

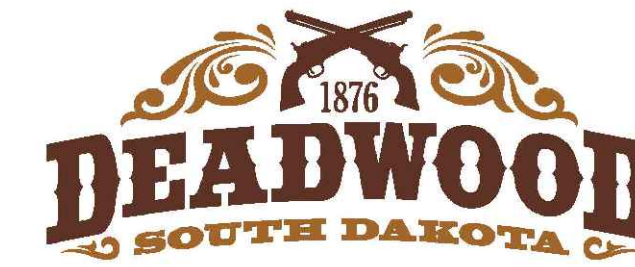
# City of Deadwood

## Deadwood Hill Trailhead Parking Lot

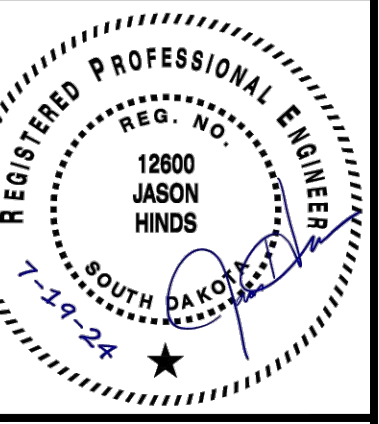
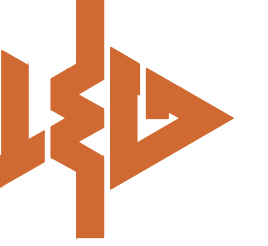
### Deadwood, South Dakota

### July 2024

**TALLGRASS**  
Landscape Architecture for the American West  
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**FMG ENGINEERING**  
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File Number:  
231370.00  
Location:  
E 1/2 Section 14  
T5N, R3E, BHM  
Surveyed By: EK  
Date: December 2023  
Designed By: JLH  
Drawn By: MDS  
Checked By: JLH

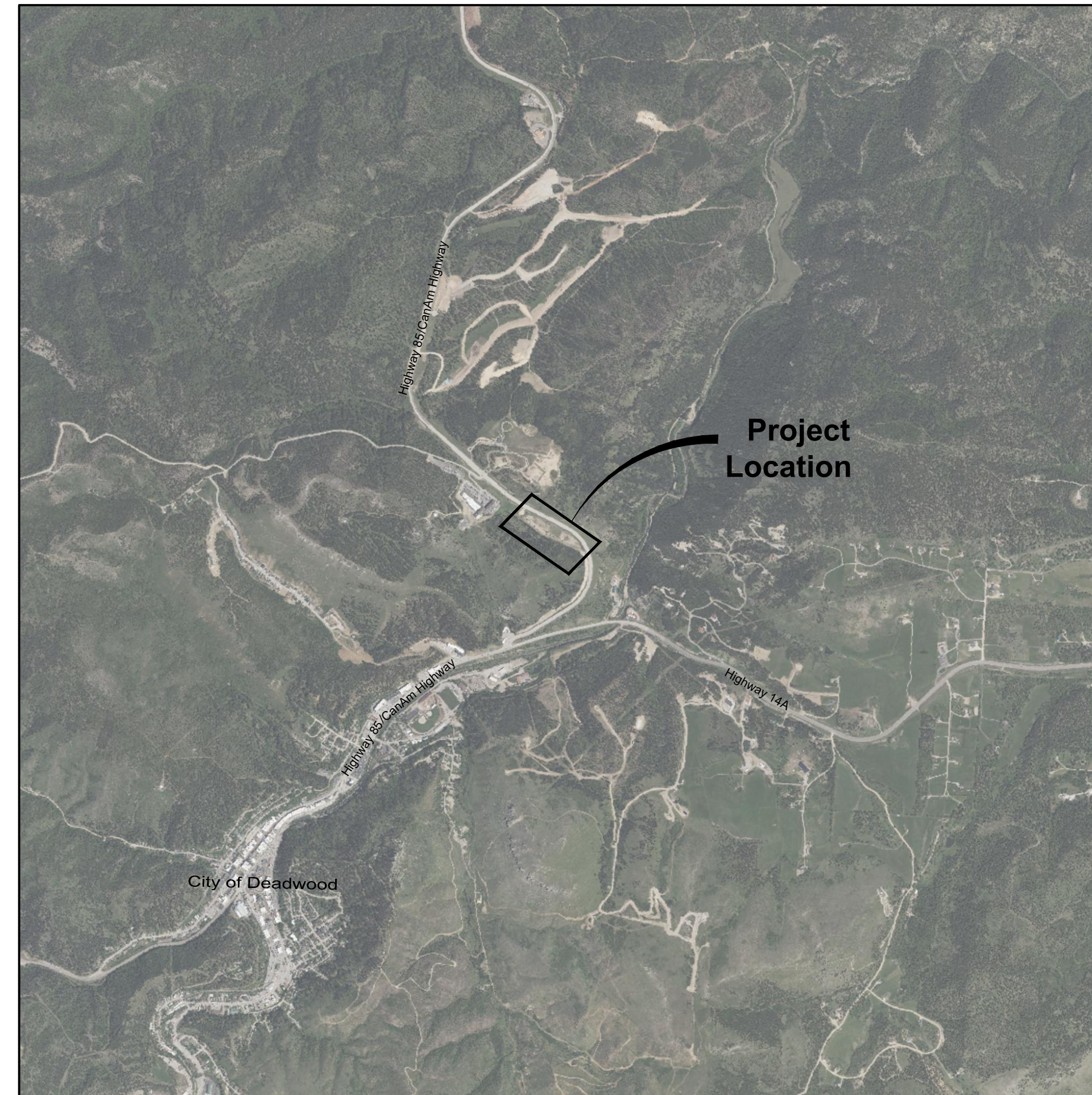
City of Deadwood  
Deadwood Hill Trailhead Parking Lot  
Deadwood, South Dakota

Revision / Date

Sheet Name:

Title Sheet

Sheet Number:  
**C1**



**VICINITY MAP**  
Not To Scale

#### Index of Sheets

- C1 Title Sheet
- C2 General Notes & Legends
- C3 Existing Conditions & Removals
- C4 Erosion Control
- C5 Site Plan
- C6 Grading Plan
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- C10 Details
- C11 Details
  
- L1 Landscape Layout
- L2 Planting & Seeding Plan
- L3 Planting Details
  
- E1 Electrical Site Plan

GENERAL CIVIL NOTES

SPECIFICATIONS TO BE USED

Unless otherwise noted on the drawings, in the contract documents, or in the detailed specifications all work on these drawings shall be in accordance with the South Dakota Department of Transportation (SDDOT) Standard Specifications for Roads and Bridges, 2015 Edition, including all current updates, except as modified in these plans and the bidding documents.

In the event of a conflict between the standard specifications, the contract documents, and plan notes, the more stringent requirement, as determined by the Engineer, shall prevail.

CONSTRUCTION SCHEDULE REQUIREMENTS

The Contractor shall submit the proposed construction schedule not less than (7) working day prior to the preconstruction meeting.

COORDINATION AND SCHEDULING

A preconstruction meeting will be conducted, the Contractor will be required to attend this and other periodic meetings as necessary with the Engineer and Owner for the purpose of scheduling and coordination during the course of construction.

PERMITS

The Contractor shall be responsible for obtaining all necessary permits and permit fees for this project. Copies of all permits shall be provided to the Engineer prior to beginning work.

EROSION AND SEDIMENT CONTROL

The Contractor is solely responsible for procuring coverage for pollution control for the project. Pollution control shall be in accordance with applicable local and federal rules and regulations. Appropriate Erosion and Sediment Control Measures shall be maintained until the site is permanently stabilized.

A SDDANR stormwater permit for general construction activities will be required as the area of disturbance is over one (1) acre. The owner shall complete the Notice of Intent and pay the associated fee, but the Contractor shall be responsible for preparation and maintenance of the Stormwater Pollution Prevention Plan (SWPPP).

MATERIALS TESTING

Materials Testing is the responsibility of the Owner and will be performed by FMG Engineering. Contractor to coordinate with FMG Engineering for required testing. It is the Contractor's responsibility to coordinate their work and schedule testing with the Owner's testing agency.

The Owner shall provide initial testing only, any additional testing required at no fault of the Owner shall be the responsibility of the Contractor. If additional special testing be required because of insufficient work quality through no fault of the Owner, the Contractor shall pay for all required re-testing necessary to assure the Owner and Engineer that the integrity of the final product meets the intent of the plans and specifications.

SUBMITTALS

Submittals shall be made by the Prime Contractor in accordance with Specifications To Be Used. Submittals shall be made at least 7 working days before Contractor's need for approval. Electronic files (PDF documents) for each submittal shall be made. Submittals shall clearly identify the project and specification section. Submittals shall be certified and dated by the Contractor as being in compliance with the specifications and plan requirements unless. Any deviations from specification requirements shall be noted by the Contractor.

The term "submittals" includes drawings, diagrams, descriptive literature, illustrations, instructions, schedules, performance and test data, product data sheets, material safety data sheets, and similar materials by a Supplier or Contractor, to illustrate material or equipment for some portion of the work.

Any work done prior to Engineer's approval shall be at the Contractor's risk. Re-submittals shall be made the same as for original submittals with changes from the previous submittal clearly shown.

RECORD DRAWINGS

The Contractor shall document all changes. Maintain onsite and separate from documents used for construction, one complete set of contract documents as record drawings. Changes include work which is installed differently than shown on the plans. Record drawings shall be provided to the Engineer upon completion.

EXISTING UTILITIES

The South Dakota one call number was called for utility locates during survey activities for the design. The utilities shown on the drawings are from the one call markings made for that project as otherwise noted on the drawings. The location of all existing utilities may not be shown on the plans or are not accurately represented on the drawings.

Existing overhead and underground power lines, overhead and underground telephone lines, fiber optic cables, water lines, gas mains, sewer lines, and other utilities not authorized to be removed shall be supported and protected from injury by the Contractor during construction and until completion of the work affecting them. The Contractor is responsible for having all utilities located prior to beginning construction. The Contractor shall be liable for damages done to such existing facilities and he shall hold the Owner harmless from any liability or expense for injuries, damages, or repairs to such facilities.

The Contractor shall coordinate all work with the utility companies. No additional payment will be made for this work.

The Contractor is to verify the existence and location of the existing utilities at the site. No extra payment will be made because of different utility locations or any other utilities that may be present unless pre-approved by the Owner and Engineer.

TRAFFIC CONTROL

The Contractor shall be responsible for Traffic Control. The Contractor shall maintain traffic in accordance with Standard Specifications. Provide Traffic Control Plan to City of Deadwood and SDDOT for approval for all work in public right of way. Submit copy of approved Plan. No additional payment shall be made.

EARTHWORK - UNCLASSIFIED EXCAVATION

All material encountered in the site work excavation shall be considered unclassified excavation regardless of the actual type of material encountered and no extra payment will be made for varying materials.

The Contractor is responsible to determine the amount of earthwork that will be necessary to complete the project. The Contractor shall dispose of excess excavation at a Contractor furnished site.

If soft or unstable materials are encountered during grading operations the contractor shall notify the Engineer for review of that area. Stabilization of these areas may be required as directed by the Engineer. So long as the project is constructed as shown on plans, plans quantities shall be the basis for payment and no additional payment shall be made. Earthwork quantities shown are for reference only and do not include shrink, swell, or reductions/additions to account for surfacing

materials.

CONTRACTOR PROVIDED WATER

The Contractor shall be responsible for providing water for compaction of earthen and granular materials used for the project. Water needed for turf reestablishment, street cleaning, and other miscellaneous items shall also be provided by the Contractor.

SUBGRADE SCARIFICATION

In areas under pavement, after subgrade elevations is reached and immediately prior to placing aggregate base course, the Contractor shall scarify the subgrade to the depth indicated on the drawings, adjust the moisture content, and compact the materials per the specifications. Subgrade scarification shall result in full processing of the soil using disks, rippers, blades, or other suitable equipment such that the soil is fully mixed prior to compaction. Subgrade shall be compacted to a density no less than 95 percent of the maximum dry density as determined by the Modified Proctor (ASTM D 1557.91).

SUBGRADE AND BASE COURSE PROTECTION AND MAINTENANCE

The Contractor shall protect and maintain the completed compacted subgrade and aggregate base course. Where completed subgrade or base course areas are affected by subsequent construction operations or adverse weather, the Contractor shall scarify the surface, reshape, and compact the material to required moisture and density prior to further construction.

THE TESTING AGENCY SHALL BE NOTIFIED TO TEST THE SUBGRADE BELOW ALL PAVEMENTS IMMEDIATELY BEFORE THE PLACEMENT OF MATERIALS ABOVE THE SUBGRADE TO VERIFY THE SUBGRADE MEETS SPECIFICATIONS.

No extra payment will be made for subgrade and base course protection and maintenance.

SUBGRADE AND AGGREGATE BASE COURSE PROOFROLLING

Before placement of the aggregate base course the prepared subgrade shall be proof rolled by the Contractor. Before placement of asphalt or concrete pavements the prepared aggregate base course shall be proof rolled by the Contractor. Proof rolling of these areas is required to check for unstable or soft areas and is required regardless of passing compaction tests. The Contractor shall furnish required heavy equipment to proof roll the areas. A materials technician from FMG Engineering must be present during proof rolling operations.

Soft areas or unstable areas discovered during proof rolling shall be stabilized to the satisfaction of the Engineer. No extra payment will be made for proof rolling.

AGGREGATE BASE COURSE

Material for aggregate base course shall conform to the requirements for Limestone Ledge Rock Base Course in Section 882 of the Standard Specifications. The aggregate supplier shall submit material sampling and testing results obtained during the year the material will be placed.

A PRE-PAVING MEETING

The Contractor shall schedule and coordinate a pre-paving meeting with the paving Superintendent, Job Foreman, Engineer, and the Owner's Testing personnel prior to initiating paving activities. It's the Paving Superintendent's responsibility to review paving requirements including but not limited to anticipated weather conditions, truck schedules, delivery schedules, paver speed set for deliveries, actions to be taken in the event of paving interruptions, maximum paver stoppage permitted, joint requirements, subcontractor scheduling, traffic control, asphalt surface raking requirements, etc.

ASPHALT CONCRETE PAVEMENT

Asphalt shall comply with the Standard Specifications.

Asphalt Concrete shall be Class E, see details. Mix design submittals are required. Mix design shall be based on material samples obtained during the year the material will be placed. Asphalt Binder shall be PG 64-22.

Recycled Asphalt Product (RAP) may be used in the asphalt composite at a ratio of up to but not exceeding 15% by weight.

Tack coat shall be applied between lifts of pavement if the lower lift becomes cold or dirty.

PAVEMENT MARKINGS

All materials shall meet Section 633 of the standard specifications to be applied per manufacture's recommendations.

All pavement markings for the striping and handicap symbols shall be completed using pavement marking paint. All striping for the parking lot shall be 4" wide yellow paint.

Handicap symbols shall be painted per ADA, Local code, and shall include a blue background and white symbol.

Handicap access aisles and/or painted parking lot islands shall be painted with 4" wide stripes 2.0' on center.

The perpendicular parking stall stripes shall not vary by more than 1.0 degree from being perpendicular to the center stripe or curb line. Variations of more than 1.0 degree will require obliteration and restriping.

The new pavement shall be allowed to age a minimum of 7 days prior to painting of pavement markings. Aging time less than this requires approval of the Engineer. Pavements shall be cleaned prior to painting. Damage to existing or new pavement markings caused by Contractor equipment and operations will require repainting of those damaged areas at no extra cost to the Owner.

Paint shall be applied at a rate of 16.9 gallons/mile for a 4" wide stripe.

REVEGETATION

All existing turfed areas disturbed by the construction shall be revegetated. See Landscaping Plans for seed mix and planting details. No additional payment shall be made for areas disturbed outside those shown on plans.

Existing Topography and Survey Legend

Table listing symbols for Survey Control Point, Benchmark, Found Survey Monument, Set Survey Monument, Spot Elevation, Borehole, Monitor Well, Sanitary Sewer Line, Cleanout, Water Line, Post Indicator Valve, Curbstop, Gate Valve, Butterfly Valve, Fire Hydrant, Well, Meter Pit, Irrigation Control Valve, Sprinkler Head, Fiber Optic Line, Telephone Line, Telephone Manhole, Communications Riser, Overhead Utility Line, Underground Power Line, Power Pole, Power Pole Anchor, Traffic Signal Pole, Light Pole, Electrical Manhole, Electrical Junction Box, Electric Meter, Gas Line, Gas Meter, Gas Valve, Down Spout, Roof Drain, Sign, Delineator Post, Mailbox, Tree (deciduous) Plus Trunk Diameter, Tree (coniferous) Plus Trunk Diameter, Stump Plus Trunk Diameter, Bush, Bush (deciduous), Bush (evergreen), Edge Of Trees, Wire Fence, Wood Fence, Chain Link Fence, Guardrail, Curb & Gutter, Detectable Warning Panel, Riprap, Contour (1'), Contour (5'), Property/R.O.W. Line, Easment Line, Section Line, 1/2 Section Line, 1/4 Section Line, Section R.O.W. Line.

Note Regarding Existing Utilities

Unless otherwise noted, utility locations shown are based on field marked locations provided by South Dakota One Call, and where possible, field measurements. Existence and location of actual utilities may vary from that shown. Contractor must verify location of all utilities before excavation.

Proposed Surfacing Legend

Table listing symbols for Asphalt Pavement, Asphalt Driveway, PCC Pavement, Concrete Driveway, Gravel Surfacing, Concrete Sidewalk, Reinforced Concrete Sidewalk, Sidewalk Ramp with Detectable Warning Panel, Concrete Curb and Gutter, Concrete Curb and Gutter (Tilted), Concrete Fillet, Concrete Fillet (Tilted).

