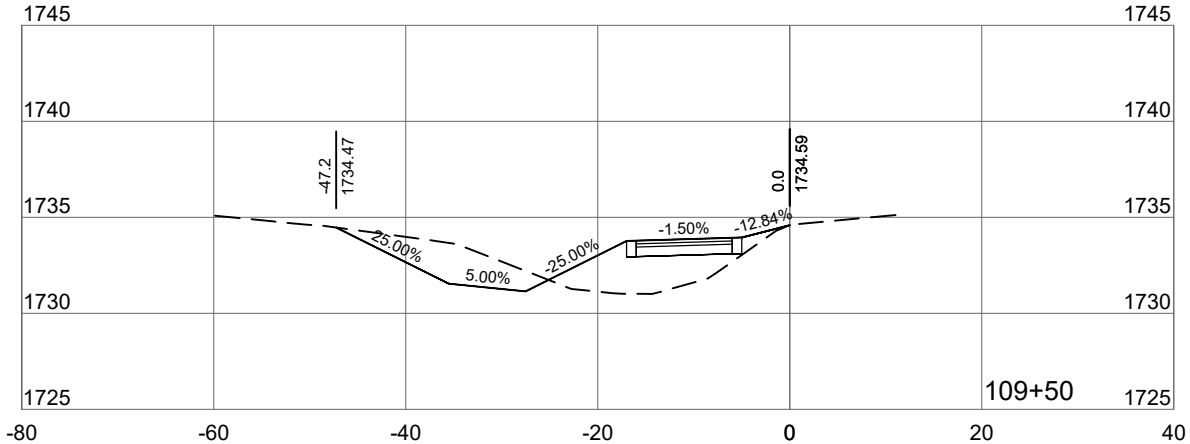
TRANSVERSE TO ROADWAY

PARALLEL TO ROADWAY

CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

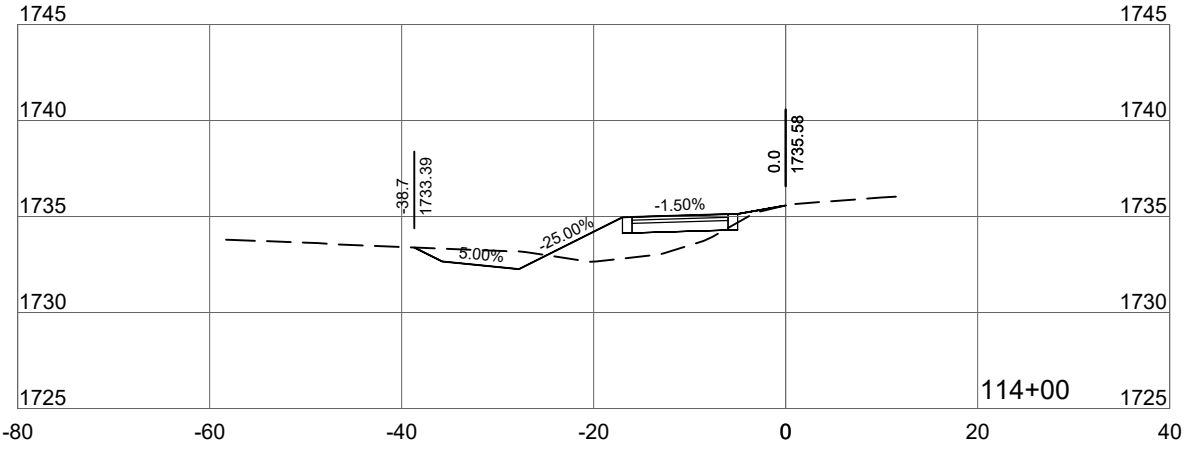
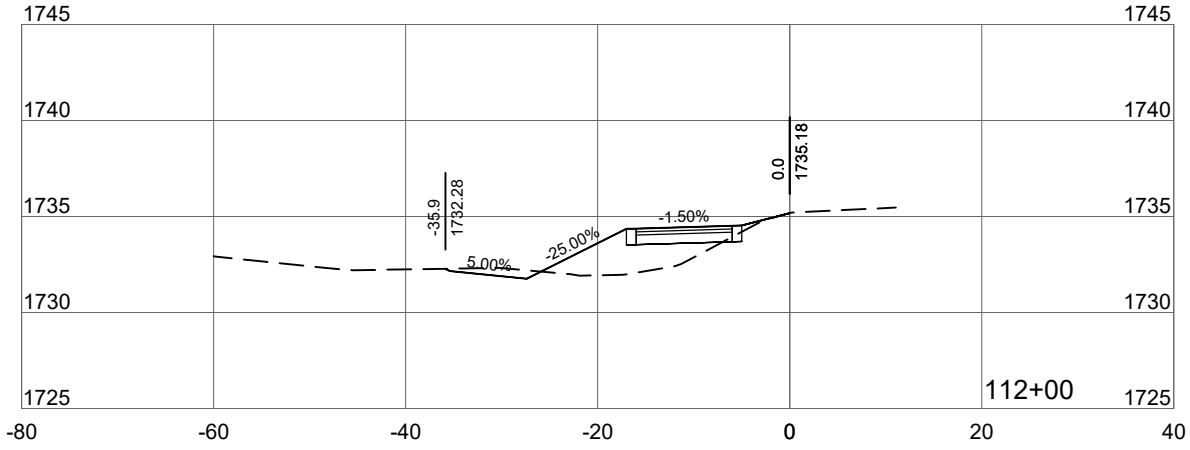
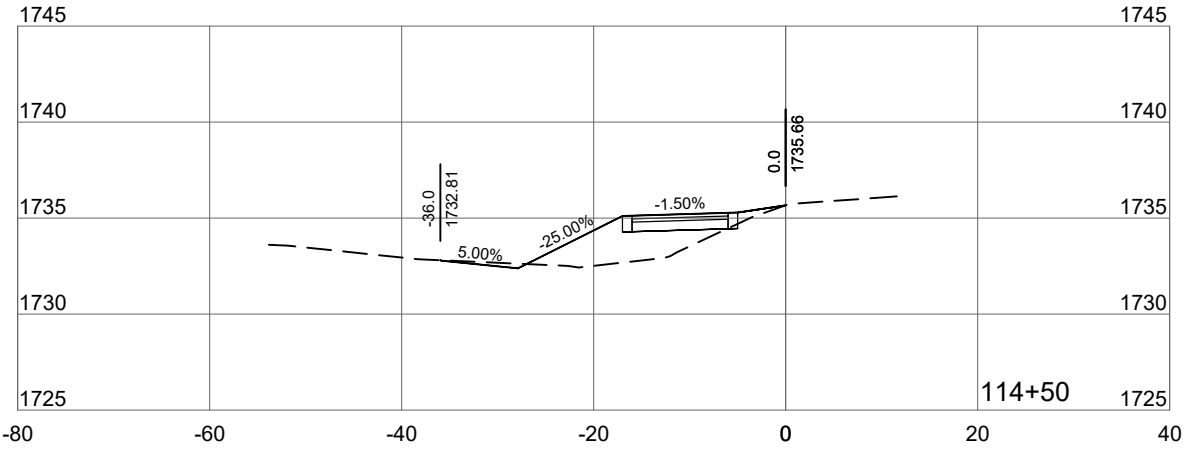
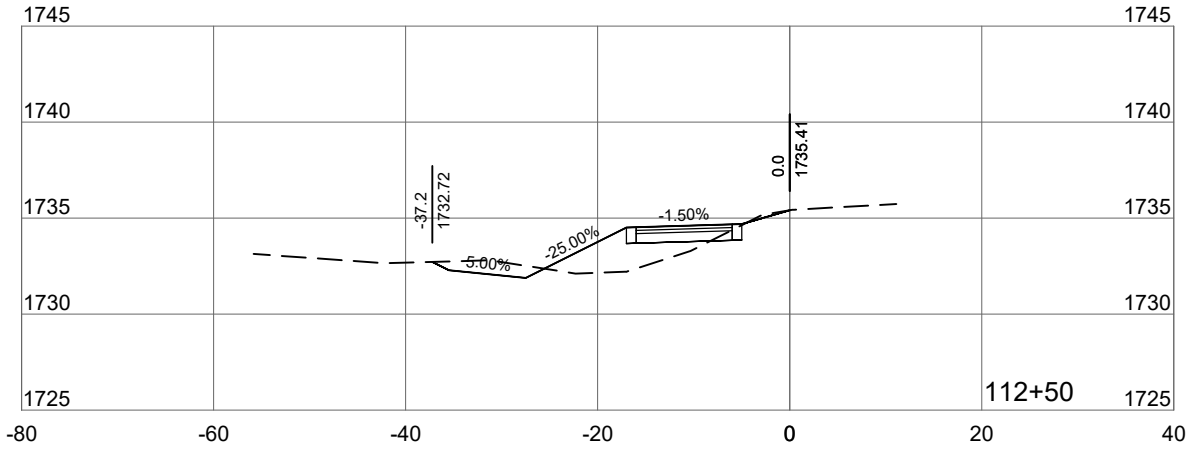
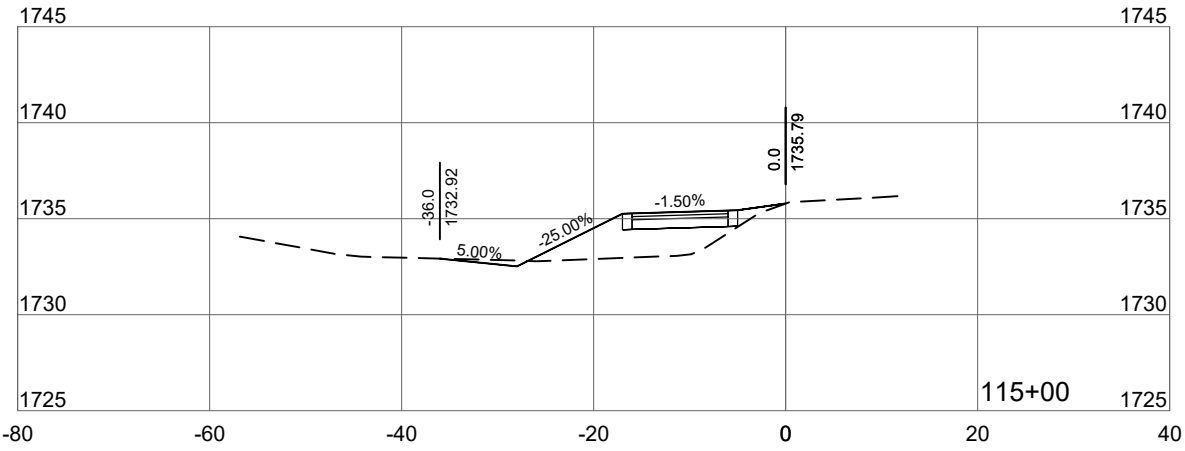
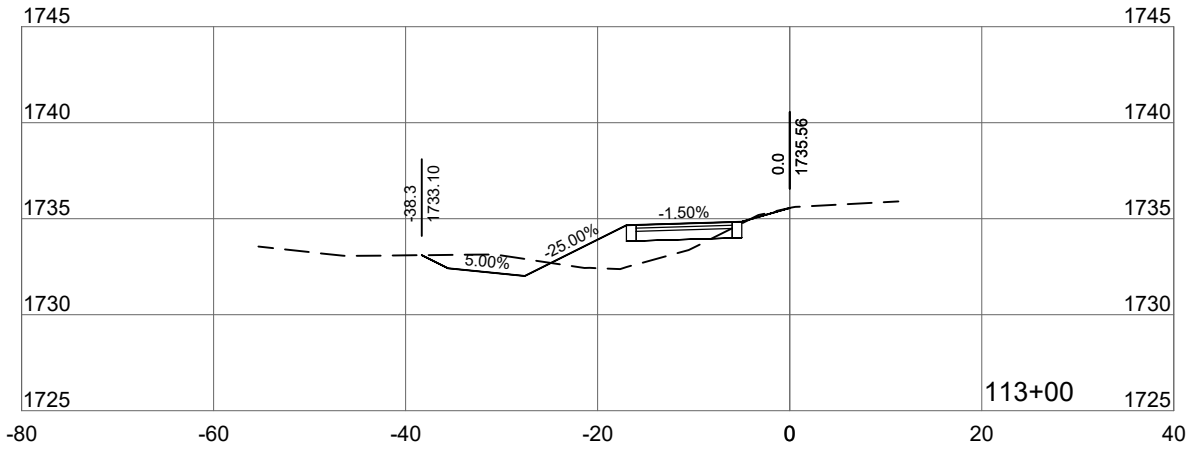
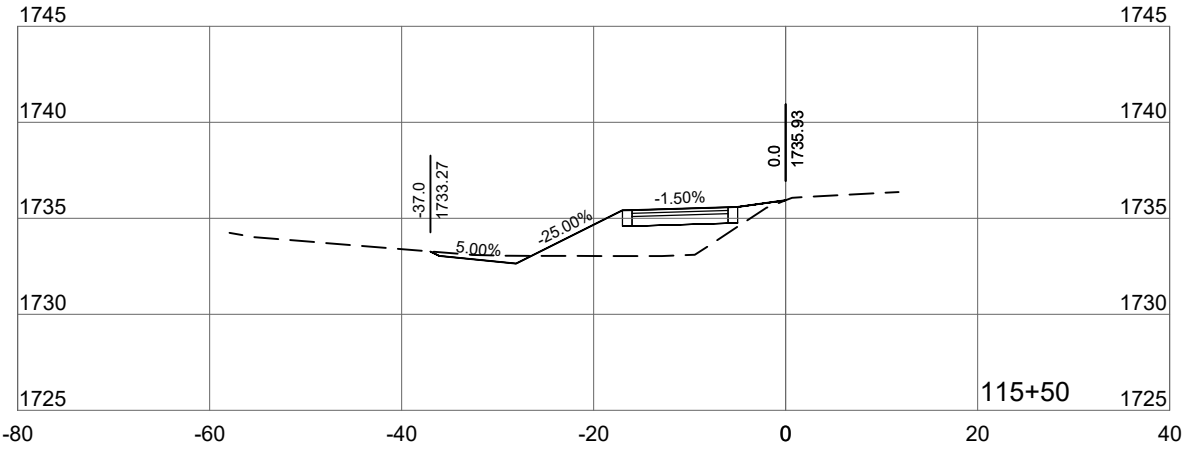
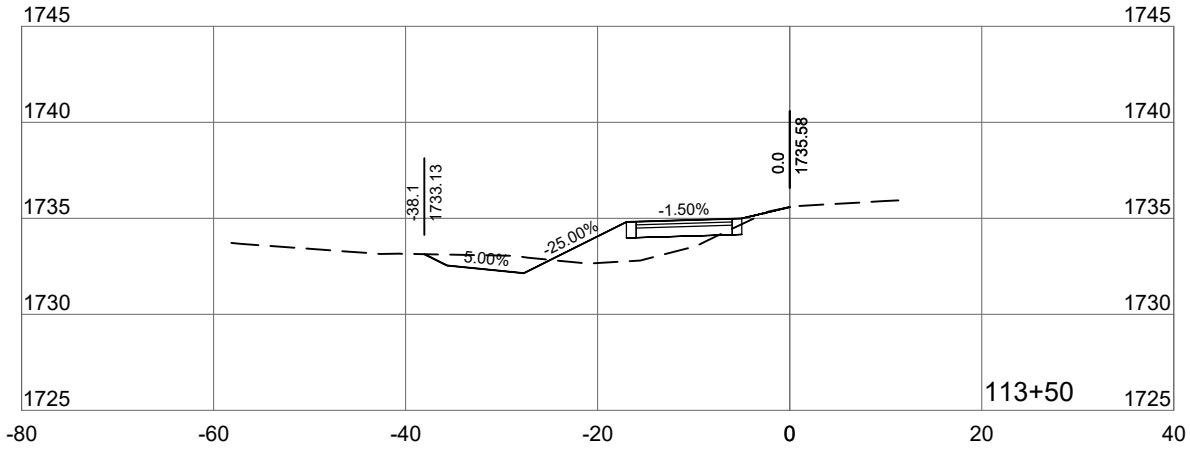
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	92	103



CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

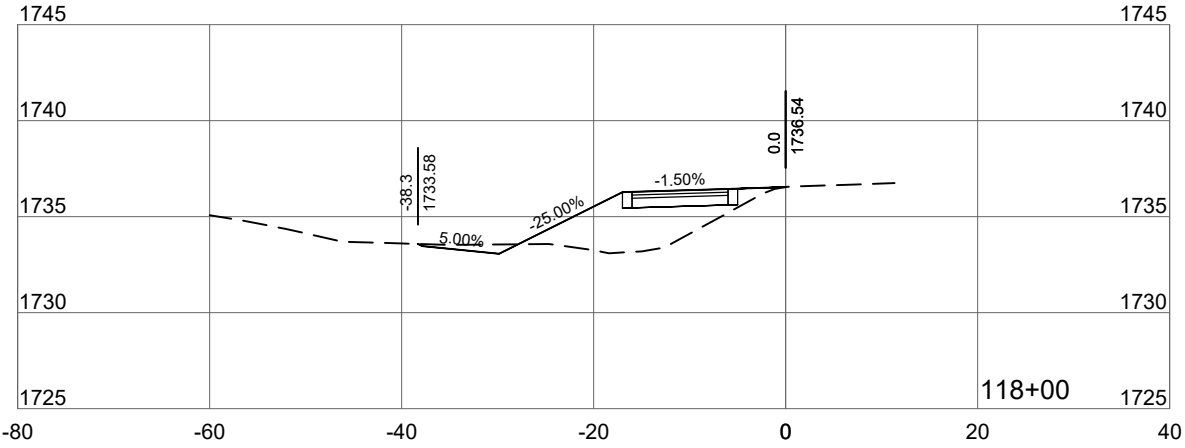
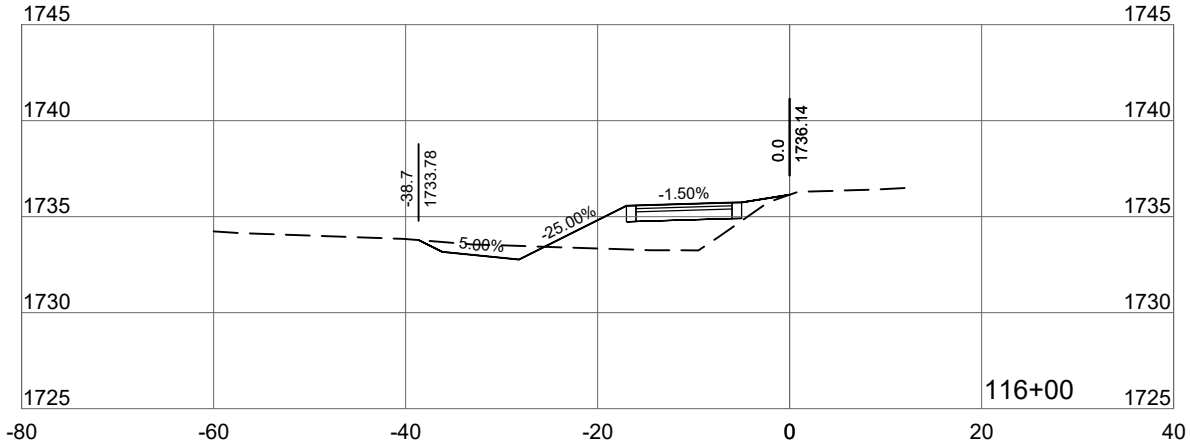
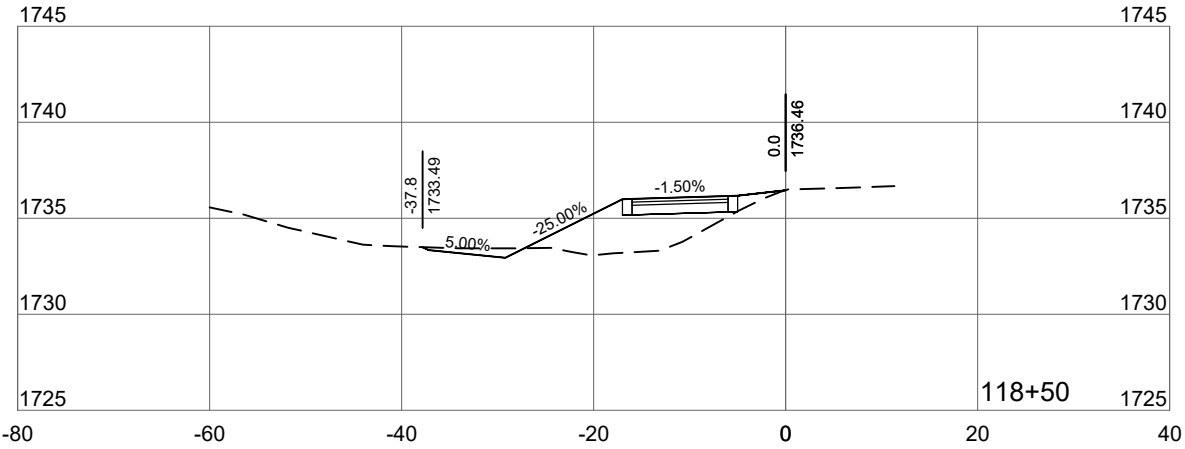
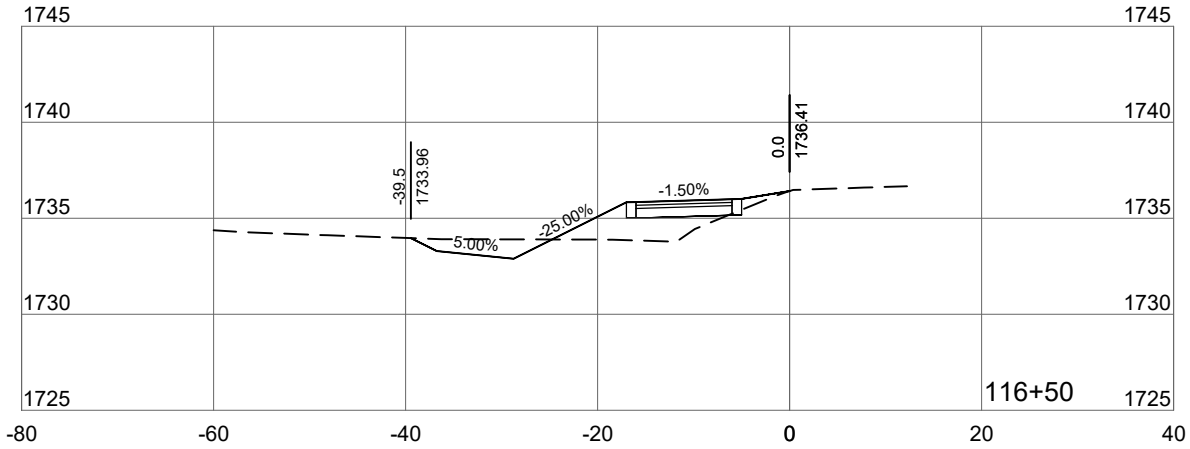
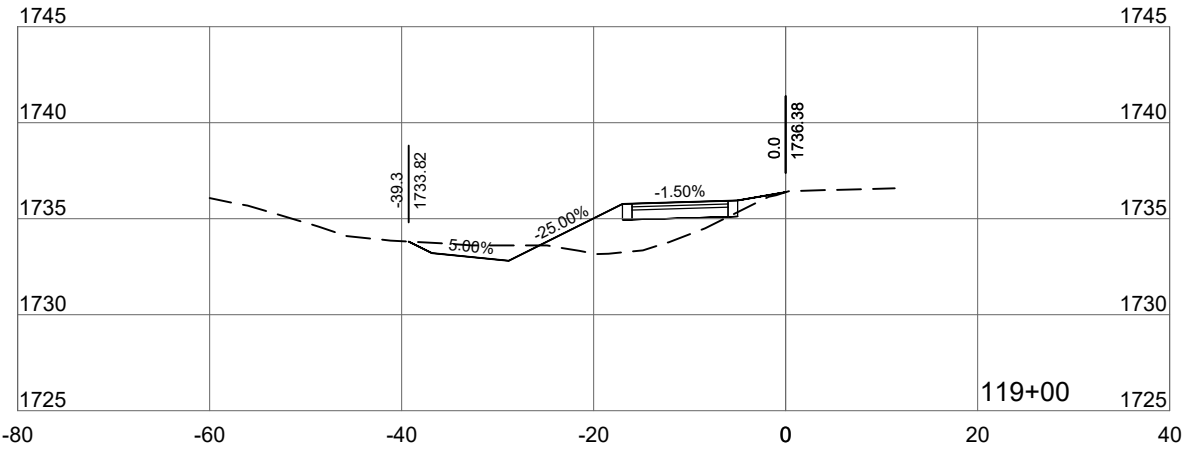
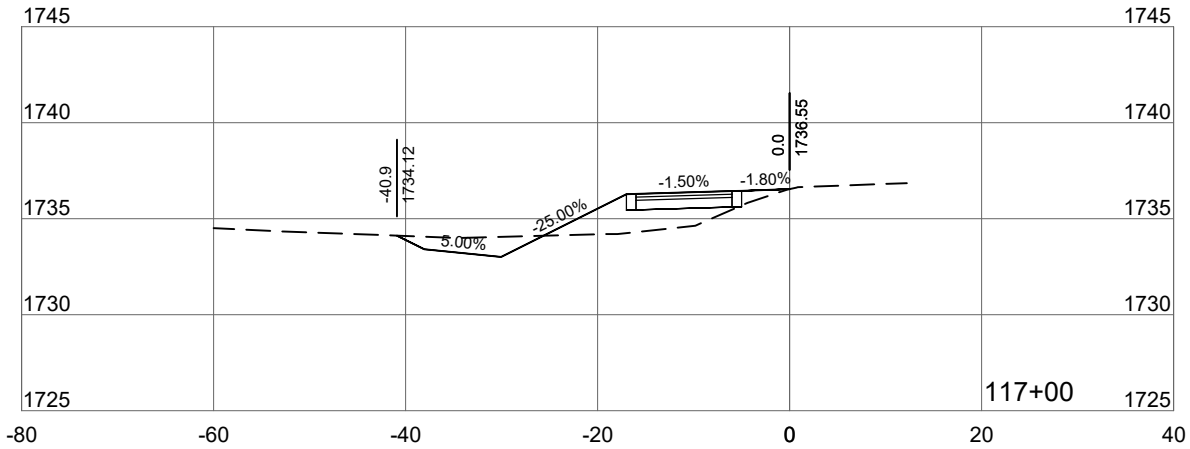
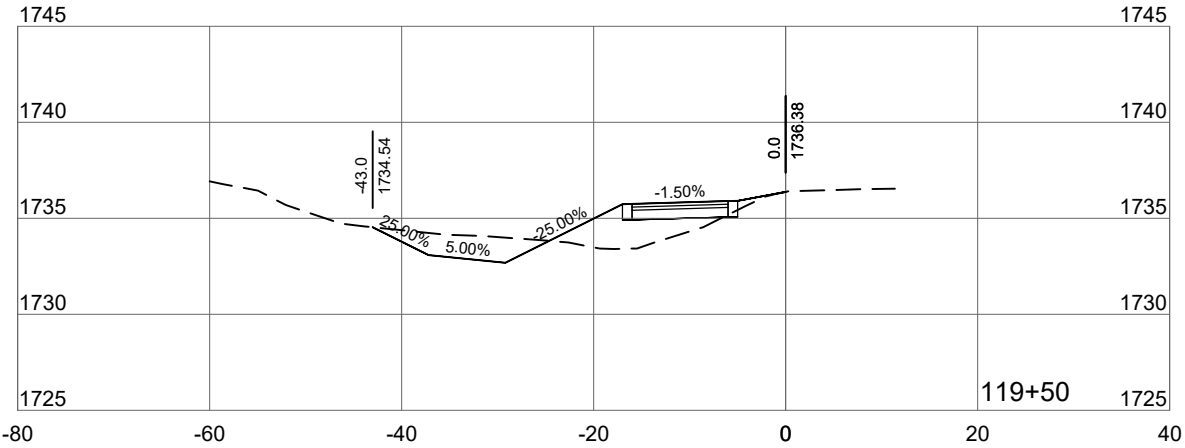
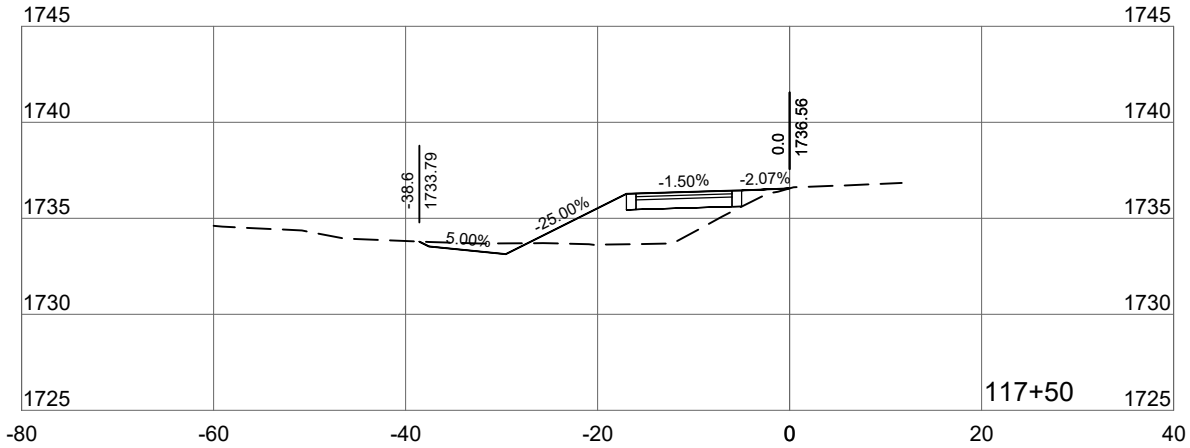
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	93	103



CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

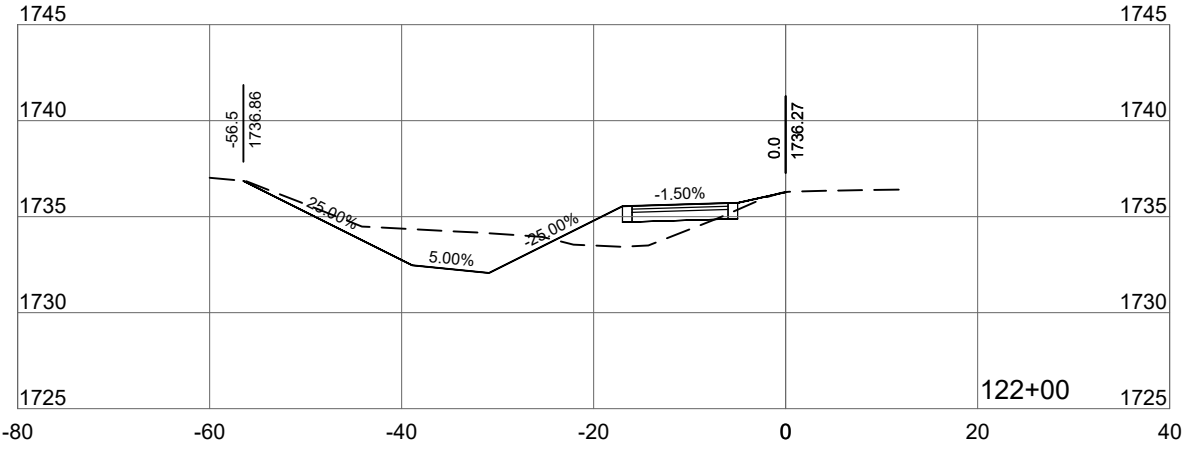
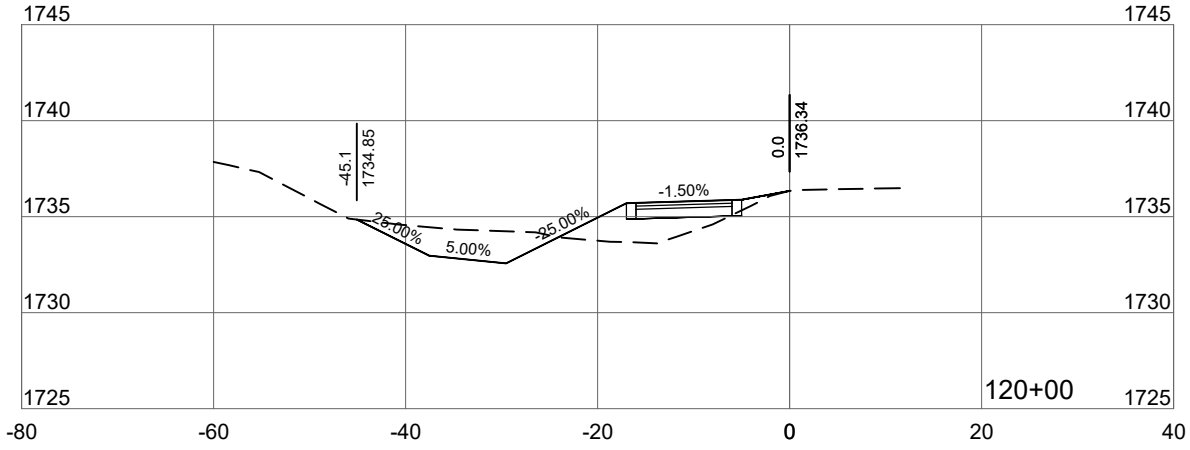
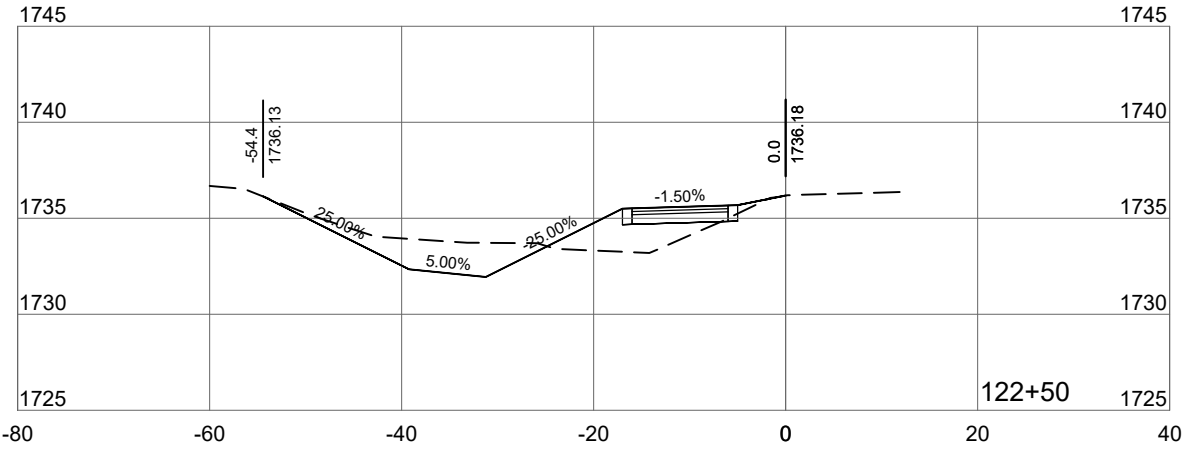
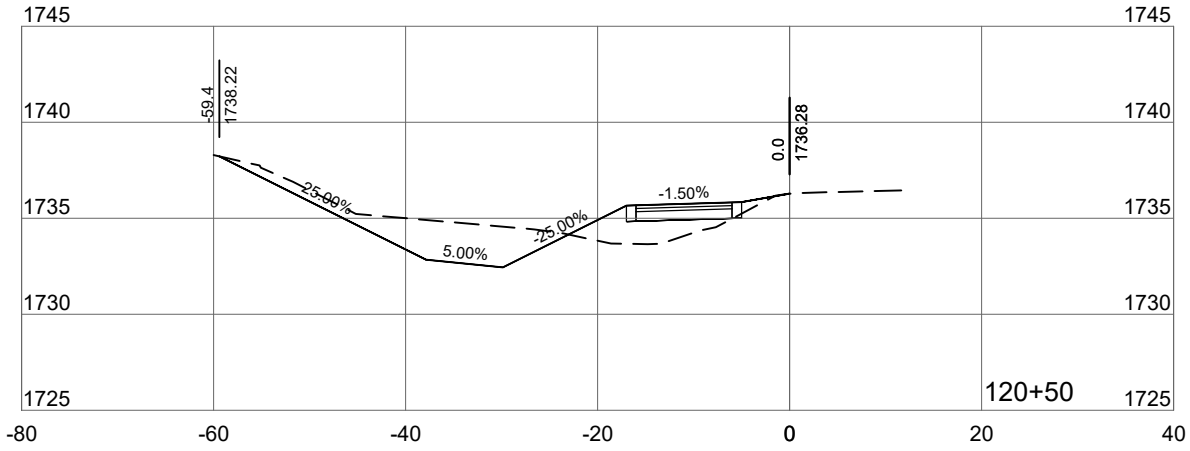
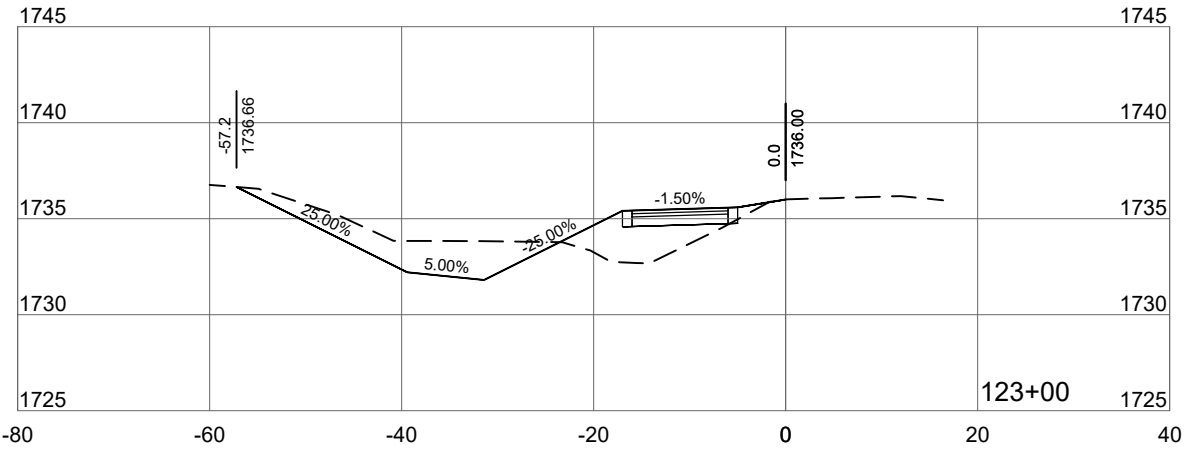
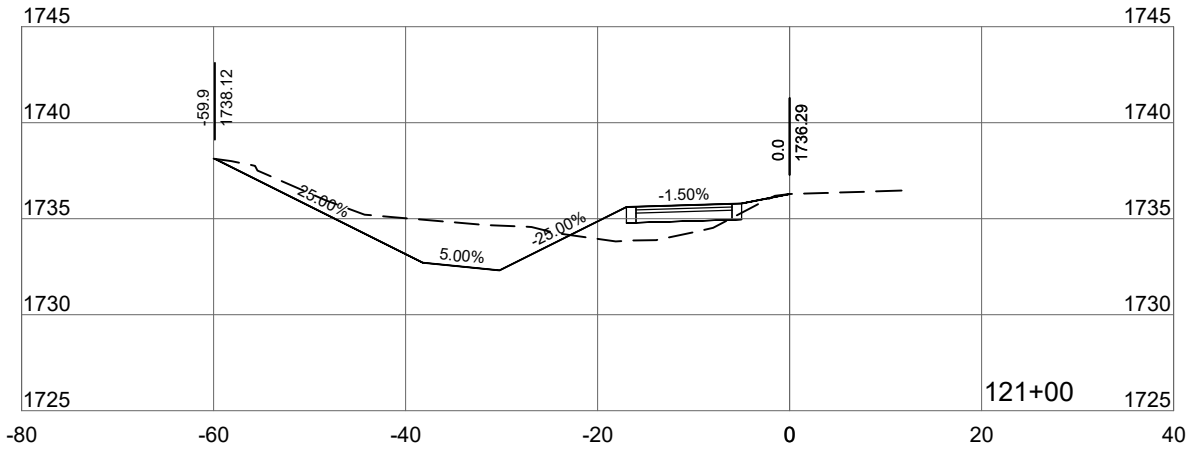
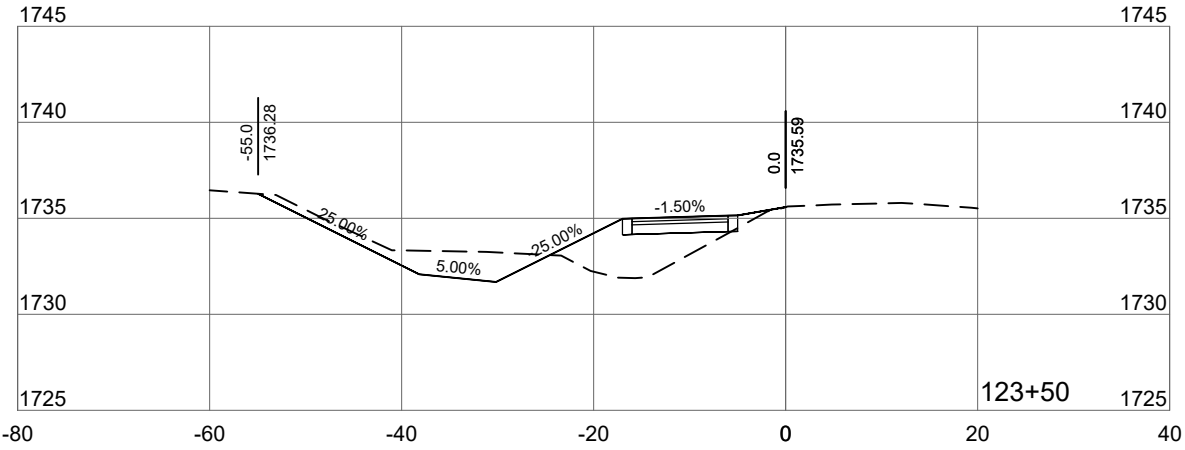
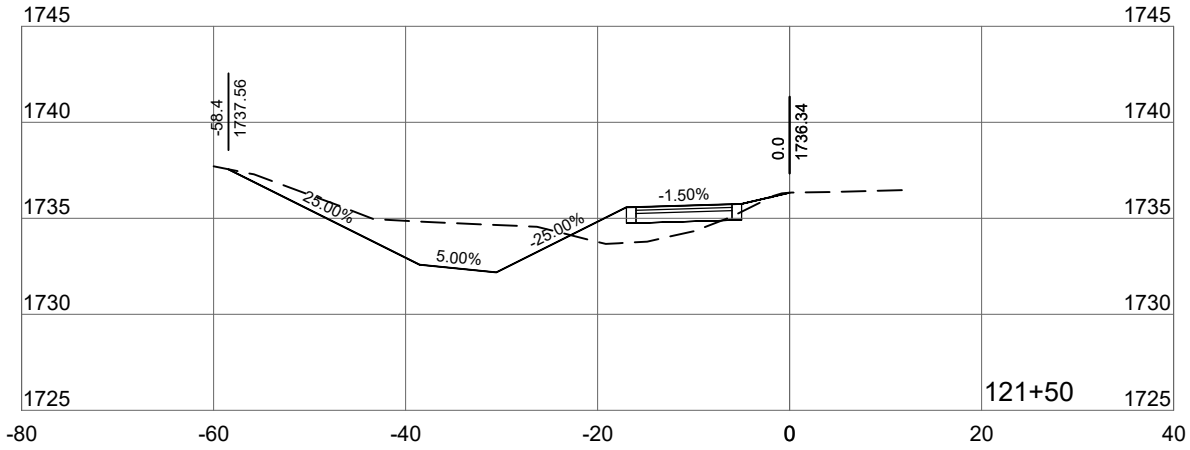
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	94	103



CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

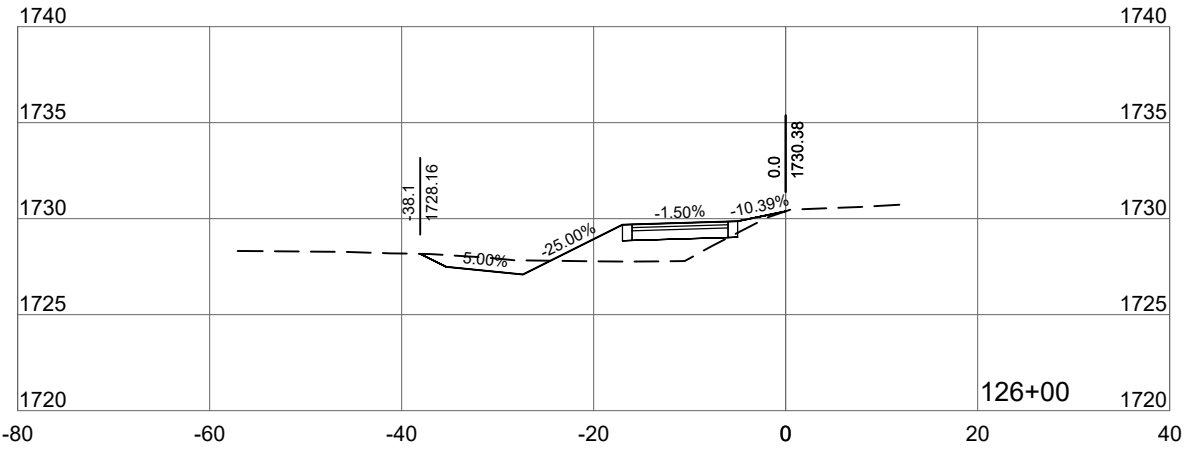
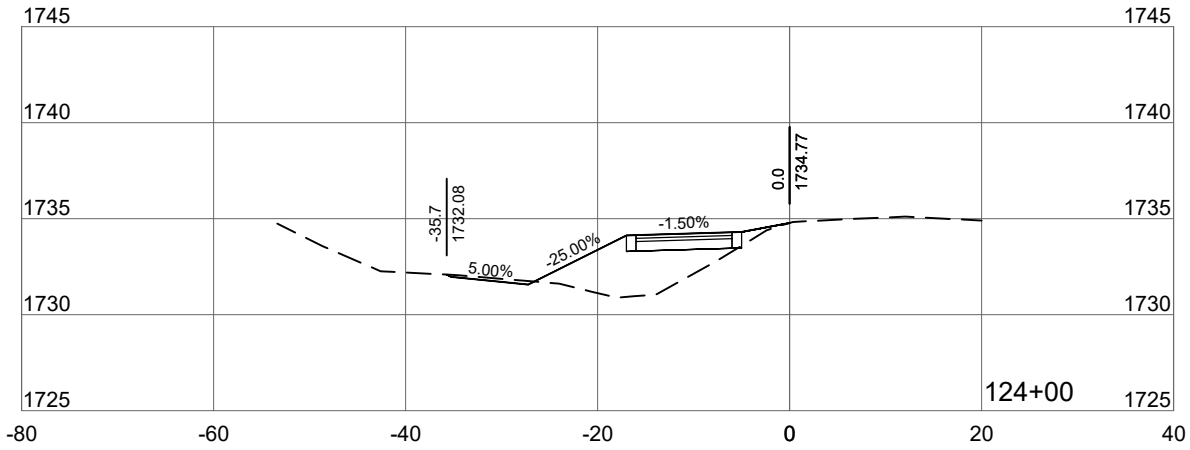
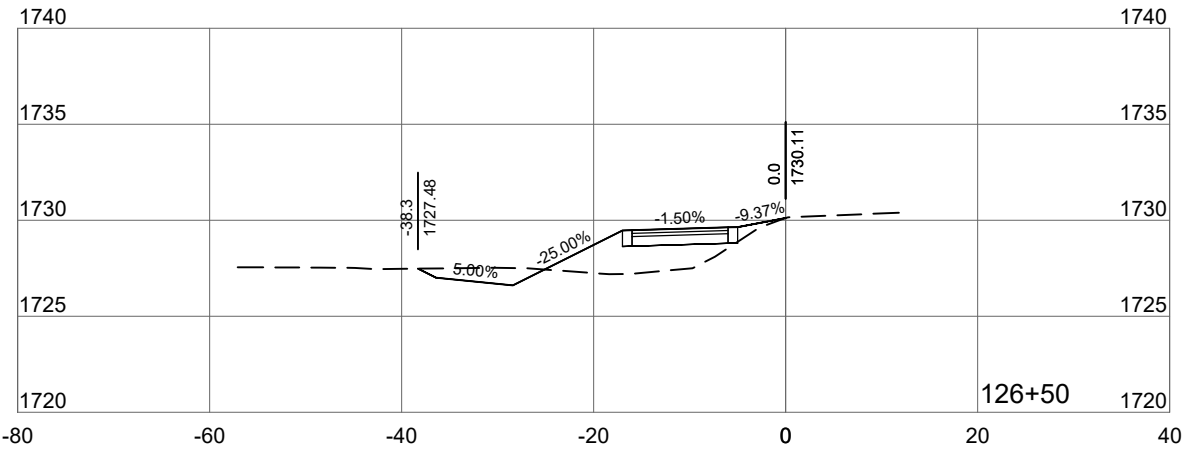
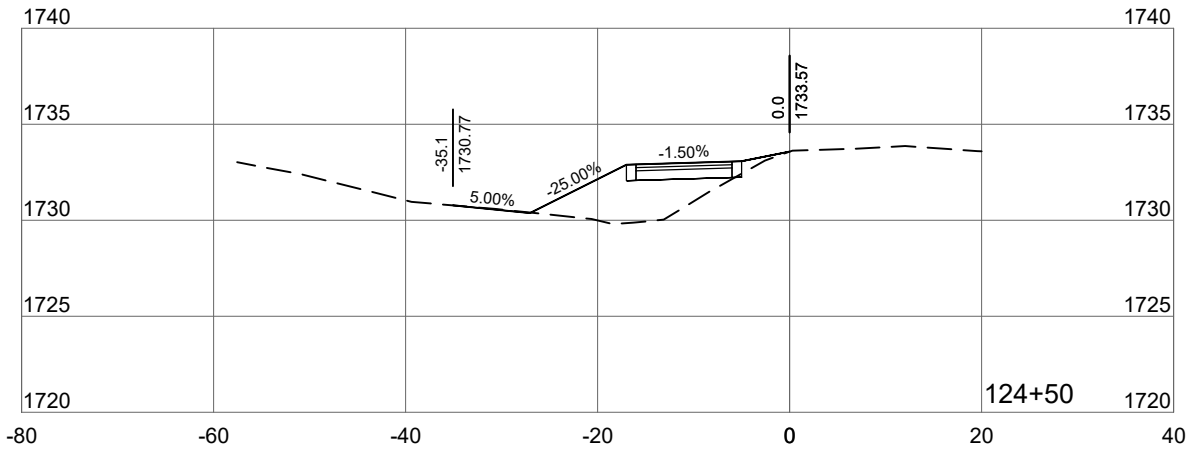
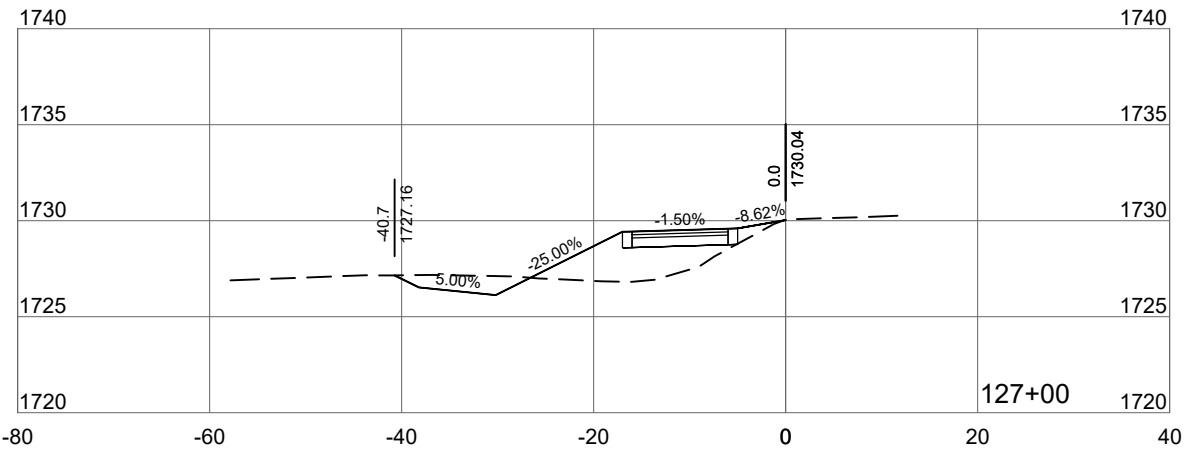
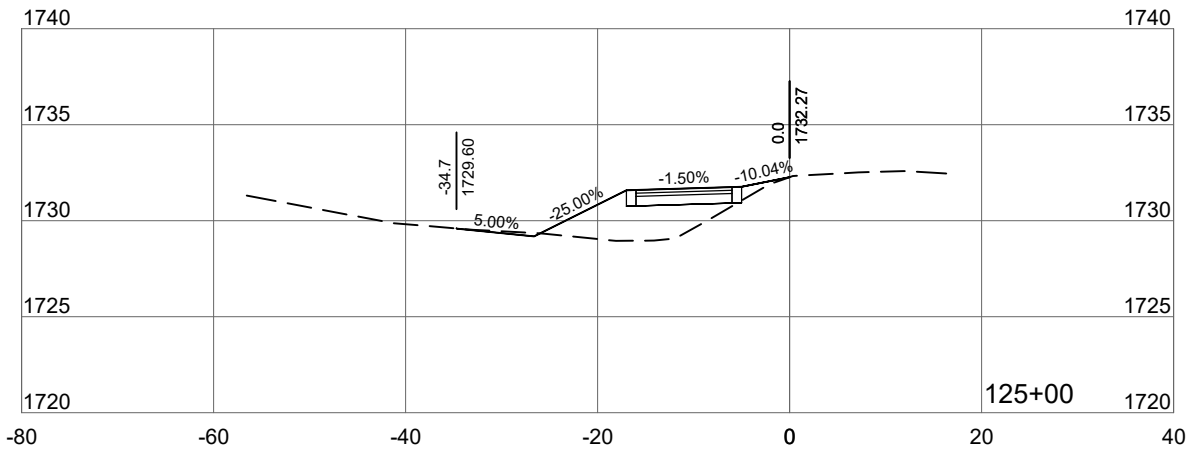
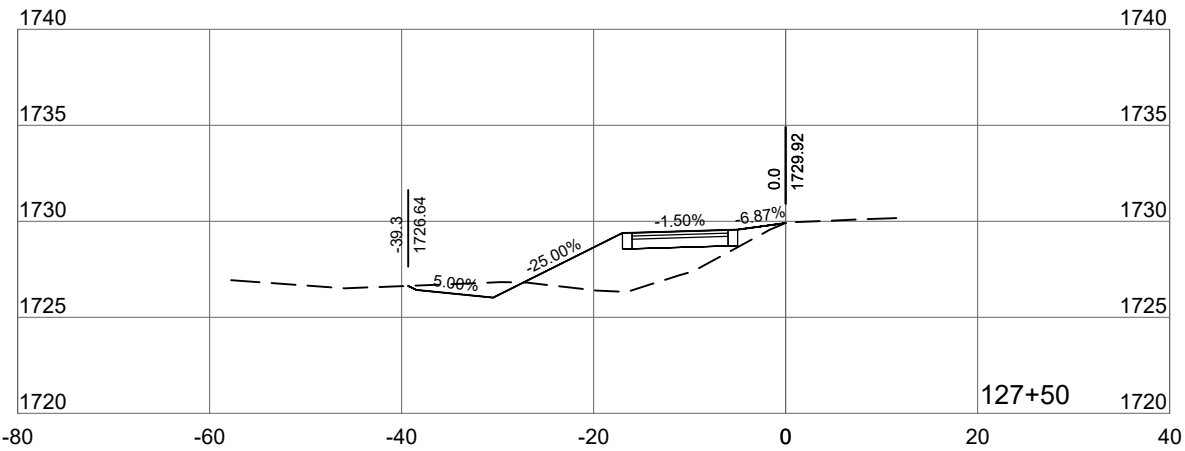
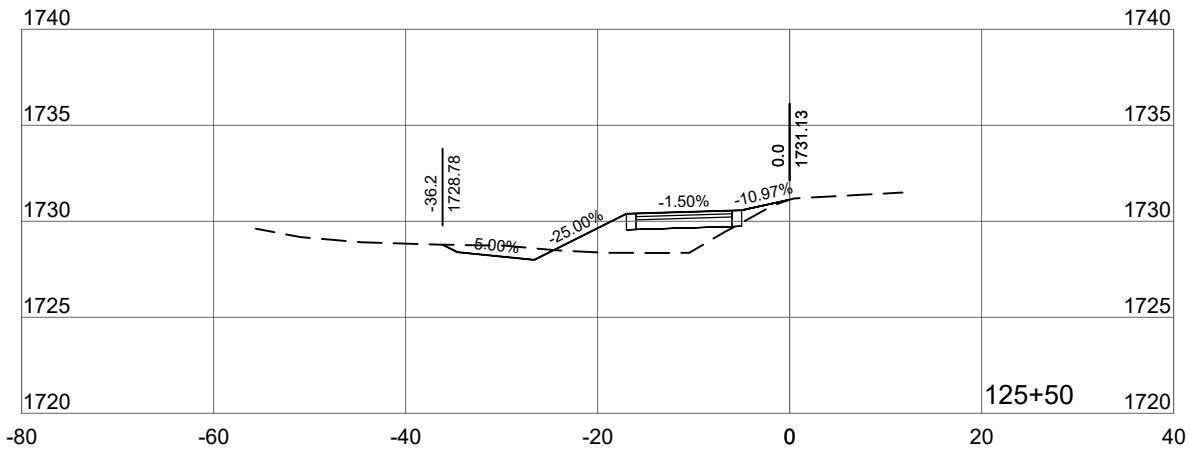
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	95	103



CROSS SECTIONS

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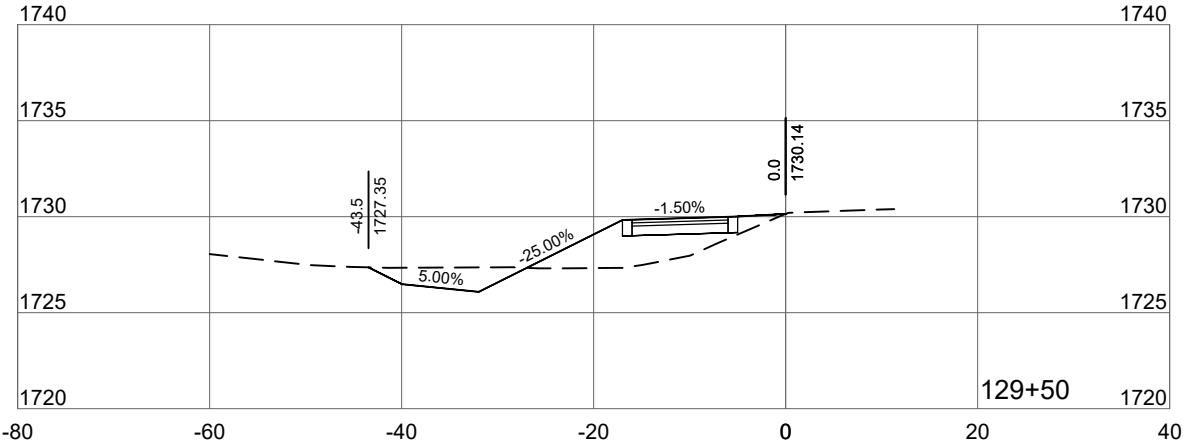
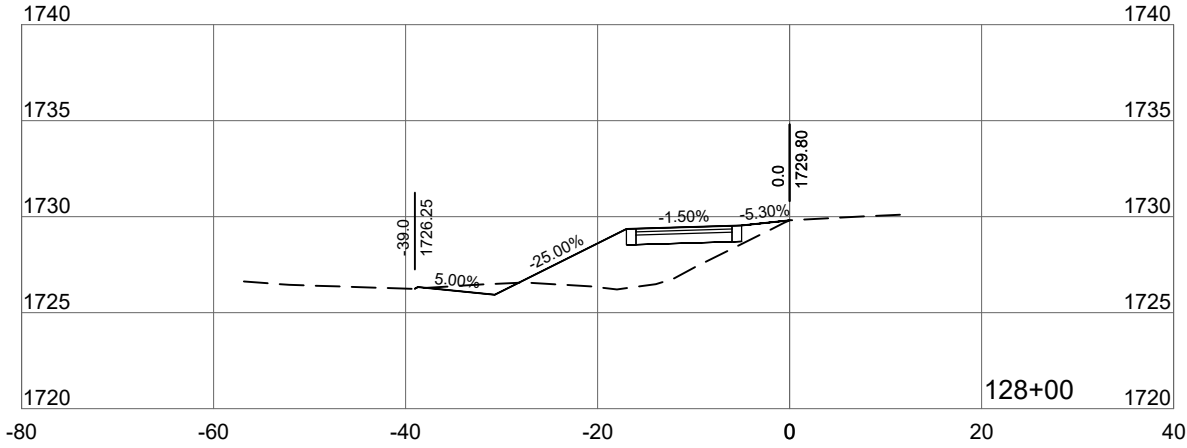
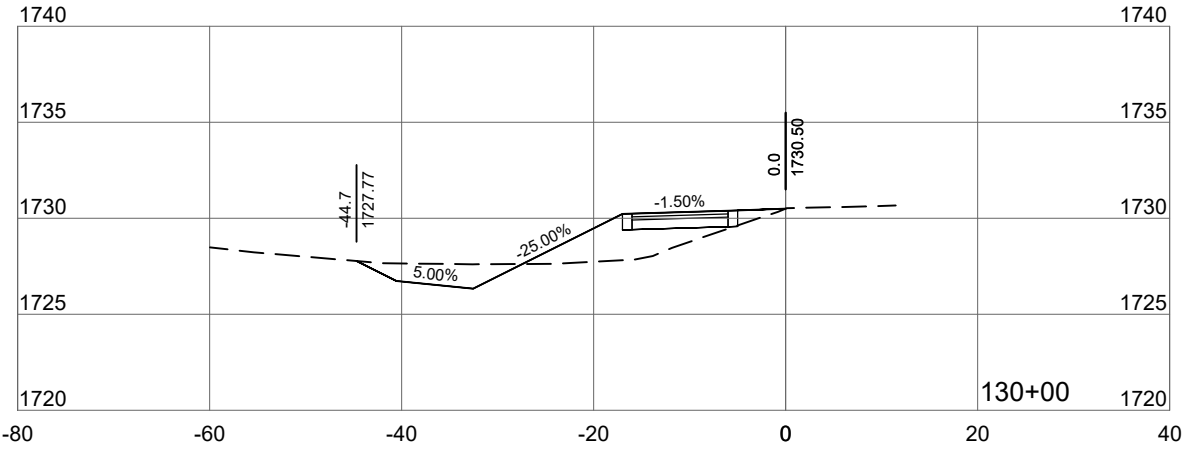
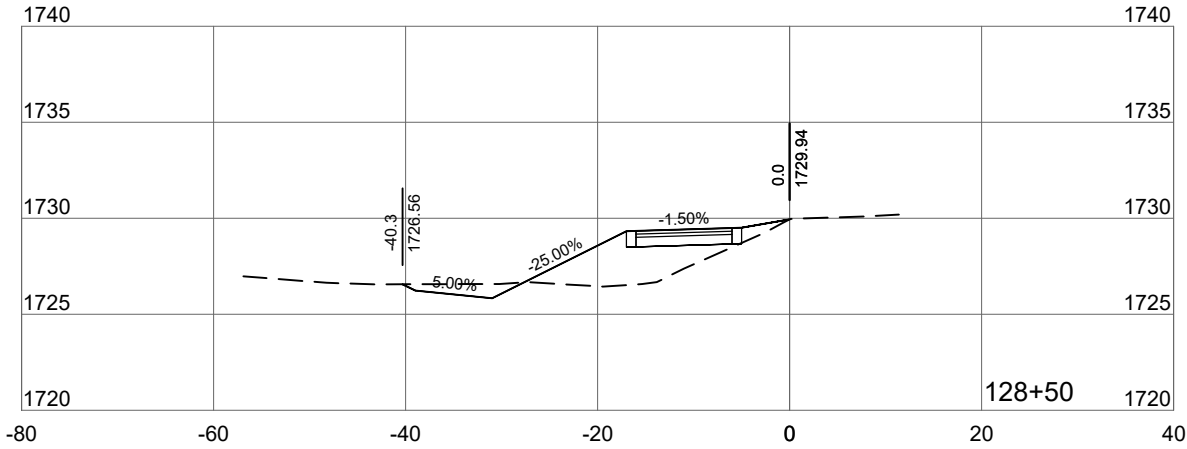
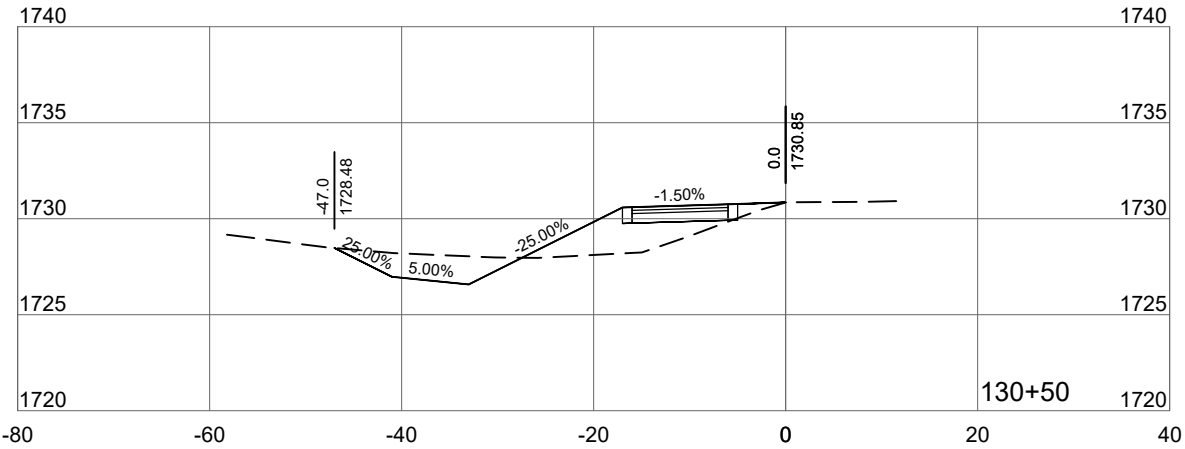
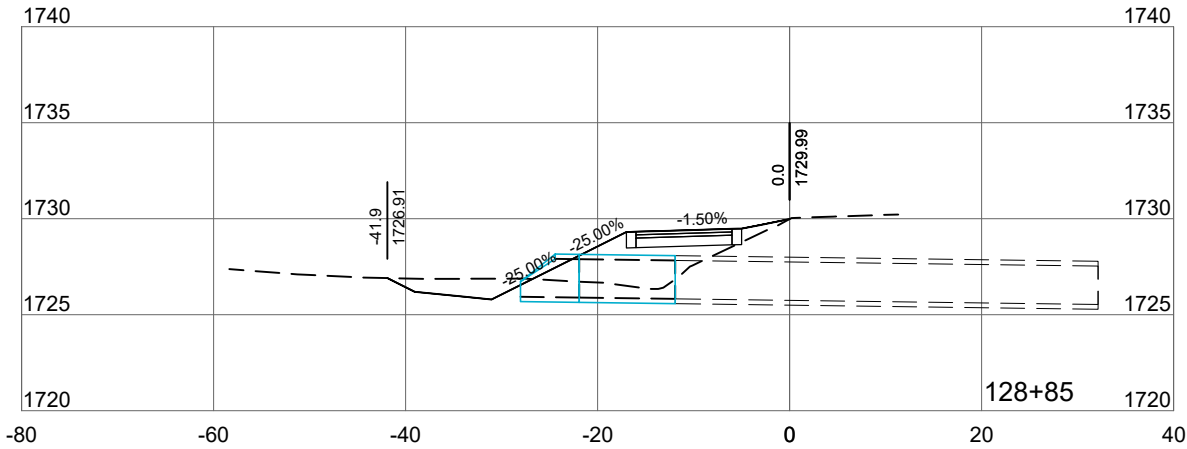
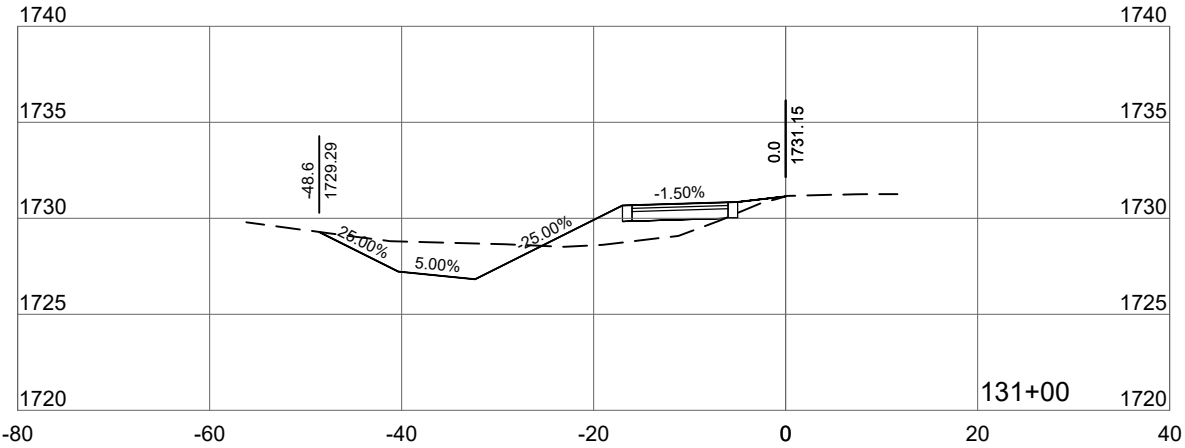
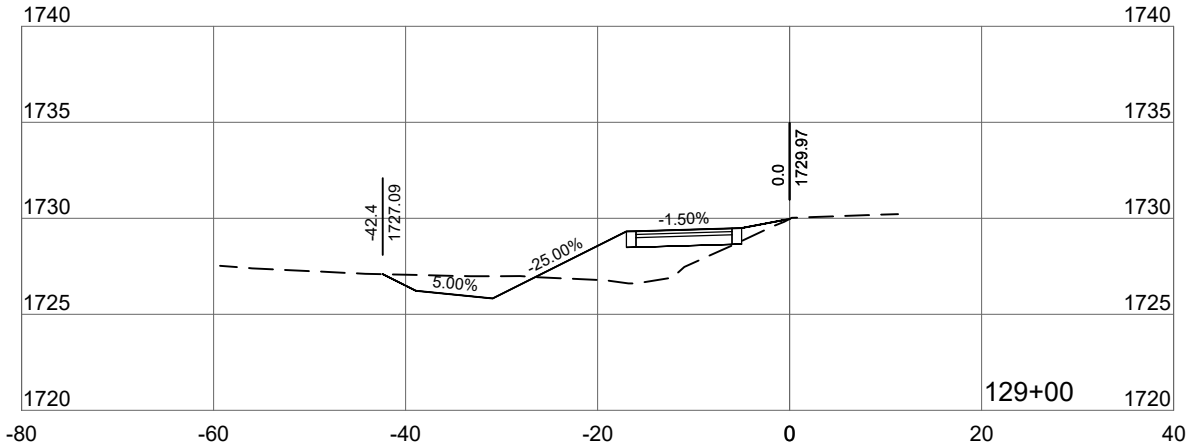
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	96	103



CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

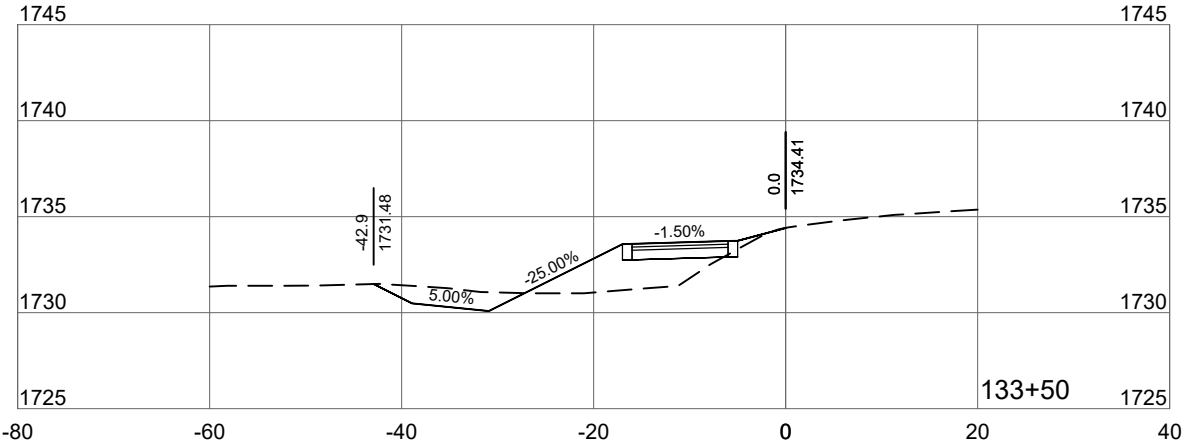
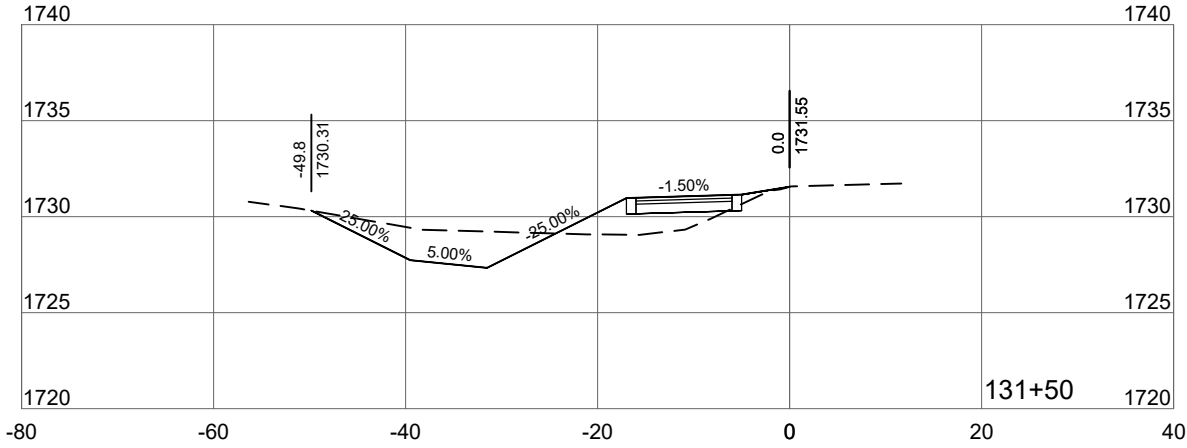
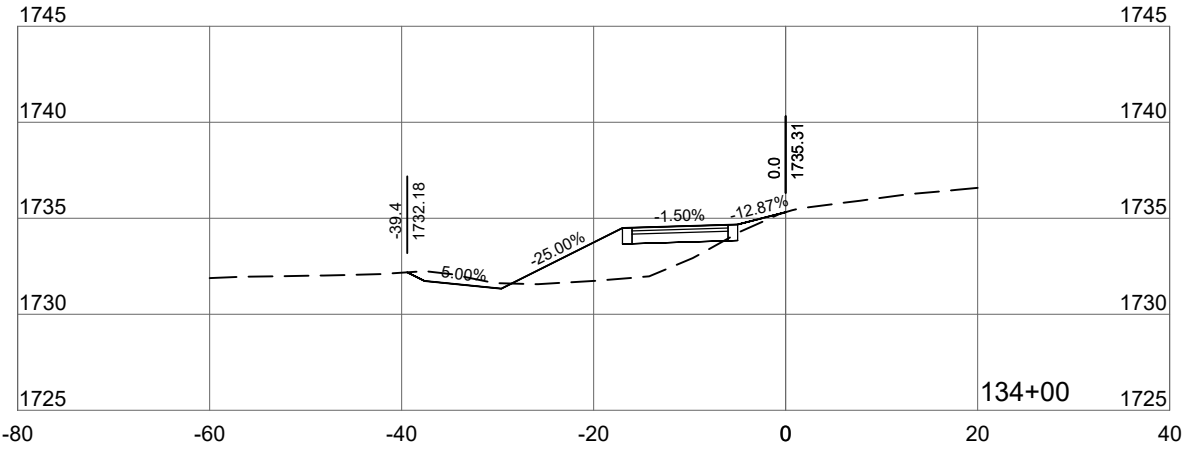
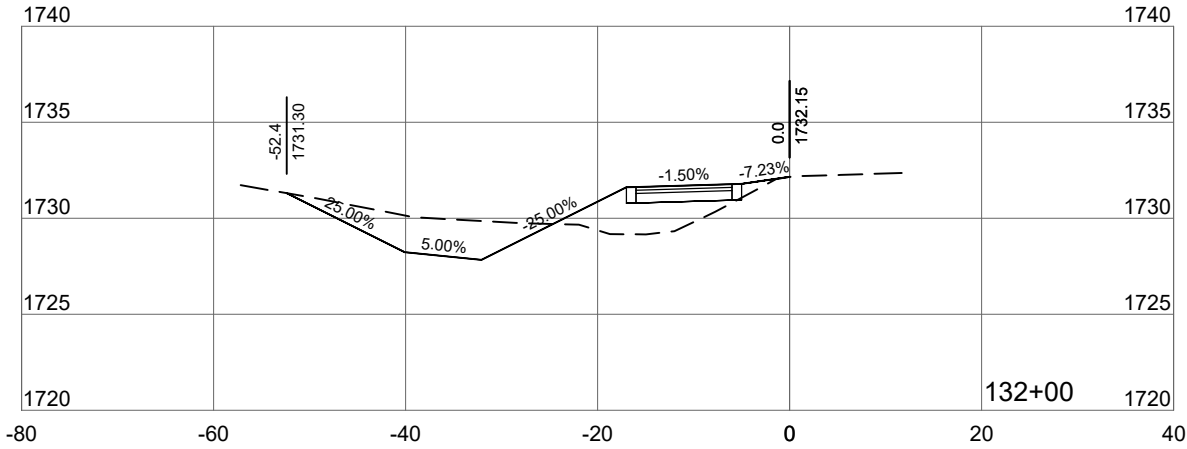
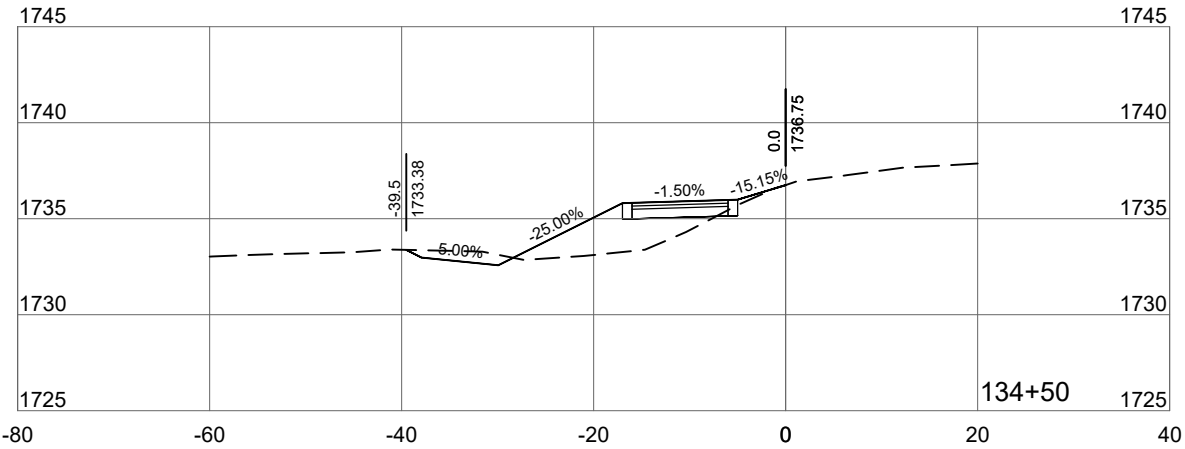
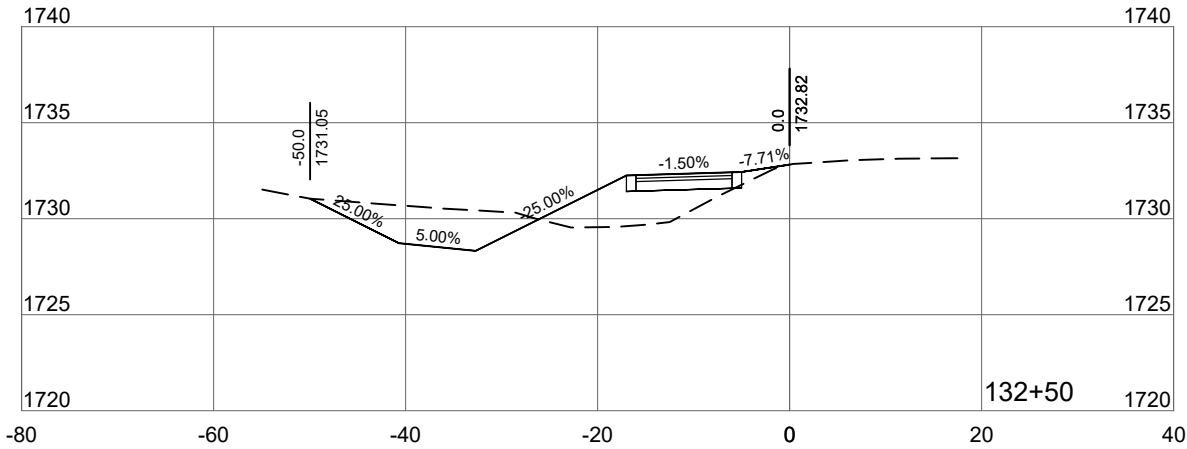
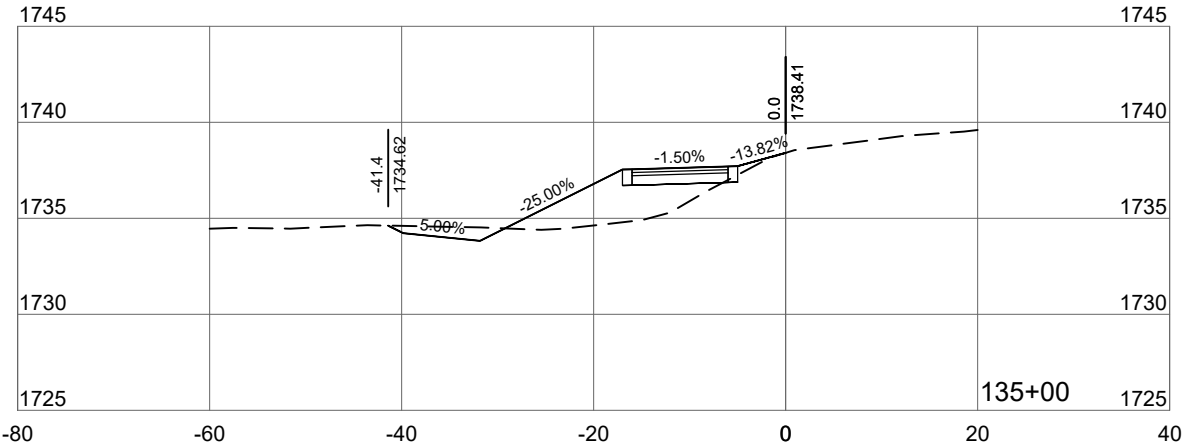
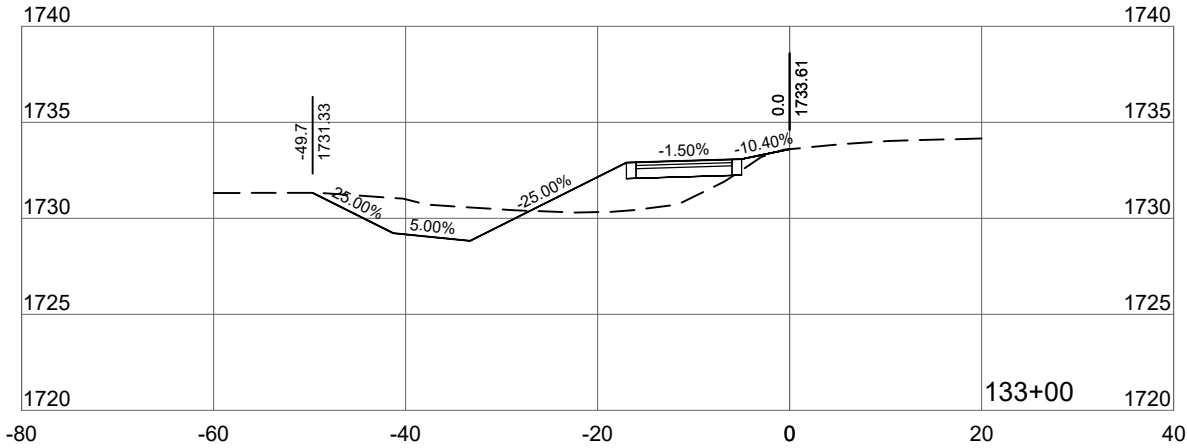
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	97	103



CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

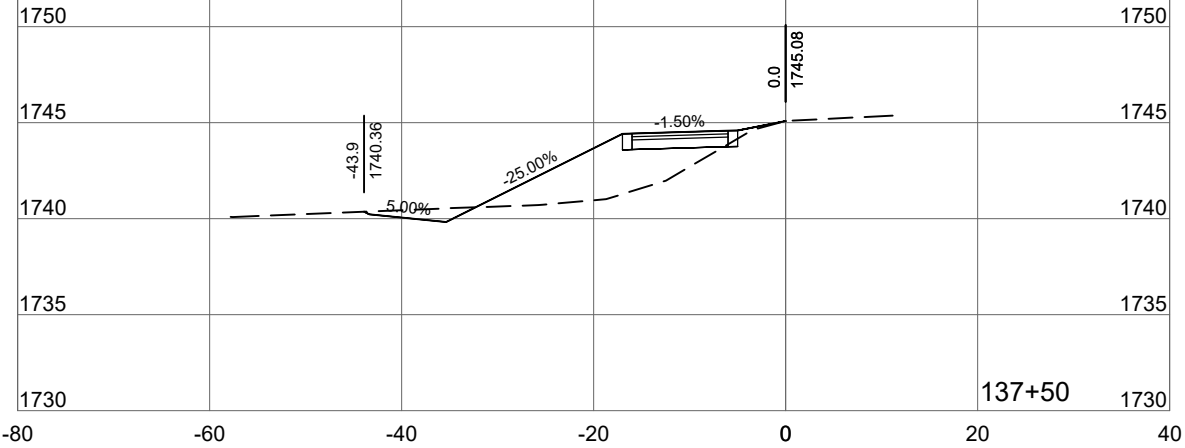
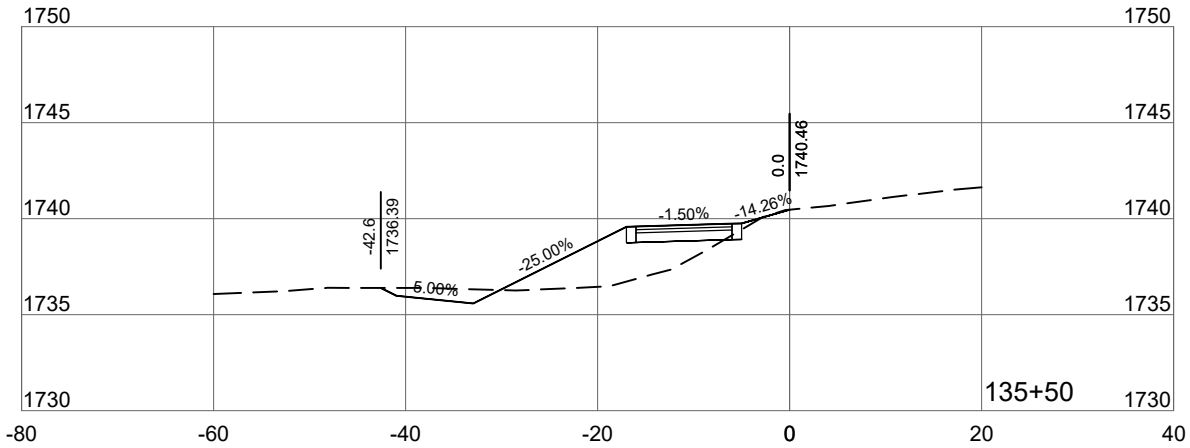
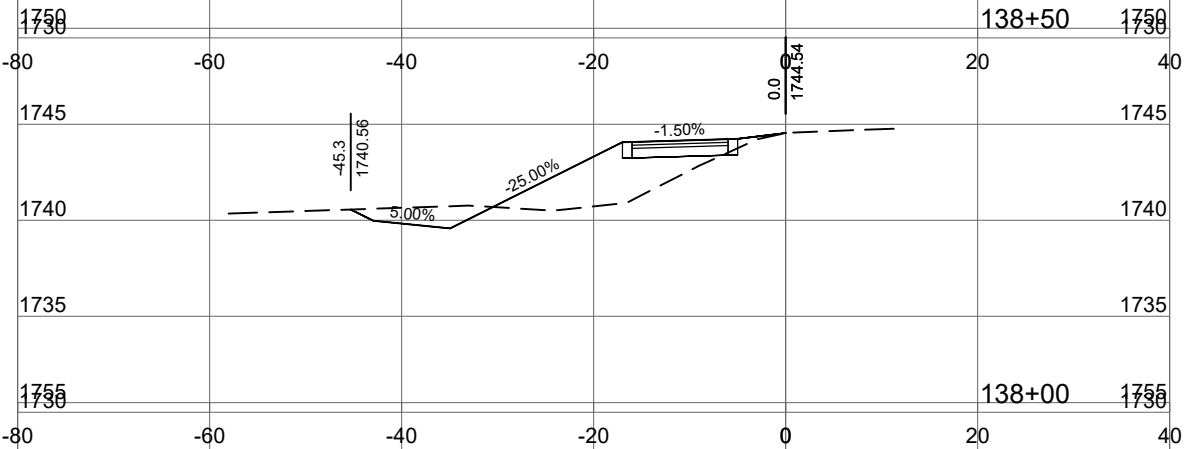
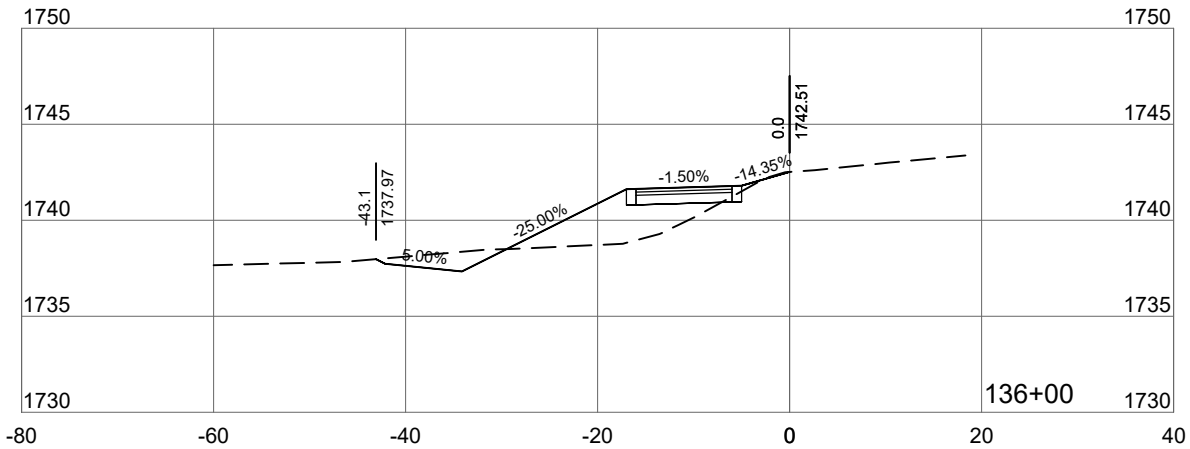
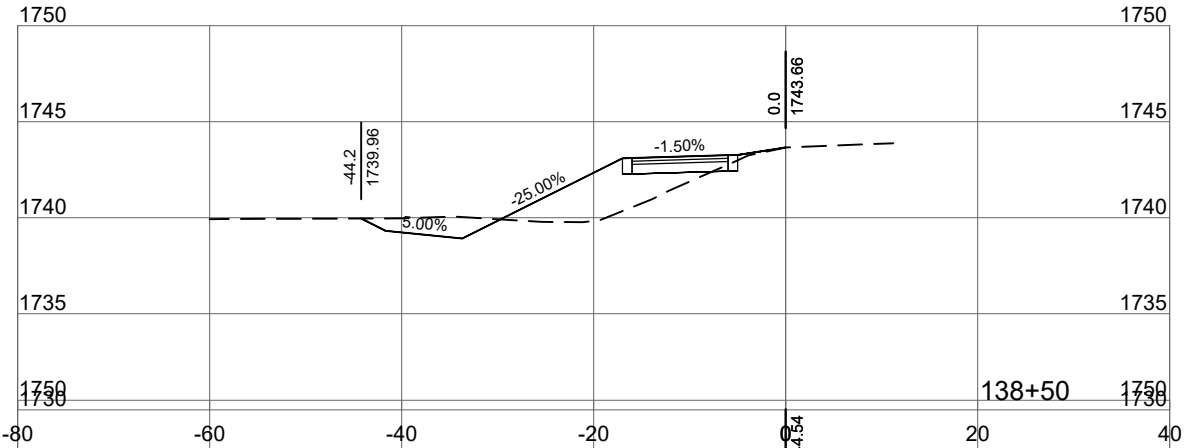
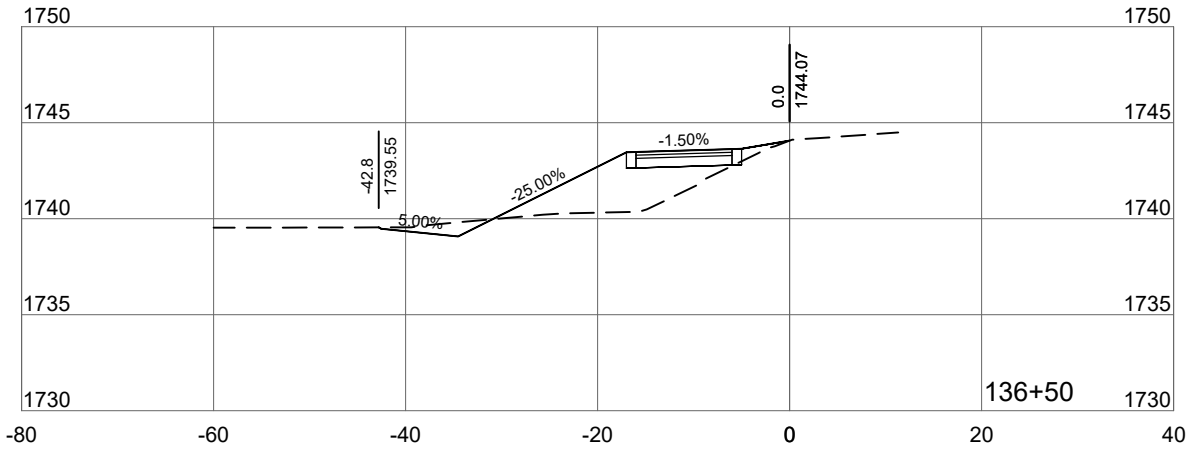
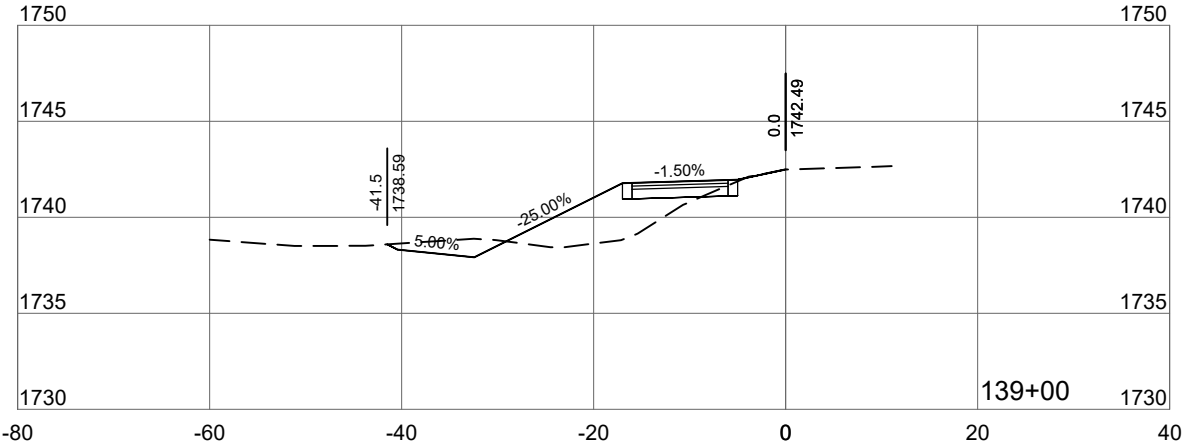
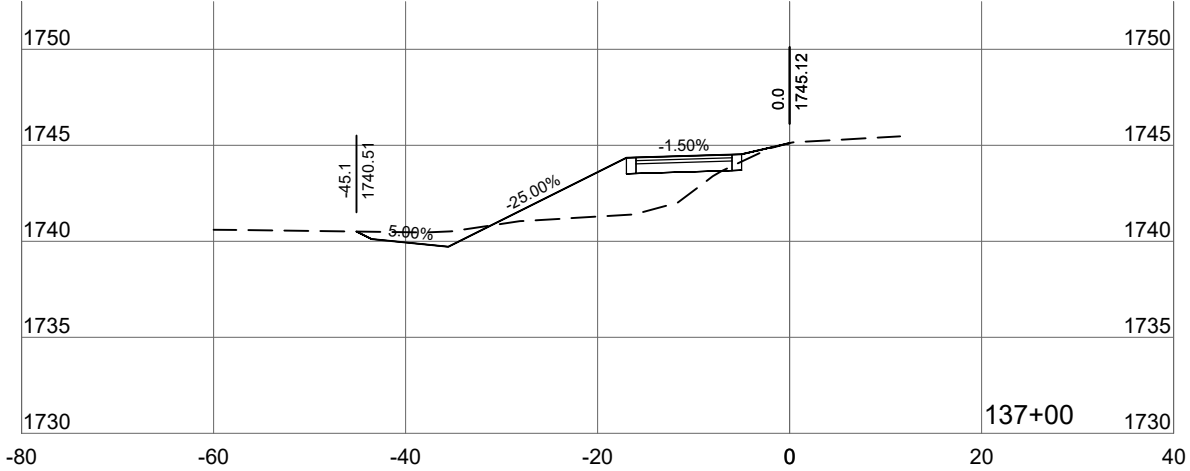
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	98	103



CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

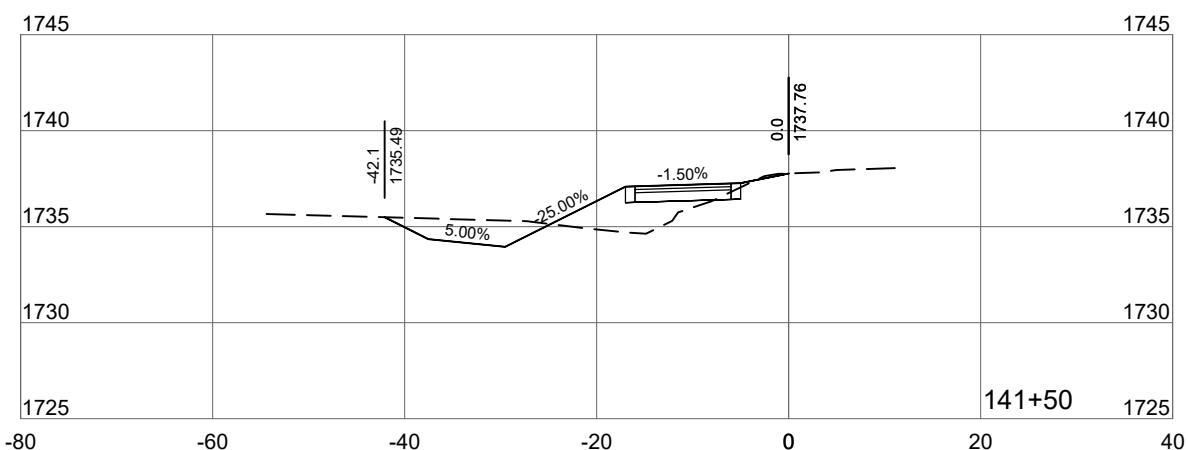
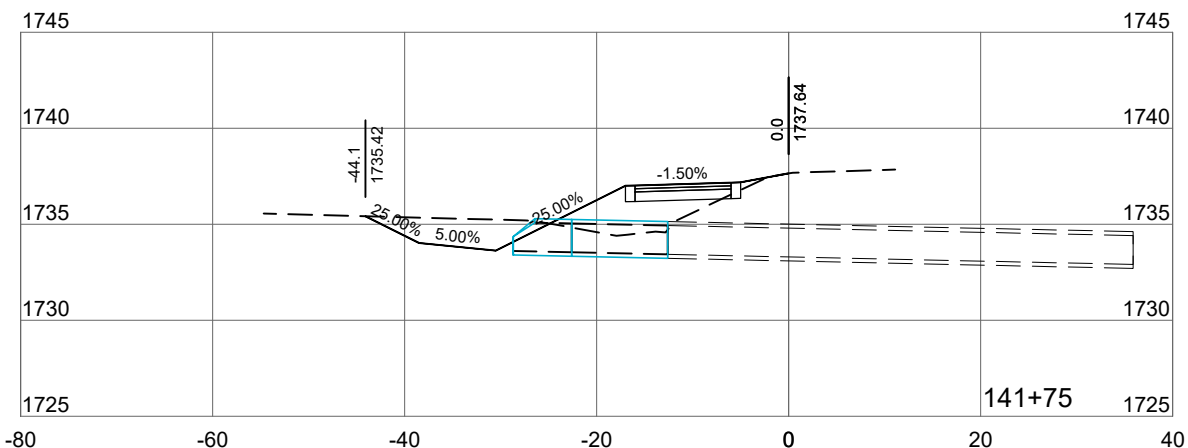
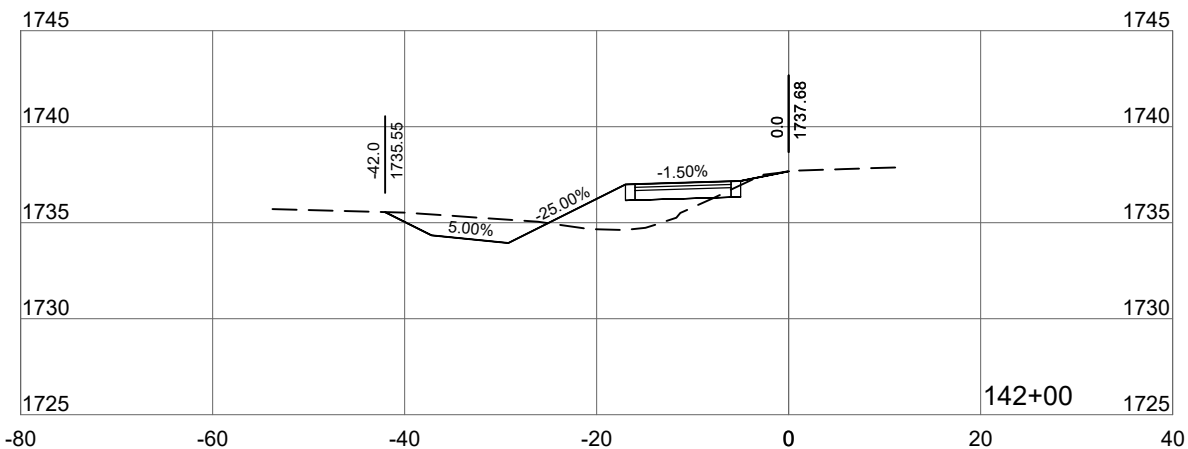
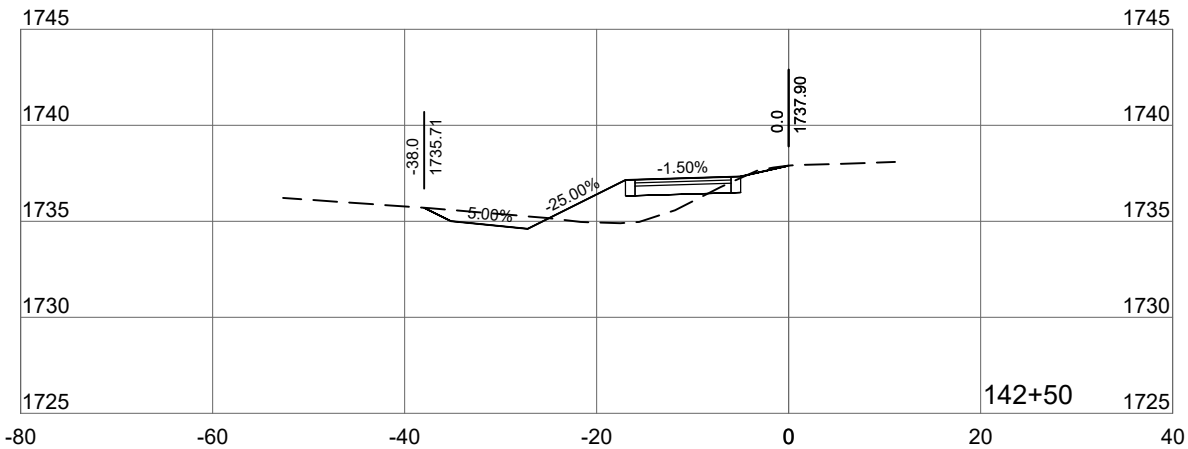
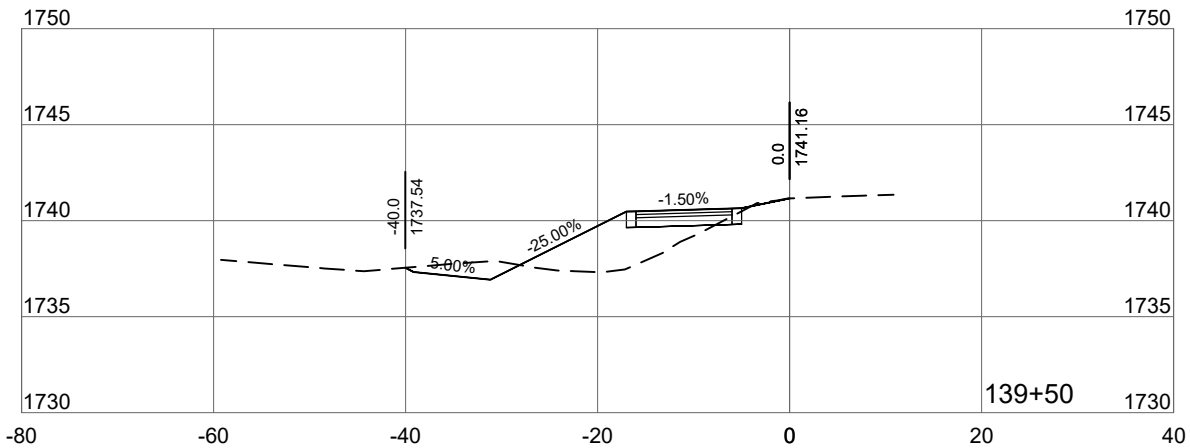
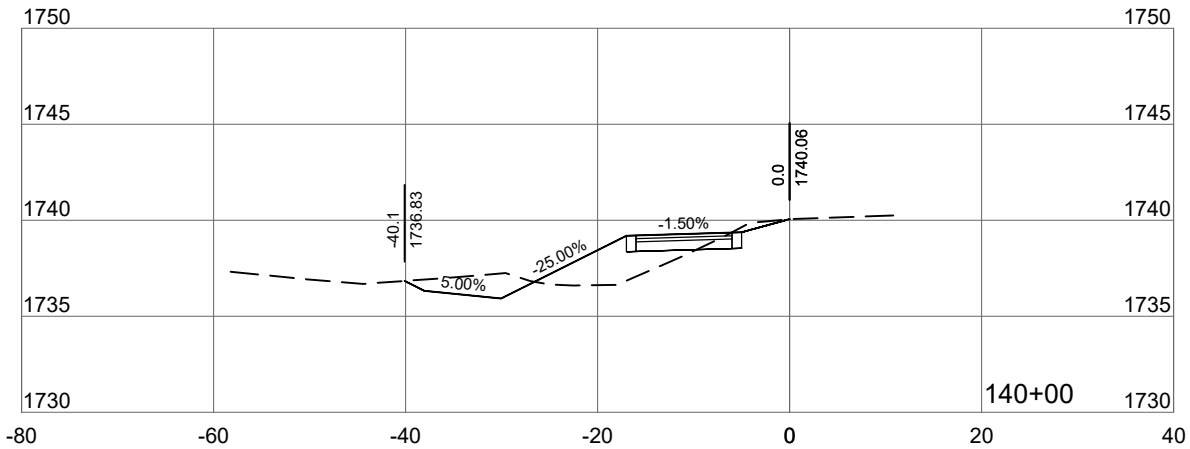
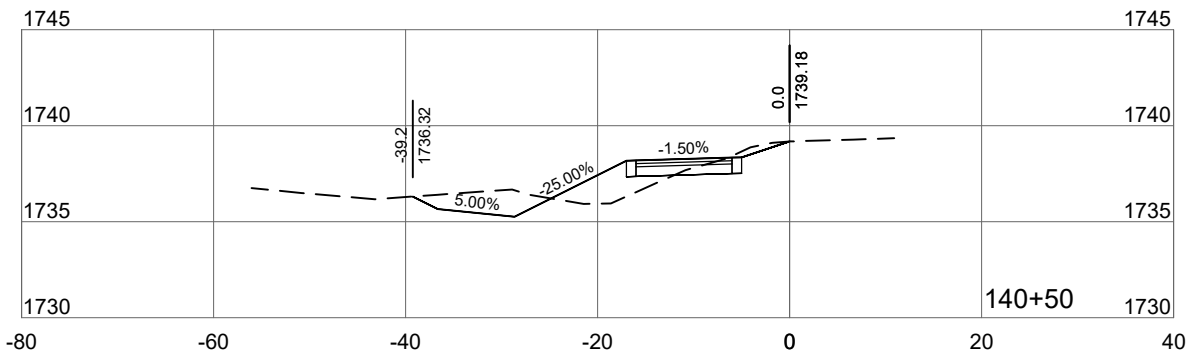
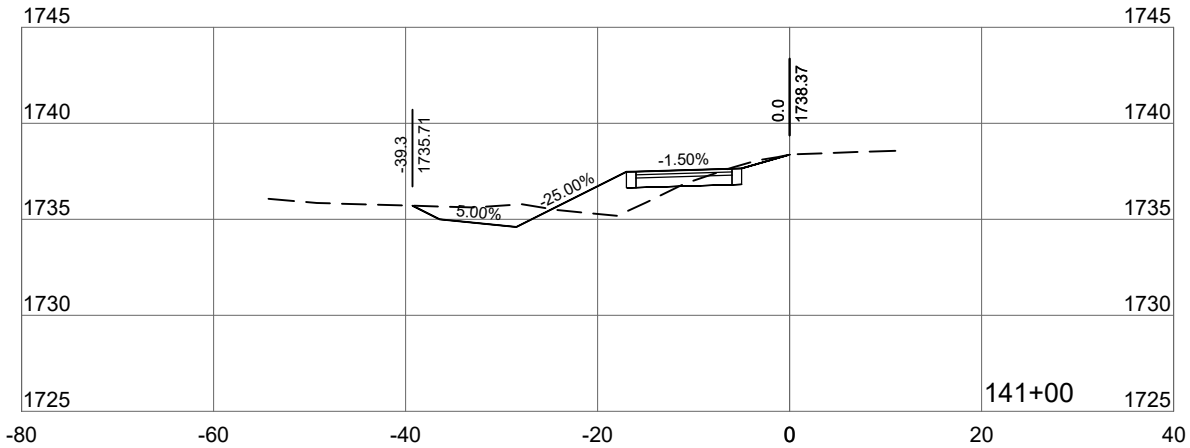
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	99	103



CROSS SECTIONS

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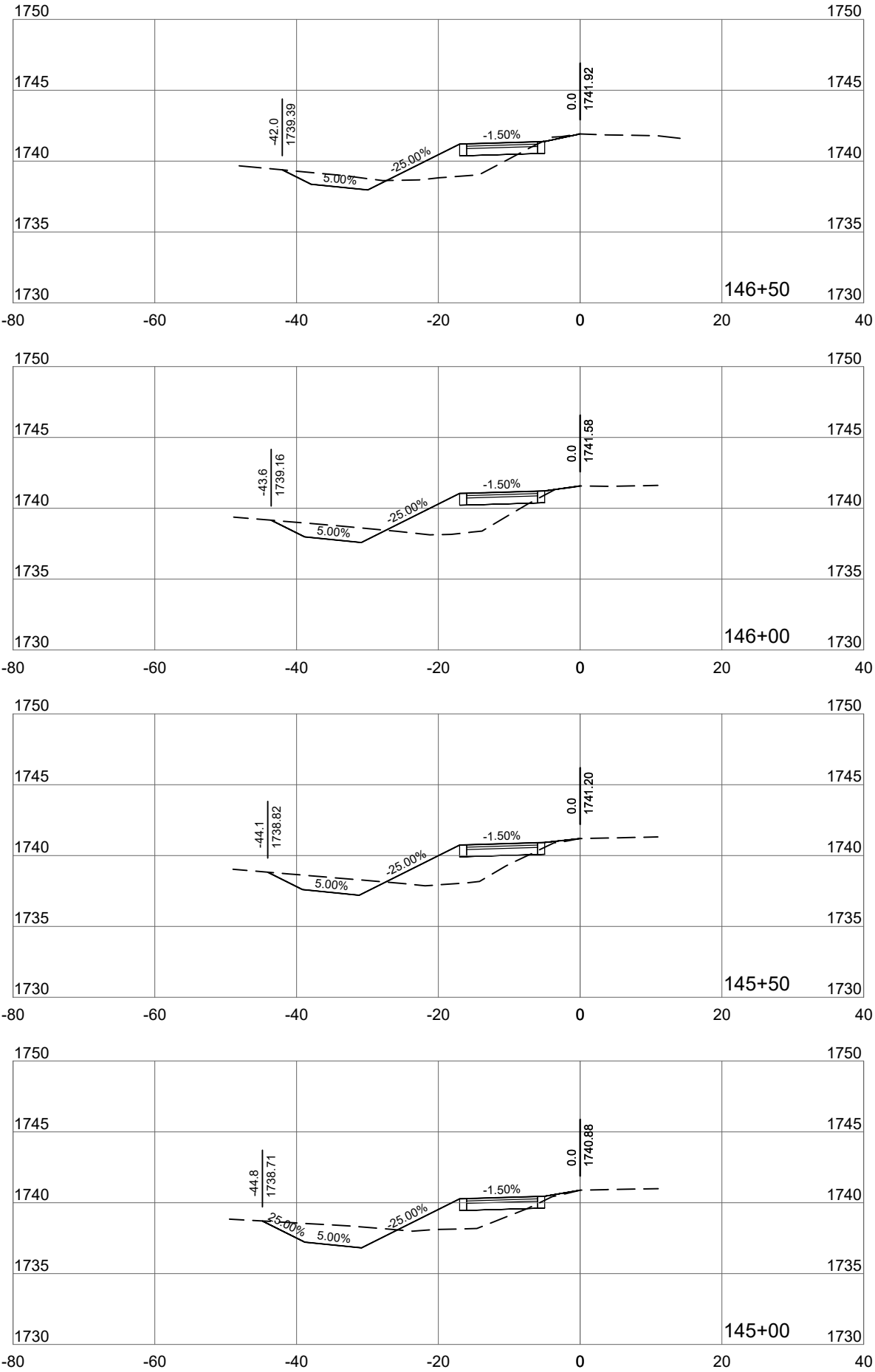
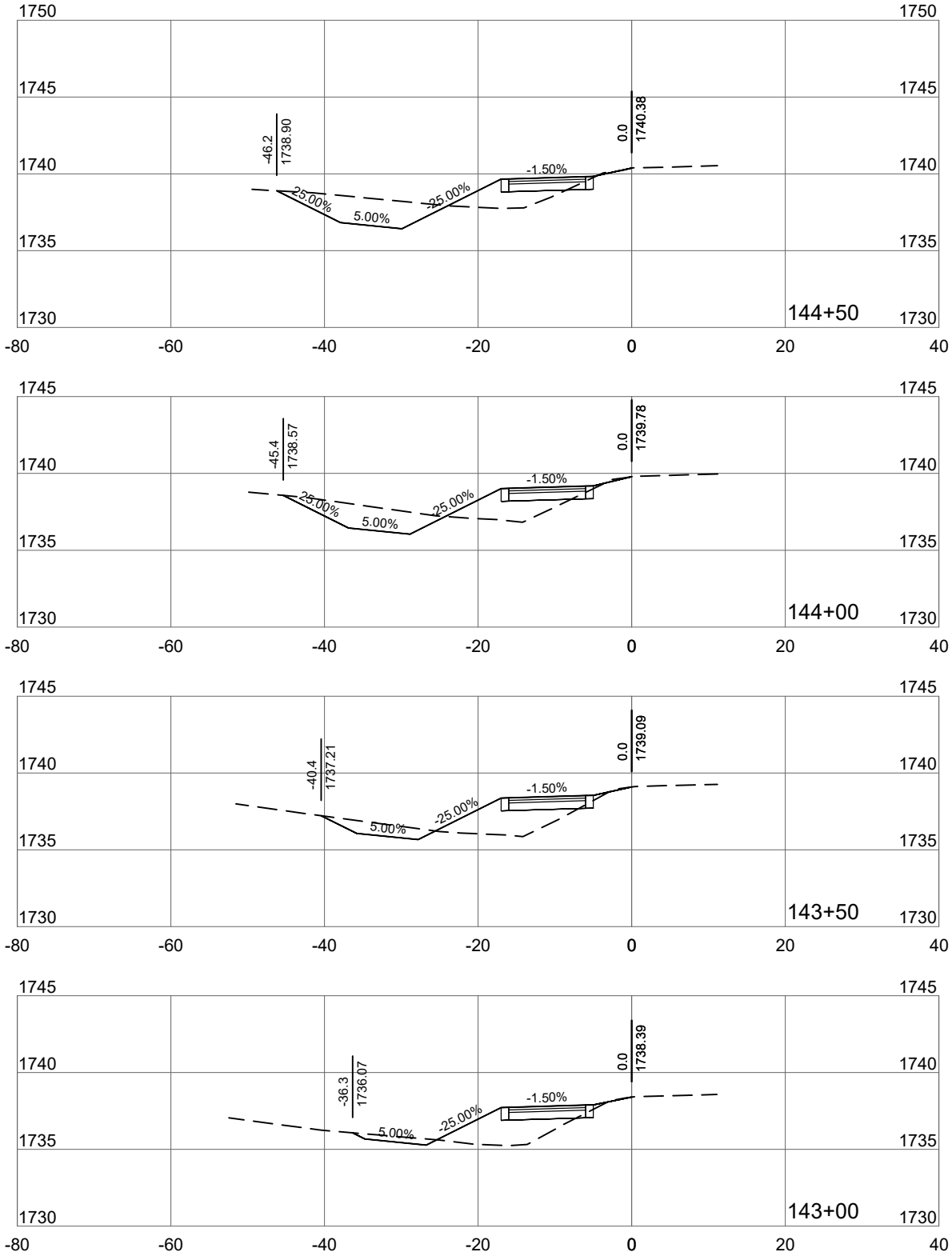
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	100	103



CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

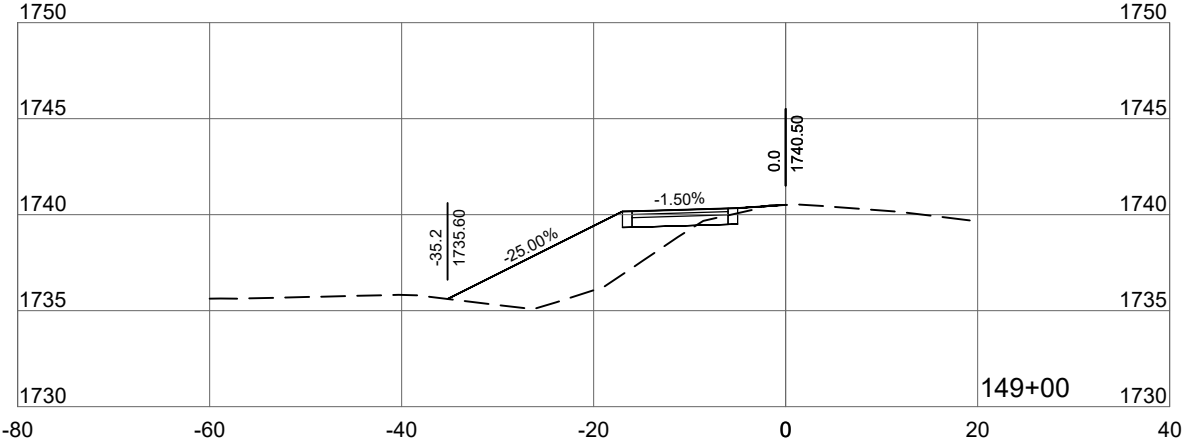
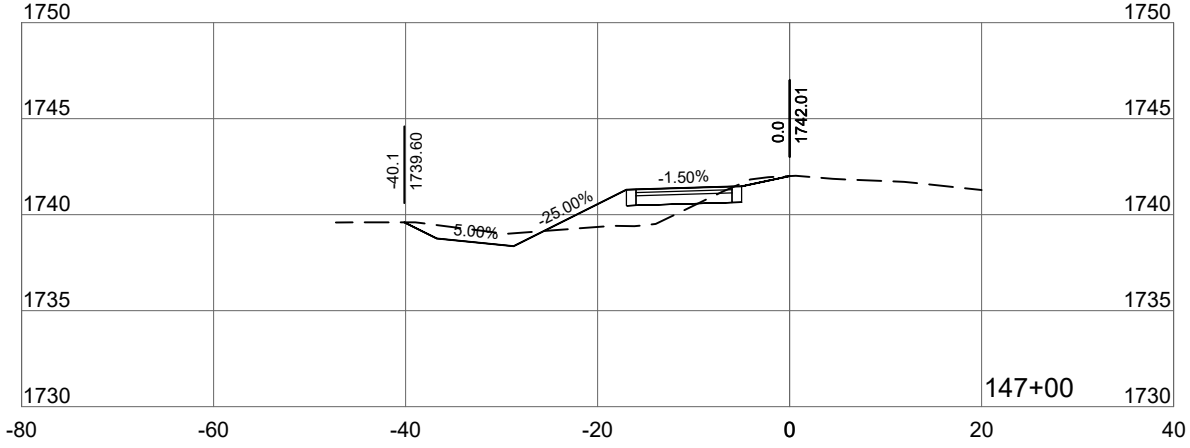
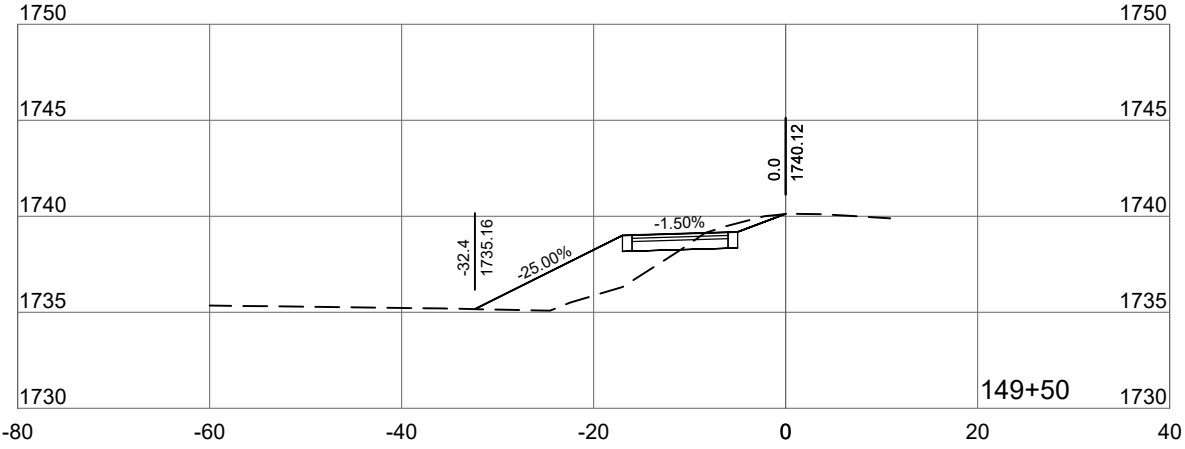
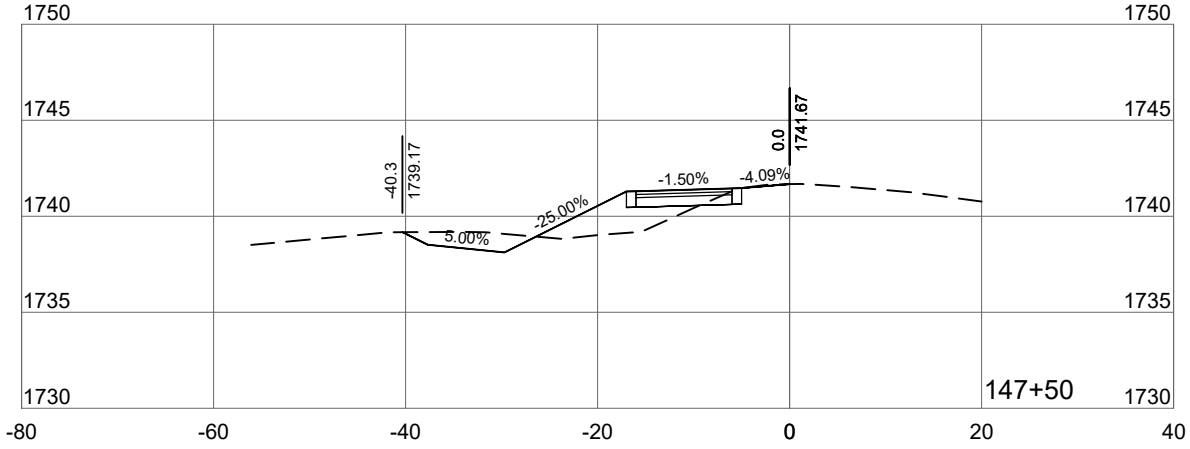
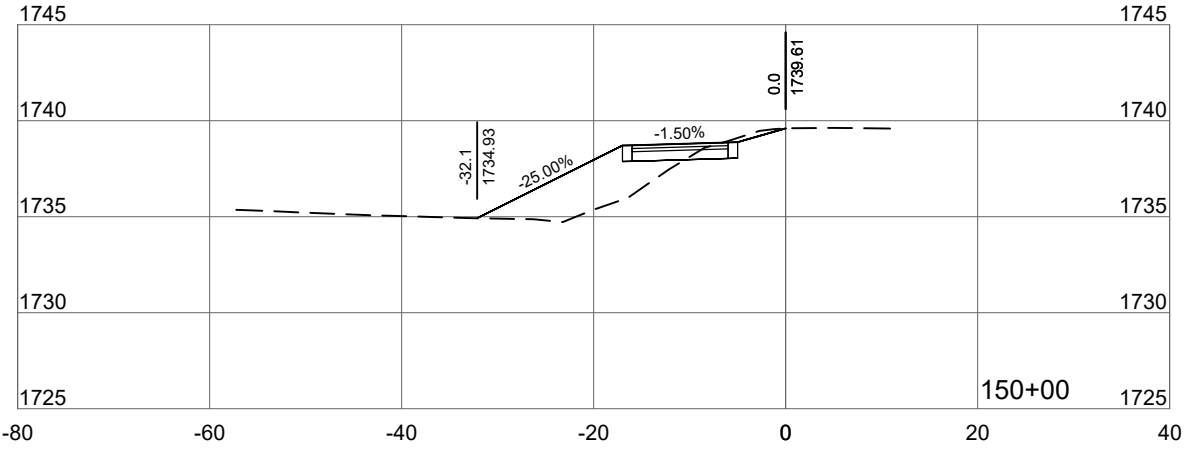
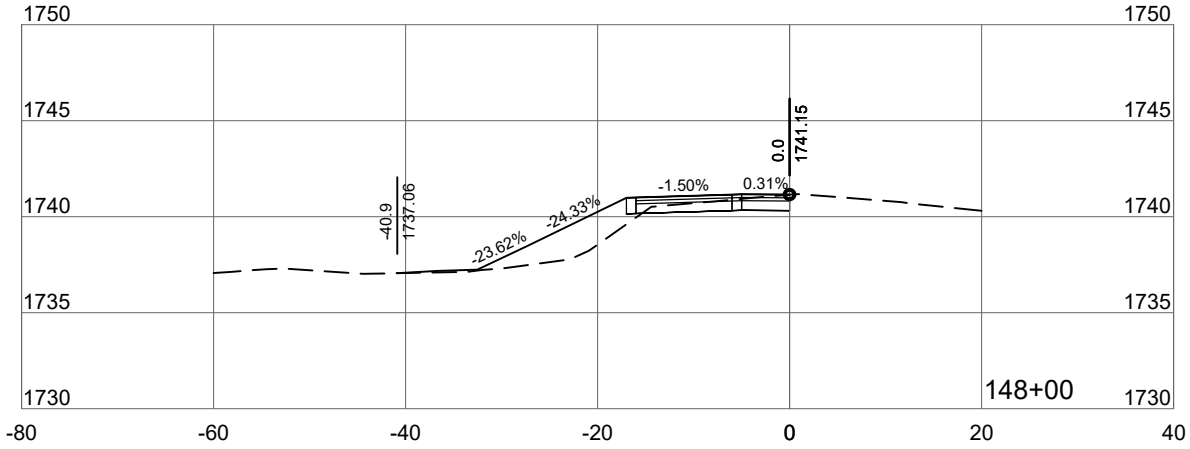
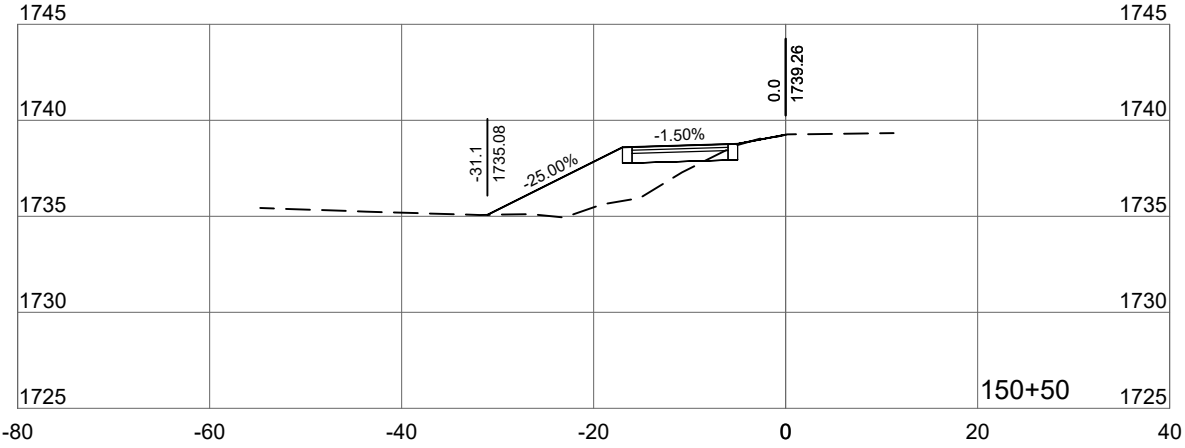
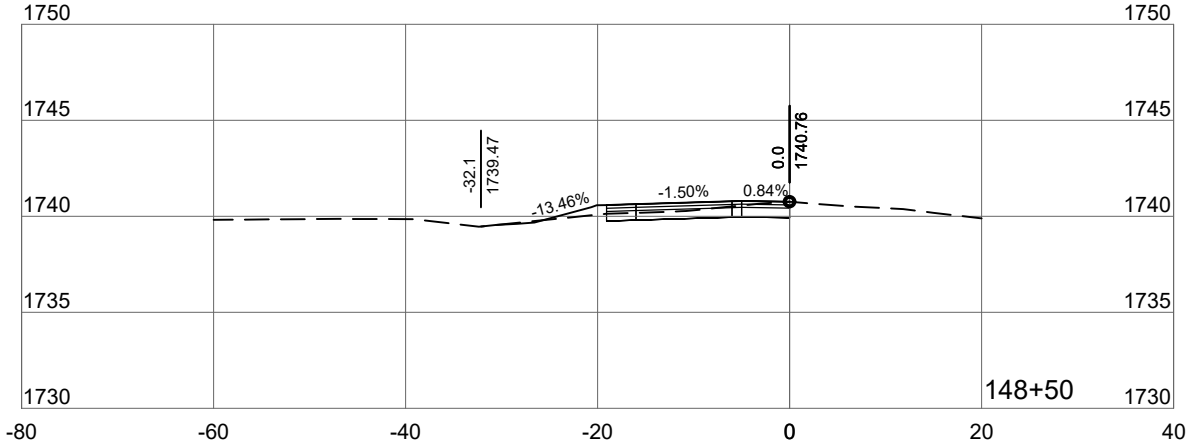
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	101	103



CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	102	103



CROSS SECTIONS

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPU(34)	103	103