Proposed Utilities Legend

Table listing symbols for Fire Hydrant, Gate Valve and Box, Curb Stop, Post Indicator Valve (PIV), Water Meter, Water Main Fittings, Cap or Plug, Tracer Wire Box or Tracer Wire and Cathodic Test Station Boxes, Water Main, Sanitary Sewer Cleanout, Sanitary Sewer Manhole, Electric Meter, Gas Line, Gas Meter, Gas Valve, Storm Sewer Inlet (Sizes and Types Vary), Riprap, Storm Sewer Pipe or Culvert, Storm Sewer Pipe End Sections, Roof Drain Pipe, Foundation Drain Pipe.

Proposed Site Legend

Table listing symbols for Sign, Chainlink Fence, Barbedwire Fence, Ornamental Fence, Common Utility Trench, Underground Power Line, Gas Main, Storm Sewer Pipe or Culvert, Parking Count, Existing Parking Count.

Demolition and Removals Legend

Table listing symbols for Asphalt Pavement Removal, Concrete Pavement Removal, Gravel Surfacing Removal, Landscape Removal Area, Curb and Gutter Removal, Gas Line Removal, Water Line Removal, Sanitary Sewer Line Removal, Power Line Removal, Fiber Optic Line Removal, Telephone Line Removal, Storm Sewer Pipe Removal, Utility Abandonment In-Place.

Grading Callout Legend

Table listing symbols for Existing Major Contour, Existing Minor Contour, Finish Grade Major Contour (5'), Finish Grade Minor Contour (1').

TP = Top of Pavement
Lip = Gutter Lip
TC = Top of Curb
FC = Fillet Corner
TSW = Top of Sidewalk
TEW = Top of Thickened Edge Sidewalk
FL = Flow Line
FG = Finish Grade
EG = Existing Grade
TW = Top of Wall
BW = Finish Grade at Bottom of Wall
BB = Bottom Block Wall Elevation

Drainage Direction Arrow

Sidewalk Slope in All Directions Shall Not Exceed 1.5%

FMG ENGINEERING logo and contact information: 3700 Sturgis Road, Rapid City, SD 57702, 605.342.4105 • fmgengineering.com



Table with project details: File Number: 231370.00, Location: E 1/2 Section 14 T5N, R3E, B1M, Surveyed By: EK, Date: December 2023, Designed By: JLH, Drawn By: MDS, Checked By: JLH.

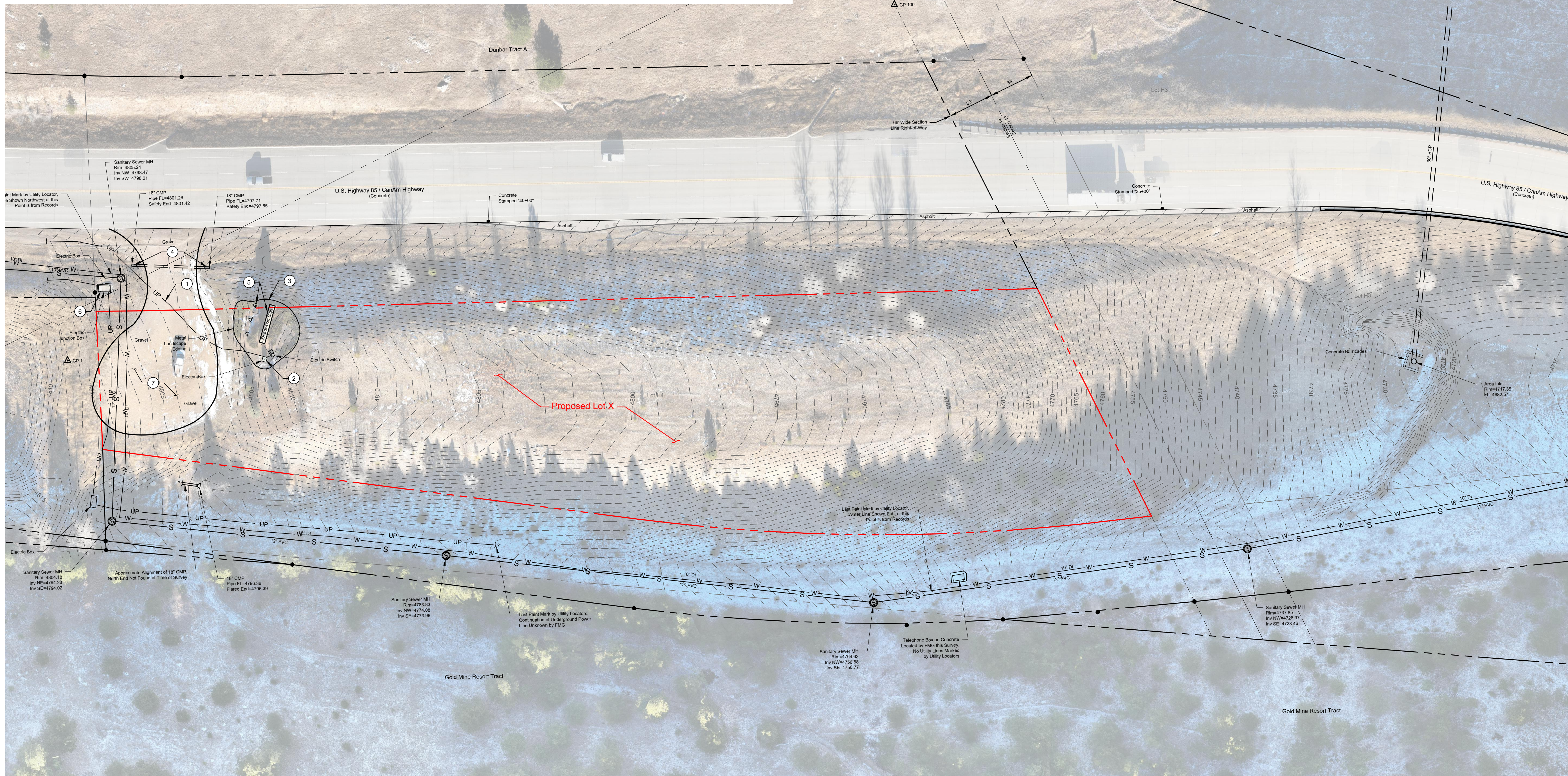
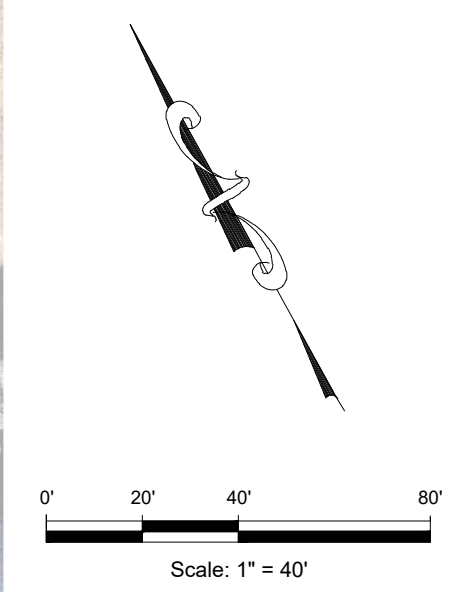
City of Deadwood, Deadwood Hill Trailhead Parking Lot, Deadwood, South Dakota

Revision / Date

Sheet Name: General Notes & Legends

Sheet Number: C2

Removal Callouts	
Callout No.	Description
1	Abandon Existing Power in Place; See Electrical for Proposed Power Relocation
2	Relocate Existing Electrical Switch and Transformer, Coordinate with Black Hills Energy. See Electrical Plans.
3	Remove Existing Metal Landscape Edging
4	Remove Existing CMP Safety Ends
5	Do Not Disturb Existing Deadwood Sign or Lights
6	Do Not Disturb Existing Electrical Boxes or Sanitary Manhole
7	Remove Existing Gravel Surfacing as Necessary



**Control Point Table**

Point Number	Eastings	Northings	Point Elevation	Description
1	998405.0410'	226940.3990'	4811.90	5/8" Rebar
2	999567.9120'	226301.9190'	4713.43	5/8" Rebar
100	999068.4430'	226874.0220'	4773.70	SDDOT Control Point

**Basis of Bearings**  
The coordinates, bearings and distances shown are based on the South Dakota State Plane Coordinate System-North Zone, NAD83(2011), US Feet. All Distances are Grid.

NAVD88, Geoid G2018u0.  
Basis of coordinate system and elevations: GNSS static observation and OPUS Post Processing Solution.

**Note Regarding Aerial Photography**  
Aerial photography from FMG drone flown on 12/15/23.

**Note Regarding Utilities**  
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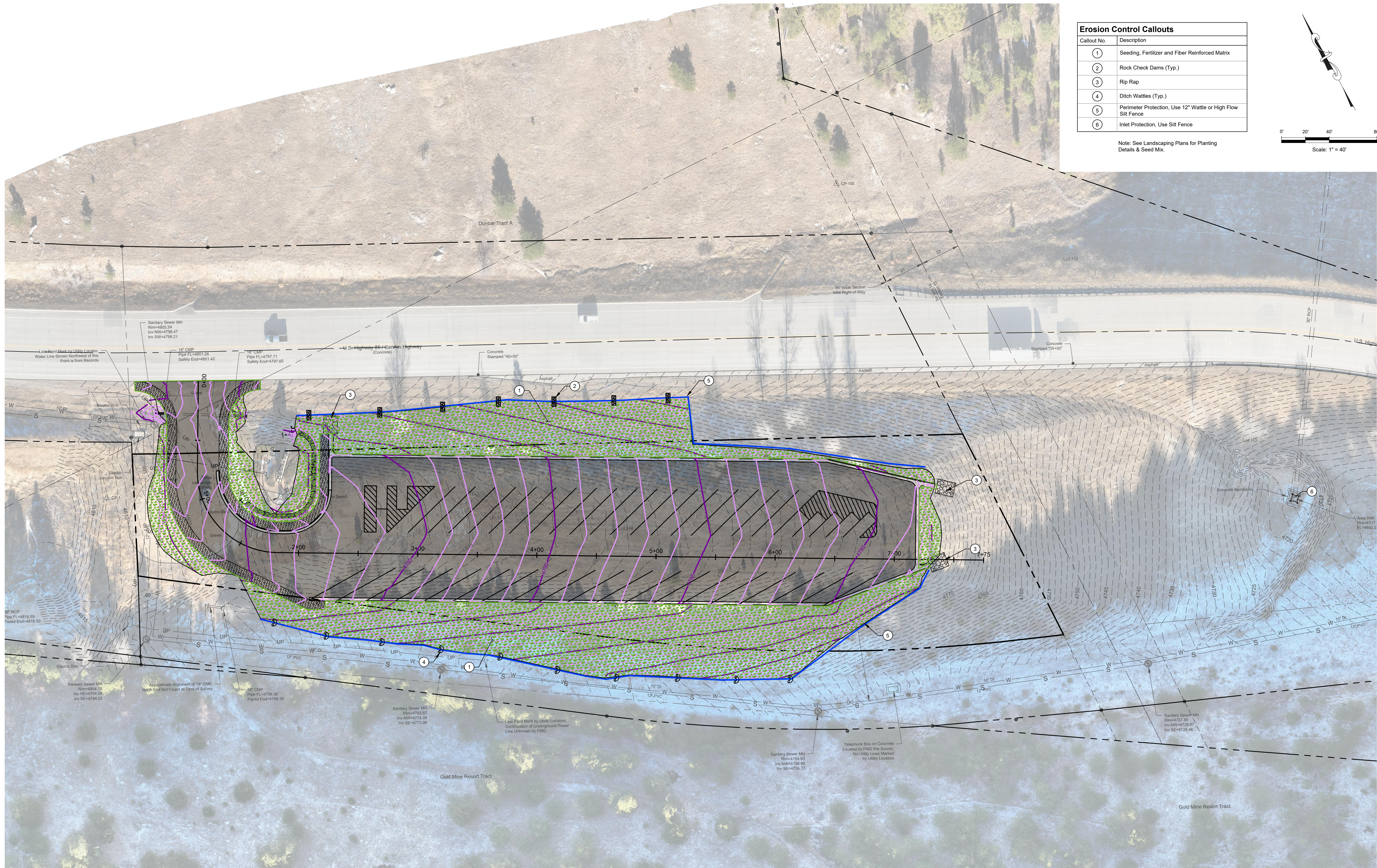
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Location:	E 1/2 Section 14 T5N, R3E, BHM
Surveyed By:	EK
Date:	December 2023
Designed By:	JLH
Drawn By:	MDS
Checked By:	JLH

**City of Deadwood**  
Deadwood Hill Trailhead Parking Lot  
Deadwood, South Dakota

Revision / Date	
Sheet Name:	Existing Conditions & Removals
Sheet Number:	C3

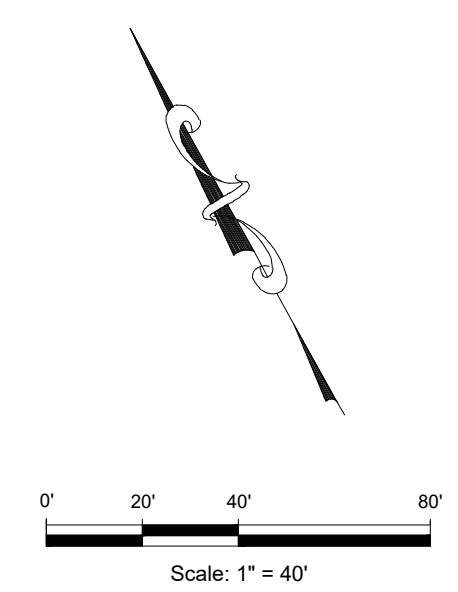
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2:2031370.00 Deadwood-New Parking Lots Civil/CAD/Plan Sheets 231370 Erosion Control Plan Set - Thursday, July 18, 2024 9:08:04 AM



Erosion Control Callouts	
Callout No.	Description
①	Seeding, Fertilizer and Fiber Reinforced Matrix
②	Rock Check Dams (Typ.)
③	Rip Rap
④	Ditch Watties (Typ.)
⑤	Perimeter Protection, Use 12" Wattle or High Flow Silt Fence
⑥	Inlet Protection, Use Silt Fence

Note: See Landscaping Plans for Planting Details & Seed Mix.



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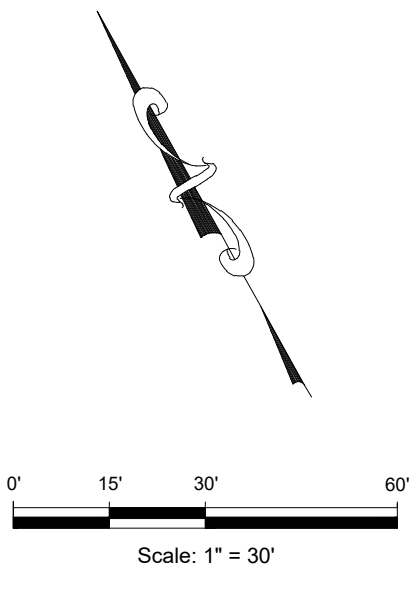


File Number:	231370.00
Location:	E 1/2 Section 14 T5N, R3E, BHM
Surveyed By:	EK
Date:	December 2023
Designed By:	JLH
Drawn By:	MDS
Checked By:	JLH

**City of Deadwood**  
 Deadwood Hill Trailhead Parking Lot  
 Deadwood, South Dakota

Revision / Date	
Sheet Name:	Erosion Control
Sheet Number:	<b>C4</b>

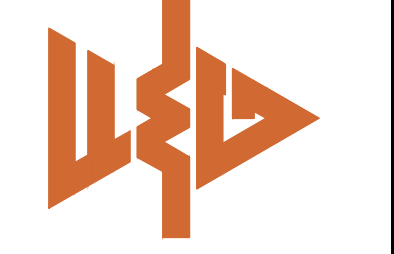
July 2024



Callout No.	Description
1	Extend 18" CMP 5' Plus Flared End (Safety End) FL = 4801.90
2	Extend 18" CMP 10' Plus Flared End (Safety End) FL = 4797.28
3	Redi-Rock Retaining Wall (0' - 8' Wall Height)
4	Solar Parking Lot Lights (See Specifications)
5	Paint ADA Symbol
6	Paint 4" Wide Yellow Stripes in Islands and Stall Stripes (Typ.)
7	Type B Curb & Gutter
8	Type R Curb & Gutter
9	6" Gravel Surfacing for Shoulders (1" Agg Base)
10	Relocated Power Meter & Transformer. Install New Secondary Power Service to Lights; See Electrical
11	Class B Riprap, 16L x 12W x 3' Deep, with Separation Fabric
12	Valley Gutter; See Detail
13	4" Asphalt Pavement; See Detail
14	Trolley Stop Sign and Information Sign; See Details
15	Taper Curb Height to Zero in 1' Minimum
16	Stop Sign, R1-1
17	4" Pipe Bollard (Typ.)

2:231370.00 Deadwood Hill Trailhead New Parking Lot Civil/CAD/Plan Sheets 231370 Site Plan - Thursday, July 18, 2024 9:08:33 AM

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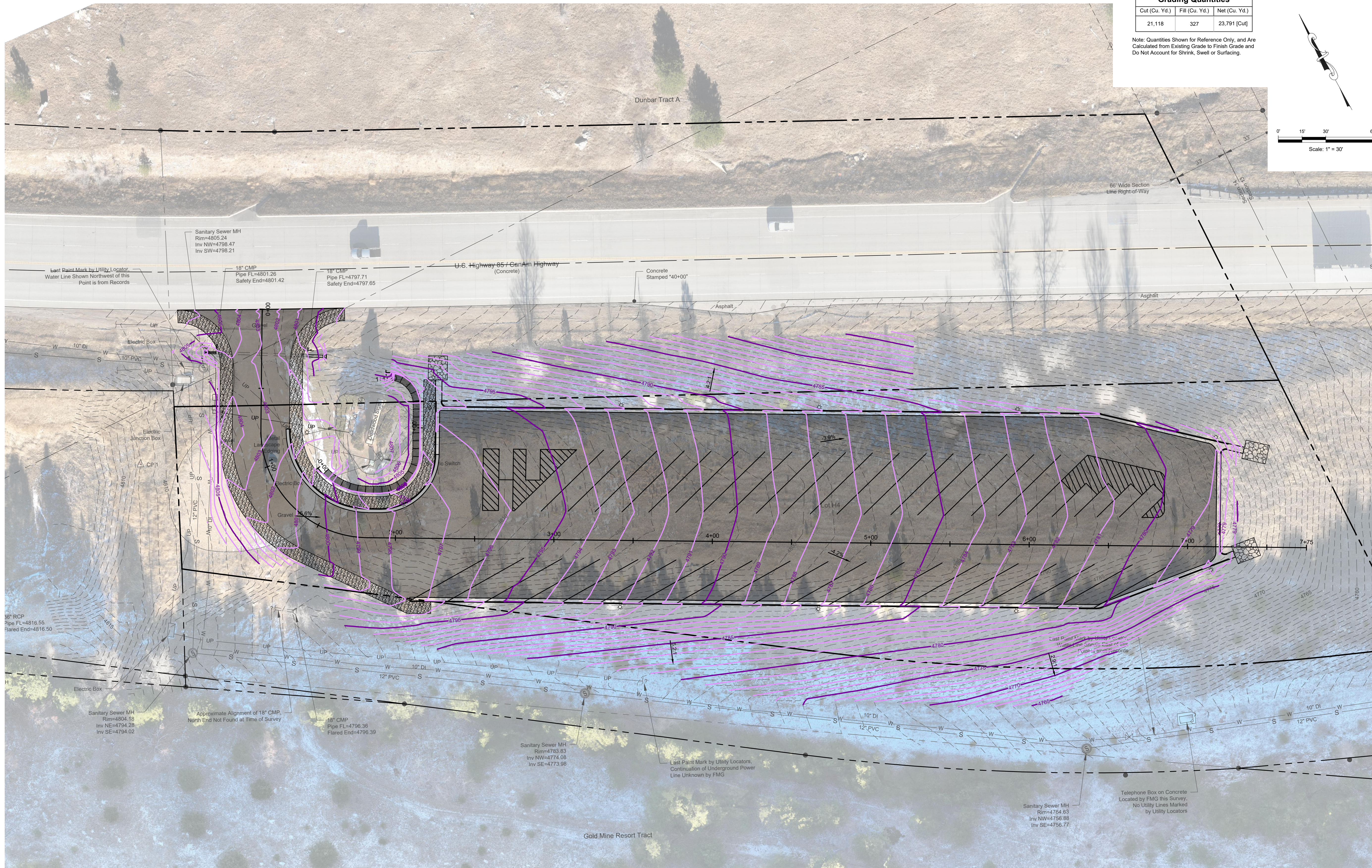


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Location:	E 1/2 Section 14 T5N, R3E, B1M
Surveyed By:	EK
Date:	December 2023
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Drawn By:	MDS
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July 2024

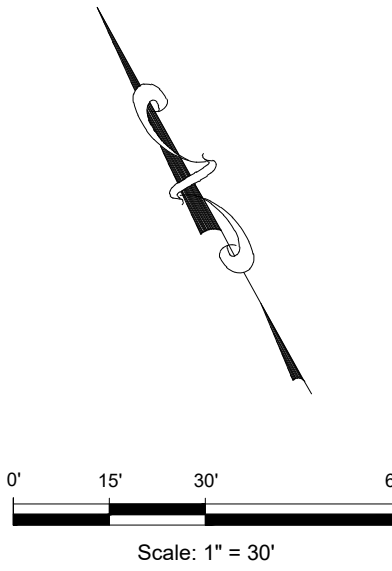
**City of Deadwood**  
 Deadwood Hill Trailhead Parking Lot  
 Deadwood, South Dakota

Revision / Date	
Sheet Name:	Site Plan
Sheet Number:	C5



Grading Quantities		
Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
21,118	327	23,791 [Cut]

Note: Quantities Shown for Reference Only, and Are Calculated from Existing Grade to Finish Grade and Do Not Account for Shrink, Swell or Surfacing.



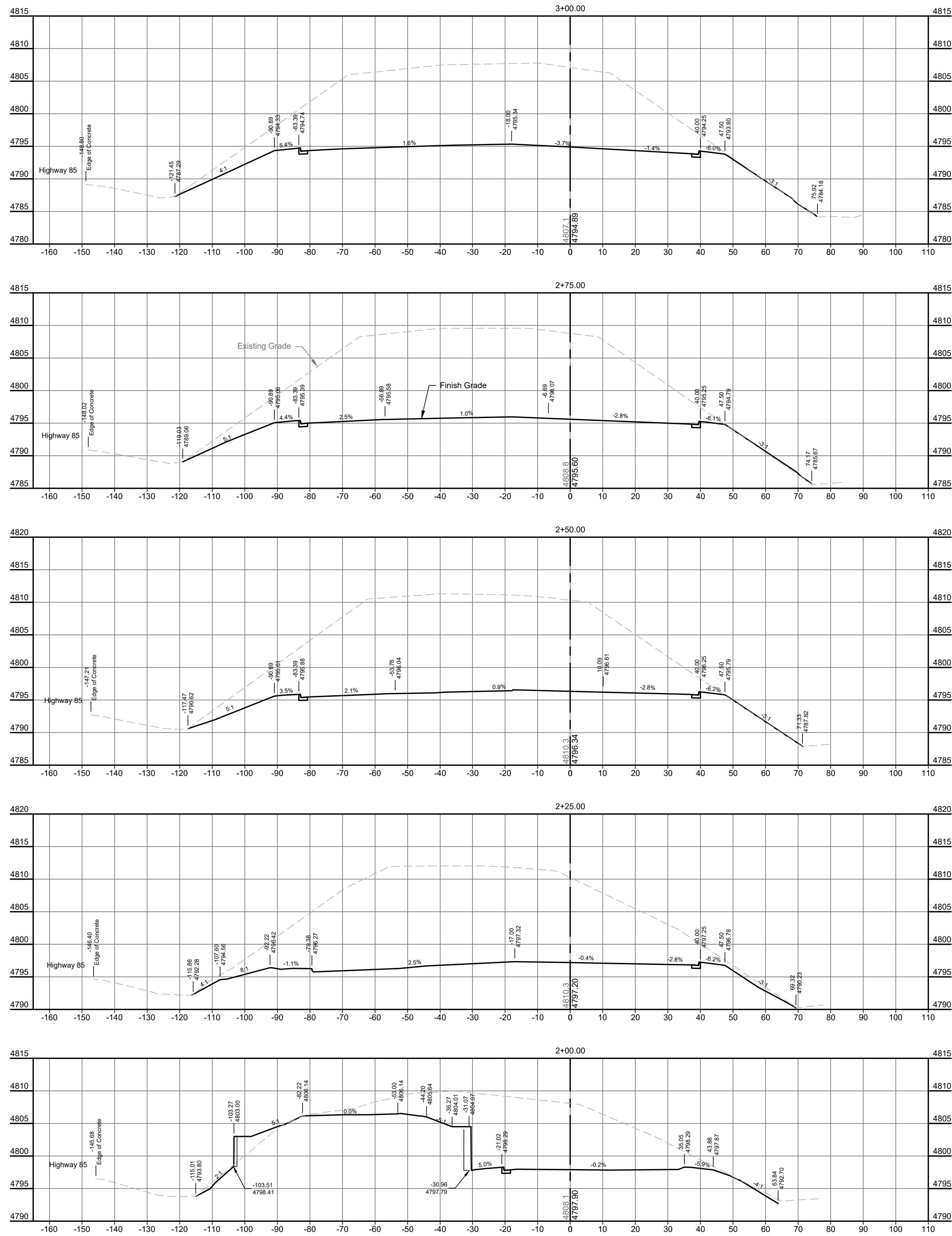
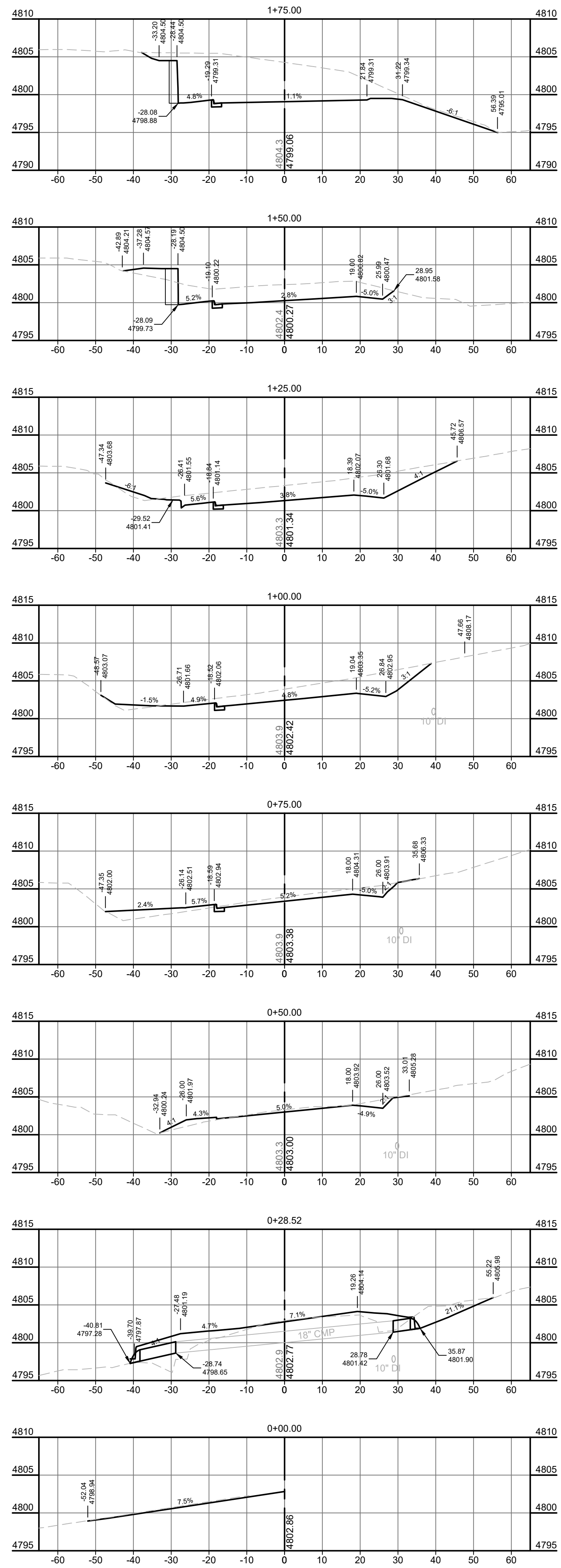
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Location:	E 1/2 Section 14 T5N, R3E, BHM
Surveyed By:	EK
Date:	December 2023
Designed By:	JLH
Drawn By:	MDS
Checked By:	JLH

July 2024

**City of Deadwood**  
**Deadwood Hill Trailhead Parking Lot**  
**Deadwood, South Dakota**

Revision / Date	
Sheet Name:	Grading Plan
Sheet Number:	<b>C6</b>

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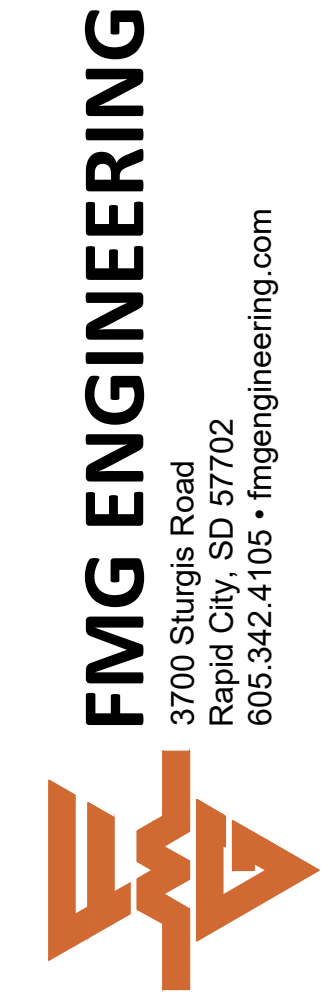
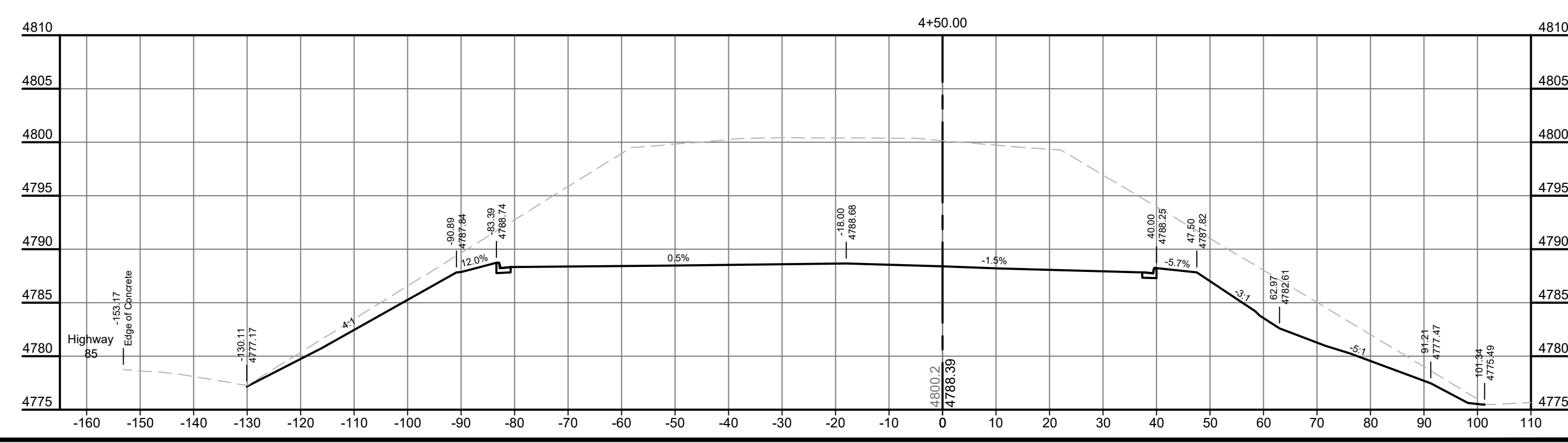
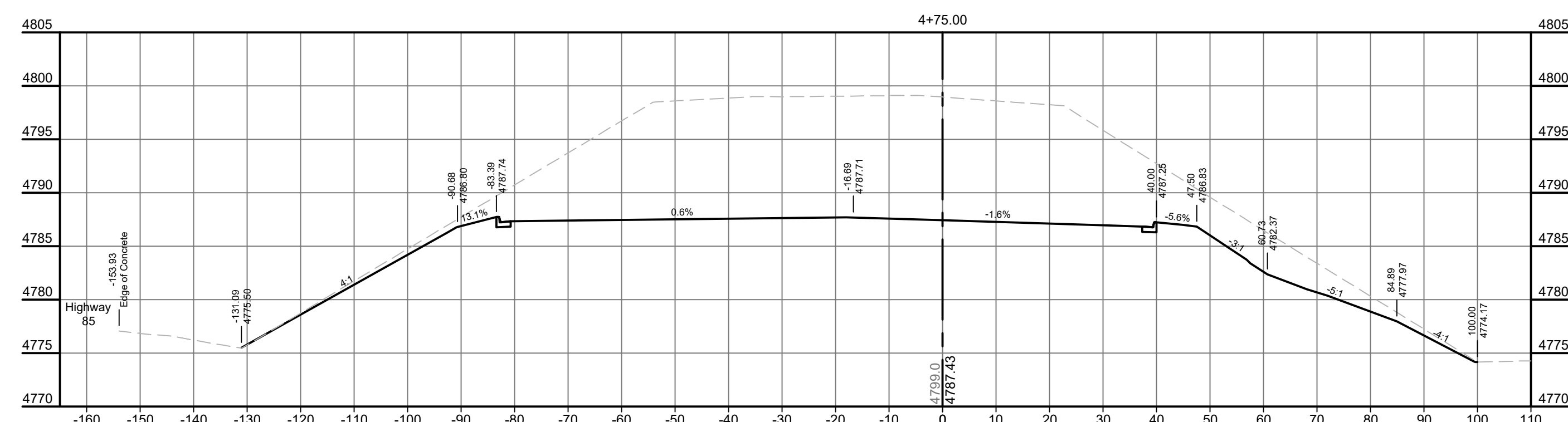
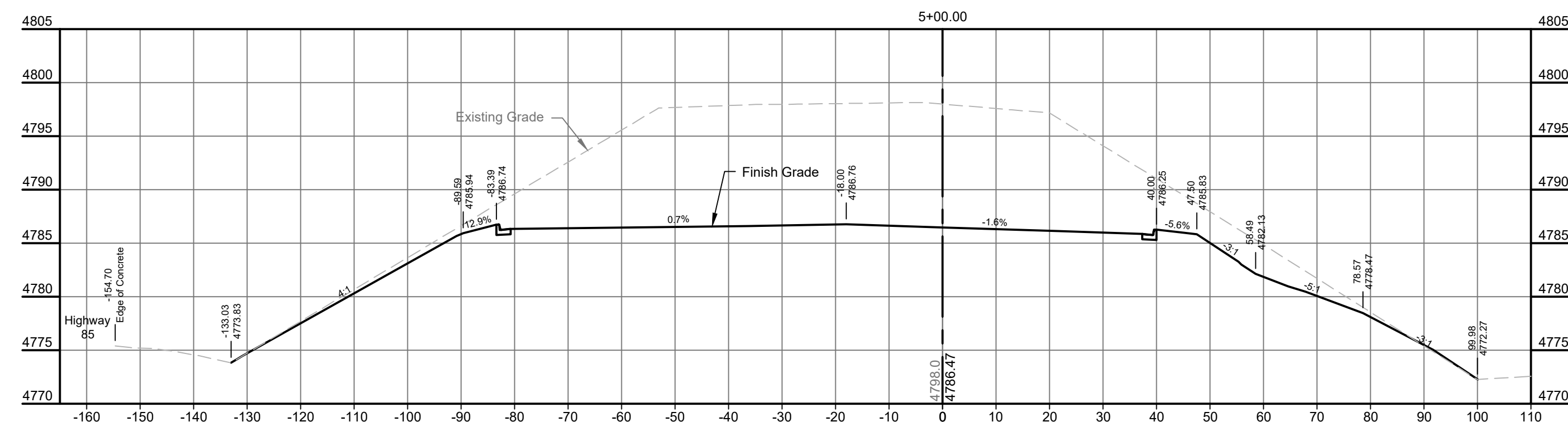
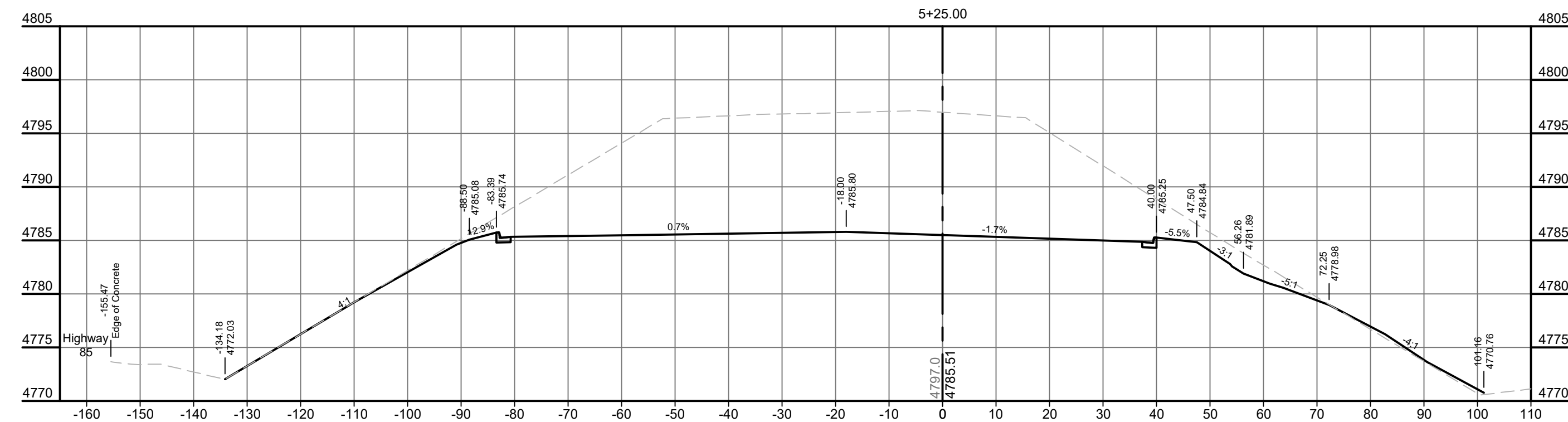
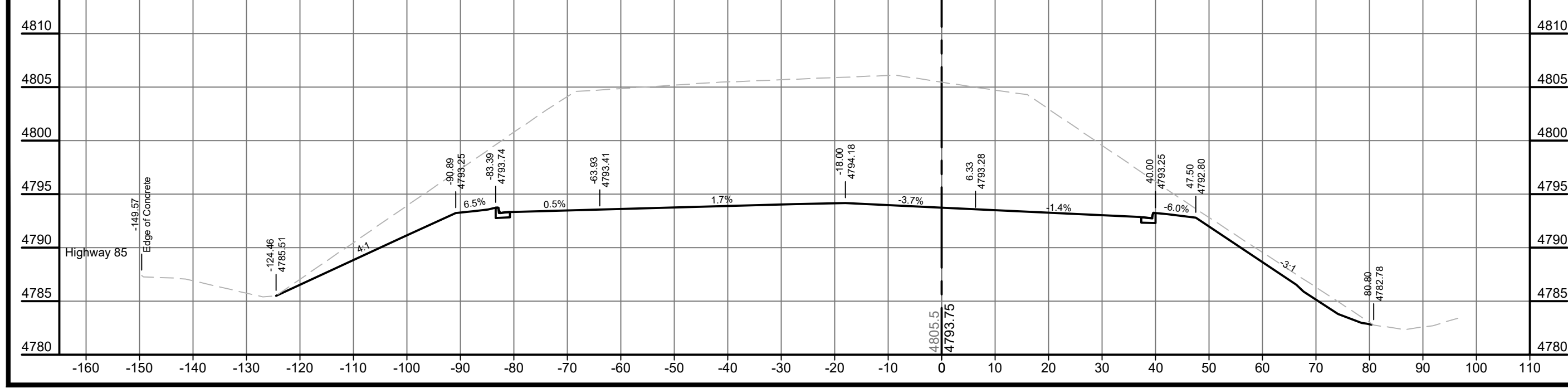
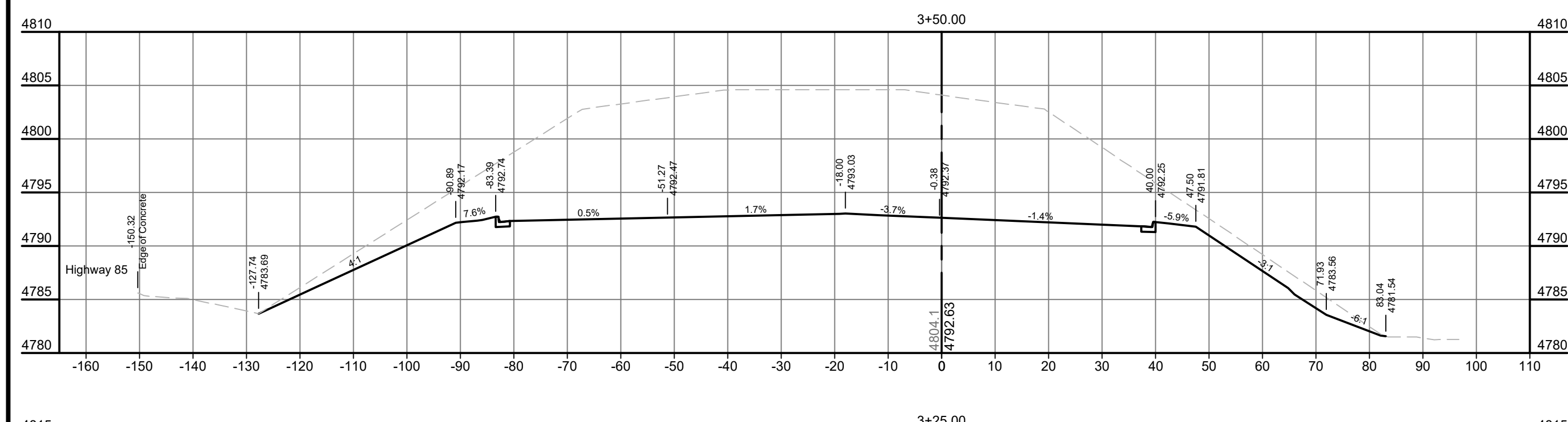
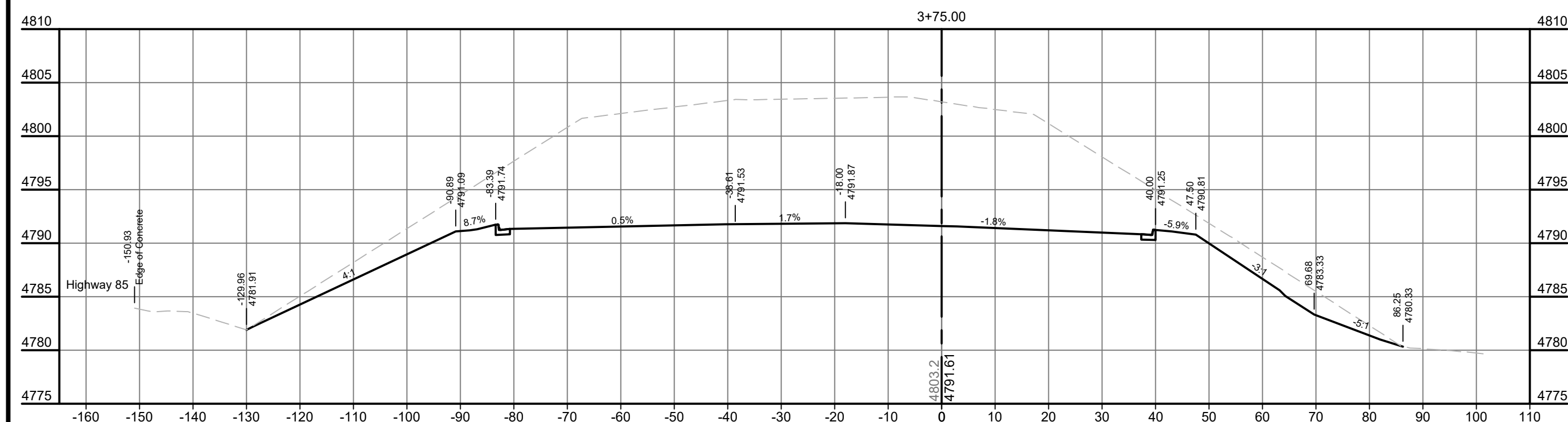
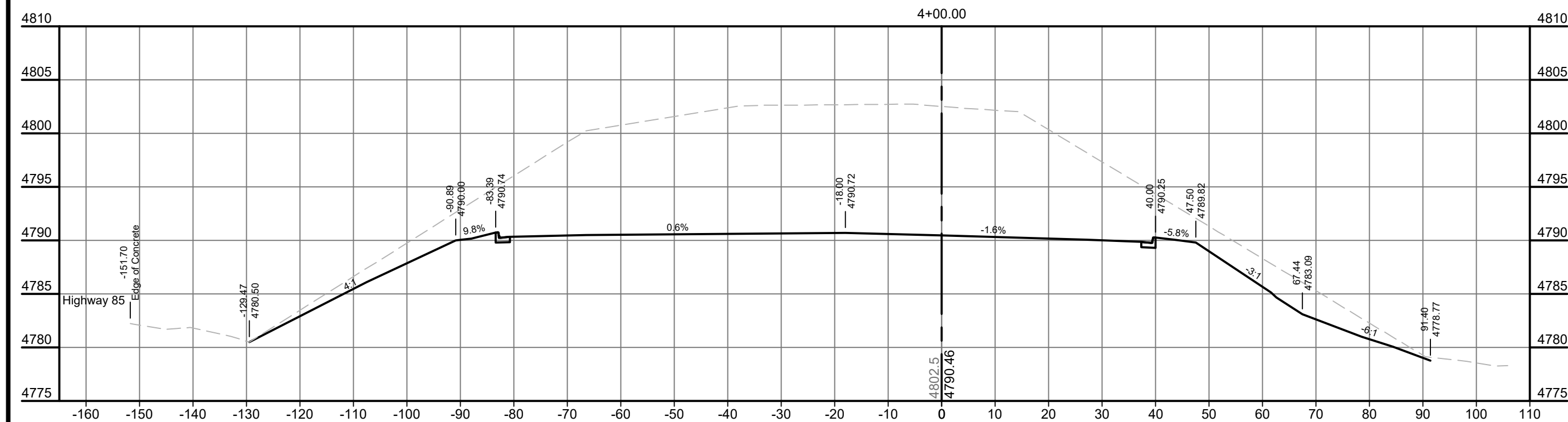
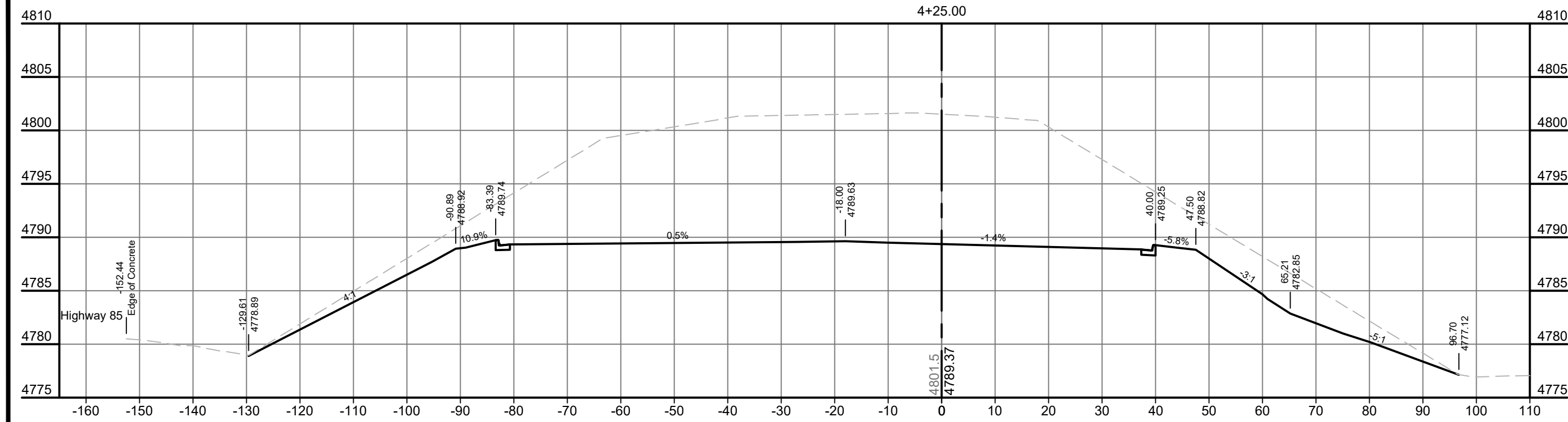
File Number:	231370.00
Location:	E 1/2 Section 14 T5N, R3E, BHM
Surveyed By:	EK
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Designed By:	JLH
Drawn By:	MDS
Checked By:	JLH

City of Deadwood  
 Deadwood Hill Trailhead Parking Lot  
 Deadwood, South Dakota

Revision / Date	
Sheet Name:	Cross Sections
Sheet Number:	C7

July 2024

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File Number:  
231370.00

Location:  
E 1/2 Section 14  
T5N, R3E, BHM

Surveyed By: EK  
Date: December 2023

Designed By: JLH  
Drawn By: MDS  
Checked By: JLH

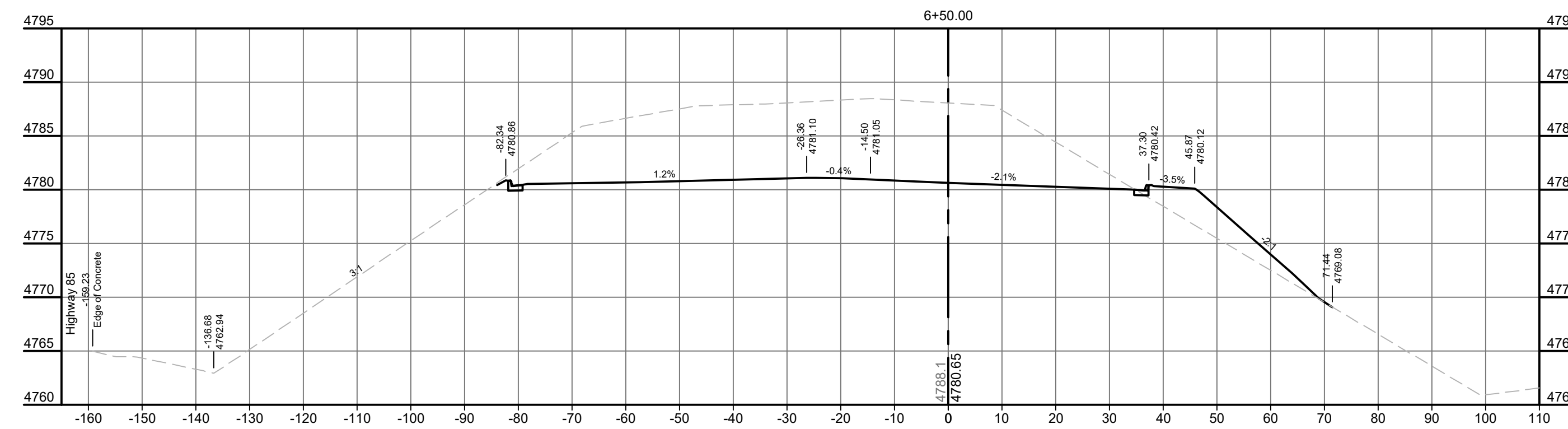
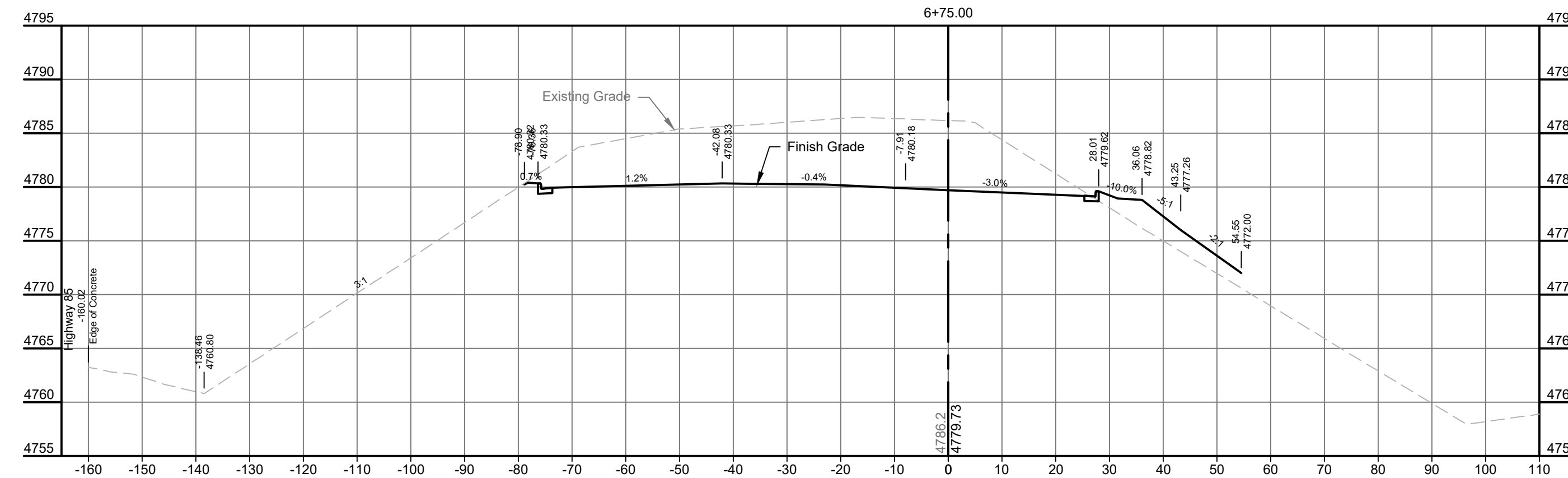
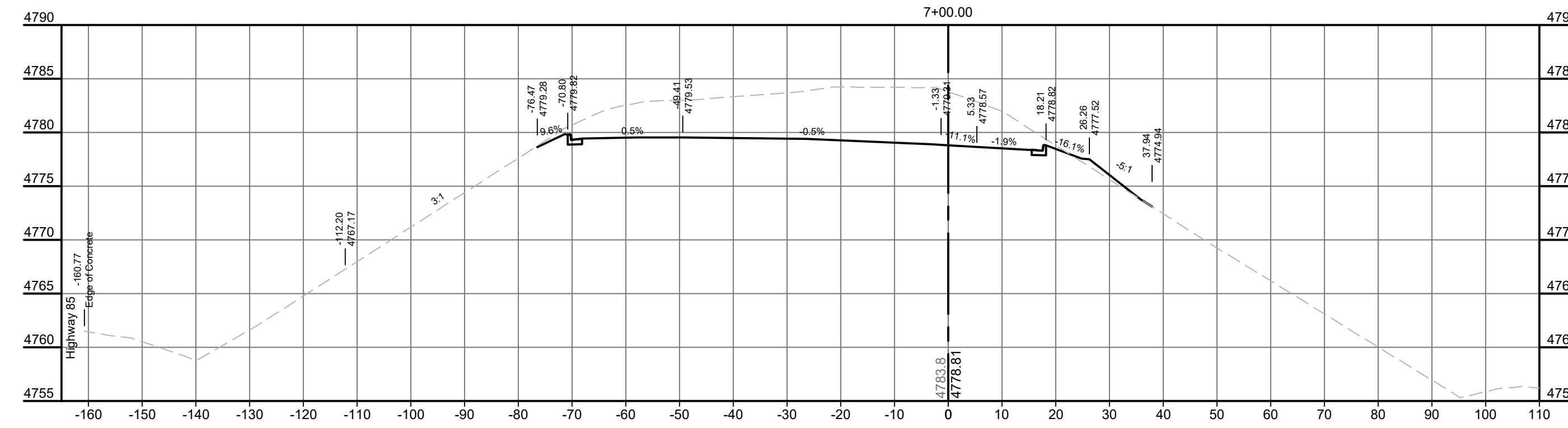
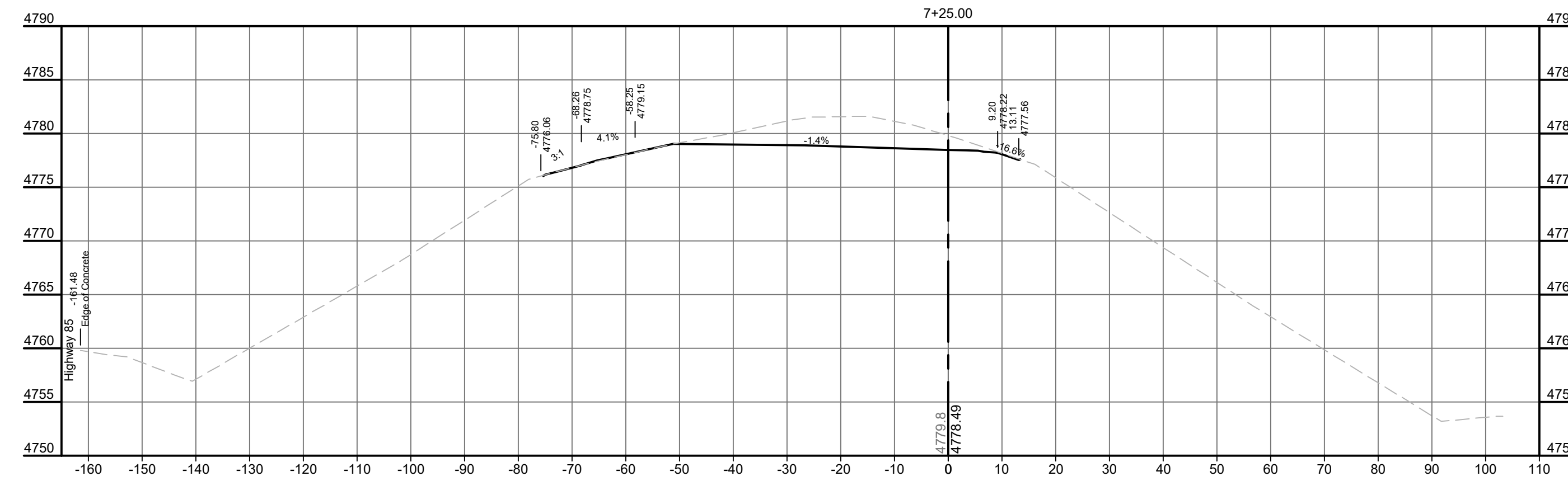
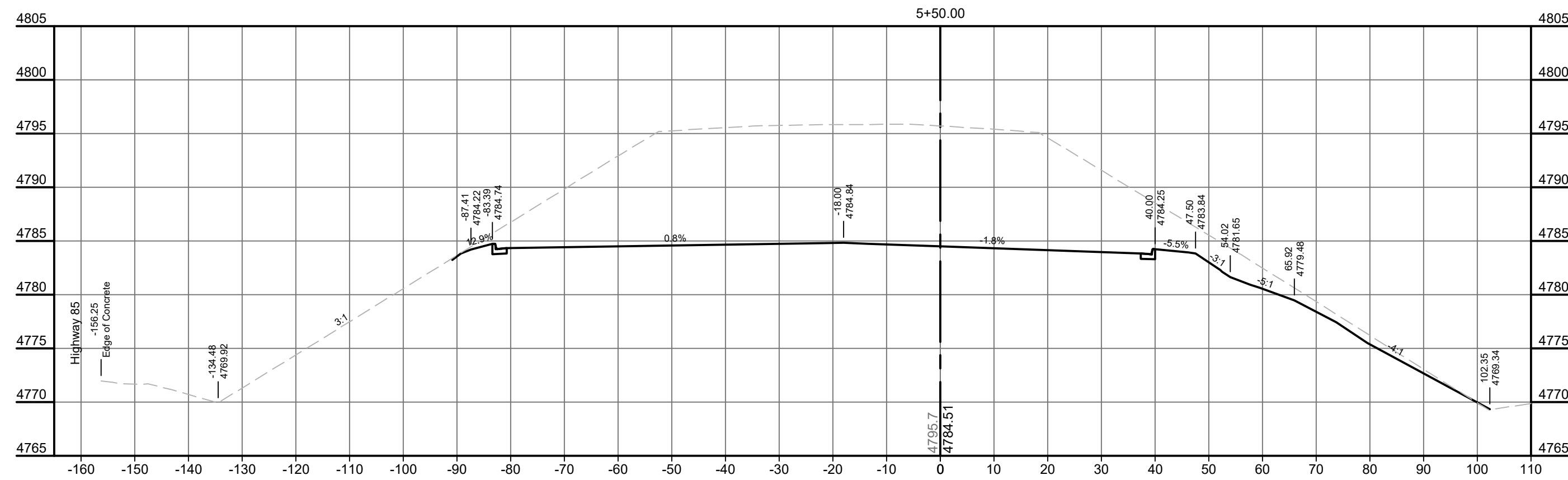
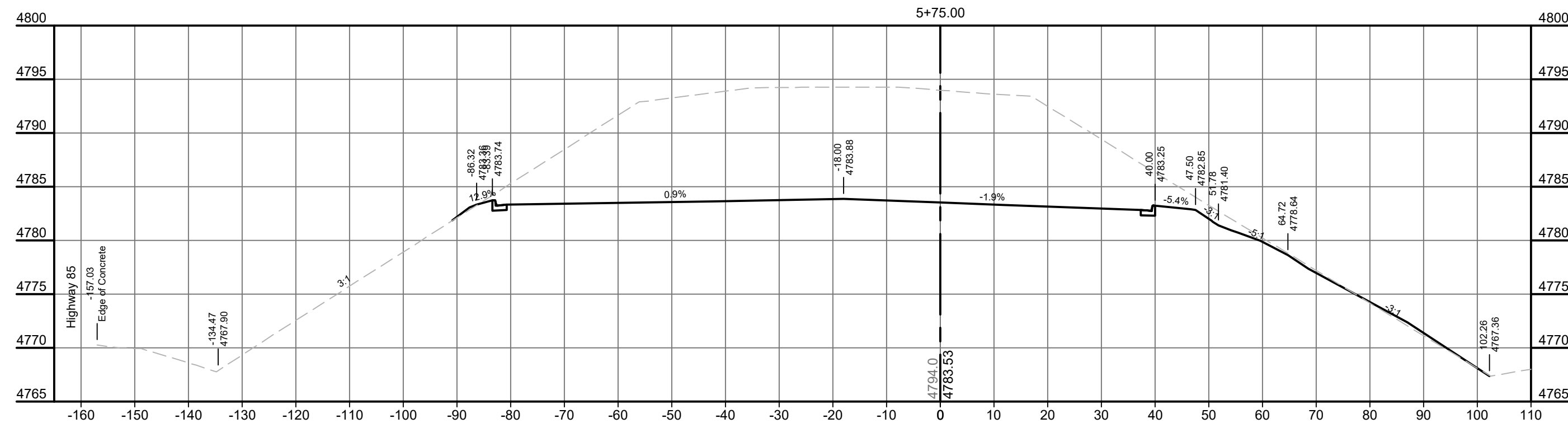
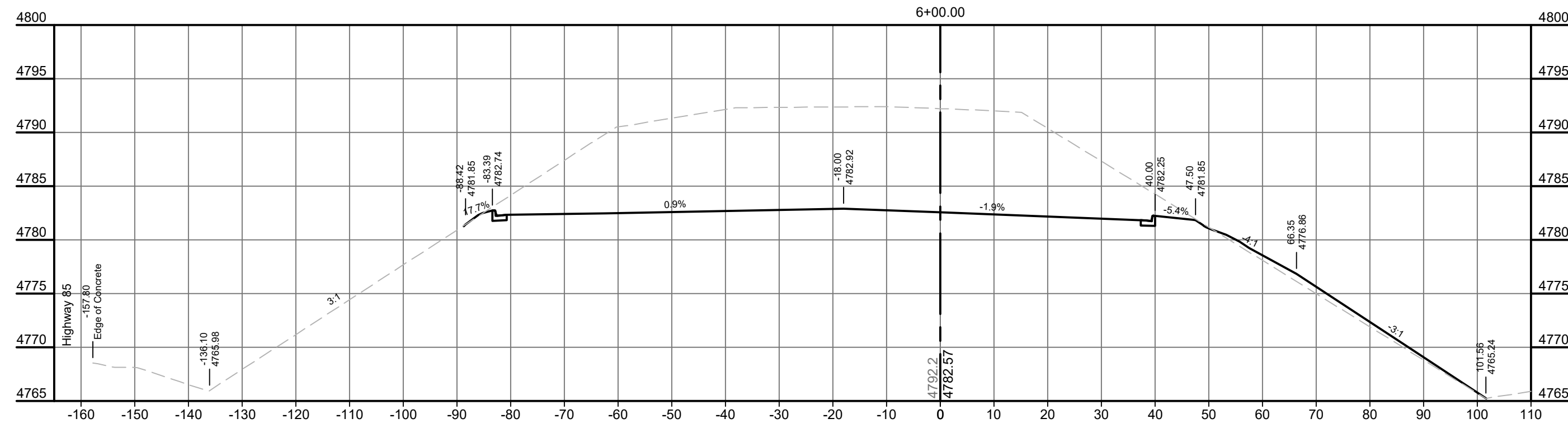
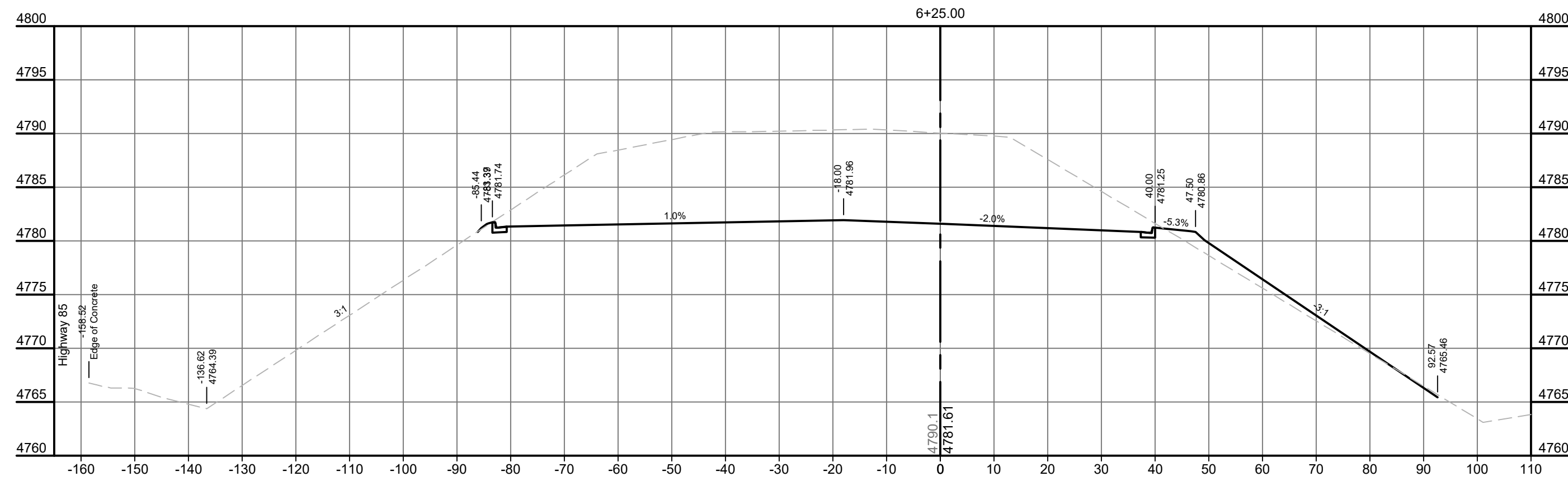
July 2024

**City of Deadwood  
Deadwood Hill Trailhead Parking Lot  
Deadwood, South Dakota**

Revision / Date
Sheet Name:
Cross Sections
Sheet Number: <b>C8</b>



2:23:37.00 Deadwood New Parking Lots Civil/CAD/Plan Sheets 231370 Grading Plan.dwg - CD Cross Sections - Thursday, July 18, 2024 9:08:51 AM

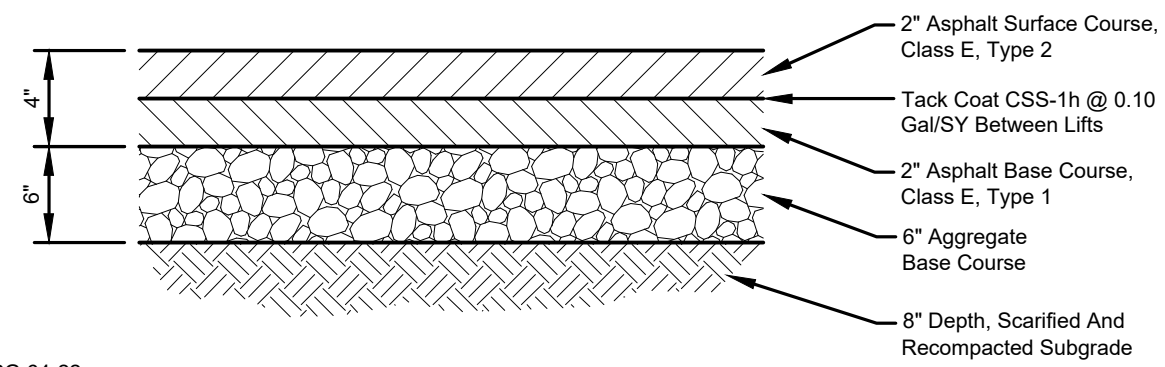


File Number:  
231370.00  
Location:  
E 1/2 Section 14  
T5N, R3E, BHM  
Surveyed By: EK  
Date: December 2023  
Designed By: JLH  
Drawn By: MDS  
Checked By: JLH

July 2024

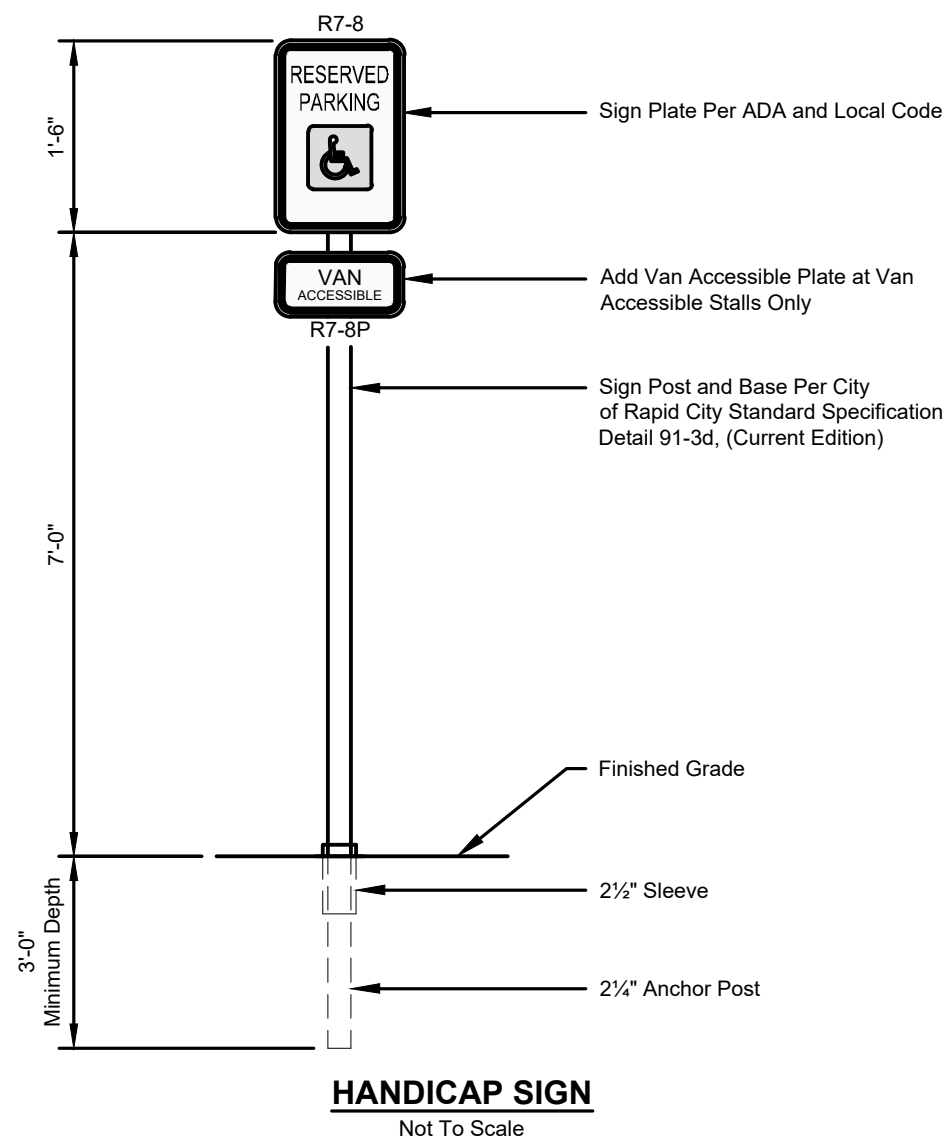
**City of Deadwood  
Deadwood Hill Trailhead Parking Lot  
Deadwood, South Dakota**

Revision / Date  
Sheet Name:  
Cross Sections  
Sheet Number:  
**C9**

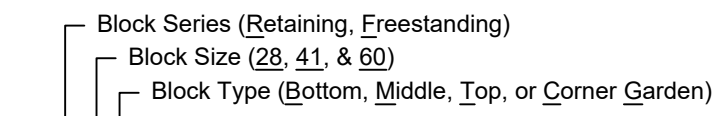


Asphalt Binder PG 64-22  
15% Maximum RAP Allowed

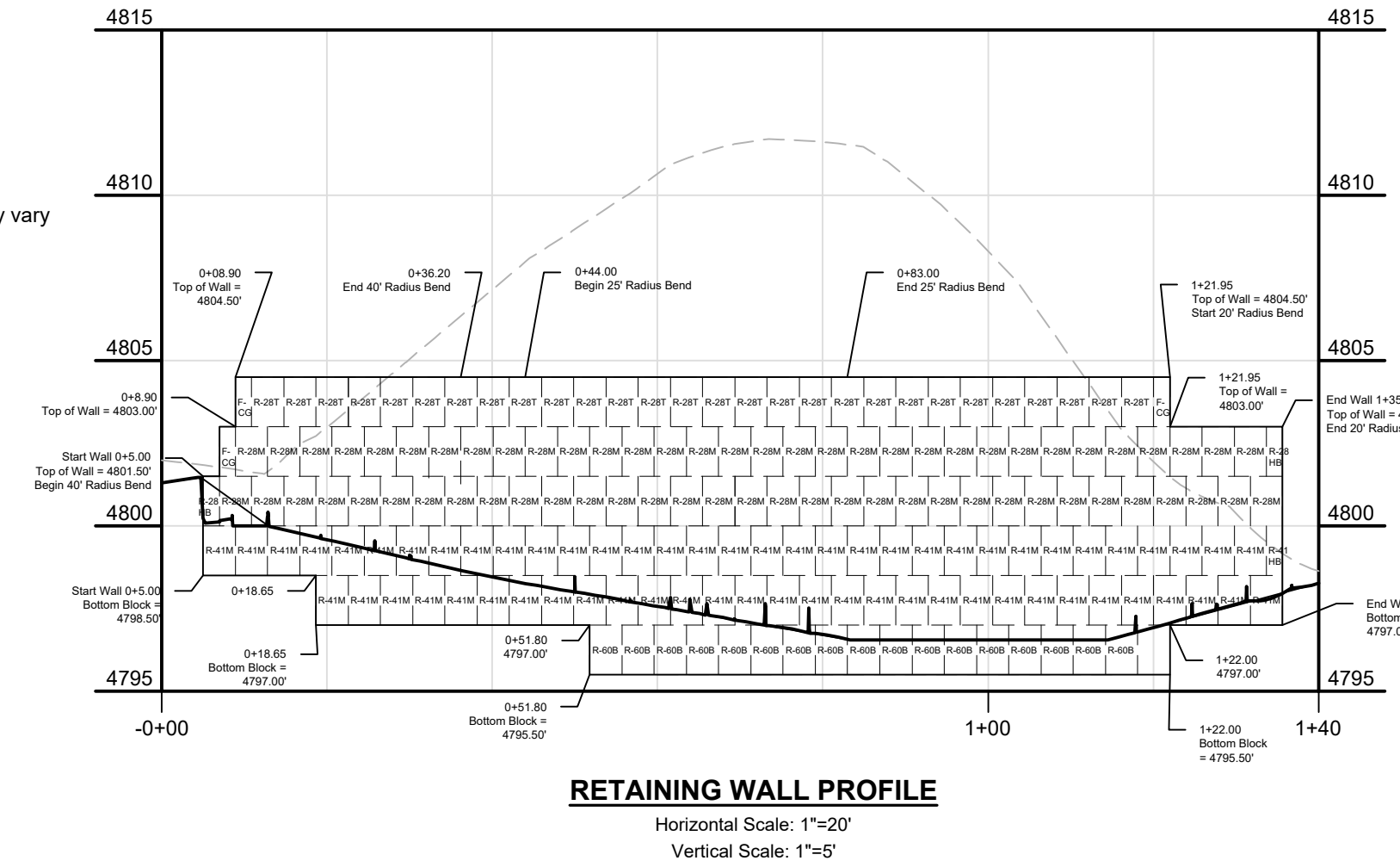
**4" ASPHALT PAVEMENT**  
Not To Scale



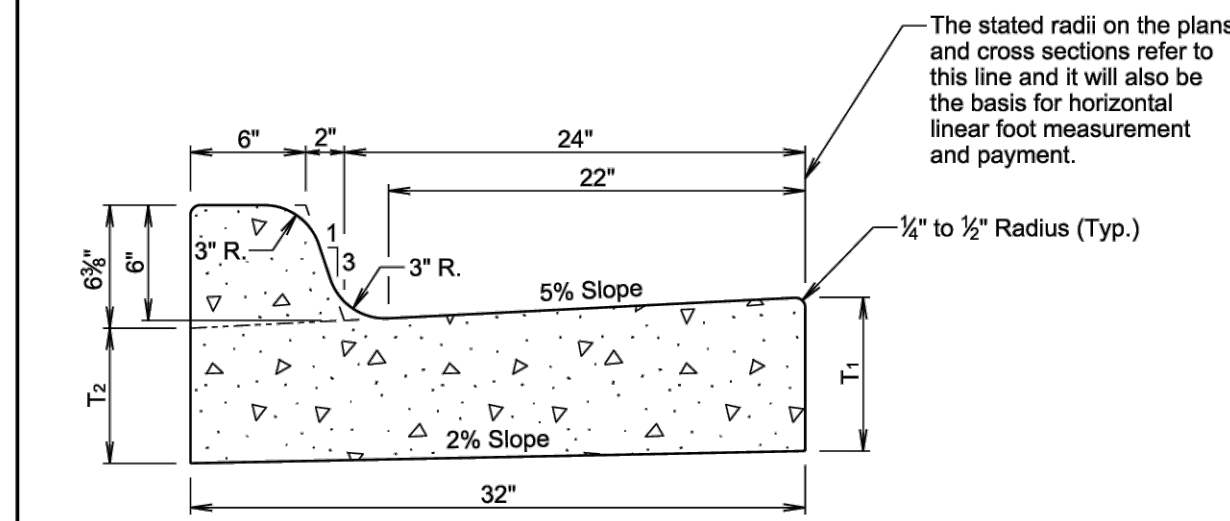
**HANDICAP SIGN**  
Not To Scale



Notes:  
1. Profiles shown for reference. Actual configurations required may vary based on field conditions.



**RETAINING WALL PROFILE**  
Horizontal Scale: 1"=20'  
Vertical Scale: 1"=5'



TYPE B CONCRETE CURB AND GUTTER					
Type	T <sub>1</sub> (Inches)	T <sub>2</sub> (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.	
B66	6	5 1/8	0.057	17.7	
B67	7	6 1/8	0.065	15.4	
B68	8	7 1/8	0.073	13.7	
B68.5	8.5	7 7/8	0.077	13.0	
B69	9	8 1/8	0.081	12.3	
B69.5	9.5	8 5/8	0.085	11.7	
B610	10	9 1/8	0.090	11.2	
B610.5	10.5	9 5/8	0.094	10.7	
B611	11	10 1/8	0.098	10.2	
B611.5	11.5	10 5/8	0.102	9.8	
B612	12	11 1/8	0.106	9.4	

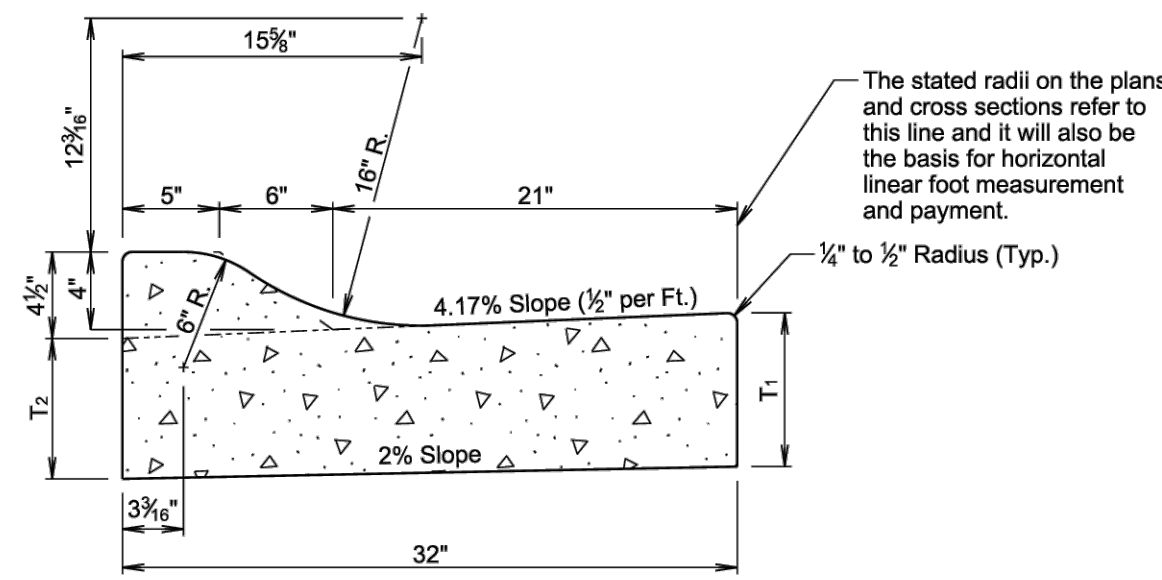
**GENERAL NOTES:**

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.  
See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

January 22, 2023  
PLATE NUMBER  
**650.01**  
Sheet 1 of 1

Published Date: 2024  
**S D D O T**

**TYPE B CONCRETE CURB AND GUTTER**



TYPE R CONCRETE CURB AND GUTTER					
Type	T <sub>1</sub> (Inches)	T <sub>2</sub> (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.	
R48	8	7 7/8	0.073	13.7	
R48.5	8.5	7 3/4	0.077	13.0	
R49	9	8 5/8	0.081	12.4	
R49.5	9.5	8 1/2	0.085	11.8	
R410	10	9 5/8	0.089	11.2	
R410.5	10.5	9 1/2	0.093	10.7	
R411	11	10 5/8	0.097	10.3	
R411.5	11.5	10 3/8	0.101	9.9	
R412	12	11 5/8	0.106	9.5	

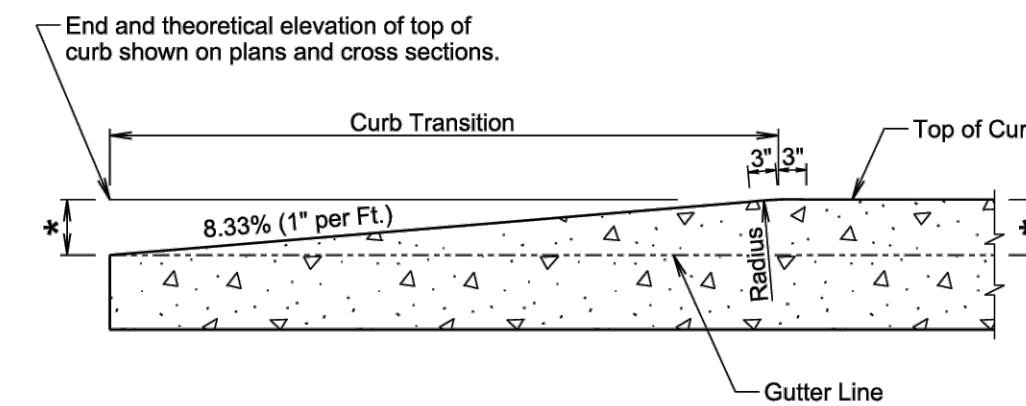
**GENERAL NOTES:**

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.  
See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

January 22, 2023  
PLATE NUMBER  
**650.33**  
Sheet 1 of 1

Published Date: 2024  
**S D D O T**

**TYPE R CONCRETE CURB AND GUTTER**



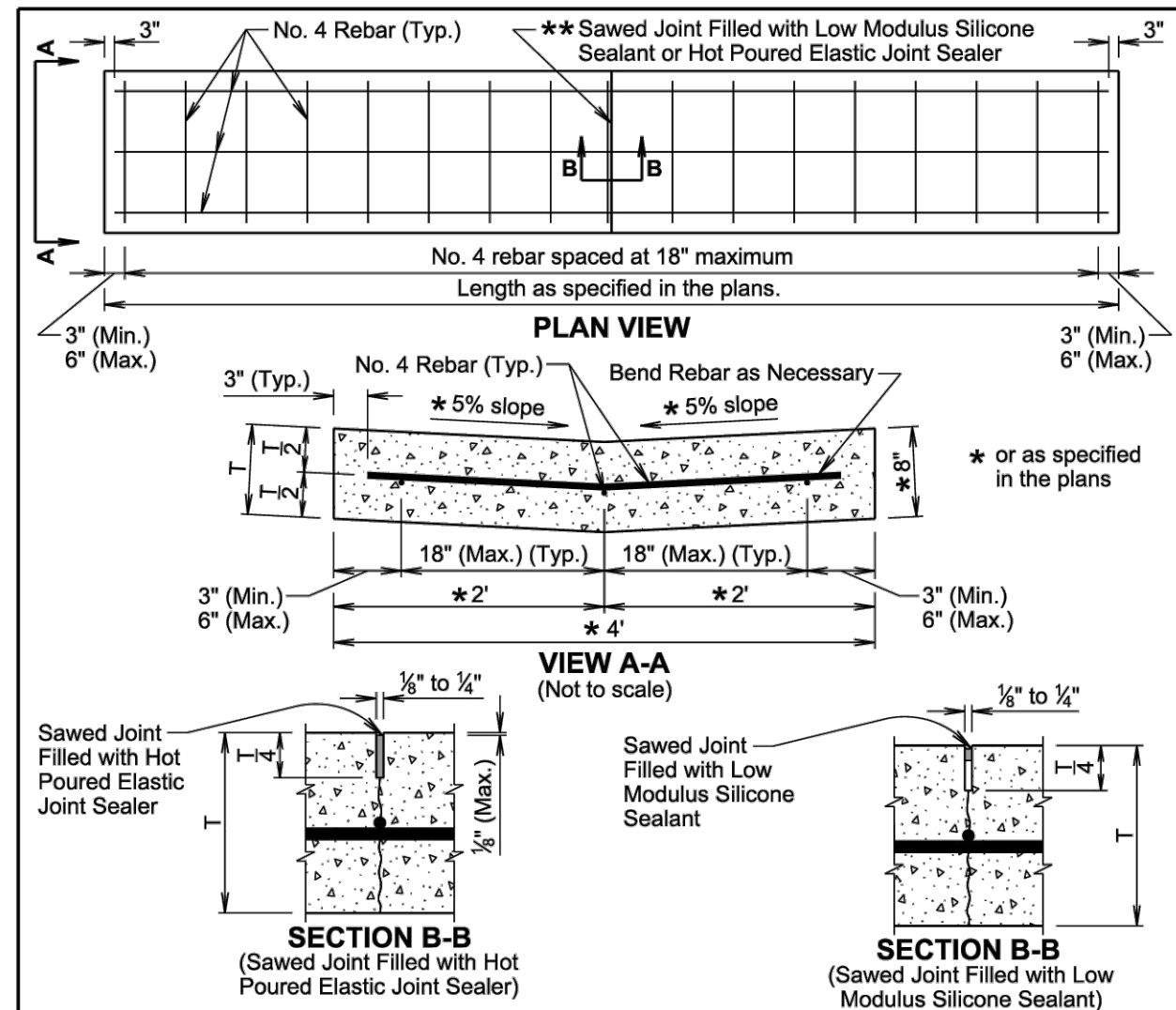
**LONGITUDINAL SECTION**  
(Concrete Curb Taper)

\* Height of Curb

December 23, 2019  
PLATE NUMBER  
**650.35**  
Sheet 1 of 1

Published Date: 2024  
**S D D O T**

**CONCRETE CURB TAPER**



**GENERAL NOTES:**

The concrete will comply with the specifications for class M6 concrete.  
The reinforcing steel will comply with the requirements of specification sections 480 and 1010.  
If a lap splice is provided the No. 4 rebar will be lapped a minimum of 12 inches.  
\*\* The sawed joints will be spaced at 12 feet; however, when the length of the valley gutter is 12 feet to 24 feet there will be a joint at the midpoint of the length. The saw cut to control cracking will be a minimum of 1/4 the thickness of the pavement.  
All hot poured elastic joint sealer material spilled on the surface of the concrete pavement will be removed as soon as the material has cooled. The extent of removal of material will be to the satisfaction of the Engineer. All costs for removal of the spilled joint sealer material will be borne by the Contractor.  
The silicone sealant will be bonded to the sides of a clean joint to completely seal the joint as approved by the Engineer.  
All costs for furnishing and installing the valley gutter including materials, equipment, labor, and incidentals will be included in the contract unit price per square yard for the corresponding Valley Gutter contract item.

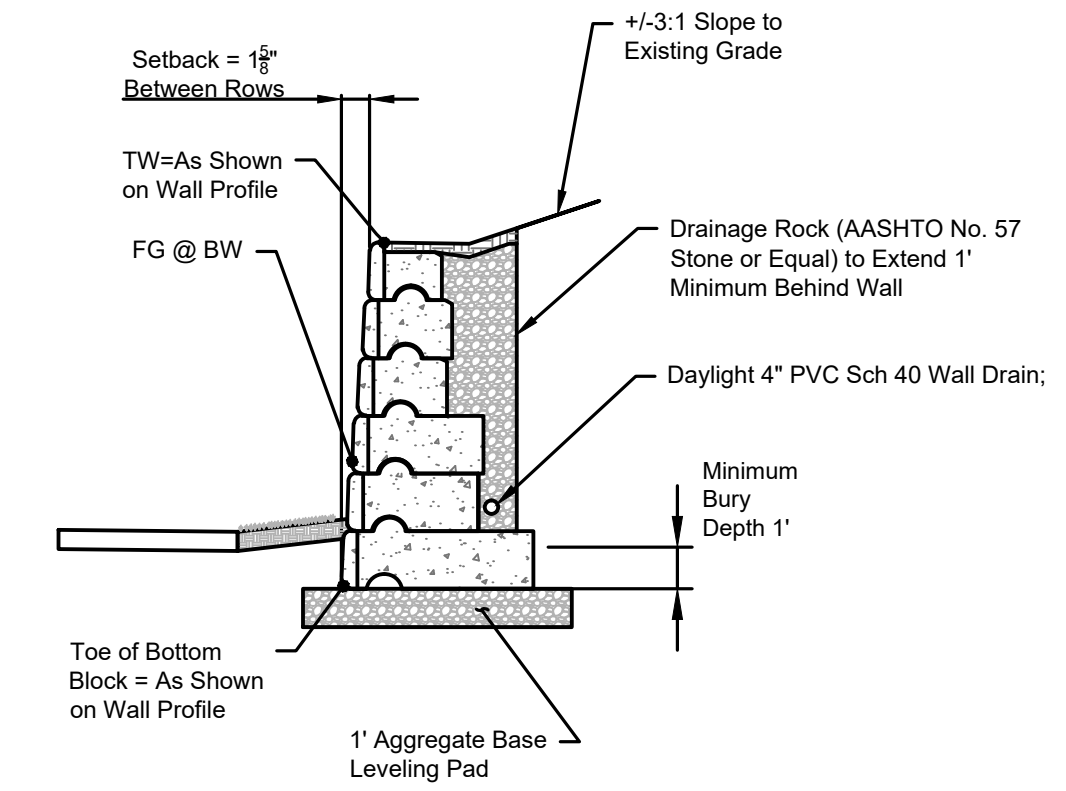
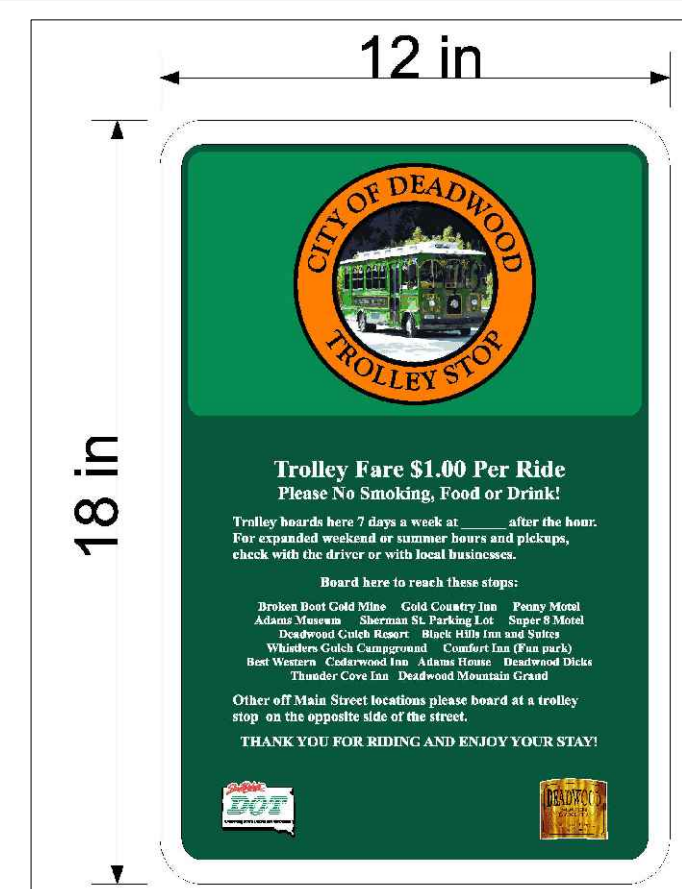
December 23, 2019  
PLATE NUMBER  
**650.40**  
Sheet 1 of 1

Published Date: 2024  
**S D D O T**

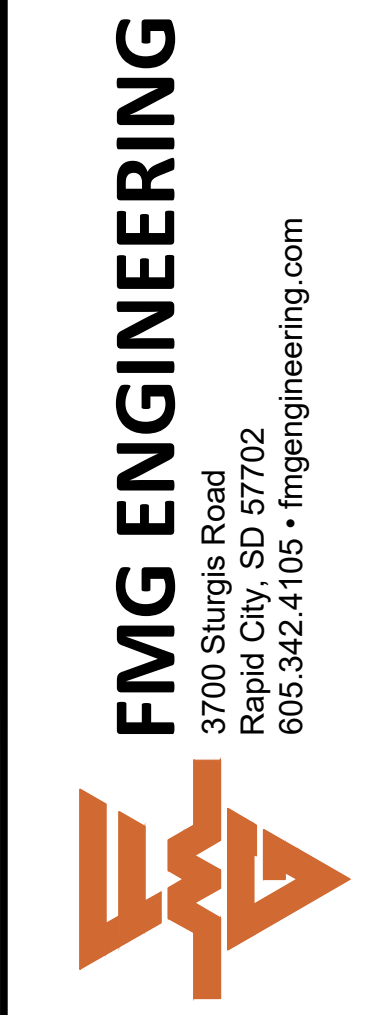
**VALLEY GUTTER**



**TROLLEY SIGN DETAILS**  
Not to Scale



**RETAINING WALL TYPICAL SECTION**  
Not to Scale



File Number:  
231370.00  
Location:  
E 1/2 Section 14  
T5N, R3E, B1M  
Surveyed By:  
Date:  
December 2023  
Designed By:  
Drawn By:  
Checked By:  
JLH  
MDS  
JLH

July 2024

**City of Deadwood**  
Deadwood Hill Trailhead Parking Lot  
Deadwood, South Dakota

Revision / Date  
Sheet Name:  
Details  
Sheet Number:

**C10**

Alternate Type Connector Sections may be used with approval of the Engineer.

DIMENSIONS (in.)									
Dia. (in.)	Ga.	A	B	H	L	W	Approx. Slope	Body	
12	16	6	6	6	21	24	2/41	1	Pc.
15	16	7	8	6	26	30	2/41	1	Pc.
18	16	8	10	6	31	36	2/41	1	Pc.
21	16	9	12	6	36	42	2/41	1	Pc.
24	16	10	13	6	41	48	2/41	1	Pc.
30	14	12	16	8	46	60	2/41	1	Pc.
36	14	14	19	9	51	72	2/41	2	Pc.
42	12	16	22	11	60	84	2/41	2	Pc.
48	12	18	27	12	69	90	2/41	2	Pc.
54	12	18	30	12	78	102	2/41	3	Pc.
60	12	18	33	12	84	114	1/41	3	Pc.
66	12	18	36	12	87	120	1/41	3	Pc.
72	12	18	39	12	87	126	1/41	3	Pc.
78	12	18	42	12	87	132	1/41	3	Pc.
84	12	18	45	12	87	138	1/41	3	Pc.

**STANDARD CONNECTIONS**

NOTE: Tubing is slipped over the sheet and rivets or lugs prior to forming operations. Connector of rivets is 0.78" of the apron.

**TUBING ATTACHMENT DETAILS SECTION A-A**

**TYPICAL CROSS-SECTION**

**SECTION A-A (alternate)**

**GENERAL NOTES:**  
 All 3 pc. bodies shall have 12 Ga. sides and 10 Ga. center panels. Width of center panels shall be greater than 20% of the pipe periphery. Multiple panel bodies to have lap seams tightly joined by 3/8" Dia. galvanized rivets or bolts.  
 For 60" through 84" sizes, reinforced edges shall be supplemented with galvanized stiffener angles. The angles will be 2" x 2" x 1/4" for 60" through 72" diameters and 2 1/2" x 2 1/2" x 1/4" for 78" and 84" diameters. The angles shall be attached by 3/8" diameter galvanized nuts and bolts.  
 Rivets and Bolts shall be 3/8" Dia. Min. for 10 Ga. and 12 Ga. sheet, and 1/2" Dia. Min. for 14 Ga. and 16 Ga. sheets. Tighten nuts with torque wrench to 25 lbs. torque.

March 31, 2000

Published Date: 2024

**S D D O T**

**C.M.P. FLARED ENDS**

PLATE NUMBER 450.35

Sheet 1 of 1

**DETAIL OF SAFETY BARS**

**ELEVATION VIEW**

**SECTION A-A**

**SECTION B-B**

**ISOMETRIC VIEW**

**FRONT VIEW**

**TYPE #2 CONNECTOR DETAIL**  
(For 30" and Larger)

**TYPE #1 CONNECTOR DETAIL**  
(For 15" Through 24")

August 31, 2022

Published Date: 2024

**S D D O T**

**C.M.P. SAFETY ENDS**

PLATE NUMBER 450.38

Sheet 1 of 2

**4" BOLLARD**  
Not To Scale

Z:\31370.00\Deadwood-New Parking Lot Civil\CD\Plan Sheets\31370 Details - C11 Details - Thursday, July 18, 2024 8:09:03 AM

**FMG ENGINEERING**  
 3700 Sturgis Road  
 Rapid City, SD 57702  
 605.342.4105 • fmgengineering.com

File Number: 231370.00  
 Location: E 1/2 Section 14 T5N, R3E, B1M  
 Surveyed By: EK  
 Date: December 2023  
 Designed By: JLH  
 Drawn By: MDS  
 Checked By: JLH

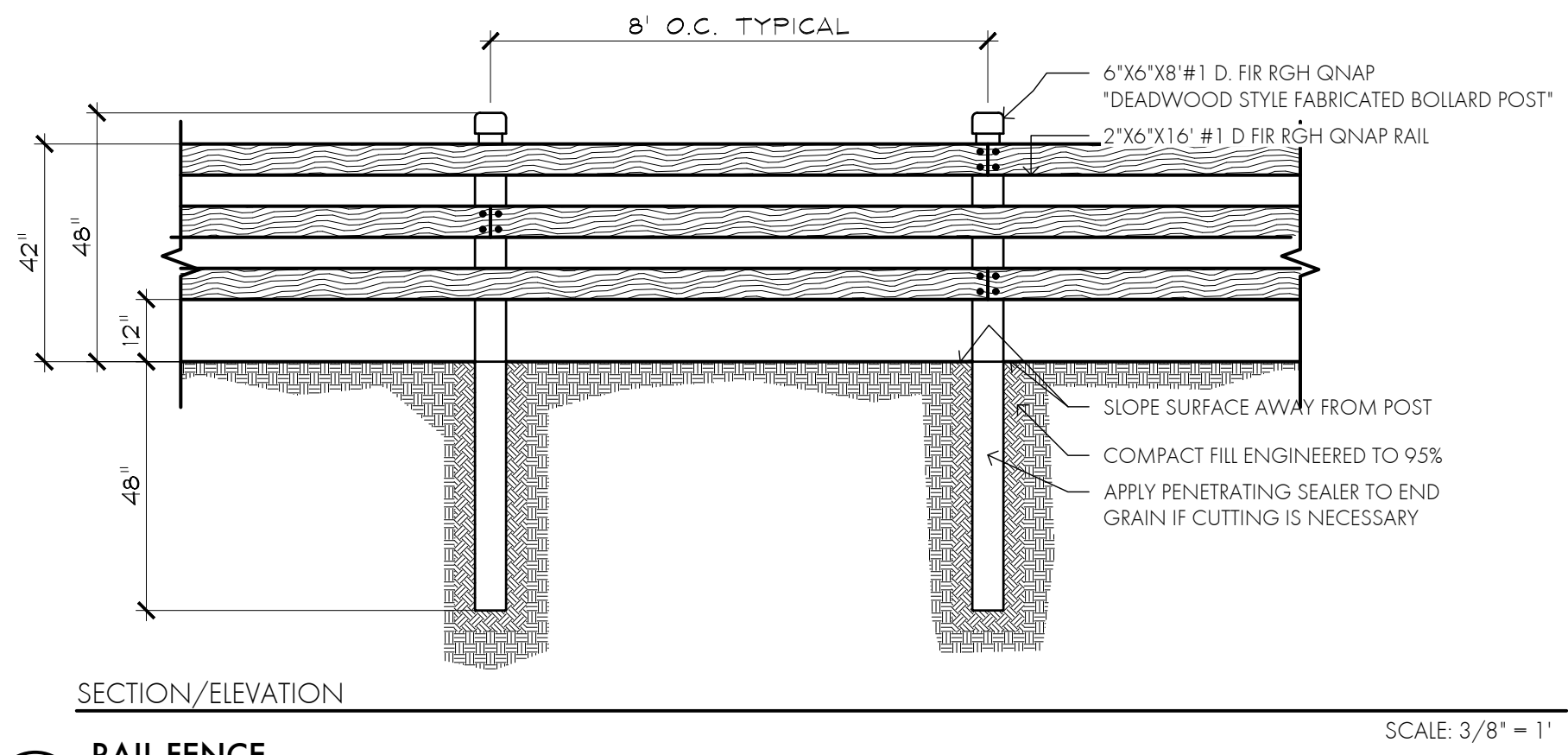
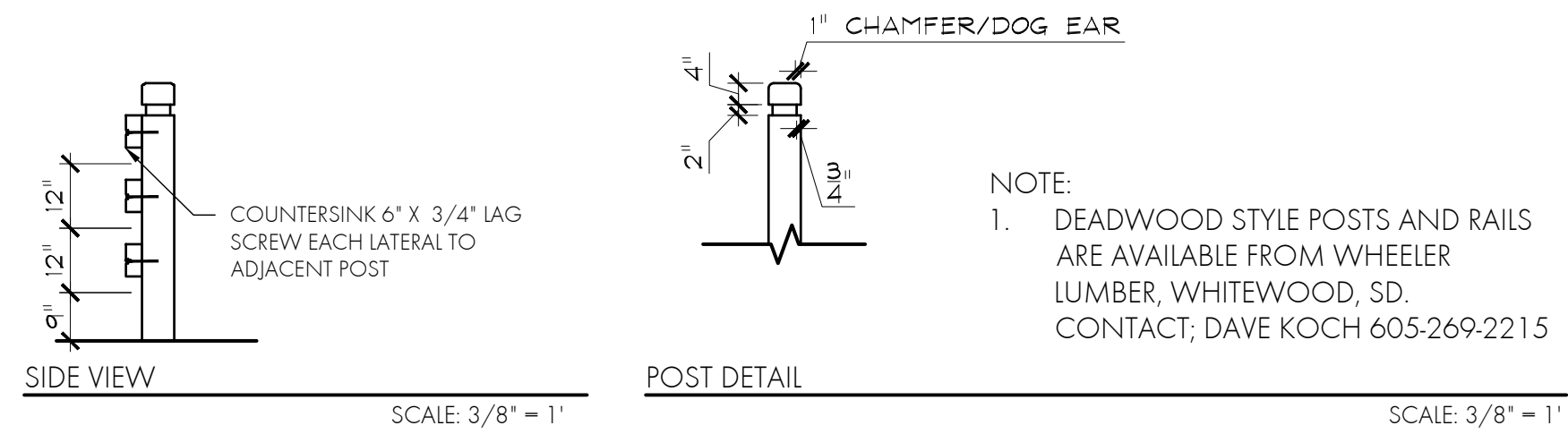
**City of Deadwood**  
 Deadwood Hill Trailhead Parking Lot  
 Deadwood, South Dakota

Revision / Date

Sheet Name: Details

Sheet Number: C11

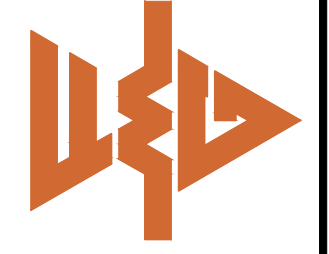
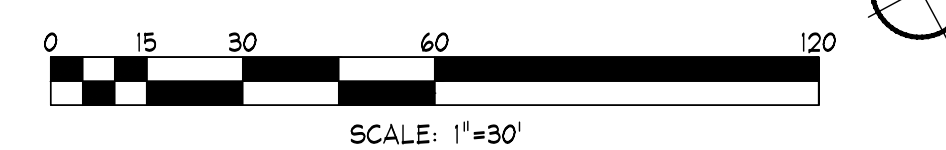
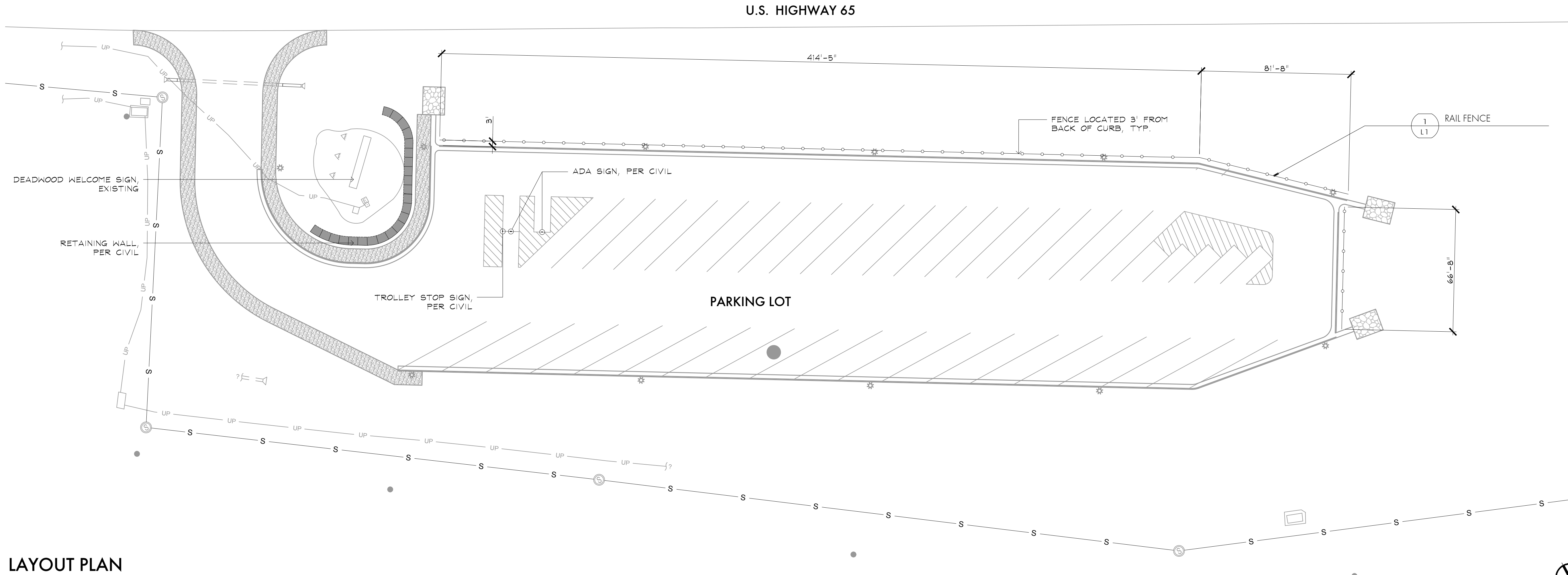
July 2024



1 RAIL FENCE

**GENERAL NOTES**

- PREPARATION**
- PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.
  - LOCATE AND CLEARLY FLAG TREES AND VEGETATION TO REMAIN.
  - PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION.
  - RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO OWNER.
- TEMPORARY EROSION AND SEDIMENTATION CONTROL**
- PROVIDE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT SOIL EROSION AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS, ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND SEDIMENT AND EROSION CONTROL DRAWINGS.
  - INSPECT, REPAIR, AND MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED.
  - REMOVE EROSION AND SEDIMENTATION CONTROLS AND RESTORE AND STABILIZE AREAS DISTURBED DURING REMOVAL.
- UTILITIES**
- LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF UTILITIES INDICATED TO BE REMOVED.
  - ARRANGE WITH UTILITY COMPANIES TO SHUT OFF INDICATED UTILITIES.
  - EXISTING UTILITIES: DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY UTILITY SERVICES ACCORDING TO REQUIREMENTS INDICATED.
  - NOTIFY ARCHITECT NOT LESS THAN TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.
- DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT ARCHITECT'S WRITTEN PERMISSION.**
- REMOVAL OF UNDERGROUND UTILITIES IS INCLUDED IN DIVISION 2 SECTIONS COVERING SITE UTILITIES. CLEARING AND GRUBBING
  - FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED.
  - PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 8 INCHES (200 MM), AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.
- TOPSOIL STRIPPING**
- REMOVE SOD AND GRASS BEFORE STRIPPING TOPSOIL.
  - STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS.
  - STOCKPILE TOPSOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMINGLING WITH SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST.
- SITE IMPROVEMENTS**
- REMOVE EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION.
- DISPOSAL**
- DISPOSAL: REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS MATERIALS INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
  - SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NON-RECYCLABLE MATERIALS. STORE OR STOCKPILE WITHOUT INTERMINGLING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES.



File Number:	1000
Location:	Sec 14 T9N R3E
Surveyed By:	xxx
Date:	xxx
Drawn By:	TGLA
Checked By:	TAO

Revision / Date	
Sheet Name:	LAYOUT PLAN

Figure Number:

**L1**

January 2023

**SEEDING NOTES**

**GENERAL NOTES:**

- SOIL IN ALL AREAS TO BE HYDRO-SEEDED SHALL BE CLEARED OF WEEDS, LITTER, DEBRIS, ETC. AMENDED AND FINE GRADED AS DESCRIBED ON PLAN PRIOR TO COMMENCING HYDROSEEDING OPERATIONS.
- CAREFULLY MAINTAIN AN EVEN FINISHED GRADE TO INSURE PROPER SURFACE DRAINAGE, WITH RIDGES AND DEPRESSIONS REMOVED. ALL AREAS SHALL BE FREE DRAINING.
- ALL AREAS WHICH ARE COMPLETE (I.E. FINISHED SLOPES) WILL BE HYDROSEEDED PER SPECIFICATIONS.
- THE FINAL HYDROSEEDING OPERATION TO BE PERFORMED BETWEEN OCTOBER 1 AND NOVEMBER 1. ADDITIONAL SEEDING MAY BE REQUIRED TO COMPLY WITH THE SWPPP. DEPENDENT UPON THE CONSTRUCTION SCHEDULE AND COMPLETED OPERATIONS.
- LIMITS OF WORK SHOWN ARE APPROXIMATE. THE INTENT IS TO HYDROSEED ALL ROAD CUTS/FILLS AND ANY DISTURBED AREAS DUE TO UTILITY OR GENERAL CONSTRUCTION. ALL DISTURBED AREAS STEEPER THAN 5:1 SHALL BE COVERED WITH A PROTECTIVE MATTING AFTER HYDROSEEDING.
- SLURRY INGREDIENTS: MULCH SHALL BE "AGRI-FIBRE" RECYCLED PAPER MULCH, @ 2,000 LBS/ACRE, INCREASE TO 2,500 LBS/ACRE FOR SLOPE STABILIZATION AREAS. STABILIZING AGENT SHALL BE "SENTINEL" BINDING AGENT TO BE USED ONLY ON SLOPES GREATER THAN 25%. USE 100 LBS/ACRE.
- FERTILIZER: 6-20-20 GUARANTEED ANALYSIS (PLUS MICRONUTRIENTS) @ 500 LBS/AC, AND 40 LBS/AC. AMONIUM SULFATE (ALL AREAS). FERTILIZERS MUST BE SUPPLIED IN A FORM WHICH WILL READILY DISPERSE INTO THE SLURRY.
- WATER: MUST BE OF ACCEPTABLE AGRICULTURAL QUALITY, FREE OF TOXIC INGREDIENTS OR OTHER FACTORS THAT INHIBIT PLANT GROWTH OR GERMINATION. USE 1,500 TO 3,000 GALLONS PER ACRE, AS NEEDED.
- OTHER: ADD "TURBO-START" BIOLOGICAL FERTILIZER ADDITIVE, 1 GALLON/ACRE TO ALL SLURRY MIXES.
- SEED MIX: PER LEGEND. SEED MUST BE IN ORIGINAL, UNOPENED CONTAINERS, DISPLAYING LABEL WHICH GUARANTEES FREEDOM FROM UNOPENED CONTAINERS, DISPLAYING LABEL WHICH GUARANTEES FREEDOM FROM NOXIOUS WEED SEEDS, A MINIMUM OF 85% PURE LIVE SEED, AND A MINIMUM GERMINATION RATE OF 85%.
- APPLICATION: THE OPERATOR SHALL SPRAY THE AREAS IN A SWEEPING MOTION, ALLOWING THE FIBRES TO BUILD ON EACH OTHER, AND CREATING A UNIFORM, VISIBLE COAT, USING THE COLOR OF THE MULCH AS A GUIDE, UNTIL ALL OF THE MATERIAL HAS BEEN APPLIED AND THE SPECIFIED RATES HAVE BEEN ACHIEVED.

**SEEDING LEGEND**

SYMBOL	DESCRIPTION	QUANTITIES*
	PREMIUM FARMLAWN, WARNE CHEMICAL OR EQ MFRS RECOMMENDED APPLICATION RATE	±57,472 SF

\* COORDINATE LIMITS WITH OWNER AND SEED TO LIMITS OF DISTURBANCE

**PROJECT PLANT SCHEDULE**

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	QTY
--------	------	----------------	-------------	------	-----

**TREES**

	PP	PINUS PONDEROSA	PONDEROSA PINE	4" CAL.	13
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**PLANTING NOTES**

**GENERAL PLANTING REQUIREMENTS**

- SEE DETAIL SHEET FOR LANDSCAPE AND PLANTING DETAILS & SEE PROJECT MANUAL FOR LANDSCAPE SPECIFICATIONS.
- THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION. SOURCE OF BASE SHEETS IS PROJECT ARCHITECTS AND ENGINEER. THE LANDSCAPE ARCHITECT ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION OR THE INADVERTENT OMISSION OF ANY SUCH INFORMATION. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT (U.S.A.) AT (800)227-2800 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION FOR MARKOUTS OF EXISTING UNDERGROUND FACILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO ANY UTILITIES CAUSED BY HIS/HER PROJECT OPERATIONS. NO CONSTRUCTION SHALL COMMENCE WITHOUT PRIOR APPROVAL OF THE SUPERVISING LANDSCAPE ARCHITECT, ENGINEER OR ARCHITECT.
- THE CONTRACTOR SHALL MAINTAIN REASONABLE ACCESS TO ALL PRIVATE DRIVEWAYS, PARKING AREAS AND AREAS THAT REQUIRE PUBLIC ACCESS DURING CONSTRUCTION.
- REFER TO CIVIL ENGINEER'S UTILITY AND GRADING AND DRAINAGE PLANS FOR UTILITY LOCATION AND DRAINAGE INFORMATION. REFER TO CIVIL ENGINEER'S GRADING PLANS FOR GRADING INFORMATION. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE PLANS OR IF THERE ARE DISCREPANCIES BETWEEN THE PLANS, CONTACT THE LANDSCAPE ARCHITECT FOR DIRECTION AS TO HOW TO PROCEED.
- VERIFY LOCATIONS OF PERTINENT SITE IMPROVEMENTS INSTALLED UNDER OTHER SECTIONS. IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT LANDSCAPE ARCHITECT FOR INSTRUCTIONS PRIOR TO COMMENCING WORK.
- CONTACT THE LOCAL UNDERGROUND UTILITY SERVICES FOR UTILITY LOCATION PERFORM EXCAVATION IN THE VICINITY OF UNDERGROUND UTILITIES WITH CARE AND IF NECESSARY, BY HAND. THE CONTRACTOR BEARS FULL RESPONSIBILITY FOR THIS WORK AND DISRUPTION OR DAMAGE TO UTILITIES SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER.

**SCHEDULING**

- CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS TO BE CONTRACT GROWN OR OTHERWISE OBTAINED FROM A CERTIFIED NURSERY.

- IF SPECIFIED MATERIAL IS NOT OBTAINABLE, SUBMIT TO LANDSCAPE ARCHITECT PROOF OF NON-AVAILABILITY AND PROPOSAL FOR USE OF EQUIVALENT MATERIAL. SUBMIT PHOTOGRAPHS OF ALTERNATIVE CHOICES OF PLANT MATERIAL FOR SELECTION BY LANDSCAPE ARCHITECT. INCLUDED WITH THESE PHOTOGRAPHS SHOULD BE CLEAR, WRITTEN DESCRIPTION OF THE TYPE, SIZE, CONDITION, AND GENERAL CHARACTER OF THE PLANT MATERIAL.
- TOP SOIL FROM THE SITE IS ACCEPTABLE FOR REUSE AS TOPSOIL.

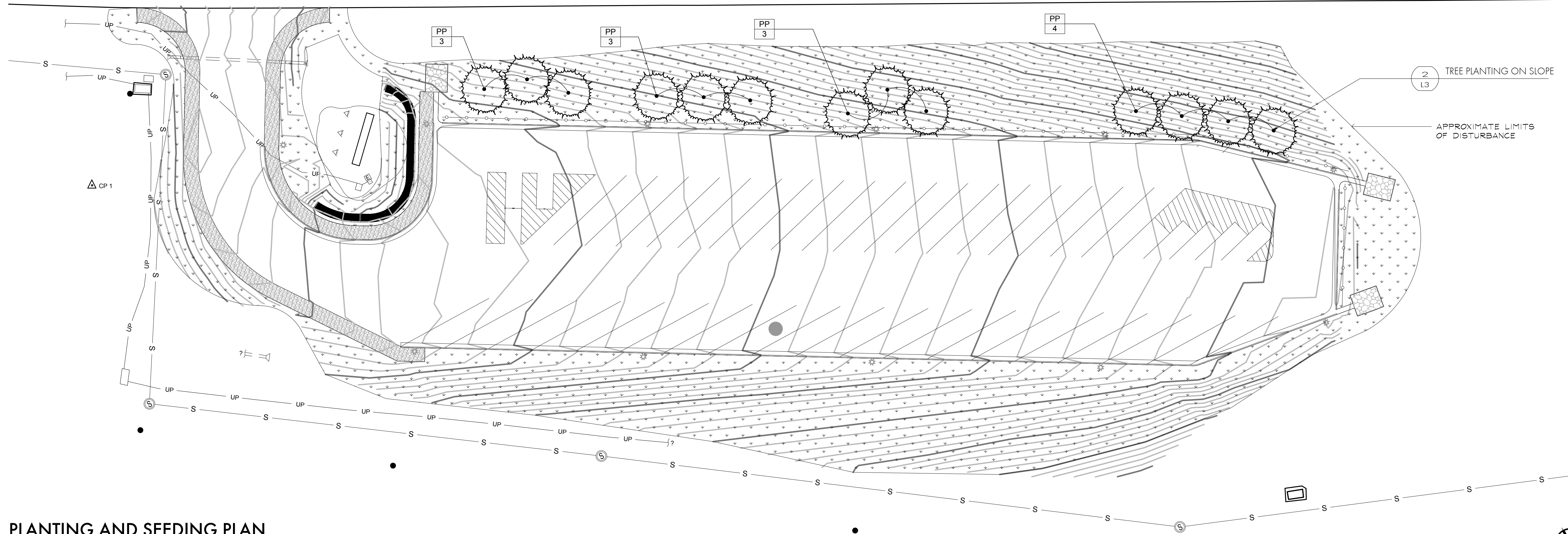
**PLANTING**

- QUANTITIES SHOWN IN THE PLANT LIST ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR & FOR OWNER INFORMATION. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE QUANTITY OF PLANTS SHOWN GRAPHICALLY ON THE PLANS. IN THE CASE OF A DISCREPANCY THE PLANS SHALL OVERRULE THE LEGEND, EXCEPT PLANTS SPECIFICALLY NOTED AS "NOT SHOWN ON PLAN." VERIFY PLANT COUNTS AND SQUARE FOOTAGES.
- EXACT LOCATIONS OF PLANT MATERIALS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD PRIOR TO INSTALLATION. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANTS TO EXACT LOCATION IN FIELD.
- TREES SHALL BE PLANTED A MINIMUM OF 4 FEET FROM FACE OF PAVEMENT, EXCEPT AS APPROVED BY LANDSCAPE ARCHITECT.
- PROVIDE MATCHING FORMS AND SIZES FOR PLANT MATERIALS WITHIN EACH SPECIES AND SIZE DESIGNATED ON THE DRAWINGS.
- PRUNE NEWLY PLANTED TREES ONLY AS DIRECTED BY LANDSCAPE ARCHITECT.
- ALIGN AND EQUALLY SPACE IN ALL DIRECTIONS TREES AND SHRUBS SO DESIGNATED PER THESE NOTES AND DRAWINGS.
- REMOVE ENTIRE WIRE CAGE FROM ROOTBALL. CUT AND REMOVE BURLAP FROM TOP 1/3 OF BALL.
- LANDSCAPE ARCHITECT TO REVIEW PLANT MATERIALS AT SOURCE OR BY PHOTOGRAPHS PRIOR TO DIGGING OR SHIPPING OF PLANT MATERIALS.
- PROVIDE MULCH RING PER DETAIL 1/L3

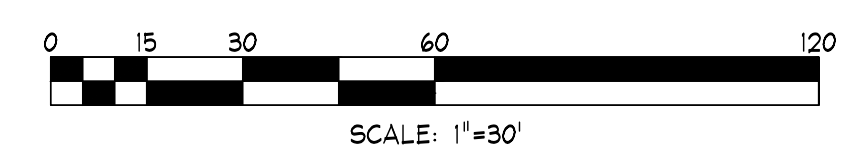
**WATERING**

- CONTRACTOR TO PROVIDE ONE TREEGATOR JUNIOR PRO 15 GAL. SLOW RELEASE WATERING BAG PER TREE.

U.S. HIGHWAY 65



**PLANTING AND SEEDING PLAN**



File Number:	1000
Location:	Sec 14 T8N R3E
Surveyed By:	xxxx
Date:	xxxx
Drawn By:	TGLA
Checked By:	TAO

January 2023

**City of Deadwood**  
 Hwy 85 Parking Concept

Revision / Date  
 Sheet Name:  
 PLANTING & SEEDING PLAN

Figure Number:

**L2**

